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Environmental Protection
Agency

Solid Waste And
Emergency Response
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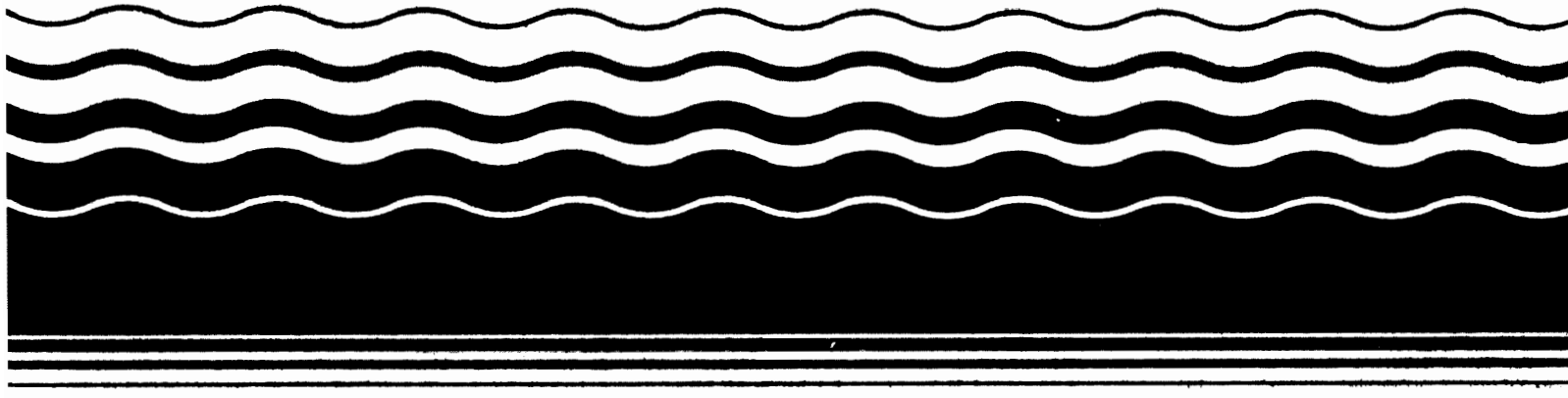
Superfund Removal Procedures

Directives Notebook
Volume 1



OERR Directive 9200.0-10A
September 1991

SUPERFUND REMOVAL PROGRAM DIRECTIVES NOTEBOOK

VOLUME ONE

Office of Emergency and Remedial Response
U.S. Environmental Protection Agency
Washington, DC 20460

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Removal Completion Date Definition

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OCT 24 1986

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Removal Completion Date Definition

FROM: Timothy Fields, Jr., Director
Emergency Response Division

TO: OHM Coordinators
Regions I - X

During the recent FY 86 SCAP review, inconsistencies were noted among Regions in determining CERCLA removal action closing dates. This memorandum is intended to clarify how the completion dates of removal actions are to be determined when temporary storage of hazardous substances is involved. The determination of removal completions was originally described in Superfund Removal Procedures -- Revision Number Two, dated August 20, 1982, and subsequently has been discussed in the various SPMS and SCAP methodologies.

Temporary demobilization and temporary storage onsite are not considered completions, unless temporary storage is the only action identified in the Action Memorandum to mitigate threats to public health, welfare and the environment. Likewise, temporary off-site storage of hazardous substances at a storage, treatment, and disposal (TSD) facility other than the facility of ultimate disposal is a continuation of the removal action, not a completion.

A removal action would not be considered complete if:

- Hazardous substances stored onsite are being monitored by the ERCS contractor or if any additional ERCS expenditures are anticipated, or
- Hazardous substances are being stored at an off-site facility, other than the ultimate TSD facility.

A removal action would be considered complete if:

- The scope of work for the removal action does not specify final off-site disposal of hazardous substances, the substances have been stabilized and are stored onsite and no additional CERCLA removal program funds are anticipated to be expended at the site. In this case, hazardous substances may be expected to undergo long-term storage onsite due to circumstances such as the unavailability of a final treatment/disposal

remedy (e.g., Missouri dioxin sites). In this instance, no CERCLA removal program funds will be expended for long-term site operation and maintenance. Any long-term (greater than 6 months) site operation and maintenance will be performed by the responsible party or another agency (e.g., State).

Hazardous substances are being stored off-site at the location of final disposal, and no additional ERCS expenditures are anticipated.

If any further clarification of how to determine the closing date of a project is required, please contact Jim Jowett or Mark Mjoness at FTS 382-2188.

cc: GAMS
Hans Crump
Terry Ouverson

Guidance on Implementation of the "Contribute to Remedial Performance" Provision

United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

EPA

DIRECTIVE NUMBER: 9360.0-13

TITLE: Guidance on Implementation of the "Contribute to Remedial Performance" Provision

APPROVAL DATE: April 6, 1987

EFFECTIVE DATE: April 6, 1987

ORIGINATING OFFICE:

☒ **FINAL**

☐ **DRAFT**

STATUS:

REFERENCE (other documents):
OSWER Directive 9200.3-02
Implementation Strategy for Reauthorized Superfund: Short Term Priorities for Action

GUIDANCE ON IMPLEMENTATION OF THE "CONTRIBUTE TO REMEDIAL PERFORMANCE" PROVISION

1. INTRODUCTION

Section 104(b) of the Superfund Amendments and Reauthorization Act of 1986 (SARA) amends section 104(a) of CERCLA to include the statement that any removal action undertaken by the President, or by any other person referred to in section 122* of the new law, should, to the extent practicable, contribute to the efficient performance of any long-term remedial action with respect to the release or threatened release concerned. This guidance document explains how to implement this provision, and includes guidelines on the applicability of the requirements, the definition of "contribute to efficient performance," exceptions, documentation and coordination. This document should be used in conjunction with the general removal procedures described in the Superfund Removal Procedures -- Revision Number Two, August 20, 1984, or, as may be amended.

2. APPLICABILITY

This provision will be applicable to removal actions at all sites -- final National Priorities List (NPL), proposed NPL, and non-NPL. The term "long-term remedial action" as used in this provision will therefore refer to a remedial action to be taken by the EPA, State, or a private party.

3. DEFINITION OF "CONTRIBUTE TO EFFICIENT PERFORMANCE"

3.1 Purpose

This provision promotes the performance of removal actions that address threats more efficiently by considering the overall site cleanup before the start of the action. To the maximum extent practicable, removal actions should be designed to avoid wasteful, repetitive, short-term actions that do not contribute to the efficient, cost-effective performance of long-term remedial actions to be taken by the EPA, State, or other party. The major objective of this requirement is to provide maximum protection of public health and the environment at minimal cost by avoidance of removal restarts. The focus of this provision is on avoidance of restarts that are due to recurring threats that were not adequately abated in the original removal action, and threats from deteriorating site conditions that should have been foreseen.

There are other circumstances, however, where removal restarts may be necessary to meet program goals. For example, a removal action may be a phased response. The first removal action might involve site stabilization and waste

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*Section 122 refers to potentially responsible parties (PRPs) who have entered into settlements with EPA.

characterization. The site may then be demobilized and closed out to allow removal personnel to prepare an analysis of waste treatment/disposal options. Once an option is selected, a removal restart would be implemented to complete the waste disposition phase. In this case, the removal restart would actually contribute to achieving a more efficient cleanup. Removal restarts may also occur in an attempt to meet other program goals, such as pursuing responsible party (RP) cleanups or State assumption of removal action operation and maintenance requirements. An RP may take over a removal action from EPA, but EPA may have to initiate a restart if the RP is not performing an adequate cleanup. The "contribute to efficient performance" provision was not intended to conflict with these other program goals. As stated above, the provision was intended to reduce removal restarts due to inadequate planning at the start of the action.

3.2 Implementation

To meet the goal of avoiding removal restarts, response personnel must adequately assess the threats posed by the hazardous substances on a site and consider how the removal action would most effectively contribute to the long-term remedy. The following questions should be considered:

1. What is the long-term cleanup plan for the site?

   This provision requires removal actions to contribute to the performance of the "long-term remedial action." At an NPL site, if the Record of Decision has already been signed, then comparing the removal action to the remedial cleanup plan is a straightforward task. However, for proposed NPL sites and for many final NPL sites, the remedial action may not have been selected when the removal action is implemented. In these cases, response personnel will be limited to identifying a range of feasible remedial alternatives. Response personnel need only review existing site information and use their best professional judgment. Removal and remedial personnel in the Region must coordinate with each other in this effort. It is the responsibility of the Region to establish appropriate coordination mechanisms.

   At non-NPL sites, response personnel should, where practicable, consult with the party performing the long-term response action at the site (e.g., State, RP) to determine the proposed approach for the long-term cleanup. It is recognized that it may be more difficult to ascertain the remedial action at non-NPL sites. Response personnel should use their best efforts to coordinate with the party performing the long-term remedy. At many non-NPL sites, there may be no plans for another party to conduct a remedial action.

2. Which threats will require attention prior to the start of the long-term action?

   The February, 1986 National Contingency Plan (NCP) broadened removal authority by allowing removal actions to be taken in response to "threats" rather than just "immediate and significant" threats.

This expanded authority will allow a removal action to address any near-term threats that may arise prior to the start of the long-term action, provided the threats meet the removal criteria established in section 300.65 of the current NCP. Potential threats should be identified when the first removal action at a site is implemented to avoid the need for future removal restarts. Therefore, in addition to identifying immediate threats, response personnel should also identify potential near-term threats from contaminant migration, deteriorating site conditions, etc. This assessment is particularly important if a decision is made to leave surface hazardous substances on site after the removal action is completed.

Response personnel must identify threats that may arise prior to the start of long-term actions, but the length of time before long-term actions will begin will vary from site to site. For example, for NPL sites where a ROD has been signed, the time frame that response personnel must consider will be shorter than for NPL sites where the Remedial Investigation/Feasibility Study (RI/FS) has just been initiated. Of course, at some NPL sites, the remedial program may plan to conduct an operable unit during the RI/FS if time permits. In this case, the time period to consider would again be shorter. Response personnel should consult with the party performing long-term action at the site to determine when such action will begin, and use their best professional judgment.

At non-NPL sites where there are no plans for another party to undertake a long-term cleanup, all threats and potential threats that meet the removal criteria in the current NCP should be identified.

3. How far should the removal action go to assure that the threats are adequately abated?

The expanded authority in the 1986 NCP will allow more complete removal actions to to be taken. Removal actions no longer have to stop when emergency situations are mitigated, but can continue, or be initiated, where needed to ensure that near-term threats are adequately abated. Measures that provide only temporary protection, insufficient to last until long-term actions begin, should be avoided to the extent possible. However, as noted above, consideration must also be given to the availability of other response mechanisms (e.g., State action, remedial operable unit) to initiate long-term action in a timely manner.

Whether or not the removal action should address all surface hazardous substances must be decided on a site-by-site basis. A removal action would be appropriate whenever surface hazardous substances may present a threat (as established in section 300.65 of the current NCP) before the start of long-term action. How the removal action should address the surface hazardous substances will also depend on site-specific conditions and the long-term cleanup plan. With the increased emphasis on using alternative technologies and new restrictions on land disposal, remedial actions may often include on-site treatment if surface contamination is extensive. In this case, the removal action may consist of consolidating and stabilizing the

substances on site to await treatment. It is important to design the removal action to ensure that the materials are adequately stabilized. At other sites, surface hazardous substances may constitute only a small part of the problem; may not be safely stabilized for a long period of time; or may be more efficiently addressed as one unit by immediate treatment or disposal. In these situations, it may be more appropriate for a removal action to include final disposition of all surface hazardous substances. The conditions at the site and the long-term cleanup plan will determine the appropriate scope of the removal response.

At non-NPL sites where there are no plans for another party to perform long-term remedial action, the threats that meet the removal criteria in the current NCP should be completely cleaned up, if possible. The avoidance of removal restarts due to recurring threats is the ultimate goal. If mitigation of the threats that meet the NCP removal criteria results in complete site cleanup (i.e., no further Federal response required), the "contribute to efficient performance" provision is fully satisfied.

In considering all of the factors described above, the major determinant of how far the removal action should go to assure threats are adequately abated will be the statutory limits on removal actions. Removal actions should contribute to the efficient performance of remedial actions to the maximum extent practicable given the $2 million/ 12 month limits on removal actions. (An exemption to the limits may be granted where the site qualifies under the "emergency" or "consistency" waivers.)

With regard to cleanup standards, this provision does not compel the removal program to lower its cleanup standards. Rather, the purpose of this provision is to improve the design of removal actions such that after cleanup standards are established for a removal site, the chosen removal action will address those substances targeted for cleanup in a manner that avoids the need for removal restarts. For example, the removal program has historically used 50 ppm as a benchmark in determining the appropriate extent of cleanup of PCB-contaminated soil. The "contribute to efficient performance" provision would not affect this number, but would direct that the method chosen to address soil contaminated above 50 ppm should be designed to avoid the need for removal restarts to the extent practicable.

4. Is the proposed removal action consistent with the long-term remedy?

The removal action that is chosen should be consistent with long-term actions at those sites where further cleanup will be taken. "Consistent" is defined in its broadest sense and may be characterized as a range of possible approaches. At one end of the spectrum, removal actions may be found consistent if they do not hinder or interfere with the remedial action to be taken. At the other end of the spectrum, removal actions may be found consistent because they contribute in a positive way

to the long-term cleanup plan. For example, a removal action to provide carbon filters to homes with contaminated drinking water as an interim measure would not interfere with a long-term remedial plan to clean up the contaminated aquifer. A removal action to solidify sludge could, however, hinder a long-term plan to incinerate the waste and should, therefore, be avoided if other approaches are feasible. A removal action to remove surface drums from a landfill could contribute in a positive way to a remedial plan to clean up the site.

Removal actions may be found consistent if they fall anywhere within this range; the most appropriate approach will depend on site-specific factors. It is recognized that in some cases, the removal action may create additional work for the remedial action and yet still be the most appropriate approach for the site. For example, a common removal action is capping contaminated soil to prevent migration and human contact in the time period before remedial actions begin. Although the cap would have to be removed to implement a long-term plan to excavate and treat the soil, it may still be the most effective method to mitigate the threat in the short-term. Protection of public health and the environment, as well as technical feasibility, must always be considered. If such an action is selected, the rationale for selection should be explained in the Action Memorandum. (See Section 5.)

The answers to these four questions will help determine what type of removal action is needed and how it can be designed to contribute to the efficient performance of long-term remedial actions. These questions are provided as general guidelines to indicate the various factors that should be considered in implementing this provision of SARA. A written analysis of the answers to each of these questions is not required. The conclusions should be documented in the Action Memorandum. (See Section 5.)

4. EXCEPTION

The only situation where it may not be feasible to consider how the proposed removal action relates to the long-term remedy is in an emergency. In such cases, response personnel may need to take whatever immediate measures are required to protect the public health, welfare, and the environment.

5. DOCUMENTATION AND COORDINATION

The Action Memorandum should specifically cite the "contribute to efficient performance" requirement and briefly discuss how the proposed removal action relates to long-term remedial actions, to the extent practicable. (See the Superfund Removal Procedures for information on the preparation of Action Memoranda.) If the proposed removal action completes the cleanup and no further action is required, this should be so noted. If only minimal information is available about long-term actions, this should also be explained. If an emergency existed that precluded an analysis of how the removal related to long-term actions, this should be noted. Finally, if compliance with this provision would conflict with other program goals (e.g., pursuit of RP cleanup), this shoud be explained.

Compliance with this requirement does not require special approval; the Action Memorandum should be approved by the established concurrence chain in the Region or in Headquarters, if appropriate. In making the determination, however, it will be the responsibility of the OSC to coordinate with the party that will undertake the long-term remedy (for those sites where additional cleanup measures will be taken).

Outline of Engineering Evaluation/ Cost Analysis (EE/CA) Guidance

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C. 20460

MAR 30 1988

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: OUTLINE OF EE/CA GUIDANCE

FROM: Timothy Fields, Jr., Director
Emergency Response Division

TO: Superfund Branch Chiefs, Regions I-X
OHM Coordinators, Regions I-X

In June 1987, the Emergency Response Division (ERD) issued the first draft guidance on Engineering Evaluations/Cost Analyses (EE/CA) for non-time-critical removal actions. The goals of the EE/CA are to: 1) satisfy environmental review requirements for removal actions; 2) satisfy administrative record requirements for improved documentation of removal action selection; and 3) provide a framework for evaluating and selecting alternative technologies.

ERD delayed issuance of a second draft EE/CA guidance pending the outcome of several issues related to the upcoming National Contingency Plan (NCP) revisions. Most of these issues have now been resolved and ERD is preparing a new draft EE/CA guidance for Regional review this spring.

Attached is an outline of the EE/CA guidance ERD is developing. Because there have been a number of questions from the Regions on EE/CAs, we thought it would be helpful to provide an outline at this time to assist the Regions in preparing EE/CAs until the new draft is available. Note that the EE/CA process no longer includes an initial screening of the alternatives and that the selection criteria have changed somewhat.

If you have questions on the attached outline, please call Jean Schumann of my staff at FTS 382-4671.

Attachment

cc: Hans Crump
Paul Nadeau
Bill Hanson
Don White
Lloyd Guerci
Frank Russo
John Cross
Earl Salo
Lee Tyner
Joe LaFornara
Bruce Engelbert
John Riley
Cristina Griffin
Jean Schumann

EE/CA GUIDANCE TABLE OF CONTENTS

ENGINEERING EVALUATION/COST ANALYSIS GUIDANCE OUTLINE

I. INTRODUCTION

° EE/CAs are required only for non-time-critical removal actions/Expedited Response Actions (ERAs). The Regions may choose to prepare an EE/CA for other actions.

- Non-time-critical removal action: Those releases or threats of releases not requiring initiation of on-site activity within 6 months after the lead agency determines, based on the site evaluation, that a removal action is appropriate. (In other words, based on threat, there is at least a 6 month lead-time available before cleanup action must begin.)

° Steps in the EE/CA process (apply only to actions that are determined at the outset to be non-time-critical):

A. Site evaluation. Removal PA/SI results indicate that the site meets the criteria for initiating a removal action and that the threat is non-time-critical. (At an NPL site, RPMs should continually evaluate site conditions to determine if a removal action is appropriate.)

B. Issue PRP notice. General notice required; special notice discretionary.

C. EE/CA Approval Memorandum. Documents that the site meets the criteria for initiating a removal action and secures management approval to conduct the EE/CA. (To be resolved: Format and approving official)

- ° OSC/RPM should notify the community relations staff of the upcoming EE/CA.
- ° Designate site spokesperson.
- ° Open Administrative Record (AR) and publish notice of availability.
- ° Begin community interviews and preparation of Community Relations Plan (CRP).

D. Contract for EE/CA preparation. TAT, REAC, REM, site-specific.

E. EE/CA study and report preparation. See II below for more detail. May include on-site activities to better define site and characterize waste (104(b) activities), but may not include cleanup measures.

F. EE/CA completed.

- ° Place EE/CA in AR and publish notice of EE/CA availability plus brief summary of EE/CA.
- ° CRP should be completed by this time.

F. Thirty-day public comment period. On EE/CA and other documents in AR.

G. Action Memorandum, attaching responsiveness summary. Describes proposed removal action and secures management approval to conduct the action. Responsiveness summary is a summary of significant public comments and EPA's response to these comments..

- AR closes when Action Memorandum is included. At this point, all information relating to the selection of the removal action must be included in the AR. EPA may add documents generated after the Action Memorandum is signed only if they concern issues which were specifically reserved for future action or if they support an amended Action Memorandum.

H. Implementation of removal action. $2 million/12 month statutory limits apply only to the implementation of the removal action, not to previous 104(b) activities.

- Note that an EE/CA and public comment period are not required if a removal action will be used to implement a signed ROD. In that case, the RI/FS and remedial public participation procedures fulfill the EE/CA requirements.

II. EE/CA REPORT

The EE/CA report should follow the format below.

A. Site Characterization

1. Site Description

Location, facility type, surrounding land use, hydrology, nature and extent of contamination, etc.

2. Site Background

Prior site use, operational history, regulatory involvement, etc. (Confidential information must be placed in confidential portion of AR.)

3. Analytical Data

Summary of results of analytical data (considering the quality of that data).

4. Site Conditions That Justify a Removal Action

Information contained in the EE/CA Approval Memorandum should be used here.

B. Identification of Removal Action Objectives

1. Statutory Limits on Removal Actions

Brief explanation for the public of the $2 million/12 month limits on removal actions and two types of statutory exemptions available ("emergency" and "consistency"). Stated objective should be to remain within these limits, unless site qualifies for one of the statutory exemptions.

2. Removal Action Scope

Description of the scope of the project, e.g., total site cleanup, site stabilization, completion of operable unit (NPL sites), surface cleanup only. Include description of principal threats to be addressed. Particularly important to clearly define scope if removal action will not address the entire universe of threats at the site.

3. Removal Action Schedule

General scheduling objectives for the removal action, identifying any time constraints (e.g., must complete action prior to winter, threat requires initiation of action within 1 year).

4. Applicable or Relevant and Appropriate Requirements (ARARs)

Identification of chemical-specific and location-specific Federal and State ARARs for the site. (Compliance with identified ARARs will be discussed in the analysis of removal alternatives in section D below.) States are required to identify promulgated State ARARs in a timely manner.

Removal actions should attain ARARs to the extent practicable.

C. Identification of Removal Action Alternatives

Description of appropriate removal action alternatives for site (including description of necessary equipment, personnel, etc.). Based on OSC/RPM experience and best professional judgment.

A "no action" alternative is not required.

Additional resources available to assist in identifying appropriate technologies: ERT, SITE program, Superfund Regional Technology Transfer contacts, industry publications, best demonstrated available technologies (BDATs) identified in the land disposal restriction rules.

D. Analysis of Removal Alternatives

Each alternative should be evaluated individually based on the criteria below.

1. Effectiveness

a. Protectiveness

° Protection of the community during the removal action

Description of threats that may result from implementing the removal action, such as air quality impacts from an incinerator that may affect human health, and mitigative measures that can be taken.

° Protection of workers during the removal action

Description of threats that may result from implementing the removal action, such as dust from excavation, and mitigative measures that can be taken.

° Threat reduction

Evaluation of the extent to which the completed action will reduce risk or mitigate the threats identified in the description of removal scope (B.2). Measured qualitatively or quantitatively (e.g., cleanup levels or cancer risk levels achieved), as appropriate.

° Time until protection achieved

Determination of the time until protection is achieved for the principal threats at the site, compared to the removal action schedule (B.3) where appropriate.

° Compliance with chemical- and location-specific ARARs

Determination of whether ARARs identified in section B.4 can be met or whether a waiver may be appropriate.

° Compliance with criteria, advisories, guidances

Description of compliance with other criteria, advisories or guidances that are not ARAR, but could appropriately be applied to the site. For example, if PCB-contaminated soil will be excavated in the alternative, EE/CA may compare the cleanup level the alternative will achieve (the level described under "threat reduction" above) to the appropriate cleanup levels in the EPA PCB Spill Cleanup Policy.

° Environmental impacts

Description of the potential adverse environmental impacts

that may result from implementing the removal action and mitigative measures that can be taken. (If overlap with ARARs evaluation occurs, simply refer reader to the appropriate ARARs discussion in the EE/CA report.)

- Potential exposure to remaining risks

  Assessment of potential for future exposure to residuals remaining on-site.

- Long-term reliability for providing continued protection

  Assessment of potential for failure of the alternative and need for replacement, and description of potential threats from such failure or replacement. Should address the reliability of engineered components of the alternative (cap, treatment system), non-engineered components (fences), and any institutional controls (deed notices), as appropriate.

b. Use of Alternatives to Land Disposal

Description of the degree to which the alternative utilizes treatment or recycling. Removal program policy encourages the use of alternatives to land disposal where practicable.

2. Implementability

a. Technical Feasibility

- Ability to construct and operate technology

  Description of the ability to construct the technology and to keep it running during operation, considering difficulties and unknowns that may lead to schedule delays. Compare to removal action schedule (B.3) where appropriate.

- Compliance with action-specific ARARs

  Identification of Federal and State action-specific ARARs and determination of whether ARARs can be met or whether a waiver is appropriate.

- Ability to meet process efficiencies or performance goals

  If overlap with ARARs evaluation occurs, simply refer reader to appropriate ARARs discussion in the EE/CA report.

- Demonstrated performance

  Evaluation of maturity of technology and whether it has been used under similar conditions for similar wastes.

- Environmental conditions

  Evaluation of impact of environmental conditions, such as terrain and climate. For example, a generally reliable oil/water separator may be inoperable in freezing temperatures without the use of heaters. A site located in a valley may pose a problem for a technology if surrounding air currents provide insufficient dispersion of particulates.

- Compliance with SARA requirement that removal actions should contribute to the efficient performance of long-term remedial action to the extent practicable

  Is the action designed to prevent the need for removal restarts to address the same threats? Is the action consistent with the long-term remedy for the site?

b. Availability

- Availability of necessary equipment, materials, and personnel

  Compare to removal action schedule (B.3) where appropriate.

- Availability of adequate offsite treatment, storage, and disposal capacity, if appropriate

  Compare to removal action schedule (B.3) where appropriate.

- Post-removal site control (PRSC)

  Description of any PRSC measures that will be required at completion of the action, including monitoring, and availability of another party to assume these activities at the end of the removal action.

c. Administrative Feasibility

- Likelihood of public acceptance of the alternative, including State and local concerns

- Activities needed to coordinate with other agencies

- Ability to obtain any necessary approvals or permits (permits are not required for actions conducted on-site)

3. Cost

a. Total Cost (Present Worth) of the Alternative

Include direct capital costs, indirect capital costs, and any post-removal site control costs. The draft NCP recommends use of discount rate of 5 percent before taxes and after inflation.

b. Statutory Limits

Comparison of total cost to the $2 million statutory limits on removal actions.

E. Comparative Analysis

Qualitative assessment of strengths and weaknesses of each alternative relative to the others. Summary tables would be helpful, with alternatives along one axis and evaluation criteria along the other axis. (Include post-removal site control costs when comparing costs of alternatives.)

F. Proposed Removal Action

Identification of the proposed removal action. If proposed action will exceed $2 million, include justification of need to exceed the statutory limits.

3.0 CONTRACTING CONSIDERATIONS

To avoid potential conflict-of-interest, the contractor who conducts the EE/CA may not be used to perform the site cleanup.

4.0 COST MANAGEMENT

5.0 EE/CA FUNDING

6.0 ENFORCEMENT-LEAD ACTIONS

Removal Program Priorities

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 31 1988

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

OSWER Directive No. 9360.0-18

SUBJECT: Removal Program Priorities

FROM: J. Winston Porter
Assistant Administrator

TO: Regional Administrators, Regions I-X

ATTN: Director, Waste Management Division, Regions I, IV, V, VII, VIII
Director, Emergency & Remedial Response Division, Region II
Director, Hazardous Waste Management Division, Regions III, VI
Director, Toxics and Waste Management Division, Region IX
Director, Hazardous Waste Division, Region X
Director, Environmental Services Division, Regions I, VI, VII

PURPOSE

The purpose of this memorandum is to confirm general policy regarding removal program priorities.

BACKGROUND

The enactment of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and other recent developments have expanded the potential scope of the removal program. Removal resource levels, however, require us to set priorities for the removal program, which address health and environmental threats to the maximum extent possible within the confines of our resource limitations. Funding levels and SCAP targets for FY 88 were contained in a memorandum of August 31, 1987, entitled Final 1987 SCAP, from Henry L. Longest and Gene Lucero to the Regions.

The national extramural cleanup budget for removals in FY 88 is about $90 million: this will fund approximately 190 removal actions. All of the $90 million is being distributed to the Regions; Headquarters is not keeping any contingency reserve. The rate of removal obligations in the first and second quarters of FY 88 suggests that there may not be enough removal funds to last through the entire year if the current pace of program activity is continued. Each Region is responsible for planning and conducting a removal program consistent with its annual resource allocation.

REMOVAL PRIORITY POLICY

Removal resources must be used to address the most serious public health and environmental threats. In all cases, Regions should aggressively pursue cleanup by the responsible party (RP), if time permits, before initiating any Fund-lead removals. Top priority for removal resources should be given to time-critical actions as follows:

- Classic emergencies involving incidents (e.g., threats of fire or explosion) where response is generally necessary within a matter of hours.

- Time-critical removals at sites on the National Priorities List (NPL). Regions should always give due consideration to the fact that removals at NPL sites may result in a loss of the 10 percent State cost-share; and

- Time-critical removals at non-NPL sites posing major health and environmental threats, which cannot be addressed by other authorities.

These three categories of time-critical removals should be the primary focus for the $90 million allocated to the removal program for cleanup contractor support.

As resources permit, there are other non-time-critical removals at NPL sites which we may be able to conduct. These removals will usually be at sites already funded in the remedial SCAP to:

- Completely cleanup NPL sites, resulting in deletion; or

- Conduct interim actions at NPL sites.

Generally, we intend to use remedial funds to pay for non-time-critical actions at NPL sites. The principal source of these remedial funds will be proceeds from RP settlements and funds allocated for remedial projects in the SCAP. My staff is examining ways to create additional funding flexibility in the Superfund SCAP and budget processes to facilitate this new direction.

Regions should strive to maintain consistency with remedial actions, but actions taken should remain within the scope of a removal. Stabilization at NPL sites is usually the most appropriate removal action, unless complete cleanup can be done within the Region's resource allocation.

States should be strongly encouraged to conduct non-time-critical removals at sites which will not score high enough to be on the NPL. Preference should be given to response alternatives which contain and control the source of contamination and prevent off-site migration. Removal personnel should also continue to provide full cooperation with the enforcement program in pursuing potential RP cleanup at these sites.

Draft Guidance for Conducting Federal Lead UST Corrective Actions on Indian Lands

OTHER RESPONSE MECHANISMS

Regions should actively pursue response by States and potential responsible parties (PRPs). Enforcement authorities should be vigorously applied to encourage PRP response. This means conducting a complete PRP search, issuing general notices or special notice letters (if time permits), negotiating with PRPs, and using administrative orders on consent to formalize settlements. Unilateral administrative orders should be considered in every case where voluntary settlement is not achieved.

Regions should also pursue response under other authorities, and give priority to those incidents posing threats which can only be addressed by Federal removal authority. For example, installation of new water supply systems should generally be a State or local responsibility. The new drinking water action levels are only one of many site-specific factors to be considered in deciding whether Federally-funded removal action is appropriate. More specific guidance in this area is under development. In the interim, Regions should contact the appropriate Regional coordinator in the Emergency Response Division whenever there are questions about removal priorities.

CONCLUSION

The importance of managing the removal program within the boundaries of its resources cannot be overemphasized. We have provided these national guidelines on removal priorities to assist Regions in this effort; however, Regions maintain the discretion to conduct other types of removals within program authorities, if site-specific conditions necessitate such action and if Regional resource levels permit. We recognize that the intrinsic nature of the removal program is such that even with the most careful planning, unanticipated events may occur.

I hope this memorandum is helpful as we all attempt to use our Superfund resources to address the most significant environmental priorities.

cc: Superfund Branch Chiefs, Regions I-X
Oil and Hazardous Materials Coordinators, Regions I-X
Jack McGraw
Henry Longest
Gene Lucero
Tim Fields
Paul Nadeau
Lloyd Guerci

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 18 1988

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Guidance for Conducting Federal-Lead UST Corrective Actions on Indian Lands

FROM: Ron Brand, Director
Office of Underground Storage Tanks

TO: Hazardous Waste Division Directors, Regions 1-3, 5-9
Water Division Directors, Regions 4 and 10
Superfund Branch Chiefs, Regions 1-10
OHM Coordinators, Regions 1-10
Timothy Fields Jr., Emergency Response Division, OERR (WH-548B)
Lisa Friedman, Office of General Counsel (LE-132S)

I have enclosed a copy of our draft guidance for conducting Federal-lead underground storage tank corrective actions in response to petroleum releases on Indian Lands. The guidance discusses the procedures and documentation that are necessary for approving and carrying out Federal response to UST releases on Indian Lands. The guidance supplements the soon to be distributed final guidance on Federal-lead UST corrective actions for States (OSWER directives 9360.0-16A), which does not address Indian Land releases.

Please submit your comments on the enclosed draft to Mark Waiwada (WH-562A) of my staff. We would appreciate receiving all comments by August 15, 1988. Should you have any questions, please call Mark at FTS-475-9727.

cc: UST Regional Program Managers
John Riley, ERD (WH-548B)
Bruce Englebert, ERD (WH-548B)
Betty Zeller, ERD (WH-548B)
Carrie Wehling, OGC (LE-132S)
Mark Waiwada, OUST

United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

EPA

DIRECTIVE NUMBER: 9610.9

TITLE: Draft Interim Guidance on Conducting Federal-Lead Underground Storage Tank Corrective Actions for Petroleum Releases on Indian Lands

APPROVAL DATE:

EFFECTIVE DATE:

ORIGINATING OFFICE: Office of Underground Storage Tanks

☐ **FINAL**

☒ **DRAFT**

STATUS: For Review and Comment

REFERENCE (other documents):
OSWER Directive 9360.0-16A
Guidance for Conducting Federal-Lead
UST Corrective Actions

DRAFT INTERIM GUIDANCE ON CONDUCTING FEDERAL-LEAD UNDERGROUND STORAGE TANK CORRECTIVE ACTIONS FOR PETROLEUM RELEASES ON INDIAN LANDS

1.0 INTRODUCTION

1.1 Purpose

This guidance document is designed to provide direction to On-Scene Coordinators, UST Regional Program Managers, and other Regional personnel for the initiation and coordination of Federal-lead corrective actions on Indian Lands in response to petroleum releases from underground storage tank (UST) systems. The guidance discusses the procedures to be followed, including how to determine whether Federal-lead corrective action is justified, and what documentation is necessary for undertaking Federal-lead UST corrective actions on Indian Lands.

This interim document supplements the guidance on Federal-lead corrective action for States (OSWER directive 9360.0-16A) which does not address releases on Indian Lands. The final guidance document on Federal-lead UST corrective action on Indian Lands will be issued in FY 1989, following the completion of Indian Lands pilot projects being conducted in Regions 8 and 9. The pilot projects will gather information about USTs on Indian Lands to assess the extent of the UST problem and the capacity of Indian Tribes to address the problem. EPA will assess the information gathered through the pilot projects, and other information gathered in responses initiated under this interim guidance, to develop the final guidance document.

1.2 Background

The Superfund Amendments and Reauthorization Act (SARA) contains provisions in section 205 amending Subtitle I of the Solid Waste Disposal Act (SWDA) which gives EPA and States under cooperative agreement the authority to conduct corrective actions in response to petroleum releases from USTs, using monies from the $500 million Leaking Underground Storage Tank (LUST) Trust Fund. SARA does not provide EPA the authority to enter into LUST Trust Fund cooperative agreements with Indian Tribes.

EPA expects Federal-lead corrective actions on Indian Lands to occur only in a limited number of instances. Preliminary assessments indicate that the total number of underground storage tanks on Indian Lands is small (0.2 percent of the regulated universe). Further assessments, including those based on the information gathered during the Indian Lands pilot projects, will generate a more accurate estimate of the total number of USTs on Indian Lands. While this document is limited to "time-critical" responses on Indian Lands (i.e., releases that require response within six months), guidance for longer-term corrective actions will be issued when the extent of the problem on

Indian Lands is more fully understood.

1.3 Policy

The EPA LUST Trust Fund Program is State implemented. States under cooperative agreement carry out Fund-financed responses to releases from leaking USTs, except in rare instances. EPA's role is to provide guidance and support to the States in their development of State LUST programs. EPA will lead a Fund-financed response in a State only in limited instances when there is a major public health or environmental emergency, the owner or operator is unwilling or unable to respond, and the State is unable to respond.

Because of the State emphasis of the program, Indian Lands present a unique situation for the EPA LUST program. EPA does not have the statutory authority to enter directly into LUST Trust Fund cooperative agreements with Indian Tribes, and most States do not have the authority to run environmental programs on Indian Lands. EPA's goal is to treat Indian Lands as States, allowing Indian Tribes to implement programs similar to those carried out by States. A legal mechanism for allowing Indian Tribes to establish cleanup programs and directly access the LUST Trust Fund is being sought, and the willingness and capability of Indian Tribes to develop and implement such programs is being examined. During this period EPA is prepared to respond to emergency LUST releases on Indian Lands.

To trigger Federal-lead action, an Indian Lands site must pose a time-critical, either immediate or near-term, substantial threat to human health and the environment, the Indian Tribe is unable to respond, and the owner or operator must be unable or unwilling to provide adequate and timely response. Considering that many Indian Tribes may lack the capability to oversee or conduct corrective actions, the criteria for initiating a Federal response to releases on Indian Lands has been expanded from the Federal-lead corrective action guidance for States. Federal response in States is limited to classic emergencies (i.e., the release immediately threatens human health and the environment and requires response within hours or days), while Federal response on Indian Lands may occur in situations where immediate action is not necessary but the release is considered time-critical and will require response within six months.

Federal-lead UST corrective actions will be performed by the same EPA emergency response and contractor personnel that conduct oil and hazardous substance removal actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and section 311 of the Clean Water Act. Removal actions appropriate to a Federal response to an UST release on Indian Lands include, but are not limited to, the following:

- Site investigations or exposure assessments to determine potential health effects of a leak and to establish corrective action priorities;

- Ventilation of fumes from a residence or other building;
- Construction of fences, warning signs, or other security or site control precautions;
- Emptying of a leaking UST or removal of contaminated soils;
- Construction of an intercepting ditch;
- Provision of alternative water supplies; and
- Temporary relocation of affected residents.

Federal-lead corrective action on an Indian Lands site will be terminated when the threat to human health and the environment has been mitigated. Release situations for which longer-term corrective actions are necessary, such as groundwater cleanup, may require remedial actions that are beyond the capabilities of EPA's removal program. OUST will address long-term corrective action under separate guidance when the need for such action is established.

Efforts will be made to involve Indian Tribal authorities in cleanup decisions. On-Scene Coordinators and UST Regional personnel should rely on Indian Tribal authorities to gather as much information as possible about the site and owners and operators prior to initiating a Federal response action.

2.0 CRITERIA FOR FEDERAL-LEAD RESPONSE

To qualify for Federal-lead response, an Indian Lands site must meet the legislative criteria specified in Section 9003(h) of Subtitle I of the SWDA for the periods before and after the effective date of the final regulations, and the site must pose a time-critical (i.e., an immediate or near-term substantial threat to human health and the environment). More specifically, the site must meet at least one of the following criteria:

- The release poses a time-critical, either immediate or near-term, substantial threat of direct human, animal, or food chain exposure to petroleum;
- The release poses a time-critical, either immediate or near-term, threat of fire or explosion;
- The release poses a time-critical, either immediate or near-term, substantial threat to public drinking water supplies; or
- The release poses a time-critical, either immediate or near-term, threat to a significant population or substantial amounts of property, or poses substantial threats to natural resources.

These criteria have been expanded from those requiring a "major" emergency for Federal-lead response in States. This allows EPA to respond to a wider range of releases on Indian Lands. Specifically, near-term has been added to the criteria to allow for Federal-lead response on sites that pose a less immediate, but still substantial threat. Immediate and near-term threats are defined as follows:

- **Immediate threat**: A release requires response within hours or days of discovery. Examples include potential or actual UST explosions or fires, or a release that is contaminating a public well.

- **Near-term threat**: The release is time-critical, and requires response within six months. An example includes a slow release of petroleum spreading at a rate which will contaminate residences within 6 months.

Since the OSC must give priority to responding to "classical" emergencies, both in the removal program under CERCLA as well as the LUST program, response to less urgent UST removals will depend on the availability of staff and resources.

3.0 DELEGATIONS

The procedures for initiating Federal-lead corrective actions on Indian Lands are covered by the delegations specified in the Federal-lead guidance on UST corrective actions in States. Federal UST corrective actions that initially cost over $250,000, require approval of the Assistant Administrator (AA), Office of Solid Waste and Emergency Response (OSWER). The Office Director (OD) of the Office of Emergency and Remedial Response (OERR) will approve actions that initially cost up to $250,000 and ceiling increases that bring the cost of an action up to $250,000, with concurrence from the OD, Office of Underground Storage Tanks (OUST).

In addition, Regional Administrators (RAs) may approve actions costing up to $50,000 in acute, life-threatening situations where response must be initiated before Headquarters can be contacted. This authority may be redelegated to Division Directors and On-Scene Coordinators.

4.0 APPROVAL PROCESS

The approval process for Federal-lead corrective actions on Indian Lands is essentially the same as that for Federal-lead UST corrective actions taken in States. However, on Indian Lands EPA's Regional personnel are also responsible for assisting in the initial evaluation of the site and gathering of information necessary to support a request for Federal action. To qualify for Federal-lead action a site must pose an immediate or near-term substantial threat to human health or the environment, the Indian Tribe is unable to respond, and the owner or operator must be unwilling or unable to carry out corrective action properly and in a timely manner. Adherence to the

procedures set forth in this approval process ensures that Federal-lead corrective actions on Indian Lands will be limited to sites that meet the criteria in section 2.0 of this guidance.

To request Federal-lead corrective action, an individual designated by Tribal authorities must notify the Regional Oil and Hazardous Materials (OHM) Coordinator, or other designated Regional management official, that a release has occurred. The UST Regional Program Manager will gather information about the site through Indian Tribes and other Federal agencies, such as the Bureau of Indian Affairs and the Indian Health Services, and will evaluate all attempts made by Indian Tribes to locate the responsible party. The assigned On-Scene Coordinator (OSC) and the UST Regional Program Manager will determine whether the site qualifies for Federal response. If insufficient information about the site is available from outside sources, the OSC, in coordination with the UST Regional Program Manager, may conduct a site assessment if available information provides sufficient reason to warrant such a visit. To use the Technical Assistance Team (TAT) on a site assessment, the OSC must obtain Headquarters approval as prescribed in OSWER directive 9360.0-16A (Appendix A, section 6.2.1).

Requests for Federal-lead corrective action can either be oral, for sites requiring action within hours or days, or written, for those sites that do not require immediate action.

4.1 Oral Request

Oral requests should be used in case of an emergency in which there exists an immediate threat of death, injury, or catastrophic environmental damage due to a petroleum release from an UST. The OSC may take immediate action to address the situation, utilizing the RA's authority to approve emergency obligations of up to $50,000.

The OSC, in coordination with the UST Regional Program Manager, when possible, will get approval from the RA or the RA's representative to request approval from Headquarters as prescribed in OSWER directive 9360.0-16A. The OSC provides oral request information to Headquarters (see Appendix A). This information is similar to that required for an oral request for Federal-lead corrective action in States, except that additional information is required on the Tribal authority reporting the release and having jurisdiction over the site. If the request is approved, the UST Regional Program Manager, in conjunction with the OSC, prepares an action memorandum within 10 days of initiating a response, which contains more detailed information about the site (see Appendix B).

4.2 Written Request

The UST Regional Program Manager, in conjunction with the OSC, will gather all information necessary to support a request for Federal-lead

corrective action and will prepare an action memorandum (see Appendix B). This action memorandum is similar to that required for a written request for Federal-lead corrective action in States except that it includes sections requiring information on the Indian Tribe's capacity to oversee or conduct corrective actions and information on why the site meets the criteria for Federal response on Indian Lands. The action memorandum is reviewed by the Emergency Response Division (ERD) Regional Coordinator and other appropriate Headquarters official(s) prior to approval as prescribed in the Federal-lead UST corrective action guidance document for States. The ERD Regional Coordinator will communicate to the Region as quickly as possible the decision to approve or deny the action.

5.0 ENFORCEMENT ACTIONS

Enforcement actions may be required prior to the initiation of Federal-lead corrective actions to ensure that every attempt is made to compel the owner or operator to respond to the release. Potential responsible party (PRP) searches and negotiations to secure owner or operator action should be undertaken in most instances by Indian Tribes. Depending on the availability of time and resources, the OSC shall undertake initial PRP searches and preliminary discussions with PRPs, if necessary, to secure owner or operator action.

Subsequent enforcement actions against owners or operators, including cost recovery, should be coordinated by Regional UST personnel in conjunction with other responsible EPA Offices. Due to the limited number of releases expected to occur on Indian Lands, and the requirements for encouraging owners or operators to respond to such releases prior to using Trust Fund monies, cost recovery by Regional personnel will be necessary only in limited instances.

6.0 INITIATING AND MANAGING FEDERAL-LEAD UST CORRECTIVE ACTION

The procedures to be followed for initiating and managing Federal-lead corrective action on Indian Lands (including information required) are the same as those specified in OSWER directive 9360.0-16A.

Procedures for initiating Federal-lead corrective action are outlined in section 6.0 of OSWER directive 9360.0-16A. These include procedures for accounting information, procuring EPA contractor and other services, and obtaining assistance from other agencies.

Procedures for managing Federal-lead UST corrective actions are outlined in section 7.0 of OSWER directive 9360.0-16A. These include information and procedures for allowable costs, stabilization standards, ceiling increases, reporting requirements, and operation and maintenance.

APPENDIX A: ORAL REQUEST INFORMATION

1. What Indian Tribal authority has jurisdiction over the site?

2. Is the person requesting Federal-response an official representative of the Indian Tribe? If so, in what capacity does he or she serve?

3 Does the Indian Tribe have its own legislative authority that covers this release?

4. Does the Indian Tribe have any formal agreement/relationship with the State regarding UST cleanups or UST related programs?

5. Is the release from a leaking underground storage tank (see definition in 9001(1) of SWDA)?

6. Is the released material a petroleum substance (see definition in Section 9001(8) of SWDA)?

7. Location of release.

8. Time and date release was discovered.

9. Name, description, and general condition of facility.

10. Is the release a long-term or chronic problem?

11. Type and estimated amount of petroleum released to the environment.

12. Which of the criteria for Federal-lead response on Indian Lands in section 2.0 does the release meet?

13. Number and proximity of persons potentially affected.

14. Increased threat to human health or the environment if response is delayed or denied?

15. Ongoing efforts to respond to release?

16. Tribal authority's ability and willingness to provide response, with specific reasons for inability to respond (e.g., lack of authority, technical expertise, qualified staff, or funding).

17. Efforts undertaken to locate owner/operator and pursue an owner/operator-financed cleanup.

18. Type of action needed to mitigate or stabilize emergency (if known)

APPENDIX B: ACTION MEMORANDUM

The Regional UST Manager, in conjunction with the OSC, must submit an action memorandum to initiate approval of a written request for Federal action on Indian Lands and within 10 days of an oral request. The action memorandum should address all of the topics outlined in Appendix C of OSWER Directive 9360.0-16A, "State Request Letter Format," in addition to the topics specified below. References to a State or local implementing agency in Appendix C of OSWER Directive 9360.0-16A should be changed to Indian Tribal authority.

The Regional UST Manager and the OSC should attempt to gather the necessary information through Indian Tribal authorities and other sources. If the information necessary to substantially complete the action memorandum is unavailable from these sources, an on-site evaluation/investigation may be undertaken if resources permit.

I. HEADING

DATE: [Month/Day/Year]

SUBJECT: Request for Emergency Federal-Lead UST Corrective Action on Indian Lands
[Site]
ACTION MEMORANDUM

FROM: [Regional Administrator]

TO: [Director, OERR]

II. BACKGROUND

The background section should contain information on the location of the site, the nature of the incident (including the history of the site, general character of the site, and issues relevant to petroleum management), quantity and types of petroleum substances present, Indian Tribal authority's role, the cleanup time frame, and actions to date, including previous and current actions to abate the threat. For specific instructions on these sections see OSWER Directive 9360.0-16A, Appendix C

A. Location Description

B. Site and Incident Characteristics

C. Quantity and Types of Petroleum Substances Present

D. Indian Tribal Authority Capacity

1. Describe the capacity of the appropriate Indian Tribal authority to oversee/conduct corrective actions.

- Discuss the appropriate Tribal authority's past experience with UST corrective actions. Has the Tribal authority ever overseen/conducted an UST cleanup or petroleum spill? If so, describe the incident and cleanup activities undertaken.

- Discuss the Indian Tribal authority's experience with other EPA, State, or local environmental programs

- Discuss the Indian Tribal authority's experience in overseeing contractors.

E. Actions to Date

IV. CRITERIA MET FOR TIME-CRITICAL FEDERAL-LEAD CORRECTIVE ACTION ON INDIAN LANDS

Strict criteria must be met to justify Federal response to a petroleum release from an underground storage tank on Indian Lands. The Indian Tribe must be unable to respond, the owner or operator must be unable or unwilling to provide adequate response, and, in addition, the release must pose an immediate or near-term (within six months) substantial threat to human health and the environment, thus indicating a time-critical situation. A time-critical situation exists if:

- The release poses an immediate or near-term substantial threat of direct human, animal, or food chain exposure to petroleum;

- The release poses an immediate or near-term threat of fire or explosion;

- The release poses an immediate or near-term substantial threat to public drinking-water supplies; or

- The release poses and immediate or near-term threat to a significant population or substantial amounts of property, or poses substantial threats to natural resources.

Specific reasons why the site meets the above criteria should be discussed in this section.

V. ATTEMPTS MADE AT SECURING OWNER/OPERATOR CLEANUP

See OSWER Directive 9360.0-16A, Appendix C.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR SHOULD ACTIONS BE DELAYED.

See OSWER Directive 9360.0-16A, Appendix C.

VII. TYPE OF ACTION REQUESTED

See OSWER Directive 9360.0-16A, Appendix C.

Definition of "Liquid Waste"

Key Words: Waste Analysis, Liquid Waste, Free Liquids

Regulations: 40 CFR 260.10(a)(25), 261.21

Subject: Definition of "Liquid Waste"

Addressee: Chris Howell, Chemical Processors, Inc,
5501 Airport Way south Seattle, WA.

Originator: David Friedman, Manager, Waste Analysis Program,
Hazardous and Industiral Waste Division

Source Doc: #9432.01(81)

Date: 6-28-81

Summary:

A liquid is any material that will pass through a 0.45 micron filter at a pressure differential of 75 psi. If the material to be evaluated consists of two or more phases, then the phases should be separated by centrifugation or other means prior to evaluating whether any of the phases meet the above definition. Free liquids as defined in §260.10 (a)(25) are defined as any liquid which passes through the Paint Filter Test (method 9095).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460
OFFICE OF SOLID WASTE

JUN 26 1981

OFFICE OF WATER
AND WASTE MANAGEMENT

Mr. Chris Howell
Chemical Processors, Inc.
5501 Airport Way south
Seattle, WA 98108

Dear Mr. Howell:

I am in receipt of your letter of June 1, 1981 to Mr. Ken Schuster regarding your request for a working definition of a "liquid" waste.

As you are aware, the Agency is actively working to develop improved laboratory procedures for defining both "ignitable" and "liquid." In the interim you may employ the following working definition of a "liquid" when evaluating wastes:

> A liquid is any material that will pass through a 0.45 micron filter at a pressure differential of 75 psi. If the material to be evaluated consists of 2 or more phases then the phases should be separated by centrifugation or other means prior to evaluating whether any of the phases meet the above definition. "Free liquids" as defined in §260.10(a)(25) are a subset of this broader class of liquids.

Any waste or phases of a waste found to meet the above definition of a "liquid" should then be evaluated for ignitability using the procedures in §261.21. All such wastes which contain or consist of liquids which have a flash point below 60°C are to be considered as ignitable wastes.

I hope this response serves to answer your question. If you would like further information please feel free to give me a call at (202) 755-9187.

Sincerely,

David Friedman

David Friedman
Manager
Waste Analysis Program
Hazardous and Industrial Waste Division (WH-565)

Determining If the Soils from Missouri Dioxin Sites are Hazardous

Key Words: Contaminated Soil, Dioxin

Regulations:

Subject: Determining if the Soils from Missouri Dioxin Sites are Hazardous

Addressee: David Wagoner, Director, Air and Waste Management Division, Region VII

Originator: John H. Skinner, Director, Office of Solid Waste

Source Doc: #9441.01(84)

Date: 1-6-84

Summary:

To determine if a soil, in which toxic compounds are present, is a RCRA hazardous waste, the origin of the toxicants must be known. If the exact origin of the toxicants is unknown, the soil is not considered RCRA hazardous unless it exhibits one or more of the characteristics of RCRA hazardous waste.

JAN - 6 1984

MEMORANDUM

SUBJECT: Soils from Missouri Dioxin Sites

FROM: John H. Skinner, Director
Office of Solid Waste

TO: David Wagoner, Director
Air and Waste Management Division, Region VII

We have reviewed the results of the analytical program for soils from Missouri dioxin sites, in response to your request for an interpretation as to whether or not these soils are RCRA hazardous wastes.

The analyses indicate the presence of a number of toxic compounds in many of the soil samples taken from various sites. However, the presence of these toxicants in the soil does not automatically make the soil a RCRA hazardous waste. The origin of the toxicants must be known in order to determine that they are derived from a listed hazardous waste(s). If the exact origin of the toxicants is not known, the soils cannot be considered RCRA hazardous wastes unless they exhibit one or more of the characteristics of hazardous waste (i.e., ignitability, corrosivity, reactivity, or extraction procedure toxicity).

If there are any questions, please contact Matt Straus in the Waste Identification Branch (FTS 382-4770).

DFagan:dmf:1/5/84:disk Fagan 6

Definition of "Treatment"

Key Words: Treatment, Containers, Authorized States

Regulations: 40 CFR 260.10

Subject: Definition of Treatment

Addressee: Robert F. Walter, Office of Environmental Health and Safety, Virginia Commonwealth University, Box 112, Richmond, VA 23298

Originator: John H. Skinner, Director, Office of Solid Waste

Source Doc: #9432.01(85)

Date: 6-26-85

Summary:

The letter clarifies the definition of "treatment" under RCRA. In light of that definition, the puncturing, crushing, or shredding of containers holding hazardous waste does not constitute treatment as defined under RCRA.

JUN 26 1985

Mr. Robert F. Walter
Office of Environmental Health and Safety
Virginia Commonwealth University
Box 112
Richmond, Virginia 23298

Dear Mr. Walter:

This is in response to your letter of June 17, 1985, in which you question whether shredding of containers holding toluene constitutes "treatment" of a waste under RCRA.

The Environmental Protection Agency (EPA) has taken the position that puncturing, crushing, or shredding of containers does not constitute treatment. As defined under RCRA treating deals with changing the state of the waste; the shredding operation changes the physical character of the container, not the waste. This interpretation is further explained in the enclosed letter to Mr. Bierlein, Counsel for Safe Transportation of Hazardous Articles, responding to questions on the same subject. Of course, this interpretation applies only to those States where the Federal RCRA regulations apply. It is intended that the States take control of the hazardous waste program; where a State program is in operation, that State's rules and regulations prevail in lieu of the Federal program. Virginia was granted final authorization for their program as of December 1984; thus, it is their rules that apply to your wastes.

If you have any further questions, please contact Alan Corson, of my staff; he may be reached at 202/382-4770.

Sincerely,

John H. Skinner
Director
Office of Solid Waste

Enclosure

Interim RCRA/CERCLA Guidance on Non-Contiguous Sites and On-Site Management of Waste and Treatment Residue

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C. 20460

MAR 27 1986

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

9347.0-1

MEMORANDUM

SUBJECT: Interim RCRA/CERCLA Guidance on Non-Contiguous Sites and On-Site Management of Waste and Treatment Residue

FROM: J. Winston Porter
Assistant Administrator

TO: Regional Administrators
Regions I - X

Region VI has recently raised several RCRA/CERCLA interface issues that have broad implications for remedial actions at many other Superfund sites. The purpose of this memorandum is to lay out EPA policy on several of these issues, including:

1. Combined treatment of CERCLA waste from non-contiguous locations;

2. On-site disposal of treatment residue;

3. Limitations on the construction of hazardous waste incinerators for on-site CERCLA use; and

4. Off-site treatment of waste and redisposal on-site.

This memorandum and attachment represent interim guidance which should be used now, but will be refined following regional review. Please submit your comments on this interim guidance to Betsy Shaw (FTS 382-3304) of the Hazardous Site Control Division, Office of Emergency and Remedial Response by April 28, 1986. We are particularly interested in comments which address the implications of this guidance for Superfund removal actions at both NPL and non-NPL sites.

Select RCRA/CERCLA Issues:

1. Combined treatment and/or disposal of CERCLA waste from non-contiguous NPL sites

NPL sites may be combined for remedial action if the following statutory criteria are met: the sites must be geographically close or pose similar threats to public health and the environment (CERCLA §104 (d)(4)). If combined remedial actions will involve the transport of waste from one site to another site, the wastes must be compatible for the selected treatment or disposal method and managed in a manner that is part of the highly reliable long-term remedy selected for that site or group of sites. Combined remedies must be cost-effective and should not result in any significant additional short-term impacts on public health and the environment at the receiving site. As in every case, CERCLA waste which is transported must be manifested. The Record of Decision (ROD) for a remedial action that involves more than one site should state that several sites are being treated as one and that their combined treatment constitutes on-site action. (See attachment.)

2. On-site management of waste and treatment residue

EPA interprets CERCLA to require that off-site treatment, storage and disposal of hazardous wastes comply with all RCRA requirements, including permitting. With respect to on-site disposal, the National Contingency Plan (50 FR 47912, November 20, 1985) requires that CERCLA activities meet the technical requirements of RCRA (and other Federal environmental requirements) that are applicable or relevant and appropriate[1] while the procedural requirements, such as permitting, need not be met.

Waste and treatment residues may be managed on-site in several ways. The approach selected will depend on the cost-effectiveness analysis at each site. One approach is to remove the waste (and treat if desired) and dispose of the waste and/or treatment residue in a new on-site land disposal unit. This unit would meet the technical RCRA Subtitle C land disposal requirements of 40 CFR Part 264 (e.g. §264.301 design and operating requirements, and land disposal closure and post closure care requirements in §264.310).

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[1] "Applicable requirements" are those Federal requirements that would be legally applicable if the response actions were not undertaken pursuant to CERCLA §104 and §106. "Relevant and appropriate requirements" are those Federal requirements that, while not applicable, are designed to apply to problems sufficiently similar to those encountered at CERCLA sites that their application is appropriate.

The second approach allows waste to be removed, treated and the residuals to be replaced in the area from which they originated. The area would then be capped and monitored consistent with the technical requirements of land disposal closure (§264.310). Under this approach, a double liner/ leachate collection system would not be required if the wastes are removed during closure for the purpose of treating them to enhance the effectiveness of the closure.

A third approach requires no further management of waste or treatment residue if the waste can be evaluated, determined to be non-hazardous and delisted. This would normally entail preparing a delisting analysis using the Vertical and Horizontal Spread (VHS) model (50 FR 48886, November 27, 1985) or other similar generic models that do not consider site specific factors. A delisting petition is not required for on-site CERCLA actions.

Finally, the National Contingency Plan (40 FR 47947 - 47948) provides for selection of a remedy that does not attain applicable or relevant and appropriate requirements if: 1) the alternative is only an interim remedy; 2) the need to use the Fund at other sites outweighs the need to implement a remedy that fully attains all requirements; 3) it is technically impractical to implement a remedy that meets all applicable or relevant and appropriate requirements; 4) meeting all such requirements will result in an unacceptable environmental impact; or 5) there is an overriding public interest related to enforcement.

The determination that RCRA requirements for treatment, storage and disposal will be met should be made during the Remedial Investigation and Feasibility Study (RI/FS). In the case of incinerator residue, a waste analysis should be conducted during the RI to provide the necessary data. Subsequent analyses, including a test burn, may be conducted during Remedial Design (RD) as appropriate on a case by case basis. Assurance of the consistency of the remedy with RCRA and other applicable or relevant and appropriate Federal requirements should be presented in the ROD, and, if appropriate, reviewed again during RD.

3. <u>Limitations on the construction of hazardous waste incinerators for on-site CERCLA use</u>

If an incinerator is to be constructed for on-site remedial action, there should be a clear intent to dismantle or remove the unit after the CERCLA action is completed. Dismantling or removal should be a part of the remedy presented in the ROD and funds should be included in the financial or contractual documents. Should there be plans to accept commercial waste at the facility after the CERCLA wastes have been treated or destroyed, it is EPA policy that a RCRA permit be obtained before the unit is constructed. (See attachment.)

4. Off-site treatment of waste and redisposal on-site

On-site disposal may involve transport of waste off-site for treatment or storage if the CERCLA waste or treatment residue is ultimately disposed of at the site of waste origin. For this activity, the CERCLA waste is manifested to and from the site and maintained separately throughout all off-site activities.

If you have any questions regarding this memorandum or attachment, please call Betsy Shaw or Bill Hanson (FTS 382-2345).

Attachment

Attachment: Interim RCRA/CERCLA Guidance on Non-Contiguous Sites and On-Site Management of Waste and Treatment Residue

Combining Hazardous Waste Sites for Remedial Action

Background:

Several situations have arisen where it may be advantageous to combine several NPL sites together for the purpose of conducting a more effective remedial action. Subject to the requirements in CERCLA §104 (d)(4), sites in proximity to one another, sites with similar wastes, and sites with the same PRPs may be good candidates for combined remedial actions. A treatment system or incinerator, for example, may be more efficient treating wastes from several sites. Expected economies of scale would lower the unit costs and favor more reliable technologies. Overall, protection of public health and the environment may increase if the waste of several smaller sites are combined at a central treatment or disposal location.

Legislative Authority: Section 104(d)(4) of CERCLA states that non-contiguous sites may be treated as one site when the separate sites are reasonably related on the basis of:

1) Geography; or
2) Threat or potential threat to public health and the environment.

Cost-Effective Reasons for Combining NPL Sites for Remedial Action

Several different circumstances may occur that favor combining site remedial actions.

Example 1: Incineration is effective for destroying wastes at several closely arrayed sites. One alternative is to use a mobile incinerator at each site. Another alternative that may be cost effective is to incinerate the wastes of several sites at one location. The residue could be disposed at the original site but, again, it would probably be more cost-effective to dispose of all ash at the same location.

Example 2: Construction of a new on-site land disposal facility has been found to be cost effective at site A. Wastes at nearby site B are similar in character and a small quantity needs to be managed.

Site B wastes could be managed on-site but it could be less expensive and more effective to dispose of the waste at Site A.

Example 3: Site A and Site B have similar wastes and are close to one another. RCRA closure with a cap has been found to be cost effective at both sites. It may be cost effective to design and remediate both sites at the same time. Therefore, the State or Region would like to contract with one design firm and one construction company to undertake both remedies.

Regions should identify opportunities to combine RI/FSs for several NPL sites in the Site Management Plan or other pre-remedial activities. Combining RI/FSs may improve the timing and effectiveness of remedial actions and should be shown in the Superfund Comprehensive Accomplishments Plan (SCAP).

Criteria for Treating Non-Contiguous Sites as One

The September 21, 1984 NPL listing (40 FR 37076) provides the flexibility to respond to several sites listed separately on the NPL with a single response if the statutory factors are met and it appears cost-effective to do so.

The following criteria would be used to treat non-contiguous sites as one when transportation of the waste is involved:

1. Sites are reasonably close to one another;

2. Wastes must be compatible for the selected treatment or disposal approach;

3. Wastes that are transported to another site need to be managed in a manner that is part of a highly reliable, long-term remedy;[1] and

4. Incremental short-term impacts (e.g. sudden releases, fugitive dust and fumes) to public health and the environment at the receiving site will be minimal. (This factor is important when the receiving site is located near a residential community.)

Of course, the remedy must also be cost-effective by either costing less or by providing increased or more reliable protection of public health and environment than two separate remedies.

When short-term impacts are found to be significant, combining sites may be determined to be inappropriate and the remedy may be reconfigured. Options include but are not limited to:

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1 This type of remedy generally is defined as:
a. Requiring little or no long-term active O/M;
b. Relatively low probability of release to the environment;
c. If a release did occur, it would not endanger public health or the environment.

1. Use another hazardous waste site where there would be fewer impacts;

2. Pretreat wastes at the original site locations (e.g., metal extraction) or improve materials handling procedures;

3. Dispose of treated residuals (e.g., incineration ash) at originating sites.

If incremental short-term impacts are significant and cannot be mitigated, then non-contiguous sites should not be treated as one for the purpose of combined treatment or disposal regardless of cost-effectiveness.

CERCLA Compliance with Other Environmental Laws

Under response actions occuring at non-contiguous sites which are treated as on-site actions, Superfund or PRPs under an EPA approved enforcement action would:

1. Manifest hazardous wastes transported to another site;

2. Meet the applicable or relevant and appropriate technical requirements of RCRA TSD facilities but would not be required to obtain RCRA permits.

Limitation: The cost of dismantling or removing a treatment or storage unit constructed as part of an on-site remedy should be factored into the determination of the cost-effectiveness of that remedy. If that alternative is selected, funds for the dismantling of the unit should be included in the remedy obligation. Should there be plans for a treatment or storage unit constructed as part of an on-site remedy to accept commercial wastes after the CERCLA waste has been processed, it is EPA policy that a RCRA permit be obtained before the unit is constructed. The cost and scheduling implications of obtaining a permit should also be factored into the analysis of cost-effectiveness.

Proposed Implementation Process:

1. Initial evaluation of NPL sites to determine if the RI/FSs of several sites should be combined. Show combined RI/FSs on SCAP.

2. Feasibility Study recommends that a combined site action would be cost-effective. Further, the Feasibility Study shows that the selected remedy meets the necessary criteria of this policy. (The NPL need not be amended.)

3. A joint public comment period is held to seek comment from all interested parties on the proposed consolidation of sites and a responsiveness summary is written.

4. Regional Administrator or Assistant Administrator signs Record of Decision for non-contiguous site action.

5. A new Record of Decision, public comment period and responsiveness summary would be required if additional sites are added to the response plan after the first Record of Decision.

Responsibilities of Regional RCRA Off-Site Disposal Contacts

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Responsibilities of Regional RCRA Off-Site Disposal Contacts

FROM: Jerry Kotas, Chief
Compliance & Implementation Branch

TO: RCRA Enforcement Branch Chiefs
Regions I-X

It has come to our attention that CERCLA personnel have experienced some difficulty in obtaining timely facility compliance status information from Regional RCRA Off-Site Disposal Contacts (RROCs). CERCLA off-site disposal decisions related to emergency cleanups were delayed because the RROC was on travel, on vacation, or otheswise unavailable, and no other person in that Region had been designated to act as a substitute for the RROC. On one occasion, it took a CERCLA On-Scene Coordinator several days to make contact with an RROC. In light of this, please designate an alternate RROC and provide me with the names, addresses, and phone numbers of both your lead and alternate RROCs within 2 weeks. Please note that, as the names of designated RROCs or their alternates change, you should notify this office as soon as possible.

Please be reminded that each Region is responsible for providing timely facility compliance status information to CERCLA response personnel. If the designated RROC is unavailable, the alternate should be available to respond to such requests for information. Secretarial staff should be informed that such requests should be addressed to the alternate. This will assure that off-site disposal of CERCLA wastes will proceed as quickly as possible, especially in the case of emergency actions, and in keeping with the mandates of the CERCLA and RCRA programs.

In addition to the above, an upcoming initiative related to the adoption of the "Procedure for Planning and Implementing Off-Site Response Actions" (Off-Site Policy) by other Federal agencies is expected to increase the frequency of inquiries

that RROCs will receive regarding facility compliance status. This will make the designation of an alternate, to respond in the absence of the RROC, even more critical. As many of you know, GAO recommended in a recent report that EPA encourage other Federal agencies to adopt the Off-Site Policy for disposal of response-related and other hazardous wastes. That recommendation is based upon the premise that no Federal wastes should be sent to facilities which may pose current or future threats to health or the environment.

The Assistant Administrator for OSWER has endorsed that recommendation, and discussions with other agencies are underway on this topic. Representatives from other agencies will be given the names of the RROCs and alternates as the source of information on "eligibility" of facilities within the Region. It is important that the RROC or the alternate be available for representatives from other Federal agencies, as well as for EPA personnel managing CERCLA response actions.

There are several other activities related to the Off-Site Policy in progress, and I would like to briefly summarize them for you. In the very near term, interim guidance will likely be issued from the Assistant Administrator on whether and how to provide notice, and an opportunity to confer, to facilities which are deemed ineligible under the Policy. Final revisions to the policy (including any changes to the notice procedures) will be issued in May, 1986 or therabouts. OSWER will also prepare guidance and forms for maintaining and reporting information related to both facility status and disposal location for CERCLA wastes.

We will try to keep you informed as to the status of each of these efforts. If you need any further information on the new initiatives mentioned above, please contact Mike Kilpatrick at (FTS) 382-4812.

Thank you for your cooperation in this matter.

cc: Regional RCRA Off-Site Contacts, Regions I-X
Lee Herwig, OFA
Mike Kilpatrick, OWPE
Tim Fields, ERD
Superfund Branch Chiefs, Regions I-X

Use of Liquids for Wind Dispersal Control at Hazardous Waste Landfills

United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

DIRECTIVE NUMBER: 9487.00-1A

TITLE: Use of Liquids for Wind Dispersal Control at Hazardous Waste Landfills

APPROVAL DATE:

EFFECTIVE DATE:

ORIGINATING OFFICE:

☒ FINAL

☐ DRAFT

STATUS:

REFERENCE (other documents):

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UNITED STATES ENVIR)NMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 21 1986

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OSWER POLICY DIRECTIVE #9487.00-1A

MEMORANDUM

SUBJECT: Use of Liquids for Wind Dispersal Control at Hazardous Waste Landfills

FROM: Marcia Williams, Director Marcia
Office of Solid Waste (WH-562)

TO: Robert L. Duprey, Director
EPA Region VIII
Waste Management Division (8-HWM)

This is in response to your request received in November 1985 for guidance concerning the question of under what conditions, if any, it is acceptable to use water or other liquid chemical stabilizers to control wind dispersal of waste in a landfill cell. We believe that the use of nonhazardous liquids for wind dispersal control at hazardous waste landfills should not be subject to the restrictions under Section 3004(c)(3) of HSWA. This use must, of course, be limited to amounts necessary to comply with wind dispersal control requirements. Such amounts should be determined by regulatory authorities on a case-by-case basis.

As stated in your memorandum, Sections 264.301(f) and 265.302(d) require the owner or operator of a landfill containing hazardous waste that is subject to wind dispersal to cover or otherwise manage the landfill to control such dispersal. Since the liquids that are used to control wind dispersal are usually nonhazardous (e.g., water), a response to your question is contained in a guidance we have drafted concerning Section 3004(c)(3) (which addresses the placement of nonhazardous liquids in hazardous waste landfills) of the 1984 Hazardous and Solid Waste Amendments (HSWA) to RCRA. This draft guidance will be sent to the regional offices in the near future.

We believe that the language and legislative history of Section 3004(c)(3) specifically, and of Section 3004(c) generally, indicate that Congress' primary concern in banning liquids was to control the placement of liquids in landfills for treatment, storage, and disposal. We believe, further, that Congress did not intend to require owners and operators to apply for an exemption for uses of nonhazardous liquids in or near a landfill that are necessary in order to comply with the technical requirements of the RCRA regulations.

You also inquired in your memorandum how wind dispersal control, including the use of liquid agents, was being managed at other sites nationally, and under what conditions. It is unfortunate that we have little information concerning the national management of wind dispersal. We do know, however, that the use of water appears to be a common management practice for control of wind dispersal for dust and particulate matter. Other methods include waste containerization, use of cover material (soil and other waste), and waste treatment before disposal (e.g., chemical fixation, carbon adsorption).

We hope this response clarifies the issue. If you should have any additional comments or concerns, please contact Paul Cassidy, of my staff, at FTS-382-4682.

Let me say finally that we were very impressed with your full and perceptive analysis of the issue of the limited use of liquids for controlling wind dispersal.

cc: EPA Regions I - VII and IX - X

Consideration of RCRA Requirements in Performing CERCLA Responses at Mining Waste Sites

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

9234.0-4

AUG 19 1986

MEMORANDUM

SUBJECT: Consideration of RCRA Requirements in Performing CERCLA Responses at Mining Waste Sites

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

Walter W. Kovalick, Jr. for

TO: Waste Management Division Directors
Regions I - X

As you know, on July 3, 1986, the Agency issued a final determination on whether mining waste would be regulated under Subtitle C of RCRA (copy attached). This determination was based on a report to Congress mandated by RCRA Section 3001(b)(3)(C) and subsequent public comments. The determination is that mining wastes will not be regulated under Subtitle C at this time. This conclusion is based on the belief that several aspects of EPA's current hazardous waste management standards if applied universally to mining sites, are likely to be environmentally unnecessary, technically infeasible, or economically impractical.

However, given the concern about actual and potential mining waste problems, the Agency intends to develop a program for regulating mining waste under Subtitle D. The current Subtitle D program establishes criteria principally aimed at municipal and industrial solid waste which focus on standards related to surface water discharges, groundwater contamination and endangered species. Modifications to this program will focus on identifying environmental problems, setting priorities for applying controls at sites with a high potential for risk, and employing a risk management approach in the development of appropriate standards to protect human health and the environment, as necessary, including closure options, tailored controls, pretreatment of wastes prior to disposal, and cleanup options. Revisions to Subtitle D criteria are expected to be proposed in mid-1988; however, EPA has reserved the option to reexamine a modified Subtitle C in the future if this approach is unworkable or insufficient.

In the interim, Superfund will continue to address mining waste problems through the RI/FS and ROD/EDD processes taking into account current Subtitle D requirements as well as options for addressing risks not addressed by Subtitle D requirements. To address such remaining risks, you may wish to consider the technical requirements of Subtitle C regulations during the initial review of remedial alternatives. If these requirements seem to be technically infeasible, they may be rejected early in the screening process. If Subtitle C approaches appear to satisfy the criteria found in Section 300.68 (g), Initial Screening of Alternatives, of the NCP, they should be considered in the detailed analysis. Other remedial alternatives should be evaluated in a risk management analysis. In some cases, a combination of Subtitle C and risk analysis approaches may be used to address a discrete phase of response. All data generated during remedial planning, including the basis for selection of specific remedies, should be forwarded to my office as it becomes available so that the information can be transmitted to OSW to assist that office in its development of standards for mining wastes.

Attachment

cc: Marcia Williams, OSW
Gene Lucero, OWPE
Dan Berry, OGC

Federal Register

Thursday
July 3, 1986

Part V

Environmental Protection Agency

40 CFR Part 261

Regulatory Determination For Wastes From the Extraction and Beneficiation of Ores and Minerals

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[FRL 3033-7]

Regulatory Determination for Wastes from the Extraction and Beneficiation of Ores and Minerals

AGENCY: Environmental Protection Agency.

ACTION: Regulatory determination.

SUMMARY: This is the regulatory determination for solid waste from the extraction and beneficiation of ores and minerals required by section 3001(b)(3)(C) of the Resource Conservation and Recovery Act (RCRA). This section of RCRA requires the Administrator to determine whether to promulgate regulations under Subtitle C of the Act for these wastes or determine that such regulations are unwarranted: the Administrator must make this determination no later than six months after completing a Report to Congress on these wastes and after public hearings and the opportunity to comment on the report. After completing these activities and reviewing the information available, the Agency has determined that regulation of the wastes studied in the Report to Congress, i.e., wastes from the extraction and beneficiation of ores and minerals, under Subtitle C is not warranted at this time.

ADDRESS: The address for the Headquarters docket is: United States Environmental Protection Agency, EPA RCRA docket (Sub-basement), 401 M street, SW., Washington DC 20460, (202) 475-9327. For further details on what the EPA RCRA docket contains, see Section VII. of this preamble, titled "EPA RCRA Docket" under "SUPPLEMENTARY INFORMATION.".

FOR FURTHER INFORMATION CONTACT: RCRA/Superfund Hotline at (800) 424-9346 or (202) 382-3000 or Dan Derkics at (202) 382-2791.

SUPPLEMENTARY INFORMATION:

Preamble Outline

Supplementary Information

I. Summary

Based on the Report to Congress, comments on the report, and other available information, EPA has determined that regulation of mining waste under Subtitle C of the Resource Conservation and Recovery Act (RCRA) is not warranted at this time.

This conclusion is based on EPA's belief that several aspects of EPA's current hazardous waste management standards are likely to be environmentally unnecessary, technically infeasible, or economically impractical when applied to mining waste. While under existing law EPA would have some flexibility to modify its standards for hazardous waste management as applied to these wastes, there are substantial questions about whether the flexibility inherent in the statute coupled with the Agency's current data on these wastes provide a sufficient basis for EPA to develop a mining waste program under Subtitle C that addresses the risks presented by mining waste while remaining sensitive to the unique practical demands of mining operations. Given these uncertainties, EPA does not intend to impose Subtitle C controls on mining waste at this time.

The Agency, however, is concerned about certain actual and potential mining waste problems, and therefore plans to develop a program for mining waste under Subtitle D of RCRA. The long-term effectiveness of this program depends on available State resources for designing and implementing a program tailored to the needs of each State, and on EPA's ability to oversee and enforce the program. As noted below in section VI, EPA will be working with the States to determine the specific nature of their current mining waste activities and their future plans to administer such programs. The Administration will work with Congress to develop expanded Subtitle D authority (i.e., Federal oversight and enforcement) to support an effective State-implemented program for mining waste. EPA has already made preliminary contacts with Congress and intends to hold detailed discussions on the specifics of the Subtitle D program in the coming year. In the interim, EPA will use RCRA section 7003 and CERCLA sections 104 and 106 to protect against substantial threats and imminent hazards. If EPA is unable to develop an effective mining waste program under Subtitle D, the Agency may find it necessary to use Subtitle C authority in the future.

II. Background

Section 8002(f) of the Resource Conservation and Recovery Act of 1976 directed EPA to conduct:

A detailed and comprehensive study on the adverse effects of solid wastes from active and abandoned surface and underground mines on the environment, including, but not limited to, the effects of such wastes on humans, water, air, health, welfare, and natural resources, and on the adequacy of means and measures currently employed by the mining industry. Government agencies, and others to dispose of and utilize such solid wastes to prevent or substantially mitigate such adverse effects.

The study was to include an analysis of:

1. The Sources and volume of discarded material generated per year from mining;

2. Present disposal practices;

3. Potential danger to human health and the environment from surface runoff of leachate and air pollution by dust;

4. Alternatives to current disposal methods;

5. The cost of those alternatives in terms of the impact on mine product costs; and

6. Potential for use of discarded material as a secondary source of the mine product.

On May 19, 1980, EPA promulgated regulations under Subtitle C of RCRA which covered, among other things, "solid waste from the extraction, beneficiation, and processing of ores and minerals," i.e., mining waste. On October 21, 1980, just before these Subtitle C regulations became effective, Congress enacted the Solid Waste Disposal Act of 1980 (Pub. L. 96-482) which added section 3001(b)(3)(A)(ii) to RCRA. This section prohibits EPA from regulating "solid waste from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore" as hazardous waste under Subtitle C of RCRA until at least six months after the Agency completes and submits to Congress the studies required by section 8002(f), and by section 8002(p) (which was also added to RCRA by the 1980 amendments).

Section 8002(p) required EPA to perform a comprehensive study on the disposal and utilization of the waste excluded from regulation, i.e., solid waste from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore. This new study, to be conducted in conjunction with the section 8002(f) study, mandated an analysis of:

1. The source and volumes of such materials generated per year;

2. Present disposal and utilization practices;

3. Potential danger, if any, to human health and the environment from the disposal and reuse of such materials;

4. Documented cases in which danger to human health or the environment has been proved;

5. Alternatives to current disposal methods;

6. The costs of such alternatives;

7. The impact of these alternatives on the use of phosphate rock and uranium ore, and other natural resources; and

8. The current and potential utilization of such materials.

The 1980 amendments also added section 3001(b)(3)(C), which requires the Administrator to make a "regulatory determination" regarding the waste excluded from Subtitle C regulation. Specifically within six months after submitting the Report to Congress, and after holding public hearings and taking public comment on the report, the Administrator must "determine to promulgate regulations" under Subtitle C of RCRA for mining waste or determine that such regulations are unwarranted."

EPA was required to complete the study and submit it to Congress by October 16, 1983. In 1984, the Concerned Citizens of Adamstown and the Environmental Defense Fund sued EPA for failing to complete the section 8002 studies and the regulatory determination by the statutory deadlines. The District Court for the District of Columbia ordered EPA to complete the studies by December 31, 1985, and to publish the regulatory determination by June 30, 1986.

EPA submitted its Report to Congress on mining waste on December 31, 1985. A notice announcing the availability of the report, and the dates and locations of public hearings, was published January 8, 1986 (51 FR 777). EPA held public hearings on the report in Tucson, Arizona on March 6, 1986; Washington, DC on March 11, 1986; and Denver, Colorado on March 13, 1986. The comment period on the report closed March 31, 1986. This notice constitutes the Agency's regulatory determination for the wastes covered by the Report to Congress, i.e., wastes from the extraction and beneficiation of ores and minerals.

On October 2, 1986, EPA proposed to narrow the scope of the mining waste exclusion in RCRA section 3001(b)(3)(A)(ii), as it applies to processing wastes (50 FR 40292). Under this proposal, wastes that would no longer be covered by the mining waste exclusion would be subject to Subtitle C if they are hazardous. These "reinterpreted" wastes were not studied in the mining waste Report to Congress and therefore, are not covered by this regulatory determination.

III. Legal Authority

EPA has concluded that its decision whether to regulate mining waste under Subtitle C should be based not just on whether mining waste is hazardous (as currently defined by EPA regulations) but also should consider the other factors that section 8002 required EPA to study. The basis of this conclusion is the language of section 3001(b)(3)(A) which states that the regulatory determination must be "based on information developed or accumulated pursuant to [the section 8002 studies], public hearings, and comment. . . ." Clearly, Congress envisioned that the determination would be based on all the factors enumerated in sections 8002 (f) and (p). Congress already knew that some mining waste was hazardous, since the RCRA Subtitle C regulations which were promulgated on May 19, 1980 were to apply to hazardous (both characteristic and listed) mining waste. Congress apparently believed, however, that EPA should obtain and consider additional information, not just data on which types of mining waste are hazardous, before imposing Subtitle C regulation on these wastes. Accordingly, this regulatory determination is based on consideration of the factors listed in sections 8002 (f) and (p).

In reviewing the factors to be studied which are listed in sections 8002 (f) and (p), and the legislative history of these and other mining waste provisions, EPA has concluded that Congress believed that certain factors are particularly important to consider in making the Subtitle C regulatory determination. First, Congress instructed EPA to study the potential dangers to human health and the environment from mining waste, indicating that the decision to regulate under Subtitle C must be based on a finding of such a danger. Second, section 8002(p) required EPA to review the actions of other Federal and State agencies which deal with mining waste "with a view toward avoiding duplication of effort." From this provision, EPA concludes that Congress believed Subtitle C regulation might not be necessary if other Federal or State programs control any risks associated with mining waste. Third, Congress expected EPA to analyze fully the disposal practices of the mining industry which, when read in conjunction with the legislative history of this provision, indicates concern about the feasibility of Subtitle C controls for mining waste. Finally, Congress instructed EPA to look at the costs of various alternative methods for mining waste management, as well as the impact of those alternatives on the use of natural resources. Therefore, EPA must consider both the cost and impact of any Subtitle C regulations in deciding whether they are warranted. Clearly, Congress believed that it was important to maintain a viable mining industry. Therefore, any Subtitle C regulations which would cause widespread closures in the industry would be unwarranted.

IV. Report to Congress

EPA's Report to Congress provides information on sources and volumes of waste, disposal and utilization practices, potential danger to human health and the environment from mining practices, and evidence of damages. EPA received more than 60 written comments on the report and heard testimony at the hearings from more than 30 individuals. A complete summary of all the comments presented at the hearings and submitted in writing is available (ICF, 1986a see VII No. 6); (see "EPA RCRA Docket"). This section summarizes the information contained in the Report to Congress, public comments received on the report, and EPA's response to the comments.

A. Summary of Report to Congress

1. Structure and Location of Mines

EPA focused on segments producing and concentrating metallic ores, phosphate rock, and asbestos, totalling fewer than 500 active sites during 1985. These sites, which are predominantly located in sparsely populated areas west of the Mississippi River, vary widely in terms of size, product value, and volumes of material handled. Several segments are concentrated primarily in one state: The iron segment is mainly concentrated in Minnesota, lead in Missouri, copper in Arizona, asbestos in California, and phosphate in Florida.

2. Waste Quantities

The Report to Congress estimated that 1.5 and 2 billion metric tons per year of nonfuel mining waste were generated in 1982 and 1980, respectively. The accumulated waste volume since 1910 from nonfuel mining is estimated to be approximately 50 billion metric tons. The large volume of annual and accumulated nonfuel mining waste results from the high waste-to-product ratios associated with mining. The fact that most of the material handled in mining is waste and not marketable product distinguishes mining from many other process industries where waste materials make up a relatively small portion of the materials used to produce

a final product. Consequently, some of the larger mining operations handle more material and generate more waste than many entire industries.

3. Waste Management Practices

The report indicated that site selection for mines, as well as associated beneficiation and waste disposal facilities, is the single most important factor affecting environmental quality in the mining industry. Most mine waste is disposed of in piles, and most tailings in impoundments. Mine water is often recycled through the mill and used for other purposes onsite. Off-site utilization of mine waste and mill tailings is limited (i.e., 2 to 4 percent of all mining waste generated). Some waste management measures (e.g., source separation, treatment of acids or cyanides, and waste stabilization) now used at some facilities within a narrow segment of the mining industry could be more widely used. Other measures applied to hazardous waste in nonmining industries may not be appropriate. For example, soil cover from surrounding terrain may create additional reclamation problems in arid regions.

4. Potential Hazard Characteristics

Of the 1.3 billion metric tons of nonfuel mining waste generated by extraction and beneficiation in 1985, about 61 million metric tons (5 percent) exhibit the characteristics of corrosivity and/or EP (Extraction Procedure) toxicity, as defined by 40 CFR 261.22 and 261.24, respectively. Another 23 million metric tons (2 percent) are contaminated with cyanide (greater than 10 mg/l). Further, there are 182 million metric tons (14 percent) of copper leach dump material and 95 million metric tons (7 percent) of copper mill tailings with the potential for release of acidic and toxic liquid, i.e., acid formation. There are 443 million metric tons (34 percent) of waste from the phosphate and uranium segments with radioactivity content greater than 5 picocuries per gram; a total of 93 million metric tons (7 percent) has radioactivity content greater than 20 picocuries per gram. Finally, asbestos mines generated about 5 million metric tons (less than 1 percent) of waste with a chrysotile content greater than 5 percent.

5. Evidence of Damages

To determine what damage might be caused by mining waste, EPA conducted ground-water monitoring and examined documented damage cases. During short-term monitoring studies at eight sites, EPA detected seepage from tailings impoundments, a copper leach dump, and a uranium mine water pond. The EP toxic metals of concern, however, did not appear to have migrated during the 6- to 9-month monitoring period. Other ground-water monitoring studies, however, detected sulfates, cyanides, and other contaminants from mine runoff, tailings pond seepage, and leaching operations. The actual human health and environmental threat posed by any of these releases is largely dependent upon site-specific factors, including a site's proximity to human populations or sensitive ecosystems. Sites well removed from population centers, drinking water supplies, and surface waters are not likely to pose high risks.

Incidents of damage (e.g., contamination of drinking water aquifers, degradation of aquatic ecosystems, fish kills, and related degradation of environmental quality) have also been documented in the phosphate, gold, silver, copper, lead, and uranium segments. As of September 1985, there were 39 extraction, beneficiation, and processing sites included or proposed for inclusion on the National Priorities List under CERCLA (Superfund), including five gold/silver, three copper, three asbestos, and two lead/zinc mines. The asbestos Superfund sites differ from other sites in that these wastes pose a hazard via airborne exposure.

6. Potential Costs of Regulation

The Report to Congress presented for five metal mining segments, total annualized costs ranging from $7 million per year (for a scenario that emphasizes primarily basic maintenance and monitoring for wastes that are hazardous under the current RCRA criteria) to over $800 million per year (for an unlikely scenario that approximates a full RCRA Subtitle C regulatory approach, emphasizing cap and liner containment for all wastes considered hazardous under the current criteria, plus cyanide and acid formation wastes). About 60 percent of the total projected annualized cost at active facilities can be attributed to the management of waste accumulated from past production. Those segments with no hazardous waste (e.g., iron) would incur no costs. Within a segment, incremental costs would vary greatly from facility to facility, depending on current requirements of state laws, ore grade, geography, past waste accumulation, percentage of waste which is hazardous, and other factors.

B. Comments Received on the Report to Congress and EPA's Response

1. Potential Hazard Characteristics

EPA received several comments addressing the magnitude of the wastes generated by the mining industry, and the amount that is hazardous. Many agreed with the report's conclusion that there are substantial volumes of waste, but questioned EPA's estimates of the amount of "hazardous" waste.

Many commenters noted that they believed the EP (Extraction Procedure) test is inappropriate for mining waste because the municipal landfill mismanagement scenario on which the test is based is not relevant to mining waste. They further noted that the corrosivity characteristic is not appropriate because it does not address the buffering capacity of the environment at certain mining sites. Finally, several commenters noted that leaching operations are processes, rather than wastes and are thus outside the purview of RCRA.

The Agency agrees that dump and heap leach piles are not wastes; rather they are raw materials used in the production process. Similarly, the leach liquor that is captured and processed to recover metal values is a product, and not a waste. Only the leach liquor which escapes from the production process and abandoned heap and dump leach piles are wastes. Since the report identified 50 million metric tons of heap and dump leach materials as RCRA corrosive wastes, EPA has accordingly reduced its estimate of mining waste volumes which meet the current definition of hazardous waste. The Agency currently estimates that out of the 61 million metric tons per year of mining waste identified as hazardous in the Report to Congress, only 11 million metric tons of mining waste generated annually are hazardous because they exhibit EP toxicity, and an unknown amount of escaped leach liquor is corrosive. EPA has also concluded that potential problems from substantial quantities of mining waste which have other properties, i.e., radioactivity, asbestos, cyanide, or acid generation potential will not be identified by the current RCRA characteristics. EPA, therefore, believes that entirely different criteria may more appropriately identify the mining wastes most likely to be of concern.

2. Evidence of Damages

EPA received many comments on whether the Report to Congress demonstrates that mining waste pose a threat to human health and the

environment. Many commenters alleged that the report does not demonstrate conclusively that such wastes do pose a threat. They claimed that EPA did not adequately consider the site-specific nature of mining waste management problems. They pointed out that the environmental settings of sites vary widely, as do management practices, and that all these factors influence risk. Also, several commenters noted that the report fails to distinguish between the threat from past practices and the threat, if any, from current practices. Based on these observations, many of these commenters urged EPA to postpone regulations pending additional analysis. However, other commenters noted that they believed there is sufficient evidence that mining waste poses a threat to human health and the environment and asked for immediate regulatory action, noting that the time for study was over.

The Agency agrees that adverse effects to the public and the environment from the disposal of mining waste is not likely at sites well-removed from population centers, drinking water supplies, surface water, or other receptors. However, for other sites, analyses of contaminant plumes released by leaching operations and releases of other contaminants (e.g., acids, metals, dusts, radioactivity) demonstrate adverse effects. Moreover, the Agency recognizes, as evidenced by the mining waste sites on the National Priorities List, the potential for problems from mining sites. It is apparent that some of the problems at Superfund or other abandoned sites are attributable to waste disposal practices not currently used by the mining industry. However, it is not clear from the analysis of damage cases and Superfund sites, whether current waste management practices can prevent damage from seepage or sudden releases. EPA is concerned that a large exposure potential exists at some sites generating mining waste, particularly the sites that are close to population centers or in locations conducive to high exposure and risk to human health and the environment.

3. Potential Costs of Regulation

EPA received a large number of comments pertaining to the cost of complying with regulations for mining waste, and the effects these compliance costs would have on the mining industry. Many commenters claimed that regulating the mining industry would impose costs much greater than those EPA estimated in its Report to Congress. They also noted that the mining industry was depressed, and that for many mines, increased compliance costs would be greater than the profits, leading to forced closures.

Many commenters also pointed out that there are current Federal and State regulations which already apply to mining, which impose costs. They noted that EPA needs to review the existing Federal and State regulatory structure before adding to it, thereby imposing additional costs. Others did not agree, commenting that existing Federal and State regulations are inadequate, and that additional EPA regulation is necessary.

EPA is sensitive to the potential costs to the industry associated with mining waste regulations under Subtitle C. The Agency is also cognizant that many EPA programs already affect the mining industry such as the Clean Water Act which, among other things, control surface water discharge via national Pollutant Discharge Elimination system (NPDES) permits. Other Federal agencies, including the Bureau of Land Management, the Forest Service, and the National Park Service, also exercise oversight and impose regulatory controls (CRA 1986b see VII no. 3). The Federal waste disposal requirements generally call for practices that will prevent unnecessary and undue degradation. Federal reclamation guidelines are somewhat more detailed, requiring approval of a land management operating plan and an environmental assessment. Also these agencies generally require compliance with all applicable state and local laws and ordinances.

A number of states have their own statutes and implementing regulations for mining waste. Some states have comprehensive and well-integrated programs; other States have newer, partially developed programs (CRA, 1986c see VII no. 4). Although there is great variation in programs, many states have siting and permitting requirements, and require financial assurance, groundwater and surface water protection, and closure standards. EPA agrees that any requirements necessary to protect human health and the environment should consider the existing Federal and State mining waste programs with a view toward avoiding duplication of effort.

C. Mining Waste Conclusions

Based on the available information and public comments, the Agency draws the following conclusions about mining wastes. (BAL 1986 see VII No. 1)

Source and Volume

- The waste volume generated by mining and beneficiation is considerably larger than the volume of waste generated by other industries currently subject to hazardous waste controls. The mining industry alone generates over one billion metric tons of waste per year compared to 250 million metric tons generated annually by all other hazardous waste industries. The average mining waste facility manages about three million metric tons of waste annually while the typical facility subject to Subtitle C controls manages about 50 thousand metric tons of waste per year.
- In general, mining waste disposal facilities are considerably larger than industrial hazardous waste disposal facilities; most of the largest industrial hazardous waste land disposal facilities are (tens of acres) in size, while typical mining waste disposal facilities are (hundreds of acres) in size. Agency studies indicate that mining waste tailings impoundments average about 500 acres; the largest is over 5000 acres. Mining waste piles average 128 acres; the largest exceeds 500 acres. Hazardous waste impoundments, however, average only about 6 acres and hazardous waste landfills average only about 10 acres. Consequently, EPA believes that many traditional hazardous waste controls may be technically infeasible or economically impractical to implement at mining waste sites because of their size.

Waste Management Practices

- EPA estimates indicate that most hazardous waste generators (about 70 percent) ship all of their waste off-site, however, no mines ship all of their waste off-site. In addition, nearly all mining waste is land disposed, while less than half of all industrial hazardous waste is land disposed.

Evidence of Damage

- In general, environmental conditions and exposure potential associated with mining waste are different than those associated with industrial hazardous waste streams. Agency studies suggest that mining waste streams generally have lower exposure and risk potential for several reasons.

—First, mining waste management facilities are generally in drier climates than hazardous waste management facilities, thereby reducing the leaching potential. Over 80 percent of the mining sites are located west of the Mississippi River, which generally has drier climates, whereas industrial hazardous waste landfills are more evenly distributed nationally. In addition, the Agency estimates that more than sixty percent

of all mines have annual net recharge between 0–2 inches, and only ten percent have net recharge greater than ten inches. However, about 80 percent of the hazardous waste land disposal facilities have net recharge greater than five inches, and over one-third exceed 15 inches.

- Second, EPA studies indicate that hazardous waste land disposal facilities are closer to ground water than mining waste sites. Over 70 percent of hazardous waste sites have a depth to ground water of 30 feet or less, while about 70 percent of mining sites have ground water depths greater than 30 feet.
- Third, Subtitle C facilities tend to be located in more densely populated areas. EPA estimates that mining waste sites have average populations of less than 200 within one mile of the site, while hazardous waste sites average over 2,000 people at the same distance. Within five miles of the mining waste sites, the average population is almost 3,000, while hazardous waste sites average nearly 60,000 people.
- Fourth, Agency studies suggest that, compared to mining waste sites, hazardous waste sites tend to be located closer to drinking water receptors and serve larger populations. Almost 70 percent of the hazardous waste sites are located within five miles of a drinking water receptor serving an average population of over 18,000 and as many as 400,000 people. Almost half as many mining sites are located within this same distance, and they serve considerably smaller populations (averaging 3,000 but ranging as high as 20,000.)

• Although the Agency believes that the human exposure and risk potential appears to be lower for mining waste sites than for industrial hazardous waste sites, many mines are located in sensitive environmental settings. EPA estimates that about 50 percent of the mines are located in areas that have resident populations of threatened or endangered species or species of other special concern, (often the case for industrial sites). In addition, mining sites are typically located in relatively remote and otherwise undisturbed natural environments.

Cost and Economic Impacts

• EPA believes that many traditional waste management controls designed principally for industrial hazardous waste management facilities may be economically impractical to implement at mining sites and could impose substantial costs to the industry resulting in potential mine closures. Full Subtitle C controls for mining sites could impose as much as $850 million per year in compliance costs. Such costs could be greater than profits resulting in mine closures.

• Many Federal and State agencies already have regulatory programs for managing mining waste. New hazardous waste controls for mining waste could be difficult to integrate with existing Federal and State programs.

V. Application of Subtitle C to Mining Waste

EPA believes that it needs maximum flexibility to develop an appropriate program for mining waste which addresses the technical feasibility, the environmental necessity, and the economic practicality of mining waste controls. The program should consist of a tailored risk-based approach which addresses the diversity and unique characteristics of mining waste problems.

The current Subtitle C program is designed principally for controlling problems created by industrial wastes. Based on information available, the Agency believes that many controls required under the current Subtitle C program, if applied universally to mining sites, would be either unnecessary to protect human health and the environment, technically infeasible, or economically impractical to implement. For instance, certain Subtitle C requirements such as single and double liner system requirements which provide liquid management, and closure and capping standards to minimize infiltration, may be technically infeasible or economically impractical to implement for mining wastes because of the quantity and nature of waste involved. In addition, for many mining sites located in remote areas, such controls may be necessary to protect human health and the environment. For example, liquid releases to the ground water can be minimized and controlled using cutoff walls or interceptor wells (i.e., controlled release) as well as through liner systems, and alternate capping requirements designed to address site-specific concerns such as direct human contact or wind erosion, are likely to be feasible and practical, thus providing better long-term protection of human health and the environment.

Section 3004(x) of RCRA does provide flexibility for regulating mining waste. This section gives EPA the authority to modify certain Subtitle C requirements for mining waste which were imposed by the Hazardous and Solid Waste Amendments of 1984 (HSWA) which relate to liquids in landfills, prohibitions on land disposal, minimum technological requirements, continuing releases at permitted facilities, and retrofitting interim status surface impoundments with liners. In modifying these requirements, EPA may consider site-specific characteristics as well as the practical difficulties associated with implementing such requirements. In addition, EPA has general authority under RCRA section 3004(a) to modify remaining Subtitle C requirements, such as administrative standards, financial requirements, and closure and capping requirements, if a waste poses different risks or the existing standards are technically infeasible. However, in modifying such requirements, section 3004(a) does not provide EPA the same degree of flexibility to consider the economic impact of regulation that is found in section 3004(x).

As described earlier in this notice, EPA believes that the decision whether to regulate mining waste under Subtitle C must consider the factors listed in RCRA sections 8002 (f) and (p), including the risks associated with mining waste, the cost of such regulation, and the effect regulation might have on the use of natural resources. EPA has concluded that in order to meet that objective, it would want to develop a program that has maximum flexibility to develop an effective control strategy for individual facilities based on site-specific conditions. The existing Subtitle C regulatory program would probably have to be changed substantially for mining waste to provide that type of flexibility.

Given these general conclusions about what would be needed to make the Subtitle C system appropriate for mining waste, there are substantial uncertainties about whether that program is the right mechanism to address mining waste. First, it is unclear whether the legal authorities under which EPA would be acting (i.e., sections 3004(a) and 3004(x)) give EPA sufficient flexibility to craft a program for "hazardous" mining waste given the statutory and regulatory approach established for other hazardous wastes. Second, and closely related, there are substantial questions about whether the Agency's current data on mining waste management provide a basis for substantial modifications to the existing Subtitle C regulatory program. With the mining waste study and the supplementary information collection efforts associated with today's notice, EPA has greatly expanded its understanding of mining waste

management practices. At the same time, additional data collection and analysis would probably be necessary to support specific modifications of multiple provisions in the existing hazardous waste regulations before those regulations would provide the type of flexibility we currently believe might be necessary. These uncertainties have led us to the conclusion that Subtitle C does not provide an appropriate template for a mining waste management program.

VI. Application of Subtitle D to Mining Waste

Solid waste that is not hazardous waste is subject to regulation under Subtitle D. Therefore, mining waste, which is included in the RCRA definition of solid waste, is currently covered by Subtitle D. EPA believes that it can design and implement a program specific to mining waste under Subtitle D that addresses the risks associated with such waste. The current Subtitle D program establishes criteria which are, for the most part, environmental performance standards that are used by States to identify unacceptable solid waste disposal practices or facilities (See 40 CFR Part 257.) These criteria include, among other things, standards related to surface water discharges, ground-water contamination, and endangered species. Because the program's criteria are aimed principally at municipal and industrial solid waste, EPA believes they do not now fully address mining waste concerns. In addition, many of these criteria, such as control of disease vectors and bird hazards, are not appropriate for mining waste.

The Agency is currently revising these criteria for facilities that may receive hazardous household waste and small quantity generator hazardous waste; these revisions will not apply to mining waste which are generally not codisposed with such wastes. However, the Agency intends to further augment the Subtitle D program by developing appropriate standards and taking other actions appropriate for mining waste problems. EPA will focus on identifying environmental problems and setting priorities for applying controls at mining sites with such potential problems as high acid-generation potential, radioactivity, asbestos and cyanide wastes. EPA will also develop a risk-management framework to develop appropriate standards as necessary to protect human health and the environment. EPA will consider requirements such as: (1) A range of closure options to accommodate variable problems such as infiltration to ground water and exposure from fugitive dust; (2) options to define tailored controls, including those established by the Clean Water Act, to address problems from runoff to surface water; (3) options for liquid management controls such as pretreatment of wastes prior to disposal, controlled release, or liner systems; (4) ground-water monitoring options that accommodate site-specific variability; and (5) a range of clean-up options.

In developing such a program, EPA will use its RCRA Section 3007 authority to collect additional information on the nature of mining waste, mining waste management practices, and mining waste exposure potential. EPA believes this authority does not limit information collection to "hazardous" waste identified under Subtitle C but also authorizes the collection of information on any solid waste that the Agency reasonably believes may pose a hazard when improperly managed. (EPA may also use this authority in preparing enforcement actions.) Initially, EPA will use this information to develop a program under Subtitle D. The information, however, may indicate the need to reconsider Subtitle C for certain mining wastes.

In specifying the appropriate standards, EPA also will further analyze existing Federal and State authorities and programs and determine future plans for administering their mining waste programs. Additionally, EPA will perform analyses of costs, impacts, and benefits and will comply fully with Executive Orders 12291 and 12498, the Regulatory Flexibility Act, and the Paperwork Reduction Act.

EPA is concerned that the lack of Federal oversight and enforcement authority over mining waste controls under Subtitle D of RCRA and inadequate State resources to develop and implement mining waste programs may jeopardize the effectiveness of the program. The Administration therefore will work with Congress to develop the necessary authority. In the interim, EPA will use section 7003 of RCRA and sections 104 and 106 of CERCLA to seek relief in those cases where wastes from mining sites pose substantial threats or imminent hazards to human health and the environment. Mining waste problems can also be addressed under RCRA Section 7002 which authorizes citizen lawsuits for violations of Subtitle D requirements in 40 CFR Part 257.

As EPA develops this program for regulating human health and environmental risks associated with mining waste, the Agency may find that the Subtitle D approach is unworkable, perhaps because there is insufficient authority to implement an effective program (i.e., the Agency does not obtain oversight and enforcement authority under Subtitle D), or that States lack adequate resources to develop and implement the program. In such an event, EPA may find it necessary to reexamine use of Subtitle C authority with modified mining waste standards in the future.

EPA has already made preliminary contacts with Congress to discuss the best approach for an effective mining waste program. The Agency intends to immediately begin collecting additional technical, economic, and other relevant information needed for program development, and to complete its data analysis by late 1987. EPA hopes to propose revisions to the Subtitle D criteria that are specific to mining waste by mid-1988.

VII. EPA RCRA Docket

The EPA RCRA docket is located at:
United States Environmental Protection Agency.
EPA RCRA Docket (Sub-basement),
401 M Street, SW.,
Washington, DC 20460.

The docket is open from 9:30 to 3:30 Monday through Friday, except for Federal holidays. The public must make an appointment to review docket materials. Call Mia Zmud at (202) 475–9327 or Kate Blow at (202) 382–4675 for appointments.

Copies of the following documents are available for *viewing only* in the EPA docket room:

1. Buc & Associates Inc., 1986. Location of Mines and Factors Affecting Exposure.
2. Charles River Associates, 1986a. Estimated Costs to the U.S. Uranium and Phosphate Mining Industry for Management of Radioactive Solid Wastes.
3. Charles River Associates, 1986b. Federal Non-EPA Regulations Addressing Mining Waste Practices.

Charles River Associates. 1986c. State Regulations of the U.S. Mining Industry.
5. Frontier Technical Associates. 1986a. Groundwater Monitoring Data on Ore Mining and Milling Solid Waste Disposal.
6. ICF. 1986a. Summary of Comments on the Report to Congress.
7. ICF. 1986b. Overview of Superfund Mine Sites.
8. Meridian 1986. Statistical Analysis of Mining Waste Data.
9. Versar. 1986a. Quantities of Cyanide-bearing and Acid-Generating Wastes.
10. Versar. 1986b. Technical Studies Supporting the Mining Waste Regulatory Determination.

The public may copy a maximum of 50 pages of material from any one regulatory docket at no cost. Additional copies cost $.20/page.

Dated: June 30, 1986.

Lee M. Thomas,

Administrator.

[FR Doc. 86-15168 Filed 7-2-86; 8:45 am]

BILLING CODE 6560-50-M

Joint EPA/NRC Guidance on the Definition and Identification of Commercial Mixed Low-Level Radioactive and Hazardous Waste

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

MAR 2 1987

MEMORANDUM

OFFICE OF SOLID WASTE AND EMERGENCY RESPO

SUBJECT: Joint EPA/NRC Guidance on the Definition and Identification of Commercial Mixed Low-Level Radioactive and Hazardous Waste

FROM: Marcia E. Williams, Director
Office of Solid Waste (WH-562)

TO: Hazardous Waste Division Directors
Regions I-X

As you know, EPA announced in the Federal Register on July 3, 1986 (51 FR 24504) that in order to obtain and maintain authorization to administer and enforce a RCRA Subtitle C hazardous waste program, States must apply for authorization to regulate the hazardous components of radioactive mixed waste. States which received final authorization prior to July 3 must revise their program by July 1, 1988 (or July 1, 1989 if a statutory amendment is required) to demonstrate authority to regulate the hazardous components of radioactive mixed waste. States initially applying for final authorization after July 3, 1987 must incorporate this provision in their application for final authorization. To date, only one State (Colorado) has been authorized for mixed waste.

Following publication of the July 3 notice and subsequent dialogue with the Nuclear Regulatory Commission (NRC) and others regarding the universe of affected wastes, it became apparent that generators of commercial low-level radioactive waste (LLW) needed guidance to facilitate delineation of whether their LLW contained a hazardous waste subject to RCRA regulation. Accordingly NRC and EPA jointly developed the attached guidance to (1) clarify the definition of commercial mixed low-level radioactive and hazardous waste (Mixed LLW) (2) assist generators of commercial low-level radioactive waste (LLW) in determining if their LLW are radioactive mixed wastes, and (3) answer anticipated questions about mixed low-level wastes.

You should feel free to consult with the contacts identified in the guidance regarding specific technical considerations or your may contact Betty Shackleford, OSW Mixed Waste Coordinator on (FTS) 475-9565.

Attachment

TO ALL NRC LICENSEES:

SUBJECT: GUIDANCE ON THE DEFINITION AND IDENTIFICATION OF COMMERCIAL MIXED LOW-LEVEL RADIOACTIVE AND HAZARDOUS WASTE AND ANSWERS TO ANTICIPATED QUESTIONS

Under the Resource Conservation and Recovery Act (RCRA), the U.S. Environmental Protection Agency (EPA) has jurisdiction over the disposal of solid wastes with the exception of source, byproduct, and special nuclear material, which are regulated by the U.S. Nuclear Regulatory Commission (NRC) under the Atomic Energy Act (AEA). Low-Level Radioactive Wastes (LLW) contain source, byproduct, or special nuclear materials, but they may also contain chemical constituents which are hazardous under EPA regulations in 40 CFR Part 261. Such wastes are commonly referred to as Mixed Low-Level Radioactive and Hazardous Waste (Mixed LLW).

NRC regulations exist to control the byproduct, source, and special nuclear material components of the Mixed LLW; EPA has the authority and continues to develop regulations to control the hazardous component of the Mixed LLW. Thus, all of the individual constituents of Mixed LLW are subject to either NRC or EPA regulations. However, when the components are combined to become Mixed LLW, neither agency has exclusive jurisdiction under current Federal law. This had led to a situation of dual regulation where both agencies, NRC and EPA, regulate the same waste.

The enclosed document, "Guidance on the Definition and Identification of Commercial Mixed Low-Level Radioactive and Hazardous Waste," was developed jointly by the NRC and EPA to aid commercial LLW generators in assessing whether they are currently generating Mixed LLW. This guidance is based on NRC and EPA regulations in effect on December 1, 1986. In addition to the

definition and the methodology for identifying Mixed LLW, which we hereby endorse, the staff has prepared answers to anticipated questions from generators which are also included.

Sincerely,

John G. Davis, Director
Office of Nuclear Material
Safety and Safeguards
U. S. Nuclear Regulatory Commission

J. Winston Porter
Assistant Administrator
Office of Solid Waste
and Emergency Response
U.S. Environmental
Protection Agency

Enclosures:
As Stated

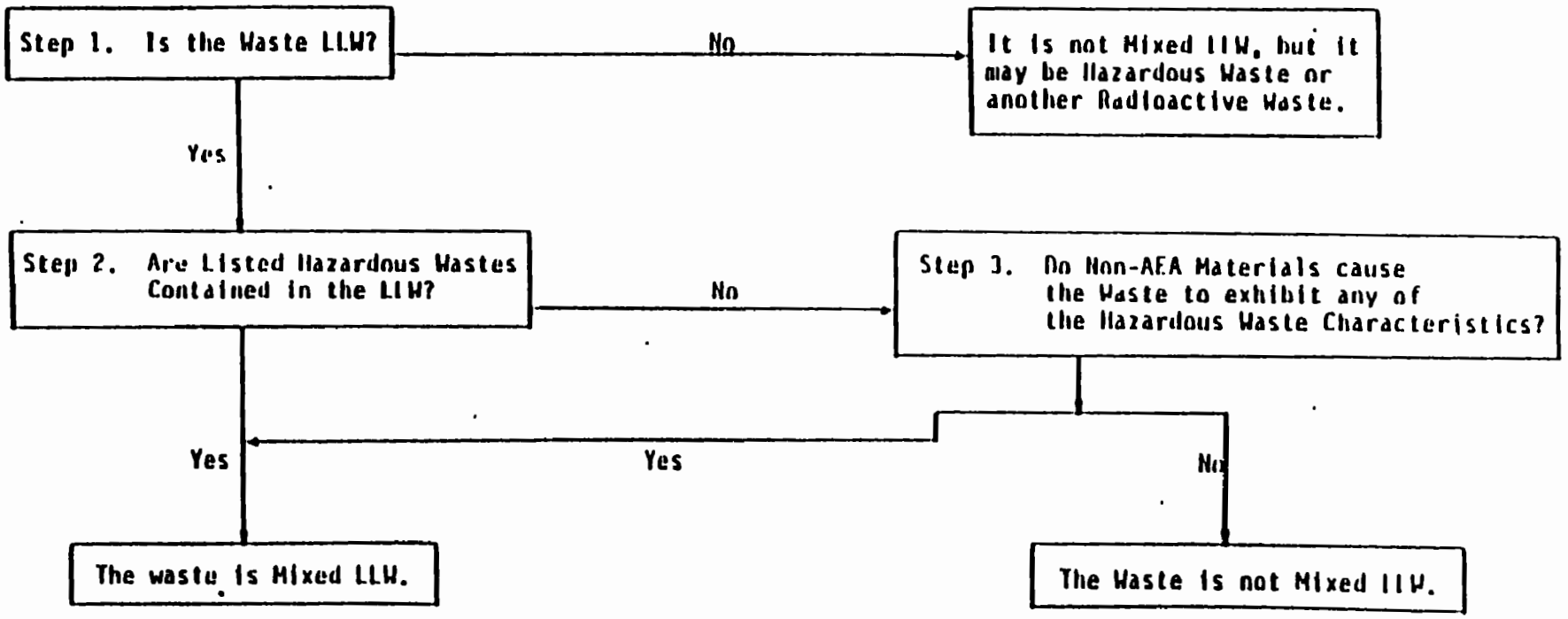

Figure 1. Identification of Mixed LLW.

GUIDANCE ON THE DEFINITION AND IDENTIFICATION OF COMMERCIAL MIXED LOW-LEVEL RADIOACTIVE AND HAZARDOUS WASTE

(87/01/05)

Definition

Mixed Low-Level Radioactive and Hazardous Waste (Mixed LLW) is defined as waste that satisfies the definition of low-level radioactive waste (LLW) in the Low-Level Radioactive Waste Policy Amendments Act of 1985 (LLRWPAA) and contains hazardous waste that either (1) is listed as a hazardous waste in Subpart D of 40 CFR Part 261 or (2) causes the LLW to exhibit any of the hazardous waste characteristics identified in Subpart C of 40 CFR Part 261.

Identification

The policy provided in this guidance is developed for commercial LLW jointly by the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Environmental Protection Agency (EPA). LLW that contains hazardous wastes defined under the Resource Conservation and Recovery Act (RCRA) is Mixed LLW. Under current Federal law, such waste is subject to regulation by NRC under the Atomic Energy Act (AEA), as amended, and by EPA under the AEA and RCRA, as amended. In the absence of legislation to the contrary, management and disposal of this waste must be conducted in compliance with NRC and EPA or equivalent state regulations.

This guidance presents a methodology (Figure 1) that may be used by generators of commercial LLW to identify Mixed LLW. Implementation of the methodology should identify Mixed LLW and aid generators in assessing whether they are currently generating Mixed LLW. Generators are cautioned, however, that application of the methodology does not affect the need to comply with applicable NRC and EPA regulations. Because EPA's regulations for hazardous waste are currently changing, generators should use applicable regulations that are in effect at the time of implementation of the methodology. This guidance has been prepared based on NRC and EPA regulations in effect on December 1, 1986.

Application of this methodology to identify Mixed LLW will reveal the complexities of the definition of Mixed LLW. If generators have specific questions about whether LLW is Mixed LLW, they should promptly contact the agencies by writing to the persons listed below.

For questions about whether the waste is low-level radioactive waste, contact:

Dr. Sher Bahadur
Division of Waste Management
Mail Stop 623-SS
U. S. Nuclear Regulatory Commission
Washington, DC 20555

For questions about whether the waste is hazardous waste, contact:

Mr. Alan Corson
Deputy Director
Characterization and Assessment Division
Mail Code WH-5628
U. S. Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460

Methodology

Step 1. Identify LLW

Step 1 in the methodology requires that the generator determine whether the waste is LLW as defined in the LLRWPAA. This Act defines LLW as radioactive material that (A) is not high-level radioactive waste, spent nuclear fuel, or byproduct material as defined in section 11e.(2) of the AEA (i.e., uranium or thorium mill tailings) and (B) the NRC classifies as LLW consistent with existing law and in accordance with (A). If the generator determines that the waste is LLW, the generator should proceed to step 2. If the determination is negative, then the waste cannot be Mixed LLW because it is not LLW. However, the waste may be another radioactive or hazardous waste regulated under AEA, RCRA, or both statutes.

Step 2. Identify Listed Hazardous Waste

In step 2, the generator determines whether the LLW contains any hazardous wastes listed in Subpart D of 40 CFR Part 261. Subpart D of Part 261 is reproduced in Appendix I of this guidance. LLW is Mixed LLW if it contains any hazardous wastes specifically listed in Subpart D of 40 CFR Part 261. Listed hazardous wastes include hazardous waste streams from specific and non-specific sources listed in 40 CFR Parts 261.31 and 261.32 and discarded commercial chemical products listed in 40 CFR Part 261.33. The generator is responsible for determining whether LLW contains listed hazardous wastes. The determination should be based on knowledge of the process that generates the waste. For example, if a process produces LLW that contains spent solvents that are specifically listed in the tables of Subpart D of Part 261, the generator should suspect that the waste is Mixed LLW.

material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

Source, special nuclear, and byproduct materials, however, may be mixed with other radioactive or non-radioactive materials that are not source, special nuclear, or byproduct materials. For example, tritium may be contained in toluene, a nonhalogenated aromatic solvent. Consistent with the definition of byproduct material, the tritium may be considered a byproduct material, while the toluene that contains the tritium would not be byproduct material. Mixtures of toluene and tritium could satisfy the definition of Mixed LLW because they contain listed hazardous waste (spent toluene) and tritium that may qualify as LLW if it has been produced by activities regulated by NRC under the AEA.

2. What are some examples of Mixed LLW?

A preliminary survey performed for the NRC identified two potential types of Mixed LLW:

- LLW containing organic liquids, such as scintillation liquids and vials; organic lab liquids; sludges; and cleaning, degreasing, and miscellaneous solvents.

- LLW containing heavy metals, such as discarded lead shielding, discarded lined containers, and lead oxide dross containing uranium oxide; light water reactor (LWR) process wastes containing chromate and LWR decontamination resins containing chromium; and mercury amalgam in trash.

The preliminary survey concluded that potential Mixed LLW comprises a small percentage of all LLW. For example, LLW containing organic liquids accounted for approximately 2.3% by volume of LLW reported in the preliminary survey (Bowerman, et al., 1985).

An earlier survey identified a more diverse universe of potential Mixed LLW including wastes that contained aldehydes, aliphatic halogenated hydrocarbons, alkanes, alkenes, amino acids, aromatic hydrocarbons, chelating agents, esters, ethers, ketones, nitrosamines, nucleotides, pesticides, phenolic compounds, purines, resins, steroids, and vitamins (General Research Corporation, 1980). NRC also anticipates that additional LLW may be identified as Mixed LLW in the future, as generators implement the definition of Mixed LLW and as EPA revises the definition of hazardous waste.

3. Could some "below regulatory concern" wastes be considered Mixed LLW?

A determination that radioactive wastes are below regulatory concern (BRC) for radioactivity may affect how the wastes are managed or discarded, but it does not affect the legal status of the wastes. Specifically, their status with respect to the definition of Mixed LLW does not change. BRC waste is still LLW because it satisfies the definition of LLW in the LLRWPAA and is within the NRC's jurisdictional authority under the AEA.

When radioactive waste contains sufficiently low concentrations or quantities of radionuclides, NRC may find that they do not need to be managed or disposed of as radioactive wastes. For NRC to make such a finding, management and disposal of the waste must not pose an undue radiological risk to the public and the environment. However, NRC's determination that the radioactive content of the wastes is below NRC regulatory concern does not relieve licensees from compliance with applicable rules of other agencies governing non-radiological hazards (e.g., regulations of EPA or the Department of Transportation).

Therefore, some BRC wastes may still be considered Mixed LLW if they contain hazardous wastes that have been listed in Subpart D of 40 CFR Part 261 or that cause the LLW to exhibit any of the hazardous characteristics described in Subpart C of 40 CFR Part 261. BRC Mixed LLW may be managed without regard to its radioactivity (but it must still be managed as a hazardous waste in compliance with EPA's regulations for hazardous waste generation, storage, transportation, treatment, and disposal (cf. 40 CFR Parts 262 through 266)).

4. If I use chemicals in my process that are identified by EPA as hazardous constituents, should I assume that my LLW is Mixed LLW?

No. Low-level radioactive waste that contains hazardous constituents may not necessarily be Mixed LLW. As defined above, Mixed LLW is LLW that contains a known hazardous waste (i.e., a listed hazardous waste) or that exhibits one or more of the hazardous characteristics because it contains non-AEA materials. For wastes that are not listed in Subpart D of 40 CFR Part 261, testing is not necessarily required to "determine" whether the LLW exhibits any of the hazardous characteristics. A generator may be able to determine whether the LLW is Mixed LLW based on knowledge of the waste characteristics or the process that generates the LLW.

Furthermore, if the generator normally segregates LLW from hazardous and other types of wastes, there is no need to assume that hazardous wastes may have been inadvertently mixed with LLW or to inspect each container or receptacle to ensure that inadvertent mixing has not occurred. Although the generator is subject to RCRA inspections and must follow the manifest, pre-transport, and other requirements of 40 CFR Part 262, the generator is not required to demonstrate that every LLW container does not contain hazardous waste.

5. What are EPA and NRC currently doing to address the Mixed LLW issue, and what should generators do in the interim before a regulatory program for Mixed LLW is established?

An incentive exists for generators to minimize the generation of Mixed LLW because Mixed LLW must currently be managed and disposed of in compliance with the regulatory controls of both EPA and NRC. These dual regulatory controls complicate management and disposal of the waste. NRC and EPA are presently working together to develop guidance for generators and disposal site operators on the management, treatment, and disposal of Mixed LLW. In the interim, generators are encouraged to minimize the generation of Mixed LLW through management practices such as waste segregation and materials tracking. Generators and waste handlers are also encouraged to consider treatment techniques to reduce the amount and hazards of Mixed LLW requiring licensed land disposal. Kemof et al (1985) prepared a preliminary evaluation of current practices and potential management options for Mixed LLW. Current disposal site operators must develop and operate facilities to dispose of Mixed LLW in compliance with both NRC and EPA requirements or cease disposing of Mixed LLW. Licensees should recognize that all of these activities must be performed in compliance with applicable NRC requirements in 10 CFR Parts 20, 30, 40, 50, 61, and 70, and applicable EPA requirements in 40 CFR Parts 124, and 260 through 270, or applicable State requirements.

6. What should I do if I believe that the RCRA regulations are inconsistent with the AEA regulations?

Section 1006 of RCRA states that, "Nothing in this Act shall be construed to apply to (or to authorize any state, interstate, or local authority to regulate any activity or substance which is subject to . . . the Atomic Energy Act of 1954 (42 U. S. C. 2011 and following) except to the extent that such application (or regulation) is not inconsistent with the requirements of such [Act]." This provision allows the modification of the RCRA requirements when they are found to be inconsistent with the AEA requirements. "Inconsistent" includes situations where satisfying both sets of regulations (RCRA and AEA regulations) would increase the radiation hazard, would be technically infeasible, or would violate national security interests. Variances from the RCRA requirements may be granted to generators, transporters, and facilities that treat, store, or dispose of Mixed LLW.

NRC licensees may petition for variances from RCRA requirements when they believe that application of one or more of these requirements would be inconsistent with the AEA. NRC licensees should first discuss the inconsistency with NRC prior to preparing the petition. NRC's review will ensure that the licensees' interpretations of the AEA requirements are correct and that the reasons for the variance petition are technically sound.

7. How can I obtain representative samples of heterogeneous trash included in LLW to perform the hazardous characteristics tests?

Before discussing the collection of representative samples of waste, generators are reminded that they are not required to test all LLW to determine if the waste contains hazardous wastes that cause the LLW to exhibit the hazardous waste characteristics. Such comprehensive testing of all LLW would likely violate the principle of keeping radiological exposures as low as is reasonably achievable. Generators should select testing as a basis for determining whether the LLW exhibits any of the hazardous waste characteristics if they cannot make the determination based on their knowledge of the process that generates the LLW.

Representative samples of waste should be collected for testing in accordance with EPA's regulations in 40 CFR Part 261.20(c), which state that waste samples collected using applicable methods specified in Appendix I of Part 261 will be considered as representative samples for hazardous characteristics testing. This appendix has been included in its entirety in Appendix II of this guidance. The sampling techniques described in Appendix I of Part 261 apply to extremely viscous liquids, fly ash-like material, containerized liquid wastes, and liquid wastes in pits, ponds, lagoons, and similar reservoirs. In the absence of guidance about sampling heterogeneous wastes, generators should use appropriate portions of the sampling methods described in Appendix I of Part 261 in combination with other methods to collect, to the maximum extent practicable, representative samples of the waste to be tested.

References

Bowerman, B. S., Kempf, C. R., MacKenzie, D. R., Siskind, B. and P. L. Piciulo, 1985, "An Analysis of Low-Level Wastes: Review of Hazardous Waste Regulations and Identification of Radioactive Mixed Wastes," NUREG/CR-4406, U. S. Nuclear Regulatory Commission.

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Kempf, C. R., MacKenzie, D. R., and B. S. Bowerman, 1986, "Management of Radioactive Mixed Wastes in Commercial Low-Level Wastes," NUREG/CR-4450, U. S. Nuclear Regulatory Commission.

Land Disposal Restrictions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C. 20460

AUG 7 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESPON

MEMORANDUM

SUBJECT: Land Disposal Restrictions

FROM: Timothy Fields, Jr., Director
Emergency Response Division

TO: Superfund Branch Chiefs, Regions I-X
OHM Coordinators, Regions I-X

The Office of Emergency and Remedial Response has prepared the attached summary of the land disposal restrictions mandated under the 1984 amendments to the Resource Conservation and Recovery Act (RCRA). This summary is still being reviewed within Headquarters, but I am sending the Regions an advance copy of the document because this information is critical to the ongoing operations of the Superfund program, especially for removal actions. In particular, I want to bring your attention to page 15 of the summary. EPA expects that the Federal Register notice discussed on that page will be published next week, and it is important that the Regions review the notice and provide comments to Headquarters. We will be contacting the Regions next week to notify them of the exact publication date.

The final, signed summary of the land disposal restrictions should be sent to the Regions shortly. I do not expect it to contain major changes from this advance draft.

Attachment

cc: Clem Rastatter
Russ Wyer
John Riley
Mark Greenwood
Lloyd Guerci
Elaine Stanley
John Cunningham
Frank Russo
Jean Schumann

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

AUG 11 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Land Disposal Restrictions

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

Gene Lucero, Director
Office of Waste Programs Enforcement

TO: Waste Management Division Directors, Regions I-X
Environmental Services Division Directors, Regions I, VI, and VII

As you know, in November 1986, EPA promulgated regulations restricting the land disposal of certain solvent and dioxin wastes pursuant to the 1984 amendments of the Resource Conservation and Recovery Act (RCRA). The effective date of these regulations for Superfund response action wastes, however, was extended until November 1988. On July 8, 1987, EPA published the second set of land disposal restriction (LDR) regulations, which addresses the "California list" wastes. The California list wastes include liquid and non-liquid wastes containing halogenated organic compounds (HOCs), and liquid wastes containing polychlorinated biphenyls (PCBs), corrosives, free cyanides, and certain metals. As of July 8, 1987, land disposal prohibitions took effect for Superfund for the following California list wastes: dilute HOC wastewaters, PCBs, corrosives, free cyanides and the metals. An extension of the effective date has been granted for the remaining HOC wastes.

The purpose of this memorandum is to summarize the LDR provisions that took effect on that date, and to inform you of the issues that are still being resolved in Headquarters regarding Superfund implementation of LDR requirements. More explicit guidance on Superfund compliance with the solvent, dioxin, California list, and other LDR provisions is forthcoming. Separate guidance will also be provided on LDR issues encountered in PRP negotiations. Until that time, the Regions should contact Headquarters if questions arise regarding compliance with the restrictions on land disposal of the California list wastes. In addition, this memorandum requests that the Regions review and comment on a Notice of Data Availability and Request for Comment which will be published in the Federal Register in the near future, and will address free cyanide and metal wastes. Due to the significant impact LDR will have on the Superfund program, the Regions should give high priority to this review.

ATTACHMENT A

SUMMARY OF MAJOR LDR PROVISIONS

AND

CALIFORNIA LIST PROHIBITIONS

Section I of Attachment A summarizes the major LDR provisions and indicates issues that must still be resolved regarding Superfund implementation of those provisions. Section II of Attachment A describes the specific prohibitions on the California list wastes. Attachment B is a copy of the November 1986 Federal Register that promulgates the overall LDR framework and the solvent and dioxin land disposal restrictions. Attachment C is a copy of a Federal Register correction notice published in June 1987, which modifies the 1986 rule. Attachment D is a copy of the July 1987 California list regulations.

Questions regarding removal program compliance with the land disposal restrictions should be directed to Jean Schumann of the Emergency Response Division (FTS 382-4671). Questions regarding remedial program compliance should be directed to John Cunningham of the Hazardous Site Control Division (FTS 382-2446), and enforcement-related questions should be directed to Frank Russo of the CERCLA Enforcement Division (FTS 382-4838).

Attachments: A - Summary of Major LDR Provisions and California List Prohibitions

B - November 7, 1986 Federal Register (LDR Framework and Solvent/Dioxin Regulations)

C - June 4, 1987 Federal Register (Correction Notice)

D - July 8, 1987 Federal Register (California List Regulations)

cc: (without Attachments B, C, and D):

Marcia Williams
Superfund Branch Chiefs, Regions I-X
OHM Coordinators, Regions I-X
Clem Rastatter
Russ Wyer
Timothy Fields
Mark Greenwood
Lloyd Guerci
Elaine Stanley
Sylvia Lowrance
Joe Carra
Arthur Weissman
Phil Jalbert
Steve Silverman
Gary Jonesi
John Cunningham
Frank Russo
Jean Schumann

Attachment A

CONTENTS

I. SUMMARY OF MAJOR LDR PROVISIONS

A. Introduction

The Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act (RCRA) were enacted on November 8, 1984. Among other things, these amendments require EPA to evaluate all hazardous wastes according to a strict schedule to determine whether land disposal of these wastes is protective of human health and the environment. For wastes that are restricted from land disposal, the amendments require EPA to set levels or methods of treatment which substantially diminish a waste's toxicity or reduce the likelihood that a waste's hazardous constituents will migrate. Beyond specified dates, restricted wastes which do not meet these treatment standards are prohibited from land disposal (unless the waste is subject to an exemption or variance, discussed later in this document). In accordance with the amendments, if EPA fails to set treatment standards for a particular waste by the scheduled deadline, that waste is automatically prohibited from land disposal.

On November 7, 1986, EPA promulgated the first set of land disposal restriction (LDR) regulations. This rule establishes the framework for implementing the LDR program. Section I of this document summarizes the major provisions of the RCRA amendments and the November 1986 regulations.

B. Applicability

The land disposal regulations apply to hazardous wastes placed in land disposal units. "Land disposal" is defined as placement in or on the land and includes, but is not limited to: placement in a landfill, surface impoundment, waste pile, land treatment facility, salt dome or salt bed formation, underground cave or mine. Also included is placement in a concrete vault or bunker intended for disposal purposes (40 CFR Section 268.2(a)). For the purposes of this definition, open detonation and open burning are not considered "land disposal," but rather, are methods of thermal treatment. At a later date, prohibitions will also be imposed on the disposal of hazardous wastes in injection wells.

LDR applies only to hazardous wastes placed in land disposal units <u>after</u> the effective dates of the prohibitions. Wastes placed in the land prior to the effective dates of the prohibitions (and not removed) are not covered by the regulations. For example, if wastes placed in the land prior to the effective date are later treated in-situ, they are not subject to the requirements of LDR. However, if wastes are removed from land disposal after the effective date, the wastes must meet the applicable treatment standards before subsequent new placement in the land.

To date, Headquarters has determined that the following scenarios do not constitute new "placement," and therefore, that the land disposal restrictions are not applicable:

- Waste is consolidated within a unit or area of contamination.
- Waste is capped in place, including grading prior to capping.
- Waste is treated in-situ.

Other scenarios have been identified that do constitute placement, and therefore, trigger the land disposal restrictions:

- Waste from different units or areas of contamination is consolidated into one unit or area of contamination.
- Waste is treated outside a unit or area of contamination, and redeposited into the same unit or area of contamination.

(Note that in many cases there are no defined "units" at Superfund sites, but rather, areas of contamination which could be considered units under RCRA.) Future guidance will provide more detail on the definition of placement.

The land disposal prohibitions apply to wastes placed in the land as well as to waste treatment residues placed in the land. Therefore, if the recycling or other treatment of a restricted waste includes land disposal of treatment residues, these residuals must meet applicable treatment standards.

Wastes which are placed into storage before the prohibition effective date are not subject to the LDR restrictions on storage. However, wastes taken out of storage after the effective date must meet applicable treatment standards prior to land disposal.

The land disposal restrictions apply to both interim status and permitted facilities.

C. Schedule for Land Disposal Restrictions

The effective dates for the land disposal restrictions under the 1984 RCRA amendments are set forth in Table 1 (page 3). The listed wastes are banned from land disposal on the effective dates unless the waste stream or residue from treatment of the waste stream meets specified treatment standards. (Exemptions from this schedule are discussed in Section I.D, and alternatives to meeting treatment standards are explained in Section I.H.)

D. Exemptions from LDR Schedule

The 1984 RCRA amendments and the LDR regulations provide exemptions and variances from the LDR schedule as set forth in Table 2 (page 4).

TABLE 1

LDR Schedule

WASTE	BAN EFFECTIVE DATE
Spent solvent wastes (F001, F002, F003, F004, F005)	November 8, 1986
Dioxin-containing wastes (F020, F021, F022, F023, F026, F027, F028)	November 8, 1986
California list wastes	July 8, 1987
First third of all ranked and listed RCRA hazardous wastes	August 8, 1988
Second third of all ranked and listed RCRA hazardous wastes	June 8, 1989
All remaining ranked and listed RCRA hazardous waste and all RCRA characteristic hazardous wastes	May 8, 1990
Any RCRA hazardous waste listed or identified under RCRA 3001 after November 8, 1984	Within six months of listing or identification

TABLE 2

Exemptions from LDR Schedule

WASTE	EXEMPTION/VARIANCE
All soil and debris wastes from from CERCLA response* and RCRA corrective actions	Statutory two-year exemption from effective date until November 8, 1988
All RCRA-listed dioxin wastes	Regulatory two-year national variance until November 8, 1988
All RCRA-listed solvent wastes from CERCLA response and RCRA corrective actions (non-soil and debris)	Regulatory two-year national variance until November 8, 1988
Small-quantity generators (100 kg - 1000 kg per month) of RCRA solvent wastes	Regulatory two-year national variance until November 8, 1988
Solvent-water mixtures, solvent-containing sludges, or solvent-contaminated soil or solids (non-CERCLA or RCRA corrective action) containing less than 1 percent total F001-F005 solvent constituents as initially generated	Regulatory two-year national variance until November 8, 1988
Liquid and non-liquid hazardous wastes containing HOCs in total concentration greater than or equal to 1,000 mg/l, or 1,000 mg/kg, respectively (except for dilute HOC wastewaters, defined in Section II)	Regulatory two-year national variance until July 8, 1989

* Soil and debris have been defined to include soil, dirt, and rock as well as natural and manufactured materials, such as contaminated wood, stumps, clothing, equipment, building materials, storage containers, and liners. The definition does not include bulk wastes that are not contaminated soil or debris. Only soil and debris resulting from CERCLA 104 and 106 (enforcement) actions are included in this exemption. State-ordered, State-funded, or private-party funded response wastes are not entitled to this exemption if CERCLA section 104 or 106 authority is not utilized, even if section 107 is used for purposes of invoking liability.

E. Treatment Standards

LDR prohibits land disposal of restricted wastes after the effective date unless specified treatment standards are met. (Alternatives to meeting the treatment standards are discussed in Section I.H.) Treatment standards may be expressed as: 1) concentration-based performance standards (concentrations in the total waste or in a waste extract), or 2) specified methods of treatment. Treatment standards are generally based on the best demonstrated available technology (BDAT) for treatment of that waste.

If the treatment standard is expressed as a waste concentration or a concentration in a waste extract, any treatment technology that meets this performance standard may be used to treat the waste prior to land disposal. If the standard is expressed as a specific technology, that technology must generally be used to treat the waste prior to land disposal.

In the November 7, 1986 LDR regulations, treatment standards were established for the RCRA-listed solvent and dioxin wastes (see Table 3 on the next page). These treatment standards are expressed as concentrations in a waste extract (40 CFR Section 268.41). The July 8, 1987 rule establishes treatment standards for the California list PCB and HOC wastes (except for dilute HOC wastewaters). These treatment standards, discussed in more detail in Section II of this document, are expressed as specific technologies (e.g., thermal treatment). Treatment standards for the remaining wastes will be evaluated according to the schedule set forth in Table 1.

Treatment standards are to be used only for disposal purposes, not as cleanup standards. In fact, sites may be cleaned to levels lower than the treatment standards.

F. Single vs. Multiple Constituent LDR Wastes

Single constituent LDR wastes must meet the treatment standard specified for that waste. For example, a wastewater containing 6 percent solvents by weight, with chlorobenzene the only LDR constituent at a concentration of 1.63 milligrams per liter (mg/l), must be treated with a technology capable of achieving a chlorobenzene concentration of less than 0.15 mg/l, the chlorobenzene treatment standard (see Table 3).

Multiple constituent LDR wastes must meet the treatment standards for each restricted waste. For example, assume a spent solvent waste contained the following:

LDR Constituent	Concentration	Treatment Standard
(1) acetone	0.75 mg/l	0.59 mg/l
(2) methylene chloride	1.20 mg/l	0.96 mg/l
(3) trichloroethylene (TCE)	0.87 mg/l	0.091 mg/l

Table 3

Solvent and Dioxin Treatment Standards

F001 - F005 Solvent Constituents	Extract Concentrations (mg/l)	
	Wastewater	Other
Acetone	0.05	0.59
n-Butyl alcohol	5.0	5.0
Carbon disulfide	1.05	4.81
Carbon tetrachloride	0.05	0.96
Chlorobenzene	0.15	0.05
Cresols (and cresylic acid)	2.82	0.75
Cyclohexanone	0.125	0.75
1,2-Dichlorobenzene	0.65	0.125
Ethyl acetate	0.05	0.75
Ethyl benzene	0.05	0.053
Ethyl ether	0.05	0.75
Isobutanol	5.0	5.0
Methanol	0.25	0.75
Methylene chloride	0.20	0.96
Methylene chloride (from pharmaceutical industry)	12.7	0.96
Methyl ethyl ketone	0.05	0.75
Methyl isobutyl ketone	0.05	0.33
Nitrobenzene	0.66	0.125
Pyridine	1.12	0.33
Tetrachloroethylene	0.079	0.05
Toluene	1.12	0.33
1,1,1-Trichloroethane	1.05	0.41
1,1,2-Trichloro-1,2,2-trifluoroethane	1.05	0.96
Trichloroethylene	0.062	0.091
Trichlorofluoromethane	0.05	0.96
Xylene	0.05	0.15

LDR Dioxins	Extract Concentration (ppb)
Hexachlorodibenzo-p-dioxins	< 1.0
Hexachlorodibenzofurans	< 1.0
Pentachlorodibenzo-p-dioxins	< 1.0
Pentachlorodibenzofurans	< 1.0
Tetrachlorodibenzo-p-dioxins	< 1.0
Tetrachlorodibenzofurans	< 1.0

LDR Chlorophenols	Extract Concentration (ppm)
2,4,5-Trichlorophenol	< 0.05
2,4,6-Trichlorophenol	< 0.05
2,3,4,6-Tetrachlorophenol	< 0.10
Pentachlorophenol	< 0.01

The waste must then be treated using a treatment technology capable of meeting the treatment standards for acetone, methylene chloride, and TCE. Similarly, if a hazardous waste contained prohibited levels of HOCs and a California list metal, the waste would be prohibited from land disposal until it was in compliance with LDR requirements for both HOCs and the restricted metal.

Note, however, that for multiple constituent wastes the prohibition effective date for each individual constituent would also be applicable. Thus, for a mixed non-liquid HOC/California list metal waste, the statutory prohibition on the metal is effective in 1987, but the HOC restriction is not effective until 1989. Until 1989, therefore, the only applicable restriction is the metal prohibition.

G. Single Constituent Addressed Under Multiple Rulemakings

Where a single constituent is addressed under more than one rulemaking, the applicable treatment standard is that for the more specific waste stream. For example, an HOC-containing waste that is also covered by the F001 spent solvent listing is prohibited from land disposal according to the effective date for the solvent regulation and must be treated to the level specified in that rule for F001 waste.

H. Alternatives to Meeting the Treatment Standard

If the treatment standard for an LDR waste cannot be met, several alternatives are available:

(i) Obtain a Treatability Variance (§ 268.44)

In some cases, it may not be possible to treat a waste to the specified level, or a specified technology may not be appropriate for a waste. A treatability variance allows the regulatory standard to be modified on a waste-specific basis for wastes that are significantly different from the wastes evaluated by EPA in setting the treatment standards and, therefore, cannot be treated to the applicable standard. Table 4 lists the major information requirements required in a petition for a variance from a treatment standard. Headquarters is currently developing treatability variance procedures specifically for Superfund wastes.

(ii) Obtain an Equivalent Treatment Method Petition (§ 268.42(b))

This alternative is available for LDR wastes where the treatment standard is expressed as a specific technology. Section 268.42(b) provides that any person may submit a petition to EPA demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by the specified treatment technology. Headquarters is currently developing petition procedures specifically for Superfund wastes.

Table 4

Major Information Requirements for a Petition

for a Variance from a Treatment Standard

- A detailed description of the petitioner's waste (including data and information on the physical and chemical characteristics of the waste) that EPA can use to compare the petitioner's waste to the wastes considered by EPA in developing BDAT.
- If the waste has been treated, a description of the treatment system, including the process design, operating conditions, and an explanation of why the treatment standard cannot be achieved using the treatment system, or an explanation of why the specified treatment technology is inappropriate for the petitioner's waste.
- If the waste has not been treated, an explanation of why the petitioner believes the waste will react to treatment differently from the wastes evaluated by EPA in developing the treatment standard.
- A description of any alternative treatment systems examined by the petitioner, and, as appropriate, the concentrations that can be achieved by applying such treatment to the waste.
- The dates of the sampling and testing.
- A description of the methodologies and equipment used to obtain representative samples.
- A description of the sample handling and preparation techniques.
- A description of the tests performed (including results).

(iii) Obtain a Case-by-Case Extension (§ 268.5)

In cases where the treatment or disposal capacity cannot reasonably be made available by the effective date of the land disposal prohibitions, the the effective date can be extended for up to one year. This extension may be renewed one time, for a total possible extension of two years. The petition for the extension must demonstrate, among other things, that the generator has made a good faith effort to locate adequate treatment, recovery, or disposal capacity and that he has entered into a binding contract to provide such capacity at a future time. During the extension period, wastes may be disposed in a landfill or surface impoundment if the facility meets minimum specified technological requirements.

Headquarters is currently evaluating whether use of such extensions is appropriate for Superfund wastes.

(iv) Obtain a No Migration Petition (§ 268.6)

EPA will consider allowing land disposal of restricted wastes if a petitioner can demonstrate, to a reasonable degree of certainty, that such disposal will not allow migration of hazardous constituents from the disposal unit or injection zone for as long as the wastes remain hazardous. In general, a successful "no migration" petition will allow land disposal only of a specific waste at a specific facility. Table 5 lists the major information requirements for a "no migration" petition. Headquarters is currently developing petition procedures specifically for Superfund wastes.

(v) Delist the Waste (Sections 260.20, 260.22)

A hazardous waste under RCRA can be formally delisted, however, this process may be too time-consuming for Superfund response actions, especially for removal actions. The current delisting process may take from six to twenty-four months, depending on the type of material and the completeness of data on the material.

I. Storage of Restricted Wastes

The 1984 RCRA amendments provide that LDR waste cannot be stored unless such storage is solely for the purpose of accumulating sufficient quantities for proper treatment, recovery, or disposal. Although no time limit has been established on such storage, in the event of an enforcement action, the storage facility bears the burden of demonstrating compliance with this purpose where storage of LDR wastes exceeds one year. For periods less than one year, EPA has the burden of proving that such storage is not in compliance with this purpose. The regulation also provides that a transporter of restricted wastes may only store such wastes at a transfer facility for ten days.

Headquarters is currently working on the issue of temporary storage of restricted Superfund wastes while awaiting implementation of on-site treatment/disposal or procurement of off-site treatment/disposal.

Table 5

Major Information Requirements for a

"No Migration" Petition

- The identification and a full characterization of the specific waste, including a comprehensive chemical and physical characterization.
- The identification and a comprehensive characterization of the disposal unit, including background air, soil, and water quality.
- A demonstration that all waste and environmental sampling, test, and analysis data are accurate and reproducible.
- A demonstration that EPA-approved sampling, testing, and estimation techniques were used.
- A demonstration that all simulation models for the specific waste and disposal site conditions were calibrated, and that the models were verified by actual measurements.
- Analyses performed to identify and quantify any aspects that could contribute significantly to uncertainty regarding the suitability of the site, including the potential for damage from earthquakes, floods, severe storms, droughts, or other natural phenomena.
- A quality assurance and quality control plan that addresses all aspects of the "no migration" demonstration.

J. Exemption for Treatment in a Surface Impoundment

Treatment of LDR-subject wastes in surface impoundments is allowed under specific provisions in 40 CFR Section 268.4. These provisions state that treatment of the restricted waste must occur in the impoundment; representative samples of sludge and supernatent must be analyzed separately to determine if they meet the applicable treatment standards in Section 268.41 (or prohibition levels, where treatment standards have not been established); treatment residues not meeting applicable standards or levels must be removed annually and not placed in any other surface impoundment; the impoundment must meet the operation and design requirements of Section 264.221 or 265.221, or be exempted under those Sections; and the owner or operator must submit to the Regional Administrator a certification that these requirements have been met, with a copy of the waste analysis plan.

K. Dilution and Mixing Prohibited

Dilution of restricted wastes with liquids or non-liquid agents (e.g., flyash, sawdust) to reach the desired concentration levels is prohibited under 40 CFR Section 268.3. Such dilution may not be used as a substitute for adequate treatment. (Note that solidification may be appropriate treatment for some California list wastes at this time. See Section II of this document.) Dilution as a part of proper treatment (e.g., addition of fixing agents, addition of lime to neutralize) is allowed. Addition of such substances produces physical or chemical changes and does not merely dilute the hazardous constituent into a larger volume of waste so as to lower the constituent concentration.

The prohibition on dilution also applies to residuals after treatment. In particular, wastes meeting Subpart D treatment standards must not be mixed with wastes that do not meet such standards in order to achieve the treatment standard (or prohibition level) for the mixture.

Restricted wastes may not be mixed unless they are mixed with wastes that require treatment or facilitate treatment. Where wastes are mixed in accordance with this principle, the lowest treatment standard (or prohibition level) must be achieved for the constituent of concern.

L. Disposal of Lab Packs Containing Restricted Wastes

If a lab pack contains restricted wastes, the entire lab pack is subject to LDR. The lab pack may not be land disposed unless the restricted wastes are removed prior to land disposal, the restricted wastes in the lab pack meet the treatment standards (or prohibition levels), or a successful "no migration" petition has been made.

M. Testing and Recordkeeping

Generator requirements. Generators are responsible for determining whether their wastes are restricted from land disposal. Such determinations can be made based on knowledge of the waste, testing, or both. When the determination is based solely on knowledge, the generator must keep all supporting documentation in his files.

A generator who determines that a waste requires treatment prior to land disposal must notify the treatment facility in writing of the appropriate treatment standard (or prohibition level) for the waste. The notification must specify the EPA Hazardous Waste Number, the applicable treatment standard (or prohibition level), the manifest number associated with the shipment of waste, and include the waste analysis data (if available).

A generator who determines that a waste can be land disposed without treatment must submit to the disposal facility a notice which contains the EPA Hazardous Waste Number, the manifest number, the applicable treatment standard (or prohibition level), and the waste analysis data (if available) or cross references to relevant data submitted at an earlier time, plus a certification statement. See Section 268.7(a)(2)(ii) for the appropriate wording for the certification.

If a generator's waste is subject to a case-by-case extension, a "no migration" petition, or a nationwide variance from the effective date, he must submit a notice to the land disposal facility receiving the waste, stating that the waste is exempt from the land disposal restrictions.

For CERCLA actions where the waste has been granted an exemption or variance specific to CERCLA waste (e.g., soil and debris, RCRA-listed solvents) and the waste does not meet LDR treatment standards, the OSC/RPM must provide to the land disposal facility a notice that the waste is a CERCLA waste and exempt from LDR, along with any waste analysis data available. The notice may read:

> "I notify _____(facility)_____ that the waste transported under this manifest number is a waste generated from a (remedial or) removal action taken under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and is exempt from prohibitions on land disposal under 40 CFR Part 268."

Treatment facility requirements. An off-site treatment facility must obtain the required data from the generator prior to treatment and place that data in the operating record. Treatment residues must be tested prior to land disposal according to the frequency specified in the treatment facility's waste analysis plan to determine if treatment has achieved the required levels. For example, if the waste analysis plan calls for testing of each batch of waste from an incineration process, these data must be submitted to the land disposal facility.

Each waste shipment to a disposal facility must be accompanied by a certification statement including cross references to any relevant data submitted at an earlier time, and a notice which includes the EPA Hazardous Waste Number, the manifest number, the applicable treatment standard (or prohibition level), and the waste analysis data (if available).

Where the treatment standard is performance-based, the certification must be worded according to Section 268.7(b)(2)(i). Where the treatment standard for an applicable waste is a specified method of treatment, the last facility to treat the waste must certify to the land disposal facility that the waste has been treated using the specified technology. See Section 268.7(b)(2)(ii) for the appropriate wording.

Land disposal facility requirements. The disposal facility, which is ultimately responsible for verifying that only wastes meeting the treatment standards (or prohibition levels) are land disposed, must maintain all documentation that the waste has been treated in accordance with the standards. Land disposal facilities must test their wastes to determine compliance with treatment standards as frequently as specified in the facility's waste analysis plan. If generation, treatment, and disposal all occur at the same site, all testing records must be placed in the operating record.

II. CALIFORNIA LIST PROHIBITIONS

A. Overview

The California list wastes include five categories of waste: free cyanides, metals, corrosives, polychlorinated biphenyls (PCBs), and halogenated organic compounds (HOCs). With the exception of HOCs, the California list addresses only liquid wastes; HOCs are regulated under LDR in both liquid and non-liquid forms. Land disposal prohibitions went into effect on July 8, 1987, for the free cyanides, metals, corrosives, PCBs, and dilute HOC wastewaters. The effective date for the other HOC wastes was extended.

The 1984 RCRA amendments (section 3004(d)) established prohibition levels for the land disposal of California list wastes that would go into effect on July 8, 1987, unless EPA promulgated more protective treatment levels by that date. In the July 8 California list rule, EPA does not set treatment levels for the free cyanides and metals, but instead allows the statutory prohibitions to take effect at this time. (More stringent levels may be established, however, in the coming months.) For corrosive wastes, the California list rule codifies the statutory prohibition levels. For PCBs and HOCs (except dilute HOC wastewaters), the California list rule establishes treatment standards.

Note that the California list addresses fairly broad categories of waste. Many of these wastes have been, or will be, covered by other LDR rulemakings, such as the spent solvent restrictions. Because the other regulations address more specific waste streams, where a California list waste is also covered by another rulemaking, the restrictions in the other regulation will take precedence over the California list prohibitions.

In order to be subject to the California list land disposal prohibitions, a given waste must meet four criteria: 1) the waste must contain a constituent specified in the California list provisions or have a pH

less than or equal to 2 (RCRA section 3004(d)); 2) the physical form of the waste must be a liquid (except for HOCs); 3) the wastes containing the California list constituent must be listed or identified as hazardous under RCRA section 3001 (as implemented in 40 CFR Part 261); and 4) the waste must contain a concentration of one or more California list constituents at or above the prohibition levels specified in RCRA section 3004(d), or more stringent levels that may be specified by EPA in the LDR regulations.

With regard to criterion two, (the waste must be a liquid), note that the rule generally requires use of the Paint Filter Liquids Test to determine if a given waste is a liquid (Method 9095 in EPA Publication SW-846). Once a waste is determined to be a liquid and to exceed the applicable prohibition levels, however, the entire waste is restricted from land disposal, not just the liquid portion.

With regard to criterion three (the waste must be a RCRA hazardous waste), in some cases it may not be possible to determine if a Superfund hazardous waste is also a RCRA hazardous waste. For example, it may be possible to determine that a given waste contains trichloroethylene, but it may not be possible to determine whether the source of the trichloroethylene is one of the processes regulated under RCRA. Headquarters is continuing to work on developing a policy for Superfund compliance with LDR for such "unknowns."

These four criteria are discussed in greater detail below for each of the California list wastes.

B. Free Cyanides and Metals

Definition. To determine if a given waste contains free cyanides for purposes of RCRA section 3004(d), the rule requires that the filtrate from the Paint Filter Liquids Test be analyzed for free cyanides. The rule does not require use of a particular analytical test, but recommends use of the Cyanides Amenable to Chlorination test in Method 9010 (EPA Publication SW-846) for determining free cyanide concentrations.

The California list metals are: arsenic, cadmium, chromium VI, lead, mercury, nickel, selenium, and thallium. These metals are defined with reference to the periodic table of elements. The LDR provisions apply both to individual constituents and to the relevant metal portion of any compounds containing such metals.

Physical Form Requirement. To determine if a given free cyanide or metal waste is a liquid for the purposes of RCRA section 3004(d), the rule requires use of the Paint Filter Liquids Test.

Hazardous Waste Requirement. To be subject to LDR provisions, the waste must be regulated as hazardous under RCRA. Thus, a given waste must contain the specified cyanides or metals, and also be either listed as hazardous under 40 CFR Part 251 or exhibit one or more characteristics of hazardous waste identified in Part 261 (i.e., ignitability, corrosivity, reactivity, or EP toxicity).

Prohibited Levels. The rule does not establish treatment standards for cyanides and metals at this time. Instead, EPA is allowing the statutory "hammer" under RCRA section 3004(d) to fall on July 8. The statute prohibits land disposal of the following:

- "Liquid hazardous wastes, including free liquids associated with any solid or sludge, containing free cyanides at concentrations greater than or equal to 1,000 mg/l."

- "Liquid hazardous wastes, including free liquids associated with any solid or sludge, containing the following metals (or elements) or compounds of these metals (or elements) at concentrations greater than or equal to those specified below:

  (i) arsenic and/or compounds (as As) 500 mg/l;
  (ii) cadmium and/or compounds (as Cd) 100 mg/l;
  (iii) chromium VI and/or compounds (as Cr VI) 500 mg/l;
  (iv) lead and/or compounds (as Pb) 500 mg/l;
  (v) mercury and/or compounds (as Hg) 20 mg/l;
  (vi) nickel and/or compounds (as Ni) 134 mg/l;
  (vii) selenium and/or compounds (as Se) 100 mg/l; and
  (viii) thallium and/or compounds (as Th) 130 mg/l."

To determine if a waste contains free cyanides or metals that exceed these statutory prohibitions, a generator may use knowledge of his waste or must test the filtrate from the Paint Filter Liquids Test. The rule recommends use of the applicable methods in EPA Publication No. SW-846 to test the filtrate.

Although EPA is not promulgating treatment standards for these wastes at this time, the Agency is planning to publish in the near future a Notice of Data Availability and Request for Comment. This notice will outline the Agency's approach to substituting more stringent prohibition levels for the cyanide and metal wastes. Because this notice had not been written at the time of this memorandum, we are not able to provide you with a draft for review in advance of the publication date. Instead, we will telephone the Regions when the publication date is known, and request that each Region obtain a copy of that Federal Register to review the proposed approach. Comments should then be provided to Headquarters at least one week prior to the close of the public comment period for this notice to allow adequate time for us to compile Regional comments. Removal personnel should submit comments to Jean Schumann by telephone (FTS 382-4671), E-Mail, or in writing (WH-548/B, Emergency Response Division). Remedial personnel should submit comments to John Cunningham (FTS 382-2446, WH-548/E, Hazardous Site Control Division).

Treatment of Restricted Metals. Section IV.D of the preamble to the California list rule states that legitimate solidification technologies are appropriate for use on California list metal-bearing wastes, at least until treatment standards are established for such wastes. The preamble also notes that the liquids in landfills prohibitions set forth in Sections 264.314 and 265.314, which place certain prohibitions on the use of absorbents, remain applicable.

C. Corrosives

Definition. The California list corrosive wastes are defined as having a pH less than or equal to 2.

Physical Form and Hazardous Waste Requirement. The statute applies to liquid (acidic) corrosive wastes. The rule requires the use of the Paint Filter Liquids Test to determine if the given waste is a liquid. Acidic wastes are defined as hazardous based on the characteristic of corrosivity found at 40 CFR Section 261.22(a)(1) when the pH is less than or equal to 2. If these wastes are treated to a pH greater than 2, they are no longer characteristic hazardous wastes and may be land disposed in a Subtitle D facility. In addition, because the regulation does not establish a technology-based treatment standard, corrosive wastes may be rendered non-liquid by chemical fixation or other treatment methods and be eligible for land disposal. If a waste is hazardous solely because of the characteristic of corrosivity, rendering it non-liquid also renders it nonhazardous because the characteristic of corrosivity based on low pH applies only to aqueous wastes.

Prohibition Levels. The rule codifies the statutory prohibition level (pH less than or equal to 2), but does not establish a treatment standard for corrosive wastes. The Agency plans to address the issue of appropriate treatment standards for corrosive wastes when it promulgates regulations for the remaining listed wastes.

To determine if a waste has a pH which exceeds the prohibition level, a generator may use knowledge of his waste, or must test the total waste (not an extract or filtrate) using the existing method for corrosivity specified in 40 CFR Section 261.22(a)(1).

D. Polychlorinated Biphenyls (PCBs)

Definition. PCBs are defined in accordance with the Toxic Substances Control Act (TSCA) regulations as "any chemical substance that is limited to the biphenyl molecule that has been chorinated to varying degrees or any combination of substances which contain such substance." In addition, inadvertently generated non-Aroclor PCBs are defined as "the total PCBs calculated following division of the quantity of monochlorinated biphenyls by 50 and dichlorinated biphenyls by 5." (40 CFR Section 761.3)

Physical Form Requirement. To determine if a given waste is a liquid for purposes of this rule, the Paint Filter Liquids Test is required.

Hazardous Waste Requirement. Liquid PCB-containing wastes are subject to the California list prohibitions only if they are mixed with or otherwise contained in wastes which are listed as hazardous under 40 CFR Part 261, or if the mixture exhibits one or more of the characteristics of hazardous waste identified in that Part.

Prohibition Levels. The rule codifies the 50 ppm prohibition level in section 3004(d) of the RCRA amendments. Therefore, liquid hazardous wastes containing greater than or equal to 50 ppm may not be land disposed. The rule requires that once a waste is determined to be a hazardous liquid, then the total waste (not an extract or filtrate) must be analyzed to determine if the 50 ppm PCB level is exceeded.

Treatment Standards. The rule requires thermal destruction (i.e., treatment in incinerators or high efficiency boilers) of restricted PCB wastes pursuant to the operating standards set forth in 40 CFR Sections 761.60 and 761.70.

The TSCA regulations state that where there is an inconsistency between TSCA and RCRA standards, the more stringent regulations govern. Therefore, although TSCA allows land disposal in certain cases of wastes containing between 50 and 500 ppm PCBs, such land disposal would not be allowed if the PCB waste is also restricted under the California list rule. Additionally, because TSCA does not allow any land disposal of liquid PCB wastes at concentrations greater than or equal to 500 ppm, such wastes that are also covered by the California list rule are not eligible for a "no migration" petition under LDR (see Section I of this document).

The LDR framework provides that where a treatment standard is expressed as a specific technology, any person may submit a petition demonstrating that an alternative technology can achieve an equivalent measure of performance. Headquarters is currently developing such petition procedures specifically for Superfund wastes.

Effective Date. The effective date of the California list prohibitions for liquid PCB wastes is July 8, 1987.

E. Halogenated Organic Compounds (HOCs)

Definition. HOCs are defined as those compounds having a carbon-halogen bond which are listed under Appendix III to Part 268 (added by the July 8 rule).

Physical Form Requirement. The rule regulates HOC wastes in both liquid and non-liquid form. (However, soil and debris from CERCLA response actions are exempted from LDR until November 1988.) The Paint Filter Liquids Test is required to determine if the waste is a liquid. With regard to liquid HOCs, the rule also establishes dilute HOC wastewater as a separate treatability group. Dilute HOC wastewaters are defined as liquid hazardous wastes that are primarily water and contain HOCs in total concentration greater than or equal to 1,000 mg/l and less than 10,000 mg/l.

Hazardous Waste Requirement. Wastes containing HOCs are only subject to the California list prohibitions if the waste is listed as hazardous under 40 CFR Part 261 or exhibits one or more of the characteristics of hazardous waste identified in that Part.

Prohibition Levels. The land disposal prohibition in the California list rule applies only to hazardous wastes containing HOCs in total concentration greater than or equal to 1,000 mg/l (liquids) or 1,000 mg/kg (non-liquids). In determining whether a waste contains HOCs above these prohibition levels, only those HOCs which are listed in Part 268 Appendix III must be considered. The generator may use knowledge of his waste or must test the total waste (not an extract or filtrate) to determine HOC concentration. The rule does not require use of a specific test.

Relationship to PCB Restriction. PCBs are also HOCs, but because PCBs are the more specific waste stream, the PCB prohibition level (50 ppm) would apply for liquid hazardous wastes containing PCBs. Therefore, a liquid HOC waste that contains greater than or equal to 50 ppm PCBs may not be land disposed, even if total HOCs are below 1,000 mg/l. However, a non-liquid HOC waste that contains greater than or equal to 50 ppm PCBs may be land disposed under this rule as long as total HOCs are below 1,000 mg/kg. If total HOCs in a liquid or non-liquid hazardous waste are greater than or equal to 1,000 mg/kg, the waste may not be land disposed even if PCB concentrations are below 50 ppm.

Treatment Standards. The rule establishes incineration (in accordance with 40 CFR Part 264 Subpart O or 40 CFR Part 265 Subpart O) as the treatment standard for all hazardous wastes containing HOCs in total concentration greater than or equal to 1,000 mg/kg (non-liquids) or 1,000 mg/l (liquids) except dilute HOC wastewaters. However, as noted earlier, if an HOC-containing waste is already subject to a treatment standard for a specific HOC (e.g., F001 spent solvent), the treatment standard for the more specific HOC waste would take precedence. Thus, the waste would have to meet the treatment standard for the solvent waste, but need not be incinerated.

The LDR framework provides that where a treatment standard is expressed as a specific technology, any person may submit a petition demonstrating that an alternative technology can achieve an equivalent level of performance. Headquarters is currently developing such petition procedures specifically for Superfund wastes.

With regard to dilute HOC wastewaters, these wastes must be treated below the 1,000 mg/l prohibition level prior to land disposal, but no particular technology is required under this rule.

Effective Dates. Due to a lack of incineration capacity, the rule provides a 2-year nationwide variance from the statutory effective date for most HOC wastes until July 8, 1989. However, the prohibitions on land disposal of dilute HOC wastewaters take effect on July 8, 1987.

Note again, that if an HOC waste is also covered under a more waste-specific rulemaking, the treatment standard and effective date for the more waste-specific rule are applicable.

F. Summary of California List Prohibition Levels

The following table summarizes the prohibition levels for the California list wastes.

Table 6

California List Prohibition Levels

Waste	Prohibition Level
Free cyanides	1000 mg/l
Metals:	
Arsenic	500 mg/l
Cadmium	100 mg/l
Chromium VI	500 mg/l
Lead	500 mg/l
Mercury	20 mg/l
Nickel	134 mg/l
Selenium	100 mg/l
Thallium	130 mg/l
Corrosives	ph $\leq$ 2
PCBs	50 ppm
HOCs	
Non-liquids	1000 mg/kg
Liquids	1000 mg/l
Dilute Wastewaters	1000 mg/l

Revised Procedures for Implementing Off-Site Response Actions

United States
Environmental Protection
Agency

Office of
Solid Waste and
Emergency Response

EPA

DIRECTIVE NUMBER: 9834.11

TITLE: Revised Procedures for Implementing Off-Site Response Actions

APPROVAL DATE: November 13, 1987

EFFECTIVE DATE: November 13, 1987

ORIGINATING OFFICE: Office of Waste Programs Enforcement

☒ **FINAL** (Interim)

☐ **DRAFT**

LEVEL OF DRAFT

- ☒ A — Signed by AA or DAA
- ☐ B — Signed by Office Director
- ☐ C — Review & Comment

REFERENCE (other documents):

United States Environmental Protection Agency
Washington, DC 20460

EPA OSWER Directive Initiation Request

1 Directive Number: 9834.11

2. Originator Information

Name of Contact Person	Mail Code	Office	Telephone Code
NANCY BROWNE	WH-527	RM 2830	475-9326

3. Title
Revised Procedures for Implementing Off-Site Response Actions

4. Summary of Directive (include brief statement of purpose)
This Directive describes procedures that should be observed when a response action under CERCLA or Section 7003 of RCRA involves the off-site treatment, storage or disposal of CERCLA waste.

5. Keywords
Off-Site Policy, Off-Site Waste, CERCLA Waste, Off-Site Management of Waste

6a. Does This Directive Supersede Previous Directive(s)? [ ] No [XX] Yes
What directive (number, title)
1) Procedures for Planning & Impl. off-site Response Actions.

b. Does It Supplement Previous Directive(s)? [ ] No [ ] Yes
2) Providing Notice to Facilities (9330.2-5)
3) Eligibility of Facilities in Assessment Monitoring (9330.2-6)

7. Draft Level
[ ] A – Signed by AA/DAA [ ] B – Signed by Office Director [ ] C – For Review & Comment [ ] D – In Development

8. Document to be distributed to States by Headquarters? [ ] Yes [x] No

This Request Meets OSWER Directives System Format Standards.

9. Signature of Lead Office Directives Coordinator	Date
Barbara M. Williams	11/13/87
10. Name and Title of Approving Official: Jonathan McGrand Acting	Date: 11/13/87

EPA Form 1315-17 (Rev. 5-87) Previous editions are obsolete.

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9834.11

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

November 13, 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Revised Procedures for Planning and Implementing Off-site Response Actions

FROM: J. Winston Porter
Assistant Administrator

TO: Regional Administrators
Regions I-X

With this memo I am transmitting the revised procedures for planning and implementing off-site response actions (the "off-site policy"). These procedures should be observed when a response action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or Section 7003 of the Resource Conservation and Recovery Act (RCRA) involves off-site treatment, storage or disposal of CERCLA waste.

This policy incorporates all of the mandates of CERCLA as amended by the Superfund Amendments and Reauthorization Act (SARA) and expands several of the more stringent requirements when applying them to wastes resulting from CERCLA decision documents signed, and RCRA section 7003 actions initiated, after the enactment of SARA. This revised policy also reinterprets the original off-site policy, issued in May 1985, as it applies to CERCLA wastes resulting from decision documents signed, and RCRA section 7003 actions initiated, before the enactment of SARA.

This revised policy is effective immediately upon issuance. It is considered to be an interim final policy as key elements of the policy will be incorporated in a proposed rule to be published in the Federal Register. As part of that rulemaking, the policy will be subject to public comment. Comments received during that period may cause additional revisions to the policy.

If you have comments regarding this revised policy, please contact Gene Lucero, Director, Office of Waste Programs Enforcement.

cc: Waste Management Division Directors
Regions I-X

REVISED PROCEDURES FOR IMPLEMENTING OFF-SITE RESPONSE ACTIONS

I. INTRODUCTION

The off-site policy describes procedures that should be observed when a response action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or Section 7003 of RCRA involves off-site storage, treatment or disposal of CERCLA waste. The procedures also apply to actions taken jointly under CERCLA and another statute.

The purpose of the off-site policy is to avoid having CERCLA wastes contribute to present or future environmental problems by directing these wastes to facilities determined to be environmentally sound. It is EPA's responsibility to ensure that the criteria for governing off-site transfer of CERCLA waste result in decisions that are environmentally sensible and that reflect sound public policy. Therefore, in developing acceptability criteria, the Agency has applied environmental standards and other sound management practices to ensure that CERCLA waste will be appropriately managed.

EPA issued the original off-site policy in May 1985. See "Procedures for Planning and Implementing Off-Site Response Actions", memorandum from Jack W. McGraw to the Regional Administrators. That policy was published in the Federal Register on November 5, 1985. The 1986 amendments to CERCLA, the Superfund Amendments and Reauthorization Act (SARA), adopted EPA's policy for off-site transfer of CERCLA wastes, with some modifications. CERCLA §121(d)(3) requires that hazardous substances, pollutants or contaminants transferred off-site for treatment, storage or disposal during a CERCLA response action be transferred to a facility operating in compliance with §§3004 and 3005 of RCRA and other applicable laws or regulations. The statute also requires that receiving units at land disposal facilities have no releases of hazardous wastes or hazardous constituents. Any releases from other units at a land disposal facility must also be controlled by a RCRA or equivalent corrective action program. While the original policy required compliance with RCRA and other applicable laws, SARA goes beyond the original policy, primarily by prohibiting disposal at units at a land disposal facility with releases, rather than allowing the Agency to judge whether the releases constituted environmental conditions that affected the satisfactory operation of a facility.

The off-site policy has been revised in light of the mandates of SARA. This revised policy also extends the SARA concepts to certain situations not specifically covered by the statute. These requirements apply to CERCLA decision documents signed, and RCRA §7003 actions taken, after enactment of SARA. Specifically, this policy covers:

- Extending SARA's "no release" requirement to all RCRA units receiving CERCLA waste, not just units at RCRA land disposal facilities;

- Expanding SARA's release prohibition to include releases of CERCLA hazardous substances, in addition to releases of RCRA hazardous waste and hazardous constituents;

- Addressing releases from other units at RCRA treatment and storage facilities; and

- Addressing off-site transfer to non-RCRA facilities.

The revised policy also reinterprets the May 1985 policy as it now applies to CERCLA decision documents signed, and RCRA §7003 actions taken, prior to the enactment of SARA.

The revised off-site policy is effective immediately upon issuance. It is considered to be an interim policy as key elements of the policy will be incorporated in a proposed rule to be published in the Federal Register. As part of that rulemaking, the policy will be subject to public comment. Comments received during that period may cause additional revisions to the policy. The final rule will reflect the final policy under CERCLA §121(d)(3) and EPA will issue a revised implementation policy memorandum if necessary.

II. APPLICABILITY

There are a number of variables which will determine whether and how the off-site policy applies: waste type, authority, funding source, and whether the decision document or order supporting the clean-up was signed before or after the enactment of SARA (i.e., before or after October 17, 1986). In order to determine which elements of the policy apply to a specific CERCLA cleanup each factor must be considered.

The first factor to consider is the type of waste to be transferred. The revised policy applies to the off-site treatment, storage or disposal of all CERCLA waste. CERCLA wastes include RCRA hazardous wastes and other CERCLA hazardous substances, pollutants and contaminants. RCRA hazardous wastes are either listed or defined by characteristic in 40 CFR Part 261. CERCLA hazardous substances are defined in 40 CFR 300.6.

Because RCRA permits and interim status apply to specific wastes and specific storage, treatment or disposal processes, the Remedial Project Manager (RPM) or On-Scene Coordinator (OSC) must determine that the facility's permit or interim

status authorizes receipt of the wastes that would be transported to the facility and the type of process contemplated for the wastes. Therefore, it is important that facility selection be coordinated with RCRA personnel.

A CERCLA hazardous substance that is not a RCRA hazardous waste or hazardous constituent (i.e., non-RCRA waste) may be taken to a RCRA facility if it is not otherwise incompatible with the RCRA waste, even though receipt of that waste is not expressly authorized under interim status or in the permit. Non-RCRA wastes can also be managed at non-RCRA facilities. Criteria applicable to CERCLA wastes that can be disposed of at non-Subtitle C facilities are discussed later in this revised policy.

The second factor to consider in determining whether this revised policy applies is the statutory authority for the action. This revised off-site policy applies to any remedial or removal action involving the off-site transfer of any hazardous substance, pollutant, or contaminant under any CERCLA authority or under RCRA §7003. This policy also applies to response actions taken under §311 of the Clean Water Act, except for cleanups of petroleum products. The policy also covers cleanups at Federal facilities under §120 of SARA.

The third factor to assess is the source of funding. The revised policy applies to all Fund-financed response actions, whether EPA or the State is the lead agency. The policy does not apply to State-lead enforcement actions (even at NPL sites) if no CERCLA funds are involved. It does apply to State-lead enforcement actions where EPA provides any site-specific funding through a Cooperative Agreement or Multi-Site Cooperative Agreement, even though the State may be using its own enforcement authorities to compel the cleanup. Similarly, non-NPL sites are covered by this policy only where there is an expenditure of Fund money or where the cleanup is undertaken under CERCLA authority.

The final factor that affects how this revised policy applies is the date of the decision document. As noted earlier, there are two classes of actions subject to slightly different procedures governing off-site transfer: first, those actions resulting from pre-SARA decision documents or RCRA §7003 orders issued prior to October 17, 1986, are subject to the May 1985 policy as updated by this revised policy; and second, those actions resulting from post-SARA decision documents or RCRA §7003 orders issued after October 17, 1986, are subject to the requirements of SARA as interpreted and expanded by this revised policy. Although the procedures in this policy are similar for these two classes of actions, there are important differences (e.g., the requirements pertaining to

releases from other units at a facility) that will be highlighted throughout this document.

Compliance with the revised procedures is mandatory for removal and remedial actions. However, there is an emergency exemption for removals if the OSC determines that the exigencies of the situation require off-site treatment, storage or disposal without following the requirements. This exception may be used when the OSC believes that the threat posed by the substances makes it imperative to remove the substances immediately and there is insufficient time to observe these procedures without endangering public health, welfare or the environment. In such cases, the OSC should consider temporary solutions (e.g., interim storage) to allow time to locate an acceptable facility. The OSC must provide a written explanation of his or her decision to use this emergency exemption to the Regional Administrator within 60 days of taking the action. In Regions in which authority to make removal decisions has not been fully delegated by the Regional Administrator to the OSC, the decisions discussed above must be made by the Regional official to whom removal authority has been delegated. This emergency exemption is also available to OSC's taking response actions under §311 of the Clean Water Act.

III. DEFINITIONS

A. Release

For the purposes of this policy, the term "release" is defined here as it is defined by §101(22) of CERCLA, which is repeated in 40 CFR 300.6 of the NCP, and the RCRA §3008(h) guidance ("Interpretation of Section 3008(h) of the Solid Waste Disposal Act", memorandum from J. Winston Porter and Courtney M. Price to the Regional Administrators, et al, December 16, 1985). To summarize, a release is any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injection, escaping, leaching, dumping or disposing to the environment. This includes releases to surface water, ground water, land surface, soil and air.

A release also includes a substantial threat of a release. In determining whether a substantial threat of release exists, both the imminence of the threat and the potential magnitude of the release should be considered. Examples of situations where a substantial threat of a release may exist include a weakened or inadequately engineered dike wall at a surface impoundment, or a severely rusted treatment or storage tank.

De minimis releases from receiving units are exempt; that is, they are not considered to be releases under the off-site

policy. De minimis releases are those that do not adversely affect public health or the environment, such as releases to the air from temporary opening and closing of bungs, releases between landfill liners of 1 gallon/acre/day or less, or stack emissions from incinerators not otherwise subject to Clean Air Act permits. Releases that need to be addressed by implementing a contingency plan would not normally be considered de minimis releases.

Federally-permitted releases, as defined by CERCLA §101(10) and 40 CFR 300.6, are also exempt. These include discharges or releases in compliance with applicable permits under RCRA, the Clean Water Act, Clean Air Act, Safe Drinking Water Act, Marine Protection, Research and Sanctuaries Act, and Atomic Energy Act or analogous State authorities.

For purposes of this policy, an interim status unit in RCRA ground-water assessment monitoring (under 40 CFR 265.93) or a permitted unit in compliance monitoring (under 40 CFR 264.99) is not presumed to have a release. EPA will evaluate available information, including the data which led to a determination of the need for assessment or compliance monitoring, data gathered during assessment monitoring, and any other relevant data, including that gathered from applicable compliance inspections. A determination of unacceptability should be made when information will support the conclusion that there is a probable release to ground water from the receiving unit. Finding a release can happen at any time before, during or after an assessment or compliance monitoring program.

On the other hand, it is not necessary to have actual sampling data to determine that there is a release. An inspector may find other evidence that a release has occurred, such as a broken dike or feed line at a surface impoundment. Less obvious indications of a release might also be adequate to make the determination. For example, EPA could have sufficient information on the contents of a land disposal unit, the design and operating characteristics of the unit, or the hydrogeology of the area in which the unit is located to conclude that there is or has been a release to the environment.

B. Receiving Unit

The receiving unit is any unit that receives off-site CERCLA waste:

(1) for treatment using BDAT, including any pre-treatment or storage units used prior to treatment;

(2) for treatment to substantially reduce its mobility,

toxicity or persistence in the absence of a defined BDAT; or

(3) for storage or ultimate disposal of waste not treated to the previous criteria.

Note that the acceptability criteria may vary from unit to unit, and that the receiving unit may vary from transfer to transfer.

C. Other Units

Other units are all other regulated units and solid waste management units (SWMU's) at a facility that are not receiving units.

D. Controlled Release

In order to be considered a controlled release, the release must be addressed by a RCRA corrective action program (incorporated in a permit or order) or a corrective action program approved and enforceable under another applicable Federal or delegated State authority.

E. Relevant Violations

Relevant violations include Class I violations as defined by the RCRA Enforcement Response Policy (December 21, 1984, and subsequent revisions) at or affecting a receiving unit. A Class I violation is a significant deviation from regulations, compliance order provisions or permit conditions designed to:

- Ensure that hazardous waste is destined for and delivered to authorized facilities;
- Prevent releases of hazardous waste or constituents to the environment;
- Ensure early detection of such releases; or
- Compel corrective action for releases.

Recordkeeping and reporting requirements (such as failure to submit the biennial report or failure to maintain a copy of the closure plan at the facility) are generally not considered to be Class I violations.

Violations affecting a receiving unit include all ground-water monitoring violations unless the receiving unit is outside the waste management area which the ground-water monitoring system was designed to monitor. Facility-wide Class I violations (such as failure to comply with financial

responsibility requirements, inadequate closure plan, inadequate waste analysis plan, inadequate inspection plan, etc.) that affect the receiving unit are also relevant violations.

Violations of State or other Federal laws should also be examined for relevance, considering the significance of the requirement that is being violated; the extent of deviation from the requirement; and the potential or actual threat to human health or the environment.

F. Relevant Release

A relevant release under this revised policy includes:

- Any release or significant threat of release of a hazardous substance (defined in 40 CFR 300.6) not previously excluded (i.e., de minimis releases or permitted releases) at all units of a RCRA Subtitle C land disposal facility and at receiving units of a RCRA Subtitle C treatment or storage facility; and

- Environmentally significant releases of any hazardous substance not previously excluded at non-receiving units at RCRA Subtitle C treatment and storage facilities and at all units at other facilities.

G. Relevant Conditions

Relevant conditions include any environmental conditions (besides a relevant violation) at a facility that pose a significant threat to public health, welfare or the environment or that otherwise affect the satisfactory operation of the facility.

H. Responsible Agency

Determinations of acceptability to receive an off-site transfer of CERCLA waste will be made by EPA or by States authorized for corrective action under §3004(u) of RCRA. References in this document to the "responsible Agency" refer only to EPA Regions or to States with this authority.

I. Responsible Government Official

The responsible government official is that person authorized in the responsible Agency to make acceptability determinations under this revised policy.

IV. ACCEPTABILITY CRITERIA

A. Acceptability Criteria for Wastes Generated Under Pre-SARA Decision Documents

CERCLA wastes from actions resulting from pre-SARA decision documents and pre-SARA RCRA §7003 orders may go to a facility meeting the following criteria:

- o There are no relevant violations at or affecting the receiving unit; and
- o There are no relevant conditions at the facility (i.e., other environmental conditions that pose a significant threat to public health, welfare or the environment or otherwise affect the satisfactory operation of the facility).

In order to determine if there is a relevant violation, an appropriate compliance inspection must be conducted no more than six months before the expected date of receipt of CERCLA waste. This inspection, at a minimum, must address all regulated units. This inspection may be conducted by EPA, a State or an authorized representative. When a State conducts the inspection, it should determine the facility's compliance status. Where a violation or potential violation comes to EPA's attention (e.g., through a citizen complaint or a facility visit by permit staff), the Region or State is expected to investigate whether a violation occurred as soon as is reasonably possible.

The May 1985 policy does not refer specifically to releases. Rather, a corrective action plan is required for relevant conditions. Therefore, in some cases, a facility receiving CERCLA wastes from an action subject to a pre-SARA decision document may not need to institute a program to control releases. Releases will be evaluated by the responsible Agency to determine whether such releases constitute relevant conditions under this policy.

The activities related to determining acceptability, providing notice to facilities, regaining acceptability and implementation procedures are discussed in the "Implementation" section of this document, and apply to off-site transfers of waste generated under pre-SARA and post-SARA decision documents.

B. Acceptability Criteria for Wastes Generated Under Post-SARA Decision Documents

Under this revised policy, there are three basic criteria that are used to determine the acceptability of a facility to receive off-site transfers of CERCLA waste generated under a post-SARA decision document or post-SARA RCRA §7003 cleanup. The criteria are:

- o There must be no relevant violations at or affecting the receiving unit;
- o There must be no releases from receiving units and contamination from prior releases at receiving units must be addressed as appropriate; and
- o Releases at other units must be addressed as appropriate.

The last two criteria are applied somewhat differently, depending on the type of facility. These differences are described below.

1. Criteria Applicable to All RCRA Subtitle C Treatment, Storage and Disposal Facilities. The first criterion that applies to all Subtitle C facilities is that there can be no relevant violations at or affecting the receiving unit. As discussed earlier, this determination must be based on an inspection conducted no more than six months prior to receipt of CERCLA waste.

A second element that applies to all Subtitle C facilities is that there must be no releases at receiving units. Releases from receiving units, except for de minimis releases and State- and Federally-permitted releases, must be eliminated and any prior contamination from the release must be controlled by a corrective action permit or order under Subtitle C, as described in the next section.

The final criterion that applies to all Subtitle C facilities, is that the facility must have undergone a RCRA Facility Assessment (RFA) or equivalent facility-wide investigation. This investigation addresses EPA's affirmative duty under CERCLA §121(d)(3) to determine that there are no releases at the facility.

Releases of RCRA hazardous waste or hazardous constituents and CERCLA hazardous substances are all included under the policy. While the RFA need not focus on identifying releases of hazardous substances that are not RCRA hazardous wastes or hazardous constituents, to the extent such releases are discovered in an RFA or through other means, they will be

considered the same as a release of hazardous waste or hazardous constituents.

o Additional Criteria Applicable to RCRA Subtitle C Land Disposal Facilities. Land disposal facilities must meet additional requirements imposed by SARA and this policy. The term "land disposal facility" means any RCRA facility at which a land disposal unit is located, regardless of whether the land disposal unit is the receiving unit. Land disposal units include surface impoundments, landfills, land treatment units and waste piles.

As stated earlier, there must be no releases at or from receiving units. In addition, releases from other units at a land disposal facility must be controlled under a corrective action program. The RFA will help determine whether there is a release. In addition, land disposal facilities must have received a comprehensive ground-water monitoring evaluation (CME) or an operation and maintenance (O&M) inspection within the last year.

Units at RCRA Subtitle C land disposal facilities receiving CERCLA waste that is also RCRA hazardous waste must meet the RCRA minimum technology requirements of RCRA §3004(o). Only where a facility has been granted a waiver can a land disposal unit not meeting the minimum technology requirements be considered acceptable for off-site disposal of CERCLA waste that is RCRA hazardous waste.

o Criteria Applicable to Subtitle C Treatment and Storage Facilities. The criterion for controlling releases from other units does not apply to all releases at treatment and storage facilities, as it does at land disposal facilities. Releases from other units at treatment and storage facilities must be evaluated for environmental significance and their effect on the satisfactory operation of the facility. If determined by the responsible Agency to be environmentally significant, releases must be controlled by a corrective action program under an applicable authority. Releases from other units at treatment and storage facilities determined not to be environmentally significant do not affect the acceptability of the facility for receipt of CERCLA waste.

2. Criteria Applicable to RCRA Permit-by-Rule Facilities. This revised policy is also applicable to facilities subject to the RCRA permit-by-rule provisions in 40 CFR 270.60. These include ocean disposal barges or vessels, injection wells and publicly owned treatment works (POTWs). Permit-by-rule facilities receiving RCRA hazardous waste must have a RCRA permit or RCRA interim status. RCRA permit-by-rule facilities must also receive an inspection for compliance with applicable RCRA permit or interim status requirements. In addition, these

facilities (and other non-RCRA facilities) should be inspected by the appropriate inspectors for other applicable laws.

In general, except for POTWs (discussed below), these facilities will be subject to the same requirements as RCRA treatment and storage facilities. That is, there can be no releases of hazardous waste, hazardous constituents or hazardous substances from receiving units. There also can be no relevant violations at or affecting the receiving unit, as confirmed by an inspection conducted no more than six months prior to the receipt of CERCLA waste. Releases from other units determined by the responsible Agency to be environmentally significant must be controlled by an enforceable agreement under the applicable authority.

Criteria for discharge of wastewater from CERCLA sites to POTWs can be found in a memorandum titled, "Discharge of Wastewater from CERCLA Sites into POTWs," dated April 15, 1986. That memorandum requires an evaluation during the RI/FS process for the CERCLA site to consider such points as:

- o the quantity and quality of the CERCLA wastewater and its compatibility with the POTW;
- o the ability of the POTW to ensure compliance with applicable pretreatment standards;
- o the POTWs record of compliance with its NPDES permit; and
- o the potential for ground-water contamination from transport to or impoundment of CERCLA wastewater at the POTW.

Based on a consideration of these and other points listed in the memorandum, the POTW may be deemed appropriate or inappropriate for receipt of CERCLA waste.

3. Criteria Applicable to Non-Subtitle C Facilities. In some instances, it may be appropriate to use a non-Subtitle C facility for off-site transfer: for example, PCB disposal is regulated under the Toxic Substances Control Act (TSCA); nonhazardous waste disposal is regulated under Subtitle D of RCRA and applicable State laws; and disposal of radionuclides is regulated under the Atomic Energy Act. At such facilities, all releases are treated in the same manner as releases from other units at Subtitle C treatment and storage facilities. That is, the responsible Agency should make a determination as to whether the release is environmentally significant and, if so, the release should be controlled by a corrective action program under the applicable Federal or State authority.

Requirements for the disposal of PCBs are established in 40 CFR 761.60. Generally, these regulations require that whenever disposal of PCBs is undertaken, they must be incinerated, unless the concentrations are less than 50 ppm. If the concentrations are between 50 and 500 ppm, the rule provides for certain exceptions that provide alternatives to the incineration requirements. The principal alternative is disposal in a TSCA-permitted landfill for PCBs. If a TSCA landfill is the receiving unit for PCBs, then that facility is subject to the same criteria applicable if a RCRA land disposal unit is the receiving unit; i.e., no relevant violations, no releases at the receiving unit and controlled releases at other units. PCBs at levels less than 50 ppm may be transported to acceptable Subtitle D facilities as discussed previously.

V. IMPLEMENTATION

A. Determining Acceptability

Acceptability determinations under the off-site policy will be made by EPA or by States authorized for corrective action under §3004(u) of RCRA. Where States have such authority, the State may make acceptability determinations for facilities in the State in consultation with EPA. Regardless of a State's authorization status, the Region and States should establish, in the Superfund Memorandum of Agreement, mechanisms to ensure timely exchange of information, notification of facilities and coordination of activities related to the acceptability of facilities and potential selection of facilities for off-site transfer. The Regions and States also need to establish or enhance coordination mechanisms with their respective RCRA program staffs in order to ensure timely receipt of information on inspections, violations and releases. These agreements can be embodied in State authorization Memoranda of Agreement, State grant agreements, or State-EPA enforcement agreements.

The responsible government official in the Region or State in which a hazardous waste facility is located will determine whether the facility has relevant violations or releases which may preclude its use for off-site transfer of CERCLA wastes. Each Region and State should have a designated off-site coordinator responsible for ensuring effective communication between CERCLA response program staff and RCRA enforcement staff within the Regional Offices, with States, and with other Regions and States.

The off-site coordinator should maintain a file of all information on the compliance and release status of each commercial facility in the Region or State. This information should be updated based on the results of State- or

EPA-conducted compliance inspections or other information on these facilities.

CERCLA response program staff should identify potential off-site facilities early in the removal action or the remedial design process and check with the appropriate Regional and/or State off-site coordinator(s) regarding the acceptability status of the facilities. If one or more facilities is identified that has not received an inspection within the last six months, the Regional off-site coordinator(s) should arrange to have such inspection(s) conducted within a timeframe dictated by the project schedule. The CERCLA REM/FIT contractor may conduct the inspection under the direction of the Deputy Project Officer. If contractor personnel are used, the Region should ensure that such personnel are adequately trained to conduct the inspections.

Responsible Agencies should base their acceptability determinations on an evaluation of a facility's compliance status and, as appropriate, whether the facility has releases or other environmental conditions that affect the satisfactory operation of the facility. States not authorized for HSWA corrective action may assist EPA in making the acceptability determination by determining a facility's compliance status (based on a State inspection) and providing this information to EPA. Regions and States should use the following types of information to make acceptability determinations:

- State- or EPA-conducted inspections. EPA will continue to assign high priority to conducting inspections at commercial land disposal, treatment and storage facilities. Facilities designated to receive CERCLA waste must be inspected within six months of the planned receipt of the waste. In addition, land disposal facilities must have received a comprehensive ground-water monitoring inspection (CME) or an operation and maintenance (O&M) inspection within the last year, in accordance with the timeframes specified in the RCRA Implementation Plan (RIP).

- RCRA Facility Assessments (RFAs). To be eligible under this policy, a RCRA Subtitle C facility must have had an RFA or equivalent facility-wide investigation. The RFA or its equivalent must be designed to identify existing and potential releases of hazardous waste and hazardous constituents from solid waste management units at the facility.

- Other data sources. Other documents such as the facility's permit application, permit, Ground Water Task Force report, ground-water monitoring data or

ground-water assessment report can contain information on violations, releases or other conditions. Relevant information from these documents should also be used to determine a facility's acceptability to receive waste under the off-site policy.

B. Notice Procedures

EPA expects that Regions and States will take timely and appropriate enforcement action on determining that a violation has occurred. Where a responsible Agency performs an inspection that identifies a relevant violation at a commercial facility likely to accept CERCLA wastes, within five working days of the violation determination, the responsible Agency must provide written notice to the facility of the violation and the effects of applying this policy. States not authorized for HSWA corrective action should inform EPA of the violation so that EPA can notify the facility of the effect of the violation under this policy. (See RCRA Enforcement Response Policy for a discussion of appropriate enforcement responses and timeframes for Class I violations.)

When the responsible Agency determines that a relevant release has occurred, or that relevant conditions exist, the responsible Agency must notify the facility in writing within five working days of that determination. The notice must also state the effect of the determination under this policy. A copy of any notice must also be provided to the non-issuing Region or State in which the facility is located. States not authorized for HSWA corrective action should provide EPA with information on releases so that EPA can determine whether a relevant release has occurred.

Private parties conducting a response action subject to this policy will need to obtain information on the acceptability of commercial facilities. The responsible Agency must respond with respect to both pre-SARA and post-SARA wastes. In addition, the responsible Agency should indicate whether the facility is currently undergoing a review of acceptability and the date the review is expected to be completed. No enforcement sensitive or predecisional information should be released.

A facility may submit a bid for receipt of CERCLA waste during a period of unacceptability. However, a facility must be acceptable in order to be awarded a contract for receipt of CERCLA waste.

Scope and Contents of the Notice. The responsible Agency must send the notice to the facility owner/operator by certified and first-class mail, return receipt requested. The

certified notice, if not acknowledged by the receipt return card, will be considered to have been received by the addressee if properly sent by first-class mail to the last address known to the responsible Agency. The notice should contain the following:

- A finding that the facility may have conditions that render it unacceptable for receipt of off-site waste, based upon available information from an RFA, an inspection, or other data sources;

- A description of the specific acts, omissions or conditions that form the basis of the findings;

- Notice that the facility owner/operator has the opportunity to request an informal conference with the responsible government official to discuss the basis for the facility's unacceptability determination under this revised policy, provided that such a request is made within 10 calendar days from the date of the notice. The owner/operator may submit written comments within 30 calendar days from the date of the notice in lieu of holding the conference.

- Notice that failure to request an informal meeting or submit written comments will result in no further consideration of the determination by the responsible Agency during the 60 calendar days after issuance of the notice. The responsible Agency will cease any transport of CERCLA waste to the facility on the 60th calendar day after issuance of the notice.

- Notice that the owner/operator may request, within 10 calendar days of hearing from the responsible government official after the informal conference or the submittal of written comments, a reconsideration of the determination by the Regional Administrator or appropriate State official. The Regional Administrator or State official may agree to review the determination at his or her discretion; and

- Notice that such a review by the Regional Administrator or appropriate State official, if agreed to, will be conducted within 60 calendar days of the initial notice, if possible, but that the review will not stay the determination.

The facility may continue to receive CERCLA waste for 60 calendar days after issuance of the initial notice. As indicated above, facility owners or operators may request an informal conference with the responsible government official

within 10 calendar days from the date of issuance of the notice, to discuss the basis for a violation or release determination and its relevance to the facility's acceptability to receive CERCLA wastes. Any such meeting should take place within 30 calendar days of the date the initial notice is issued. If unacceptability is based on a State inspection or enforcement action, a representative of the State should attend the meeting. If the State does not attend, EPA will notify the State of the outcome of the meeting. The owner/opeator may submit written comments within 30 calendar days from the date of the notice in lieu of holding the conference. If the responsible Agency does not find that the information submitted at the informal conference or in comments is sufficient to support a finding of acceptability to receive CERCLA wastes, it should so inform the facility orally or in writing.

Within 10 calendar days of hearing from the responsible government official after the informal conference or the submittal of written comments, the facility owner or operator may request a reconsideration of the determination by the Regional Administrator or appropriate State official. The Regional Administrator or appropriate State official may use his or her discretion in deciding whether to conduct a review of the determination. Such a review, if granted, should be conducted within the 60 day period (originating with the notice) to the extent possible. The review will not stay the determination.

The RPM, OSC or equivalent site manager must stop transfer of waste to a facility on the 60th calendar day after issuance of a notice. The facility then remains unacceptable until such time as the responsible Agency notifies the owner or operator otherwise. The off-site coordinator and the OSC/RPM should maintain close coordination throughout the 60-day period.

In limited cases, the responsible Agency may use its discretion to extend the 60 day period if it requires more time to review a submission. The facility should be notified of any extension, and it remains acceptable during any extension.

The responsible Agency may also use its discretion to determine that a facility's unacceptability is immediately effective upon receipt of a notice to that effect. This may occur in situations such as, but not limited to, emergencies (e.g., fire or explosion) or egregious violations (e.g., criminal violations or chronic recalcitrance) or other situations that render the facility incapable of safely handling CERCLA waste.

Implementation of this notice provision does not relieve the Regions or States from taking appropriate enforcement action under RCRA or CERCLA.

C. Procedures for Facilities with Outstanding Unacceptability Determinations

Under the original May 1985 off-site policy, facilities determined to be unacceptable to receive CERCLA wastes were provided with written notice and were generally afforded informal opportunities to comment on the determination (the latter step was not required by the policy). Although the Agency believes that these steps represented adequate procedural safeguards for facilities seeking to receive CERCLA wastes, EPA has decided to provide an additional opportunity for review, in light of this revised policy, for facilities with unacceptability determinations already in place on the effective date of the revised policy.

Any such facility that wishes to meet with the responsible Agency to discuss the basis for a violation or release determination and its relevance to the facility's ability to receive CERCLA wastes, may request an informal conference with or submit written comments to the responsible Agency at any point up to the 60th day after the publication of the proposed rule on the off-site policy in the Federal Register. Such a meeting should take place within 30 calendar days of the request. If the responsible government Agency does not find the information presented to be sufficient to support a finding of acceptability to receive CERCLA wastes, then it should inform the facility orally or in writing that the unacceptability determination will continue to be in force. The facility may, within 10 calendar days of hearing from the responsible government official after the informal conference or submittal of written comments, petition the EPA Regional Administrator or appropriate State official for reconsideration. The Regional Administrator or State official may use his or her discretion in deciding whether to grant reconsideration.

These procedures for review of unacceptability determinations that were already in place on the effective date of this revised policy will not act to stay the effect of the underlying unacceptability determinations during the period of review.

D. Re-evaluating Unacceptability

An unacceptable facility can be reconsidered for management of CERCLA wastes whenever the responsible Agency finds that the facility meets the criteria described in the "Acceptability Criteria" section of this policy.

For the purposes of this policy, releases will be considered controlled upon issuance of an order or permit that

initiates and requires completion of one or more of the following: a facility-wide RCRA Facility Investigation (RFI); a Corrective Measures Study (CMS); or Corrective Measures Implementation (CMI). The facility must comply with the permit or order to remain acceptable to receive CERCLA waste. At the completion of any such phase of the corrective action process, the responsible Agency should again review the facility for acceptability under the off-site policy using the criteria listed in this document, and as necessary and appropriate, make new acceptability determinations, and issue additional orders or modify permit conditions to control identified releases. Releases that require a determination of environmental significance will be considered controlled upon issuance of an order or permit to conduct an RFI, CMS or CMI, or upon completion of an RFI which concludes that the release is not environmentally significant. Again, the facility must comply with the permit or order to remain acceptable to receive CERCLA waste.

If the facility is determined to be unacceptable as a result of relevant violations at or affecting the receiving unit, the State (if it made the initial determination) or EPA must determine that the receiving unit is in full physical compliance with all applicable requirements. Where a State not authorized for HSWA corrective action makes this determination, it should notify EPA immediately of the facility's return to compliance, so that the Agency can expeditiously inform the facility that it is once again acceptable to receive CERCLA wastes.

The responsible Agency will notify the facility of its return to acceptability by certified and first-class mail, return receipt requested.

E. Implementation Procedures

All remedial decision documents must discuss compliance with this policy for alternatives involving off-site management of CERCLA wastes. Decision documents for removal actions also should include such a discussion.

Provisions requiring compliance with this policy should be included in all contracts for response action, Cooperative Agreements with States undertaking Superfund response actions, and enforcement agreements. For ongoing projects, these provisions will be implemented as follows, taking into consideration the differences in applicable requirements for pre- and post-SARA decision documents:

- RI/FS: The Regions shall immediately notify Agency contractors and States that alternatives for off-site

management of wastes must be evaluated against the provisions of this policy.

- o Remedial Design: The Regions shall immediately notify Agency contractors, the States, and the U.S. Army Corps of Engineers that all remedies that include off-site disposal of CERCLA waste must comply with the provisions of this policy.

- o Remedial Action: The Regions shall immediately assess the status of compliance, releases and other environmental conditions at facilities receiving CERCLA waste from ongoing projects. If a facility is found not to be acceptable, the responsible Agency should notify the facility of its unacceptability.

- o Enforcement: Cleanups by responsible parties under enforcement actions currently under negotiation and all future actions must comply with this policy. Existing agreements need not be amended. However, EPA reserves the right to apply these procedures to existing agreements, to the extent it is consistent with the release and reopener clauses in the settlement agreement.

If the response action is proceeding under a Federal lead, the Regions should work with the Corps of Engineers or EPA Contracts Officer to negotiate a contracts modification to an existing contract, if necessary. If the response action is proceeding under a State lead, the Regions should amend the Cooperative Agreement.

Transmission of Guidance for Conducting Federal-Lead Underground Storage Tank Corrective Actions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 25 [illegible]

OFFICE OF
SOLID WASTE AND EMERGENCY RESPO

OSWER DIRECTIVE 9360.0-16A

MEMORANDUM

SUBJECT: Transmission of Guidance for Conducting Federal-Lead Underground Storage Tank Corrective Actions

FROM: J. Winston Porter
for Assistant Administrator

TO: Regional Administrators
Regions I-X

ATTN: Regional Waste Management Division Directors
Regions I-X

Attached is the final guidance for removal program personnel conducting Federal-lead corrective actions for petroleum leaks from underground storage tanks (USTs). This guidance supersedes the interim guidance of June 4, 1987 (OSWER directive # 9360.0-16). Based on comments offered by reviewers, changes have been made to clarify definitions and procedures throughout the guidance. A separate guidance is under development regarding corrective actions on Indian lands.

In response to comments, further emphasis has been placed on the responsibility of State governments to conduct responses in non-emergency situations and enforcement activities. In several places, the guidance now stresses EPA policy requiring the State to perform any remedial action after the Federal response stabilizes a situation. The role of the Regional UST Coordinator in the process of implementing and overseeing Federal-lead UST corrective actions has been greatly increased. Finally, specific emphasis has been placed on the necessity for contacting owners or operators before initiating corrective action.

If there are any questions regarding this guidance, please contact Elizabeth Zeller at FTS 382-7735.

Attachment

cc: Superfund Branch Chiefs, Regions I-X
Henry Longest
Ron Brand

GUIDANCE FOR CONDUCTING FEDERAL-LEAD UNDERGROUND STORAGE TANK CORRECTIVE ACTIONS

June, 1988

Prepared by the Emergency Response Division
Office of Emergency and Remedial Response

DISCLAIMER

The policies and procedures established in this document are intended solely for the guidance of government personnel. They are not intended, and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. The Agency reserves the right to act at variance with these policies and procedures and to change them at any time without public notice.

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1.0 INTRODUCTION

1.1 Purpose

This guidance document is designed to provide direction to On-Scene Coordinators (OSCs), other removal program personnel, and Regional Underground Storage Tank (UST) Coordinators for the initiation and continuation of Federal-lead corrective actions in response to petroleum releases from leaking underground storage tanks. The guidance presents procedures to be followed, including required justifications and the documentation necessary for undertaking a Federal-lead UST corrective action. A separate guidance document is being developed for corrective actions on Indian lands.

1.2 Background

The Superfund Amendments and Reauthorization Act of 1986 (SARA) amends Subtitle I of the Solid Waste Disposal Act (SWDA) to provide the authority for Federal response to petroleum releases from leaking USTs. The amendments also establish a $500 million Leaking Underground Storage Tank (LUST) Trust Fund to finance both Federal and State UST program activities. Federal-lead UST corrective actions will be performed by the same EPA emergency response and contractor personnel that conduct oil and hazardous substance removal actions.

Note: As used in this guidance, "SWDA" refers to the Solid Waste Disposal Act as amended by any other legislation, including SARA, the Resource Conservation and Recovery Act of 1976 (RCRA), and the Hazardous and Solid Waste Amendments of 1984 (HSWA).

1.3 Policy

It is EPA's policy that LUST Trust Fund-financed responses at petroleum releases from underground storage tanks will be conducted by States under cooperative agreement with EPA, except in rare circumstances. Most States will have broad cooperative agreements to address emergency response and to perform cleanups; in the absence of such agreements, the Region and State are encouraged to develop site-specific cooperative agreements, under which the State will conduct corrective actions at individual sites. EPA will undertake a corrective action only in instances where there is a major public health or environmental emergency, and the State is unable to respond. In addition, the State must demonstrate that it has contacted or attempted to contact owners or operators, and the State is convinced that owners or operators are unable or unwilling to provide adequate, timely response. Federal-lead corrective action will be limited to stabilization of the immediate situation, with the expectation that further cleanup will be performed by the State under an appropriate cooperative agreement.

1.4 Definitions

For the purposes of this guidance, the following definitions apply:

Exposure Assessment - As defined in Section 9003(h)(10) of SWDA, "the term 'exposure assessment' means an assessment to determine the extent of exposure of, or potential for exposure of, individuals to petroleum from a release from an underground storage tank based on such factors as the nature and extent of contamination and the existence of or potential for pathways of human exposure (including ground or surface water contamination, air emissions, and food chain contamination), the size of the community within the likely pathways of exposure, and the comparison of expected human exposure levels to the short-term and long-term health effects associated with identified contaminants and any available recommended exposure or tolerance limits for such contaminants. Such assessment shall not delay corrective action to abate immediate hazards or reduce exposure."

Major Public Health or Environmental Emergency - To qualify for Federal response action, an UST site must be deemed a major public health or environmental emergency. (This definition is more strict than that for current hazardous substance removal actions and is intended to significantly limit the number of Federal-lead UST responses, so that only health or environmental emergencies are addressed). Such an emergency exists if the following criteria are met:

- The release poses an immediate and substantial threat of direct human, animal, or food chain exposure to petroleum; or
- The release poses an immediate threat of fire and/or explosion; or
- The release poses an immediate and substantial threat to public drinking water supplies; or
- The release poses an immediate threat to human health or substantial amounts of property, or poses an immediate and substantial threat to natural resources.

Petroleum - As defined in Section 9001(8) of SWDA, "the term 'petroleum' means petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute)." This term includes, but is not limited to, gasoline, diesel fuel, and jet fuel.

Underground Storage Tank - As defined in Section 9001(1) of SWDA, "the term 'underground storage tank' means any one or combination of tanks (including underground pipes connected thereto) which is used to contain an accumulation of regulated substances, and the volume of which (including the volume of the underground pipes connected thereto) is 10 per centum or more beneath the surface of the ground. Such term does not include any:

A) Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes,

B) Tank used for storing heating oil for consumptive use on the premises where stored,

C) Septic tank,

D) Pipeline facility (including gathering lines) regulated under -

   i) the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.),

   ii) the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.), or

   iii) which is an intrastate pipeline facility regulated under State laws comparable to the provisions of law referred to in clause (i) or (ii) of this subparagraph,

E) Surface impoundment, pit, pond, or lagoon,

F) Storm water or waste water collection system,

G) Flow-through process tank,

H) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations, or

I) Storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

The term 'underground storage tank' shall not include any pipes connected to any tank which is described in subparagraphs (A) through (I)."

Final clarification of these terms and definitions will be found in the regulations (and preamble) for underground storage tanks, scheduled for publication later in 1988.

2.0 CRITERIA FOR CORRECTIVE ACTION

2.1 Legislative Standards and Criteria

This guidance is designed to provide direction for undertaking Federal-lead corrective action at petroleum leaks from underground storage tanks. The basic criteria for a Federal response are found in Section 9003 of the amended SWDA; Subsection (c) specifies the release detection, prevention, and correction requirements for USTs to be promulgated by EPA, and Subsection (h) provides two sets of criteria for Federal-lead UST responses.

Before the effective date of the regulations promulgated under Section 9003(c) of SWDA, a corrective action may be undertaken if the Administrator (or State under cooperative agreement) deems it necessary to protect human health and the environment, as authorized in Section 9003(h)(1) of SWDA. The EPA (or the responding State) must give priority to sites where no owner or operator is able to undertake proper corrective action, and to UST releases posing the greatest threat to human health and the environment.

After the regulations become effective, a response may be conducted only if corrective action is necessary to protect human health and the environment and one or more of the following criteria, presented in Section 9003(h)(2) of SWDA, are met:

- No financially solvent tank owner or operator, capable of carrying out proper corrective action, is found;
- The situation requires prompt action to protect human health and the environment;
- Corrective action costs exceed the financial responsibility requirements established for the tank, and expenditures from the LUST Trust Fund are necessary to ensure effective action; or
- The tank owner or operator has failed, or refused, to comply with an administrative order to perform corrective action.

Priority must be given to releases posing the greatest threat to human health and the environment.

2.2 EPA Criteria

In addition to the basic policy guidelines discussed in Section 1.3, and the legislative restrictions presented in Section 2.1, EPA will undertake corrective action only if a major public health or environmental emergency exists, as defined in Section 1.4.

EPA will take only those corrective actions that stabilize the emergency situation, allowing State or other responders to implement permanent cleanup remedies. If EPA's mitigative measures require continuing post-corrective action control (operations and maintenance), the affected State will be responsible for these measures as soon as possible.

3.0 FUND UTILIZATION

In accordance with SWDA Section 9003(h), the statute that describes Federal response under the LUST Trust Fund, and in compliance with EPA policy for Federal-lead actions, the general activities listed in Section 3.1 may be conducted with Fund monies. See Sections 7.2 and 7.3 for more detail on allowable and non-allowable costs related to performing corrective actions.

3.1 Eligible Activities

- Site investigations or exposure assessments (see Section 1.4) to determine potential health effects of a leak, and to establish corrective action priorities.

- Corrective actions such as stabilization of the site, temporary relocation of affected residents, or provision of alternate household water supplies.

- Enforcement activities (see Section 4.4) including development, implementation, and oversight of enforcement orders directed to responsible tank owners/operators.

- Cost recovery activities to seek reimbursement of LUST Trust Fund expenditures from liable parties.

3.2 State Cost Share

Until EPA's final regulations for release detection, prevention, and correction become effective later in 1988, there is no requirement for States to cost share or match Trust Fund monies. After the effective date of the regulations, States must pay a 10 percent share of the cost of LUST Trust Fund corrective actions, as required by Section 9003(h)(7)(B) of SWDA. However, failure to pay this required cost share will not prevent EPA from conducting a response if immediate action is necessary to mitigate an imminent and substantial endangerment to human health or the environment.

4.0 APPROVAL PROCESS

Federal-lead UST corrective actions may be approved only if the definitions and criteria outlined in Sections 1.0 and 2.0 are met. In particular, the site must pose a major public health or environmental emergency to which the owner or operator or the State is unable to respond in an adequate and timely manner. In addition, no Federal-lead corrective action will be conducted unless an appropriate request is received from a State.

The Federal-lead UST delegations of authority, as well as two approval processes (based on response time considerations), are presented below.

4.1 Delegation of Authorities

All obligations for Federal-lead UST corrective actions (with limited exceptions for emergency situations, as noted below in section 4.1.1) must be approved by the Assistant Administrator (AA), Office of Solid Waste and Emergency Response (OSWER), as provided by Delegation 8-33 (see Appendix A). This authority may be redelegated to the Office Director (OD), Office of Emergency and Remedial Response (OERR). If redelegated, the OD, OERR, must obtain the concurrence of the OD, Office of Underground Storage Tanks (OUST).

4.1.1 In accordance with Delegation 8-33, Regional Administrators (RAs) may approve emergency obligations for Federal-lead UST corrective actions of up to $50,000 per site. This authority may be be used only

1) during non-duty hours (after 5:00 p.m. EST [local time in Washington, D.C.] on weekdays, or on Saturday, Sunday, or federal holidays), or if the situation precludes contacting Headquarters prior to initiating necessary response actions, and

2) if there is risk of death, injury, or catastrophic environmental damage, due to a petroleum release from an UST. Such an emergency would be posed by imminent or actual events such as:

- Fire and/or explosion; or
- Substantial or irreversible damage to a sensitive ecosystem or significant natural resource.

RAs may redelegate this limited authority to the Division Director and OSC level, as provided in Delegation 8-33. If redelegated, the OSC's $50,000 authority is included in the RA's $50,000 authority; it is not in addition to that authority. This authority may be used to initiate response, and may be used to initiate project restarts should new and unforeseen emergency conditions occur which meet the above criteria. This authority cannot be used for continuations of work in progress. The costs

that are applied toward the RA's authority to obligate funds up to $50,000, and the costs that are excluded from this limit, are similar to those defined in EPA's Superfund Removal Procedures -- Revision Number Three.

4.2 Oral Request from State

When the response time demands of the situation preclude implementing the formal written approval process described below in Section 4.3, the following oral approval process may be implemented.

4.2.1 The State evaluates the site and gathers all the necessary information to support an oral request (see Appendix B). The State UST Coordinator orally transmits the request and information to the Regional Oil and Hazardous Materials (OHM) Coordinator, or other designated Regional management official.

4.2.2 The assigned OSC consults with the Regional UST Coordinator, where possible (see Section 4.4).

4.2.3 The OSC (jointly with the Regional UST Coordinator, where possible) determines if the criteria for corrective action discussed in Section 2.0 are met, and if an immediate response (within hours or days) is necessary. If so, the following approval process is implemented.

4.2.4 Approval process for corrective action

4.2.4.1 During regular working hours:

a) The OSC or other Regional official, after consultation with the Regional UST Coordinator, notifies the appropriate Headquarters Emergency Response Division (ERD) Regional Coordinator of the Region's intent to request oral approval from Headquarters to initiate an UST corrective action (phone # 8-382-2188, Magnafax # 755-2155, TWX # 710-822-9269, E-mail # EPA 5511).

b) The OSC gets oral approval from the RA or delegatee.

c) The OSC or other Regional official provides the information set forth in Appendix B to Headquarters.

d) The ERD Regional Coordinator reviews and processes the request, and relays the request and a recommendation for approval/denial to the appropriate Headquarters official.

e) The ERD Regional Coordinator communicates the decision and the appropriate accounting information (see Section 5.0) to the OSC or other Regional official as quickly as possible, and confirms the decision in writing by the end of the next work day. The OSC must notify the Regional UST Coordinator of the decision.

f) The RA transmits a formal action memorandum (see Appendix D), along with a formal State request letter (see Appendix C) to ERD within 10 days.

4.2.4.2 During non-duty hours (after 5:00 p.m. EST on weekdays, on Saturday, Sunday, and holidays), or if the situation precludes contacting Headquarters prior to initiating necessary response actions:

a) The OSC obtains oral approval from the RA, or from his/her delegatee (see Section 4.1, or Appendix A). This authority may only be used to obligate funds up to $50,000, for corrective actions which meet the criteria in section 4.1.1.

b) The OSC notifies the Regional UST Coordinator (see Section 4.4) and ERD Regional Coordinator of this action as soon as possible.

c) The RA transmits a formal action memorandum (see Appendix D), along with a State request letter (see Appendix C) to ERD within 10 working days. A ceiling increase request (see Appendix E) may be incorporated within this memorandum, if needed.

4.2.4.3 During non-duty hours, if a ceiling greater than $50K is needed:

a) The OSC telephones the National Response Center (NRC), 800-424-8802, identifies himself/herself, and asks to be put in contact with the ERD Duty Officer.

b) The NRC contacts the ERD Duty Officer.

c) The ERD Duty Officer contacts the OSC and asks for the information contained in Appendix E. The ERD Duty Officer notifies the supervisory duty officer, the OD/OERR, the OD/OUST, and the AA/OSWER (if appropriate), who approves or denies the request.

d) The ERD Duty Officer communicates the decision to the OSC as quickly as possible, and confirms the decision in writing by the end of the next work day.

e) The RA sends a formal action memorandum (see Appendix D) along with the State request letter (see Appendix C) to ERD within 10 days.

4.3 Written Request from State

This approval process must be used whenever response time demands allow. Typically, this will mean that Federal response can be delayed for several days.

4.3.1 Receive written request from State

The affected State shall perform a thorough site evaluation to clearly determine the extent of release, source, substance(s) released, and threats posed by the release. The State shall also make every reasonable attempt to locate owners or operators and compel corrective actions. The State must then prepare a formal written request for Federal-lead UST corrective action that presents all of the pertinent site information, using the State request letter format in Appendix C. The request letter should be sent to the Regional OHM Coordinator, or other designated Regional management official, from the Director of the State UST agency designated by the Governor of the affected State.

4.3.2 Notify Regional UST Coordinator

When a letter requesting UST corrective action is received from the State, the Regional UST Coordinator must be consulted and provided a copy of the letter (see Section 4.4).

4.3.3 Evaluate State request

The OSC and Regional UST Coordinator jointly evaluate the State request to determine whether:

- Additional information is required. If the request letter (see Appendix C) is deficient, the Region should contact the State and obtain additional information, or instruct the State to resubmit the request letter incorporating the Region's comments. If necessary, the OSC may perform a perfunctory site inspection to gather needed data.

- Federal-lead UST corrective action is not justified. If the situation does not meet the criteria discussed in Section 2.0, the OSC and the Regional UST Coordinator must recommend to the OHM Coordinator that the request be denied.

- Federal-lead UST corrective action is justified. If the situation appears to meet the criteria discussed in Section 2.0, the following approval procedures should be implemented.

4.3.4 Regional role

The OSC notifies the appropriate ERD Regional Coordinator of the Region's intent to request Headquarters' approval to initiate a Federal-lead UST corrective action (phone # 8-382-2188, Magnafax # 755-2155, E-mail # EPA 5511, TWX # 710-822-9269). The OSC should also forward a copy of the State request letter, or a draft copy of the action memorandum to allow the ERD Regional Coordinator to expedite the Headquarters approval process.

The OSC should provide the information set forth in the State request letter (see Appendix C) by submitting an action memorandum, using the format presented in Appendix D. The action memorandum must be signed by the RA and addressed to the AA, OSWER through the OD, OERR, to the attention of the Director, ERD.

4.3.5 Headquarters role

The ERD Regional Coordinator reviews the action memorandum, gets concurrences from other offices as necessary (e.g., OUST, OGC), and sends it with a recommendation for approval/denial to the appropriate Headquarters official for final determination and signature.

The ERD Regional Coordinator then communicates the OSWER decision to the Region as quickly as possible, along with the appropriate accounting information (see Section 5.0). Written confirmation of the decision is forwarded to the OSC and the Regional UST Coordinator as soon as practicable.

4.4 Regional UST Coordinator/Enforcement

The Regional UST Coordinator is a Regionally-designated employee who acts as a liaison between emergency response personnel and Regional UST program management. The Regional UST Coordinator may have information about a specific site, the status of a State's UST program, and the State's eligibility for a cooperative agreement under the LUST Trust Fund, that could prove useful in weighing the State's response capabilities against the characteristics and magnitude of an UST emergency. The Regional UST Coordinator should be informed as soon as possible whenever the Region receives a State request for Federal-lead UST corrective action; whenever practicable, the Regional UST Coordinator, together with the OSC, should evaluate the appropriateness of Federal-lead corrective action prior to

seeking approval. The OSC should keep the Regional UST Coordinator informed of all significant events during Federal-lead UST corrective actions.

States, under cooperative agreements, will be expected to initiate and pursue enforcement action. The Regional UST Coordinator is responsible for coordinating with affected State agencies, particularly in identifying owners or operators and pursuing enforcement actions. EPA has the authority to issue several different types of administrative orders under SWDA: Section 9005 warning letters can be issued to compel tank testing and investigation to detect suspected leaks; Section 9003(h) orders can be issued to require site assessment, development of a response plan, and implementation of corrective action pursuant to the EPA-approved plan; and Section 9006(a) orders can be issued to enforce compliance with a previous order. States are expected to have or develop similar enforcement authorities. Enforcement efforts to secure response from owners or operators must not delay Federal-lead corrective action if site conditions meet the criteria in Section 4.1.1 of this guidance.

5.0 ACCOUNTING INFORMATION

The LUST Trust Fund appropriation number is 68-20X8153; the program element is FPYV2B. For all actions given prior Headquarters approval, account and Document Control numbers will be issued to the ERD Regional Coordinator by the Headquarters Financial and Administrative Management Support Staff (FAMS). The ERD Regional Coordinator will then inform the OSC of the assigned numbers.

Each Region has approval authority up to $50,000 per site to use in responding to certain UST emergencies (see Section 4.1.1 for more detail). For actions initiated by the Region using its $50,000 authority, account and Document Control numbers should be issued by the Regional Financial Management Officer.

Detailed information describing Trust Fund appropriation, account number structure, activity codes, and other relevant matters has been issued by the Comptroller General to all Financial Management Officers in Comptroller Policy Announcement Number 87-13, "Interim Financial Policies and Procedures Governing Use of the Leaking Underground Storage Tank (LUST) Trust Fund" (see Appendix I).

The Policy Announcement establishes policies and procedures for use of the Fund by EPA and State governments. Each site will be assigned a ten-digit account number in the Financial Management System (FMS), which enables tracking of site-specific costs for cost management and cost recovery purposes. The Policy Announcement details methods of charging time and other direct costs to the Fund.

6.0 INITIATION OF ON-SITE ACTIONS

Mechanisms available to the OSC for initiating an UST response include:

- o Procurement of cleanup services;
- o Procurement of technical assistance; and
- o Assistance through other agencies.

6.1 Procuring Cleanup Services

For site tracking purposes, the Agency has defined the "start" of the action to be the date on which a cleanup contractor (e.g., ERCS) mobilizes on the site, not the date on which a site assessment is performed, the action is approved, or the first obligation occurs.

6.1.1 Emergency Response Cleanup Services (ERCS) contracts

The ERCS zone contracts, supplemented by the Regional ERCS contracts, form the core of EPA's emergency response resources. These contracts provide 24-hour, immediate delivery of cleanup contractor personnel, services, and material for response to CERCLA hazardous substance releases. The contracts also include provisions for UST response. Procedures to mobilize ERCS contractors are identical to current removal program procedures, as outlined in Superfund Removal Procedures -- Revision Number Three, ERCS Users' Manual, and EPA Superfund Emergency Contracting Procedures. An Ordering Officer should fill out a Delivery Order (DO) and Procurement Request (PR) using the accounting information provided by the ERD Regional Coordinator or the Region's Financial Management Officer. Instructions for completing and processing DOs can be found in Appendix G.

6.1.2 Other commercial contracts

When use of the ERCS contractor is inappropriate due to conflict of interest, response time considerations, or other unusual or unforeseen circumstances, other contractors may be used. For information and procedures on procuring other contractor services, OSCs should contact the appropriate Headquarters Procurement and Contracts Management Division (PCMD) Contracting Officer (CO).

6.2 Procuring Technical Assistance

6.2.1 Technical Assistance Team (TAT) contracts

The TAT contracts provide technical and management assistance to OSCs. TAT services include sampling, cleanup monitoring, documentation of site conditions and activities, project planning, health and safety planning, cost tracking,

quality assurance, and related tasks. The two TAT zone contracts include provisions for UST response. Procedures for implementing these contracts are similar to current removal program procedures as outlined by Superfund Removal Procedures -- Revision Number Three and the TAT Contract User's Manual, except that the Project Officer must give approval. The Region's Deputy Project Officer (DPO) should complete a Technical Direction Document (TDD) form, being sure to specify that the source of funding is the LUST Trust Fund (instructions for completing and processing TDDs can be found in Appendix H). The DPO must obtain the Headquarters Project Officer's (PO) approval of the TDD; the PO will contact the contractor Zone Program Manager (ZPM) as soon as possible to confirm approval. The ZPM will then communicate the PO's approval to the appropriate TAT Leader, who may only then implement the task requested by the TDD. Appendix H provides a detailed description of the process for activating TAT.

6.2.2 Environmental Response Team (ERT)

The EPA Environmental Response Team (ERT) provides a wide range of technical, analytical, investigative, and planning services. To obtain ERT assistance, contact the ERD Regional Coordinator.

6.3 Assistance from Other Agencies

Other Federal agencies may have personnel with specific expertise and experience that could be useful to OSCs in performing Federal-lead UST corrective actions. EPA has a Memorandum of Understanding (MOU) or site-specific Interagency Agreements (IAGs) with each of several agencies to facilitate their direct participation in hazardous substance responses using CERCLA monies. Although there is no provision for their participation in Federal-lead UST corrective actions, which are funded under SWDA, OSCs may contact other agencies to seek informal advice or assistance as appropriate. The following agencies may be particularly helpful.

6.3.1 Federal Emergency Management Agency (FEMA)

FEMA is often used to provide assistance with temporary and permanent relocation of affected residents and businesses during removal actions.

6.3.2 Agency for Toxic Substances and Disease Registry (ATSDR)

ATSDR can provide advice concerning exposure effects of certain substances, calculate risks to the public and the environment from releases and issue health advisories where appropriate, and can recommend cleanup levels. ATSDR may be able to provide assistance or guidance in performing exposure assessments (as defined in Section 1.4) at Federal-lead UST corrective action sites.

6.3.3 United States Coast Guard (USCG)

USCG is experienced in responding to a wide range of release incidents involving petroleum. USCG may have site-specific information concerning UST releases in coastal zones or affecting surface waters, and should be notified whenever Federal-lead UST corrective action is considered at such a release to determine whether response is more appropriate under the Clean Water Act (CWA).

6.4 Stabilization Standards

Federal-lead UST corrective action will generally be limited to stabilization of the emergency conditions that justified the initiation of the response; occasionally, however, more complete cleanup may be appropriate. Whenever possible, further cleanup after stabilization should be conducted, as needed, by the State under an appropriate cooperative agreement with EPA.

When conducting stabilization actions, OSCs should consider relevant state standards and other applicable guidelines, as may be provided by the Regional UST Coordinator. The OSC should stabilize the site to a level that protects human health and the environment by mitigating the immediate threats.

7.0 MANAGING FEDERAL-LEAD UST CORRECTIVE ACTIONS

This section provides guidance on the roles and responsibilities of OSCs when managing UST response projects. A variety of topics is addressed, including oversight of contractors, allowable costs, cost management, ceiling increases and scope modifications, access agreements, health and safety, community relations, reporting requirements, and post-corrective action site control considerations.

OSCs have complete responsibility for directing response operations. This means that they must ensure that all on-site activities are consistent with Subtitle I of SWDA, as amended by Section 205 of SARA, and program policies and procedures; that all expenditures of funds are appropriate and reasonable; and that subsequent cost recovery actions will be supportable.

7.1 Oversight of Contractors

A major OSC role is oversight of the contractors performing response activities. Examples of oversight activities include:

- Preparation of the work report;
- Review and certification of the Contractor Cost Report (EPA Form 1900-55), which lists daily contractor costs;
- Daily monitoring of contractor personnel and equipment to verify satisfactory completion of the work;
- Determination of the overall project status.

In conducting these oversight activities, OSCs may request support from the TAT. Examples of such support are maintaining entry/exit logs of all contractor personnel and equipment, communicating oral or written messages from the OSC to the cleanup contractor, and maintaining logs related to project costs. The TAT staff may not, however, assume the OSC's responsibilities for directing site activity, verifying satisfactory completion of work, or approving 1900-55 forms.

Compelling circumstances, such as another response incident, may require the OSC to leave the site for more than 24 hours. The OSC may designate capable persons from Federal, State, and local agencies to act as OSC representatives to supervise response operations. TAT staff, because of their non-governmental status, may not be designated OSC representatives.

Response program policy dictates the following guidelines for, and limitations on, the designation and activities of OSC representatives:

- Federal employees - The preferred designee would be another Federal employee because such a designee would have authority to direct, not merely oversee, contractors; to initiate activities involving expenditures of money; and to certify completion of work and costs.

  Examples of appropriate Federal employees are another OSC, a non-OSC Superfund employee, or a non-Superfund employee from within the Region; an OSC or other employee from another Region; or Headquarters personnel or employees from another Federal agency such as USCG.

  As a practical matter, reassignment of staff from other duties may be difficult, particularly with respect to personnel outside the program, Region, or Agency. Moreover, designation of a Federal employee who does not have adequate training in program procedures and response operations could endanger the response.

- State/local staff - State and local officials are precluded from taking any actions involving expenditures of LUST Trust Fund monies, unless an appropriate cooperative agreement has been executed. In practice, this means that State and local representatives may transmit and supervise the implementation of the OSC's work orders but may not provide new instructions.

- TAT - TAT personnel may not serve as OSC designees; they may, however, continue to provide support services at the site and monitor cleanup contractor performance in the absence of the OSC.

Because of the practical difficulties in designating an OSC representative who can assume full on-site responsibilities, OSCs are discouraged from leaving the site except in very limited circumstances. Examples of such circumstances are when EPA has an agreement with a State or local government to provide water hookups, or when the site clearly has "insignificant" activity (e.g., a pump running).

7.2 Allowable Costs

In general, EPA will expend LUST Trust Fund monies at a Federal-lead UST corrective action only to stabilize the situation and mitigate those problems that are directly responsible for creating the major public health or environmental emergency. Because of limitations on funds, long-term remediation and post-corrective action site control (operation and maintenance) activities must be performed by the State.

During an UST corrective action, the OSC is authorized to incur only those costs that qualify as appropriate uses of the LUST Trust Fund. These costs must be directly allocable to a particular response, reasonable, and necessary to accomplish the response.

This section summarizes both extramural and intramural costs that are allowable. To assist OSCs in tracking indirect costs, the Financial Management Division issues provisional EPA indirect cost rates. These rates should be used to estimate indirect costs incurred during the action.

In addition to the items specified below, an exposure assessment, as defined in Section 1.4 of this guidance, may also be performed at a Federal-lead UST corrective action. This assessment is a brief version of the detailed and complex risk assessment often performed to estimate exposure potential near RCRA and CERCLA hazardous substance sites. Although the exposure assessment is an allowable cost, it may rarely be appropriate due to time and financial restrictions imposed by the response criteria presented in Section 2.0 of this guidance. The ERD Regional Coordinator should be notified if an exposure assessment is being considered.

7.2.1 Extramural costs

- Cleanup contractor and consulting costs, including waste transportation and disposal, now provided principally under the ERCS contractor system and supplemented as needed by non-ERCS commercial contractors.
- Support contractor costs, including TAT.
- Subcontractor costs.
- Other costs, such as EPA leasing or rental of equipment; incremental costs for EPA-owned equipment; supplies, materials, and equipment (including transportation costs) procured for the specific corrective action and fully expended during the corrective action; and utilities.
- 15% contingency allowance, for unforeseen extramural costs.

7.2.2 Intramural costs

- EPA direct costs, including the salaries, overtime, travel, and per diem of on-site EPA personnel.
- Direct costs incurred by ERT.

- Direct costs incurred by Headquarters and Regional technical and legal staff.

- EPA Regional laboratory costs.

- Indirect costs, including EPA Regional and Headquarters management and administrative costs and fringe benefits.

7.3 Non-Allowable Costs

Corrective action costs not allowed under the LUST Trust Fund include (but are not limited to):

- State and local costs for which prior authorization was not specifically given by the OSC or addressed in a cooperative agreement (e.g., municipal services such as use of police or fire departments and State personnel who are on-scene performing tasks not specifically requested by the OSC).

- Costs for the research and development of equipment and response technologies used in conjunction with an UST corrective action (e.g., emerging alternative disposal technologies). Funding may be available, however, through other sources; contact the ERD Regional Coordinator for more information.

- Costs incurred by a contractor to provide response measures, for which that contractor is later found to be liable.

7.4 Cost Management

During Federal-lead UST corrective actions, all Regions must implement an effective system for managing response costs. This management system must ensure the efficient use of public monies, enable all response costs to be tracked against dollar ceilings, and provide the necessary information to support cost recovery actions.

Ultimate responsibility for cost management rests with the OSC. Detailed guidelines for the OSC are in the Removal Cost Management Manual. That manual identifies four components of cost management (i.e., cost projection, cost control, cost documentation, and cost recovery) which are applicable to Federal-lead UST corrective actions, and are summarized briefly below.

7.4.1 Cost projection

The key to effective cost management is through cost projection prior to the start of a response, as well as during a response. Pre-response estimates of costs form the basis for establishing a total project ceiling recorded in

the action memorandum; cost projection during a response allows the OSC to anticipate the need for increases in the project ceiling. To estimate indirect costs, OSCs should use the provisional rates provided by the Headquarters Financial Management Division through the Region's Financial Management Officer.

7.4.2 Cost control

Cost control consists of cost planning and monitoring as well as verification of costs. OSCs are in the most advantageous position to control response costs if they stay informed on the availability of cost-effective resources. Thus, OSCs should: identify non-commercial support services and response equipment available to the Region; familiarize themselves with cost-effective cleanup services in the event contracting outside the ERCS network is required; maintain information on the cost of obtaining, operating, and maintaining safety equipment; and review final UST response reports of costs at past responses.

In addition, OSCs are responsible for monitoring site work and verifying that the contractor has provided the personnel, equipment, expendables, and subcontractors for which it has charged the government. OSCs should note the strict limitations under the EPA contract management policies for delegating these responsibilities to non-Federal personnel such as TAT, or to State officials not operating under a cooperative agreement (see Section 7.1).

7.4.3 Cost documentation

Cost documentation refers to the specific set of procedures that OSCs use to maintain a record of all on-site activities and associated costs. The method of cost documentation should be consistent from day to day at a specific response but may vary from site to site and Region to Region. The method an OSC selects must ensure thorough record-keeping on the following six information items:

- Chronology of events and decisions;
- Site conditions;
- Movement of personnel and equipment (e.g., site entry and exit);
- Contractor planned and authorized work compared to actual accomplishments;
- Contractor costs (e.g., commercial cleanup contracts); and

- Other costs (e.g., TAT, ERT, Regional laboratory services, direct Headquarters and Regional intramural obligations, site access/acquisition).

The Removal Cost Management Manual provides applicable guidance on methods OSCs can use to determine each category of direct cost, and includes examples of the various types of documents OSCs can use to record information (e.g., POLREPs, entry/exit log, incident obligation log).

7.4.4 Cost recovery

Because of the possibility of a cost recovery action for any case involving the expenditure of LUST funds, OSCs have a responsibility to observe, document, and preserve critical evidence relating to the response and its costs. The cost documentation efforts described above are designed to ensure that facts concerning the release and owners or operators are recorded before response activity or the passage of time obscures or eliminates the evidence; that physical evidence essential for a trial is collected and preserved in a manner that will withstand judicial scrutiny; and that the government has maintained sufficient evidence of actual costs and substantiation of the need to incur those costs.

The essential elements of a cost recovery action are:

- Evidence of a release or threat of release of petroleum from an UST;
- Evidence that the defendant(s) is owner or operator of the UST;
- Evidence that the corrective action taken was necessary to protect human health and the environment; and
- Proof of incurred costs.

7.5 Ceiling Increases/Scope Modifications

OSCs should anticipate the need for ceiling increases or scope changes as early in the corrective action as possible so that the approval process does not interrupt the continuity of a project. The OSC should notify the appropriate ERD Regional Coordinator of such changes prior to submitting a formal request for approval; OSCs are encouraged to send a draft of the impending formal request to the ERD Regional Coordinator, to expedite concurrence and approval.

7.5.1 Ceiling increases

The initial action memorandum approving the corrective action establishes a project ceiling. This ceiling

represents the total funding approved for the corrective action. OSCs cannot incur costs in excess of the initial project ceiling unless a ceiling increase is approved.

The request for a ceiling increase should contain the information shown in Appendix E. The level of detail required will vary according to site-specific circumstances. In general, the request should include information on the current site conditions, actions taken to date, costs to date, and the reasons why the ceiling increase is required (e.g., changed site conditions or increased disposal costs). It is important to explain whether the increase is 1) to perform more work to mitigate the threat in the original scope of work, or 2) to respond to an additional threat to human health, welfare or the environment, not previously documented, requiring additional corrective measures. If the ceiling increase is needed to complete actions previously approved, the request should detail the reasons why additional funds are required for those actions. If the ceiling increase is needed to address additional threats, the request should contain a new finding that the threats pose a major public health or environmental emergency. Ceiling increase requests must be submitted to Headquarters under the signature of the RA and must include the information outlined in Appendix E.

The RA should send the request for a ceiling increase to the the AA, OSWER. In order to ensure an expeditious, smooth processing of the request, a final copy should also be sent to the ERD Regional Coordinator who is responsible for coordinating the Headquarters concurrence process.

7.5.2 Change in scope - no ceiling increase

UST corrective actions are approved by the AA, OSWER with a complete scope of work. In order to expand this scope (e.g., to address an additional threat), a formal change of scope request, specifying the additional corrective actions to be performed, must be approved by the official who approved the initial request.

The request should include information on current site conditions, actions taken to date, costs to date, and the additional proposed corrective actions as well as the additional threat.

7.6 Access Agreements

Gaining access to sites, where response actions require the use of adjoining property or property within the site boundaries owned by parties who are not owners or operators of the UST, may require obtaining access agreements or negotiating for rights-of-way with the property owners. Such agreements may be needed in order to establish a new road, to allow for the use of a private road, or to establish a command post.

7.6.1 Obtaining access

Primary responsibility for arranging for site access rests with the State. However, the OSC is ultimately responsible for obtaining site access agreements. The OSC may need to work with the State to ensure that arrangements are executed. Typically, the State will approach the property owner and the final access agreement will be drawn up either between the landowner and the State, or directly between the landowner and the OSC or the response contractor. Property access agreements must cover the duration of the response action and any associated post-corrective action control measures. The OSC is responsible for overseeing all site access negotiations and agreements, regardless of whether they are obtained through Federal or State channels. If gaining access voluntarily is a problem, the OSC should consult the Office of Regional Counsel. The OSC should also consult the Regional Counsel to obtain legal advice on gaining access to property for which the State has no authority, such as rights-of-way for public utilities, railroads, and Federal lands.

7.6.2 Payments for property

The Agency will not, as a rule, pay property owners for rights-of-way or easements for property adjacent to the site or within the site boundaries. Cases where payment becomes an issue in arranging for site access should be referred to the Regional Counsel or the ERD Regional Coordinator for assistance.

A written agreement signed by the OSC or EPA contractor with an owner/operator of an UST or a property owner who is not an owner/operator but whose property is contaminated or threatened cannot promise to compensate the owner for use of the property, to indemnify the owner for potential third party liability, or to pay for damages. Any written agreements offered by any property owner must be reviewed by Regional Counsel.

Generally, the OSC should attempt to restore the property, to the extent practicable, to its pre-response condition (e.g., regrading and reseeding a temporary site access road). The OSC may recommend fair payment to the owner as compensation, or assess the extent of any

contamination and arrange for disposal, if necessary. In cases where the amount or type of compensation becomes an issue, the OSC should consult with the Regional Counsel or ERD Regional Coordinator.

7.7 Worker and Visitor Health and Site Safety

Response actions are subject to all applicable Federal, State, and local Occupational Safety and Health (OSH) laws. Standards of the Occupational Safety and Health Administration (OSHA) form the basis for the safety and health protection of workers involved in Federal UST corrective actions. Where State OSH laws exist, these laws may also apply to response actions. The safety and health requirements of other Federal agencies may also apply.

For LUST Trust Fund-financed corrective actions, all Federal, State, and contractor personnel involved are required to comply with the lead agency's overall occupational safety and health policies and with a site-specific safety plan. All visitors to the site are also subject to the same health and safety requirements.

Because response activities associated with each specific incident are unique, standard procedures will often have to be adapted or modified to meet the incident-specific requirements. For this reason, a written safety plan must be prepared for each incident, distributed, and posted in the command post. This should be done before response operations begin on the site, or as soon as possible thereafter. The plan must cover all phases of incident operations and identify key personnel and must be updated or modified as needed or as conditions change. As a minimum requirement, the safety plan should address the following:

- Establishment of the number of personnel permitted to enter the contamination zones.
- Establishment of entry and escape routes.
- Establishment of procedures to identify, locate, and alert off-site medical personnel.
- Determination of physical, chemical, and biological properties of known contaminants.
- Establishment of decontamination protocol.
- Establishment of levels of protection.
- Establishment of air-monitoring protocol.
- Establishment of general safety rules and equipment.

- Scheduling of daily safety meetings.

- Posting of key agency and emergency contacts.

OSCs are responsible for ensuring that workers and visitors are informed of on-site hazards and the provisions of the site health and safety plan. The OSC shall ensure that all individuals entering the site (e.g., EPA, TAT, contractors, press) have read the plan and understand its contents.

Throughout the response action, the OSC may call upon OSHA to advise on worker health and safety issues. When needed, the OSC may request that the National Institute of Occupational Safety and Health (NIOSH) provide assistance to OSHA in testing worker protection equipment and gathering information for guidance on safety issues. The OSC must be cognizant of on-site health and safety activities and is responsible for monitoring Federal and contractor compliance with EPA and site safety requirements and applicable Federal and State laws and regulations. However, OSCs are directly responsible only for their own staff; each government agency and private employer is responsible for the health and safety of its own employees and for ensuring compliance with OSHA requirements, applicable State OSH laws, and Agency health and safety programs. The Agency will not assume responsibility for other government or contractor personnel.

OSHA has authority for enforcing compliance with Federal OSH regulations. Response actions are subject to OSHA inspections. Where State OSH laws exist, State inspections may take place. If the OSC discovers an infraction of safety requirements, the OSC must remind all site personnel and visitors of the requirements. Should the infraction continue, the OSC may call in OSHA or State OSH inspectors to review practices to ensure compliance.

7.8 Community Relations and Public Information

Community relations is a communication network between response officials and the community. The objectives of community relations are: to identify community concerns about the site; to encourage citizens to express concerns and provide information; to provide information to the community on health and environmental effects of the release and proposed response action; and to incorporate citizen comments and concerns (including those of the owners or operators) into the decision-making process.

Community relations activities will be important at Federal-lead UST corrective action sites because a major public health or environmental emergency exists. However, the time and extent of Federal involvement may not warrant complex community relations plans. The EPA's Community Relations Policy (May 1983) and Community Relations in Superfund: A Handbook (March 1986) can be used as applicable guidance for developing and implementing community relations activities. Although no specific activities

currently required at Federal-lead UST corrective actions, a community relations profile should be prepared for any action that lasts longer than five days. The profile should provide notice to owners/operators that the record is available for review. The profile explains how program and community relations staff intend to plan for and implement community relations activities at the site. It should contain a brief outline of the nature of community concerns, the key site issues, the objectives of community relations activities, and the communications activities considered for the site..

Some petroleum releases may require short-term corrective action lasting no longer than a few days. These kinds of actions may not involve substantial community relations planning because of the nature of the emergency and the quick response time required. At these sites, the focus of community relations is to provide information about the site and its risks to the community; information can be channelled through the media and local officials.

7.9 Record-Keeping Requirements

OSCs must ensure that they document and record all decisions and determinations they make prior to and during responses. OSCs must also include in the files any significant comments received from the owners/operators and their response to these comments. Structured site and Regional files are the sole repositories for site records. Care must be taken to ensure their completeness and long-term security. Both site management and financial management records are critical when cost recovery is involved. Complete and precise OSC records of oral and written communication with owners and operators, contractors, and participating Federal, State, and local agencies must be maintained should litigation arise at some later time.

7.9.1 Pre-response records

Prior to the initiation of an UST response (when time allows), the OSC must maintain documentation regarding decisions and determinations relating to issues such as:

- The appropriateness of a Federal-lead UST corrective action;
- Contact with, and comments received from, the owner or operator;
- Contact with, and comments received from, the State;
- Planning response actions;
- Developing contractual arrangements; and
- Complying with relevant environmental statutes.

7.9.2 UST response records

During the course of a LUST Trust Fund-financed corrective action, the OSC is responsible for generating and maintaining site-specific documents such as action memoranda and daily and periodic cost control reports. It is critical that the OSC maintain a log of on-site activities and record all communications with the contractor, the owners or operators, and participating Federal, State, and local agencies. The Removal Cost Management Manual outlines the OSC's cost control record-keeping responsibilities. The ERCS Contract Users' Manual and the TAT Contract User's Manual prescribe guidance for contractor-related record-keeping. Any cost control record-keeping requirements in conjunction with Federal, State, and local agencies may be prescribed as necessary.

7.10 Reporting Requirements

The OSC is responsible for documenting and reporting all response activities taken at a site. Reporting requirements include preparing and submitting to ERD a series of POLREPs and a final UST response report. POLREPs consist of initial, progress, and final reports. This section provides guidance on when the various reports should be submitted and the types of information each report should contain. All site information developed by the OSC must be made available to the Regional UST Coordinator, who will coordinate with the State to ensure that an effective, final resolution to a release will be accomplished by the State.

7.10.1 Pollution reports (POLREPs)

POLREPs provide factual operational data surrounding the incident and a current accounting of the total funds allocated in an incident. POLREPs should also detail measures to ensure that the affected community is properly and fully informed of all response activities. The Regions should bear in mind that POLREPs are a method of alerting Headquarters that critical events may be pending and that requests/action are about to be initiated. However, all requests for Headquarters decisions must be formally submitted in accordance with Section 4.0 of this guidance. To properly assist Headquarters management, routine POLREPs are sent to ERD at (202) 755-2155 (Telefax), 710-822-9269 (TWX), or EPA 5511 (E-Mail).

7.10.1.1 Initial POLREP

The OSC should prepare and send to Headquarters and the Regional UST Coordinator an initial POLREP for each new Federal-lead UST corrective action. This report should give the start date, describe the incident (including the outcome of any site evaluation), give the status of actions (including enforcement), and describe future plans.

7.10.1.2 Progress reports

Routine progress reports should be submitted to ERD and the Regional UST Coordinator a minimum of once a week and daily, where practicable, when events are rapidly occurring. Progress POLREPs should identify the following:

a) Situation -- present status of ongoing response activities;

b) Actions Taken -- activities undertaken since the last POLREP;

c) Future Plans -- planned actions by the OSC;

d) Project Costs -- estimated funds obligated thus far, including a breakdown of the cost categories as noted in the following example:

Extramural	Current Ceiling	Obligations To Date
Cleanup contractors	$20,000	$10,000
TAT	5,000	2,000
15% Contingency	3,750	N/A
Intramural (both HQ and Region)		
Direct	3,000	1,500
Indirect (estimate based on provisional rates)	6,000	3,000
TOTAL PROJECT CEILING	$37,750	$16,500

e) Any other pertinent information such as status of efforts to obtain cleanup by responsible parties.

Also, POLREPs should be provided to ERD and the Regional UST Coordinator on all major unanticipated developments of interest at approved corrective actions (e.g., fires, explosions, and all accidents even if no damage or injury has been caused) not included in other progress reports. In addition to reporting accidents to ERD via POLREPs, a corrective action accident report (see Appendix F) should also be completed and submitted to ERD. This form was developed to provide more detailed documentation of circumstances surrounding accidents during the course of response actions. The information it contains is vital should litigation occur.

7.10.1.3 Final POLREP

When a Federal-lead UST corrective action has been completed, a final POLREP (e.g., POLREP #15 and FINAL) should be submitted that describes the final actions taken at the release, results achieved, detailed final costs and date of completion, the demobilization date, and future actions planned and who will perform them.

7.10.2 Final UST reports

Within 60 days after the conclusion of a Federal-lead UST corrective action, the OSC should prepare and submit to ERD a final UST report. It is necessary that ERD have these final UST reports on hand to respond to inquiries from the public, Congress, the Office of the Inspector General, and the General Accounting Office.

The final UST response report is a complete report on the response operation and the action taken. It should include a summary of events, an analysis of the effectiveness of corrective actions, a list of problems affecting the response, if applicable, and OSC recommendations. The completion date is the date on which any wastes are shipped for ultimate disposal or the site is demobilized, whichever is later. Temporary demobilization and temporary on-site storage are not considered completions unless they are the final actions approved (i.e., off-site disposal is not approved).

7.11 Post-Corrective Action Site Control

The State or local government must assume responsibility for operations and maintenance performance and costs after the system is proven to be operational. Examples of operations and maintenance at a corrective action include running pumps or operating a ventilation system.

If the State recommends response options involving operations and maintenance in the oral request (see Appendix B) or State request letter (see Appendix C), the State must explain how it intends to assume resource and financial responsibility for these options. Some States may have cooperative agreements that provide for operations and maintenance; the Regional UST Coordinator should be contacted for this information, as detailed in Section 4.4.

Some situations may require operations and maintenance as part of all response options. If no owner or operator agrees to assume responsibility, the State must take over these actions under an UST cooperative agreement.

SOLID WASTE DISPOSAL ACT (SWDA)

8-33. Selection and Performance of Federal Corrective Actions at Leaking Underground Storage Tanks

1. AUTHORITY. Pursuant to Subtitle I of the Solid Waste Disposal Act (SWDA), to determine the necessity of and to select Federal corrective actions at leaking underground storage tanks containing petroleum, to enter property and to perform such corrective actions.

2. TO WHOM DELEGATED. Assistant Administrator for Solid Waste and Emergency Response and Regional Administrators.

3. LIMITATIONS.

a. Regional Administrators or their delegatees may exercise this authority only for requests for obligations not exceeding $50,000, and must comply with Federal-lead UST corrective action guidance issued by the Assistant Administrator for Solid Waste and Emergency Response (AA/OSWER).

b. If this authority is redelegated, the Director, Office of Emergency and Remedial Response, must obtain the advance concurrence of the Director, Office of Underground Storage Tanks.

4. REDELEGATION AUTHORITY.

a. This authority may be redelegated by the Assistant Administrator for Solid Waste and Emergency Response to the Director, Office of Emergency and Remedial Response.

b. Regional Administrators may redelegate this authority to Division Directors, who may then redelegate to On-Scene Coordinators.

5. ADDITIONAL REFERENCES.

a. Superfund Removal directives.

b. Section 9005(a) of SWDA.

c. Section 9003(h) of SWDA.

d. UST corrective action procedures.

APPENDIX B: Oral Request Information Outline

1. State official requesting assistance (should be authorized by Director of State UST agency designated by Governor).

2. Is the release from a leaking underground storage tank? (see Section 1.4 of this guidance for definition)

3. Is the released substance petroleum? (see Section 1.4 of this guidance for definition)

4. Location of release.

5. Time and date of release.

6. Name, description, and general condition of facility.

7. Is the release a long-term or chronic problem?

8. Types and amounts of petroleum substances involved, and quantities released to environment.

9. Major public health or environmental emergency conditions. (see Sections 1.4 and 2.2 of this guidance for detail)

10. Number and proximity of persons potentially affected.

11. Increased threat to human health or the environment if response is delayed or denied.

12. Ongoing efforts to respond to release.

13. State/local/owner-operator ability and willingness to provide response, with specific reasons for inability to respond (e.g., lack of authority, technical expertise, qualified staff, or funding).

14. Specific enforcement actions undertaken by the State.

15. Type of action needed to mitigate or stabilize emergency (if known).

APPENDIX C: State Request Letter Format

Federal-lead UST corrective action will not be initiated unless specifically requested by the appropriate State via the State UST Coordinator. A letter requesting Federal-lead corrective action should be signed by the Director of the State UST agency designated by the Governor and addressed to the Regional OHM Coordinator, or other designated Regional management official.

Below is a recommended format for the State to follow in preparing an UST corrective action request letter. While use of this model format is not mandatory, the letter should address all of the topics presented in the model in order to demonstrate that the incident meets the Federal-lead UST response criteria (particularly that it poses a major public health or environmental emergency and that neither the State, nor the owner or operator can provide adequate response) and that all actions in the scope of work are consistent with SWDA. Because this letter will provide much of the source material to be used by the Region in preparing an action memorandum (see Appendix D), adherence to this format is strongly encouraged.

I. HEADING

DATE: [Month/Day/Year]

SUBJECT: Request for Federal-lead UST Corrective Action
[Site, City, State]
STATE REQUEST LETTER

FROM: [Director of Designated State UST Agency]

TO: [Regional OHM Coordinator]

II. BACKGROUND

The background section should contain information on the location of the site, the nature of the incident (including the history of the site, general character of the site, and issues relevant to petroleum management), quantity and types of petroleum substances present, State and local authorities' role, the cleanup time frame, and actions to date, including previous and current actions to abate the threat.

A. Location Description

1. Describe the site's physical location.

Give distances from nearest populations and points of reference, as appropriate. Also state the population size. For example, "A school is within 1/4 of a mile and there are 1,000 residences within a mile of the site; the area is mainly suburban residential with some industrial areas."

Describe the areas adjacent to the incidents or site in terms of nearby vulnerable or sensitive populations, habitats, and natural resources. For example, "The site is adjacent to wetlands and a tributary to the river flows nearby. The area's primary drinking water aquifer underlies the site."

Describe any areas protected by statute, such as parks, historic sites, and sensitive ecosystems. This may include areas such as the New Jersey Pinelands, wetlands areas, or wild and scenic rivers.

2. Provide supporting documentation.

Providing pictures, diagrams, maps, and/or sketches is encouraged. They may be included as attachments or incorporated into the text. This documentation may help to substantiate the threat at the site.

B. Site and Incident Characteristics

1. Discuss the history of the incident or situation that poses the major public health or environmental emergency.

Describe the type of incident that has occurred (e.g., a classic release) and why it occurred. For example, "A corroded storage tank failed during refilling." Be sure to list all of the site's key problem areas (e.g., tanks, associated pipe lines, free product on ground water, or contaminated soils).

Describe the exact location of the incident at the site. For example, "The release occurred at a corroded tank in the south corner of the site." Include the time and date (if known) of the incident. State whether the release is new, just recently discovered, or a chronic problem that has deteriorated. Also describe when and how the incident was discovered; for example, "The town fire marshal received complaints from residents of strong gasoline fumes in their basements."

2. Discuss the general character of the site; show that it meets the definition of "underground storage tank" (see Section 1.4 of this guidance).

Describe the current use of the site (e.g., active facility, vacant lot, recreational area). Describe the previous nature and type of the facility, as well as the activities historically undertaken at the site; for example, a tank farm used for storing aviation fuels, or an oil refinery with numerous underground tanks and pipelines. State the site characteristics that qualify it as an "underground storage tank" site.

Include any pertinent information on the site owners or operators, past and present. This information should reflect whether the current or previous owners or operators contributed to the conditions on the site.

3. Present all findings on the extent of the release to date.

First, note all pathways of release (e.g., surface water, ground water, air emissions/vapors, soil). Then, indicate whether the release is confined to the site or has migrated off the site. Where possible, present the results of any on-site or off-site monitoring. With respect to drinking water contamination, note the number of municipal or private wells contaminated or threatened.

4. Discuss the relevant issues relating to current petroleum management practices.

Describe any existing structures, measures, or conditions that would either mitigate or accelerate the release of any materials on site (e.g., an unstable dike, a temporary containment system, adverse weather conditions, site security, fencing, condition of containers and similar situations). State whether the release is widespread and/or is migrating rapidly.

Indicate the extent to which the petroleum wastes can be treated or are amenable to alternatives to land disposal. State whether the site is to be stabilized or cleaned up, if known.

C. Quantity and Types of Petroleum Substances Present

1. List all petroleum substances known to be on site at the time of the approval request.

Describe briefly the results of the sampling (e.g., "most affected residences exceed the lower explosive limit for gasoline vapors in their basements") and give estimates of quantities of the classes of petroleum substances if they are available (for example, "four inches of diesel fuel was found floating on the underlying ground water").

2. Describe the sampling methodology.

Briefly describe the sampling methodology as well as methods for maintaining consistency, reliability, and quality control. Mention who performed the data collection and the lab analysis (e.g., EPA, contractor, local health authorities).

D. State Role

Discuss the State request for Federal-lead UST response.

List and describe the reasons why the State cannot provide adequate response to mitigate the major public health or environmental emergency posed by this UST petroleum release. Be detailed; indicate whether the State cannot respond due to a lack of authority, expertise, or resources. Estimate the resources required for response and specify which resources the State lacks, and why. Discuss why a site-specific cooperative agreement under the LUST Trust Fund would be an inappropriate response mechanism for this site or incident.

E. Actions to Date

1. Discuss any previous actions to abate the threat.

Describe any Federal, State, local, owner or operator, or privately sponsored activities that have been performed. Give the dates, costs, and effectiveness of such actions. Actions to abate the threat may include issuance of an advisory from the locality advising residents not to drink their water, or the provision of bottled water.

2. Discuss any current actions to abate the threat.

Any Federal, State, local, owner or operator, or privately-sponsored activities that are currently being conducted should be described. This information should include estimated costs and completion dates of these activities.

III. MAJOR PUBLIC HEALTH OR ENVIRONMENTAL EMERGENCY

Strict criteria must be met to justify Federal response to a petroleum release from an underground storage tank. These criteria require that neither the State nor the owner or operator be able to provide adequate response. In addition, the release must pose a major public health or environmental emergency, as indicated by:

- An immediate and substantial threat of direct human, animal, or food chain exposure to petroleum; or
- An immediate threat of fire and/or explosion; or
- An immediate and substantial threat to public drinking water supplies; or
- An immediate threat to human health or substantial amounts of property, or an immediate and substantial threat to natural resources.

The State should ensure that their request letter discusses how the release meets these criteria. Sections A and B below provide some specific examples of the types of material to include that demonstrate a major public health or environmental emergency.

A. Threats to Public Health and Welfare

Describe the threats to public health and welfare.

List all of the threats, starting with the most serious, that adversely affect human health or welfare (e.g., drinking water contamination, fire/explosion). Identify any human exposure that already has occurred, the kind of exposure (e.g., inhalation, ingestion, dermal contact) and the exposure pathway (e.g., water supply, indoor air pollution). Describe any reports of illness, injury, or death that appear to be linked to the exposure. Be as specific as possible about the number of individuals exposed, the proximity of sensitive populations (e.g., hospitals, schools), the geographic area affected, and whether exposure was acute or chronic. Also, describe any anticipated exposure and whether it is imminent, especially with regard to public drinking water supplies.

Compare the amounts or concentrations of substances shown to background levels or health standards as appropriate. If a health advisory is given, or if an exposure assessment has been performed, include it as an attachment to the letter, and reference it in the discussion.

B. Threats to the Environment

Describe threats to the environment.

List all the threats, starting with the most serious, that adversely affect the environment (e.g., damage to sensitive ecosystem, animals, ground water). Identify any natural resource or environmental damage that already has occurred and the extent of exposure (e.g., acute or chronic). Indicate whether there have been reports of deaths of flora or fauna (e.g., fish kills). If so, state how much environmental damage has occurred (e.g., 20,000 acres of wetland contaminated, one million fish killed).

Discuss all actual and potential impacts on the affected area. Describe any anticipated exposure and whether it is imminent. Indicate whether the release threatens endangered species, critical wetlands, or other resources protected under law.

IV. ENFORCEMENT

The purpose of this section is to meet the statutory requirement that priority be given to cases where the owner or operator is unable or unwilling to undertake necessary action. This information should be referenced here as "see attachment" and placed on a separate page entitled "Enforcement Sensitive." This section includes information on the enforcement strategy (summarized), the status of notice letters and/or negotiations, the available enforcement authority, owners or operators, previous enforcement actions, the probability of recovering costs, and the recommended enforcement strategy. This section also should contain information on the potential for a non-Federal response. This information is required before Federal corrective action is started, unless the release meets the conditions in Section 4.1.1.

A. Enforcement Strategy

1. Briefly summarize the enforcement strategy.

Summarize the enforcement strategy for notifying, negotiating with, and litigating against owners or operators. Indicate whether the State or Federal enforcement attorneys are actively pursuing informal negotiations, are actively pursuing litigation, or have decided to postpone or not pursue litigation. For example, "no enforcement actions currently underway," or "the owner or operator has agreed to conduct a cleanup." Describe what actions are planned (e.g., negotiations or administrative orders).

2. Briefly summarize the enforcement actions.

Indicate if litigation is proceeding or is contemplated. Cite under what statutory authority the action will be or is being taken (e.g., SWDA Section 9003(h)).

B. Status of Enforcement Actions

1. Owners or operators

Note the names of owners or operators. Indicate whether the owner or operator has taken action; if so, describe the action and explain why it was inadequate.

Describe any efforts being undertaken to obtain additional owner/operator response. Describe the attempts that have been made to locate owners or operators (e.g., oral inquiries both on and off site). Include whether the owner or operator has been notified (e.g., contacted in person or by telephone, written follow-up).

Give the dates that notice letters were sent and a summary of the responses of the recipients (e.g., the owner agreed to clean up the site, or denied involvement at the site). If negotiations are underway, describe the activities under discussion.

2. Provide information on the status of notice letters and/or negotiations.

Describe any previous State or Federal enforcement actions taken to date. These actions may include notice letters or demand letters.

3. State the probability of recovering costs.

Estimate the solvency of the owner or operator. Evaluate the ability to obtain the necessary actions in a timely fashion through litigation. This should be included if it explains why actions are being requested of EPA when owners and operators are financially able to undertake these actions.

V. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR SHOULD ACTION BE DELAYED

Describe any expected changes in the situation should no action be taken or should action be delayed. Include a description of the worst case that could possibly occur should no action be taken. These changes may include:

- Spread of contamination. For example, the ground water contaminant plume may spread through a larger area.
- Change in nature of contamination. For example, gasoline vapors may seep into structures, producing the added threat of fire/explosion.
- Increased threat to human health and the environment if action is delayed or denied. For example, the contaminant plume may soon reach drinking water wells.
- Impact on future response actions if action is delayed or denied. For example, the tanks will deteriorate further, leaking additional petroleum into the ground.

VI. IMPORTANT POLICY ISSUES (only as necessary and applicable)

Include a separate section on important policy issues that are significant to this request. These issues may include:

- Cost sharing (State cost sharing is applicable after regulations promulgated under SWDA Section 9003(c) become effective).

- o The division of responsibilities among Federal and/or State agencies.
- o Owners and operators.
- o Off-site disposal availability.
- o Special coordination and similar issues.
- o Concurrent CERCLA action or the presence of hazardous materials on site.
- o Contiguous sites (if multiple locations are recommended for consideration as one site, give justification for such consideration).

Issues should be fully explained, including a discussion on the efforts being made to resolve the issue and/or decisions that must be made before a resolution is reached.

VII. STATE REQUEST FOR EPA ACTION

The State should specify the corrective actions it is requesting that EPA perform. These might include

- o Recovery of free material;
- o Temporary water supply; or
- o Temporary relocation of residents.

APPENDIX D: Action Memorandum Format

The Region should prepare an action memorandum based on the State letter requesting Federal-lead UST corrective action (see Appendix C). The action memorandum should address all of the topics outlined in Appendix C, along with the additional items presented below. If the State request letter adequately follows the format suggested in Appendix C, then the Region's action memorandum may simply consist of the following sections with a copy of the State letter referenced and attached. If the State letter is deficient, the Region must ensure that the action memorandum addresses and corrects all of the deficiencies, including all of the information requested in Appendix C and in the additional sections described below. In any case, a copy of the State request letter should always be attached to the action memorandum for reference.

I. HEADING

DATE: [Month/Day/Year]

SUBJECT: Request for Federal-Lead UST Corrective Action
[Site, City, State]
ACTION MEMORANDUM

FROM: [Regional Administrator]

TO: [see Appendix A]

II. PROPOSED ACTIONS AND COSTS

OSCs should consider cost as one of many factors when proposing UST corrective actions. However, there are no statutory or regulatory requirements for cost-effectiveness. The purpose of this section is to provide guidelines for presenting information on proposed and alternative actions, estimated costs, and the project schedule.

A. Proposed Actions

1. Describe the proposed actions.

Describe the specific tasks involved and the results sought by the corrective actions as they pertain to the threat(s) discussed in Appendix C. For example, "The primary objective of the proposed action is the mitigation of the threat to public health by provision of alternate potable water supplies to the affected homes."

Indicate whether any further information is needed before all response actions can be identified (e.g.,

sampling to address ground water or drinking water contamination).

State why the proposed actions are appropriate for this situation and explain the rationale for choosing the proposed option. Describe the technical feasibility and probable effectiveness of the proposed action. Address response time requirements, intermedia relationships, temporary versus long-term solutions, institutional considerations, and environmental impacts.

Describe the procedures to be undertaken in the proposed actions. For example, "Corrective action will include ventilation of affected structures and provision of bottled water to impacted residents." Describe any impediments to the proposed action (e.g., lack of public acceptance or problems with access).

2. Describe the project schedule.

Give the time frame needed to stabilize or clean up the site and include how quickly response can begin. Give the estimated period of performance. Indicate whether post-corrective action site control (operation and maintenance) will be required, and how the State intends to perform it.

3. State the estimated costs.

Estimate the total project ceiling with an itemized breakout of the following cost categories that comprise that ceiling: extramural costs, which include cleanup contractor costs, TAT costs, and a 15% contingency allowance; and EPA intramural costs, both direct and indirect. For example:

Extramural	Estimated Costs
Cleanup contractors	$20,000
TAT	5,000
15% Contingency	3,750
Intramural (both HQ and Region)	
Direct	3,000
Indirect (estimate based on provisional rates)	6,000
TOTAL PROJECT CEILING	**$37,750**

If LUST Trust Fund monies have been obligated for past actions, then indicate the obligations (in both Procurement Requests and Delivery Orders).

B. Alternative Actions

Briefly describe the alternative actions, explaining the decision rationale used to select the proposed corrective action plan.

Describe what other actions were considered (e.g., providing hookups to city water instead of providing bottled water). Briefly describe the technical feasibility and probable effectiveness of each option. Address response time requirements, intermedia relationships, temporary vs. long-term solutions, institutional considerations, environmental impacts, and estimated costs of each option. State any impediments to the options (e.g., public acceptance or access to the site). State why the selected alternative was chosen.

III. RECOMMENDATION

The purpose of this section is to briefly present the Region's recommendations, rationale, and projected costs for the action. For example, "Because conditions at [site name] meet the criteria for Federal-lead UST response, I recommend your approval of the proposed UST corrective action. The estimated total project costs are $37,750 of which $20,000 are for extramural cleanup contractor costs. This site meets the criteria for a major public health (and/or environmental) emergency, and no State, local, or other agency, owner or operator, or other party can or will provide adequate and timely response."

Approve: _____ [Name and Title] _____ Date: _____

Disapprove: _____ [Name and Title] _____ Date: _____

Concur: _____ [Name and Title] _____ Date: _____

Attachment[s]

APPENDIX E: Ceiling Increase Request Format

The following action memorandum format is recommended for requesting approval for ceiling increases. The purpose of this format is to provide the OSC with a blueprint that can be easily followed when substantiating the need for exceeding the current ceiling on Federal-lead UST corrective action costs.

I. HEADING

DATE: [Month/Day/Year]

SUBJECT: Request for a Ceiling Increase
[Site, City, State]
ACTION MEMORANDUM

FROM: [Regional Administrator]

TO: [see Appendix A]

II. ISSUE

Briefly explain why the ceiling increase is being requested. Indicate what the new project ceiling will be if the ceiling increase is approved. For example, "A ceiling increase of $16,000 for a new total of $54,550 is being requested to continue a Federal-lead UST corrective action at this site."

III. BACKGROUND

The primary purpose of this section is to identify the key characteristics of the release in order to lay the foundation for demonstrating that a major public health or environmental emergency exists. These characteristics include site location and pre-release use, the type of release, and its scope. In compiling this information, the OSC should consider the availability of pictures, diagrams, maps, and/or sketches that may assist in describing the site.

A. Incident/Response History

Discuss the background/history of the site, including the following: current conditions at the site; who initiated actions and when; the date Federal-lead UST corrective actions were approved and by whom; approved actions; and actions taken to date (e.g., ventilation of structures, provision of bottled water).

B. Site Conditions

Briefly describe the site conditions and the reasons for a ceiling increase request. State whether the additional funds are needed due to increased costs for previously approved actions, or to expand the scope of work beyond that approved in the original

action memorandum. If the ceiling increase is needed to complete previously approved actions, explain the need for additional funding (e.g., disposal costs higher than anticipated). If the ceiling increase is needed to expand the scope of work, discuss how the site conditions meet the criterion of presenting a major public health or environmental emergency; also explain why neither the owner nor operator is able to conduct the corrective action. Include a description of a worst-case scenario should the ceiling increase not be granted.

Discuss the present status of the UST corrective action (e.g., gasoline release contained and soil awaiting excavation).

Include any information that may help substantiate the need for a ceiling increase. Attach any enforcement status information, ATSDR health advice memoranda, and other pertinent information such as pictures, drawings, and other materials to the back of this action memorandum.

IV. PROPOSED ACTIONS

Describe the proposed actions to be undertaken if a ceiling increase is approved. Briefly describe the actions that are required to complete the response; for example, "Bottled water will be provided until water main hookups are completed." Indicate the objective of the proposed actions or the threats these actions are to abate, minimize, or limit.

V. SUMMARY OF COSTS

Provide a summary of costs, including a breakdown of costs for both the current ceiling and the proposed ceiling. Detail the estimated total project ceiling with an itemized breakdown of the following cost categories that comprise the ceiling: extramural costs, including cleanup contractor costs, TAT costs, and a 15% contingency allowance; and EPA intramural costs, both direct and indirect. For example, the total project ceiling should be broken down as follows:

Extramural	Current Ceiling	Proposed Ceiling
Cleanup contractors	$20,000	$30,000
TAT	5,000	7,000
15% Contingency	3,750	5,550
Intramural (both HQ and Region)		
Direct	3,000	4,000
Indirect (estimate based on provisional rates)	6,000	8,000
TOTAL PROJECT CEILING	**$37,750**	**$54,550**

VI. RECOMMENDATION

The purpose of this section is to briefly present the Region's recommendations, rationale, and the project costs. For example, "To eliminate the major health emergency posed to the nearby public and the environment consistent with the Federal-lead UST response criteria, I recommend you approve this $16,800 ceiling increase request." Briefly summarize what the additional funds will be used for. Briefly state how the approval would increase the current total project ceiling. For example, "Your approval would raise the extramural cleanup contractor ceiling to $30,000 and bring the total project ceiling from $37,750 to $54,550. You may indicate your approval or disapproval by signing below."

Approve: _____ [Name and Title] _____ Date: _____

Disapprove: _____ [Name and Title] _____ Date: _____

Concur: _____ [Name and Title] _____ Date: _____

Attachment[s]

APPENDIX F: Federal-Lead UST Corrective Action Accident Report Format

1. Date and Time of Incident: Date of Report:

2. Site Name and Location: Prepared By:

3. OSC: Preparer's Phone #:

4. Description of Incident:

5. Factors Leading Up to Incident:

6. Site Work Related to Incident (OSC Orders, TAT Oversight, Foreman's Orders):

7. Weather Conditions During Incident (Temperature, Humidity, Wind Direction and Speed, Precipitation):

8a. Injuries (Person, Role of Person On Site, Description of Injury):

8b. Exposure (Person Exposed, Substances Involved, Type of Exposure - Inhalation, Ingestion, Dermal):

8c. Medical Treatment (Paramedic, Physician, Hospital, Length of Stay, Estimated Cost):

9. Property Damage (Owner, Location, Description of Damages, Estimated Cost):

10a. Other Persons On Site:

10b. Other Person's Roles/ Activities On Site on Day of Incident:

APPENDIX G: Delivery Order Preparation and Processing

To activate the ERCS contractor and initiate cleanup at a Federal-lead UST corrective action, a Delivery Order (DO) must be prepared and issued. All DOs will be issued by Ordering Officers (e.g., Regional Deputy Project Officers (DPOs), Headquarters Contracting Officers (COs), or EPA On-Scene Coordinators (OSCs); new warrants are being issued enabling OSCs to order services at UST cleanups) for individual corrective actions. These DOs will be issued on a fixed rate, indefinite quantity basis, with time and material provisions.

This appendix on DO preparation and processing describes procedures which address:

- Oral Delivery Orders;
- Delivery Order completion and processing; and
- Delivery Order modifications.

The procedures described in this appendix are applicable to both the ERCS zone contracts and the separate ERCS Regional contracts.

A. Oral Delivery Orders

As indicated, DOs can be issued orally to the ERCS contractors. This flexibility is designed to enhance response capabilities under the ERCS contract network. However, any oral order must be confirmed by a written DO within 48 hours.

When the ERCS contractor is contacted by telephone for purposes of orally issuing a DO, the Ordering Officer should simultaneously complete a Delivery Order form (see Exhibit G-1) noting:

- Date and time of the order (all references to time specified in the DO should reflect the local time of the location where services are to be provided);
- Contractor representative contacted (should be a person authorized to commit the contractor) and telephone number;
- Response location;
- Date and time the contractor is required on site;
- Date and time the contractor agrees to be on site; and
- Brief narrative of the services (e.g., personnel, equipment, and materials) and level of protection (e.g., health and safety) required.

Some of these items can be completed before the call is made to the contractor. For example, the response location or the level of safety protection required may be known ahead of time and could be completed in advance.

By completing the Delivery Order form during (or for some items directly before) the discussion with the contractor, the Ordering Officer will:

- Provide the contractor clear direction on the services needed;
- Document personnel, equipment, and materials expected on site;
- Establish the OSC-Response Manager site management relationship, and
- Facilitate completion of the written DO issued to the contractor at the site.

The information recorded during issuance of the oral Delivery Order will be important should there be any dispute concerning the contractor's ability to provide the services within the required response times.

B. Delivery Order Completion and Processing Instructions

To formally initiate services performed by the ERCS contractor to conduct UST corrective actions, Ordering Officers must prepare written Delivery Orders. The DO specifies the services to be performed by the ERCS contractor in executing a specific corrective action. Each DO establishes a ceiling amount that constitutes the maximum amount for which the government shall be liable. Instructions for the completion and processing of DOs are outlined below.

1. Delivery Order completion.

Delivery Order preparation is the responsibility of the Federal Ordering Officer. A standard format is used for the DO; all items in the DO should be completed as explained below and illustrated by the sample in Exhibit G-1.

- Date of Order (Box 1): Enter the date of issuance of the DO to the contractor.
- Contract Number (Box 2): Enter the contract number (e.g., 68-01-____) of the ERCS contract under which services are being ordered. The final four digits of this number vary; call the CO to obtain the current contract number.

EXHIBIT G-1

DELIVERY ORDER FOR EMERGENCY RESPONSE CLEANUP SERVICES

(This Delivery Order is subject to all terms and conditions of the contract listed in Block No. 2)

1. DATE OF ORDER	2. CONTRACT NO.	3. ORDER NO.
01/06/87	68-01-	03

4. TIME OF INITIAL ORDER	5. DELIVERY ORDER CEILING AMOUNT
8 00 ☒ AM ☐ PM EST Time Zone	$ 20,000 (Obligated Amount)

6. ACCOUNTING AND APPROPRIATION DATA

Appropriation #	Document Control #	Account #	Object Class
68 -20X8153			25.3

7a. ISSUED TO: CONTRACTOR (Name, Address and Zip Code)	8a. ISSUED BY: ORDERING OFFICER (Name, Address and Zip Code)
UST Cleanups, Inc. 2200 Mudtrack Lane Rochester, NY 14609	Vincent Bradford Environmental Protection Agency 841 Chestnut Street Philadelphia, PA 19107

7b. PROGRAM MANAGER (Name and Phone No.)	8b. EPA REGION/USCG DISTRICT	8c. ZONE
Joseph Davidson (716) 482-2811	03	1

7c. RESPONSE MANAGER (Name and Phone No.)	8c. ON-SCENE COORDINATOR (Name and Phone No.)
Fred Davidson (716) 522-3093	Janet Smith (215) 597-0807

9. RESPONSE LOCATION (Site Name and/or Address and Zip Code)	10. CONTRACTOR REQUIRED ON SITE (Date and Time)	11. REQUIRED WORK COMPLETION DATE
ABC Service Station 2927 North 2nd Street Arlington, VA 22201	01 / 07 / 87 7:30 ☒ AM ☐ PM EST	01 / 13 / 87

12. STATEMENT OF WORK. *The Contractor shall furnish the necessary personnel, materials, services, facilities and otherwise do all things necessary for or incident to the performance of the work set forth below:*

1) Establish a security perimeter around the site by installing high-visibility fence and installing warning signs as directed by OSC.

2) Drain two 10,000-gallon tanks of diesel oil and transport to a recycling facility in compliance with RCRA.

3) Excavate grossly contaminated soil and securely store on site.

4) Provide and install non-sparking ventilation equipment for enclosed structures, as necessary.

5) Collect samples of soil and diesel oil as directed by OSC.

13. ORDERING OFFICER		
Vincent Bradford, OSC		01/06/87
Name / Title	Signature	Date

- Order Number (Box 3): Enter a nine (9) digit DO number which sequentially consists of:
  - Last four digits of the contract number (see Box 2 above);
  - EPA Region (e.g., 01, 02, . . .10); and
  - Three digit number representing the sequence of the DO being issued in the Region or Agency.
- Time of Initial Order (Box 4): Enter the time of issuance of the DO. All references to time on the DO should reflect the local time at the site where the services are to be provided.
- Delivery Order Ceiling Amount (Box 5): Enter the total estimated cost of contractor personnel, equipment, and materials for which the order is being placed. The ceiling amount represents the amount obligated by the government for the corrective action. The OSC's/ Ordering Officer's authority to obligate the government for UST response is limited to $50,000. All initial DOs or Order modifications for amounts greater than the initial $50,000 must be obligated by the CO. **Under no circumstances may the ERCS contractor develop the cost estimate used here.** This is the sole responsibility of the Federal Ordering Officer who may, however, with Project Officer approval, seek the assistance of the Technical Assistance Team (TAT) contractor or EPA's Environmental Response Team (ERT) in developing the estimate.
- Accounting and Appropriation Data (Box 6): Accounting and appropriation data consist of four numbers, which should be entered as follows for UST actions:
  - Appropriation Number: 68-20X8153 (does not change).
  - Account Number and Document Control Number (DCN): Represented by ten (10) and six (6) character numbers, respectively. These numbers will be obtained by the ERD Regional Coordinator from the Headquarters Financial and Administrative Management Support Staff (FAMS) for all actions given prior Headquarters approval. If the Region's $50,000 allocation is being used (i.e., the emergency criteria in section 4.1.1 have been met), the Region should use its own numbering system developed by the Regional Financial Management Officer.
  - Object Class Code: 25.35 (for all EPA program contracts; does not change).

- Issued To: Contractor (Box 7A): Self-explanatory.

- Program Manager (Box 7B): Enter the name and phone number of the contractor representative authorized to receive the DO and commit contractor resources to provide the services and supplies required to complete the Statement of Work.

- Response Manager (Box 7C): Enter the name and phone number of the contractor representative designated by the Program Manager as the single point of contact for on-scene coordination and responsible for management and execution of cleanup activities as specified by the OSC or other designated Federal officials.

- Issued By: Ordering Officer (Box 8A): Self-explanatory.

- EPA Region/USCG District (Box 8B): Enter the number for the EPA Region; the USCG District does not apply for Federal-lead UST corrective action.

- Zone (Box 8C): Enter the number of the ERCS zone where the site is located:

  Zone 1 - Regions I-III

  Zone 2 - Region IV

  Zone 3 - Region V

  Zone 4 - Regions VI - X

- On-Scene Coordinator (Box 8D): Self-explanatory.

- Response Location (Box 9): Enter the location of the release or site where services are to be performed by the contractor.

- Contractor Required on Site (Box 10): Enter the date and time contractor personnel, equipment, and materials are required on site to implement the corrective action.

- Required Work Completion Date (Box 11): Enter the anticipated date by which contractor services are to be completed. Estimates are acceptable and dates may be revised through modifications issued by the CO.

- Statement of Work (Box 12): This block contains the description of the services to be performed by the ERCS contractor. The Statement of Work should not be so narrow as to restrict the contractor's effort nor so broad as to permit the contractor to explore areas having little relationship to the desired work. The block should either contain, or refer to attachments that contain:

  - Statement of Work, including a task breakdown and schedule;

  - Site-specific institutional requirements or clearances that must be obtained by the contractor (e.g., permits for transportation and disposal of wastes or right-of-way clearances); and

  - Any plans, including a site operations plan, health and safety plan, or quality assurance plan developed for the specific corrective action.

- Ordering Officer (Box 13): Self-explanatory.

2. Delivery Order processing.

The completed DO is signed by the Ordering Officer and issued to the contractor Program Manager or designee (e.g., on-site Response Manager). The contractor is required to acknowledge receipt of the DO in writing within one week or one half of the time specified for performance of the order, whichever is less, following receipt. The acknowledgment of receipt of the DO must be submitted to the Ordering Officer, with a copy forwarded to the CO.

It is the Ordering Officer's responsibility to make sure that the contractor submits an acknowledgment of receipt each time a DO is issued. The acknowledgment of receipt will help preclude misunderstandings between the Ordering Officer and the ERCS contractor over the terms and conditions of the DO. It will also serve as documented evidence when potential contractual actions are required to enforce the terms of a work order.

C. Delivery Order Modifications

During the course of an UST corrective action, it may become necessary to modify the Statement of Work, completion date, or ceiling amount specified in the DO. All such changes must be authorized in a written amendment of the DO using Standard Form 30 (see Exhibit G-2). If increased funding is required for a project, the existing DO should be amended; a new DO should not be issued.

EXHIBIT G-2

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than Item 6)	CODE

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)	(x)	9A. AMENDMENT OF SOLICITATION NO.
		9B. DATED (SEE ITEM 11)
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14

(x) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE
(Signature of person authorized to sign)		BY (Signature of Contracting Officer)	

NSN 7540-01-152-8070
PREVIOUS EDITION UNUSABLE

30-105

STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

Requests for amendments should be prepared by the Ordering Officer or the OSC and forwarded to the CO for approval. In most cases, requests and approvals can be handled over the telephone. The CO will prepare and sign the amendment and issue it to the contractor. Minor changes, such as adjustments in quantities of labor and equipment which will not result in an increase to the DO ceiling, can be provided directly to the contractor by the OSC. Such changes, however, should be noted in the written site documentation kept by the OSC, and should be forwarded in writing to the contractor and the CO.

APPENDIX H: Technical Direction Document Preparation and Processing

When the need arises for technical services during a Federal-lead UST corrective action, a Technical Direction Document (TDD) should be issued to activate the Technical Assistance Team (TAT) contractor. This appendix presents a detailed description of the process, including an explanation of the TDD form used to document the initiation of services and a description of EPA and contractor roles and responsibilities in managing and implementing the process. The following are addressed:

- o TDD completion and processing;
- o TDD amendments; and
- o Special Project TDDs.

The procedures described in this appendix apply to both TAT zone contracts; however, the specific instructions on completing the TDD form directly relate to the sample TDD forms used in TAT zone 1 (EPA Regions I-V) and in TAT zone 2 (EPA Regions VI-X).

A. TDD Completion and Processing Instructions

When a need for TAT contractor services arises, the Headquarters Project Officer (PO), or Regional Deputy Project Officer (DPO) with PO concurrence, prepares and issues a written TDD, which serves as the principal mechanism for initiating these services. Where practicable, the DPO should confer with the Regional UST Coordinator prior to issuance of the TDD. An oral TDD may be issued, but must always be followed by a written TDD within five (5) calendar days. The TDD includes background data, the scope of work to be performed, a schedule of deliverables, an estimate of time and costs required to perform the work, and other related information.

Only the DPO or PO is authorized to prepare and issue TDDs to the contractor TAT Leader. The TAT may not act on an UST corrective action without the specific concurrence of the PO. Each DPO can issue TDDs only to the TAT Leader assigned to that particular DPO's Region. For example, the Region I DPO can issue TDDs only to the TAT Leader assigned to Region I. TDDs can also be issued by the PO to the appropriate TAT contractor Zone Program Manager (ZPM) for special ZPM efforts within the contract Statement of Work (SOW).

1. TDD completion.

A sample TDD form that has been used in TAT zone 1 is shown in Exhibit H-1; Exhibit H-2 shows a TDD form used in TAT zone 2. Each of the elements on the TDD should be completed by the DPO as explained below.

EXHIBIT H-1

1. COST CENTER:	TAT – CONTRACT 68-01-7367 TECHNICAL DIRECTION DOCUMENT (TDD) OHM EMERGENCY RESPONSE AND SPILL PREVENTION PROGRAM ROY F. WESTON INC.	2. NO: 2A. TYPE:

3. PRIORITY:	4. SOURCE OF FUNDS:	5. EPA SITE ID:	6. COMPLETION DATE:	8. REFERENCE INF
☐ HIGH (1) ☐ MEDIUM (2) ☐ LOW (3)		5A. EPA NAME:	7. OVERTIME APPROVED: ☐ YES ☐ NO	☐ YES ☐ ☐ ATTACHED ☐ PICK UP

9. GENERAL TASK DESCRIPTION:

9A. ESTIMATED COST: $ ESTIMATED HOURS:

10. SPECIFIC ELEMENTS: 11. INTERIM DEADLINES:

12. DESIRED REPORT FORM: FORMAL REPORT ☐ LETTER REPORT ☐ FORMAL BRIEF ☐

OTHER (SPECIFY):

13. COMMENTS:

14. AUTHORIZING OPO: 15. DATE:

(SIGNATURE)

16. RECEIVED BY: ☐ ACCEPTED ☐ ACCEPTED WITH EXCEPTIONS ☐ REJECTED 17. DATE:

(TATL SIGNATURE)

1. DESCRIPTOR:

- 1 White = OPO Copy (Signed by TATL Recipient Upon)
- 2 Green = TATL Copy
- 3 Canary = ADPMO Copy
- 4 Pink = Project Officer Copy
- 4 Pink = Contracting Officer Copy (Attachment 20)

EXHIBIT H-2

1A. Cost Center:	TAT ZONE II CONTRACT CONTRACT NO. 68-01-7368 TECHNICAL DIRECTION DOCUMENT (TDD) ECOLOGY AND ENVIRONMENT, INC.	2. No.: T Amendment
1B. Account No.:		

3A. Priority ☐ High ☐ Medium ☐ Low	4A. Estimate of Total Hours: Total Costs:	5A. EPA Site Name:	7. Completion Dat
		5B. SSID No.: / 5C. City/County/State:	8. Reference Info: ☐ Yes ☐ Atta ☐ No ☐ Pick
3B. Key EPA Contact: Name: Phone:	4B. Overtime Approved: ☐ Yes ☐ No	6. Source of Funds: ☐ Other ☐ CERCLA ☐ 311 ☐ UST	8A. Subtask Code:

9. Type of Activity:

CWA-311	CERCLA	AS SPECIFIED ABOVE	
☐ SPCC	☐ Site Assessment	☐ Special Project	☐ Quality Assurance
☐ On-Scene Monitoring	☐ Removal Funded	☐ Analytical Project	☐ Training
☐ Spill Clean-up Funded	☐ Removal PRP (AO/CO)	☐ TITLE III	☐ Program Management
	☐ On-Site Monitoring	☐ UST	☐ Technical Assistance
		☐ FEMA	☐ Information Manageme

10. General Task Description:

11. Desired Report Form:
☐ Formal Repo
☐ Letter Repor
☐ Formal
☐ Other

12. Specific Elements:

13. Interim Deadli

14. Authorizing DPO: _____ (Signature) 15. Date:

16. Received by: ☐ Accepted ☐ Accepted with Exceptions (Attached) ☐ Rejected
_____ (TATL Signature) 17. Date:

Distribution:
Sheet 1 White - DPO Copy
Sheet 2 Blue - TATL Copy
Sheet 3 Green - ZPM Copy
Sheet 4 Canary - PO Copy
Sheet 5 Pink - CO Copy
[illegible] - DPO Original (Assigned by TATL)

- Cost Center (Box 1A): Enter the number of the TAT Region that is being issued the TDD; in the sample, 07 is entered to indicate Region VII.

- Account Number (Box 1B): Leave blank; to be filled in by the TAT contractor.

- TDD Number (Box 2): Enter this serial number which identifies the TAT Region in which the TDD is issued, the calendar year and month, and the sequence number of the TDD issued that month. For example, the number 07-8701-03 is interpreted as follows: 07 refers to the TAT location in Region VII; 87 refers to the calendar year in which the TDD is issued; 01 is the month the TDD is issued; and 03 indicates that this is the third TDD issued in the month of January. If the TDD amends an earlier TDD, check the "Amendment" blank.

- Priority (Box 3A): Check the box corresponding to the priority of the request. The priority should reflect whether an immediate action is required (high priority), an action is to be taken within a definite time period (medium priority), or an action is to be taken within a flexible time period (low priority).

- Key EPA Contact (Box 3B): Enter the name and telephone number of the EPA person directly involved with overseeing and managing contractor performance of the task. This will typically be the OSC.

- Estimate of Total Hours (Box 4A): Enter an estimate of the technical labor hours needed to accomplish the TDD assignment. The estimate should be based on best engineering judgment considering knowledge of the project or task requirements, data needs, and previous experience on similar projects.

- Estimate of Total Costs (Box 4A): Enter an estimate of the total cost including direct labor, travel, expenses, and subcontracting.

- Overtime Approved (Box 4B): The DPO must specify whether overtime hours are allowable for the task outlined in the TDD by checking the appropriate box.

- EPA Site Name (Box 5A): Self-explanatory; if not applicable enter N/A.

- SSID No. (Box 5B): UST sites must be numbered to allow cost recovery; see page 2 of Attachment I to the Comptroller's Policy Announcement No. 87-13 (Appendix I of this guidance). Contact the Regional Financial Management Officer and ERD Regional Coordinator for more information on assigning a site-specific ID number.

- City/County/State (Box 5C): Enter the location of the UST site; if not known, this can be entered by the contractor. If not applicable enter N/A.

- Source of Funds (Box 6): Check the UST box.

- Completion Date (Box 7): Enter the date specified by the DPO for the TAT contractor submittal of the completed TDD assignment. Completion dates must not be left open.

- Reference Info (Box 8): This item allows the DPO to provide the TAT contractor with any reference materials or supplemental information necessary to expedite TDD completion. At the same time, accountable control of such information is maintained. Check the most applicable box.

- Type of Activity (Box 9): Check the UST box.

- General Task Description (Box 10): In this section, enter a description of the task requirements that indicates the following:

  - The type of support desired;

  - The level of intensity required (the depth to which certain issues should be pursued); and

  - Any other pertinent information.

  The task description must clearly delineate the goals and objectives of the activity and the desired products and/or deliverables. Ambiguous phrases such as "assist OSC" are not sufficient. Where no interim task objectives are present, continuation of the general task description can be made into Box 12. Where interim task objectives are present, continuation of the general task description should be made on a separate sheet of paper that can be attached to the TDD.

- Desired Report Form (Box 11): The DPO should indicate the type of end product desired for the TDD assignment. Additional information can be provided in Box 12 or by attaching additional sheets to the TDD.

- Specific Elements (Box 12): In this section, elaborate on the general task description and define interim task objectives. This section should provide the TAT Leader with a clear understanding of the objectives, expected results, and required deliverables and/or reports. If more space is needed, the continuation of the description of specific task elements should be made on a separate sheet of paper that can be attached to the TDD.

- o Interim Deadlines (Box 13): Denote completion dates, where applicable, for the interim task objectives that are specified on corresponding lines in Box 12.

- o Signatures and Dates (Boxes 14-17): These sections are self-explanatory. The TDDs are to be issued and signed by the PO (or DPO with PO concurrence) and received and signed by the contractor TAT Leader. If the TAT Leader judges the TDD to be out of scope, or for other reasons unacceptable, the appropriate box must be checked to show the action. This is necessary to bring the matter to the attention of the DPO, PO, Regional UST Coordinator, and Headquarters Contracting Officer (CO). An appropriate explanation can be noted on the right-hand margin of the form.

- o Distribution: Copies of the TDD should be distributed as specified on the bottom of the form, plus an additional copy to the Regional UST Coordinator.

The DPO should keep in mind three important points while preparing a TDD. First, the DPO must be as specific as possible in describing the scope of work to be performed by the TAT. Second, the DPO must clearly indicate contractor reporting requirements. And, finally, it is extremely important that the DPO include in the TDD estimates for technical hours and costs needed to accomplish the assignment.

Although exact tasks and response activities, particularly those involving emergency situations, may be somewhat difficult to define, it is very important to the extent possible to provide specific guidance to the contractor on the expected work scope (see Exhibit H-1, Boxes 4A and 10 - 13). The task description should be as detailed as available information permits so that there is a clear understanding by the TAT contractor of the activity objective, yet allow some flexibility for alternative and innovative actions by the contractor as conditions warrant. Examples of candidate tasks which could be performed for different types of response, corrective action, or prevention work can be extracted directly from the TAT contract Statement of Work (SOW).

Care must be taken by the DPO and TAT Leader to ensure that all tasks requested and performed are within the bounds of the TAT contract SOW. Particular attention must be given to ensure that TAT TDDs do not involve personal services. For example, the DPO must not direct the TAT to provide clerical support, travel arrangements, or other personal services for EPA staff. The DPO is also forbidden from specifying an individual TAT member to perform a task. Specific TAT staffing decisions are the responsibility of the TAT contractor.

The tasks included in any one activity will depend upon the project-specific conditions. It may prove useful for the Region to develop standardized work scopes for an activity and to use

this scope (modified as necessary for a specific situation) as an attachment to the TDD.

In addition, the TDD reporting requirements (Box 11) must be spelled out such that the work product provides the degree of detail desired by the DPO and therefore facilitates accomplishment of the activity objectives. The DPO may wish to develop standard report outlines for various types of activities (i.e., facility inspection reports) and to attach these to the TDD as appropriate.

Finally, the DPO is responsible for ensuring that an estimate of technical hours and costs needed to accomplish the TDD assignment is included in the TDD. These estimates may be used in three important ways to ensure that the TAT performs efficiently. First, these estimates can serve as the basis for individual TDDs. The actual hours and costs can then be compared with the estimates. Any large differences between the figures may be indicative of problems and should be reviewed by the DPO. Second, the estimated hours, used in combination with the estimated completion date, can help to identify the need for overtime to complete the task. Since the contract limits the overtime which may be charged, overtime must be monitored.

The third use for the estimate of technical hours is to provide the basis for comparison of total estimated hours for all active TDDs with the total technical hours available. Total technical hours available can be computed from the information in the contract. The difference between the two figures will tell the DPO to what extent available contractor resources are being utilized. The TAT contractor can also provide this information on a regular basis (e.g., biweekly).

2. TDD processing.

After the TDD is completed, it is signed by the DPO or the DPO's designee and forwarded to the contractor TAT Leader. (When the DPO plans to be out of the office and unavailable to perform contract management functions, the DPO must submit a written request, or telephone the PO and CO, for approval to appoint a temporary assistant DPO; this request must be for a discrete period of time.) The PO must also be notified by the DPO for concurrence with the TDD. The PO will convey concurrence to the ZPM, who will communicate this concurrence to the TAT Leader as soon as possible. The contractor TAT Leader can take one of three actions on the TDD:

- If the TDD is acceptable to the contractor TAT Leader as issued by the DPO, the TAT Leader signs the TDD and proceeds with performance of the assigned activities. In general, the TAT contractor should be willing to accept any assignment within the bounds of the TAT contract SOW. However, as stated earlier, conducting personal services for EPA staff is not allowed.

- The TAT leader can accept the TDD with exceptions. In this case, the exceptions are to be noted on the form and a copy is returned to the DPO. The DPO and TAT Leader are to resolve these exceptions prior to the contractor commencing work. If necessary, a revised TDD should be issued reflecting resolution of any exceptions. If the issue cannot be resolved on this level, the DPO should consult with the PO in Headquarters for guidance. If necessary, the PO will consult with the contractor ZPM to try to resolve the situation. If it is resolved, the DPO may issue a revised TDD reflecting the issue resolution and the contractor will proceed with task performance. If the PO and contractor ZPM cannot resolve the issue, the matter is referred to the CO for final resolution. Where possible, and with concurrence of the DPO, the contractor should begin work on the acceptable work elements of the TDD, pending resolution of the points at issue.

- If the contractor TAT Leader rejects the TDD, it is returned to the DPO with an explanation of the reasons for rejection. The DPO and TAT Leader are to confer to resolve the situation. If a resolution is reached, a revised TDD can be issued, if necessary, and the contractor proceeds with the task. If the DPO and the TAT Leader cannot resolve the problem, the DPO should contact the PO for guidance as explained above.

When the TDD is acceptable to both the TAT Leader and the DPO, it should be signed and dated. Appropriate copies should be placed in the contractor's and EPA's central TDD files. The DPO should then send copies of the TDD to the PO, CO, and the Regional UST Coordinator.

B. TDD Amendments

In the event that an issued TDD needs revision, the DPO must issue a TDD amendment containing the appropriate changes. Events that require TDD amendments may include, for example, an original underestimation of a project's magnitude or an acceleration of a project's period of performance. The original TDD's number will be used, with a check in the "Amendment" blank (Box 2). The revised TDD should include the material contained in the original TDD and the revised information so as to be capable of standing alone. Amendments are to be processed in the same manner as described above.

C. Special Project TDDs

Funding has been obligated for the performance of special projects under the TAT contracts. All TAT Special Projects TDDs for Federal-lead UST corrective actions must be signed and issued by the appropriate PO, after conferring with the Regional UST Coordinator. If a special project is required, the PO may

request that the ZPM prepare and submit a work plan and cost estimate for completing the TDD. The TAT contractor's work plan should include a detailed technical approach, schedule for completion, and cost breakdown. It should be sufficiently detailed to provide a base for guiding work, measuring progress, and controlling budgets. The contractor work plan should address the elements specified below:

- Objectives and scope of the proposed activity and its relationship to other ongoing or planned activities.
- Technical approach for the activity, anticipated problems, and proposed solutions.
- Detailed breakdown of tasks to be performed.
- Description of work to be performed under each task, including objectives and scope, information sources, and methods to be used.
- Analysis of resources (level) expected for each task.
- Anticipated total labor cost for each task.
- Identification and tabulation of total direct costs for each major work element.
- Schedule, including critical path and milestones.
- Listing and schedule of deliverables.
- Safety and contingency measures.

Upon review of the plan, the PO will approve and issue the TDD.

APPENDIX I: Interim Financial Procedures Governing Use of the LUST Trust Fund

Comptroller's Policy Announcement No. 87-13

Available from OUST Program -

202 - 475 - 9810

8 - 475 - 9810

Policy for Superfund Compliance with the RCRA Land Disposal Restrictions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 17 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OSWER Directive 9347.1-02

MEMORANDUM

SUBJECT: Policy for Superfund Compliance With the RCRA Land Disposal Restrictions

FROM: Jonathan Z. Cannon
Acting Assistant Administrator

TO: Regional Administrators, Regions I-X

Purpose

To transmit the Superfund policy for complying with the RCRA land disposal restrictions (LDRs) at Superfund sites.

Background

CERCLA section 121(d) requires on-site Superfund remedial actions to comply with Federal, and more stringent State, environmental requirements that are determined to be applicable or relevant and appropriate requirements (ARARs). Section 121 also identifies six ARAR waivers: 1) interim remedy; 2) greater risk to human health and the environment; 3) technical impracticability; 4) equivalent standard of performance; 5) inconsistent application of State standard; and 6) Fund-balancing.

With regard to Superfund removal actions, the current NCP requires on-site removal actions to comply with Federal ARARs to the extent practicable, considering the exigencies of the situation. The preamble to the proposed NCP contains guidance on how to determine whether compliance is "practicable."

On-site removal and remedial actions must comply with substantive aspects of both applicable and relevant and appropriate requirements. Off-site removal and remedial actions must comply with both substantive and administrative aspects of applicable requirements only.

The RCRA land disposal restrictions are a potential ARAR for Superfund actions. As you may know, OERR is developing a guidance document to assist the Regions in complying with the LDRs. Although several issues must be resolved

before this guidance is issued, this memorandum will summarize one of the major issues that has been decided, namely, how to determine whether the LDRs are "applicable" to a Superfund response action. This policy will be discussed in greater detail in the guidance document.

Objective

In order to assist Regional removal and remedial staff in making current site decisions about the LDRs, this memorandum will explain: 1) how to determine when the LDRs are "applicable" to a Superfund removal or remedial action, and 2) the Superfund approach for complying with the LDRs when they are determined to be applicable. (This memorandum does not address how to make "relevant and appropriate" determinations.)

Implementation

Section A below explains how site managers (OSCs, RPMs) should determine whether the LDRs are "applicable" to a Superfund response action. Section B explains how Superfund intends to comply with the LDRs when they are determined to be applicable.

A. Application of the LDRs to CERCLA response actions

To determine if the LDRs are applicable to a given response action at a Superfund site, the site manager must answer three questions. The answer to each question must be "yes" for the LDRs to be applicable.

1. Does the CERCLA action constitute "placement"?

The LDRs are triggered as applicable requirements by "placement" of restricted RCRA hazardous wastes in land-based units.[1] Placement occurs when wastes are land disposed (or placed) in land-based RCRA units, such as landfills, surface impoundments, waste piles, and land treatment facilities. Placement does not occur if wastes are moved within a unit or are left in place (e.g., capping, in-situ treatment, consolidation within a unit). Placement does occur when wastes are moved from one unit and placed in another unit. For example, if wastes from a CERCLA site are disposed at an off-site landfill, this action constitutes placement.

However, the concept of a RCRA unit may be less useful for uncontrolled hazardous waste sites, which often involve widespread and dispersed contamination. Therefore, to assist in defining when placement occurs for on-site disposal at Superfund sites, the Agency has developed the concept of an

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[1] Several LDR requirements (the storage restrictions, dilution prohibition, and off-site notification requirements, in particular) are triggered when restricted wastes are generated, or picked up, rather than when the wastes are "placed." However, the major LDR restrictions discussed in the remainder of this memorandum are triggered only if wastes are "placed."

"area of contamination" (AOC). An AOC is delineated by the extent of continuous contamination, although one AOC may contain varying types and concentrations of contamination. For example, a waste pit with the surrounding contaminated soil is one AOC and may be viewed as a single "unit," e.g., a single landfill. For the purposes of the LDRs, therefore, AOCs are equivalent to RCRA units.

Movement of waste within the AOC does not constitute placement, but movement of waste out of the AOC into another unit will trigger placement. Placement would occur if wastes from different AOCs are consolidated into one AOC or if wastes are removed and treated outside the AOC and returned to the same or a different AOC. Placement would also occur if wastes are excavated from the AOC, placed in an incinerator or tank located within the AOC, and then redeposited into the AOC, because the incinerator and tank are considered separate units from the AOC.

2. Is the CERCLA waste also a RCRA hazardous waste?

The LDRs are applicable only to RCRA hazardous wastes (i.e., listed and characteristic wastes identified under §261). However, not all wastes at Superfund sites are RCRA hazardous wastes. Therefore, the site manager must decide if it is reasonably ascertainable, within the scope of the Superfund site investigation, that the CERCLA waste is also a RCRA hazardous waste. Reasonable efforts must be used to collect the information needed to determine if a waste is a RCRA listed or characteristic waste. (It is expected that current data collection efforts at Superfund sites should be sufficient for this purpose.) The site manager should have affirmative evidence (e.g., manifests, records, knowledge of process) to demonstrate that the Superfund waste is a RCRA hazardous waste for the LDRs to be potentially applicable.

To determine whether a CERCLA waste is a RCRA characteristic waste, site managers may test the waste or use their knowledge of the properties of the waste. To determine if a waste is a listed waste, sampling alone will not be sufficient. The RCRA listing descriptions will generally require that the site manager have knowledge about the source of the waste (for example, did the sludge on site result from a wastewater treatment operation?) or its prior use (e.g., was the waste unused when it was discarded?).

If the site manager determines that the site waste is a RCRA hazardous waste, he/she must also determine if that waste is a "California list" waste. The California list wastes are a distinct category of RCRA hazardous wastes regulated under the LDRs. The LDR regulations describe the California list wastes and they will be discussed in the forthcoming guidance document.

3. Is the RCRA waste restricted under the LDRs at the time of placement?

The land disposal restrictions are being phased in for the RCRA hazardous wastes over a period of time. Attachment 1 presents the LDR statutory deadlines established by section 3004 of the 1984 RCRA amendments. A RCRA waste becomes a restricted waste under the LDRs on its statutory deadline, or earlier if EPA chooses to promulgate treatment standards for a waste prior to this deadline. Note that after May 1990, all RCRA hazardous wastes (that were

listed or characteristic as of the 1984 RCRA amendments) will be restricted under the LDRs.

To determine if the LDRs are applicable, site managers should determine if the RCRA waste will be restricted under the LDRs at the time the waste is to be placed.

To summarize Section A, the LDRs are applicable when three conditions are met: 1) the CERCLA action constitutes placement, 2) the CERCLA waste is a RCRA hazardous waste, and 3) the RCRA waste is restricted at the time of placement. If these conditions are met, the CERCLA action must comply with the LDRs, unless an ARAR waiver is granted (remedial actions) or compliance with the LDRs is determined not to be "practicable" (removal actions).

B. Superfund compliance with the LDRs

Section B briefly describes the different types of LDR requirements and provides an overview of the Superfund approach for complying with these LDR requirements when they are determined to be "applicable." Section B describes only the major LDR restrictions; the upcoming guidance document will give a complete description of all LDR provisions.

1. Summary of the major LDR requirements

When a waste becomes "restricted" on its statutory deadline (or possibly earlier), one of four types of restrictions will take effect:

Treatment standard (§268.40-43) - The RCRA amendments direct EPA to promulgate treatment standards for all RCRA hazardous wastes by the statutory deadlines. To date, most of the standards set by EPA are concentration levels that must be achieved prior to land disposal. (The regulations specify whether a total waste analysis or the Toxicity Characteristic Leaching Procedure (TCLP) must be used to measure the concentration levels.) For concentration-based treatment standards, any technology may be used to achieve these standards. However, in limited cases, EPA has also promulgated a specific technology as a treatment standard, or has established a "no land disposal" treatment standard where a waste was no longer generated, no longer being land disposed, or was capable of being totally recycled.

National capacity extension (§268.30-33) - When EPA sets a treatment standard for a waste, it must also determine if there is sufficient capacity available nationwide to treat the waste to that standard. If not, EPA may grant a nationwide capacity extension for the waste for up to two years. During the extension, the waste does not have to meet the treatment standard. However, if waste that does not meet the standard is disposed in a landfill or surface impoundment, the receiving unit must meet the RCRA §3004(o) minimum technology requirements (e.g., double liner, leachate collection system, ground water monitoring). Because of these limitations on disposal, wastes are still considered "restricted" during national capacity extensions.

Attachment 2 highlights the national capacity extensions that EPA has granted to date for CERCLA soil and debris wastes that are contaminated with RCRA restricted wastes.

Soft hammer (§268.8) - If EPA fails to set a treatment standard for a First or Second Third waste on the statutory deadline, the soft hammer goes into effect automatically. The soft hammer places two requirements on the disposal of wastes in landfills and surface impoundments: 1) the receiving unit must meet the RCRA minimum technology requirements, and 2) the generator must demonstrate and certify that he has investigated treatment options for the waste, and, where treatment is practically available, that the waste has been treated using the best practically available treatment method. The soft hammer remains in effect until EPA sets a treatment standard for the waste, or until the hard hammer falls in May 1990, whichever comes first.

Hard hammer (RCRA §3004(g)(6)(C)) - If EPA fails to set a treatment standard for a solvent, dioxin, or California list waste by the statutory deadlines for these wastes, or for any "Third" waste by May 1990, the hard hammer falls. The hard hammer prohibits all land disposal of the affected waste.

Compliance with RCRA and the LDRs may also be obtained through several options other than meeting the restrictions above. It is important to note that **these options constitute compliance with RCRA; they do not require an ARAR waiver under CERCLA.**

A Treatability Variance (§268.44) is available when a treatment standard has been set for a waste. The variance can be used where, because the site manager's waste is significantly different from the waste used by EPA to set the treatment standard, the standard cannot be met or the BDAT technology is inappropriate. The variance can be granted either administratively, for a particular waste at a particular site, or through a rule-making procedure, which establishes a new nationwide waste category and associated treatment standard.

An Equivalent Treatment Method Petition (§268.42) can be used where a treatment standard is a specified technology, but the site manager can demonstrate that another technology can achieve an equivalent measure of performance.

A No-Migration Petition (§268.6) can be used as an alternative to any of the four restrictions above. The site manager must demonstrate that there will be no migration of hazardous constituents above health-based levels from the disposal unit or injection zone for as long as the waste remains hazardous.

Delisting (§260.20 and §260.22) can be used as an alternative to any of the four restrictions above, when the RCRA hazardous waste is a listed waste. The site manager must demonstrate that: 1) the waste does not meet any of the criteria under which the waste was listed, and 2) other factors

(including additional constituents) would not cause the waste to be hazardous.

2. Superfund approach for complying with the LDR requirements

The present Superfund approach for complying with the LDRs when they are applicable requirements is illustrated below:

CASE A: CERCLA liquid or sludge wastes that are also RCRA restricted hazardous wastes

CERCLA liquid or sludge	+ RCRA restricted hazardous waste	+ Placement	=	LDR is applicable. Must comply (unless CERCLA ARAR waiver is granted). If the LDR restriction is a treatment standard, evaluate whether it can be met. If not, determine if a Treatability Variance or other RCRA option is appropriate.

CASE B: CERCLA soil or debris wastes that contain RCRA restricted hazardous wastes

CERCLA soil or debris	+ RCRA restricted hazardous waste	+ Placement	=	LDR is applicable. Must comply (unless CERCLA ARAR waiver is granted). If LDR restriction is a treatment standard, will generally be appropriate to seek a Treatability Variance. Other RCRA options may also be appropriate.

CERCLA response actions often address waste matrices, such as contaminated soil and debris, that are different from the RCRA industrial wastes used to set the LDR treatment standards. Therefore, the Agency is undertaking a rulemaking that will set LDR treatment standards specifically for contaminated soil and debris. Until that rulemaking is completed, site managers should use the data collected during the removal and remedial site investigations to support a Treatability Variance for soil and debris where necessary. As part of this interim approach, the Agency is developing specific guidance for obtaining a Treatability Variance for soil and debris, which establishes alternate treatment levels or methods for soil and debris.

If you have further questions, you may call the Headquarters Superfund Regional Coordinators, Carolyn Offutt of the CERCLA program (FTS 475-9760), or Michaelle Wilson of the RCRA land disposal restrictions program (FTS 382-4770).

Attachments

cc: Regional Counsel, Regions I-X
Director, Waste Management Division, Regions I, IV, V, VII, and VIII
Director, Emergency and Remedial Response Division, Region II
Director, Hazardous Waste Management Division, Regions III and VI
Director, Toxics and Waste Management Division, Region IX
Director, Hazardous Waste Division, Region X
Environmental Services Division Directors, Regions I, VI, and VII
Henry Longest
Sylvia Lowrance
Bruce Diamond
Lisa Friedman
Superfund Branch Chiefs, Regions I-X
Oil and Hazardous Materials Coordinators, Regions I-X
Bettie Van Epps, OERR Document Coordinator

Attachment 1

LDR STATUTORY DEADLINES

RCRA HAZARDOUS WASTE	STATUTORY DEADLINE*
Spent solvent wastes (F001-F005)	November 8, 1986
Dioxin wastes (F020-F023 and F026-F028)	November 8, 1986
California list wastes - Any RCRA hazardous waste; and - Liquid (except for HOCs); and - Exceeds statutory prohibition level for certain cyanides, metals, corrosives, PCBs or HOCs	July 8, 1987
CERCLA/RCRA corrective action soil and debris (Solvent-containing, dioxin-containing, and California list wastes only)	November 8, 1988
First Third wastes (listed RCRA hazardous wastes)	August 8, 1988
Second Third wastes (listed RCRA hazardous wastes)	June 8, 1989
Third Third wastes (listed and characteristic RCRA hazardous wastes)	May 8, 1990
New RCRA wastes (any RCRA hazardous waste listed or identified under RCRA 3001 after November 8, 1984)	Within 6 months of listing or identification**

* These dates are statutory deadlines in HSWA. On this date, some type of LDR restriction will apply (i.e., treatment standard, minimum requirement during national capacity extension, soft hammer, hard hammer). However, the Agency also has the authority to restrict a waste earlier than its statutory deadline. Currently, the Agency is planning to restrict certain Third Third wastes in the June 1989 Second Third rule, so individual regulations must be checked.

** If EPA misses the 6 month deadline, the waste will not be restricted under the LDRs because HSWA contained no hammer provisions for newly identified wastes.

Attachment 2

LDR NATIONAL CAPACITY EXTENSIONS FOR CERCLA SOIL AND DEBRIS

Waste Category	Statutory Deadline	Treatment Standard Effective Date
Solvent (F001-F005)	November 8, 1988	November 8, 1990*
Dioxin (F020-F023 and F026-F028)	November 8, 1988	November 8, 1990*
California list (HOCs)	November 8, 1988	November 8, 1990*
First Third:		
Wastes where BDAT is incineration	August 8, 1988	August 8, 1990*
Wastes where BDAT is other than incineration	August 8, 1988	August 8, 1988**
Soft hammer wastes - treatment standard not set; must meet soft hammer restrictions as of 8/8/88	August 8, 1988	N/A

* The effective date is based on the granting of a national capacity extension. During the capacity extension, the soil and debris do not have to meet the promulgated treatment standards. However, if soil or debris that does not meet the standard is disposed in a landfill or surface impoundment, the receiving unit must meet the RCRA minimum technology requirements (double liner, leachate collection system, ground water monitoring).

** Except for K048-K052 and K071, which were granted capacity extensions until August 8, 1990.

Land Disposal Restrictions as Relevant and Appropriate Requirements for CERCLA Contaminated Soil and Debris

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

JUN - 5 1989

OSWER Directive No. 9347.2-01

MEMORANDUM

SUBJECT: Land Disposal Restrictions as Relevant and Appropriate Requirements for CERCLA contaminated Soil and Debris

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

Bruce M. Diamond, Director
Office of Waste Programs Enforcement

TO: Directors, Waste Management Division
Regions I, IV, V, VII, VIII
Director, Emergency and Remedial Response Division
Region II
Directors, Hazardous Waste Management Division
Regions III, VI
Director, Toxic and Waste Management Division
Region IX
Director, Hazardous Waste Division
Region X

PURPOSE

To transmit OSWER policy on the relevance and appropriateness of the Land Disposal Restrictions (LDRs) to CERCLA responses involving contaminated soil and debris.

BACKGROUND

As clarified in OSWER Directive 9347.1-02 (see attachment), the LDRs are applicable to CERCLA responses only when such actions constitute placement of a restricted RCRA waste. Therefore, if no restricted RCRA wastes are identified in a Superfund waste that is being placed, the LDRs would not be applicable. Site-specific questions have arisen, however, as to the relevance and

appropriateness of the LDRs to soil and debris that do not contain RCRA restricted wastes. In particular, Region II (having determined that the contaminated soil and debris to be treated and "placed" at the 93rd Street site did not contain RCRA hazardous wastes) sought consultation with Headquarters on whether LDRs should be considered relevant and appropriate given that the Agency is in the process of developing treatment standards for soil and debris wastes separate from the treatment standards developed for industrial process wastes.

OSWER POLICY

OSWER has concluded that until a rulemaking is completed that establishes treatment standards for soil and debris, the LDRs generally should not be considered as relevant and appropriate for soil or debris that does not contain restricted RCRA wastes. The following language should be incorporated into feasibility study ARAR discussions, proposed plans, and the "Compliance with ARARs" section of future RODs for situations similar to the above example:

> The Agency is undertaking a rulemaking that will specifically apply to soil and debris. Since that rulemaking is not yet complete, EPA does not consider LDR to be relevant and appropriate at this site to soil and debris that does not contain RCRA restricted wastes.

Should you have any questions regarding this policy, please contact your Regional Coordinators in the Hazardous Site Control Division, the CERCLA Enforcement Division, or Steve Golian (FTS 475-9750) in the Site Policy and Guidance Branch.

Attachment

cc: Sylvia Lowrance, OSW

Notification of Out-Of-State Shipments of Superfund Site Wastes

OSWER Directive Initiation Request | OSWER 9330.2-07

2. Originator Information

Name of Contact Person	Mail Code	Office	Telephone Code
Hugo Fleischman	OS-240	OERR/HSCD/SLCB	382-5734

3. Title

Notification of Out-of-State Shipments of Superfund Site Wastes

4. Summary of Directive (include brief statement of purpose)

The purpose of this memo is to implement EPA's policy that prior to the off-site shipment of Superfund wastes to an out-of-state waste management facility, EPA Regional personnel will provide notice to that State's environmental officials.

5. Keywords Superfund, CERCLA, SARA

6a. Does This Directive Supersede Previous Directive(s)? [X] No. [ ] Yes What directive (number, title)

b. Does It Supplement Previous Directive(s)? [X] No [ ] Yes What directive (number, title)

7. Draft Level

[X] A – Signed by AA/DAA [ ] B – Signed by Office Director [ ] C – For Review & Comment [ ] D – In Development

8. Document to be distributed to States by Headquarters? [X] Yes [ ] No

This Request Meets OSWER Directives System Format Standards.

9. Signature of Lead Office Directives Coordinator	Date
Betti VanEpps, OERR Publications COordinator	

10. Name and Title of Approving Official	Date
Jonathan Cannon, Act. Asst. Admin., OSWER	

EPA Form 1315-17 (Rev. 5-87) Previous editions are obsolete.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C 20460

SEP 14 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OSWER Directive 9330.2-07

MEMORANDUM

SUBJECT: Notification of Out-of-State Shipments of Superfund Site Wastes

FROM: Jonathan Z. Cannon, Acting Assistant Administrator
Office of Solid Waste and Emergency Response

TO: Regional Administrators
Regions I- X

PURPOSE

The purpose of this memorandum is to implement EPA's policy that prior to the off-site shipment of Superfund wastes to an out-of-State waste management facility, EPA Regional personnel will provide notice to that State's environmental officials.

BACKGROUND

A number of States and localities have expressed the concern that they are not formally notified before unusually large amounts of Superfund wastes are transferred to permitted facilities within their States for treatment, storage or disposal. The Agency believes that such notice may be appropriate, and that indeed, such notice may be helpful in facilitating the safe and timely accomplishment of Superfund waste shipments. Thus, EPA has decided to adopt a policy of providing States with prior notification of off-site shipments of Superfund wastes. (Because the State in which the site is located participates in the remedy selection process, and thus is already aware of Superfund remedies within that State, this policy will apply only to out-of-State waste shipments.)

OBJECTIVES

The objectives of this policy are to alert States to shipments of wastes from out-of-State Superfund sites, so that the State may take any steps necessary to facilitate the safe transfer of waste, and to respond to any public inquiries concerning the waste movements.

IMPLEMENTATION

Effective immediately, the Region should implement the notification of Superfund waste shipments. The Agency intends that notice under this policy should be routinely provided to State environmental officials for all remedial actions and "non-time critical" removal actions involving the off-site shipment of Superfund wastes that are known to Regional officials, including waste shipments arising from Fund-lead responses, State-lead responses, Federal facility responses, and responses conducted by PRPs (emergency and time-critical removals are not covered by this policy). This policy pertains to all such off-site shipments, not merely response actions involving "unusually large" shipments; however, you may, in your discretion, decide that notice is unnecessary for shipments of small amounts of wastes (e.g., 10 cubic yards).

The notification should be in writing, and should set out the following information, where available: (1) the name and location of the facility to which the wastes are to be shipped; (2) the type and quantity of waste to be shipped; (3) the expected schedule for the waste shipments; and (4) the method of transportation. In addition, the Region should notify the State of major changes in the shipment plan, such as a decision to ship the wastes to another facility within the same State, or to a facility in another State.

The identity of the receiving facility and State will be determined by the lead agency following the award of the response action contract. The Region should provide relevant information on the off-site shipments as soon as practicable after the information becomes available to the Region; unless the information is unavailable, it should be provided before the wastes are actually shipped.

Because CERCLA actions may be carried out under a number of mechanisms and by a number of parties (e.g., lead State agencies, other Federal agencies, PRPs), OSWER plans to issue additional guidance to help Regions to implement this notification policy. That additional guidance will address: modification of contracting procedures and contract terms in order to provide for routine notification under Fund-lead response actions; modification to cooperative agreements in order to provide for routine notification under State-lead response actions; model provisions for orders and settlement agreements with PRPs in order to provide for routine notification under PRP response actions; and model provisions for Interagency Agreements to provide for notification in Federal facility response actions. The guidance may also attempt to establish levels below which such notice would not be necessary. OSWER will minimize the

burden on the Regions by placing the responsibility for prior notification on the response action contractor where appropriate.

Should you have any questions concerning this policy or its implementation, please contact William O. Ross of my staff at FTS 382-4645.

Analysis of Treatability Data for Soil and Debris: Evaluation of Land Ban Impact on Use of Superfund Treatment Technologies

OSWER Directive Initiation Request

9380.3-04

2. Originator Information

Name of Contact Person	Mail Code	Office	Telephone Code
Henry L. Longest	OS-200	OERR	382-2180

3. Title

Analysis of Treatability Data for Soil and Debris: Evaluation of Land Ban Impact on Use of Superfund Treatment Technologies: A Superfund Management Review: Recommendation 34A

4. Summary of Directive (include brief statement of purpose)

The purpose of this memo is to transmit an analysis of the effectiveness of treatment technologies for contaminated soil and debris in response to the recommendation in the Superfund Management Review to "carefully evaluate impact of RCRA land ban and other rules on use of alternative technolog

5. Keywords

6a. Does This Directive Supersede Previous Directive(s)? ☐ No ☐ Yes What directive (number, title)

b. Does It Supplement Previous Directive(s)? ☐ No ☐ Yes What directive (number, title)

7. Draft Level

☐ A – Signed by AA/DAA ☐ B – Signed by Office Director ☐ C – For Review & Comment ☐ D – In Develop

8. Document to be distributed to States by Headquarters? ☐ Yes ☐ No

This Request Meets OSWER Directives System Format Standards.

9. Signature of Lead Office Directives Coordinator	Date
Betti VanEpps	11-30-89
10. Name and Title of Approving Official	**Date**
Henry L. Longest II	11-30-89

EPA Form 1315-17 (Rev. 5-87) Previous editions are obsolete.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 30 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OSWER Directive 9380.3-04

MEMORANDUM

SUBJECT: Analysis of Treatability Data for Soil and Debris: Evaluation of Land Ban Impact on Use of Superfund Treatment Technologies

Superfund Management Review: Recommendation 34A

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response (OS-200)

TO: Addressees

Purpose

The purpose of this memo is to transmit an analysis of the effectiveness of treatment technologies for contaminated soil and debris in response to the recommendation in the Superfund Management Review to "carefully evaluate impact of RCRA land ban and other rules on use of alternative technologies." This analysis will provide support to Regional decisions to employ treatability variances for complying with the RCRA Land Disposal Restrictions as applicable or relevant and appropriate requirements for Superfund actions involving contaminated soil and debris.

Background

The Superfund Management Review acknowledged that Superfund response actions may not be able to meet treatment standards based on "best demonstrated available technology" (BDAT) under the Land Disposal Restrictions (LDR). This may limit the potential treatment technologies available for Superfund clean-ups, with technologies such as soil washing, stabilization, and biological treatment being precluded because they may not meet the highest level of performance required by LDRs. In contrast, the study encouraged the greater use of innovative technologies and urged the reduction of non-technical barriers, such as regulatory and policy constraints, that inhibit use of treatment technologies, while preserving the intent and spirit of applicable RCRA regulations.

OSWER program offices recognized the potential limitation treatment technologies for Superfund actions and developed a process to use LDR treatability variances for soil and debris. Guidance was issued to the Regions in July 1989 through the Superfund LDR Guide 6A, "Obtaining a Soil and Debris Treatability Variance for Remedial Actions" (OSWER Directive 9347.3-06FS). Superfund LDR Guide 6B, "Obtaining a Soil and Debris Treatability Variance for Removal Actions," is scheduled to be issued in December 1989. These guides describe the treatability variance process, include alternate treatment levels to be obtained under treatability variances, and identify treatment technologies which have achieved the recommended levels. OSWER recognizes that the use of treatability variances represents an interim approach and is currently in the process of acquiring additional data for developing a regulation on treatment standards for contaminated soil and debris.

The following analysis summarizes the effectiveness of treatment technologies applied to soils and other environmental wastes and provides support for decisions by the Regions to use treatability variances, when appropriate. The analysis identifies some of the key technical considerations to be evaluated in obtaining a treatability variance when there is a reasonable doubt that a technology operated at full scale cannot consistently meet the BDAT treatment standards for the soil and debris to be treated.

Analysis of Treatment Effectiveness

An extensive effort was undertaken during 1987 and 1988 to collect existing data on treatment of soil, sludge, debris, and related environmental media. The results from several hundred studies were collected and reviewed. All applicable treatment information from 67 studies was extracted, loaded into a data base, and analyzed to determine the effectiveness of technologies to treat different chemical groups (Summary of Treatment Technology Effectiveness for Contaminated Soil, U.S. EPA, EPA/540/2-89/053).

Although some of the data on which the analysis is based have limited quality assurance information, the data, nevertheless, do indicate potential effectiveness (at least 90% to 99% reduction of concentration or mobility of hazardous constituents) of treatment technologies to treat Superfund wastes. Some reductions in organic concentrations or organic mobility of more volatile compounds may actually represent the removal of those compounds as a direct result of volatilization during dechlorination, bioremediation, soil washing, or immobilization, which requires consideration of appropriate emission controls. Percentage removal reductions are not always a good measure of effectiveness, especially when high concentrations remain in the residuals. Some of the performanc

summarized below is based upon a relatively small number of data points and may not extrapolate well to the broad array of soils requiring treatment.

Based on this analysis, a number of technologies commonly used in the Superfund program provide substantial reduction in mobility and toxicity of wastes as required in Section 121 of the Superfund Reauthorization and Amendments Act of 1986. For example:

- Thermal destruction has been proven effective on all organics compounds, usually accomplishing well over 99% reduction of organics.
- Although the data indicate that PCBs, dioxins, furans, and other aromatic compounds have been dechlorinated to approximately 80%, more recent data indicating that removal efficiencies may approach 99.9%.
- Bioremediation successfully treats many halogenated aliphatic compounds, non-halogenated aromatics, heterocyclics, and other polar compounds with reduction efficiencies in excess of 99%.
- Removal efficiencies for low temperature thermal desorption have been demonstrated with averages up to 99% for non-polar halogenated aromatics and with treatment often exceeding 90% for other polar organics.
- Soil washing data on organic compounds indicate average removal efficiencies of approximately 90% for polar non-halogenated organics and 99% for halogenated aromatics, with treatment often exceeding 90% for polynuclear aromatics. The chemical extraction process, with optimized solvent selection, has demonstrated removal efficiencies often exceeding 90% for volatile and non-volatile metals.
- Immobilization processes, while not actually destroying the organic compounds, reduce the mobility of contaminants an average of 99% for polynuclear aromatic compounds. Immobilization may not effectively stabilize some organic compounds, such as volatile organics, and the long-term effectiveness of immobilization of organics is under evaluation. Immobilization can achieve average reductions in mobility of 93% for volatile metals, with reductions in mobility often exceeding 90% for non-volatile metals.

The attachment contains a more detailed summary of the data which is extracted from the "Summary of Treatment Technology Effectiveness for Contaminated Soil."

Technology Limitations to be Considered

The data available suggest that treatment of soil and debris with organic contamination by technologies other than thermal

destruction will not be able to consistently achieve BDAT standards. Therefore, other technologies should be used for those wastes, only if approved under a treatability variance.

The residual concentrations in contaminated soil treated by technologies other than thermal destruction is highly dependent upon the concentrations in the untreated soil. Therefore, when evaluating technologies other than thermal destruction, the ability of those technologies to treat high concentrations of organics should be considered.

The Regions need to carefully review the site conditions and characteristics in designing and operating materials handling, pretreatment, and treatment requirements. High variability in contaminant concentrations of untreated soil may have an adverse effect on the ability to achieve treatment levels at higher concentrations using technologies other than thermal destruction. Consideration should be given to the need for blending wastes.

In selecting technologies for contaminated soils and sludges, the number and types of contaminants must be carefully screened, and, in some cases, different technologies may be necessary for soils and sludges.

Implementation

The data indicate potential limitations of treatment technologies to meet BDAT standards for Superfund wastes. Superfund LDR Guide 6A outlines the treatability variance process for Superfund soil and debris and identifies alternate treatment levels. Guide 6A should be followed, when appropriate, until OSWER completes a regulation with treatment standards for contaminated soil and debris. The limitations on technologies identified in this memorandum should be taken into account when evaluating, selecting, designing, and implementing Superfund response actions.

Attachment

Addressees:

Sylvia Lowrance, Director
Office of Solid Waste

Bruce Diamond, Director
Office of Waste Programs Enforcement

Directors, Waste Management Division
Regions I, IV, V, VII, VIII
Director, Emergency and Remedial Response Division
Region II
Directors, Hazardous Waste Management Division
Regions III, VI

Director, Toxic and Waste Management Division
Region IX
Director, Hazardous Waste Division
Region X

Attachment

TECHNOLOGY CONCLUSIONS ON SOIL TREATMENT

Extracted from "Summary of Treatment Technology Effectiveness for Contaminated Soil" EPA /540/2-89/053

For each treatability group, the effectiveness of various technologies was evaluated and is summarized in Figure 1. The following ratings were used:

- Demonstrated Effectiveness: A significant percentage of the data, 20%, are from pilot or full scale operations, the average removal efficiency for all of the data exceeds 90%, and there are at least ten data pairs.

- Potential Effectiveness: The average removal efficiency for all of the data exceeds 70%.

- No Expected Effectiveness: The average removal efficiency for all of the data is less than 70% and no interference is expected to this process as a result of this group.

  No Expected Effectiveness: Potential adverse effects to the environment or the treatment process may occur. For example, high concentrations of metals may interfere with biological treatment.

In some cases, a different rating was selected when additional qualitative information and engineering judgment warranted.

Two symbols were used if the compounds within a treatability group were so variable that a range of conclusions could be drawn for a particular technology.

TECHNOLOGY CONCLUSIONS ON SOIL TREATMENT

Extracted from "Summary of Treatment Technology Effectiveness for Contaminated Soil" EPA /540/2-89/053

Thermal Destruction (See Figure 2)

Principle of Operation

- Thermal destruction uses high temperatures to incinerate and destroy hazardous vastes, usually by converting the contaminants to carbon dioxide, vater, and other combustion products in the presence of oxygen.

Effectiveness on Organics

- This technology has been proven effective on all organic compounds, usually accomplishing vell over 99% removal.
- Thermal destruction technologies are equally effective on halogenated, non-halogenated, nitrated, aliphatic, aromatic, and polynuclear compounds.
- Incineration of nitrated compounds such as trinitrotoluene (TNT) may generate large quantities of nitrous oxides.

Effectiveness on Inorganics

- Thermal destruction is not an effective technology for treating soils contaminated with high concentrations of some metals.
- High concentrations of volatile metal compounds (lead) present a significant emissions problem, which cannot be effectively contained by conventional scrubbers or electrostatic precipitators due to the small particle size of metal-containing particulates.
- Non-volatile metals (copper) tend to remain in the soil when exposed to thermal destruction; however, they may slag and foul the equipment

Dechlorination (See Figure 3)

Principle of Operation

- Dechlorination is a destruction process that uses a chemical reaction to replace chlorine atoms in the chlorinated aromatic molecules with an ether or hydroxyl group. This reaction converts the more toxic compounds into less toxic, more vater-soluble products. The transformation of contaminants within the soil produces compounds that are more readily removed from the soil. An evaluation of the end products is necessary to determine whether further treatment is required.

Effectiveness on Organics

- PCBs, dioxins, furans, and other aromatic compounds (such as pentachlorophenol) have been dechlorinated to approximately 80% removal, vith more recent data indicating that removal efficiencies may approach 99.9%.
- Other limited laboratory data suggest potential applicability to other halogenated compounds including straight-chain aliphatics (such as 1,2-dichloroethane). The removal indicated by the data may be due in part to volatilization.
- Although no data vere available for halogenated cyclic aliphatics (such as dieldrin), it is expected that dechlorination vill be effective on these compounds as vell.
- When non-halogenated compounds are subjected to this process, volatilization may occur.

Effectiveness on Inorganics

- Dechlorination is not effective on metals, and high concentrations of reactive metals (such as aluminum), under very alkaline conditions, hinder the dechlorination process.

Bioremediation (See Figure 4)

Principle of Operation

- Bioremediation is a destruction process that uses soil microorganisms including bacteria, fungi, and yeasts to chemically degrade organic contaminants.

Effectiveness on Organics

- Bioremediation appears to successfully treat many halogenated aliphatic compounds (1,1-dichloroethane), non-halogenated aromatics (benzene), heterocyclics (pyridine), and other polar compounds (phenol) with removal efficiencies in excess of 99%; however, the high removal implied by the available data may be a result of volatilization in addition to bioremediation.
- More complex halogenated (4-4'DDT), nitrated (triazine), and polynuclear aromatic (phenanthrene) compounds exhibited lower removal efficiencies, ranging from approximately 50% to 87%.
- Poly-halogenated compounds may be toxic to many microorganisms.

Effectiveness on Inorganics

- Bioremediation is not effective on metals.
- Metal salts may be inhibitory or toxic to many microorganisms.

Low Temperature Thermal Desorption (See Figure 5)

Principle of Operation

- Low temperature thermal desorption is a physical transfer process that uses air, heat, and/or mechanical agitation to volatilize contaminants into a gas stream, where the contaminants are then subjected to further treatment. The degree of volatility of the compound rather than the type of substituted group is the limiting factor in this process.

Effectiveness on Organics

- Removal efficiencies have been demonstrated by these units at bench, pilot, and full scales, ranging from approximately 65% for polynuclear aromatics (naphthalene), to 82% for other polar organics (acetone) and 99% for non-polar halogenated aromatics (chlorobenzene).

Effectiveness on Inorganics

- Low temperature thermal desorption is not effective on metals.
- Only mercury has the potential to be volatilized at the operating temperatures of this technology.

Chemical Extraction and Soil Washing (See Figure 6)

Principle of Operation

- Chemical extraction and soil washing are physical transfer processes in which contaminants are disassociated from the soil, becoming dissolved or suspended in a liquid solvent. This liquid waste stream then undergoes subsequent treatment to remove the contaminants and the solvent is recycled, if possible.

- Soil washing uses water as the solvent to separate the clay particles, which contain the majority of the contaminants, from the sand fraction.
- Chemical extraction processes use a solvent which separates the contaminants from the soil particles and dissolves the contaminant i the solvent.

Effectiveness on Organics

- The majority of the available soil washing data on organic compounds indicates removal efficiencies of approximately 90% for polar non-halogenated organics (phenol) to 99% for halogenated aromatics (chlorobenzene), with lover values of approximately 71% for PCBs to 82% for polynuclear aromatics (anthracene).
- The reported effectiveness for these compounds could be due in part to volatilization for compounds with higher vapor pressures (such as acetone).
- This process is least effective for some of the less volatile and less water soluble aromatic compounds.

Effectiveness on Inorganics

- The chemical extraction process, with optimized solvent selection, has demonstrated removal efficiencies of 85% to 89% for volatile metals (lead) and non-volatile metals (copper), respectively.

Immobilization (See Figure 7)

Principle of Operation

- Immobilization processes reduce the mobility of contaminants by stabilizing them within the soil matrix, without causing significant contaminant destruction or transfer to another medium.
- Volatile organics will often volatilize during treatment, therefore a effort should be made to drive off these compounds in conjunction wit an emission control system.

Effectiveness on Organics

- Reductions in mobility for organics range from 61% for halogenated phenols (pentachlorophenol) to 99% for polynuclear aromatic compounds (anthracene).
- Immobilization is also effective (84% reduction) on halogenated aliphatics (1,2-dichloroethane).
- Some organic mobility reductions of more volatile compounds may actually be removals as a direct result of volatilization during the exothermic mixing process and throughout the curing period.
- The immobilization of organics is currently under investigation, including an evaluation of the applicability of analytical protocols (EP, TCLP, total analysis) for predicting long-term effectiveness of immobilization of organics. The preliminary available data indicate that significant bonding takes place betveen some organic contaminants and certain organophilic species in the binding matrix; hovever, immobilization may not effectively stabilize some organic compounds, such as volatile organics.

Effectiveness on Inorganics

- Immobilization can accomplish reductions in mobility of 81% for non-volatile metals (nickel) to 93% for volatile metals (lead).

FIGURE 1: PREDICTED TREATMENT EFFECTIVENESS FOR C AMINATED SOIL

TECHNOLOGY / TREATABILITY GROUP	THERMAL DESTRUCTION	DECHLORINATION	BIOREMEDIATION [4]	LOW TEMPERATURE THERMAL DESORPTION	CHEMICAL EXTRACTION AND SOIL WASHING	IMMOBILIZATION [4]
NON-POLAR HALOGENATED AROMATICS (W01)	●	◒	◒ [3]	● ◒	◒	◒
PCBs, HALOGENATED DIOXINS, FURANS, AND THEIR PRECURSORS (W02)	●	◒	◒ [3]	○ [1]	◒	◒ [1]
HALOGENATED PHENOLS, CRESOLS, AMINES, THIOLS, AND OTHER POLAR AROMATICS (W03)	● [3]	◒	◒	◒	◒	◒ [3]
HALOGENATED ALIPHATIC COMPOUNDS (W04)	●	◒ [2]	◒ [2]	●	◒	◒ [2]
HALOGENATED CYCLIC ALIPHATICS, ETHERS, ESTERS, AND KETONES (W05)	●	◒ [1]	◒ [1]	○ [1]	◒ [1]	◒ [1]
NITRATED COMPOUNDS (W06)	●	○ [1]	◒	○ [1]	◒	◒ [1]
HETEROCYCLICS AND SIMPLE NON-HALOGENATED AROMATICS (W07)	●	○ [2]	◒ [2]	●	◒	◒ [2]
POLYNUCLEAR AROMATICS (W08)	●	○ [2]	◒	○	◒	◒
OTHER POLAR NON HALOGENATED ORGANIC COMPOUNDS (W09)	●	○ [2]	◒ [2]	◒	◒	◒ [2]
NON-VOLATILE METALS (W10)	○ [1]	○ [1]	○ X [1]	○ [1]	◒	● [3]
VOLATILE METALS (W11)	X [1]	○ [1]	○ X [1]	○ [1]	◒	●

11/29/89

● Demonstrated Effectiveness

◒ Potential Effectiveness

○ No Expected Effectiveness (no expected interference to process)

X No Expected Effectiveness (potential adverse effects to environment or process)

1 Data were not available for the treatability group. Conclusions are drawn from data for compounds with similar physical and chemical characteristics

2 High removal efficiencies implied by the data may be due to volatilization or soil washing

3 The predicted effectiveness may be different than the data imply, due to limitations in the test conditions.

4 These technologies may have limited applicability to high levels of organics

FIGURE 2: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY
THERMAL DESTRUCTION

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (ppm) AND % REMOVALS	GENERAL OBSERVATIONS
NON POLAR HALOGENATED AROMATICS (W01)	32 PAIRS 6 % BENCH 94 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 590 EFFLUENT 0.024 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology works very well at optimum operating conditions on a variety of initial concentrations. • Brominated compounds will inhibit flame propagation. • High levels of acid gases produced in the presence of oxygen will attack the refractory walls and exposed metal surfaces.
PCBs, HALOGENATED DIOXINS, FURANS, AND THEIR PRECURSORS (W02)	161 PAIRS 3 % BENCH 83 % PILOT 14 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 1,100 EFFLUENT 0.005 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology works very well at optimum operating conditions on a variety of initial concentrations. • High levels of acid gases produced in the presence of oxygen will attack the refractory walls and exposed metal surfaces.
HALOGENATED PHENOLS, CRESOLS, AMINES, THIOLS, AND OTHER POLAR AROMATICS (W03)	81 PAIRS 92 % BENCH 2 % PILOT 6 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 550 EFFLUENT 0.70 AVERAGE REMOVAL EFFICIENCY 98 %	• This technology works well at optimum operating conditions on a variety of initial concentrations. • Oxides of nitrogen and sulfur can create potential serious cross media impacts if not removed from gas emissions. • High concentrations of acid gases produced in the presence of oxygen will attack the refractory walls and exposed metal surfaces.
HALOGENATED ALIPHATIC COMPOUNDS (W04)	92 PAIRS 21 % BENCH 79 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 41 EFFLUENT 0.016 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology works well at optimum operating conditions on a variety of initial concentrations. • If this is the only treatability group present, low temperature thermal desorption may be more cost effective. • High levels of acid gases produced in the presence of oxygen will attack the refractory walls and exposed metal surfaces.
HALOGENATED CYCLIC ALIPHATICS, ETHERS, ESTERS, AND KETONES (W05)	118 PAIRS 67 % BENCH 33 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 790 EFFLUENT 17 AVERAGE REMOVAL EFFICIENCY 99 %	• This technology works well at optimum operating conditions on a variety of initial concentrations.
NITRATED COMPOUNDS (W06)	142 PAIRS 73 % BENCH 27 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 99,000 EFFLUENT 200 AVERAGE REMOVAL EFFICIENCY 99 %	• This technology works well at optimum operating conditions on a variety of initial concentrations. • High amounts of nitrous gases may be released into the atmosphere if not controlled by a nitrous oxide burner.

FIGURE 2: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY
THERMAL DESTRUCTION (CONT.)

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (PPM) AND % REMOVALS	GENERAL OBSERVATIONS
HETEROCYCLICS AND SIMPLE NON HALOGENATED AROMATICS (W07)	42 PAIRS 7 % BENCH 88 % PILOT 5 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 740 EFFLUENT 0.077 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology works very well at optimum operating conditions on a variety of initial concentrations. • Low temperature thermal desorption may be more cost effective.
POLYNUCLEAR AROMATICS (W08)	24 PAIRS 33 % BENCH 58 % PILOT 8 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 1,000 EFFLUENT 0.32 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology works very well at optimum operating conditions on a variety of initial concentrations.
OTHER POLAR NON HALOGENATED ORGANIC COMPOUNDS (W09)	34 PAIRS 35 % BENCH 65 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 600 EFFLUENT 0.28 AVERAGE REMOVAL EFFICIENCY 99 %	• This technology works well at optimum operating conditions on a variety of initial concentrations.
NON VOLATILE METALS (W10)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• The physical and/or chemical characteristics of the constituents of this treatability group indicate that this technology would not be effective. • Pyrolysis and infrared thermal destruction of wastes with metal concentrations over 500 ppm may possibly reduce the mobility of these metals by binding the metals into the solid residue.
VOLATILE METALS (W11)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• This technology is not recommended if the waste contains high concentrations of volatile metals, due to potential volatilization of these metals with subsequent cross media impacts. • Pyrolysis and infrared thermal destruction may reduce the mobility of these metals by binding the metals into the solid residue.

FIGURE 3: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY
DECHLORINATION

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (ppm) AND % REMOVALS	GENERAL OBSERVATIONS
NON POLAR HALOGENATED AROMATICS (W01)	8 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 190 EFFLUENT 16 AVERAGE REMOVAL EFFICIENCY 98 %	• Data were for chlorobenzene only. These data suggest that this technology is potentially effective in certain situations
PCBs, HALOGENATED DIOXINS, FURANS, AND THEIR PRECURSORS (W02)	31 PAIRS 97 % BENCH 3 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 180 EFFLUENT 16 AVERAGE REMOVAL EFFICIENCY 91 %	• This technology is potentially effective, especially for sandy soils. • Data on sludges show better removal due to more uniform distribution of contaminants and better reagent contact. • Lower initial concentrations give lower removal efficiencies. • Moisture content over 4 to 7% deactivates the NaPEG reagent. • Particle size and soil matrix affect reagent penetration and process effectiveness. • Recent data indicate that greater than 99% of PCBs and furans can be destroyed (des Rosiers, 1988)
HALOGENATED PHENOLS, CRESOLS, AMINES, THIOLS, AND OTHER POLAR AROMATICS (W03)	8 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 98 EFFLUENT 2.4 AVERAGE REMOVAL EFFICIENCY 96 %	• Data were for pentachlorophenol only These data suggest that this technology is potentially effective in certain situations. • Recent data indicate that greater than 99% of contaminants can be destroyed (des Rosiers, 1988).
HALOGENATED ALIPHATIC COMPOUNDS (W04)	16 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 330 EFFLUENT 0.44 AVERAGE REMOVAL EFFICIENCY 99 %	• These data suggest that this technology is potentially effective in certain situations. • Some halogenated aliphatics react with the APEG reagents to form explosive compounds, especially in the presence of heavy metals. The potential for this to occur should be evaluated in the laboratory before dechlorination treatment is selected. • The high removal efficiency may be the result of volatilization or the APEG process acting as a soil washing process.
HALOGENATED CYCLIC ALIPHATICS, ETHERS, ESTERS, AND KETONES (W05)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• Data were not available for this treatability group. Data for compounds with similar physical and chemical characteristics suggest that this technology is potentially effective in certain situations. Treatability studies will be needed to confirm the technology's effectiveness.
NITRATED COMPOUNDS (W06)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• Data were not available available for this treatability group. • The physical and/or chemical characteristics of the constituents of this treatability group indicate that this technology would not be effective.

FIGURE 3: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY
DECHLORINATION (CONT.)

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (ppm) AND % REMOVALS	GENERAL OBSERVATIONS
HETEROCYCLICS AND SIMPLE NON HALOGENATED AROMATICS (W07)	24 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 2,200 EFFLUENT 23 AVERAGE REMOVAL EFFICIENCY 99 %	• The physical and/or chemical characteristics of the constituents of this treatability group suggest that this technology would not be effective. • The high removal efficiency may be the result of volatilization or the APEG process acting as a soil washing process.
POLYNUCLEAR AROMATICS (W08)	6 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 3,600 EFFLUENT 180 AVERAGE REMOVAL EFFICIENCY 91 %	• The physical and/or chemical characteristics of the constituents of this treatability group suggest that this technology would not be effective. • The high removal efficiency may be the result of volatilization or the APEG process acting as a soil washing process
OTHER POLAR NON HALOGENATED ORGANIC COMPOUNDS (W09)	16 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 1,700 EFFLUENT 30 AVERAGE REMOVAL EFFICIENCY 96 %	• The physical and/or chemical characteristics of the constituents of this treatability group suggest that this technology would not be effective. • The high removal efficiency may be the result of volatilization or the APEG process acting as a soil washing process.
NON VOLATILE METALS (W10)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• The physical and/or chemical characteristics of the constituents of this treatability group suggest that this technology would not be effective.
VOLATILE METALS (W11)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• The physical and/or chemical characteristics of the constituents of this treatability group suggest that this technology would not be effective.

FIGURE 4: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY
BIOREMEDIATION

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (ppm) AND % REMOVALS	GENERAL OBSERVATIONS
NON POLAR HALOGENATED AROMATICS (W01)	66 PAIRS 95 % BENCH 5 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 29 EFFLUENT 0 79 AVERAGE REMOVAL EFFICIENCY 53 %	• This technology is not effective for all contaminants in this class; however, there is potential for effectiveness for low initial concentrations with further development. • The presence of these contaminants at low concentrations is not expected to interfere with the treatment of applicable wastes. • The effectiveness of this technology may be different than the data imply, because the initial concentrations in these tests were so low.
PCBs, HALOGENATED DIOXINS, FURANS, AND THEIR PRECURSORS (W02)	1 PAIRS 0 % BENCH 100 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 2,000 EFFLUENT 0 12 AVERAGE REMOVAL EFFICIENCY 99 %	• The lone data pair is PCBs. • Ongoing research suggests that this technology may be potentially effective for this group.
HALOGENATED PHENOLS, CRESOLS, AMINES, THIOLS, AND OTHER POLAR AROMATICS (W03)	3 PAIRS 0 % BENCH 100 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 63 EFFLUENT 17 AVERAGE REMOVAL EFFICIENCY 74 %	• This technology is potentially effective for low initial concentrations. • Bioremediation requires uniformly mixed media with small particle sizes. • Toxic compounds such as cyanides, arsenic, heavy metals, and some organics adversely affect the treatment. • Preprocessing includes mixing and nutrient and organism addition. • Bioremediation is a slow process. • Bioremediation has low costs relative to other technologies.
HALOGENATED ALIPHATIC COMPOUNDS (W04)	27 PAIRS 0 % BENCH 100 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 23 EFFLUENT 0 027 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology is potentially effective for low initial concentrations. • Bioremediation requires uniformly mixed media with small particle sizes. • Toxic compounds such as cyanides, arsenic, heavy metals, and some organics adversely affect the treatment. • Preprocessing includes mixing and nutrient and organism addition. • Bioremediation is a slow process. • Bioremediation has low costs relative to other technologies. • Removal may actually represent volatilization during preprocessing and treatment.
HALOGENATED CYCLIC ALIPHATICS, ETHERS, ESTERS, AND KETONES (W05)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• Data were not available for this treatability group. Data for compounds with similar physical and chemical characteristics suggest that this technology may be potentially effective in certain situations with low initial concentrations.
NITRATED COMPOUNDS (W06)	22 PAIRS 0 % BENCH 100 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 13 000 EFFLUENT 1,400 AVERAGE REMOVAL EFFICIENCY 82 %	• This technology is potentially effective on these contaminants, especially at low concentrations. • Some of the available data for this treatability group were based on very high initial concentrations; however consideration should be given to the ability of the technology to treat high initial concentrations. • Bioremediation requires uniformly mixed media with small particle sizes. • Toxic compounds such as cyanides, arsenic, heavy metals, and some organics adversely affect the [illegible]ment. [illegible]ssing includes mixing and nutrient and organism addition. [illegible]diation is a slow process.

FIGURE 4: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY
BIOREMEDIATION (CONT.)

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (ppm) AND % REMOVALS	GENERAL OBSERVATIONS
HETEROCYCLICS AND SIMPLE NON HALOGENATED AROMATICS (W07)	64 PAIRS 0 % BENCH 100 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 220 EFFLUENT 0.025 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology is potentially effective for low initial concentrations. • Bioremediation requires uniformly mixed media with small particle sizes. • Toxic compounds such as cyanides, arsenic, heavy metals, and some organic compounds adversely affect treatment • Preprocessing includes mixing and nutrient and organism addition. • Bioremediation is a slow process • Bioremediation has low costs relative to other technologies. • Removal may actually represent volatilization during preprocessing and treatment.
POLYNUCLEAR AROMATICS (W08)	37 PAIRS 19 % BENCH 81 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 120 EFFLUENT 38 AVERAGE REMOVAL EFFICIENCY 87 %	• This technology is potentially effective for low initial concentrations. • Bioremediation requires uniformly mixed media with small particle sizes. • Toxic compounds such as cyanides, arsenic, heavy metals, and some organic compounds adversely affect treatment. • Preprocessing includes mixing and nutrient and organism addition. • Bioremediation is a slow process. • Bioremediation has low costs relative to other technologies.
OTHER POLAR NON HALOGENATED ORGANIC COMPOUNDS (W09)	22 PAIRS 0 % BENCH 100 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 64 EFFLUENT 0.32 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology is potentially effective for low initial concentrations. • Bioremediation requires uniformly mixed media with small particle sizes. • Toxic compounds such as cyanides, arsenic, heavy metals, and some organic compounds adversely affect treatment. • Preprocessing includes mixing and nutrient and organism addition. • Bioremediation is a slow process. • Bioremediation has low costs relative to other technologies. • Removal may actually represent volatilization during preprocessing and treatment.
NON-VOLATILE METALS (W10)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• High concentrations of heavy metals may adversely affect particular organisms. • The physical and/or chemical characteristics of the constituents of this treatability group suggest that the technology would not be effective.
VOLATILE METALS (W11)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• High concentrations of heavy metals may adversely affect particular organisms. • The physical and/or chemical characteristics of the constituents of this treatability group suggest that the technology would not be effective.

FIGURE 5: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY
LOW TEMPERATURE THERMAL DESORPTION

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (ppm) AND % REMOVALS	GENERAL OBSERVATIONS
NON-POLAR HALOGENATED AROMATICS (W01)	29 PAIRS 48 % BENCH 4 % PILOT 48 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 130 EFFLUENT 0.07 AVERAGE REMOVAL EFFICIENCY 99 %	• Although this technology was not expected to perform well on this treatability group, the data from studies which utilized higher operating temperatures and longer residence times indicate that many of the compounds in this group may be treated by this technology with potential effectiveness. • This technology is not recommended for the treatment of waste mixtures which contain high concentrations of metallic and/or organic forms of mercury, unless emissions are controlled. • This technology has demonstrated effectiveness on some of the more volatile contaminants in this group, and it is potentially effective on the remaining contaminants.
PCBs, HALOGENATED DIOXINS, FURANS, AND THEIR PRECURSORS (W02)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• No data were available • The physical and/or chemical characteristics of the constituents of this treatability group suggest that this technology would not be effective. • This technology is not recommended for the treatment of waste mixtures which contain high concentrations of metallic and/or organic forms of mercury, unless emissions are controlled.
HALOGENATED PHENOLS, CRESOLS, AMINES, THIOLS, AND OTHER POLAR AROMATICS (W03)	14 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 260 EFFLUENT 67 AVERAGE REMOVAL EFFICIENCY 72 %	• Although the data suggest that this technology is not as effective with this treatability group, the technology, if operated at higher temperatures and residence times, may successfully treat many of the compounds in this group. • This technology is not recommended for the treatment of waste mixtures which contain high concentrations of metallic and/or organic forms of mercury, unless emissions are controlled.
HALOGENATED ALIPHATIC COMPOUNDS (W04)	132 PAIRS 27 % BENCH 50 % PILOT 23 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 590 EFFLUENT 19 AVERAGE REMOVAL EFFICIENCY 94 %	• This technology works well on this treatability group. • Removal efficiencies are not as high with soils having extremely elevated concentrations. A longer residence time may remedy this situation. • This technology is not recommended for the treatment of waste mixtures which contain high concentrations of metallic and/or organic forms of mercury, unless emissions are controlled.
HALOGENATED CYCLIC ALIPHATICS, ETHERS, ESTERS, AND KETONES (W05)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• No data were available for this treatability group. • The physical and/or chemical characteristics of the constituents of this treatability group suggest that this technology would not be effective. • This technology is not recommended for the treatment of waste mixtures which contain high concentrations of metallic and/or organic forms of mercury, unless emissions are controlled.
NITRATED COMPOUNDS (W06)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• No data were available for this treatability group. • This technology is not recommended for the treatment of waste mixtures which contain high concentrations of metallic and/or organic forms of mercury, unless emissions are controlled.

FIGURE 5: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY
LOW TEMPERATURE THERMAL DESORPTION (CONT.)

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (ppm) AND % REMOVALS	GENERAL OBSERVATIONS
HETEROCYCLICS AND SIMPLE NON HALOGENATED AROMATICS (W07)	111 PAIRS 37 % BENCH 38 % PILOT 24 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 820 EFFLUENT 1.7 AVERAGE REMOVAL EFFICIENCY 98 %	• This technology works well on this treatability group. • This technology is not recommended for the treatment of waste mixtures which contain high concentrations of metallic and/or organic forms of mercury, unless emissions are controlled
POLYNUCLEAR AROMATICS (W08)	62 PAIRS 27 % BENCH 60 % PILOT 13 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 1,400 EFFLUENT 130 AVERAGE REMOVAL EFFICIENCY 65 %	• This technology is not generally effective as a treatment for this group, but individual compounds may be treated effectively at higher operating temperatures and longer residence times. • This technology is not recommended for the treatment of waste mixtures which contain high concentrations of metallic and/or organic forms of mercury, unless emissions are controlled.
OTHER POLAR NON HALOGENATED ORGANIC COMPOUNDS (W09)	34 PAIRS 82 % BENCH 6 % PILOT 12 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 1,800 EFFLUENT 170 AVERAGE REMOVAL EFFICIENCY 82 %	• This technology is potentially effective on some contaminants in this group. • This technology is not recommended for the treatment of waste mixtures which contain high concentrations of metallic and/or organic forms of mercury, unless emissions are controlled.
NON VOLATILE METALS (W10)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• The physical and/or chemical characteristics of the constituents of this treatability group indicate that this technology would not be effective. • This technology is not recommended for the treatment of waste mixtures which contain high concentrations of metallic and/or organic forms of mercury, unless emissions are controlled.
VOLATILE METALS (W11)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• The physical and/or chemical characteristics of the constituents of this treatability group indicate that this technology would not be effective. • This technology is not recommended for the treatment of waste mixtures which contain high concentrations of metallic and/or organic forms of mercury, unless emissions are controlled.

FIGURE 6: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY
CHEMICAL EXTRACTION AND SOIL WASHING

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (ppm) AND % REMOVALS	GENERAL OBSERVATIONS
NON-POLAR HALOGENATED AROMATICS (W01)	20 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 170 EFFLUENT 0.30 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology is potentially effective on these contaminants but all data are from bench scale. • Surfactants may adhere to the soil and reduce soil permeability. • Possible volatile emission losses may occur during treatment.
PCBs, HALOGENATED DIOXINS, FURANS, AND THEIR PRECURSORS (W02)	22 PAIRS 82 % BENCH 4 % PILOT 14 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 9,900 EFFLUENT 4,000 AVERAGE REMOVAL EFFICIENCY 71 %	• This technology is potentially effective on these contaminants with further development. • Some of the available data for this treatability group were based on very high initial concentrations; however consideration should be given to the ability of the technology to treat high initial concentrations. • The presence of oil in the matrix enhances removal. • The removal efficiency decreases as the percent of clays and clayey silts increases. • Surfactants may adhere to the soil and reduce soil permeability.
HALOGENATED PHENOLS, CRESOLS, AMINES, THIOLS, AND OTHER POLAR AROMATICS (W03)	20 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 97 EFFLUENT 18 AVERAGE REMOVAL EFFICIENCY 72 %	• Data were from pentachlorophenol only. • This technology is potentially effective on these contaminants, especially for treating sandy soils. • Surfactants may adhere to the soil and reduce soil permeability.
HALOGENATED ALIPHATIC COMPOUNDS (W04)	40 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 290 EFFLUENT 0.22 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology is potentially effective on these contaminants, but all data are from bench scale. • This technology may be more applicable to sandy soils. • Surfactants may adhere to the soil and reduce soil permeability. • Volatile emissions may occur during treatment.
HALOGENATED CYCLIC ALIPHATICS, ETHERS, ESTERS, AND KETONES (W05)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY 0 %	• Data were not available for this treatability group. Data for compounds with similar physical and chemical characteristics suggest that this technology is potentially effective in certain situations. • Surfactants may adhere to the soil and reduce soil permeability.
NITRATED COMPOUNDS (W06)	3 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 6,900 EFFLUENT 47 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology is potentially effective on these contaminants. However, data are limited and testing was conducted at bench scale.

FIGURE 6: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY
CHEMICAL EXTRACTION AND SOIL WASHING (CONT.)

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (ppm) AND % REMOVALS	GENERAL OBSERVATIONS
HETEROCYCLICS AND SIMPLE NON HALOGENATED AROMATICS (W07)	55 PAIRS 98 % BENCH 0 % PILOT 2 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 1,700 EFFLUENT 36 AVERAGE REMOVAL EFFICIENCY >99 %	• This technology is potentially effective on these contaminants but nearly all data are from bench scale. • Volatile emissions may occur during treatment • Surfactants may adhere to the soil and reduce soil permeability.
POLYNUCLEAR AROMATICS (W08)	24 PAIRS 71 % BENCH 0 % PILOT 29 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 1 600 EFFLUENT 380 AVERAGE REMOVAL EFFICIENCY 82 %	• This technology is potentially effective on these contaminants with further development. • Some of the available data for this treatability group were based on very high initial concentrations; however, consideration should be given to the ability of the technology to treat high initial concentrations. • Surfactants may adhere to the soil and reduce soil permeability.
OTHER POLAR NON HALOGENATED ORGANIC COMPOUNDS (W09)	58 PAIRS 95 % BENCH 0 % PILOT 5 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 70,000 EFFLUENT 15,000 AVERAGE REMOVAL EFFICIENCY 81 %	• This technology is potentially effective on these contaminants. • Some of the available data for this treatability group were based on very high initial concentrations; however, consideration should be given to the ability of the technology to treat high initial concentrations. • Treatment effectiveness should be evaluated on a case-by-case basis. • Surfactants may adhere to the soil and reduce soil permeability. • Volatile emissions may occur during treatment
NON VOLATILE METALS (W10)	34 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 34 EFFLUENT 11 AVERAGE REMOVAL EFFICIENCY* 69 %	• This technology is potentially effective on these contaminants. • Water and H_2SO_4 at a pH of 1.0 and a 3:1 molar ratio of EDTA at a pH of 12.0 can both achieve good levels of extraction. • Iron (1-2%) may cause solvent regeneration problems.
VOLATILE METALS (W11)	54 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 71 EFFLUENT 10 AVERAGE REMOVAL EFFICIENCY* 86 %	• This technology is potentially effective on these contaminants, especially for sandy soils • Silty and clayey soils are not as effectively treated. • Arsenic may be difficult to extract due to low solubility.

* Reduction in Mobility

FIGURE 7: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY IMMOBILIZATION

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (ppm) AND % REMOVALS*	GENERAL OBSERVATIONS
NON POLAR HALOGENATED AROMATICS (W01)	4 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 31 EFFLUENT 065 AVERAGE REMOVAL EFFICIENCY* 83 %	• Data were for chlorobenzene only. • These data suggest that this technology is potentially effective in certain situations, particularly where the initial concentration is low. • The treatment mechanism for the more volatile compounds may be volatilization as opposed to immobilization. Air pollution control systems may be necessary to minimize cross media impacts from these volatile emissions. • It is not recommended that this technology be selected if this is the only treatability group present.
PCBs, HALOGENATED DIOXINS, FURANS, AND THEIR PRECURSORS (W02)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY* 0 %	• Incomplete quantitative data were available to evaluate treatment effectiveness. These quantitative data and additional qualitative information suggest that this technology is potentially effective in certain situations, particularly where the initial concentration is low. • It is not recommended that this technology be selected if this is the only treatability group present.
HALOGENATED PHENOLS, CRESOLS, AMINES, THIOLS, AND OTHER POLAR AROMATICS (W03)	4 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 25 EFFLUENT 11 AVERAGE REMOVAL EFFICIENCY* 91 %	• Data were from pentachlorophenol only. These data suggest that this technology is potentially effective in certain situations, particularly where the initial concentration is low. • The effectiveness of this technology on these contaminants may be different than the data imply, due to limitations in the test conditions. • It is not recommended that this technology be selected if this is the only treatability group present.
HALOGENATED ALIPHATIC COMPOUNDS (W04)	0 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 11 EFFLUENT 024 AVERAGE REMOVAL EFFICIENCY* 98 %	• Though these data suggest that this technology is potentially effective in certain situations, particularly where the initial concentration is low. • The reductions in mobility may be due to volatilization of the volatile compounds during treatment. • Air pollution control systems may be necessary to minimize cross media impacts from these volatile emissions. • It is not recommended that this technology be selected if this is the only treatability group present.
HALOGENATED CYCLIC ALIPHATICS, ETHERS, ESTERS, AND KETONES (W05)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY* 0 %	• Data were not available for this treatability group. Data for compounds with similar physical and chemical characteristics suggest that this technology is potentially effective in certain situations, particularly where the initial concentration is low. • It is not recommended that this technology be selected if this is the only treatability group present.
NITRATED COMPOUNDS (W06)	0 PAIRS 0 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 0 EFFLUENT 0 AVERAGE REMOVAL EFFICIENCY* 0 %	• Data were not available for this treatability group. Data for compounds with similar physical and chemical characteristics suggest that this technology is potentially effective in certain situations, particularly where the initial concentrations are low.

* Rec[illegible]ay

FIGURE 7: FINAL CONCLUSIONS BY TREATMENT TECHNOLOGY IMMOBILIZATION (CONT.)

TREATABILITY GROUP	NUMBER AND SCALE OF AVAILABLE DATA	AVERAGE CONCENTRATIONS (ppm) AND % REMOVALS*	GENERAL OBSERVATIONS
HETEROCYCLICS AND SIMPLE NON HALOGENATED AROMATICS (W07)	12 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 23 EFFLUENT 6 8 AVERAGE REMOVAL EFFICIENCY* 73 %	• Though these data suggest that this technology is potentially effective in certain situations, particularly where the initial concentration is low, the reductions in mobility may be due to the volatilization of volatile organic compounds during treatment. • Air pollution control systems may be necessary to minimize cross media impacts from these volatile emissions. • It is not recommended that this technology be selected if this is the only treatability group present.
POLYNUCLEAR AROMATICS (W08)	2 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 3 0 EFFLUENT 0 03 AVERAGE REMOVAL EFFICIENCY* 99 %	• These limited data suggest that this technology is potentially effective in certain situations, particularly where the initial concentration is low
OTHER POLAR NON HALOGENATED ORGANIC COMPOUNDS (W09)	7 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 20 EFFLUENT 6 8 AVERAGE REMOVAL EFFICIENCY* 77 %	• These limited data suggest that this technology is potentially effective in certain situations, particularly where the initial concentration is low. • The treatment mechanism for the more volatile compounds may be volatilization as opposed to immobilization Air pollution control systems may be necessary to minimize cross media impacts from these volatile emissions. • It is not recommended that this technology be selected if this is the only treatability group present
NON VOLATILE METALS (W10)	24 PAIRS 67 % BENCH 33 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 28 EFFLUENT 0 34 AVERAGE REMOVAL EFFICIENCY* 81 %	• This technology works well on these contaminants. • High levels of oil and grease may interfere with the process. • Soluble salts of Mg, Sb, Zn, Cu, and Pb may interfere with the pozzolan reaction. • High levels of sulfates may interfere with the process. • Pretreatment may be required to increase pH
VOLATILE METALS (W11)	33 PAIRS 100 % BENCH 0 % PILOT 0 % FULL	AVERAGE CONCENTRATIONS (ppm) INFLUENT 610 EFFLUENT 1 4 AVERAGE REMOVAL EFFICIENCY* 93 %	• Based on the pilot scale data this technology works well on these contaminants. Some bench scale data was not representative of optimum conditions. • High levels of oil and grease may interfere with the process. • Soluble salts of Mg, Sb, Zn, Cu, and Pb may interfere with the pozzolan reaction. • High levels of sulfates may interfere with the process. • Pretreatment may be required to increase pH.

* Reduction in Mobility

Draft Guidance on Differentiating Alternative Technologies for the Removal Program

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 30 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Draft Guidance on Differentiating Alternative Technologies for the Removal Program (9380.2-05)

FROM: Timothy Fields Jr., Director
Emergency Response Division

TO: Oil and Hazardous Materials Coordinators
EPA Regions I - X

Superfund Branch Chiefs
EPA Regions I - X

Captain Robert L. Storch Jr., Chief
Marine Environmental Response Division, USCG

The attached document provides draft guidance to removal field personnel to differentiate among alternative technologies, identifying them as available, innovative, or emerging.

The guidance describes criteria used for determining the developmental status of a particular technology. Among the topics addressed are: definitions of alternative technology and the terms - available, innovative, and emerging; identification of Alternative Technologies; and a Summary of Alternative Technology Contracts Procurement. It is expected that this guidance will become part of the forthcoming Alternative Technology Guidance.

Please review the document and provide comments by October 25, 1987, to Elizabeth Zeller of my staff. If you have any questions, Elizabeth may be reached at, FTS 382-2190.

Thank you for your attention to this request.

Attachment

cc: Russ Weyer, HSCD
Art Weissman, PAS
Lee Tyner, OGC
Joe Freedman, OGC
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Frank Biros, OWPE
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United States Environmental Protection Agency
Washington, DC 20460

EPA OSWER Directive Initiation Request

1 Directive Number: 9380.2-05

2. Originator Information

Name of Contact Person	Mail Code	Office	Telephone Number
Elizabeth Zeller	WH-548/B	OERR/ERD	382-2190

3. Title
Guidance on Differentiating Alternative Technologies

4. Summary of Directive (include brief statement of purpose) The purpose of this document is to provide removal program field personnel with guidance on identifying alternative technologies as either available, innovative, or emerging. This document presents general criteria based on developmental status. Use of the classification criteria will assist field personnel in technology selection and procurement. In addition, this document will direct field personnel on how to obtain the necessary concurrences and approvals for the use of an alternative technology.

5. Keywords
Superfund, CERCLA, SARA, Alternative Technology

6a. Does this Directive Supersede Previous Directive(s)? ☐ Yes ☒ No What directive (number, title)

b. Does it Supplement Previous Directive(s)? ☒ Yes ☐ No What Directive (number, title)
9380.2-1 Administrative Guidance for Removal Program Use of Alternatives to Land Disposal

7. Draft Level
☐ A — Signed by AA/DAA ☐ B — Signed by Office Director ☒ C — For Review & Comment ☐ In Development

This Request Meets OSWER Directives System Format

8. Signature of Lead Office Directives Coordinator — Date

9. Name and Title of Approving Official
Timothy Fields, Jr., Director/ERD — Date 9/30/87

OSWER DIRECTIVE OSWER DIRECTIVE OSWER DIRECTIVE

****DRAFT****
September 4, 1987

GUIDANCE ON DIFFERENTIATING ALTERNATIVE TECHNOLOGIES FOR THE REMOVAL PROGRAM

I. PURPOSE

The purpose of this document is to provide removal program field personnel with guidance on identifying alternative technologies as either available, innovative, or emerging. This document presents general criteria based on developmental status. Use of the classification criteria will assist field personnel in technology selection and procurement. In addition, this document will direct field personnel on how to obtain the necessary concurrences and approvals for the use of an alternative technology.

II. BACKGROUND

There is concern in the scientific community and the general public over the long-term reliability of containment technologies (e.g., landfills, containment lagoons) used as disposal options at Superfund removal sites. Because these and similar disposal options do not render the waste non-hazardous, they are not permanent cleanup solutions. In response to these concerns, the Superfund Amendments and Reauthorization Act of 1986 (SARA) explicitly addresses, promotes, and sponsors the use of alternative technologies to effect permanent cleanups.

An effort is under way by EPA to maximize the use of alternative technologies at Superfund removal sites through amendments to the National Contingency Plan (NCP); development of policies and documents such as the Alternative Technology Guidance, Land Disposal Restriction Guidance, and the Engineering Evaluation/Cost Analysis Guidance; compliance with the Resource Conservation and Recovery Act (RCRA) and the Toxic Substances Control Act (TSCA); and implementation of the Superfund Technology Transfer program. The alternative technology provisions in these policies and programs were developed to encourage permanent cleanups in a safe, cost-effective manner.

III. DEFINITIONS

The Superfund Amendments and Reauthorization Act of 1986 (SARA) defines an alternative technology as a "series of unit operations or any unit operation that permanently alters the composition of hazardous waste through chemical, biological, or physical means so as to significantly reduce toxicity, mobility, and/or volume of the hazardous waste or contaminated materials being treated." For the purpose of this document, alternative technologies are defined by their development status. The Superfund Innovative Technology Evaluation (SITE) Strategy and Program Plan identifies three levels of development:

(1) *Available Alternative Technology* - A technology, such as several forms of incineration, that is fully proven and in routine commercial or private use;

(2) *Innovative Alternative Technology* - Any fully developed technology for which cost or performance information is incomplete, thus hindering routine use at CERCLA hazardous waste sites. An innovative alternative technology requires full-scale field testing before it is considered proven and available for routine use; and

(3) *Emerging Alternative Technology* - An alternative technology in an early stage of development; research has not yet successfully passed laboratory- or pilot-scale testing.

IV. CRITERIA FOR DIFFERENTIATING ALTERNATIVE TECHNOLOGIES

The criteria for classifying a technology as ~~available~~ existing, innovative, or emerging are based on the developmental status (including performance evaluation of the process, i.e., types of tests performed and the results). The criteria listed in this section are subjective; all technologies may not meet all of the criteria in a particular category based on the performance evaluation. However, by incorporating good engineering foresight and past performance records (particularly from other CERCLA-funded sites), one should be able to decide which category is most appropriate for that technology. The number of uncertainties will ultimately be the deciding factor between available and innovative or innovative and emerging. Since emerging technologies are usually in the early stages of development, it will not be difficult to distinguish between available and emerging technologies. In general, any data available for emerging technologies are based on bench- or pilot-scale tests, whereas

performance and reliability records for available technologies at the full-scale stage are obtainable for review.

The OSC should be fully cognizant of the following information prior to determining the category of the alternative technology:

1. The types of tests required before full-scale implementation;
2. Modifications to the process or technology necessary before implementation; and
3. The performance record of the technology.

It should be noted that although a technology may be classified as available or innovative, some modification of standard or past operating configuration is usually required to achieve successful results. There will be a different set of concerns with each technology, depending on site conditions and the contaminant present. The attainability of the technology (e.g., in a particular Region or State) has no bearing on its classification as available, innovative, or emerging. The provision of various levels of cost data, however, may allow for the upscale of innovative and emerging technologies.

Generally, available technologies should meet all the criteria listed below; innovative technologies would meet most of the criteria, in whole or in part, while emerging technologies would fail to meet any of the criteria sufficiently. Application of the criteria is shown in Exhibit 1. Good engineering foresight and professional judgment in conjunction with the criteria will be required to make an effective determination of the appropriate category.

The criteria for differentiating alternative technologies are:

1) The technology has successfully passed bench-scale testing.

2) The technology has successfully passed pilot-scale testing.

3) The technology has accomplished full-scale waste treatment under site conditions which did not differ significantly from site conditions of previous applications.

4) The technology has been used successfully to treat the same concentration of contaminants under site conditions which did not differ significantly from site conditions for previous applications.

5) The technology is routinely used at CERCLA hazardous waste sites.

6) Operation and maintenance records are available for review prior to implementing the technology.

7) The technology is generally available in the commercial/industrial market.

8) The technology will produce emissions/effluents that are easy to manage from environmental, cost, and health standpoints.

9) The technology is a valid comparison to previous methods of disposal in terms of providing better treatment or destruction of hazardous waste.

10) Demonstration and performance data are available for review.

V. IDENTIFICATION OF ALTERNATIVE TECHNOLOGIES

Information on potential alternative technologies for removals may be obtained from various sources, such as: the Removal Alternative Technology List; ORD Publications Announcement and Technology Transfer Newsletter; ERT Technology Bulletins; the Superfund Regional Technology Transfer Contact; the Superfund Technology Transfer Program; the Superfund Innovative Technology Evaluation Program; various industry publications (trade journals); or discussions with OSCs.

Alternative Technology List

An initial compilation of known technologies developed by ORD is shown in Exhibit 2. The technologies are identified by their treatment process and development status, and were constructed by interpreting scientific data and information currently available. These tables are presented in draft form and will be replaced with a final version as soon as they become available.

Technologies are always evolving as development continues and improvements are made. Because the developmental status of a particular technology may change, the technology's original classification may also change. For example, technologies originally classified as emerging may continue to develop through pilot- and full-scale testing. If further tests are successful, the technology may be classified as innovative. It is important to note that although a technology may be classified as available for the treatment of a particular waste stream or media; it may, however, be classified as innovative for another waste stream since its performance for treating the latter may not be fully proven. As technology development and improvement occur, the information in Exhibit 2 will be updated and periodically distributed to all Regions.

VI. SUMMARY OF ALTERNATIVE TECHNOLOGY CONTRACTS PROCUREMENT

The approval, procurement, and use of an alternative technology is dependent upon the technology's development status. This section describes contract procurement procedures for available, innovative, and emerging technologies. Exhibit 3 summarizes the concurrence procedures for all of the technologies.

A. Available Technologies

Generally, the use of available technologies is supported by Headquarters and procurement/implementation is straightforward. The majority of removal actions involving available alternative technologies are conducted through cleanup contracts (ERCS, Regional, and Site-Specific). Non-competitive subcontracts, fully documented by the contractor to justify sole source procurement and to verify reasonable costs, may be used.

B. Innovative Technologies

To use innovative technologies, (or a technology for which the development status is uncertain), Regions must consult with ERD and obtain Headquarters concurrence. The Regions are required to send a memorandum to the Director of ERD, outlining the technology. The memorandum should contain as much relevant technical and site information as possible. Technical information necessary to fully review a technology may include, but is not limited to: performance evaluation of full-scale testing; results from past usage at CERCLA-funded removals (if applicable); bench- or pilot-scale test results specific to the site conditions and contaminants; and potential and/or known modifications

necessary before implementation. Copies of the memorandum should be forwarded to the Chief of the Environmental Response Team (ERT), the Procurement and Contracts Management Division (PCMD), the Regional Coordinator, and the ERCS Project Officer. The ERT will review and evaluate the technology before approval is given for its use. Reasonable costs must be established for the proposed innovative technology. When the cost of the technology exceeds $500,000, consent by PCMD will be required, and an audit of the vendor's proposal must be performed by the Office of the Inspector General.

C. Emerging Technology

It is important to note that ERD and PCMD must be consulted before deciding to use an emerging technology as an option. The Superfund program generally does not sponsor emerging technologies with the possible exception of demonstration projects and performance-based contracts. These contracts require specific cleanup and/or treatment achievements as a basis for payment (performance-based contracts may also be considered for available and innovative technologies.) Only where stated goals are met do contractors receive payment.

An engineering evaluation/cost analysis (EE/CA) is required for non-time-critical removal actions (actions which allow at least a 6-month planning period before on-site action must be initiated) regardless of the technology's status. Procedures for drafting and submitting such an analysis are described in the upcoming EE/CA Guidance for Non-Time-Critical Removal Actions.

Procurement and contracting considerations are detailed in the forthcoming Alternative Technology Guidance.

I. BIOLOGICAL TI :NT TECHNOLOGIES

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TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Activated Sludge	Soluble organics in dilute aqueous waste streams (< 1% suspended solids).	BOD < 11,000 ppm. Requires low concentrations of heavy metals, PCBs, pesticides, oil and grease. Output sludge contains heavy metals and refractory organics which require further treatment.	A	X	7,8,10
Aerated Lagoons	Industrial wastewater, organics with slow biodegradation potential, soluble organics in dilute aqueous waste streams.	Requires large area. Unsuitable for solids. Requires a temperate climate. Output sludge contains heavy metals and refractory organics which require further treatment.	A		7,8
Aerobic Treatment (sequential batch reactor, fluidized bed, fixed film fluidized bed with/without activated carbon, aerated biofilm reactor, membrane reactor)	Aqueous waste with low levels (BOD < 10,000 ppm) of nonhalogenated organics and certain halogenated organics (i.e., phenols, formaldehyde, PCP).	Requires consistent, stable operating conditions.	A,I	X	1,10,15
Anaerobic Treatment (fluidized bed, fixed film fluidized bed with/without activated carbon)	Aqueous slurry with low to moderate levels of non-chlorinated organic compounds containing less than 7% solids.	Requires consistent stable operating conditions. Unsuitable for oil and grease, aromatics and long chain hydrocarbons. Output sludge requires incineration	A,I	X	1,2,8,10

[1]PHASE = Phase of Development, A = Available, I = Innovative, E = Emerging [2]MOBILE = Transportable

I. BIOLOGICAL TI 'NT TECHNOLOGIES

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TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Composting	Aqueous sludge with less than 50% solids, non-chlorinated hydrocarbons, high organic wastes including oils, tars, and industrial processing sludges.	Requires nutrient supplementation. Output sludge contains heavy metals.	A	X	7,8
Enzyme Treatment	Soluble organics in dilute aqueous waste streams.	Requires stable influent concentration.	E		
Genetically Engineered Organisms:		Requires pretreatment removal of heavy metals, oil, grease and VOCs.			
- Mycorrhizal	Soil-entrained hazardous waste constituents.		E		2
- Organo-mercurial Detoxifying Bacteria	Organomercurial-contaminated water, soil, and secure burial sites.		E		2,12
- PCB Degraders	PCB-contaminated soils.		E		2
- Soil Detoxifying Microorganisms	Various organic compounds in soils.		E		2
- Yeast Strain	Halogenated organics.		E		5
- White Rot Fungus *(Phanerochaete Chrysosporium)*	Toxic or refractory halogenated organics in soil (i.e., 2,3,7,8-TCDD, DDT, mirex, lindane, hexachlorobenzene).		E		2,4,12

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I. BIOLOGICAL TR[illegible]NT TECHNOLOGIES

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TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Rotating Biologic Contactor	Biodegradable dilute aqueous organic waste including solvents and halogenated organics.	Limited to low concentrations of heavy metals and concentrated refractory organics. Unsuitable for sludges or solids.	A	X	8,10
Trickling Filter	Soluble organics in dilute aqueous waste streams with less than 1% suspended solids including solvents and halogenated organics.	BOD < 5000 ppm. Output sludge contains heavy metals and refractory organics which require further treatment.	A	X	8,10
Waste Stabilization Pond	Soluble organics in dilute aqueous waste streams with less than 0.1% solids.	Not known.	A		

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II. CHEMICAL TREATMENT TECHNOLOGIES

TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE[1]	MOBILE[2]	REFERENCE
Chlorinolysis	Concentrated liquid chlorinated organic waste streams with low contrations of sulfur and oxygen.	Unsuitable for solids and tars. Unsuitable for benzene and aromatics. Output carbon tetrachloride can be recovered.	I		8
Dehalogenation	Halogenated organics in soils and sludges that are partially dehydrated (i.e., PCBs, dioxins).	Requires heat and excess reagent.	I	X	1,2,4,5,10
Electrochemical Dehalogenation	Halogenated organics (i.e., PCBs).	Not known.	E		13
Electrolytic Oxidation	High concentrations cyanide (10%) and metals wastes.	Suitable for low solid content waste.	A		1,10
Hydrolysis	Solids, soils, sludges, slurries, or liquids contaminated with organic compounds.	Requires careful handling of strong acids and alkalines. Reaction is performed at high temperatures and pressures requiring close monitoring.	A	X	1,10
Ion Exchange	Aqueous organic or inorganic waste streams, principally metals.	Suitable for liquid waste only.	A	X	1,7,8,10
Lignin Adsorption	Aqueous organic or inorganic waste streams.	Not known.	E		2,5
Microwave Heating Process	Organic liquids or vapors.	Suitable for small quantities of highly toxic waste and material recovery.	E		5

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II. CHEMICAL TRF T TECHNOLOGIES

TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Neutralization	Corrosive liquid wastes both acids and bases.	Unsuitable for sludges and solids. Requires corrosion resistant equipment.	A	X	1,7,8,10
Oxidation (chlorination, ozonation, hydrogen peroxide, potassium permanganate, chlorine dioxide, hypochlorites)	Dilute aqueous waste (< 1% waste) containing organic/inorganic compounds.	Requires controlled reaction conditions. Suitable for liquids and sludges only.	A	X	1,7,8,10
Photooxidation using irradiated semiconductor oxides	Organics and inorganics present in leachates and industrial sludges.	Not known.	E		2,5
Polymerization	Organic compounds such as aromatics, aliphatics, and oxygenated monomers.	Application is limited to spills.	I		1,10
Precipitation	Aqueous organic and inorganic waste containing metals.	Requires optimization of the reaction pH for the specific mix of metals present. Output sludge requires further treatment. Cross-reactivity may occur for mixed-metals content waste. Unsuitable for sludges, tars, and slurries.	A	X	1,7,8,10

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II. CHEMICAL TRE..... / TECHNOLOGIES

TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Reduction (sulfur dioxide, sodium borohydride, sulfite salts, ruthenium tetraoxide)	Dilute aqueous waste stream containing inorganic compounds especially metals (<1% heavy metal concentration).	Applicable to inorganic waste only. Suitable for liquid waste only.	I	X	1,7,8,10
UV/Photolysis	Liquid waste containing dioxins.	Suitable for liquids only.	E		1,4,5,10,12
Ultrasonic Dechlorination	Halogenated organics.	Requires controlled temperature conditions.	E	X	14

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III. PHYSICAL TREATMENT TECH[illegible]IES (COMPONENT SEPARATION)

TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Air Flotation (dissolved or induced)	Liquid waste containing oils or light suspended solids.	Liquid effluent may require further treatment.	A	X	8
Belt Filter Press	Biological and industrial sludges.	Filter cake may require further treatment.	A	X	1,8
Centrifugation (bowl, basket, disk)	Organic/inorganic liquids, slurries, and sludges containing suspended or dissolved solids or liquids where one component is nonvolatile. For example, wastewater sludge, wastes containing immiscible liquids, or wastes containing three distinct phases.	Unsuitable for tars, solids, dry powders, or gases. Not applicable for small size or low density particles.	A	X	1,8,10
Chamber Pressure Filtration (pressure leaf, tube element, plate and frame, horizontal plate)	Wastewater sludges, or sludges with a flocculated or adhesive nature.	Dewatering technology. Unsuitable for sticky or gelatinous sludges.	A	X	7,8,10
Granular Media Filtration	Liquid waste containing suspended solids and/or oil.	Requires pretreatment fo suspended solids concentration < 100 mg/l. Requires frequent backwashing.	A	X	1,8,10
Gravity Separation (coagulation, flocculation, sedimentation)	Liquids containing settleable suspended solids, oil, grease.	Liquid effluent may require further treatment. Unsuitable for heavy slurries, sludges, or tars.	A	X	8

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III. PHYSICAL TREATMENT TECHNOLOGIES (COMPONENT SEPARATION)

TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
High Gradient Magnetic Separation	Magnetic or paramagnetic particles in slurry.	Requires low concentration of magnetic materials. Limited to a 15% maximum total solid content.	E	X	10
In situ Soil Extraction	Soils with low levels of organics or inorganics/metals contamination.	Unsuitable for dry or organic-rich soils.	E	X	1,2
Oil Separation	Immiscible oily liquids in water that form an emulsion.	Not known.	A	X	
Vacuum Filtration (fixed media, rotary drum)	Organic or inorganic chemical sludges, metals and cyanides bound up in hydroxide sludges.	Dewatering technology. Unsuitable for sticky or gelatinous sludges.	A	X	1,8,10

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III. PHYSICAL TREATMENT TECHNOLOGIES (PHASE SEPARATION)

TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Air Stripping	Aqueous and adsorbed organic and inorganic wastes with relatively high volatility and low water solubility such as chlorinated organics, aromatics, and ammonia.	Limited to VOC concentration < 100 ppm. Suspended solids may clog tower.	A	X	1,2,7,8,10
Artificial Freezing	Sludges and soils contaminated with organics or metals.	Not known.	I	X	2
Carbon Adsorption	Aqueous organic wastes (containing <1% total organics and < 50 ppm solids) with high molecular weight and boiling point, and low water solubility, polarity and ionization.	Unsuitable for metals.	A	X	1,7,8,10
Colloidal Gas Aphrons (CGAs) (enhances air stripping and biodegradation)	Soils contaminated with phenols, phthalate esters, aromatic hydrocarbons, aliphatic hydrocarbons, chlorinated hydrocarbons, amines and alcohols.	Hydraulic conductivity of the soil must be > 10^{-4} cm/sec.	E		2
Distillation	Liquid organic mixtures with low viscosity that can be separated due to molecular weight/ volatility differences.	Unsuitable for thick polymeric materials, slurries, sludges, or tars.	A	X	1,8,10

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III. PHYSICAL TREATMENT TE... ...GIES (PHASE SEPARATION)

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TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Electrokinetics	Soils contaminated with organic or inorganic waste.	Soil matrix must be relatively permeable and saturated.	I		2
Evaporation	Organic/inorganic liquid solvents contaminated with nonvolatile impurities (i.e., oil, grease, paint solids, polymeric resins).	Liquids must be volatile. Unsuitable for tars, solid, dry powders, or gases. Energy-intensive process	A	X	1,8,10
Freeze Crystallization	Dilute aqueous organic/inorganic waste solutions containing < 10% total dissolved solids.	Unsuitable for foamy, viscous or high solid content waste streams.	E		2
Mechanical Soil Aeration	Volatile organics in sludge and soil.	Effluent may require further treatment.	A	X	7
Metal Binding	Metal-contaminated aqueous waste streams, leachate or groundwater.	Limited to metal concentrations between 500-1000 ppm.	E		2
Resin Adsorption	Aqueous waste streams containing soluble organics particularly phenols and explosive materials.	Limited to low concentrations of organics (<8%) and suspended solids (<50 ppm).	A		8
Reverse Osmosis	Aqueous waste streams containing <400 ppm heavy metals, high molecular weight organics, and dissolved gases.	Unsuitable for oxidants. Requires controlled pH, low concentration of suspended solids, and no strong oxidants.	I	X	2,5,8

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III. PHYSICAL TREATMENT TE OGIES (PHASE SEPARATION)

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TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Solvent Extraction	Aqueous stream contaminated with single or multi-component dissolved organic wastes. Sludge contaminated with oil, toxic organics, and heavy metals.	Extracting solvent must be immiscible in the liquid and differ in density so gravity separation is possible. Suitable for sludges containing < 20 wt % oil/organics and < 20 wt % solids.	I, A	X	8,10,12,15
Steam Stripping	Aqueous solutions of volatile orgnics.	Effluent may require further treatment. Suitable for waste streams with low metal concentration.	A	X	1,2,7,8,10
Supercritical Extraction	Sludges, solids, or liquids contaminated with organics.	Effluent may require further treatment.	E	X	2,10,15
Ultrafiltration	Removes oils, metals and proteins from aqueous solutions with dissolved organics, emulsions, and colloidal particles.	Limited to low concentrations of suspended soils.	A	X	8

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IV. STABILIZATION/SOLIDIFICATION/ENCAPSULATION TREATMENT TECHNOLOGIES

TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Cement-based Fixation	Treated sludges and soils containing metal cations, radioactive wastes, and solid organics (i.e., plastics, resins, tars).	Long term stability/ leachability is unknown. Lignite, silt or clay increase setting time. Dissolved sulfate salts, borates, and arsenates must be limited.	A	X	1,6,10,15
Macro-Encapsulation, Overpacking, Thermoplastic and Thermoset-ting Techniques	Chemically or mechanically stabilized organic, inorganic, and radioactive wastes.	Encapsulating matrix must be campatible with waste. Long term leach-ability unknown, there-fore, waste storage must be considered. Requires specialized equipment.	A	X	1,6,10
Pozzolanic-based Fixation (flyash, lime-based)	Treated sludges and soils containing heavy metals waste oils, solvents, and low level radioactive waste.	Borates, sulfates, and carbohydrates interfere with the process. Long term stability/ leachability is unknown.	A	X	1,6,10
Sorptive Clays (treated, chemically modified).	Halogenated organic compounds and heavy metals.	Long term leaching is a problem, therefore, waste storage must be considered.	I	X	2,5,6
Vitrification	Soils contaminated with organic, inorganic, and radioactive wastes.	Limited to soils with high silica content.	A/I	X	1,2,4,10

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V. THERMAL TRE T TECHNOLOGIES

TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Electric Reactor	Soils contaminated with solids and liquid organics and inorganics.	Contaminated soil must be finely divided and dry.	I	X	1,2,4,10,11, 15
Electric Pyrolysis	Viscous liquids, sludges, solids, high ash materials, salts and metals and halogenated waste.	Requires homogeneous waste input. Metals and salts in the residue can be leachable.	I	X	1,10,15
Fixed Hearth	Bulky solids, liquids and sludges.	Particle size must be large enough not to fall through grate.	A		8
Fluidized Bed	Organic solids, liquids, and sludges.	Requires low water and inert solid content.	A	X	1,2,4,8,10,12,15
Industrial Boiler	Granulated solids, liquids, and sludges.	Requires low chlorine and sulfur content. Ash content clogs system. Particle size.	A		1,8,10
Industrial Kilns	Spent pot lining, nonhalogenated oils and PCB-contaminated liquids and sludge.	Chlorine and sulfur content must be limited. Particle size.	A		1,8,10,12
Infrared Incineration	Soils, solids, and sludges contaminated with chlorinated organic compounds (i.e., PCBs, dioxins, explosives).	Primarily for solid organic waste. Heavy metals are not fixed in ash.	A	X	1,4,10,15

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V. THERMAL TREAT TECHNOLOGIES

TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFERENCE
Liquid Injection	Pumpable liquid organic waste.	High inorganic content and heavy metal content must be limited. Chlorinated solvents cause accelerated corrosion rates	A	X	1,5,8,10,12
Microwave Plasma	PCBs	Not known.	I		
Molten Glass	Organic solids, liquids, gases, sludges (i.e., (i.e., plastics, PCBs, asphalt, pesticides).	Sodium sulfates must be limited to <1% content. Inappropriate for soils and high ash waste.	I		1,2,10,11
Molten Salt	Low ash, low water content liquid or solid waste.	Corrosion problems. Requires frequent bed replacement.	I	X	1,7,10
Multiple Hearth	Granulated solids, sludges, tar, liquid, and and gaseous combustible waste.	Water, salt and metal content must be limited. Particle size must be small enough to pass through injector nozzles. Not recommended for hazardous wastes.	A		1,7,8,10,12
Plasma Systems	Liquid organic wastes (i.e., pesticides, dioxins, PCBs, halogenated organics).	Liquids only.	I	X	1,2,7,10,15
Pure Oxygen Burner	Liquid wastes which require high temperatures for destruction or have low heating values.	Requires specially engineered nozzles to atomize the liquid waste.	I	X	15

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V. THERMAL TREA[T] TECHNOLOGIES

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TECHNOLOGY	APPLICABLE CONTAMINANTS	QUALIFYING FACTORS	PHASE [1]	MOBILE [2]	REFEREN
Radio Frequency Thermal Heating	Volatile, low boiling point, or easily decomposed organic compounds in soil.	Not known.	I	X	1,10
Rotary Kiln	Solid, liquid, or gaseous organic waste.	Containerized wastes are difficult to handle. High inorganic salt or heavy metal content wastes require special consideration. Fine particulate matter must be limited.	A	X	1,2,4,7,8,10, 12,15
Supercritical Water Oxidation	Aqueous organic solution/slurry or mixed organic/inorganic waste.	Not known.	I	X	1,4,10,11,12
Wet Air Oxidation	Aqueous waste streams (<5%) with dissolved or suspended volatile organic substances.	Unsuitable for solids, viscous liquids, or highly halogenated organic compounds. Not economical for dilute or concentrated waste.	A	X	1,7,10,11

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Superfund Innovative Technology Evaluation (SITE) Program Requirements

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

APR 22 1988

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Superfund Innovative Technology Evaluation (SITE) Program Requirements

FROM: J. Winston Porter
Assistant Administrator

TO: Addressees

PURPOSE

The purpose of this memorandum is to describe the regulatory requirements and procedures for implementing treatment technology demonstration projects in the SITE program.

BACKGROUND

The SITE program was established under section 209(b) of the Superfund Amendments and Reauthorization Act (SARA) (section 311(b) of CERCLA, as amended) to evaluate technologies for the treatment of hazardous waste. The purpose of the program is to expedite the development and commercialization of technologies to fulfill the cleanup requirements under section 121 of SARA. This is primarily accomplished by conducting technology demonstrations. These demonstrations provide performance, cost and reliability data so that potential future users have sufficient information to make sound judgements as to the applicability of the technology for a specific site or to compare it to other alternatives. Demonstrations will take place under conditions that either duplicate or closely simulate actual wastes and conditions found at Superfund sites. The demonstrations will simulate a commercial scale application and will be of sufficient size to generate data applicable to full-scale operation. The results of these demonstrations will be broadly applicable to all hazardous waste cleanup efforts.

The program is focused on conducting technology evaluations as partnerships between EPA and developers. After acceptance into the program, the technology developers are responsible for providing and operating their equipment, while the Agency is responsible for monitoring and evaluating performance. New technologies are accepted into the program based on responses to a Request for Proposal (RFP), which is distributed annually.

Once a developer is accepted, a Superfund waste is chosen for treatment demonstration based on site nominations provided by the Regions. At the present time, there are 20 developers participating in the program with projects at various stages of completion. Several field demonstrations are taking place for the first group of technologies; Regions are considering Superfund site nominations for the second group; and a third RFP will be distributed in January.

In the course of implementing these projects, several issues have arisen concerning the relationship to Superfund and RCRA requirements. Specifically, issues concerning permitting, ARARs (applicable or relevant and appropriate requirements), community relations, and cost recovery are addressed below.

DISCUSSION

Section 311 of CERCLA authorizes EPA to carry out the SITE program and sets forth detailed standards governing the program. Projects taken under the SITE program are not remedial actions and are not governed by the provisions of section 121 of CERCLA. Rather, section 311(b)(4) requires that SITE projects be carried out:

> under such terms and conditions as the Administrator shall require to assure the protection of human health and the environment and to assure adequate control by the Administrator of the research, testing, evaluation, development, and demonstration activities at the site.

In addition, section 311(b)(7) provides that in selecting technologies to be demonstrated, EPA "shall, consistent with the protection of human health and the environment, consider..." several enumerated criteria.

EPA believes that section 311 gives the Agency authority to determine what is necessary to protect human health and the environment, and that SITE program activities are not subject to environmental permitting requirements under other Federal and State laws. However, in order to assure protection of human health and the environment, SITE demonstration projects taking place at Superfund sites should comply with the substantive requirements of all applicable or relevant and appropriate State and Federal environmental laws, except where a waiver similar to one of those provided in section 121(d)(4) is appropriate. For the same reason, off-site demonstration projects should be limited to facilities having all appropriate State and Federal permits.

Occasionally, it will be necessary to conduct laboratory bench-scale treatability tests prior to the actual technology demonstration. Bench-scale tests are primarily required to assess the effectiveness of and establish operating parameters for biological and solidification technologies. In order to assure protection of human health and the environment, EPA will prefer to use permitted facilities to conduct bench-scale treatability tests. However, if this is not practicable, the tests may be performed at non-permitted off-site facilities. It is anticipated that unpermitted facilities would only be used in a limited number of circumstances. Any

usee of off-site facilities should be restricted to wastes in limited quantities necessary to perform the tests (e.g., 50 kg). Laboratories conducting treatability tests should be required to submit a test plan and to have a health and safety plan. No public comment period is necessary for the small-scale laboratory testing. Unused samples, treated residues, and by-products should be returned to the original site or disposed of at permitted facilities. Manifests should be used for shipment of waste to Subtitle C facilities. However, shipments from a Superfund site to a laboratory for study and then back to the Superfund site need not be manifested. Materials should be transported in accordance with relevant DOT or postal service regulations and all shipping receipts should be kept in the project files. In addition, sample handling requirements in 40 CFR 261.4(d) should be met.

With respect to community relations, CERCLA section 311(b)(5)(e) requires that the Agency give notice and opportunity for public comment on SITE demonstrations. The primary purpose of this provision is to solicit comments on the proposed matching of technologies with sites for the purpose of conducting field demonstrations. The SITE program will use the community relations procedures established for CERCLA remedial actions when carrying out demonstrations at Superfund sites. Off-site demonstrations should comply with relevant permit requirements, and the associated public comment process will satisfy the SITE program requirements.

Finally, since the SITE demonstrations are not part of the Superfund response action, the costs are not recoverable from responsible parties.

Attachment

Addressees:

Director, Office of Emergency & Remedial Response, Region II
Director, Hazardous Waste Management Division, Regions III & VI
Director, Air and Waste Management Division, Region II
Director, Waste Management Division, Regions I, IV, V, VII & VIII
Director, Toxics and Waste Management Division, Region IX
Director, Hazardous Waste Division, Region X
Director, Environmental Services Division, Region I-X

cc: Director, ORD/OEETD
Director, ORD/HWERL
Director, OERR
Regional SITE Coordinators

Factors to Consider When Selecting Incinerators as Alternative Technology for Superfund Cleanups

BACKGROUND PAPER

SUPERFUND INNOVATIVE TECHNOLOGY EVALUATION PROGRAM

INTRODUCTION

The Environmental Protection Agency's Office of Research and Development (ORD), joining with the Office of Solid Waste and Emergency Response (OSWER), has initiated the Superfund Innovative Technology Evaluation (SITE) Program. The SITE Program will help EPA find, test, and encourage the use of new ways to destroy, stabilize or otherwise treat hazardous wastes, rather than just burying them in the ground.

The overall goal of the SITE Program is to maximize the use of alternatives to land disposal and containment at Superfund sites. To accomplish this goal, the program will provide reliable cost and performance information on technologies that offer an alternative to land disposal. This information will be generated by conducting pilot-scale or full-scale demonstrations of alternative technologies at Superfund sites.

BACKGROUND

EPA's Superfund program is designed to clean up hazardous waste sites around the country. It has been underway for six years with action taken at over 450 Superfund sites to address long-term problems created by hazardous wastes. More than half of these sites have involved burying the hazardous wastes in specially prepared landfills -- a process called land disposal. While land disposal can be a good way to handle wastes, in some instances it does not provide a permanent solution to the problem. The wastes in the landfill may still be dangerous, and may potentially leak through the confines of the burial site.

Recently, members of the scientific community, the public, and Congress expressed concern that it was time to move away from reliance on land disposal for handling hazardous wastes. These views are reflected in the Hazardous and Solid Waste Amendments of 1985 (HSWA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). The Agency responded by altering certain policies and developing regulations regarding hazardous waste disposal in landfills and the expanded use of alternative technologies.

More specifically, the Land Disposal Restriction provisions of HSWA stipulate that certain wastes cannot be land disposed unless they meet specific concentration-based treatment standards that represent best demonstrated available technology. Similarly, the new SARA sets a clear preference for the use of cost-effective

treatment remedies which permanently and significantly reduce the toxicity, mobility or volume of wastes at Superfund sites. In addition to these provisions, SARA directs EPA to carry out a program of research, evaluation, testing, development and demonstration of alternative or innovative technologies to achieve more permanent protection of human health and welfare and the environment. These laws, regulations, and policies clearly provide the impetus toward the use of treatment alternatives for the management of hazardous wastes. Technical and policy guidance on the use and availability of alternative technologies in both the Superfund removal and remedial programs is expected soon.

SITE PROGRAM PHASES

The four phases of the SITE Program listed below are being conducted simultaneously. They will be integrated so that information from one phase can be used in another. Each phase is designed to meet a particular objective of the SITE Program. The SITE program will be periodically reviewed to determine how information generated from all phases may be used to encourage the selection of new technologies at Superfund sites.

- Phase I: Identify and Remove Impediments

  Trained engineers, economists and policy analysts will identify the obstacles to the orderly development and use of alternative technologies to manage hazardous wastes. Resolving issues dealing with permit requirements treatment residue disposal, liabilities, procurement requirements, and public interest will help pave the way to increased use of treatment alternatives. Recommendations on how EPA can remove or limit obstacles to the use of alternative technologies will be complete by mid 1987.

- Phase II: Conduct a Demonstration Program

  EPA will conduct a demonstration program for innovative technologies at selected Superfund sites. From these demonstrations, EPA will provide performance and cost information for the new technologies. This information will help EPA decide when, and under what circumstances, to use the technology at other hazardous waste sites.

  The demonstration progam will be an ongoing effort. EPA plans to start several demonstrations as soon as possible to obtain information on the most advanced technologies. Demonstrations will then occur on a yearly schedule. An annual SITE demonstration plan will be published for public comment and will discuss the proposed technologies to be demonstrated and the Superfund sites identified for use that year.

- o Phase III: Applications Analyses

  Applications analyses will be conducted for technologies that warrant further investigation after completion of the demonstration. Such analyses will examine the applicability of the technology to other Superfund sites and include factors such as cost, appropriate site conditions, efficiency characteristics, and waste types. Policies and procedures that need to be taken into account in applying promising new technologies to Superfund sites will be examined.

- o Phase IV: Emerging Technologies Development

  ORD will establish a research program to continually evaluate and encourage the development of emerging alternative technologies through pilot testing to full scale demonstrations. This phase will be initiated in the spring of 1987 and will be ongoing thereafter.

THE DEMONSTRATION PHASE: A SUMMARY

Phase II, the Demonstration Phase, will be the most publicly visible of the four phases. Actual work will begin at Superfund sites during the demonstration phase and new technologies will be evaluated. Key events in the demonstration phase are summarized:

- o Advertise in Commerce Business Daily

  A notice requesting proposals will be placed in the Commerce Business Daily (CBD) on or before January 15, 1987, and annually thereafter. Developers of new and innovative technologies are asked to obtain from EPA the information necessary to submit proposals for demonstrating their technology. Proposals submitted in response to the CBD announcement can be made through February. Information about the Request for Proposals (RFP) can be obtained from Mr. Steve James (ORD) by calling 513-569-7877 (commercial) or 684-7877 (FTS).

  In addition to choosing technologies based on the CBD advertisement, EPA has set up a second mechanism where innovative technologies may also be demonstrated as part of routine response actions. Superfund or other cleanup sites on which EPA is planning to use treatment technologies as part of the response action may be adapted for SITE demonstrations.

- Select Technologies

  Potential new technologies will be carefully screened by OSWER and ORD. The screening process will be competitive and must be completed within 90 days of receiving the completed application. In selecting technologies to be demonstrated, EPA must consider, at a minimum, the following criteria:

  1. The potential for contributing to solutions to those waste problems which pose the greatest threat to human health, which cannot be adequately controlled under present technologies, or which otherwise pose significant management difficulties.

  2. The availability of technologies which have been sufficiently developed for field demonstration and which are likely to be cost-effective and reliable.

  3. The availability and suitability of sites for demonstrating such technologies, and the capability to conduct demonstration projects in such a manner as to assure the protection of human health and the environment.

  4. The likelihood that the data to be generated from the demonstration project at the site will be applicable to other sites.

- Match Technologies to Sites

  Many of the new technologies may only be suited for specific kinds of wastes at a specific site. Using the expertise and knowledge in EPA Headquarters, laboratories, and the EPA Regions, technologies will be matched with wastes at available Superfund sites. The new Superfund law requires EPA to conduct a minimum of ten technology demonstrations each year. While most demonstrations will take place at Superfund sites, some technologies may be tested at commercial hazardous waste sites or at special test and evaluation facilities operated by EPA or the developer. Factors such as risk, public interest, expense, disposal of residues and involvement of potentially responsible parties will be considered when matching sites and wastes with technologies.

- Develop Annual SITE Demonstration Plan

  The annual SITE demonstration plan will discuss the technology demonstration projects planned, how and when the projects will be carried out, the tentative sites selected, the resource requirements for conducting the demonstrations, and the means for public involvement and input. This plan will be published for public review and comment.

- Implement Site-Specific Community Relations Programs

  Once a site and technology have been tentatively selected, EPA will develop and implement a community relations plan to seek the ideas and suggestions of local residents. In accordance with the plan, EPA will introduce the community to the SITE Program and its role at their local site, and will provide information on the specific technologies. Public comment will be sought throughout the demonstration project and community relations activities will continue for the duration of the demonstration.

- Conduct Demonstration

  After reviewing and incorporating comments on the SITE demonstration plan, EPA will enter into a contract, letter agreement, or cooperative agreement with the developer of the technology. The demonstration will begin and probably last several months, depending upon the time required to gather information on the effectiveness and reliability of the technology. The developer will provide the equipment and be responsible for set-up and operation at the demonstration site. The technology will treat Superfund wastes during the test, but since it is only a demonstration, it will not be expected to clean up all of the wastes at the Superfund site. If necessary, another standard technology will be used to handle the remaining wastes. EPA's role will be to ensure credible results by providing the testing protocols and procedures and preparing the analytical and quality assurance/quality control work plans so the performance data can be consistently and accurately interpreted.

- Complete Evaluation and Distribute Information

  At the close of each demonstration, EPA will evaluate the results of all tests. If the results are positive, the technology could be applied at other similar Superfund sites. EPA will modify Agency policies and procedures to encourage the use of these and other alternative technologies.

EPA will make available the results of the evaluation of each new technology to the hazardous waste cleanup industry, regulatory agencies and the public. The Agency is developing a technology transfer program to ensure the distribution of accurate information as quickly as possible.

THE PROGRAM TO DATE

The Superfund reauthorization calls for a minimum of ten field demonstrations per year through 1990. Congress authorized $20 million per year for the demonstration program, including demonstrations of innovative monitoring equipment. The alternative technology demonstration program is limited to $10 million per year, with a $3 million cap for a single demonstration.

In anticipation of reauthorization, EPA began setting up the SITE Program in 1986. In March of 1986, the first notice requesting proposals was placed in the Commerce Business Daily. In response to RFP SITE-001, twenty proposals were received representing the following technologies:

10 Incineration/Thermal
3 Biological Treatment
2 Containerization
1 Solidification/Stabilization
1 In-Situ Vapor Extraction
1 Chemical Detoxification
1 Robotics
1 Vapor Condensation

The proposals were evaluated and ranked according to the specified criteria. In addition, EPA identified several potential demonstrations through the second mechanism -- routine response actions. A listing of firms, tentative sites (where determined), and a brief description of the technologies which are potentially proposed for demonstration during 1987 is attached.

CONTACTS

- OSWER: Don White 202-475-8600 (commercial) or 475-8600 (FTS)
  For information on Superfund wastes and sites and other general information.
- ORD: Ron Hill 513-569-7861 (commercial) or 684-7861 (FTS) or Steve James 513-569-7877 (commercial) or 684-7877 (FTS)
  For information related to applications of treatment technologies, the Commerce Business Daily announcement, and the Request for Proposals.
- Superfund/RCRA Hotline 800-424-9346
  202-382-3000

SUPERFUND INNOVATIVE TECHNOLOGY EVALUATION (SITE) PROGRAM:
PROPOSED DEMONSTRATION PROJECTS AS OF NOVEMBER 25, 1986

Main Track (ORD)

Developer	Technology	Tentative Location of Demonstration
Waste-Tech Services, Inc. 18400 West 10th Avenue Golden, Colorado 80401 Contact: Eliot Cooper 303-279-9712	Mobile thermal combustor-fluidized bed	Coors Company Golden, Colorado
Advanced Combustion Technologies Inc. P.O. Box 940498 Atlanta, Georgia 30340 Contact: Thomas McGowan 404-662-5360	Pure oxygen burner	EPA ORD Test and Evaluation Facility
Shirco Infrared Systems, Inc. 1195 Empire Central Dallas, Texas 75247 Contact: Scott Berdine 214-630-7511	Electric infrared incinerator	To be determined
Hazcon, Inc. P.O. Box 947 Katy, Texas 77492 Contact: Ray Funderburk 713-391-1085	Solidification/ stabilization process	To be determined
Westinghouse Electric Corp. Waste Technology Services Division P.O. Box 286 Madison, Pennsylvania 15663 Contact: Carrie Penman 412-722-5709	(1) Pyroplasm system	To be determined
Contact: William Reed 412-722-5303	(2) Electric pyrolyzer	To be determined
Terra Vac, Inc. P.O. Box 550 Dorado, Puerto Rico 00646 Contact: James Malot 809-723-9171	In-situ vacuum extraction	To be determined

Through Response Actions

Developer	Technology	Tentative Location of Demonstration
New York State Department of Environmental Conservation (Plasma Systems, Inc.) 50 Wolf Road Albany, New York 12233 Contact: Norman Nosenchuck 518-262-1338	Plasma pyrolysis thermal unit	Love Canal Niagara Falls, New York
GA Technologies, Inc. P.O. Box 85608 San Diego, California 92138 Contact: Harold Dict 619-455-2383	Circulating bed combustor	GA Technologies' facility; test on waste from McColl, Fullerton, CA (remedial action)
Resources Conservation Company 3101 N.E. Northup Way Bellevue, Washington 98004 Contact: Paul McGough 206-828-2455	Basic Extraction Sludge Treatment (BEST): solvent extraction technology	General Refinery, Inc. Savannah, Georgia (removal action)
General Electric One River Road Schenectady, New York 12345 Contact: John Harrsen 518-385-0045 and International Waste Technologies 807 North Waco, Suite 31 Wichita, Kansas 67203 Contact: Jeff Newton 316-262-1338	In-situ solidification/ fixation process	General Electric Haileah, Florida

FACTORS TO CONSIDER WHEN SELECTING INCINERATORS
AS ALTERNATIVE TECHNOLOGY FOR SUPERFUND CLEANUPS

- Facility Capacity - Many incinerators are no longer accepting Superfund wastes because they are not in compliance with the RCRA Offsite Disposal Policy. Since the number of incinerators available to accept wastes is limited, it is critical to consider the chemical and physical characteristics of the waste before selecting a disposal option. Otherwise, because of limited incinerator capacity, hazardous wastes that must be incinerated (e.g., high level PCBs, pesticides, cyanide wastes, etc.) will have to be stored in a temporary storage facility, or staged onsite until a RCRA approved incinerator has the capacity to receive the waste.

- Mobility of the Hazardous Material - Certain hazardous materials will tend to leach more quickly than others. This should be considered prior to landfilling.

- Incinerable Characteristics - Some wastes, particularly liquids with a high flash point, must be incinerated. Other wastes, especially bulk soils and sludges, or materials with high water or ash contents because they require a high energy input, are difficult and much more expensive to incinerate.

- Hazardous Constituent Concentration - Highly contaminated wastes are generally better candidates for incineration than low level materials, because of the higher long term public health and environmental risks associated with landfilling this material instead of destroying it.

- Cost - According to the Offsite Disposal Policy, alternative technology can be eliminated only if the cost of the alternative far exceeds the cost of others (e.g., by an order of magnitude) and does not provide substantially greater public health and environmental benefit.

Other Alternatives

- Reuse or recycle
- Onsite treatment or pretreatment (e.g., neutralize acids, remove lead from soil)
- Encapsulation
- Treat at commercial or public waste treatment facilities
- Incinerate in a cement kiln or other industrial boilers/furnaces

CERCLA Removal Actions at Methane Release Sites

United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

EPA

DIRECTIVE NUMBER: 9360.0-8

TITLE: CERCLA Removal Actions at Methane Release Sites

APPROVAL DATE: January 23, 1986

EFFECTIVE DATE: January 23, 1986

ORIGINATING OFFICE: Superfund

☒ FINAL

☐ DRAFT

STATUS:

Memorandum from Henry Longest II, Director, OERR
To: Basil G. Constantelos, Director, Waste Management Division, Region V

REFERENCE (other documents):

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 23 1986

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: CERCLA Removal Actions at Methane Release Sites

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

TO: Basil G. Constantelos, Director
Waste Management Division
Region V

This memorandum clarifies Office of Emergency and Remedial Response policy on the appropriateness of removal actions at methane gas release sites under authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). This issue was recently brought to our attention as a result of response actions which were being considered at the Industrial Excess Landfill (IEL) site in Lake Township, Ohio.

Because methane gas is not listed or designated under any of the statutory provisions in section 101(14) of CERCLA, it is not a "hazardous substance." However, response actions under CERCLA section 104 are not limited to hazardous substances. Section 104(a)(1) authorizes responses to actual or potential releases of "pollutants or contaminants." The definition of hazardous substance in section 101(14) and pollutant or contaminant in section 104(a)(2) excludes certain types of natural gas and petroleum. Naturally occurring methane gas found in or associated with petroleum deposits is a type of natural gas and is therefore exempted from CERCLA coverage. However, methane gas emanating from a landfill is not considered to be "natural gas" and such releases may therefore be eligible for response under section 104(a)(1) if methane gas otherwise meets the definition of pollutant or contaminant under section 104(a)(2).

With respect to the response authority for pollutants or contaminants, response action under section 104(a)(1) is authorized only if there is a threatened or actual release of such substances which may present an "imminent and substantial danger to the public health or welfare." The potentially explosive gas levels, detected during daily monitoring at the perimeter of the landfill and nearby homes and businesses, appear to meet the criterion of imminent and substantial danger. Therefore, because the methane gas is not excluded as a "natural gas," if it is determined to be a "pollutant or contaminant" as defined in section 104(a)(2) and to pose an "imminent and substantial danger to the public health and welfare," response under CERCLA is authorized.

Although the proposed removal action is authorized under CERCLA section 104(a)(1), the responsible party may not be liable under section 107 for removal action costs since liability under that section is limited to releases of hazardous substances.

As a matter of policy, CERCLA responses to methane gas releases should be carefully evaluated on a case-by-case basis. Approval of the removal action at IEL should not be considered as setting a general precedent for future actions involving methane gas. Methane gas is produced in most landfills, and response authorized under CERCLA section 104(a)(1) for release of a "pollutant or contaminant" must be carefully evaluated and documented for the presence of an "imminent and substantial danger to the public health or welfare."

In a related issue, please note that methane control measures may be taken as part of a response action that controls a release of a hazardous substance. These measures would be taken to protect public health and the environment and to ensure the integrity of the remedy.

cc: Waste Management Division Directors, Regions I-IV and VI-X
Environmental Services Division Directors, Regions I,VI and VII
Regional Branch Chiefs
Regional OHM-Coordinators
Gene Lucero
Russ Wyer
Steve Lingle
Jim Lounsbury
Tim Fields
Hans Crump
Sherry Hawkins

Implementation Strategy for Reauthorized Superfund: Short Term Priorities for Action

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OCT 24 1986

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE
9200.3-02

MEMORANDUM

SUBJECT: Implementation Strategy for Reauthorized Superfund: Short Term Priorities for Action

FROM: J. Winston Porter
Assistant Administrator

TO: Regional Administrator, Regions I - X
Regional Counsel, Regions I - X
Director, Waste Management Division
Regions I, IV, V, VII, and VIII
Director, Emergency and Remedial Response Division
Region II
Director, Hazardous Waste Management Division
Regions III and VI
Director, Toxics and Waste Management Division
Region IX
Director, Hazardous Waste Division
Region X
Environmental Services Division Directors
Regions I, VI, and VII

On October 17, 1986, the President signed the Superfund Amendments and Reauthorization Act of 1986 (SARA) amending the current "Superfund" law and enacting certain additional provisions. The attached transition guidance provides basic interpretations and instructions with respect to SARA.

SARA continues the process and program that was put in place with the revised National Contingency Plan (NCP) in November 1985. It contains a number of new provisions, however, that give statutory emphasis to some aspects of the existing program, or that add important new considerations. In addition, the new law requires the Agency to meet mandatory schedules for initiating and completing various remedial activities, and challenges us to efficiently manage a program that is much larger in size and scope.

As we move ahead with the new Superfund program, I want us to proceed along two tracks. The first involves strong emphasis on finishing work currently in the pipeline, particularly those projects in the final implementation phases. Completion of this and other ongoing work must incorporate

careful consideration of the impact of SARA in a manner designed to minimize program disruption. The other track will involve initiating new work, as well as further refinement of our understanding of the SARA provisions.

This is the first in a series of memos that will provide direction for implementing the new Superfund program. Many of you will encounter policy issues in advance of guidance. Questions you face in the field will help drive our priorities for providing such guidance. I ask that you move forward aggressively to implement the new program and not wait until all the questions have been answered.

When you encounter an unresolved issue that may have national policy implications, please consult with the Headquarters contact appropriate to that issue. I have attached a list of contacts to assist in key areas.

The new Superfund will be a great challenge for all of us. It will require close working relationships within EPA, as well as with other Federal agencies, State and local governments, citizens groups, contractors, and industry. It will be imperative that we show major results with the program and funds entrusted to us. I look forward very much to working with all of you on this very important endeavor.

Attachment

cc: Administrator
Deputy Administrator
Associate Administrator for
International Activities
Associate Administrator for
Regional Operations
Assistant Administrator for
Administration & Resources Management
Assistant Administrator for
Enforcement & Compliance Monitoring
General Counsel
Assistant Administrator for
Policy, Planning & Evaluation
Assistant Administrator for
External Affairs
Inspector General
Assistant Administrator for
Water
Assistant Administrator for
Air & Radiation
Assistant Administrator for
Pesticides & Toxic Substances
Assistant Administrator for
Research & Development

CERCLA REAUTHORIZATION TRANSITION GUIDANCE

I. SCOPE OF GUIDANCE

This guidance specifically addresses the management of on-going response actions (remedial and removal, Fund and enforcement) affected by the SARA. Although SARA includes a number of other new authorities (such as Emergency Planning and Community Right to Know) that are effective immediately, these provisions will be largely addressed in separate memoranda and guidance documents.

This document paraphrases some sections of the new law. Such paraphrasing is not meant to be interpretive of legislative language nor does it summarize complete sections of the law that may themselves be very lengthy. Please carefully review the attached summary and the actual provisions in order to understand fully the legislation.

This guidance is organized as follows:

II. EFFECTIVE DATE OF PROVISIONS

All provisions of the new statute took effect on the date of enactment (October 17, 1986) unless otherwise specified by law. One area, however, where previous Agency decisions are "grandfathered" is with respect to records of decision (RODs) and consent decrees [§121(b)(1)].

A. Signed RODs and Consent Decrees - Prior to and within 30 Days of SARA

RODs signed or consent decrees lodged prior to the date of enactment are not required to meet new requirements of §121 (Clean-up Standards) unless the record of decision is reopened after the date of enactment to modify the remedy [§121(b)(1)]. An Enforcement Decision Document (EDD) is the functional equivalent of a ROD; therefore the effective date provision applies to all signed EDDs, as well as RODs, where public participation was equivalent to that provided for RODs. (Where the EDD resulted in a consent degree, the grandfathering provision, of course, applies.) In the future, all selections of remedies for fund and enforcement lead sites will follow the ROD process.

For RODs signed or consent decrees lodged within 30 days of date of enactment, EPA must certify in writing that the portion of the remedial action covered by the ROD or consent decree complies to the maximum extent practicable with §121 of the new law [§121 (b)(2)]. The certification responsibility is given by statute to the Administrator. Regions should consult with their Headquarters' contacts and take active measures to ensure that this certification can occur at the time of ROD signature.

B. RODs signed or Consent Decrees Lodged 30 days after SARA

RODs not signed within 30 days of enactment are required to comply fully with all new SARA provisions. In considering the new provisions, Regions should recognize that while cost effective remedies which protect human health and the environment continue to be required, the statute places a greater emphasis on the performance, long-term protectiveness and reliability of remedial actions. [See Section IV; ial Program Provisions.]

C. Implementation Considerations: Signed RODs for Operable Units

Projects in the design and construction phase at the time of enactment are the highest priority for Agency actions (see Section IV; Remedial Program). However, before proceeding, Regions should examine whether additional RODs are planned and assess the overall remedial strategy to ensure that future operable units are consistent with the new SARA requirements.

III. REMOVAL PROGRAM CONSIDERATIONS AND PRIORITIES

A. New Provisions

Three significant provisions of the new law are effective immediately and may have an impact on on-going and future removal operations.

1. Time and Dollar Limits

The new law raises the time and dollar limits for removal operations from six months and $1 million to twelve months and $2 million [§104(e)(1)]. Although new time and dollar limits are effective immediately, the Regions are not currently delegated the authority to sign Action Memoranda above $1 million. Until delegation to the Regions of additional authority, Headquarters' approval of ceiling increases and exemption requests above $1 million will be required. Regions are already delegated the authority to approve extensions of any time limits. Any findings by the Region that an extension of time is needed must be made as early as practicable, and at least before expiration of the new statutory time limit of 12 months.

Headquarters' review of non-delegated dollar limit extensions will be expeditious and will focus on consistency with criteria for removal actions and, in this immediate post-enactment period, on the availability of limited dollars to complete emergency actions. Regions have the discretion to re-evaluate on-going removals to determine if the scope should be changed under the new limits. At some sites, it is possible that a more efficient approach could be designed given the additional fund/time limits available.

2. Consistency Waiver

The new statute provides for an additional waiver to statutory limits which allows EPA to continue a removal action beyond $2 million and 12 months where such action is "appropriate and consistent" with future remedial actions [§104(e)(2)]. This waiver is available at both proposed and final NPL sites. Our current position is that it will not be used at non-NPL sites.

3. Contribution to Efficient Performance

Removal actions that take place after SARA are to be conducted in such a manner as to "contribute to the efficient performance" of long-term remedial measures "to the extent the President deems practicable" [§104(b)(2)]. This provision promotes the performance of removal actions that more efficiently address threats by considering the overall site clean-up before the start of the action. The goal of this requirement is to reduce the need for removal restarts. The responsibility under this provision is effective immediately.

The Action Memorandum must include a specific discussion on how the proposed removal action meets this criterion. One situation where it may not be feasible to consider how the removal action contributes to the performance of the remedial action is in an emergency involving an immediate threat. In such cases, response personnel may need to take whatever immediate measures are required to protect the public health, welfare and the environment, and should document the reasons for taking the action without having first considered this criterion.

For on-going removals, response personnel should keep in mind the requirement that removals contribute to the efficient performance of long-term remedial measures, and take whatever steps are practicable under site-specific field circumstances to meet this requirement. Changes to on-going removal actions that take place in the course of exercising this responsibility should be documented in an amended Action Memorandum. This documentation should occur as soon as possible[1].

1/ As it is existing policy to ensure that removal actions contribute to the efficient performance of long-term measures to the extent practicable, this provision may have very little practical impact on signed Action Memoranda or on-going actions.

- If an Action Memorandum has been signed, the removal is on-going, and a new Action Memorandum is necessary to go beyond statutory limits. The new memo should address the degree to which this requirement has been addressed.

- If an Action Memorandum has been signed but a removal action not yet initiated, consideration should be given to amending the Action Memorandum, if this requirement is not already addressed prior to initiating the response action.

- If an Action Memorandum has not been signed, it must address this requirement.

B. Removal Program Priorities

Until SARA funding is available, we must continue to conserve funding for removal actions. We plan to provide $2 million per month nationally to respond to the most serious emergency situations.

Regions should use this period to carry out preliminary activities that will allow on-site work to begin promptly when new CERCLA funding becomes available. Such activities include:

- Continue to conduct preliminary assessments under CERCLA section 104(b) authority at sites where removal action may be necessary.

- Coordinate and prepare Action Memoranda and secure the Regional Administrator's informal approval (not signature) for potential removal actions of less than $1 million so that on-site activities can begin promptly when SARA funding becomes available.

- Prepare and submit to Headquarters draft ceiling increase requests (between $1 million and $2 million) and exemption requests (above $2 million), so that coordination and informal approval can take place during the period of restricted funding. Review of draft requests will ensure that on-site actions can be initiated promptly and will be particularly important in obtaining timely Headquarters' approval of exemption requests based on the new "remedial consistency" waiver.

- Refer sites needing action and having responsible parties to Regional enforcement programs.

During fiscal year 1986, many removal actions were not initiated, others were demobilized and some actions were conducted at a reduced pace. As the removal program gears up with SARA funds, removal site priorities will have to be established by each Region. Available personnel and funding resources will have to be considered in setting these priorities.

IV. REMEDIAL PROGRAM PROVISIONS AND PRIORITIES

Highlighted below are some of the considerations that you will want to keep in mind as you proceed to incorporate the SARA requirements into on-going work. Paraphrasing of the statutory language -- particularly the cleanup standards section -- was necessary due to length. The statutory language and the Regional Counsel should be consulted for a more complete description of SARA's impact on the program.

A. Major Provisions

Clearly, the most important section of the law relating to the remedial program is §121, cleanup standards. This section codifies many of the existing requirements under the National Contingency Plan (NCP) but also adds new requirements, additional detail and direction. Some of the areas addressed include emphasis on treatment technologies in selection of remedies, meeting State standards, and formalizing the role of States in the cleanup process. The following discussion highlights the areas that should receive particular attention and consideration during the conduct of RI/FSs and development of RODs.

1. Applicable, Relevant and Appropriate Federal and State Requirements.

Section 121(a) and (d) establish the requirements for the degree of cleanup for remedial actions. The new amendments require that remedial actions conducted on-site shall meet the "applicable or relevant and appropriate standards, limitations, criteria, and requirements" (ARAR) of State and Federal environmental laws. Specific Federal environmental laws including, but not limited to, TSCA, SDWA, CWA, RCRA or MPRSA, are listed as potentially applicable to on-site clean ups. In addition, remedial actions are required to attain specifically identified standards, such as maximum contaminant level goals or MCLGs, formerly known as recommended maximum contaminant levels (RMCLs), established under the Safe Drinking Water Act and water quality criteria established under the Clean Water Act, when relevant and appropriate under the circumstances. (See statutory language, Section 121(d), for a more definitive description.)

The new law basically builds upon EPA's site-specific approach to cleanup standards (found in the NCP and in the CERCLA Compliance Policy) which requires remedial actions to meet the applicable or relevant and appropriate requirements of other Federal environmental statutes. Additional RCRA regulations that become effective both before and after reauthorization will themselves expand the specific requirements that SARA clean-ups have to meet. Some of the most significant requirements which can be applicable or relevant and appropriate to Superfund remedial actions are the land disposal ban provisions of HSWA. The land ban requirements could potentially

have significant impacts on the cleanup levels, treatment technologies and the decisionmaking processes Superfund uses in remediating sites. Many substantive issues pertaining to these regulations and their impact on Superfund remedial actions and RCRA corrective actions remain to be resolved. It is clear, however, that these regulations can affect all projects in every stage of the remedial process. Headquarters will keep the Regions closely informed on policy development in this area.

The new law expands the list of potentially applicable or relevant and appropriate requirements to include promulgated State standards, requirements, criteria, or limitations. These State requirements should be addressed in the same manner that Federal requirements are currently. Under certain circumstances State ARARs need not be met [§121(d)(2)(c)(ii), and (d)(4)(E)]. These circumstances include inconsistent application of State requirements, lack of formal promulgation of the requirement, and requirements that would effectively result in a statewide prohibition of land disposal.

The addition of State requirements, criteria, standards, and limitations as applicable, relevant and appropriate requirements requires EPA to obtain a complete picture of State requirements early in the RI/FS process. The Regions should develop their own process for obtaining information from the States on applicable, relevant and appropriate requirements. However, it is recommended that this include:

- A request to the State to notify EPA of the specific requirements that they think will be applicable or relevant and appropriate to each alternative under examination in the feasibility study.

- The above request made in writing, as early as possible, but not later than the time when the remedial investigation is 25 percent complete.

- Give the State a fixed time period for review of alternatives for which they are to identify ARARs and ask for an offical documented response.

2. Preference for Permanent Solutions and Alternative Treatment Technologies.

While the new provisions continue to require cost-effective remedies which protect human health and the environment, the statute places a greater emphasis on the long-term protection and reliability of remedial actions.

The language calls for remedial actions which utilize permanent solutions and alternative treatment or resource recovery technologies to the maximum extent practicable. It establishes a preference for remedies in which treatment which permanently and significantly reduces the mobility, toxicity, or volume of waste comprises the principal element. If a remedy in accordance with the preference for treatment and permanent solutions is not selected, an explanation must be published [Section 121(b)(1)(G)].

Regions should collect sufficient data during the RI/FS to assess and compare treatment performance, reliability, and other operating parameters. As a goal, information should also be collected sufficient to attain an accuracy on costs of +50/-30 percent at the time of the ROD. Treatability studies frequently will be necessary prior to the ROD to properly evaluate treatment technologies and estimate costs. As appropriate, this would entail pilot scale testing (e.g., confirmation burns) or, in some situations, bench scale testing (e.g., for fixation).

In evaluating alternatives, Regions should closely examine 1) how effectively and significantly each alternative reduces the toxicity, mobility, and volume of the waste; 2) the degree of protectiveness and long-term reliability each alternative affords (including the uncertainties associated with land disposal); 3) the effect of applicable or relevant and appropriate land ban requirements on performance targets; 4) short-term impacts posed by each option; and 5) short-term and long-term costs of the alternatives, including capital, operation and maintenance, and replacement costs over the life of the remedial action [§121(b)]. Present worth costs would then be calculated, as currently practiced.

3. State Involvement

SARA provides broad authority and an extensive list of requirements for State involvement in every phase of the Superfund program [§121(f)]. Over the long term the Agency will develop and issue regulations concerning State involvement which could go beyond current Agency policy. In the interim, Regions should proceed to work with the States to inform them of new requirements and priorities as outlined in this memo.

The amended law generally does not alter State cost-sharing provisions.[2] Given the preference for treatment established in the new law, and the likely increase in the cost of remedies, the value of the State cost share of the remedial response action is likely to increase in many cases. Regions should begin discussions with their States now to alert them to the likely impact of the new law so that the States may begin to consider how to raise the additional funds that are likely to be necessary.

2/ Section 104(f) has the effect of requiring a 50 percent State match for State operated facilities.

States should be made aware that pre-emption by the original CERCLA on State creation of trust funds similar to "Superfund" has been removed in the new law [§114(a)].

4. Waivers

The new law adopts many of the waivers contained in the existing NCP, but also adds some new ones. Compliance with ARARs can be waived when:

- The remedial action is an interim measure where the final remedy will attain the ARAR upon completion;
- Compliance will result in greater risk to human health and the environment than other options;
- Compliance is technically impracticable;
- Other remedial actions will attain "an equivalent standard of performance to that required under the otherwise applicable requirement, through use of another method or approach";
- For State requirements, the State has not consistently applied the State requirement, or demonstrated the intent to apply such requirements, at similar remedial actions; or
- For §104 remedial actions where compliance will not provide a balance between the need to protect human health and the environment at a facility and the availability of Fund money for response at other facilities [§121 (d)(4)].

The waivers for fund balancing, technical impracticality, and interim remedies remain essentially the same as in the NCP, while the waiver for enforcement cases with strong public interest has been eliminated. The waiver for unacceptable environmental impacts has been expanded and redefined as a waiver where compliance would result in "greater risk to human health and the environment." A new waiver is added for actions whose "standard of performance" is "equivalent" to a requirement through use of another method or approach.[3] And another new waiver is added for State requirements that have not been consistently applied.

5. Health Assessments

Under the new law, a health assessment must be conducted by the Agency for Toxic Substances and Disease Registry (ATSDR) for every site on the National Priorities List (NPL) on the following schedule:

- By 12/10/88 for facilities proposed for the NPL prior to SARA; and

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3/ The Conference Report states that this waiver allows "flexibility in the choice of technology, but does not allow any lesser stand or other basis such as risk-based calculation"... unless "the original standard is risk based."

- Within one year after proposal for facilities proposed for the NPL after SARA [§110].

These assesssments will assist EPA and ATSDR in determining whether action is required to be taken to reduce human exposure to hazardous substances, and whether additional information on human exposure and associated health risks (i.e. epidemiological studies by ATSDR) is needed. The assessments will evaluate the current and potential risk to human health posed by individual sites and facilities [§110(3)(G)].

While ATSDR will provide an assessment of whether existing exposure provides a risk to public health, EPA will continue its risk assessment (public health evaluation and endangerment assessment) activities as part of its risk management responsibilities -- determining and selecting the remedy.

Health assessments are not required to be completed before a project moves forward. However, ATSDR is required to complete health assessments "to the maximum extent practicable" before the RI/FS is completed. The highest priority for completion of health assessments should be any RODs the Region expects to sign within the next several months. Regions should coordinate with ATSDR to establish overall priorities and schedules for health assessments as well as work closely with ATSDR during the RI phases and development of alternatives.

B. Remedial Program Priorities

As previously mentioned in Section II (C) of this guidance, projects in the construction phase and design projects at the time of enactment should proceed on schedule to the degree possible. One of the Regions' highest priority activities should be to examine these projects and assess their consistency with subsequent operable units given that these subsequent units will have to comply fully with the new law.

In addition, priorities for funding remedial projects will be determined according to the phase that the projects were in when SARA was passed. Priorities for remedial work should focus on the need to fund the construction pipeline. Projects nearest completion (remedial actions) will receive funding and staffing first, followed by remedial designs, and on-going RI/FSs. Although we recognize that some Regions will have a need to start new RI/FSs, for the time being the backlog of work to be done in ensuring that on-going projects meet or exceed the SARA requirements may cause new starts to receive a lower priority.

V. ENFORCEMENT PROGRAM PROVISIONS AND PRIORITIES

SARA includes a number of changes to the existing enforcement-related provisions and adds a new section (§122) on settlement procedures. In general, the enforcement-related amendments adopt

many of the provisions of the Interim CERCLA Settlement Policy and other existing enforcement program activities. The purpose of this section is to outline the significant new enforcement procedures and requirements and how these procedures will affect ongoing CERCLA activities.

A. SETTLEMENT PROCEDURES

1. RI/FS Special Notice Procedures

Section 122(e) establishes a new negotiation procedure for RI/FSs and RD/RAs which EPA may in its discretion choose to follow. This procedure involves issuance of "special notice" to PRPs followed by a moratorium on EPA action for a set time period. Although EPA may continue past notice and negotiation practices, it is expected that in most instances the negotiation procedure under §122(e) will be followed.

EPA may issue "special notice" if it determines that negotiations would facilitate an agreement with potentially responsible parties (PRPs) to either undertake or finance an RI/FS. Special notice is required to include the following information, to the extent it is available:

- Names and addresses of PRPs;
- Volume and nature of substances; and
- Ranking by volume of substances [§122(e)(1)].

EPA must also provide notice to the State of negotiations with PRPs and provide an opportunity for State participation in the negotiations [§121(f)(1)(F)]. If the release or threat of release at the site in question may have resulted in damages to natural resources, EPA must notify the Federal Trustee and provide an opportunity for the Trustee to participate in the negotiations [§122(j)(1)]. To simplify the notification of Federal Trustees, the Agency plans to provide a list of projects in the SCAP to the Trustees as notice to participate in negotiations. Additional guidance on coordination with Federal Trustees will be developed.

The PRPs who receive special notice have 60 days to submit a proposal to undertake or finance the RI/FS [§122(e)(2)(B)]. During this 60 day period, EPA may not initiate the RI/FS [§122(e)(2)(A)]. Additional studies or investigations authorized under §104(b) may be initiated and nothing precludes EPA's authority to undertake response or enforcement activity regarding a significant threat to the public health or the environment [§122(e)(5)]. The Regions may, under forward planning, initiate a scope of work or a negotiations support document[4]. The scope of work or negotiations

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[4]/ Under forward planning, using TES or REM contractors, at a cost of up to $50K per site and estimating a work period of approximately one month, the Regions may develop a site specific "negotiations support document." In general, this work would include collecting background information, conducting a site visit and developing a scope of work. More detailed guidance on the scope and use of these documents will be forthcoming.

support document should be provided to PRPs when notice is given so they can prepare an adequate proposal. Initiating the scope of work or negotiations support document will not constitute starting the RI/FS under the moratorium.

If a good faith proposal[5] is submitted within 60 days of notice, the moratorium limiting initiation of the RI/FS continues for a total of 90 days from the date of notice.

If settlement is achieved, the agreement for the conduct or financing of the RI/FS must be in the form of an Administrative Order on Consent or a Consent Decree [§122(d)(3)]. Administrative Orders on Consent are the preferred format for RI/FS agreements, except where an action has been filed in court.

The agreement may authorize the PRPs to conduct the RI/FS only when the following conditions are met:

- o EPA determines that the PRPs are qualified to do the RI/FS;
- o EPA arranges or contracts for a qualified person to assist in overseeing the conduct of the RI/FS[6]; and
- o The PRPs agree to reimburse EPA for the cost of such oversight [§104(a)].

The settlement agreement for the RI/FS need not contain a finding of imminent and substantial endangerment to the public health or the environment [§122(d)(1)(A)].

If a good faith proposal is not submitted within sixty days of notice, or negotiations fail after submittal of a proposal, EPA may initiate the RI/FS [§122(e)(4)].

5/ In general, a "good faith" proposal is a proposal in writing, in which the PRPs make a showing of their qualifications and willingness to conduct or finance the RI/FS which, and at least, addresses the major elements of the workplan or statement of work.

6/ The Statement of Managers refers to a "qualified person" as "someone with the professional qualifications, expertise and experience necessary to provide additional assurance that the President is conducting meaningful oversight." This person could be a State employee, employee of another Federal agency or any other "qualified person" EPA may contract with to perform the oversight. This provision does not replace the need for in-house EPA oversight, but rather supplements it, much like the current use of TES/REM contractors or the COE for oversight. Moreover, it is still EPA policy to require reimbursement for the cost of its oversight.

2. Ongoing RI/FS Activities

If notice letters have already been sent for RI/FS negotiation and Regions are prepared to negotiate or have inititiated negotiations, parties do not have to receive another notification regarding their liability for the conduct of the RI/FS unless the Regions desire to use the moratorium procedures in §122(e). The Regions must bear in mind, however, that the remedy eventually selected for these sites must comply with §121, cleanup standards.

a. Ongoing Negotiations for RI/FS

In ongoing negotiations for RI/FSs, PRPs should be informed of the requirements of §121 for cleanup standards. In particular these include, but are not limited to, consideration of alternatives that meet ARAR reguirements, the statutory preference for permanent remedies, and notification and involvement of States in determining ARARs and concurring on remedy selection. EPA must also arrange for a qualified person to assist with the oversight of the RI/FS and the PRPs must agree to reimburse EPA for that oversight.

b. Ongoing RI/FS

An RI/FS currently being conducted by PRPs should be reviewed to assure that alternatives evaluated include those that comply with §121. This review will be similar to the evaluation that will be conducted for ongoing fund-financed RI/FSs. (See section on cleanup standards.) Sections of Administrative Orders on Consent or Consent Decrees may need to be revised to reflect that the final remedy must meet the requirements of §121. A letter should be sent to the PRPs informing them of the new provisions and providing them with an opportunity to discuss the changes to the Administrative Order or Consent Decree. (A sample letter is being developed and will be sent to the Regions shortly.)

c. New Negotiations for RI/FS

As EPA's current policy suggests, all notice letters should be issued to the PRPs as early as possible. Responsible party searches should be conducted concurrently with the expanded site inspections (ESI) and notice letters should generally follow shortly after proposal on the NPL. If the Region chooses to invoke the §122(e) "special notice" and negotiation procedure, the notice letter should specifically reference that fact and explain that the 60-day timeframe in which the PRP must make an offer begins with receipt of the notice letter. Using the notice letter as the vehicle to begin the moratorium on initiation of the RI/FS should avoid any potential delays when EPA is actually ready to commence the RI/FS. A model administrative order on consent and a detailed scope of work for the RI/FS should be sent to the PRPs at

the time notice is given. If the Region chooses not to invoke the §122(e) procedure, the notice letter should state the reasons why the procedure is inappropriate [§122(a)].

3. RD/RA Procedures

If EPA decides to invoke the negotiation procedures in §122(e) for the remedial action, EPA must again provide special notice to the PRPs and provide information on volume, nature and ranking of wastes. The Statement of Managers indicates that this information "should be routinely made available at this time". This is a separate notice and information release from the RI/FS notice. State and Federal Natural Resource Trustees must also be notified and provided an opportunity to participate in the negotiations. Notice for RD/RA negotiations should generally be given as early as possible, but no later than when EPA has identified a "preferred" remedy.

Again, as with the RI/FS procedures, the PRPs have sixty days to make a good faith proposal to conduct or finance the remedial action. A good faith proposal is a proposal in writing, in which the PRPs make a showing of their qualifications and willingness to conduct or finance the major elements of the ROD. During these sixty days, EPA may not initiate remedial action under §104(a) or under §106. Additional studies authorized under §104(b), however, including remedial design may be initiated during the negotiation period.

If a good faith proposal is submitted, the moratorium on initiation of a §104(a) response action or the issuance of §106 Administrative Order or the filing of a §106 civil action continues for 120 days from the date of notice.

An agreement with PRPs for remedial action must be in the form of a consent decree. Several sections of the new statute affect the terms which can be included in such a decree. First, §121(e)(2) requires that the decree contain stipulated penalties. These penalties are in addition to the penalties which can be collected under §122(e). Second, because §113(j)(2) establishes that EPA decisions relating to remedial measures are to be judged under the arbitrary and capricious standard, all dispute resolution provisions must provide that in any dispute concerning the response action the court will uphold the EPA response decision unless the objecting party can demonstrate on the administrative record that the decision was arbitrary and capricious or otherwise not in accordance with law. Finally, in §122(f) Congress has established the conditions upon which a covenant not to sue can be granted. A separate section below explains how this statutory provision affects settlement terms.

The proposed agreement must be filed with the Court at least 30-days before final approval is sought from the Court and persons not party to the agreement must have an opportunity to comment

before final judgment. [§122(d)(2)(B)]. This requirement is consistent with current Department of Justice (DOJ) practice [28 CFR 50.7]

It is important to note here that under the new statute, EPA retains its authority to issue unilateral administrative orders for RD/RAs, if the settlement fails or EPA has decided not to pursue a settlement.

a. Application to Ongoing Negotiations

Except for the RODs/EDDs which are subject to the "grandfather" provision, any remedies which are the subject of ongoing negotiations for RD/RA must also be evaluated for compliance with §121. Particular attention should be paid to the application of State standards, preference for permanent remedy, use of alternate concentration limits (ACLs) and cost effectiveness.

Any ongoing negotiations for RD/RA that were proceeding in the form of an Administrative Order on Consent must be redirected to a Consent Decree. These Consent Decrees must incorporate the new statute's provisions on covenants not to sue, stipulated penalties, and deference to Agency decisionmaking. The Department of Justice should be notified of these cases and brought into the negotiations.

b. Application to New Negotiations

If "special notice" is given to provide the PRPs an opportunity to undertake the RD/RA, EPA anticipates that initiation of the remedial design during the first 60-day period will only occur in exceptional circumstances. Initiation of remedial design during this period must have advance concurrence from Headquarters. If the PRPs submit a good faith proposal, initiation of the design during the second 60-day period should again be the exception and requires concurrence from Headquarters.

4. Releases or Covenants not to Sue

Section 122(f) authorizes EPA to provide to PRPs, in certain circumstances, covenants not to sue for any liability, including future liability, under CERCLA for a release or a threatened release of a hazardous substance addressed by a remedial action. This provision adopts with only a few changes, the guidance on this subject set forth in the Interim CERCLA Settlement Policy. Releases from liability are to be in the form of a covenant not to sue.

The appropriateness of providing a covenant not to sue from liability is, according to §122(f)(1), to be based on the consideration of such factors as:

1) Effectiveness and reliability of remedy;

2) Nature of risks remaining;

3) Extent performance standards are in decree;

4) Extent action provides complete remedy;

5) Extent technology used is demonstrated to be effective;

6) Whether source of funding would be available for any additional remedial actions; and

7) Whether action will be carried out in whole or significant part by PRPs.

Section 122(f)(2) makes it mandatory that covenants not to sue for future liability be provided under certain circumstances for redisposal liability and for the portion of the remedial action which involves the permanent destruction or treatment of the hazardous waste. No covenants not to sue for future liability, however, may take effect until EPA certifies that the remedial action has been completed and any covenant issued under §122(f) is conditioned upon satisfactory performance of the remedial action.

If a covenant not to sue for future liability is not mandated under §122(f)(2), the covenant must include a reopener clause which allows EPA to pursue PRPs concerning a release or threat of release that arises out of conditions which were unknown at the time EPA certified that the remedial action was completed [§122(f)(6)(A)]. The reopener should not be conditioned on the presence of an imminent and substantial endangerment. EPA is also authorized to include any other terms in the reopener necessary to protect public health, welfare, and the environment [§122(f)(6)(C)]. In "extraordinary circumstances," the reopener clause may be omitted if the terms of the agreement are sufficient to provide assurance that public health and the environment will be protected from future releases [§122(f)(6)(B)]. Regions should still include the second reopener for "new scientific information" contained in the Interim Settlement Policy.

The new language on covenants not to sue is effective immediately and should be included in all consent decrees involving remedial action. At a minimum, consent decrees must specify that any covenant not to sue for future liability does not take effect until the remedial action has been completed, that the covenant not to sue is predicated upon satisfactory performance of the remedial work, and that the reopener is not limited to imminent and substantial endangerment situations.

Additional guidance on covenants not to sue is being developed. Until such guidance is available, Regions must consult with Headquarters in advance of any agreement that will provide a mandatory covenant ~~not~~ to sue under §122(f)(2) or contain a no reopener clause on the basis of the "extraordinary circumstances" provision.

5. Additional Parties

If during the course of "special notice" negotiations, additional PRPs are identified, EPA may bring those parties into the negotiations [§122(e)(2)(C)]. However, the addition of new parties does not affect the original date of notice and commencement of the moratorium provision. (This applies to RI/FS negotiations as well.)

B. Additional Enforcement Related Amendments

1. Contribution Protection

Section 113 of CERCLA has been amended to provide contribution protection statutorily to PRPs for matters addressed in an administrative or judicially approved settlement. The settlement reduces the potential liablity of other PRPs by the amount of the settlement. Since contribution protection is now provided by law, it is no longer appropriate to include such a provision in the consent decree.

2. Pre-enforcement Review

Section 113(h) has been amended to include language on pre-enforcement review. The amendments state that Federal court jurisdiction to review challenges to removal and remedial actions is limited to the following cases:

- o Actions under §107;
- o Actions to enforce an order under §106(a);
- o Action for reimbursement under §106(b)(2)[7];
- o Action under §106 where U.S. has moved to compel remedial action; and
- o Action under §310 (Citizen Suits) that alleges the response action was in violation of CERCLA.

7/ Any person who receives and complies with an Administrative Order may petition the Agency for reimbursement within 60 days after completion of the required action. Reimbursement may be obtained if a party shows by a preponderance of the evidence that it is not liable under §107 or if the party can demonstrate that the action ordered was arbitrary and capricious.

With the exception of the new citizen suit provision and the new provision on reimbursement, this new language confirms the Agency's current position that parties may not take any action challenging the Agency's selection of remedy before an enforcement action is taken. If the parties challenge the selection of remedy following an enforcement action, that challenge is limited to judicial review of the administrative record.

3. Judicial Review/Administrative Record: §113(j)

SARA limits the judicial review of adequacy of any response action taken to the administrative record. Judicial review, including review of RODs signed before the date of enactment, will be on the administrative record. EPA is required to establish an administrative record which is to be the basis for the selection of any response action. An administrative record is required for all response actions: removal and remedial, fund-financed and enforcement. The record must also be available for public review.

Until regulations on the administrative record are promulgated under §113(j), the administrative record consists of all items considered by the Agency in selecting the response actions and includes items developed and received under the current procedures for selection of the response action including public participation procedures. These existing procedures are set out in the June 1985 RI/FS Guidance and the February 1985 Draft ROD Guidance.

The Agency will be developing detailed guidance on what documents need to be maintained in the record and develop, where necessary, a process for organizing the record for sites where the response action has been selected.

Because the record is the only basis for review of the selection of the response action by PRPs or citizen suits, it is extremely important that the Agency properly document and maintain all the information it uses for making the selection of response action. The Regions must closely adhere to the procedures outlined in the RI/FS and ROD Guidance.

C. Priorities for Enforcement Activities

The Regions, in consultation with Headquarters, will need to re-evaluate ongoing enforcement activities and develop priorities for assuring compliance with the new amendments. The following should be the first priorities for Regions in re-evaluating their enforcement activities:

1. Review of sites scheduled for RI/FS and RD funding in the first and second quarters of FY 87. Regions must make sure that proper notice and information exchange with PRPs has occurred. (This should be consistent with SCAP targets.)

2. Review draft settlement documents to ensure incorporation of the provisions discussed in V.A.3.

3. Review Agency position in ongoing negotiations for RD/RA (where consent decree has not been lodged or ROD/EDD has not been signed) and assure consistency with new requirements.

4. Review of PRP conducted RI/FSs that are nearing completion. PRPs must be informed of the new statutory requirements and Regions must assure that selection of remedy will be consistent with §121.

5. Review all other RI/FS being conducted by PRPs under administrative Orders or Consent Decrees. PRPs must be notified of new requirements and appropriate revisions to the Order or Decree to reflect new requirements should be made.

D. Additional Enforcement Provisions

SARA includes several other provisions that affect enforcement activities. In general, however, these additional provisions will not be employed by the Agency until they have been delegated from the President to the Agency and the Agency has developed policies and guidelines for their use. A brief description of these provisions has been provided.

1. Response Action Contractor (RAC) Indemnification

Section 119 gives EPA discretionary authority to indemnify RACs against liability (including the expenses of litigation or settlement) for negligence arising out of the RAC's performance in carrying out response action activities under CERCLA [§119(c)(1)]. The amendment does not allow EPA to indemnify RACs whose conduct or activities are deemed to involve gross negligence, intentional misconduct, or for conduct for which they are strictly liable under State law [§119(c)(1)]. RCRA facility owners and operators and publicly owned treatment works (POTWs) are also precluded from EPA indemnification [§119(c)(5)(D)].

2. Non-Binding Preliminary Allocation of Responsiblity

Section 122(e)(3) of SARA requires the Agency to develop guidelines for preparing non-binding preliminary allocations of responsiblity (NBARs) for PRPs. These guidelines may include such factors as volume, toxicity, mobility, strength of evidence, ability to pay, litigative risk, etc. The Agency, in its discretion, may, after the RI/FS, provide an NBAR to the PRPs. NBARs are not admissable as evidence, are not subject to judicial review and do not constitute an apportionment or other statement on the divisibility of harm or causation.

Working with the Regions, Headquarters is currently developing the guidelines for NBARs and plans to develop several pilot projects beginning early next year.

3. De Minimis Settlements

Section 122(g) of SARA authorizes EPA to reach final settlements with PRPs if the settlement involves a minor portion of the response costs and the waste sent to the site by the PRP is minimal in comparison to the other hazardous substance at the facility in terms of amount and toxicity. Final settlements also may be entered with landowner PRPs if the landowner did not conduct or permit the disposal of hazardous waste at the site, did not contribute to the release of hazardous substances by an act or omission, and did not buy the property with the knowledge that waste had been disposed of at the site. PRPs claiming a defense to liability as opposed to being less culpable than other PRPs must meet the new requirements of §101(f) to establish that defense.

These "de minimis" settlements may be in the form of an Administrative Order or a Consent Decree. Administrative Orders for facilities where total response costs exceed $500,000 must have the written approval of DOJ.

The Agency has several "de minimis" pilot projects underway and is concurrently developing Agency-wide guidance for "de minimis" settlements.

4. Cost Recovery Settlements

Section 122(h) authorizes any agency with authority to respond, to compromise and settle claims under §107, if the claim has not been referred to DOJ. DOJ must give written approval of any claim compromised where the total response costs exceed $500,000.

Procedures and guidance on compromising claims are under development.

VI. CROSS-CUTTING PROVISIONS

A. Scope of Response Action

SARA contains three prohibitions on response actions that generally reflect existing agency policy. Fund-eligible response actions are generally prohibited with respect to:

- Releases of naturally occurring substances;
- Releases from products which are part of buildings or structures and result in exposure therein; and
- Contamination of drinking water supplies due to normal deterioration of the system.

The Agency may respond to these situations in cases of emergency where no other party can respond in a timely manner [§104(c)].

B. Off-Site Policy

The new statute reflects the current off-site policy in most respects. The existing off-site policy remains in place as is, except as altered by the Statute. If aspects of the off-site policy are more stringent than statutory requirements, these provisions remain in effect.

The statute requires that hazardous substances, pollutants and contaminants be disposed of off-site only at facilities in compliance with (i.e. having no significant violations) RCRA Subtitle C or TSCA or other applicable Federal laws where appropriate, and applicable State requirements [§121(d)(3)].

Disposal at off-site land disposal facilities is further restricted in that:

- The unit receiving the waste must have no release into ground water, surface water, or soil (other than de minimus releases into soil); [8] and

- Any releases from other units must be controlled under an approved corrective action program (either through a permit or administrative order).

With respect to the above statutory conditions, Regions will need to examine commercial facilities to determine if there are significant violations of State standards, or if there are releases from the proposed receiving unit, in order to determine whether the off-site facility is eligible to receive CERCLA waste. (Please note, as per previous guidance, the fact that the facility is in assessment monitoring does not mean that the facility is ineligible. Evidence of a release determines eligibility/ineligibility.) In addition, Regions must examine whether there are releases from other units (regulated units or solid waste management units). If such releases are present, the facility must be under an order or permit schedule of compliance to correct such releases in order to be eligible to receive CERCLA waste.

The statute also requires that notice of ineligibility determinations made under the Off-Site Policy be given to facilities. Until regulations are developed, notice must be given per the statutory requirements. Those requirements are met by following the notice procedures set forth in OSWER Directive Number 9330.2-05 (CERCLA Off-Site Policy: Providing Notice to Facilities; May 12, 1986).

8/ The Conference Report states that this language "is intended to preclude transfer or disposal of hazardous waste or constituents thereof into unlined units and lined units with releases other than de minimis releases into soil."

C. Technical Assistance Grants

The new amendments provide authority to issue technical assistance grants of up to $50,000 to "any group of individuals which may be affected by a release or threatened release at any facility which is listed on the NPL..." [Section 117(e)]. SARA requires that rules be issued governing these grants. These rules are under development and we plan to issue them as interim final regulations. Information on how citizens can apply for the grants will also be issued at that time.

D. Leaking Underground Storage Tank Trust Fund

SARA also contains a section amending Subtitle I of RCRA to establish a Leaking Underground Storage Tank Trust Fund which is to pay costs incurred for corrective action and enforcement action resulting from responses to leaking underground petroleum storage tanks. These amendments also require establishment of financial responsibility by private parties for purposes of corrective action and compensation resulting from accidental tank releases [§205].

In general, responsible parties will provide the first line of response action for releases from leaking tanks. When responsible parties are not available to conduct the response, States, acting under cooperative agreements will determine the need for and type of response actions. The Federal government will conduct responses only where the release constitutes a major public health emergency and no State authority or responsible party is able to respond in a timely manner. We anticipate that a Federal response will be minimal. In addition to responding to emergencies, a major priority for the Regions will be to negotiate cooperative agreements with the States.

Because the removal contracts and program personnel are experienced in conducting response actions, responsibility to undertake these few Federal actions will be assigned to them. The new Emergency Response Clean-up Services contracts and Technical Assistance Team contracts have been modified to include responses under Subtitle I of RCRA using UST Trust Fund appropriations. These contracts will be available for use later this fall.

UST program authorities are new authorities that are currently not delegated to the Regions. These provisions [Section 205 of SARA] amend the Solid Waste Disposal Act and are given, by statute, to the Administrator. Headquarters' sign-off will therefore be required on response actions in this area.

VII. IMPACT ON DELEGATIONS

A. Executive Delegations

Like CERCLA, the new law provides direct authority, in most cases, to the President rather than directly to EPA or another Federal agency. Some authorities in the new law will, therefore, have to be delegated to EPA and other Federal agencies through a revision to Executive Order 12316 before they can be implemented.

The new law affects current delegation of authority as well as future delegations of new authority. A list of authorities that have been delegated, as well as those that are new or changed, will be provided shortly.

B. Internal Delegations

Existing internal delegations also remain in effect unless they are in conflict with the new law, and/or are unavailable for delegation until the Executive Order is revised. The language of each existing internal delegation will be evaluated.

If an existing internal delegation is very specific, and a new provision is beyond the scope of the delegation, it is not automatically delegated to the Region and must be delegated.

LIST OF CONTACTS

TRANSITION GUIDANCE

PROVISIONS	NAME & TITLE	PHONE
Office of Emergency & Remedial Response		
Overview: Program Implementation/Guidance	Clem L. Rastatter Executive Officer	382-2180
Clean up Standards/ Permanent Remedy	Tom Sheckells, Chief Remedial Analysis Branch	382-2339
Applicable Appropriate & Relevant Standards	Arthur Weissman, Acting Chief Policy Analysis Staff	382-2182
State Issues	Sam Mborekas, Chief State & Regional Coordination Branch	382-2443
Health Authorities	Elaine Stanley, Deputy Director Hazardous Sites Control Division	382-4632
Grandfathering of Section 121	Elaine Stanley, Deputy Director Hazardous Sites Control Division	382-4632
Removal Provisions	Hans Crump, Chief Response Operations Branch	382-2188
UST Romoval Actions	Hans Crump Response Operations Branch	382-2188
Office of Waste Programs Enforcement		
Overview: Program Implementation/Guidance	John Cross, Chief Guidance & Oversight Branch	475-6770
Settlements/Notifications	Janet Farella, Chief Oversight & Documentation Section	382-2034
Administrative Records	Janet Farella, Chief Oversight & Documentation Section	382-2034
Indemnification & Response Action Contracts	Bob Mason, Chief Guidance Section	382-4015
Non-binding Allocation of Responsibility	Debbie Wood Policy Coordinator	475-8715

Guidance on Implementation of the "Contribute to Remedial Performance" Provision

Washington, DC 20460

EPA OSWER Directive Initiation Request

9360.0-13

2. Originator Information

Name of Contact Person	Mail Code	Office	Telephone Number
Jean Schumann	WH-548/B	OSWER, OERR, ERD	382-2190

Title

Guidance on Implementation of the "Contribute to Remedial Performance" Provision

Summary of Directive (Include brief statement of purpose)

Provides guidance to Regions on implementation of the SARA provision that requires removal actions to contribute to the efficient performance of long-term remedial actions.

Keywords

Superfund, CERCLA, SARA, Removal Action, Contribute to Remedial Performance

Does this Directive Supersede Previous Directive(s)? ☐ Yes ☒ No What directive (number, title)

Does It Supplement Previous Directive(s)? ☒ Yes ☐ No What Directive (number, title)

Implementation Strategy for Reauthorized Superfund: Short Term Priorities for Action

Draft Level

☐ A — Signed by AA/DAA ☐ B — Signed by Office Director ☐ C — For Review & Comment ☐ In Development

Request Meets OSWER Directives System Format

Signature of OSWER Office Directives Coordinator	Date
T. C. Hyde	4.3.87
Name and Title of Approving Official	Date
J. Winston Porter, Assistant Administrator/OSWER	4/6/87

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DIRECTIVE DIRECTIVE L

GUIDANCE ON IMPLEMENTATION OF THE "CONTRIBUTE TO REMEDIAL PERFORMANCE" PROVISION

1. INTRODUCTION

Section 104(b) of the Superfund Amendments and Reauthorization Act of 1986 (SARA) amends section 104(a) of CERCLA to include the statement that any removal action undertaken by the President, or by any other person referred to in section 122* of the new law, should, to the extent practicable, contribute to the efficient performance of any long-term remedial action with respect to the release or threatened release concerned. This guidance document explains how to implement this provision, and includes guidelines on the applicability of the requirements, the definition of "contribute to efficient performance," exceptions, documentation and coordination. This document should be used in conjunction with the general removal procedures described in the Superfund Removal Procedures -- Revision Number Two, August 20, 1984, or, as may be amended.

2. APPLICABILITY

This provision will be applicable to removal actions at all sites -- final National Priorities List (NPL), proposed NPL, and non-NPL. The term "long-term remedial action" as used in this provision will therefore refer to a remedial action to be taken by the EPA, State, or a private party.

3. DEFINITION OF "CONTRIBUTE TO EFFICIENT PERFORMANCE"

3.1 Purpose

This provision promotes the performance of removal actions that address threats more efficiently by considering the overall site cleanup before the start of the action. To the maximum extent practicable, removal actions should be designed to avoid wasteful, repetitive, short-term actions that do not contribute to the efficient, cost-effective performance of long-term remedial actions to be taken by the EPA, State, or other party. The major objective of this requirement is to provide maximum protection of public health and the environment at minimal cost by avoidance of removal restarts. The focus of this provision is on avoidance of restarts that are due to recurring threats that were not adequately abated in the original removal action, and threats from deteriorating site conditions that should have been foreseen.

There are other circumstances, however, where removal restarts may be necessary to meet program goals. For example, a removal action may be a phased response. The first removal action might involve site stabilization and waste

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*Section 122 refers to potentially responsible parties (PRPs) who have entered into settlements with EPA.

characterization. The site may then be demobilized and closed out to allow removal personnel to prepare an analysis of waste treatment/disposal options. Once an option is selected, a removal restart would be implemented to complete the waste disposition phase. In this case, the removal restart would actually contribute to achieving a more efficient cleanup. Removal restarts may also occur in an attempt to meet other program goals, such as pursuing responsible party (RP) cleanups or State assumption of removal action operation and maintenance requirements. An RP may take over a removal action from EPA, but EPA may have to initiate a restart if the RP is not performing an adequate cleanup. The "contribute to efficient performance" provision was not intended to conflict with these other program goals. As stated above, the provision was intended to reduce removal restarts due to inadequate planning at the start of the action.

3.2 Implementation

To meet the goal of avoiding removal restarts, response personnel must adequately assess the threats posed by the hazardous substances on a site and consider how the removal action would most effectively contribute to the long-term remedy. The following questions should be considered:

1. What is the long-term cleanup plan for the site?

This provision requires removal actions to contribute to the performance of the "long-term remedial action." At an NPL site, if the Record of Decision has already been signed, then comparing the removal action to the remedial cleanup plan is a straightforward task. However, for proposed NPL sites and for many final NPL sites, the remedial action may not have been selected when the removal action is implemented. In these cases, response personnel will be limited to identifying a range of feasible remedial alternatives. Response personnel need only review existing site information and use their best professional judgment. Removal and remedial personnel in the Region must coordinate with each other in this effort. It is the responsibility of the Region to establish appropriate coordination mechanisms.

At non-NPL sites, response personnel should, where practicable, consult with the party performing the long-term response action at the site (e.g., State, RP) to determine the proposed approach for the long-term cleanup. It is recognized that it may be more difficult to ascertain the remedial action at non-NPL sites. Response personnel should use their best efforts to coordinate with the party performing the long-term remedy. At many non-NPL sites, there may be no plans for another party to conduct a remedial action.

2. Which threats will require attention prior to the start of the long-term action?

The February, 1986 National Contingency Plan (NCP) broadened removal authority by allowing removal actions to be taken in response to "threats" rather than just "immediate and significant" threats.

This expanded authority will allow a removal action to address any near-term threats that may arise prior to the start of the long-term action, provided the threats meet the removal criteria established in section 300.65 of the current NCP. Potential threats should be identified when the first removal action at a site is implemented to avoid the need for future removal restarts. Therefore, in addition to identifying immediate threats, response personnel should also identify potential near-term threats from contaminant migration, deteriorating site conditions, etc. This assessment is particularly important if a decision is made to leave surface hazardous substances on site after the removal action is completed.

Response personnel must identify threats that may arise prior to the start of long-term actions, but the length of time before long-term actions will begin will vary from site to site. For example, for NPL sites where a ROD has been signed, the time frame that response personnel must consider will be shorter than for NPL sites where the Remedial Investigation/Feasibility Study (RI/FS) has just been initiated. Of course, at some NPL sites, the remedial program may plan to conduct an operable unit during the RI/FS if time permits. In this case, the time period to consider would again be shorter. Response personnel should consult with the party performing long-term action at the site to determine when such action will begin, and use their best professional judgment.

At non-NPL sites where there are no plans for another party to undertake a long-term cleanup, all threats and potential threats that meet the removal criteria in the current NCP should be identified.

3. How far should the removal action go to assure that the threats are adequately abated?

The expanded authority in the 1986 NCP will allow more complete removal actions to to be taken. Removal actions no longer have to stop when emergency situations are mitigated, but can continue, or be initiated, where needed to ensure that near-term threats are adequately abated. Measures that provide only temporary protection, insufficient to last until long-term actions begin, should be avoided to the extent possible. However, as noted above, consideration must also be given to the availability of other response mechanisms (e.g., State action, remedial operable unit) to initiate long-term action in a timely manner.

Whether or not the removal action should address all surface hazardous substances must be decided on a site-by-site basis. A removal action would be appropriate whenever surface hazardous substances may present a threat (as established in section 300.65 of the current NCP) before the start of long-term action. How the removal action should address the surface hazardous substances will also depend on site-specific conditions and the long-term cleanup plan. With the increased emphasis on using alternative technologies and new restrictions on land disposal, remedial actions may often include on-site treatment if surface contamination is extensive. In this case, the removal action may consist of consolidating and stabilizing the

substances on site to await treatment. It is important to design the removal action to ensure that the materials are adequately stabilized. At other sites, surface hazardous substances may constitute only a small part of the problem: may not be safely stabilized for a long period of time; or may be more efficiently addressed as one unit by immediate treatment or disposal. In these situations, it may be more appropriate for a removal action to include final disposition of all surface hazardous substances. The conditions at the site and the long-term cleanup plan will determine the appropriate scope of the removal response.

At non-NPL sites where there are no plans for another party to perform long-term remedial action, the threats that meet the removal criteria in the current NCP should be completely cleaned up, if possible. The avoidance of removal restarts due to recurring threats is the ultimate goal. If mitigation of the threats that meet the NCP removal criteria results in complete site cleanup (i.e., no further Federal response required), the "contribute to efficient performance" provision is fully satisfied.

In considering all of the factors described above, the major determinant of how far the removal action should go to assure threats are adequately abated will be the statutory limits on removal actions. Removal actions should contribute to the efficient performance of remedial actions to the maximum extent practicable given the $2 million/ 12 month limits on removal actions. (An exemption to the limits may be granted where the site qualifies under the "emergency" or "consistency" waivers.)

With regard to cleanup standards, this provision does not compel the removal program to lower its cleanup standards. Rather, the purpose of this provision is to improve the design of removal actions such that after cleanup standards are established for a removal site, the chosen removal action will address those substances targeted for cleanup in a manner that avoids the need for removal restarts. For example, the removal program has historically used 50 ppm as a benchmark in determining the appropriate extent of cleanup of PCB-contaminated soil. The "contribute to efficient performance" provision would not affect this number, but would direct that the method chosen to address soil contaminated above 50 ppm should be designed to avoid the need for removal restarts to the extent practicable.

4. Is the proposed removal action consistent with the long-term remedy?

The removal action that is chosen should be consistent with long-term actions at those sites where further cleanup will be taken. "Consistent" is defined in its broadest sense and may be characterized as a range of possible approaches. At one end of the spectrum, removal actions may be found consistent if they do not hinder or interfere with the remedial action to be taken. At the other end of the spectrum, removal actions may be found consistent because they contribute in a positive way

to the long-term cleanup plan. For example, a removal action to provide carbon filters to homes with contaminated drinking water as an interim measure would not interfere with a long-term remedial plan to clean up the contaminated aquifer. A removal action to solidify sludge could, however, hinder a long-term plan to incinerate the waste and should, therefore, be avoided if other approaches are feasible. A removal action to remove surface drums from a landfill could contribute in a positive way to a remedial plan to clean up the site.

Removal actions may be found consistent if they fall anywhere within this range; the most appropriate approach will depend on site-specific factors. It is recognized that in some cases, the removal action may create additional work for the remedial action and yet still be the most appropriate approach for the site. For example, a common removal action is capping contaminated soil to prevent migration and human contact in the time period before remedial actions begin. Although the cap would have to be removed to implement a long-term plan to excavate and treat the soil, it may still be the most effective method to mitigate the threat in the short-term. Protection of public health and the environment, as well as technical feasibility, must always be considered. If such an action is selected, the rationale for selection should be explained in the Action Memorandum. (See Section 5.)

The answers to these four questions will help determine what type of removal action is needed and how it can be designed to contribute to the efficient performance of long-term remedial actions. These questions are ided as general guidelines to indicate the various factors that should onsidered in implementing this provision of SARA. A written analysis of tne answers to each of these questions is not required. The conclusions should be documented in the Action Memorandum. (See Section 5.)

4. EXCEPTION

The only situation where it may not be feasible to consider how the proposed removal action relates to the long-term remedy is in an emergency. In such cases, response personnel may need to take whatever immediate measures are required to protect the public health, welfare, and the environment.

5. DOCUMENTATION AND COORDINATION

The Action Memorandum should specifically cite the "contribute to efficient performance" requirement and briefly discuss how the proposed removal action relates to long-term remedial actions, to the extent practicable. (See the Superfund Removal Procedures for information on the preparation of Action Memoranda.) If the proposed removal action completes the cleanup and no further action is required, this should be so noted. If only minimal information is available about long-term actions, this should also be explained. If an emergency existed that precluded an analysis of how the removal related to long-term actions, this should be noted. Finally, if pliance with this provision would conflict with other program goals (e.g., suit of RP cleanup), this shoud be explained.

Compliance with this requirement does not require special approval; the Action Memorandum should be approved by the established concurrence chain in the Region or in Headquarters, if appropriate. In making the determination, however, it will be the responsibility of the OSC to coordinate with the party that will undertake the long-term remedy (for those sites where additional cleanup measures will be taken).

Scope of the CERCLA Petroleum Exclusion Under Sections 101(14) and 104(a)(2)

cc PAS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

JUL 31 1987

OFFICE OF
GENERAL COUNSEL

MEMORANDUM

SUBJECT: CERCLA Petroleum Exclusion

FROM: Lisa K. Friedman
Associate General Counsel
Solid Waste & Emergency Response Division

TO: Addressees

Attached is OGC's long-awaited memo on the scope of the petroleum exclusion under CERCLA. If you have any questions about it, please call me (382-7706), Mark Greenwood (382-7703), or Carrie Wehling (382-7706).

Attachment

Addressees: Gene Lucero (WH-527)
Lloyd Guerci (WH-527)
Tom Adams (LE-133)
Steve Leifer (LE-134SO
[redacted] (WH-548)
Regional Counsels, Regions 1-X
Dave Buente, DOJ
Peggy Strand, DOJ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

JUL 31 1987

OFFICE OF GENERAL COUNSEL

MEMORANDUM

SUBJECT: Scope of the CERCLA Petroleum Exclusion Under Sections 101(14) and 104(a)(2)

FROM: Francis S. Blake
General Counsel (LE-130)

TO: J. Winston Porter
Assistant Administrator
for Solid Waste and Emergency Response (WH-562A)

One critical and recurring issue arising in the context of Superfund response activities has been the scope of the petroleum exclusion under CERCLA. Specifically, you have asked whether used oil which is contaminated by hazardous substances is considered "petroleum" under CERCLA and thus excluded from CERCLA response authority and liability unless specifically listed under RCRA or some other statute. For the reasons discussed below, we believe that the contaminants present in used oil or any other petroleum substance are not within the petroleum exclusion. "Contaminants", as discussed below, are substances not normally found in refined petroleum fractions or present at levels which exceed those normally found in such fractions. If these contaminants are CERCLA hazardous substances, they are subject to CERCLA response authority and liability.

Background

Under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 as amended (CERCLA), governmental response authority, release notification requirements, and liability are largely tied to a release of a "hazardous substance." Section 104 authorizes government response to releases or threatened releases of hazardous substances, or "pollutants or contaminants." Similarly, liability for response costs and damages under Section 107 attaches to persons who generate, transport or

dispose of hazardous substances at a site from which there is a release or threatened release of such substances. Under Section 103, a release of a reportable quantity of a hazardous substance triggers notification to the National Response Center.

The term "hazardous substance" is defined under CERCLA Section 101(14) to include approximately 714 toxic substances listed under four other environmental statutes, including RCRA. Both the definition of hazardous substance and the definition of "pollutant or contaminant" under Section 104(a)(2) exclude "petroleum, including crude oil or any fraction thereof", unless specifically listed under those statutes. 1/ Accordingly, no petroleum substance, including used oil, can be a "hazardous substance" except to the extent it is listed as a hazardous waste under RCRA or under one of the other statutes. Thus two critical issues in assessing whether a substance is subject to CERCLA is whether or not, and to what extent, a substance is "petroleum." This memorandum discusses the second type of petroleum exclusion issue. The question, therefore, is not whether used oil is "petroleum" and thus exempted from CERCLA jurisdiction, but to what extent substances found in used oil which are not found in crude oil or refined petroleum fractions are also "petroleum". If such substances are not "petroleum" then a release of used oil containing such substances may trigger CERCLA response actions, not to the release of used oil, but to the contaminants present in the oil.

1/ The full texts of these provisions are as follows:

Section 101(14)

. . . .

The term [hazardous substance] does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

Section 104(a)(2)

. . . .

The term [pollutant or contaminant] does not include petroleum, including crude oil and any fraction thereof which is not otherwise specifically listed or designated as hazardous substances under section 101(14)(A) through (F) of this title, nor does it include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas).

Although the term "hazardous substance" is defined by statu there is no CERCLA definition of "petroleum" and very little direct legislative history explaining the purpose or intended scope of this exclusion. None of the four early Superfund bills originally excluded responses to oil, although the apparent precursor to Section 101(14), found in S. 1480, excluded "petroleum" without explanation in all versions except that introduced. The legislative debates on the final compromise indicate only that Congress intended to enact later, separate superfund-type legislation to cover "oil spills." See generally 126 Cong. Rec. H11793-11802 (December 3, 1980).

Since the enactment of CERCLA, the Agency has provided some interpretations of the nature and scope of the petroleum exclusion. In providing guidance in 1981 on the notification required under Section 103 for non-RCRA hazardous waste sites the Agency stated that petroleum wastes, including waste oil, which are not specifically listed under RCRA are excluded from the definition of "hazardous substance" under 101(14). 46 Fed. Reg. 22145 (April 15, 1981). 2/

In 1982 and in 1983, the General Counsel issued two opinions on the CERCLA petroleum exclusion. In the first opinion, the General Counsel distinguished under the petroleum exclusion between hazardous substances which are inherent in petroleum, such as benzene, and hazardous substances which are added to or mixed with petroleum products. The General Counsel concluded that the petroleum exclusion includes those hazardous substances which are inherent in petroleum but not those added to or mixed with petroleum products. Thus, the exclusion of diesel oil as "petroleum" includes its hazardous substance constituents, such as benzene and toulene, but PCB's mixed with oil would not be excluded. Moreover, if the petroleum product and an added hazardous substance are so commingled that, as a practical matter, they cannot be separated, then the entire oil spill is subject to CERCLA response authority.

In the second opinion, the General Counsel concluded that the petroleum exclusion as applied to crude oil "fractions" includes blended gasoline as well as raw gasoline, even though refined or blended gasoline contains higher levels of hazardous

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2/ In the notice the Agency used the term "waste oil" without stating whether it was intended to include all waste oil or only unadulterated waste oil. The Agency has subsequently interpreted the reference to "waste oil" in this notice to include only unadulterated waste oil. 50 Fed. Reg. 13460 (April 4, 1985).

substances. The increased level of hazardous substances results from the blending of raw gasoline with other petroleum fractions to increase its octane levels. Because virtually all gasoline which leaves the refinery is blended gasoline, the petroleum exclusion would include virtually none of this fraction if the increased concentration of hazardous substances due only to its processing made it subject to CERCLA.

Finally, the Agency has interpreted the petroleum exclusion in two recent Federal Register notices. In the April 4, 1985 final rule adjusting reportable quantities under Section 102, the Agency provided its general interpretation of the exclusion:

> EPA interprets the petroleum exclusion to apply to materials such as crude oil, petroleum feedstocks, and refined petroleum products, even if a specifically listed or designated hazardous substance is present in such products. However, EPA does not consider materials such as waste oil to which listed CERCLA substances have been added to be within the petroleum exclusion. Similarly, pesticides are not within the petroleum exclusion, even though the active ingredients of the pesticide may be contained in a petroleum distillate: when an RQ of a listed pesticide is released, the release must be reported.

50 Fed. Reg. 13460 (April 4, 1985).

In March 10, 1986, the Agency published a notice of data availability and request for comments on the proposed used oil listing under RCRA. 51 Fed. Reg. 8206. In that notice, the Agency responded to commenters who had argued that the RCRA listing would discourage used oil recycling because it would subject generators, transporters, processors, and users to Superfund liability. The Agency stated that used oil which contains hazardous substances at levels which exceed those normally found in petroleum are currently subject to CERCLA. 51 Fed. Reg. 8206 (March 10, 1986). Although the fact that the used oil is contaminated does not remove it from the protection of the petroleum exclusion, the contaminants in the used oil are subject to CERCLA response authority if they are hazardous substances. Accordingly, most used oil, even without a specific listing, would not be fully within the petroleum exclusion, irrespective of the listing.

Discussion

Because there is no definition of "petroleum" in CERCLA or any legislative history which clearly expresses the intended scope of this exclusion, there are several possible interpretations which could be given to this provision. However, we believe that our current interpretation, under which "petroleum" includes hazardous substances normally found in refined petroleum fractions but does not include either hazardous substances found at levels which exceed those normally found in such fractions or substances not normally found in such fractions, is most consistent with the statute and the relevant legislative history. Under this interpretation, the source of the contamination, whether intentional addition of hazardous substances to the petroleum or addition of hazardous substances by use of the petroleum, is not relevant to the applicability of the petroleum exclusion. The remainder of this memorandum explains in greater detail this interpretation and its legal basis, and responds to arguments raised in opposition to this interpretation.

The following is our interpretation of "petroleum" under CERCLA 101(14) and 104(a)(2), which we believe to be consistent with Congressional intent and the position which the Agency has taken on the scope of the petroleum exclusion thus far. First, we interpret this provision to exclude from CERCLA response and liability crude oil and fractions of crude oil, including the hazardous substances, such as benzene, which are indigenous in those petroleum substances. Because these hazardous substances are found naturally in all crude oil and its fractions, they must be included in the term "petroleum," for that provision to have any meaning.

Secondly, "petroleum" under CERCLA also includes hazardous substances which are normally mixed with or added to crude oil or crude oil fractions during the refining process. This includes hazardous substances the levels of which are increased during refining. These substances are also part of "petroleum" since their addition is part of the normal oil separation and processing operations at a refinery in order to produce the product commonly understood to be "petroleum."

Finally, hazardous substances which are added to petroleum or which increase in concentration solely as a result of contamination of the petroleum during use are <u>not</u> part of the "petroleum" and thus are not excluded from CERCLA under the

exclusion. 3/ In such cases, EPA may respond to releases of the added hazardous substance, but not the oil itself.

We believe that an interpretation of "petroleum" to include only indigenous, refinery-added hazardous substances is the interpretation of this provision which is most consistent with Congressional intent. The language of the provision, its explanation in the legislative history, and the Congressional debates on the final Superfund bill clearly indicate that Congress had no intention of shielding from Superfund response and liability hazardous substances merely because they are added, intentionally or by use, to petroleum products.

The language of the petroleum exclusion describes "petroleum" principally in terms of crude oil and crude oil fractions. This language is virtually identical to the language used in an earlier Superfund bill to define "oil." 4/ There is no indication in the statute or legislative history that the term "petroleum" was to be given any meaning other than its ordinary, everyday meaning. See Malat v. Riddell, 383 U.S. 569, 571 (1966) (words of a statute should be interpreted where possible in their ordinary, everyday sense). Petroleum is defined in a standard dictionary as

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3/ The mixing of two or more excluded petroleum substances, such as blending of fuels, would not be considered contamination by use, and the mixture would thus also be an excluded substance.

4/ See H.R. 85, 96th Cong., 2d Sess. §101(s) (as passsed by the House, September 1980) (""Oil" means petroleum, including crude oil or any fraction or residue therefrom"). H.R. 85 was designed principally to provide compensation and assess liability for oil tanker spills in navigable waters. As discussed below, the omission of this "oil spill" coverage under the petroleum exclusion was believed to be the most significant omission in terms of response to environmental releases under the final Superfund bill.

Although the bill containing the precursor to Section 101(14), S. 1480, does not have a definition of "petroleum", its accompanying report did explain the term "petroleum oil" in the context of the taxing provisions:

> The term "petroleum oil" as used in subsection 5 means petroleum, including crude petroleum and any of its fractions or residues other than carbon black.

S. Rep. No. 96-848, 96th Cong., 2d Sess. 70 (1980).

> an oily flammable bituminous liquid that may vary from almost colorless to black, occurs in many places in the upper strata of the earth, is a complex mixture of hydrocarbons with small amounts of other substances, and is prepared for use as gasoline, naphtha, or other products by various refining processes.

Webster's Ninth New Collegiate Dictionary 880 (1985). Thus, an interpretation of the phrase "petroleum, including crude oil or any fraction thereof" to include only crude oil, crude oil fractions, and refined petroleum fractions is consistent with the plain language of the statute. 5/

The only legislative history which specifically discusses this provision states that

> petroleum, including crude oil and including fractions of crude oil which are not otherwise specifically listed or designated as hazardous substances under subparagraphs (A) through (F) of the definition, is excluded from the definition of a hazardous substance. The reported bill does not cover spills or other releases strictly of oil.

S. Rep. No. 96-848, 96th Cong., 2d Sess. 29-30 (1980) (emphasis added). Thus, the petroleum exclusion is explained as an exclusion from CERCLA for spills or releases only of oil. The legislative history clearly contemplates that the petroleum

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5/ This distinction under the exclusion in Title I of CERCLA between petroleum as the substance that leaves the refinery and the hazardous substances which are added to it prior to, during or after use was also made by Congress in Title II, the revenue provisions or CERCLA. In Title II, Congress made a distinction between "chemicals", petrochemical feedstocks and inorganic substances, taxed in Subchapter B of Chapter 38 of Internal Revenue Code, and "petroleum", crude oil and petroleum products, taxed in Subchapter A. Section 211 of CERCLA. The list of taxed chemicals includes many of the contaminant hazardous substances typically found in used oil: arsenic, cadmium, chromium, lead oxide, and mercury. The term "petroleum products" was explained in the legislative history as including essentially crude oil and its refined fractions. H. Rep. No. 96-172, Part III, 96th Cong., 2d Sess. 5 (1980) (to accompany H.R. 85).

exclusion will not apply to mixtures of petroleum and other toxic materials since these would not be releases "strictly of oil".

The Congressional debates on the final compromise Superfund legislation provides further clarification of Congressional intent concerning the scope of the petroleum exclusion, both in terms of what this provision deleted from the bill and what it did not. First, the major concern expressed with respect to the final compromise bill was the omission of its oil spill jurisdiction due to the petroleum exclusion. See e.g. 126 Cong. Rec. H11787 (Rep. Florio) (daily ed. December 3, 1980); id. at H11790 (Rep. Broyhill); id. at H11792 (Rep. Madigan); id. at H11793 (Rep. Studds); id. at H11795 (Rep. Biaggi); id. at H11796 (Rep. Snyder). This omission was of concern because it was believed to leave coastal areas and fisheries vunerable to tanker spills of crude and refined oil, such as the wreck of the Argo Merchant, and offshore oil well accidents. 126 Cong. Rec. H11793 (Rep. Studds) (daily ed. December 3, 1980). See also 126 Cong. Rec. S10578 (proposed amendment to S1480 by Sen. Magnuson) (daily ed. August 1, 1980); id. at S10845 (proposed amendment to S1480 by Sen. Gravel) (daily ed. August 5, 1980). The omitted coverage of oil spills was believed to include approximately 500 spills per year, 126 Cong. Rec. H11796 (Rep. Snyder) (daily ed. December 3, 1980), far less than the number of contaminated oil releases each year.

However, it was clear that the omission of oil coverage was intended to include spills of oil only, and there was no intent to exclude from the bill mixtures of oil and hazardous substances. The remarks of Rep. Mikulski are typical of the general understanding of the effect of the petroleum exclusion in the final bill:

> The Senate bill is substantially similar to the House measure, with the exception that there is no oil title.
>
> I realize that it is disappointing to see no oil-related provision in the bill, but we must also realize that this is our only chance to get hazardous waste dump site cleanup legislation enacted. . . .
>
> Moreover, there is already a mechanism in place that is designed to deal with spills in navigable waterways. There is not, however, any provision currently in our law that addresses the potentially ruinous situation of abandoned toxic dump sites.
>
> I, therefore, believe that it is imperative that we pass the Senate bill as a very important beginning in our attempt to defuse the ticking environmental time bomb of abandoned toxic waste sites.

Id. at H11796.

In addition, several speakers specifically identified such mixtures as releases not only covered by the legislation but releases to which the bill was addressed.

> Mr. Edgar ...
>
> In my State, hazardous substances problems have been discovered at an alarming rate in recent years. In the summer of 1979, an oil slick appeared on the Susquehanna River near Pittston, Pa. When EPA officials responded under section 311 of the Clean Water Act, they learned that the slick contained a variety of highly poisonous chemicals in addition to the oil.
>
> Officials estimate that more than 300,000 gallons of acids, cyanide compounds, industrial solvents, waste oil and other chemicals remain at this site where they could be washed to the surface anywhere in a 10-square - mile surface.

Id. at H11798. See also 126 Cong. Rec. S14963 (daily ed. November 24, 1980) (Sen. Randolph) (contaminated oil slick). Other petroleum products containing hazardous substance additives intended to be addressed by the legislation include PCB's in transformer fluid, id. at S14963 (Sen. Randolph) and S14967 (Sen. Stafford), dioxin in motor fuel used as a dust suppressant, id. at S14974 (Sen. Mitchell), PCB's in waste oil, id. (Sen. Mitchell) 6/ and contaminated waste oil, id. at S14980 (Sen. Cohen). Accordingly, Congress understood the petroleum exclusion to remove from CERCLA jurisdiction spills only of oil, not releases of hazardous substances mixed with the oil.

There are two principal arguments which have been raised in opposition to this interpretation. First, the argument has been made that this interpretation narrows the petroleum exclusion to the extent that it has became virtually meaningless. As we have noted in previous opinions on this issue, an interpretation which emasculates a provision of a statute is strongly disfavored. Marsano v. Laird, 412 F.2d 65, 70 (2d Cir. 1969). However, this interpretation leaves a significant number of petroleum spills outside the reach of CERCLA. Spills or releases of gasoline remain excluded from CERCLA under the petroleum exclusion. As indicated by the legislative history for the 1984 underground storage tank

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6/ The illegal disposal of PCB's in North Carolina described by Senator Mitchell was a result of the spraying of 131,000 gallons of PCB-contaminated waste oil along a roadway. See 126 Cong. Rec. H9448 (daily ed. September 23, 1980).

legislation, leakage of gasoline from underground tanks appears to be the greatest source of groundwater contamination in the United States. 130 Cong. Rec. S2027, 2028 (daily ed. February 29, 1984) (Sen. Durenberger). In addition, spills of crude or refined petroleum are not subject to Superfund, as was frequently noted prior to its passage. See generally 126 Cong. Rec. H11786-H11802 (daily ed. December 5, 1980). Moreover, under this interpretation not all releases of used oil will be subject to CERCLA since used oil does not necessarily contain non-indigenous hazardous substances or hazardous substances in elevated levels. 7/ Although used oil is generally "contaminated" by definition, see e.g., RCRA Section 1005 (36), the impurities added by use may not be CERCLA hazardous substances.

A second argument which has been made opposing this interpretation is that Congress intended to include in the term "petroleum" all hazardous substances added through normal use of the petroleum substance. However, even if it were possible to determine in a response situation whether a hazardous substance was added intentionally or only through normal use or to determine what additions are "intentional", the legislative history is contrary to such a distinction. As noted above, the Senate Report explaining this provision states that it excludes releases or spills strictly of oil. This explanation expresses Congressional intent that releases of mixtures of oil and toxic chemicals, i.e. releases which are not strictly of oil, would be subject to CERCLA response authority. Releases of contaminated oil even if contaminated due to "normal use" are not releases strictly of oil.

Furthermore, the Congressional debates prior to passage clearly indicate an intent that contaminated oil would be subject to Superfund as several such releases were discussed as the focus of the legislation. Congress was concerned with the environmental and health effect of abandoned toxic waste sites, not whether the presence of such hazards was intentional or due to normal practices. In fact, one of the petroleum-hazardous substance mixtures most often mentioned during the debates was that of PCB contaminated oil, which is a type of contamination arguably resulting from the "normal use" of the oil in transformers. Accordingly, an interpretation of the petroleum exclusion which includes as "petroleum" hazardous substances added during use of the petroleum would not be consistent with Congressional intent.

7/ Data submitted to EPA by the Utility Solid Waste Activities Group et al. in Appendix C of their comments on the RCRA Used Oil listing, February 11, 1986.

Finally, although the Superfund Amendments and Reauthorizat Act of 1986 (SARA) contains several provisions related to oil and oil releases, it did not amend the petroleum exclusion under CERCLA. Moreover, the new provisions concerning oil and oil releases and their legislative history do not indicate a Congressional intent inconsistent with this opinion.

The only discussion of "petroleum" in the Conference Report for SARA is in the context of defining the scope of the new petroleum response fund for leaking underground storage tanks under Subtitle I of the Resource Conservation and Recovery Act (RCRA). Subtitle I defines "petroleum" in a manner nearly identical to CERCLA. The Conference Report specifies that used oil would be subject to the response fund notwithstanding its contamination with hazardous substances. H. Rep. No. 99-962, 99th Cong., 2d Sess. 228 (1986). The Conference Report is not inconsistent with the Agency's position on "petroleum" under CERCLA since it merely specifies that the leaking underground storage tank (UST) response fund is applicable to tanks containing certain mixtures of oil and hazardous substances, as well as to tanks containing uncontaminated petroleum. In fact, the Report further states that the UST response fund must cover releases of used oil from tanks since "releases from tanks containing used oil would not rise to the priority necessary...for CERCLA response", id. (emphasis added), not because such releases would be entirely excluded from CERCLA jurisdiction. See also 132 Cong. Rec. S14928 (daily ed. October 3, 1986) (Senator Chaffee) (Nothing in Section 114, pertaining to liability for releases of recycled oil, "shall affect or impair the authority of the President to take a response action pursuant to Section 104 or 106 of CERCLA with respect to any release...of used oil or recycled oil"); 132 Cong. Rec. H9611 (daily ed. October 8, 1986) (Rep. Schneider) ("...the oil companies are rightfully assessed a significant share of the Superfund tax...Waste oils laced with contaminants have been identified at at least 153 Superfund sites in 32 States.").

Guidance on Non-NPL Removal Actions Involving Nationally Significant or Precedent-Setting Issues

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR -3 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Guidance on Non-NPL Removal Actions Involving Nationally Significant or Precedent-Setting Issues (OSWER Directive 9360.0-19)

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

TO: Director, Waste Management Division
Regions I, IV, V, VII, VIII
Director, Hazardous Waste Management Division
Regions III, VI
Director, Emergency and Remedial Response Division
Region II
Director, Toxics and Waste Management Division
Region IX
Director, Hazardous Waste Division, Region X
Director, Environmental Services Division
Regions I, VI, VII

Purpose:

This memorandum transmits guidance for identifying non-NPL removal actions that may be nationally significant or precedent-setting and establishes procedures for requesting Headquarters (HQ) concurrence. The guidance also outlines procedural requirements for five categories of removals which are of special interest from a national perspective, but which are **not** subject to the HQ concurrence requirement for nationally significant or precedent-setting removals.

Background:

Delegation 14-1-A (February 1987) and OSWER Directive 9360.0-12 (April 1987) require the concurrence of the Assistant Administrator for Solid Waste and Emergency Response (AA, OSWER) prior to initiation of removal actions taken at non-NPL sites where the proposed action is of national significance or precedent-setting. Redelegation R-14-1-A transfers authority to concur to the Director of the Office of Emergency and Remedial Response (OD, OERR); authority to non-concur remains with the AA, OSWER. The purpose of the concurrence requirement is to promote national consistency in the implementation of the Superfund removal program.

It is not anticipated that a large number of removal actions will pose issues requiring HQ concurrence. Assessment of the potential long-term implications of initiating certain removal actions is largely interpretive, however, and Regional personnel should consult this guidance whenever considering a removal action at a non-NPL site.

Objective:

The objective of this guidance is to ensure Regional compliance with HQ concurrence requirement for non-NPL removal actions involving nationally significant or precedent-setting issues. This document identifies categories of potential removal situations which have been determined to be of national significance or precedent-setting and specifies procedures for requesting HQ concurrence on these actions. The guidance also identifies categories of removals subject to special procedural requirements but not to the HQ concurrence requirement.

The types of removals subject to the concurrence requirement are not limited to those categories identified in the guidance. These categories are to be used by the Regions as a guide for screening proposed removals at non-NPL sites that may require HQ concurrence. Since evaluation of these sites is largely interpretive, final determinations regarding removals of a nationally significant or precedent-setting nature should involve consultation with Emergency Response Division (ERD) Regional Coordinators.

This interim final guidance is effective immediately. Additional revisions to the guidance will be considered as experience is gained and/or further policies are established that may affect the established categories and the HQ concurrence mechanisms.

Implementation:

I. NATIONALLY SIGNIFICANT OR PRECEDENT-SETTING CATEGORIES

Six categories of removals have been designated as nationally significant or precedent-setting. The list is not exhaustive and early consultation with the Emergency Response Division (ERD) is recommended where there are questions. In making the determination, the key considerations are:

(a) whether Fund-financed response to a particular incident will establish a precedent for when or how future response actions must be taken; or

(b) whether a response will commit EPA to a course of action that could have a significant impact on future resources, due to the widespread occurrence of a particular problem.

The categories identified and the rationale for identification are as follows:

1. **Removal actions at sites within the United States or its territories involving contamination or response actions that may affect other sovereign nations, including Indian tribes.**

Rationale: HQ concurrence will facilitate the execution of proper diplomatic protocol by the Department of State, and proper coordination with Indian tribes, the Bureau of Indian Affairs, the Indian Health Service, and other appropriate organizations, where applicable.

2. **Removals involving pesticide contamination arising from:**

   - **improper storage of pesticide products awaiting indemnification**
   - **lawful application of pesticides, including special local use pesticides**
   - **grain fumigation operations.**

   Rationale: HQ concurrence will ensure that the Agency avoids commitment to cleanup of widespread contamination beyond the intended scope of CERCLA.

3. **Removal actions at sites involving any form of dioxin when it is one of the principal contaminants of concern.**

   Rationale: HQ concurrence will ensure national consistency in dioxin cleanup. The Dioxin Disposal Advisory Group (DDAG) in HQ must review all dioxin removal actions to verify that the proposed action will provide an acceptable level of protection from dioxin exposure.

4. **Removal actions at sites involving releases from consumer products in consumer use (e.g., lead-contaminated soil resulting from peeling lead-based paint on houses).**

   Rationale: HQ concurrence will ensure that the Agency avoids a commitment to the cleanup of widespread non-point source contamination that is beyond the intended scope of CERCLA.

5. **Removals involving asbestos when it is the principal contaminant of concern.**

   Rationale: HQ concurrence remains necessary because action levels for response have not yet been set and these determinations are being made on a case-by-case basis.

6. **Removal actions involving substances or releases which may be subject to statutory exclusions or limitations in CERCLA. These include:**

- **substances excluded from Fund-financed response under the SARA section 101(14) definition of "hazardous substance" (e.g., petroleum products including crude oil, and natural gas or synthetic gas usable for fuel);**

- **releases excluded from Fund-financed response under the SARA section 101(22) definition of "release" (e.g., emissions from the engine exhaust of motor vehicles; releases of radioactive material from a nuclear incident; and releases caused by normally applied fertilizer);**

- **releases excluded from Fund-financed response under SARA section 104(a)(3) including releases of a naturally occurring substances; releases from products that are part of a structure and result in exposures within the structure; and releases in public or private drinking water supplies due to system deterioration from ordinary use.**

Specific examples of substances or releases that have raised statutory interpretation or related policy issues with respect to their eligibility for CERCLA removal action include radon contamination in building structures, pentachlorophenol (PCP) contamination in log cabins, releases from coal gasification facilities, methane gas releases, and asbestos in building materials in homes.

Rationale: HQ concurrence will ensure that statutory exclusions and limitations are interpreted in a consistent manner. HQ concurrence will also ensure consistent application of EPA's authority under CERCLA section 104(a)(4) to respond to any release or threat of release if it constitutes a public health or environmental emergency and no other person will respond in a timely manner.

Concurrence Procedures

Early screening for issues of a nationally significant or precedent-setting nature is essential to ensure timely HQ concurrence when necessary. OSCs should contact the appropriate ERD Regional Coordinator when a possible nationally significant or precedent-setting removal action is first identified, to alert the Regional Coordinator that a request for HQ concurrence will be forthcoming. OSCs should also call the Regional Coordinator for advice on actions that are not specifically listed in the guidance, but which may be nationally significant or precedent-setting. Some nationally significant removal actions may require special coordination and oversight by the National Incident Coordination Team (NICT). These types of removal actions are discussed in a November 10, 1986, memorandum from the AA, OSWER entitled "Relationship between Preparedness Staff and Office of Emergency and Remedial

Response during a Nationally Significant Incident," which states that OSCs should inform the Regional Coordinator when these types of incidents occur.

For those removal actions where HQ concurrence is required, written concurrence must be received prior to the Regional Administrator's (RA) formal approval of the Action Memorandum, except in cases of emergencies (i.e., situations where a response must be initiated within hours after completion of a site evaluation). HQ concurrence procedures for non-emergency removal actions at dioxin sites have been modified to streamline procedures. These non-emergency, emergency, and special dioxin concurrence procedures are discussed below.

Non-Emergency Removal Concurrence Procedures

All non-emergency concurrences must be requested through an Action Memorandum with a Request for Concurrence form attached. The Action Memorandum should be in final draft form, except that it should not be signed by the RA. The request form must be addressed from the RA to the OD, OERR and should describe the nationally significant or precedent-setting issue. This form has been developed in an effort to minimize the additional paperwork associated with obtaining HQ concurrence. A copy of the form is attached.

The RA may approve the Action Memorandum for a nationally significant or precedent-setting removal action once the action has been concurred upon by HQ. Additional HQ concurrence is required only if the scope of work described within the Action Memorandum changes significantly. In this case, HQ concurrence on the amended Action Memorandum is required, as discussed above, prior to any additional actions at the site. HQ concurrence is not required on requests for ceiling increases or time exemptions, unless the scope of work changes significantly. Most $2 million exemption requests require approval by the AA, OSWER, unless the consistency exemption authority for that site has been delegated to the RA.

Emergency Removal Concurrence Procedures

In cases where emergency removal actions, as defined above, involve nationally significant or precedent-setting issues, Regions may initiate a removal action without HQ concurrence. In these cases, however, OSCs must take only those actions necessary to mitigate the emergency or stabilize the site, and then inform the appropriate ERD Regional Coordinator on the next working day after the removal action was initiated.

If the response is determined to be nationally significant or precedent-setting but no further actions are required beyond the emergency mitigation, the Regions must send to the Director, OERR a copy of the Action Memorandum

submitted to the RA for that removal. The Action Memorandum should clearly describe the nationally significant or precedent-setting issues involved. A request for HQ concurrence is not necessary when the incident does not require actions beyond the initial emergency measures.

For those nationally significant or precedent-setting sites where further response is required beyond the emergency measures, HQ concurrence must be obtained before taking any further action. These concurrence requests are subject to the non-emergency procedural requirements described above. HQ will expedite the review of these requests to avoid delaying on-going removal actions.

Special Dioxin Concurrence Procedures

To reduce the administrative burden that the HQ concurrence procedures place on Regions with large numbers of dioxin sites, the non-emergency concurrence procedures have been modified. This modification permits the concurrence on a single dioxin site Action Memorandum to be used for multiple dioxin sites in the same Region. To qualify for this special concurrence procedure, the additional dioxin sites must have identical forms of dioxin present, and identical cleanup measures must be employed to achieve identical cleanup goals. Regions with multiple dioxin sites meeting these criteria may obtain concurrence for them all on a single Action Memorandum if supplementary information is supplied as described below.

The additional sites should be listed on the concurrence form if they are known at the time the original Action Memorandum is submitted. It should be specifically stated that the sites are identical in nature and that identical cleanup measures will be employed. If additional dioxin sites meeting the above criteria are discovered after receipt of the original HQ concurrence, the Regions are required to inform the appropriate ERD Regional Coordinator of the location of the additional removal actions. The Regions must also note within the Action Memorandum that previous concurrence on the cleanup approach has been provided.

II. REMOVAL ACTIONS SUBJECT TO SPECIAL PROCEDURAL REQUIREMENTS

The requirements established below apply to five removal categories that do **not** present nationally significant or precedent-setting issues requiring HQ concurrence, but instead involve issues that require special Regional procedures.

The five categories of removal actions and the policy for handling each are as follows:

1. **Removals involving mining sites.**

   Procedures: OSCs must consult with their ERD Regional Coordinator and demonstrate within the Action Memorandum that they have investigated other potential cleanup authorities (e.g., the Surface Mining Act) but found that a response could not be initiated under such authorities within the time frame required to protect human health, welfare, or the environment, or that these authorities do not apply to the particular response situation.

2. **Removals involving Federal facilities.**

   Procedures: Guidance on conducting removals at Federal facilities is under development. Until this guidance is effective, OSCs must confer with the ERD Regional Coordinators to ensure that the roles and responsibilities of the various agencies are assigned appropriately.

3. **Removals involving site-specific contracts.**

   Procedures: OSCs must coordinate with the HQ Procurement and Contracts Management Division (PCMD) to confirm that the contract Statement of Work (SOW) is consistent with the Action Memorandum and the SOW conforms with CERCLA and the NCP.

4. **Removals involving radiation sites.**

   Procedures: OSCs must contact the HQ Office of Radiation Programs for guidance on health and safety in conducting radiation cleanup activities.

5. **Removals involving business relocations.**

   Procedures: Action Memoranda for removals involving business relocations may be approved by the Regional Administrators, and other response activities comprising the removal may be initiated; however, until specific guidance is developed, OSCs must confer with ERD Regional Coordinators on business relocations prior to initiating the specific business relocation activities. This is to ensure national consistency in the criteria used to determine the need for business relocations, and the specific expenses incurred.

Comments and questions on this guidance should be directed to Betty Zeller in the Emergency Response Division, FTS 382-7735.

Attachment

cc: Superfund Branch Chiefs, Regions I-X
OHM Coordinators, Regions I-X
Betti Van Epps
Tim Fields
Betty Zeller

Subject: Request for Concurrence on Proposed Nationally Significant or Precedent-Setting Removal

From: Regional Administrator

To: Director
Office of Emergency and Remedial Response

The purpose of this memorandum is to request your concurrence on the proposed removal action at the _____ site in _____. Redelegation of Authority R-14-1-A gives you the authority to concur on nationally significant or precedent-setting removals.

The OSC has discussed this proposed removal with staff of the HQ Emergency Response Division. ERD has advised the OSC that this removal is considered nationally significant or precedent-setting because _____
_____.

The action memorandum is attached for your review. My approval awaits your concurrence.

Concur

_____ _____
Director, Office of Emergency and Remedial Response Date

According to the redelegation, authority to non-concur remains with the Assistant Administrator. If you choose not to concur on this action, please forward this memo to the Assistant Administrator.

Non-Concur:

_____ _____
Assistant Administrator for Solid Waste and Emergency Response Date

Concur:

_____ _____
Assistant Administrator for Solid Waste and Emergency Response Date

Final Guidance on Implementation of the "Consistency" Exemption to the Statutory Limits on Removal Actions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 12 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Final Guidance on Implementation of the "Consistency" Exemption to the Statutory Limits on Removal Actions (OSWER Directive 9360.0-12A).

FROM: Jonathan Z. Cannon
Acting Assistant Administrator

TO: Director, Waste Management Division
Regions I, IV, V, VII, VIII
Director, Hazardous Waste Management Division
Regions III, VI
Director, Emergency and Remedial Response Division
Region II
Director, Toxic and Waste Management Division
Region IX
Director, Hazardous Waste Division, Region X
Superfund Branch Chiefs, Regions I-X
Oil and Hazardous Materials Coordinators, Regions I-X

Purpose:

The purpose of this memorandum is to transmit final guidance on use of the exemption from the statutory limits on removals for actions that are otherwise appropriate and consistent with the remedial action to be taken.

Background:

On April 6, 1987, interim final guidance was issued on implementation of the revised statutory limits on removal actions which discussed procedures for using the new exemption contained in the Superfund Amendments and Reauthorization Act of 1986 (SARA). This exemption allows removals to exceed the statutory time and money limits of one year and $2 million where necessary to achieve consistency with the remedial action to be taken. This guidance is final and supersedes the interim final version of April 1987.

Objective:

The final guidance elaborates on the approach adopted in the proposed National Contingency Plan. Except in limited circumstances, use of the exemption from the statutory limits will be restricted to sites on the National Priorities List. Justification for use of the exemption will require that the removal action be "consistent" with the remedial action as defined in the guidance, and fall into at least one of the four categories of activities that are listed as "appropriate." Included with the guidance is a sample action memorandum demonstrating proper documentation of the justification.

Implementation:

1.0 Introduction

Section 104(e) of the Superfund Amendments and Reauthorization Act of 1986 (SARA) amends section 104(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) to raise the statutory limits on removal actions and establish a new exemption from those limits. Under SARA, the limits on removals increase from $1 million and six months to $2 million and 12 months.

The new exemption may be used if "continued response action is otherwise appropriate and consistent with the remedial action to be taken." It applies to any Fund-financed removal and thus encompasses State-lead as well as EPA-lead responses. Actions where the Agency has the lead, but is to be reimbursed by private parties or other Federal agencies, are still subject to the statutory limits and provisions for exemption.

Regional Administrators (RAs) are authorized to approve requests for exemption from the 12-month limit. The Assistant Administrator (AA), Office of Solid Waste and Emergency Response (OSWER) retains authority to approve requests for exemption from the $2 million limit, but may delegate that authority to RAs on a case-by-case basis.

2.0 Purpose of the Exemption

The "consistency" exemption in CERCLA 104(c) supports the new provision in CERCLA 104(a)(2) requiring removal actions to "contribute to the efficient performance of any long-term remedial action" (see OSWER Directive 9360.0-13). Together, the new CERCLA 104(a) provision and the "consistency" exemption in 104(c) are intended to promote and enhance efficiency and continuity in the Superfund program as a whole.

The 104(a) provision does this by ensuring that the removal program attempts to anticipate remedial action that will be needed and avoids taking

response actions that will impede the remedial action or result in wasteful restarts. The "consistency" exemption promotes efficiency by allowing removals to exceed the statutory limits for time and cost when to do so will result in lower overall cleanup cost as well as enhanced protection of public health and the environment.

3.0 Application of the "Consistency" Exemption

3.1 Criteria for Eligible Activities

As stated above, removal actions should take into account efficiency of the Superfund program as a whole. If there is no efficiency to be gained from continuing a removal action beyond the statutory limits, then the "consistency" exemption should not be used. In addition, in order to show that a proposed removal is "appropriate and consistent with the remedial action to be taken" it must be shown to meet the criteria for consistency in (a) and for appropriateness in (b) below:

(a) Consistency: At a minimum, the removal does not foreclose the remedial action.

This criterion is necessary to ensure that planned or expected remedies are not precluded by the removal. The "remedial action to be taken" is the remedial action that, prior to the start of the removal action, was planned or could reasonably have been expected to be taken. Certainly, the actual performance of the activities that are part of a planned or expected remedial action are consistent with that action. It may turn out that after a removal done under a "consistency" exemption, the Agency will decide not to take any further response action.

(b) Appropriateness: The activity is necessary for any one of the four following reasons:

1. To avoid a foreseeable threat.

This is an action that permanently abates a threat, as opposed to a temporary measure that, of necessity, will have to be repeated periodically, until the permanent remedy is performed.

2. To prevent further migration of contaminants.

This is an action taken to minimize the scope of the cleanup and the potential for harm to human health and the environment.

3. To use an alternative to land disposal.[1]

This criterion recognizes that procurement of alternative technology is more time-consuming and expensive than that of land disposal. CERCLA expresses preference for alternative technologies over land disposal.

4. To comply with the Off-site Policy.

This criterion recognizes that the standards required of facilities at which Superfund wastes may be disposed of may limit the number of available facilities. This in turn may cause delay in, or increase the cost of, disposing of site wastes.

3.2 Extension of Statutory Limits

For eligible activities, use of the "consistency" exemption to exceed the statutory limits of $2 million and 12 months will be considered in the following manner:

(a) Cost: Only reasonable increases will be granted. Generally, this means not more than $1 to $2 million above the statutory limits.

(b) Time: Limits on duration will be decided, based on the particular circumstances at the site.

3.3 Sites at Which Use of the Exemption is Appropriate

This exemption will be used primarily at sites listed on the National Priorities List (NPL). However, there may be limited circumstances when use of this exemption will be appropriate for non-NPL sites. Those instances are expected to occur only rarely, and will be determined by the AA, OSWER, on a case-by-case basis. In addition to the above criteria, the AA will generally consider the following factors when making that determination:

(a) the magnitude of the contamination and the threat to human health and the environment;

(b) the status of negotiations with potentially responsible parties;

---

[1] Procedures for analysis, justification, and documentation for emergency and time-critical actions can be found in the "Administrative Guidance for Removal Program Use of Alternatives to Land Disposal," August 1988, OSWER Directive 9380.2-1; for non-time-critical actions use the EE/CA Guidance memo from Tim Fields, March 30, 1988.

(c) the opportunity for widespread technology transfer; and

(d) whether the site is likely to be proposed for the NPL.

4.0 Approval Procedures

4.1 Documentation

The action memo requesting approval of the "consistency" exemption should document that the proposed activities meet the requirements under section 3.0, above.

4.2 Concurrences

In addition to any concurrences ordinarily obtained, where the site in question is proposed for or listed on the NPL, the appropriate official in the Region's remedial program must concur.

4.3 Approval

Regional Administrators (RAs) are authorized to approve requests for exemption from the 12-month limit for both NPL and non-NPL sites. The Assistant Administrator (AA), Office of Solid Waste and Emergency Response (OSWER) retains authority to approve all requests for exemption from the $2 million limit, but may delegate that authority to RAs on a case-by-case basis.

cc: Henry Longest
Bruce Diamond
Tim Fields
Russ Wyer
Lloyd Guerci

Clarification of Eligibility and Approval for Hazardous Duty Pay (Office of the Comptroller Transmittal No. 85-05)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

cc: Hank Crump
Steve Hester

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE
OAM Coordinators
Regions I-X
GAMS Staff
FYI,
10/8/85

MEMORANDUM

SUBJECT: Hazardous Duty Pay

FROM: Thad Juszczak

TO: OSWER Office Directors

The attached Office of the Comptroller Transmittal Number 85-5 provides procedures for authorizing hazardous duty pay and recording hazardous duty hours. Please ensure that the appropriate personnel are made aware of these policies and procedures. If you have any questions, please see me. Thank you.

Attachment

cc: Jack McGraw
Bruce Engelbert
Tina Parker
Dave Chamberlin
Rachel Hughes

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C. 20460

SEP 16 1985

OFFICE OF ADMINISTRATION AND RESOURCES MANAGEMENT

OFFICE OF THE COMPTROLLER
TRANSMITTAL NUMBER 85-5

SUBJECT: Clarification of Eligibility and Approval for Hazardous Duty Pay

FROM: John J. Sandy, Acting Director
Financial Management Division

TO: Financial Management Officers

Recently, a number of questions have been received concerning the hazardous duty pay differential. This Transmittal clarifies: 1) procedures for authorizing hazardous duty pay and 2) recording of hazardous duty pay on the Time and Attendance Report.

PROCEDURES FOR AUTHORIZING HAZARDOUS DUTY PAY

The following procedures guide the authorization of hazardous duty pay:

- Supervisors who believe that an employee has performed or will perform hazardous duty (as defined in the EPA Pay Administration Manual) are required to submit a written recommendation for hazardous duty pay to the operating personnel officer.
- Supervisors must ensure that work for which a hazardous duty premium is requested falls strictly within the criteria of the EPA Pay Administration Manual before recommending approval.
- The personnel officer will coordinate the recommendation with the local safety officer and the Director, Personnel Management Division, where necessary.
- If the hazardous duty pay differential is determined to be appropriate, the personnel officer will indicate approval by signing the recommendation and returning it to the supervisor.

- A hazardous duty premium may not be paid until an approved recommendation is received from the personnel officer.

Detailed procedures for the authorization of hazardous duty payments are contained in Chapter 9, Section 5 of the EPA Pay Administration Manual.

RECORDING HAZARDOUS DUTY HOURS

The following procedures apply to the recording of hazardous duty hours;

- Only employees for which a hazardous duty pay differential has been authorized are eligible for hazardous duty pay.
- The Time and Attendance Report must reflect total hours for which the hazardous pay differential is authorized. The differential is payable for the total hours during which the employee is in pay status on a calendar day, including overtime hours. When the tour of duty extends into another calendar day, the hazardous duty pay is charged to the day work began.
- Hazardous duty pay should be listed on the Time and Attendance Report as "Hours in Pay Status" under the heading "HAZ".

Chapters 3 and 4 of the EPA Timekeeping Manual provide additional information on the recording of hazardous duty hours.

INQUIRIES

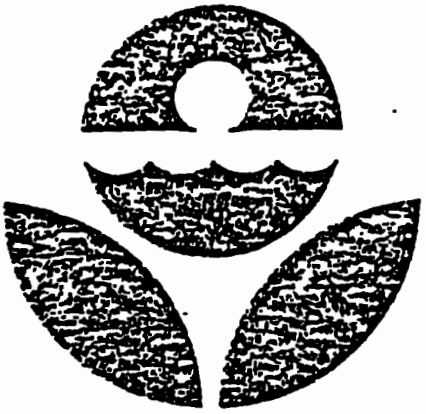
If you have any questions please contact Joe Nemargut of the Fiscal Policies and Procedures Branch on FTS 382-5113.

cc: Kym Davis (PM 212)
Management Division Directors
Senior Budget Officers

Addressees:
Chris O'Connor, Financial Management Officer, Region I
Ron Gherardi, Financial Management Officer, Region II
Bill Hoffman, Financial Management Officer, Region III
Conny Chandler, Financial Management Officer, Region IV
Richard Walker, Financial Management Officer, Region V
Richard Kenyon, Financial Management Officer, Region VI
Mary Jo Wallerstedt, Acting Financial Management Officer, Region VII
Alfred Vigil, Financial Management Officer, Region VIII
William Anning, Financial Management Officer, Region IX
Mildred Martin, Financial Management Officer, Region X
Alan Lewis, Financial Management Officer, Las Vegas
Rich Ruhe, Financial Management Officer, Cincinnati
Bill Laxton, Financial Management Officer, RTP-Durham
Vincette L. Goerl, HQ Accounting Operations Branch

Superfund Indirect Cost Manual for Cost Recovery Purposes (FY 1983 - FY 1986)

ENVIRONMENTAL PROTECTION AGENCY



SUPERFUND INDIRECT COST MANUAL

FOR COST RECOVERY PURPOSES

FY 1983 through FY 1986

OFFICE OF THE COMPTROLLER

OFFICE OF ADMINISTRATION AND RESOURCES MANAGEMENT

March 1986

Subject: Recovery of Superfund Indirect Costs

Recovering the costs of Superfund site clean-up from parties responsible for the contamination will be one of the major sources of replenishment of the Hazardous Substance Response Trust Fund (the Superfund) in the years ahead. In that regard, it is critical that EPA seek to recover all costs associated with clean-up. These costs should include all direct and indirect costs related to site clean-up.

Indirect costs are the costs necessary to operate the program but which cannot be attributed directly to specific sites. Examples include program management, indirect salaries and fringe benefits, administrative support, rent, and utilities. EPA has developed an indirect cost allocation system which allocates these indirect personnel and program overhead costs down EPA's organizational structure to Superfund sites. Determining the appropriate charges for each site is the ultimate objective for cost allocation.

While indirect costs are generally understood and accepted in the business community, they are not normally used in the government environment. Accordingly, I have directed that this manual be prepared to (1) provide an explanation of what indirect costs are and how EPA allocated them, and (2) to provide instructions to regional financial management personnel for calculating the amount of indirect costs which should be claimed in cost recovery actions.

The Superfund Accounting Branch, Financial Management Division, at EPA Headquarters will calculate indirect cost rates for each region for each fiscal year, beginning with fiscal year 1983. As rates for succeeding years are calculated, the Financial Management Division will issue transmittals to keep this manual up to date.

This manual has been provided to regional Financial Management Officers, Regional Counsels, Headquarters Legal Offices (OECM and OGC) and all Headquarters and regional Superfund Program Division Directors.

Suggestions for improvement or comments should be referred to George Alapas, Chief, Superfund Accounting Branch at FTS 382-2268. The address is:

EPA Headquarters
Superfund Accounting Branch, PM-226
401 M Street, S.W.
Washington, D.C. 20460

C. Morgan Kinghorn
Comptroller, EPA

Table of Contents

Introduction

The purpose of this manual is twofold:

(1) To provide an explanation of how EPA's indirect cost rates were developed, and

(2) To explain how those rates should be used to calculate indirect costs allocable to individual Superfund sites.

The first section includes an explanation of what indirect costs are, and why and how they are allocated so that an indirect cost rate can be developed. The purpose of the section is to provide an understanding of how this occurs so that Agency representatives can become comfortable enough with the concepts to defend them in negotiations and/or litigation.

The second section provides those rates that have been calculated for each region and an explanation of how they should be applied to derive indirect costs allocable to a given site. These costs should be pursued in cost recovery actions with the same intensity as direct costs.

Allocation Methodology

The purpose of this section is to present EPA's methodology for indirect cost allocation to Superfund sites in an understandable format for non-accountants. It is intended to assure the reader that the indirect costs claimed in cost recovery actions have been derived from the most accurate and defensible methodology available using generally accepted accounting principles. As such these indirect costs are valid and should be recognized as part of the total recoverable costs incurred by the Government in clean-up actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

This section answers relevant questions about Superfund site indirect costs. The specific questions this section addresses are as follows:

- What are indirect costs?
- What is cost allocation?
- Why and how did EPA develop an indirect cost allocation methodology for Superfund sites?
- What costs are allocated?
- What is the conceptual form of EPA's methodology?
- How does EPA apply the methodology to determine indirect cost rates for Superfund sites?
- What does an indirect cost rate represent?

The answers to these questions should provide a sufficient understanding of the indirect costs of a Superfund site that the reader will accept their validity as recoverable costs.

What are indirect costs?

Indirect costs are those costs which are necessary to the operation of the program and support of site clean-up efforts, but which cannot be directly identified to the efforts at any one site.

They range from costs closely related to site work -- pay earned by on-scene-coordinators while in training or awaiting the next clean-up assignment -- to costs not so closely related to site work -- a portion of the Administrator's time. While these costs are very different in their relationship to any

particular site, both are necessary and are incurred in support of the site clean-up program.

Other examples of indirect costs are:

- costs of site clean-up personnel while they are not cleaning specific sites, e.g., training, vacation, sick and holiday pay.
- all costs of non-site personnel, e.g., program managers; clerical support; and personnel, finance, contracts and other administrative support staff.
- office space costs such as rent and utilities for both site and non-site staff.

In summary, indirect costs are all costs attributable to the Superfund program that cannot be directly identified to a specific site.

What is cost allocation?

Cost allocation is the method by which indirect costs are assigned to one or more cost objectives. A cost objective is any activity for which a separate measurement of costs is desired. Examples include departments or services, such as the clean-up of Superfund sites. Cost allocation is done to develop the full cost of a cost objective including direct and indirect costs for any number of reasons -- for EPA the reason is cost reimbursement.

Why did EPA develop an indirect cost allocation methodology for Superfund sites?

It is universally acknowledged by the business world that indirect costs are a real part of the total costs of any product or service. In that context EPA is concerned with indirect costs because they are a real part of the total cost of response at hazardous waste sites. As such, it is EPA policy to seek recovery of "all costs...incurred by the United States Government," as stated in Section 107 (a)(4)(A) of CERCLA.

How was that methodology developed?

To provide a sound and defensible basis for determining indirect costs, EPA decided to develop a formal indirect cost allocation methodology. To ensure that the methodology would be based on appropriate accounting principles, EPA contracted with the international accounting firm of Ernst and Whinney. Ernst and Whinney was tasked with developing an indirect cost allocation methodology which would most accurately reflect the level of indirect support provided to Superfund sites by EPA

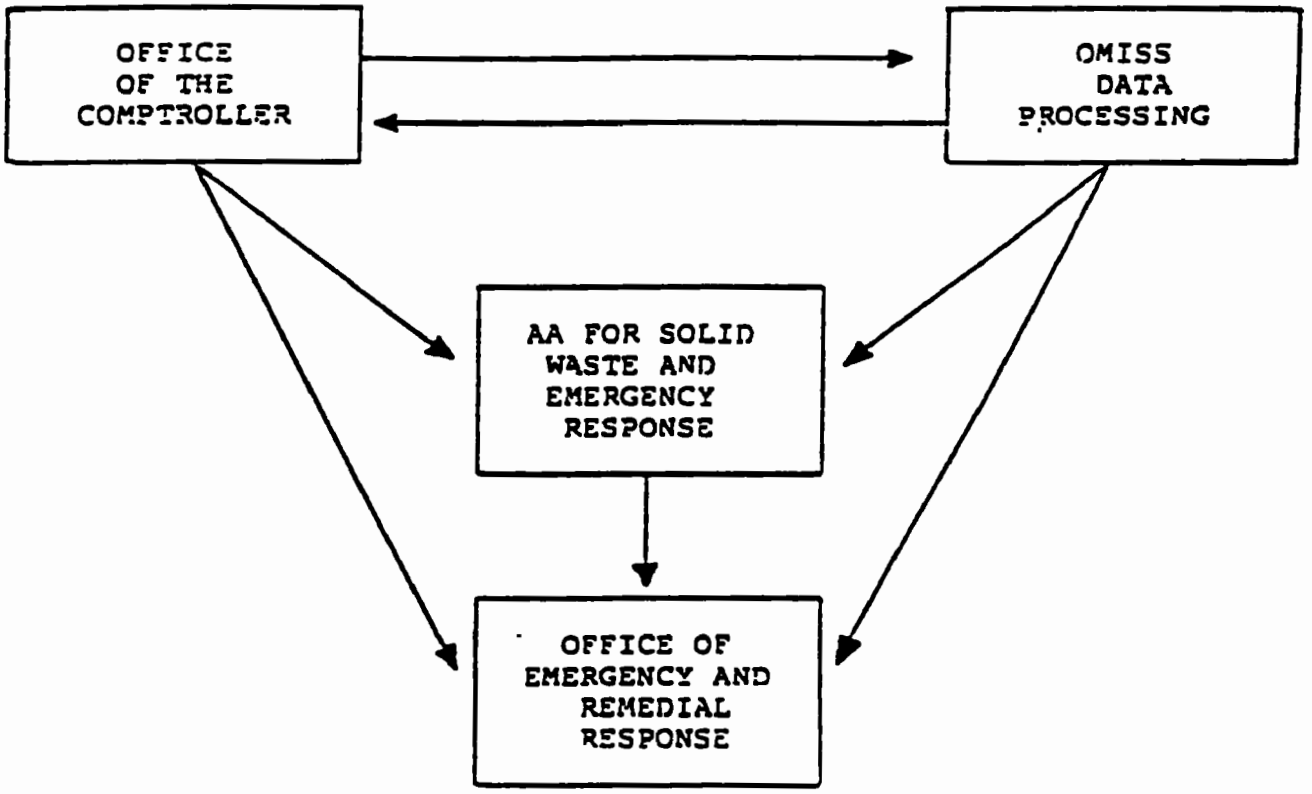
organizations. This section describes the decision making process EPA and Ernst and Whinney went through to decide upon the most appropriate methodology.

Development of a cost allocation methodology requires 1) selecting a method, 2) selecting how to accumulate costs, and 3) selecting the allocation bases that link the cost objectives to the costs themselves. An allocation base is that which defines the various recipients of the support provided by an organization as well as the proportionate amount of that organization's costs which should be allocated to each of those various recipients.

Selecting the method

Selection of a particular method of allocation is dictated by concerns about accuracy and practicality. The various levels of accuracy provided by each of the generally accepted alternative methods is dictated by the degree to which each method recognizes the concept of support department interdependency. The following is an illustration of this concept.

Example of Support Department Interdependency



In this example, the Comptroller provides support to Data Processing, but the support is mutual -- in reality each supports the other. Both support departments, in turn, support the Assistant Administrator for OSWER and OERR, separately.

Only the cross allocation method adequately recognizes the type of support department interdependency displayed in this example. The cross allocation method is defined as explicitly recognizing the mutual services rendered among all departments. For this reason, the cross allocation method is universally considered the most accurate and defensible of all methods. EPA's need for just such a method led to the adoption of this method over less accurate methods.

Selecting how to accumulate costs

EPA's Financial Management System (FMS) is designed to accumulate costs by allowance holder. Allowance holders (AHs) are responsible for the day to day management of EPA resources. Allowance holders are generally identified with the Assistant Administrator (AA) organizational level. Responsibility for control of resources is further delegated to and accounted for by responsibility centers (RCs). Responsibility centers are usually assigned to division level organizations. This AH/RC design allows identification of costs to organization units down to division level. The ability to accumulate costs by division enabled Ernst and Whinney and EPA to study EPA's organizational units at the division level for support relationships to other organizational units; to the Superfund program; and to Superfund sites, the final cost objectives.

Selecting the allocation bases

Cost accounting literature provides guidance and principles governing the selection of bases used for distributing support costs. The guidance and principles are quite technical and are not presented here. However, Ernst and Whinney adhered to those principles in selecting the allocation bases that best reflect the support provided by each of those organizations which are allocable within the principles of cost allocation.

What costs are allocated?

EPA's funding generally falls into appropriations for Salaries and Expenses, Research and Development, Abatement and Control, Construction Grants, Buildings and Facilities, and Superfund. Indirect costs that are allowable for allocation -- i.e., costs that support Superfund -- are expended from EPA's appropriations for Salaries and Expenses and for Superfund. Therefore, only costs paid from those two appropriations were reviewed for possible allocation.

Within those appropriations, costs specifically excluded from allocation are 1) capital costs, which are considered investments rather than operating expenses related to a given fiscal year, and 2) costs charged directly to Superfund sites, i.e., direct costs. Specifically, the indirect costs which are allocated are as follows:

- salaries and fringe benefits
- EPA travel and transportation
- rent, communications, and utilities
- printing and reproduction
- supplies and materials
- other contractual services.

What is the conceptual form of EPA's methodology?

EPA's cost allocation methodology is a three stage process which allocates the indirect costs from higher level organizations down EPA's organizational structure through two intermediate levels to the final cost objectives -- Superfund sites. The first intermediate level is the Assistant Administrator organizational level, and the second intermediate level is the regional program division organizational level -- that which works most closely with the Superfund sites themselves.

Stage 1

The first stage's basic function is to allocate Headquarters support costs to the Agency's major "Assistant Administrator (AA)" organizational level, i.e. Headquarter's Program AAs -- Pesticides and Toxic Substances; Air, Noise and Radiation; Water; Research and Development; and Solid Waste and Emergency Response (OSWER) -- and Regional Administrators (RAs). An organization chart for EPA Headquarters is presented at the end of this section (page I-8) to aid this discussion. Temporary cost pools are created to receive the allocation to the "AA" level. Dollars allocated to the cost pools for the Headquarters program AAs for Pesticides and Toxics; Air, Noise and Radiation; Water; and Research and Development are not brought forward to Stage 2 for allocation to lower organizational levels because they are non-allocable.

They are considered non-allocable to Superfund because with the exception of Research and Development, they do not support Superfund. While Research and Development does support Superfund, the beneficial relationship to actual site work is often tenuous. Accordingly, we did not allocate it. The cost pools formed in Stage 1 to accumulate costs that are allocated to the AA for OSWER and the Regional Administrators are brought forward to Stage 2 for further allocation because OSWER supports Superfund and the Regional Administrators support their regions.

Stage 2

The second stage's basic functions are (1) to allocate the allocable cost pools formed in Stage 1 (OSWER and the Regional Administrators) to lower organizational levels (division level) within OSWER and the Regions, (2) to allocate OSWER administrative support organizations to lower level OSWER organizations and (3) to allocate Regional administrative office costs (the Regional Administrator, Regional Counsel, Policy and Management, etc.) support costs to regional program divisions (Air Management, Waste Management, Water Management, and Environmental Services). The authorized regional organization chart is presented at the end of this section (page I-9) to provide a visual representation of regional organizations.

Stage 3

The third stage's basic functions are 1) to allocate lower level OSWER organizations to three final cost pools -- Superfund sites, Superfund in general, and non-Superfund; and 2) to allocate regional program division costs to those same three final cost pools. Regional indirect cost rates can be calculated after costs have been allocated in the third and final stage of the allocation.

Automating the allocation of costs

EPA chose to automate the allocation because the cross-allocation methodology adopted by EPA involves many repetitive calculations. EPA chose to use Ernst and Whinney's cross-allocation software (GOVCOST). This software is also used by several State and local governments to perform their indirect cost allocations. In that context, the GOVCOST software has been approved by several Federal government agencies for use by State and local governments in determining indirect costs that are allocable to Federal programs and allowable for reimbursement.

How does EPA apply the methodology to determine indirect cost rates for Superfund sites?

The basis on which costs are allocated from regional program divisions to Superfund sites, Superfund in general, and non-Superfund cost pools is according to the proportion of regional program division employee hours charged to each of those categories. This allocation basis is used because Ernst and Whinney and EPA studied regional program divisions and determined that where the employees of those divisions charged their time was the best measure of support provided to each of those categories by those divisions. Once costs have been allocated to the final three cost pools mentioned above, EPA calculates an indirect cost rate for each region. Using their individually derived rate, each

region can apply indirect costs to each of its individual Superfund sites.

The rate for any region is calculated by dividing the costs allocated to that region's Superfund site cost pool by the number of regional program division hours charged to sites. For example, if the total cost allocated down EPA's organizational structure to a region's Superfund site cost pool is $1,500,000, and the total regional program division hours charged to that region's sites is 21,000 hours, the indirect cost rate for that region is $71 per hour of regional program division labor.

$$\frac{\$1,500,000}{21,000} = \$71.43, \text{ or } \$71 \text{ rounded to the nearest dollar.}$$

What does the indirect cost rate represent?

Using the above example, assume that the region had only three sites, and the 21,000 regional program division hours were charged to sites as follows:

Site A = 1,000 hours
Site B = 15,000 hours
Site C = 5,000 hours

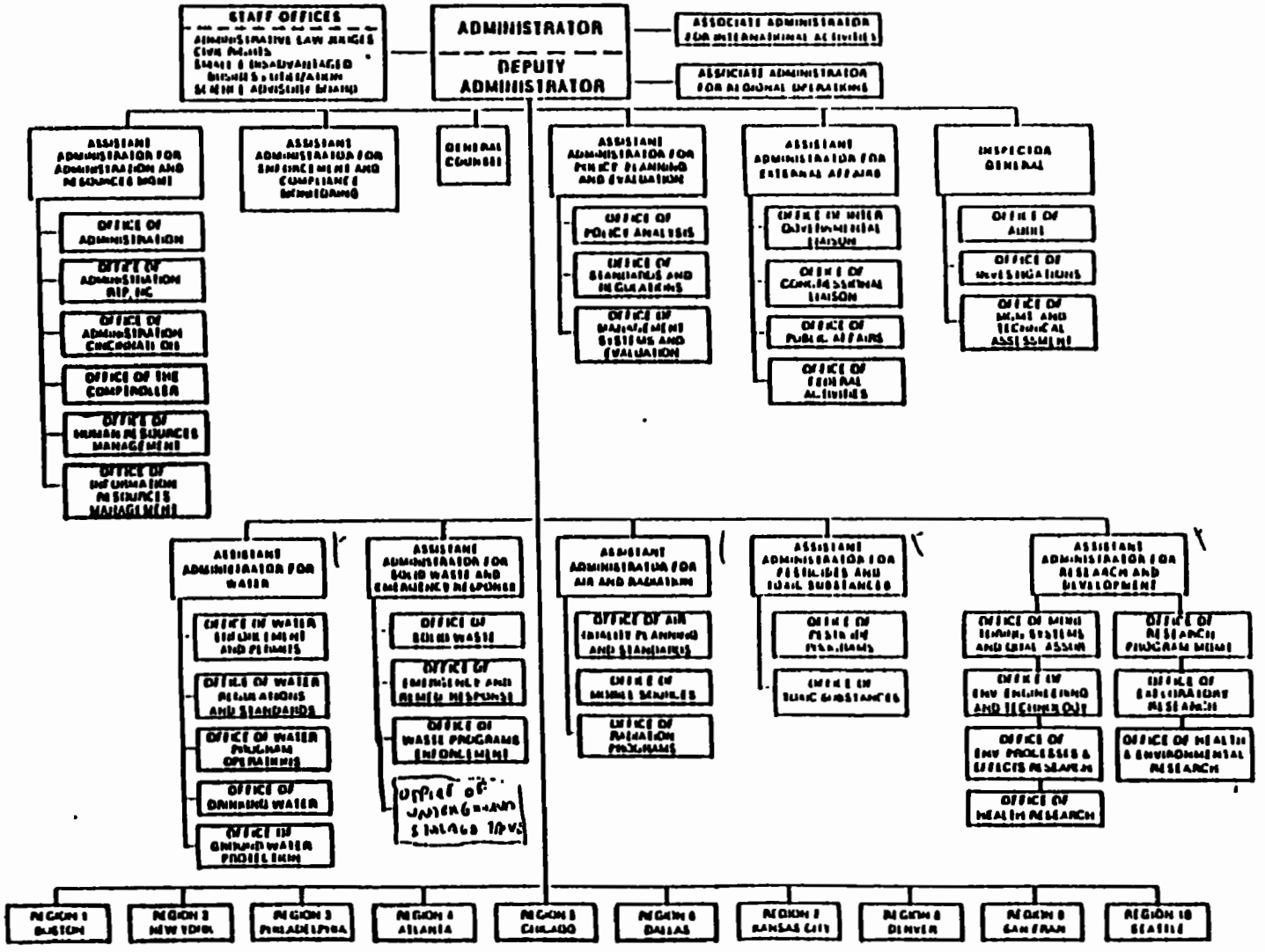
Total = 21,000 hours.

Indirect costs for those sites would be as follows:

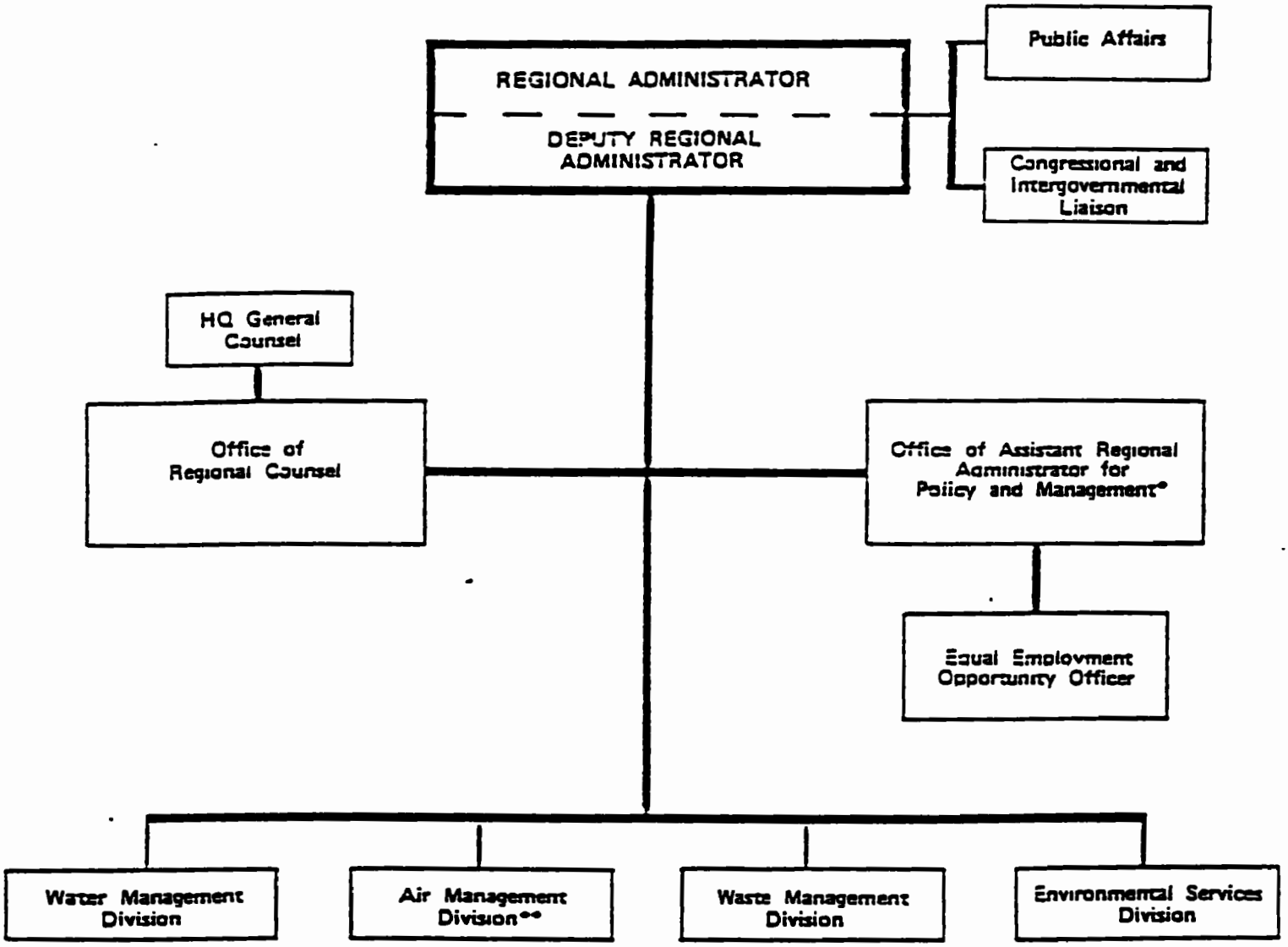
Site A indirect costs = $71 x	1,000 hours =	$ 71,000
Site B indirect costs = $71 x	15,000 hours =	$1,065,000
Site C indirect costs = $71 x	5,000 hours =	$ 355,000
Total		$1,500,000.

The rate is merely a means of determining an individual site's share of the indirect costs allocated to the Superfund sites cost pool.

U.S. Environmental Protection Agency



AUTHORIZED EPA REGIONAL ORGANIZATION



* Alternative Regional organization may reflect Management Division concept.
** Alternative Regional organization may reflect a single Division including Air and Waste Management functions.

EPA Indirect Cost Rates and Explanation of Use

This section has four purposes:

1) provide rules to follow in applying regional indirect rates to individual Superfund sites;

2) issue instructions for including indirect costs in a site's cost documentation package;

3) provide the regional indirect cost rates for each region and fiscal year;

4) provide a worksheet to calculate the indirect costs to be claimed in a Superfund site's cost recovery action.

Rules for Applying the Rates

Rule #1

A region's indirect cost rate must only be applied to hours charged to a site by regional program division personnel. This is because that rate has been derived by dividing the indirect costs allocated to a region's Superfund site cost pool by only the number of hours charged to sites by regional program division personnel. For example, expanding the example used in Section I, assume the total number of hours charged to sites is as follows:

	Regional Program Divisions	Regional Administrative Divisions	Headquarters Offices
Site A	1,000	200	50
Site B	15,000	3,500	2,000
Site C	5,000	1,500	500
Total	21,000	5,200	2,550.

If the $71 rate was applied to all regional hours charged to sites in the region, the total calculated indirect costs for sites would be:

Site A: (1,000 hours + 200 hours) x $71 = $ 85,200
Site B: (15,000 hours + 3,500 hours) x $71 = $1,313,500
Site C: (5,000 hours + 1,500 hours) x $71 = $ 461,500

Total: (21,000 hours + 5,200 hours) x $71 = $1,860,200.

This calculation of indirect costs is obviously incorrect because the total indirect costs allocated to the region's cost pool for Superfund sites was only $1,500,000 as developed in Section I. This example reflects the critical importance of this rule.

Exception to Rule #1

There is one and only one exception to rule #1. The exception applies only to regions 3 and 4. The exception is required because the accounting structure of regions 3 and 4 do not permit distinction between program division and administrative division hours. Therefore, the total regional division hour charges was the allocation basis used to allocate costs from regions 3 and 4 program divisions to the Superfund site, Superfund in general, and non-Superfund cost pools.

Additionally, the indirect cost rates for regions 3 and 4 were derived by dividing costs allocated to the Superfund site cost pool by the number of hours charged to sites by all regional divisions (program and administrative). Therefore, regions 3 and 4 must apply their indirect cost rates to all regional hours charged to a site in order to calculate the correct amount of indirect costs for that site.

Rule #2

The indirect cost rate for a fiscal year must only be applied to hours that relate to that fiscal year. Cost accounting principles dictate that indirect cost rates should be calculated for a specific period of time, generally a fiscal year. EPA calculates indirect cost rates for each fiscal year. EPA uses the latest calculated rates as provisional rates until the next fiscal year's rates can be calculated.

Indirect costs and the cost documentation package

This manual is intended to support and defend the indirect costs that are being claimed in cost recovery actions. It has been written for the non-accountant to best serve that role. Therefore, the indirect cost portion of the cost documentation package should consist of a copy of this manual with only the applicable regional rate reference sheet and calculation work-sheet. Any requirements for a more detailed discussion of EPA's indirect costs claimed should be directed to the Superfund Accounting Branch.

Indirect cost rate reference sheet and worksheet

The remainder of this section provides, by region, the indirect cost rates for each fiscal year and a worksheet that will display the application of a region's indirect cost rates which produces the amount of indirect costs claimed in cost recovery for a Superfund site. The completed worksheet and a copy of this manual should serve as the support and documentation of the amount of indirect costs claimed. The fully documented regional program division hours on which a site's indirect costs are calculated are, and will continue to be, part of the documentation for direct site costs.

UPDATED REGIONAL REFERENCE AND WORKSHEETS FOR CALCULATING INDIRECT COSTS FOR COST RECOVERY PURPOSES ARE ATTACHED TO THE SUPERFUND INDIRECT COST UPDATE MEMORANDUM ISSUED BY VINCETTE L. GOERL, DIRECTOR OF FINANCIAL MANAGEMENT DIVISION (PM-226)

Superfund Indirect Cost Update

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
ADMINISTRATION
AND RESOURCES
MANAGEMENT

MEMORANDUM

SUBJECT: Superfund Indirect Cost Update

FROM: Vincette L. Goerl, Director
Financial Management Division (PM-226)

TO: Assistant Regional Administrators
Regional Management Division Directors

Gene Lucero, Director
Office of Waste Programs Enforcement

Edward E. Reich
Associate Enforcement Counsel
For Hazardous Waste Enforcement

In March, 1986, the Comptroller issued the Superfund Indirect Cost Manual for Fiscal Years (FY) 1983, 1984, 1985, and 1986 which provided indirect cost rates to be used in Superfund cost recovery actions. The manual also furnished guidance on the application of the rates along with an explanation of the methodology employed.

The purpose of this memorandum is to update information contained in the manual by (1) providing new rates for FYs 1983-86 and a provisional rate for FY 1987, (2) clarifying the distinctions between provisional rates and final rates, and (3) apprising you of our plans regarding indirect costs during FY 1987.

Attached are revised pages to the Manual providing the new rates which should be used by the regional financial management offices in computing indirect costs for cost recovery actions. The rates should be applied in the same manner as explained in Section II of the Manual. You will note that the rates for FYs 1983 and 1984 are labelled "Final" while the FY 1985-87 rates are termed "Provisional." The general distinction is that final rates are based on the actual costs incurred during the year, whereas provisional rates are interim, temporary rates to be used until actual costs are known and final rates can be computed. EPA's policy for determining provisional rates is to use the rates from the latest fiscal year for which rates based on actual costs have been computed. Since FY 1984 is the latest such year, the FY 1984 rates are used as provisional rates for 1985-87.

In addition to being based on the actual incurred costs for the year, final rates also reflect adjustments recommended by auditors from the Office of the Inspector General (OIG). The OIG has completed most of the fieldwork on audits of FY 1983 and 1984. They have recently begun the FY 1985 and FY 1986 audit.

Ideally, final rates should be the basis for determining the indirect costs allocable to a site since they are based on actual costs. In reality, many cost recovery actions are scheduled for completion before final rates are known. In such cases, it is acceptable to use the provisional rates. EPA's policy of provisional rate determination based on latest known final rates is a common and accepted practice utilized by numerous government contractors and grantees.

Our goals regarding indirect costs for FY 1987 include the following:

1. Computation and issuance of FY 1985 and 1986 final rates.

2. Analysis of the rate computation methodology for possible revisions.

3. Evaluation of the existing indirect cost documentation with an eye towards revision (e.g. the Manual) and/or issuance of new material.

4. Conducting training courses or workshops on indirect costs for Regional and Headquarters personnel.

5. Examining the feasibility of incorporating indirect costs into the Superfund accounting and financial reporting process.

The attached pages should be substituted for the corresponding pages in the Manual. Please direct any questions or comments to William Cooke of the Superfund Accounting Branch on (202) 382-2880.

Attachments

cc: David P. Ryan
Budget Division
Regional Comptrollers

REGION I

Reference Sheet For Calculating Indirect Costs For Cost Recovery

	Final		Provisional		
Region I's Indirect Cost Rate Per Direct Labor Hour:	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
	$ 62	$ 60	$ 60	$ 60	$ 60

Allowance Holder/Responsibility Centers To Which The Indirect Rate Should Be Applied:

Code	Title	Year Applicable (X)				
		FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
01C	Air Division	X	X	X	X	X
01L	Water Division	X	X	X	X	X
01N	Environmental Service Division	X	X	X	X	X
01R	Waste Management Division	X	X	X	X	X

REGION I

SITE #:_____ SITE NAME:_____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

	Direct Hours (i.e., Total Regional Hours)				Total Hours	X	Rate	=	Subtotal
	01C	01L	01N	01R					
FY 1983							$62		
FY 1984							$60		
FY 1985							$60		
FY 1986							$60		
FY 1987							$60		

TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY _____

REGION II

Reference Sheet For Calculating Indirect Costs For Cost Recovery

	Final		Provisional		
Region II's Indirect Cost Rate Per Direct Labor Hour:	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
	$ 68	$ 68	$ 68	$ 68	$ 68

Allowance Holder/Responsibility Centers To Which The Indirect Rate Should Be Applied:

Code	Title	Year Applicable (X)				
		FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
02C	Caribbean Field Office	X	X	X	X	X
02D	Emergency and Remedial Response Division	X	X	X	X	X
02M	Air and Waste Management Division	X	X	X	X	X
02N	Water Mangement Division	X	X	X	X	X
02P	Environmental Services Division	X	X	X	X	X

REGION III

SITE #:_____ SITE NAME:_____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

Direct Hours (i.e., Total Regional Hours)	Total Hours	X	Rate	=	Subtotal
FY 1983 (Final)			$52		
FY 1984 (Final)			$52		
FY 1985 (Provisional)			$52		
FY 1986 (Provisional)			$52		
FY 1987 (Provisional)			$52		
					_____
			TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY		_____

REGION II

SITE #:_____ SITE NAME:_____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

	Direct Hours (i.e., Total Regional Hours)					Total Hours	X	Rate	=	Subtotal
	02C	02D	02M	02N	02P					
FY 1983								$68		
FY 1984								$68		
FY 1985								$68		
FY 1986								$68		
FY 1987								$68		

TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY

REGION IV

SITE #:_____ SITE NAME:_____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

Direct Hours (i.e., Total Regional Hours)	Total Hours	X	Rate	=	Subtotal
FY 1983 (Final)			$59		
FY 1984 (Final)			$54		
FY 1985 (Provisional)			$54		
FY 1986 (Provisional)			$54		
FY 1987 (Provisional)			$54		
					_____
TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY					_____

REGION

Reference Sheet For Calculating Indirect Costs For Cost Recovery

	Final		Provisional		
Region V's Indirect Cost Rate Per Direct Labor Hour:	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
	$ 71	$ 61	$ 61	$ 61	$ 61

Allowance Holder/Responsibility Centers To Which The Indirect Rate Should Be Applied:

Code	Title	Year Applicable (X)				
		FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
05E	Dir. Office Waste Mgmt/Emerg. Response	X	X	X	X	X
05F*	Waste Management Division - Superfund	X	X	X	X	X
05G	Hazardous Waste Enforcement Branch	X	X	X	X	X
05H	Great Lakes Coordinator	X	X	X	X	X
05L	Air Division	X	X	X	X	X
05P	Water Division	X	X	X	X	X
05Q	Waste Management Division - Non-Superfund	X	X	X	X	X
05R	Environmental Services Division	X	X	X	X	X
05W	Central Regional Lab	X	X	X	X	X
05Y	Eastern Office	X	X	X	X	X
05Z	S&A Central District Office	X	X	X	X	X

* 05F was Emergency and Remedial Response Branch in FYs 1983-86 but nonetheless should be used in calculating indirect costs for those years.

REGION V

SITE #:_____ SITE NAME:_____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

	Direct Hours (i.e., Total Regional Hours)					Total Hours	X	Rate	=	Subtotal
	05E	05F	05G	05H	05L					
FY 1983								$71		
FY 1984								$61		
FY 1985								$61		
FY 1986								$61		
FY 1987								$61		

SUB-TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY (transfer to page 2) _____

REGION V

SITE #:_____ SITE NAME:_____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

	Direct Hours (i.e., Total Regional Hours)						Total Hours	X	Rate	=	Subtotal
	05P	05Q	05R	05W	05Y	05Z					
FY 1983									$71		
FY 1984									$61		
FY 1985									$61		
FY 1986									$61		
FY 1987									$61		

Subtotal this page _____

TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY _____

REGION VI

Reference Sheet For Calculating Indirect Costs For Cost Recovery

	Final		Provisional		
Region VI's Indirect Cost Rate Per Direct Labor Hour:	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
	$ 66	$ 60	$ 60	$ 60	$ 60

Allowance Holder/Responsibility Centers To Which The Indirect Rate Should Be Applied:

Code	Title	Year Applicable (X)				
		FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
06H*	Houston Lab	-	-	X	X	-
06J	Air, Pesticides & Toxics Division	-	-	-	X	X
06K	Water Management Division	X	X	X	X	X
06L**	Hazardous Waste Management Division	X	X	X	X	X
06M	Environmental Services Division	X	X	X	X	X

* 06H was Management Division in FYs 1983 and 1984 and should not be used to calculate indirect costs for those years.

** 06L was Air & Waste Management Division in FYs 1983-1985; but, nontheless, should be used in calculating indirect costs for those years.

REGION VI

SITE #:_____ SITE NAME:_____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

	Direct Hours (i.e., Total Regional Hours)					Total Hours	X	Rate	=	Subtotal
	06H	06J	06K	06L	06M					
FY 1983								$66		
FY 1984								$60		
FY 1985								$60		
FY 1986								$60		
FY 1987								$60		

TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY _____

REGION VII

Reference Sheet For Calculating Indirect Costs For Cost Recovery

	Final		Provisional		
Region VII's Indirect Cost Rate Per Direct Labor Hour:	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
	$ 68	$ 65	$ 65	$ 65	$ 65

Allowance Holder/Responsibility Centers To Which The Indirect Rate Should Be Applied:

Code	Title	Year Applicable (X)				
		FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
07C	Air and Water Management	X	X	X	X	X
07K	Water Management Division	X	X	X	X	X
07L	Air and Toxics Division	-	-	X	X	X
07M	Environmental Services Division	X	X	X	X	X
07W	Waste Management Division	-	-	X	X	X

REGION VII

SITE #:_____ SITE NAME:_____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

	Direct Hours (i.e., Total Regional Hours)					Total Hours	X	Rate	=	Subtotal
	07C	07K	07L	07M	07W					
FY 1983								$68		
FY 1984								$65		
FY 1985								$65		
FY 1986								$65		
FY 1987								$65		

TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY

REGION VIII

Reference Sheet For Calculating Indirect Costs For Cost Recovery

	Final		Provisional		
Region VIII's Indirect Cost Rate Per Direct Labor Hour:	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
	$ 60	$ 62	$ 62	$ 62	$ 62

Allowance Holder/Responsibility Centers To Which The Indirect Rate Should Be Applied:

Code	Title	Year Applicable (X)				
		FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
08K	Water Division	X	X	X	X	X
08L	Air and Hazardous Material Division	X	X	X	X	X
08M*	Environmental Services Division	X	X	X	X	X
08R	Montana	X	X	X	X	X
08S	Air and Hazardous Material Branch	X	X	X	X	-

*08M was Surveillance and Analysis Division in FYs 1983-1986; but, nontheless, should be used in calculating indirect costs for those yea

REGION VIII

SITE #:_____ SITE NAME:_____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

	Direct Hours (i.e., Total Regional Hours)					Total Hours	X	Rate	=	Subtotal
	08K	08L	08M	08R	08S					
FY 1983								$60		
FY 1984								$62		
FY 1985								$62		
FY 1986								$62		
FY 1987								$62		

TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY

REGION IX

Reference Sheet For Calculating Indirect Costs For Cost Recovery

	Final		Provisional		
Region IX's Indirect Cost Rate Per Direct Labor Hour:	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
	$ 65	$ 63	$ 63	$ 63	$ 63

Allowance Holder/Responsibility Centers To Which The Indirect Rate Should Be Applied:

Code	Title	Year Applicable (X)				
		FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
09K	Toxics and Waste Management Division	X	X	X	X	X
09L	Water Management Division	X	X	X	X	X
09M	Air Management Division	X	X	X	X	X

REGION IX

SITE #: _____ SITE NAME: _____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

	Direct Hours (i.e., Total Regional Hours)			Total Hours	X	Rate	=	Subtotal
	09K	09L	09M					
FY 1983						$65		
FY 1984						$63		
FY 1985						$63		
FY 1986						$63		
FY 1987						$63		

TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY _____

REGION X

Reference Sheet For Calculating Indirect Costs For Cost Recovery

	Final		Provisional		
Region X's Indirect Cost Rate Per Direct Labor Hour:	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
	$ 64	$ 61	$ 61	$ 61	$ 61

Allowance Holder/Responsibility Centers To Which The Indirect Rate Should Be Applied:

Code	Title	Year Applicable (X)				
		FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
10C*	Air and Toxics Division	X	X	X	X	X
10G	Alaska Operations Office	X	X	X	X	X
10M**	Water Division	X	X	X	X	X
10N	Hazardous Waste Division	X	X	X	X	X
10P***	Environmental Services Division	X	X	X	X	X
10R	Oregon Operations Office	X	X	X	X	X
10T	Idaho Operations Office	X	X	X	X	X
10W	Washington Operations Office	X	X	X	X	X

*10C was Emergency Response in FYs 1983 and 1984; but, nonetheless, should be used in calculating indirect costs for those years.

**10M was Air and Water Programs Division in FYs 1983 and 1984; but, nonetheless, should be used in calculating indirect costs for those years

***10P was Surveillance and Analysis Division in FYs 1983 and 1984; but, nonetheless, should be used in

REGION X

SITE #:_____ SITE NAME:_____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

	Direct Hours (i.e., Total Regional Hours)					Total Hours	X	Rate	=	Subtotal
	10C	10G	10M	10N	10P					
FY 1983								$64		
FY 1984								$61		
FY 1985								$61		
FY 1986								$61		
FY 1987								$61		

SUB-TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY (transfer to page 2) _____

REGION X

SITE #: _____ SITE NAME: _____

Worksheet For Calculating Indirect Costs For Cost Recovery Purposes

	Direct Hours (i.e., Total Regional Hours)			Total Hours	X	Rate	=	Subtotal
	10R	10T	10W					
FY 1983						$64		
FY 1984						$61		
FY 1985						$61		
FY 1986						$61		
FY 1987						$61		

Subtotal this page _____

TOTAL INDIRECT COSTS TO CLAIM IN COST RECOVERY _____

Superfund Site Allowances (Comptroller Policy Announcement Number 87-07)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

2/3/87

COMPTROLLER POLICY ANNOUNCEMENT
No. 87-07

OFFICE OF ADMINISTRATION AND RESOURCES MANAGEMENT

MEMORANDUM

SUBJECT: Superfund Site Allowances

JAN 13 1987

FROM: David P. Ryan
Comptroller

TO: Assistant Regional Administrators
Management Division Directors
Senior Budget Officers
Regional Comptrollers

This policy announcement introduces a separate Advice of Allowance for certain Superfund extramural site activities and describes the policies and procedures necessary to implement this new allowance. Because the Regions are the only current recipients of site-specific response extramural funding, these new Site Allowances will be issued only to the Regional Offices. They will provide a separate extramural dollar allowance for Superfund Removals, Remedial Designs (RD) and Remedial Actions (RA), and will distribute the Design and Action allowances by site.

BACKGROUND

This policy announcement is one of a continuing series of improvements being implemented to strengthen the Agency's funds control procedures. The new Site Allowances will contribute to improved funds control in a number of ways: (1) they provide a fiscal management structure that ensures the Superfund program is executed according to Congressional and Agency plans, (2) they separate the dollars into reasonable management units without the loss of flexibility afforded by the large site response program element, and (3) they augment tracking and planning activities conducted through the Superfund Comprehensive Accomplishments Plan (SCAP) by imposing formal Agency funds control requirements on key activities.

POLICY

In the past, each Region received all of its Superfund dollars in one allowance. Effective with implementation of this policy, each Region will receive two separate Superfund allowances: a Site Allowance and a Regular Superfund Allowance.

The Site Allowance will be divided into three categories:

1) Removal Actions - Extramural Only. This portion of the allowance will provide funding for emergency as well as non-emergency removals, and will not be issued site specifically.

2) Remedial Design - Extramural Only. This portion of the allowance will be issued site specifically, listing the funding provided for each design by site name, site ID number and dollar amount.

3) Remedial Action - Extramural Only. This portion of the allowance will also be issued site specifically, listing the funding provided for each remedial action by site name, site ID number and dollar amount.

The Regular Superfund Allowance will contain all of the remaining Superfund dollars for the Region. This includes all intramural dollars and all other Superfund extramural funds (e.g., site inspections, investigations and feasibility studies, community relations, management assistance, etc.). This allowance will not be issued site specifically.

IDENTIFICATION OF THE SITE ALLOWANCE

The Site Allowance will be referred to as the "Alpha" allowance since it will include an "A" in the Allowance Holder field. For example, Region V's regular Superfund allowance is issued to Allowance Holder "05", while the Site Allowance will be issued to Allowance Holder "5A". Region X's Site Allowance will be identified as "0A" (zero, A). In this way, the allowance and the account numbers established from it will be uniquely identified as intended for site-specific purposes only. This will allow obligating officials to ensure that funds issued for RD/RA and Removal activities in the Alpha allowance are not used for other activities.

REPROGRAMMINGS

The initial quarterly Superfund Site Allowance will be developed based on the program's SCAP. Any modifications to that initial plan would be submitted through both the SCAP adjustment/amendment process and through the standard change request process, thus revising the next allowance to be issued. Change requests will be required to reprogram dollars among Superfund activities on the Site Allowance (even if the site remains the same), between sites under the same Superfund activity, and between any portion of the Site Allowance and the regular Superfund allowance. Each change request should equal a net change of zero dollars and should provide a detailed explanation as to why resources are being shifted among activities and/or sites. Requests for additional resources should be submitted directly to the Office of Solid Waste and Emergency Response (OSWER).

SUBMISSION OF CHANGE REQUESTS

Change requests from the Regions should be submitted to the Budget Division with a copy to OSWER's Resource Management Staff. OSWER will review the requests to ensure that the change request is consistent with the SCAP and will then forward the request to the Budget Division for final approval. Notification of approval will be part of the normal change request and SCAP update process.

In order to reduce paperwork, electronic systems for your use in transmitting SCAP adjustments/amendments and change requests will be established. Instructions on these systems will be issued in the near future.

MONITORING COMPLIANCE

The Budget Division will monitor obligations against the Site Allowance on a monthly basis. If an Allowance Holder exceeds the Removal allocation or any one of the Remedial Design or Remedial Action site allocations, the Budget Division will notify the Allowance Holder and request resolution of the over-obligation. If the Allowance Holder does not submit a change request, decommit or deobligate funds, or effect corrections in the Financial Management System as necessary, the Budget Division will initiate reprogramming from the Allowance Holder's regular Superfund allowance. Repeated violations of site or activity allocations may result in partial or total withdrawal of the Allowance Holder's Site Allowance. As is standard Agency policy, if an Allowance Holder exceeds either the Regular or Site Allowance, the Budget Division will withdraw obligational authority in accordance with existing procedures.

During the last quarter of the year, the Budget Division will work directly with the Allowance Holders and OSWER as necessary to ensure that all allowances and obligations are aligned prior to year-end closing.

EFFECTIVE DATE

This policy is effective January 1, 1987 and will affect all Regional Superfund allowances issued thereafter.

QUESTIONS

If you have any questions about the policy and change request procedures outlined above, please call Ron Bachand on 382-4165 or Becky Kennedy on 382-2995. Questions concerning the SCAP should be addressed to Terry Ouverson on 382-2447.

cc: J. Winston Porter
Henry Longest
Thad Juszczak
Terry Ouverson

Interim Concurrence Procedures for Removal Actions Under Delegated Regional Authority Requiring EPA Headquarters Concurrence

Interim Concurrence Procedures for Removal Actions Under Delegated Regional Authority Requiring EPA Headquarters Concurrence

At the present time, there are three types of removal actions under the delegated Regional Authority which require EPA Headquarters concurrence. They are:

- removals using the consistency waiver;
- removals with a ceiling of $1 million to $2 million; and
- removals that are nationally significant or precedent-setting.

Outlined below are interim concurrence procedures to be used by the OSCs and RAs to obtain this concurrence. Attached to these interim concurrence procedures are examples of nationally significant or precedent-setting removal scenarios that require EPA Headquarters concurrence. For a Removal Action under delegated Regional Authority requiring Headquarters concurrence, the OSC shall prepare an Action Memorandum that follows the appropriate guidance for the type of action planned (e.g., compliance with the consistency waiver guidance).

The OSC shall notify the appropriate Regional Coordinator in the Guidance and Monitoring Section, ERD, of the Region's intent to request HQ concurrence to initiate a removal (phone: FTS 8-382-2118, Magnafax: 202-755-2155, TWX: 710-822-9269).

The OSC should contact his or her designated Regional Coordinator as soon as possible to alert ERD that an Action Memorandum is being sent for concurrence. Advance notice of a request is important because the Regional Coordinator must send the Action Memorandum through several additional offices for concurrence.

The OSC shall then provide the required information in the Action Memorandum, with a cover memorandum detailing why the Removal Action under delegated Regional authority requires HQ concurrence. The request must be signed by the RA, and addressed to the AA/OSWER through the Director/OERR to the attention of the Director/ERD.

OSCs are encouraged to submit draft Action Memoranda and cover memoranda to their designated Regional Coordinator to ensure that all requests requiring HQ concurrence are complete. In addition, OSCs should send all final Action Memoranda requiring HQ concurrence to their designated Regional Coordinator who will immediately begin the concurrence process.

The Guidance and Monitoring Section, ERD, will review the Action Memorandum, coordinate and gain concurrence from other divisions and offices as necessary (e.g., the Office of Waste Programs Enforcement, Office of General Counsel, and Hazardous Site Control Division), and relay the request and a recommendation for approval/denial to the Director, OERR. The Director/OERR will review the request and forward it with a recommendation to the AA/OSWER for final concurrence.

ERD will communicate OSWER's decision to the OSC as quickly as possible. Written confirmation of the decision will be forwarded to the O' by ERD as soon as practicable.

In an emergency, requests may be made verbally. Within 24 hours, the OSC should follow up with an Action Memorandum and cover memorandum signed by the RA.

New Method for Determination of Indirect Costs in Superfund Removal Project Ceiling (Comptroller Policy Announcement Number 87-15)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 15 1987

COMPTROLLER POLICY ANNOUNCEMENT
No. 87-15

OFFICE OF
ADMINISTRATION
AND RESOURCES
MANAGEMENT

MEMORANDUM

SUBJECT: New Method for Determination of Indirect Costs in Superfund Removal Project Ceilings

FROM: David P. Ryan
Comptroller

TO: Assistant Regional Administrators
Management Division Directors
Senior Budget Officers
Regional Comptrollers
Waste Management Division Directors
Environmental Services Division Directors
Regions I, VI and VII
Director, Office of Emergency and
Remedial Response
Director, Office of Waste Programs
Enforcement
Financial Management Officers

This memorandum announces Agency policy regarding determination of indirect costs in Superfund removal project ceilings.

BACKGROUND

Except in emergency situations, the On-Scene Coordinator (OSC) must prepare a Removal Action Memorandum before initiating removal cleanup action. This memorandum must be signed by the Regional Administrator (RA) or his/her designee. In the event of an emergency action of $50,000 or less, the OSC, when delegated the authority, may initiate the removal first, and then may prepare an Action Memorandum to be signed by the RA or his/her designee to document that the removal has been approved.

The estimated project cost of the removal must be included in the Removal Action Memorandum and this estimate becomes the project ceiling. Under the Superfund Amendments and Reauthorization Act (SARA), this project ceiling cannot exceed $2 million or have a duration of more than 12 months unless an exemption is granted. Prior to SARA, the statutory limits were $1 million and six months, respectively. With the exception of certain legal and site

investigatory costs, which are covered under Section 104(b) of CERCLA. the estimated project ceiling covers all direct and indirect costs of work to be performed for the removal project. Indirect costs are those costs necessary to operate the program, but which cannot be attributed directly to specific sites. Examples include program management, indirect salaries and fringe benefits, administrative support, rent and utilities.

In March 1986, the Office of the Comptroller distributed the Superfund Indirect Cost Manual, which provided instructions for calculating the amount of indirect costs to be claimed in cost recovery actions. It also established provisional rates (dollars per hour of Regional direct labor hours) for estimating indirect costs allocable to a specific site. However, the Indirect Cost Manual did not specifically address the use of provisional indirect cost rates in the development of estimated project costs for removal actions. Therefore, On-Scene Coordinators continued to use the methodology contained in the January 1985 EPA Removal Cost Management Manual to project both indirect and direct costs for Superfund removal projects.

POLICY

To allow a uniform recording method, the application of the provisional rates contained in the Indirect Cost Manual should also be used in determining indirect rates for removal costs, rather than the method described in the January 1985 Removal Cost Management Manual, which is currently under revision, and will incorporate this new policy. Accordingly, we are establishing the following policy. For clarification purposes, it restates our existing policy concerning intramural and extramural direct costs, as well as provides the new policy for indirect cost projection.

Extramural Costs

- Project ceilings for CERCLA removal actions will include an estimated cost unit for anticipated direct extramural costs at the site. These direct costs include, but are not limited to, cleanup contractor costs (ERCS), subcontractors, letter contracts with State and local governments, order for services, notice to proceed contracts, alternative technology contracts, and interagency agreements (IAGs) with other Federal agencies. The "Extramural Cleanup Contractor" costs include a contingency factor that is determined by the OSC, normally 10-20%, as discussed in the Removal Cost Management Manual.

- Other extramural items can include the projected costs for the Technical Assistance Teams (TAT), Contract Laboratory Program (CLP) analytical costs, and the Environmental Response Team (ERT) contracts.

- After reviewing the projected total extramural costs, the OSC will utilize a 15% contingency factor, (again as discussed in the Removal Cost Management Manual). This 15% contingency allows for unforeseen or unanticipated contractor expenses -- which can include delays resulting from poor weather conditions, or equipment failure. Therefore, the total projected direct extramural costs should be increased by this 15% contingency factor. Attachment I, "Removal Project Ceiling Estimate" illustrates this guidance.

Intramural Costs

- The OSC will estimate the cost of EPA personnel, Regional as well as Headquarters, who will charge hours to the site.

- While the OSC can estimate the number of Regional hours planned for the site, it is difficult to project the number of Headquarters hours planned. Therefore, it has been determined that a percentage (10%) of the planned Regional hours be used to estimate Headquarters hours. For instance, if there are 300 Regional hours projected - there would be 30 hours (10% of 300) planned for Headquarters.

- Tracking of actual hours can be accomplished through FMS reports obtained through the Financial Management Office.

- Project ceilings for removal actions at Superfund sites will include an estimate for Agency indirect costs allocable to the site. Indirect costs will be estimated by multiplying the latest available provisional indirect cost rates by the estimated EPA intramural Regional direct labor hours. (Note that only Regional direct labor hours are used to calculate indirect costs -- not Headquarters). Attachment I illustrates this.

- Attachment II provides the latest provisional indirect cost rates for FY 1987. Any changes to these rates will be provided to the OSCs by the Regional Financial Management Officer (FMO). The FMO is also available to provide assistance to the OSC in the calculation of the indirect costs. In addition, the Financial Management Division will notify the Emergency Response Division (ERD), Office of Emergency and Remedial Response, when changes in the provisional rates occur, so that ERD can modify the software package currently being used by the OSCs.

EFFECTIVE DATE

This policy is effective for all current removal projects that have not had a Removal Action Memorandum approved as of the date of this policy and for all future site-specific removal activity.

SUNSET DATE

This policy will be incorporated in a forthcoming section of the Resources Management Directives System. When that section is issued in final, you will be notified that this policy announcement is superseded by that document. The next update of the EPA Removal Cost Management Manual will also be revised to reflect this policy.

INQUIRIES

If you have any questions concerning this announcement, please contact Liz Milstead, Fiscal Policies and Procedures Branch, on 382-4205. Questions regarding the EPA Removal Cost Management Manual should be addressed to Jean Wright, OERR, ERD, on 382-2342.

Attachments

cc: J. Richard Bashar
Alvin Pesachowitz
John J. Sandy
Tony Musick
Carole Ansheles
FMD Branch Chiefs
Tim Fields
OHM Coordinators, Regions I-X
TAT/ERCS DPO's, Regions I-X
ERT

Attachment I

S A M P L E

REMOVAL PROJECT CEILING ESTIMATE

EXTRAMURAL COSTS		
Extramural Cleanup Contractor ..... (This cost category includes OSCs estimates for: ERCS, Mini-ERCS, subcontractors, Letter Contracts, Alternative Technology Contracts, IAGs with other Federal agencies, etc. Also includes 10-20% contingency)	$862,500	
TAT Costs	$50,000	
CLP Analytical Costs	$100,000	
ERT Contract (EERU)	$100,000	
Subtotal, Extramural Direct Costs.....	$1,112,500	
15% Contingency of Above Costs ..... (round to nearest thousand)	$167,000	
TOTAL, EXTRAMURAL COSTS		$1,279,500
INTRAMURAL COSTS		
Intramural Direct Costs ..... ($30 X 330 Labor Hours (300 - Region/30 Hdqtrs)	$9,900	
Intramural Indirect Costs ..... (See instructions below)	$18,000	
TOTAL, INTRAMURAL COSTS		$27,900
TOTAL REMOVAL PROJECT CEILING ESTIMATE		$1,307,400

Formula for Calculating Indirect Costs:

Region Specific Indirect Cost Rate	X	Estimated Regional Direct Labor Hours	=	Indirect Costs
$60		300		$18,000

Attachment II

PROVISIONAL FY 1987 INDIRECT COST RATES

Region	Organizations to Which the Rates Apply	FY 87 Provisional Rates
I	Air, Water, Environmental Services, and Waste Management Division	$60 per hour
II	Caribbean Field Office; Emergency and Response, Air and Waste Management, Water Management, and Environmental Services Divisions	$68 per hour
III	All Regional Organizations	$52 per hour
IV	All Regional Organizations	$54 per hour
V	Directors Office - Waste Management/ Emergency Response; Hazardous Waste Enforcement Branch, Great Lakes Coordinator; Central Regional Lab; Eastern and S&A Central District Offices; and Waste Management, Air, Water, and Environmental Services Divisions	$61 per hour
VI	Houston Lab; and Air, Pesticides and Toxics, Water Management, Hazardous Waste Management, and Environmental Services Divisions	$60 per hour
VII	Water Management, Air and Toxics, Environmental Services, and Waste Management Divisions	$65 per hour
VIII	Air and Hazardous Material Branch; Montana Office; and Water, Air and Hazardous Material, and Environmental Services Divisions	$62 per hour
IX	Toxics and Waste Management, Water Management, and Air Management Divisions	$63 per hour
X	Alaska, Oregon, Idaho, and Washington Operations Offices; and Air and Toxics, Water, Hazardous Waste, and Environmental Services Divisions	$61 per hour

Timing of $2 Million Exemption Request Submission

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 4 1988

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Timing of $2 Million Exemption Request Submissions

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

TO: Addressees

PURPOSE:

This memorandum is to inform you of the requirements for submitting removal $2 million exemption or ceiling increase requests to Headquarters for approval.

BACKGROUND:

Over the past six months, Regions have been submitting removal exemption and ceiling increase requests that have not provided Headquarters with adequate time for review. Several of these requests have been received only a matter of days before Headquarters approval is needed to avoid bringing the work to a stop. The review process at Headquarters involves several offices, including the Office of General Counsel and Office of Waste Programs Enforcement. We need at least three weeks to process a complete, well-justified request.

PROCEDURES:

The procedures outlined in this memorandum apply to planned and ongoing removal actions that may require exemptions from the $2 million statutory ceiling. You must prepare a $2 million exemption request as soon as you estimate that a project ceiling will exceed $2 million. If you estimate the project cost will exceed $2 million before you start an action, Headquarters approval must be received before the removal action can begin if it is practical to do so. Exemption requests for ongoing sites where additional funds will make the project ceiling exceed $2 million or ceiling increase requests for sites that have already received exemptions to the $2 million statutory criteria must be submitted three weeks before Headquarters approval is needed.

CONCLUSION:

Exemption requests signed by the Regional Administrator that are incomplete or insufficiently justified will be returned to the Regions to be rewritten. This will probably result in a substantial delay in obtaining Headquarters approval. You can avoid this delay by starting as early as possible and working closely with the appropriate Headquarters Regional Coordinator throughout the justification and review process. I think your personal attention to these types of requests is critical to their quality and timeliness and will appreciate your help on future submissions. Superfund Branch and Section Chiefs were provided with guidance on October 22, 1987, on the preparation of $2 million exemption requests that you should find useful.

Addressees:

Director, Environmental Services Division
  Regions I, VI, and VII
Director, Waste Management Division,
  Regions I, IV, V, VII, and VIII
Director, Emergency and Remedial Response Division,
  Region II
Director, Hazardous Waste Management Division,
  Regions III and VI
Director, Hazardous Waste Division
  Region X
Director, Toxics and Waste Management Division,
  Region IX

cc: Earl Salo, OGC
Timothy Fields Jr., ERD
OHM Coordinators, Regions I-X

Model Program for Removal Site File Management

MODEL PROGRAM FOR REMOVAL SITE FILE MANAGEMENT

July, 1988

Office of Solid Waste and Emergency Response
and the
Office of Administration and Resources Management
U.S. Environmental Protection Agency

MODEL PROGRAM FOR REMOVAL SITE MANAGEMENT

OSWER Directive 9360.2-01

July 1988

Unites States Environmental Protection Agency
Office of Emergency and Remedial Response
Emergency Response Division
Washington D. C. 20460

NOTICE

Development of this document was funded, wholly or in part, by the United States Environmental Protection Agency under contract No. 68-01-7281 to American Management Systems, Inc. It has been subjected to the Agency's review process and approved for publication as an EPA document.

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MODEL PROGRAM FOR
REMOVAL SITE FILE MANAGEMENT

Overview

Effective file management in the Superfund Emergency Removal Program requires performance of several important functions, particularly:

- Securing necessary file management supplies (e.g., site file kit)
- Transporting file materials to the site
- Setting up the site file
- Completing appropriate documentation in a timely manner
- Filing documentation in the site file
- Distributing (copies of) appropriate documentation to the regional office
- Replenishing file management supplies
- Periodically reviewing the site file (while action is on-going) for completeness and accuracy
- Determining whether site file documents belong in the administrative record
- Distributing (copies of) appropriate documentation to the administrative record.

These functions have typically been the responsibility of the On-Scene Coordinator (OSC), with assistance from other EPA Regional staff, contractors (e.g., TAT) and the USCG Strike Teams. It is critical that each Region clearly assign responsibility for each of these OSC functions.

The Model File Management Program described in this document was prepared to guide the OSCs, Regional administrative support staff, and other responsible personnel in performance of good site records management. The Model Program consists of four parts:

- ***Site File Structure*** - A model for classifying all the documentary material generated in the course of a removal action.

- ***Site File Kit*** - A recommended kit containing items necessary to support structured collection and storage of information at the site.

- ***File Management Processes*** - A step-by-step review of the stages of file management for a site.

- ***Supporting the Administrative Record*** - A recommended approach to ensuring that appropriate site files are placed in the administrative record.

The remainder of this document presents more information on each of these four areas.

2. *Site File Structure*

One of the OSC's important responsibilities during a removal action is to establish and maintain site files. These files include documentation of all aspects of the removal -- technical, contractual, and financial. Good documentation is vital for proper management of the ongoing removal action and subsequent cost recovery.

Individual Regions currently use varied site file structures. Some of the variety stems from the different levels of complexity involved in removal actions. The individuality of emergency response organizations in the Regions, and of the OSCs within them, also contributes to the variety of site file structures.

There are two important guiding principles for the site file structure:

- **Each Region should have a site file structure that can be used consistently.**

- **All site file structures in use in the Regions should include the same minimum set of information.**

The minimum set of information* to be included in all site file structures consists of the following:

- Chronology of events and decisions
- Entry and exit of personnel and equipment
- Contractor work planned/authorized and contractor work accomplished
- Contractor costs
- Site conditions, such as weather
- Cumulative intramural and extramural project costs.

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* Removal Cost Management Manual, Chapter 5, Exhibit 5-1.

This minimum set of information is generally documented using the following forms:

- OSC Log
- POLREPS
- Site Entry/Exit Log
- Hot Zone Entry/Exit Log
- Work Reports
- 1900-55s
- Incident Obligation Log.

Since certain Regions already have site file structures that satisfy the minimum requirements, we do not believe that all Regions should be required to use the same detailed site file structure. However, each Region must ensure that:

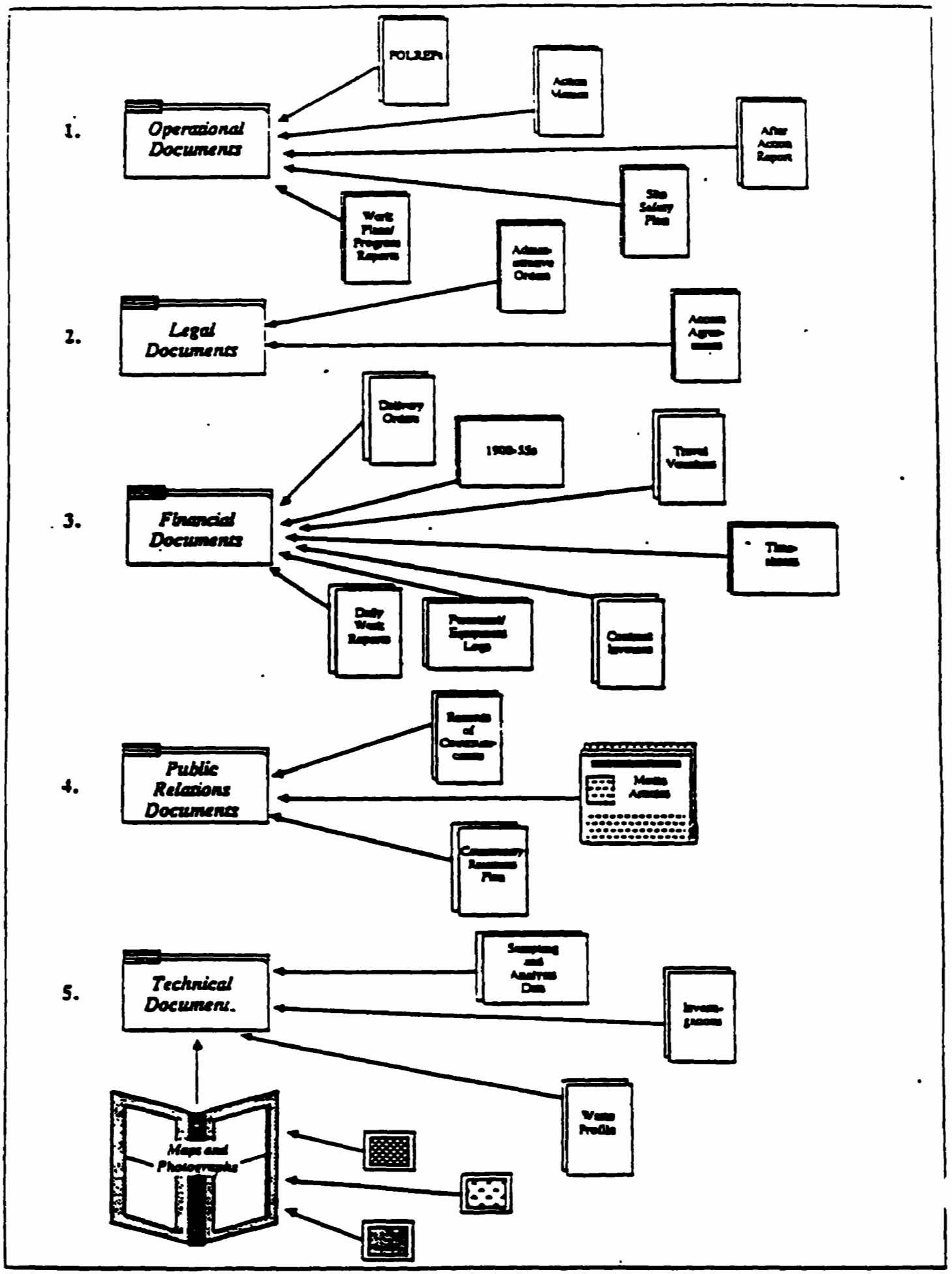
- It adopts a comprehensive, workable site file structure
- Its Regional OSCs use the structure consistently.

Exhibit 1 presents the model site file structure which meets the minimum requirements outlined above and combines aspects of several Regional site file structures currently in use. This model should be the basis for a file structure in Regions which have not already developed a satisfactory file structure. The model structure consists of five major groupings of documentation, each of which contains a number of specific document types, as follows:

(1) ***Operational*** documents are those used in general management of the removal project. These documents are mainly type-written or computer-generated and are generally on letter-size (8.5 by 11 inch) paper. Documents in this category include:

- POLREPS
- Action Memos
- Site Safety Plan
- Contractor Workplans

MODEL SITE FILE STRUCTURE



- Contractor Progress Reports
- OSC Log Books
- Performance Summaries
- Performance Evaluation Reports
- Notice Letters
- Section 106 Orders or Other Enforcement Orders

(2) ***Legal*** documents include those issued by a court of law as well as other binding documents. These documents are mainly type-written and are generally on letter-size (8.5 by 11 inch) or legal-size (8.5 by 14 inch) paper. Examples of legal documents include:

- Administrative Orders
- Access Agreements
- Warranty Deed
- Release of Liability
- Consent Agreement

(3) ***Financial*** documents include 1900-55s, timesheets, travel vouchers, and other items used to document EPA costs for potential recovery actions. These documents may be forms filled out by hand or by computer and may include carbon or tissue copies as backup (e.g., hotel bills). The forms are generally letter-size, and the backup documentation may be any size. A full list of financial documents includes:

- Procurement Requests
- Delivery Orders
- 1900-55s
- Timesheets
- Travel Vouchers
- Contract Invoices
- Personnel/Equipment Logs
- Daily Work Reports
- IG Audit
- IAGs Between EPA and Other Federal Agencies

- Subcontracting Justification Documentation
- Order for Services Contracts
- State Letter Contracts

Many of these originals (e.g., timesheets, travel vouchers, contract invoices) should be regularly forwarded to the appropriate finance office for processing. OSCs may wish to include copies of these documents in the site files.

(4) ***Public relations*** documents cover interactions with the local community, the media, public officials, and the public at large. They include such items as media articles, records of communication, and community relations plans. These documents may be typewritten or computer-generated reports on various size paper or they may be originals or copies of newspaper articles or handwritten notes.

(5) ***Technical*** documents are more scientific in nature and may include sampling and analysis data, investigations, and waste profiles. These documents may be typewritten or computer-generated and are generally on letter-size paper. Technical documents also include ***photographs and maps***. Photographs may be black and white or color, any size from snapshot to enlargement. Maps may be originals or copies on, usually, oversize stock. Separate, oversize binders may be needed to store such items.

3. Site File Kit

Use of Site File Kits will make it easier for OSCs and Regional administrative support staff to establish and maintain the necessary site files. In the Model Program, the Regional office would distribute Site File Kits to OSCs to maintain for use when they initiate new removal actions. Alternatively, OSCs may delegate responsibility for the Site File Kits to the Regional administrative support person or the TAT.

Components of the Site File Kit should be expendable, with each new site receiving a new, complete kit. The Kit should be streamlined and light, making it easy for the OSC (or designee) to hand-carry it, along with personal luggage, to the new site. There should be a single inventory control point in each Region for the site file kits.

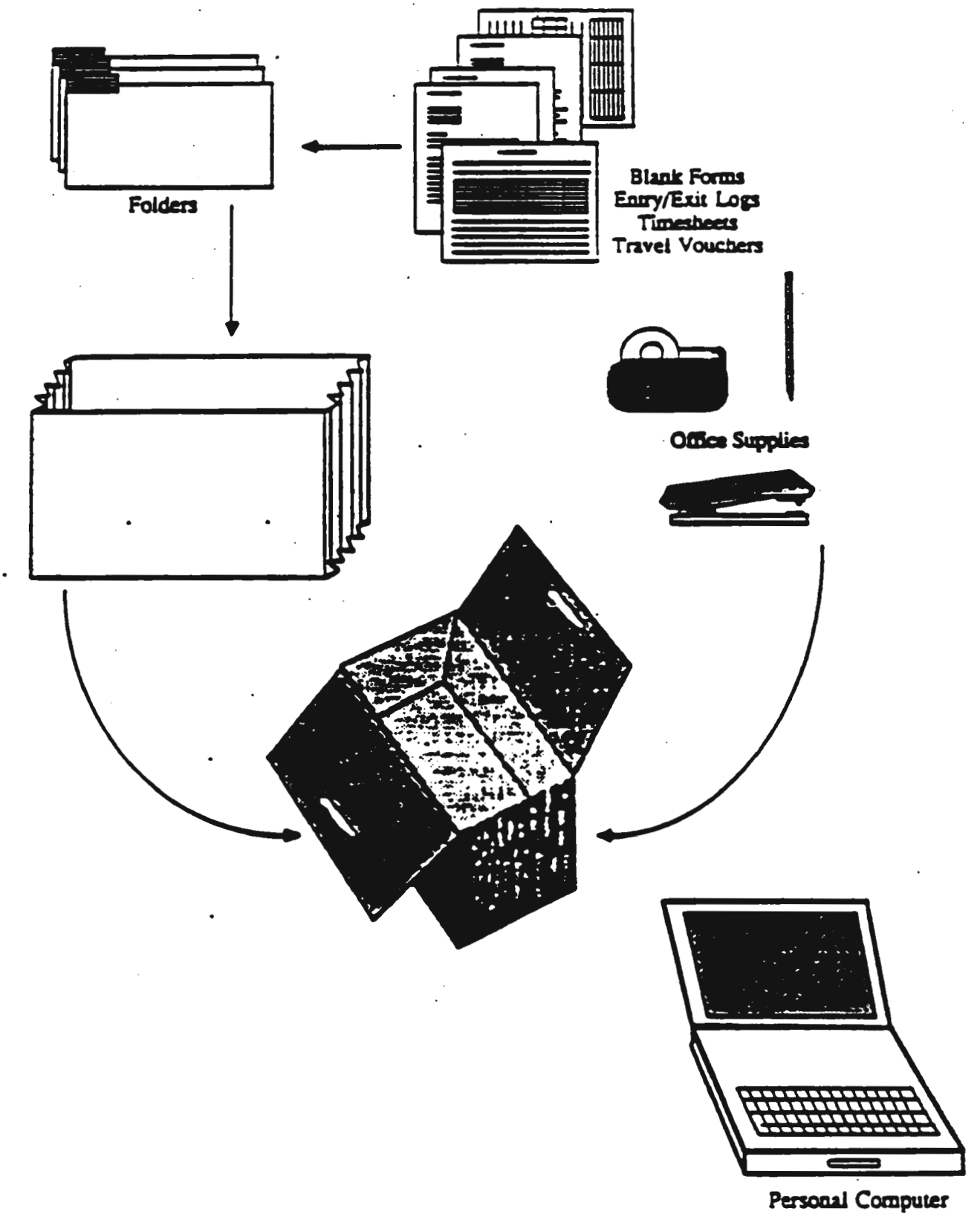
Exhibit 2 illustrates the contents of a sample Site File Kit. It consists of a sample case (or other sturdy, portable container) which can be outfitted with pre-labelled folders, blank forms, and basic office supplies. The pre-labelled folders and blank forms conform to the site file structure established in the Region or the model site file structure outlined above. In this example, the Kit contains six folders with the following labels:

- Operational Documents
- Legal Documents
- Financial Documents
- Public Relations Documents
- Technical Documents
- Photographs/Maps

Blank forms include timesheets, travel vouchers, and personnel/equipment logs.

The Kit also contains office supplies necessary to "begin business" at the removal site. Such office supplies may include:

EXHIBIT 2
SAMPLE SITE FILE KIT



- Stapler, staples, and staple-puller
- Variety of pencils and pencil sharpener
- Variety of pens (including felt-tip markers)
- Paper clips
- Push pins
- Masking and transparent tape
- Scissors
- Inkless stamps (e.g., ORIGINAL, DRAFT)
- Post-it notes
- Opaquing fluid
- Calendar
- Document-numbering stamp.

A logical supplement to the Kit is a portable personal computer and a copy of the Removal Cost Management System software which can be used to produce reports and analyze data. With a modem, the computer could be used to transmit computer-generated reports (e.g., POLREPs) to the Regional office and headquarters. The computer can also be used to access reference materials stored on diskette. Such reference materials might include:

- Statement of Work
- Users' manuals
- Directory of ERCS contractors
- Applicable sections of ERCS contract
- Guidance/procedures on invoices, dailies, etc.
- EPA phone book (both HQ and Region).

While the sample Site File Kit is fairly inclusive, the OSC may require some bulky items which would be better purchased near the site. Such items might include a bulletin board, graphics supplies, 3-ring binders, and blank video tape.

4. *File Management Processes*

OSCs have the primary responsibility for maintaining site files while the removal site is active. OSCs may be assisted in this responsibility by Regional administrative support staff, TAT and other contractors, and USCG Strike Team personnel. The OSC (or his/her delegate) must complete the appropriate forms and reports in a timely fashion and file them according to the site file structure endorsed by the Region.

Physical location of the various site file components depends on both the nature of the removal project and the organization of the Regional office. In general, the OSC must have direct access to complete documentation (either originals or copies) from the time that a removal action is initiated until the final OSC report is published.

The major steps involved in site file management follow the life-cycle of the site-specific removal action:

- **Project initiation**
- **Short-term actions with no command post**
- **Long-term actions with command post**
- **Preparation of the final OSC report.**

Each of these steps is described in greater detail below.

a. Project Initiation

When a project begins, the OSC (or delegated person) should bring a new site file kit to the site when he/she first visits it. The Regional administrative support person may later bring additional site filing and office supplies. It is most important, however, that some form of site file kit, even abbreviated, be available on site at project start.

5. Supporting the Administrative Record

Detailed agency policy and procedures on handling the administrative record requirements of SARA are issued separately by OWPE. It is recommended that the Regions establish a regular process for reviewing active site documents against the current criteria for inclusion in the administrative record.

The suggested steps in this process are:

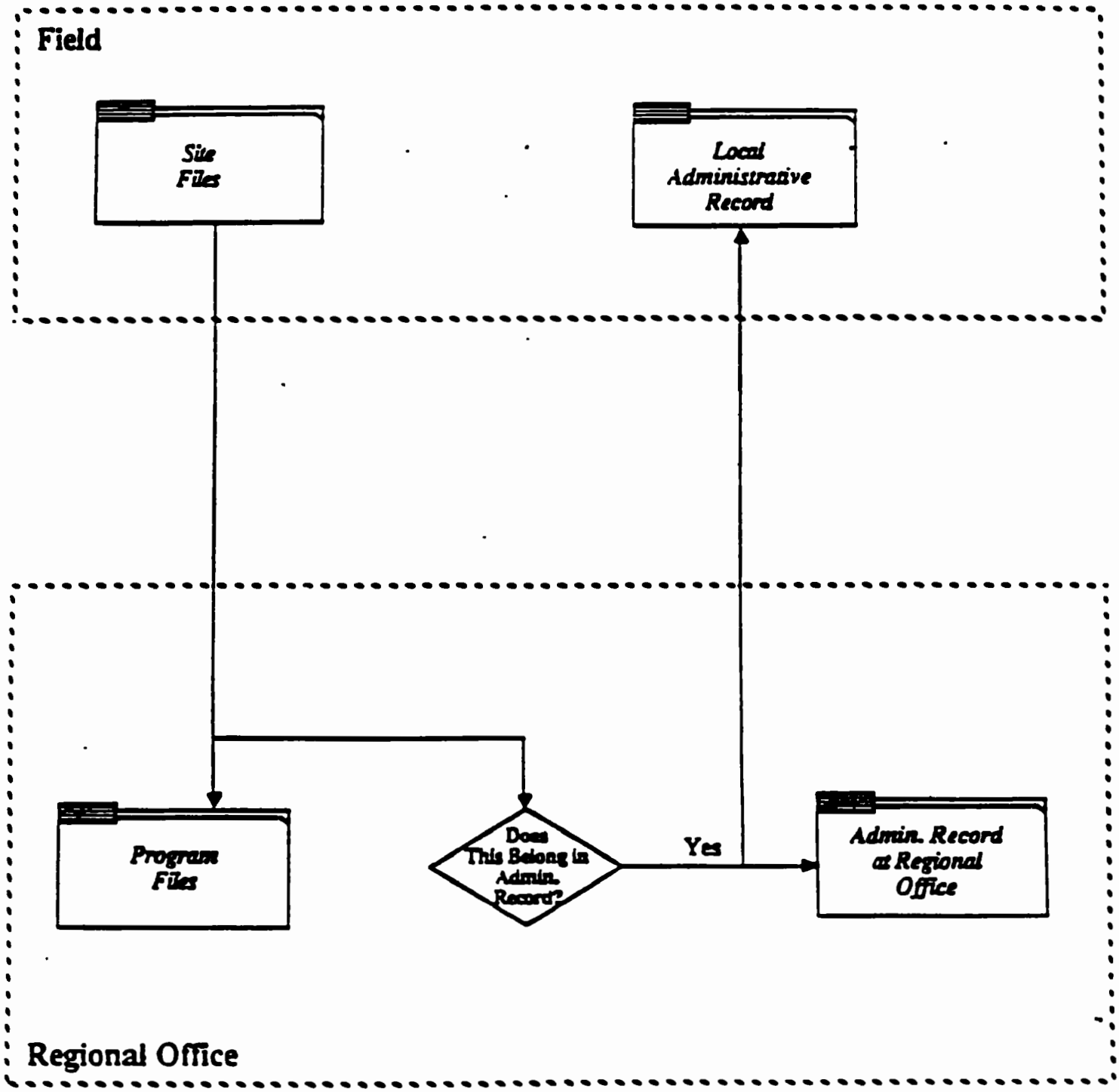
- The OSC (or designated person) brings all new site documents to the Regional office on a regular basis for copying and/or storage in Regional files.

- At the same time, the OSC or other Regional staff responsible for file management reviews the removal action materials for possible inclusion in the administrative record.

- The OSC or other designated Regional staff (or contractors) prepares copies of selected items for the Region's administrative record and, if appropriate, the local administrative record maintained on or near the site.

A flow chart summarizing this process is in Exhibit 3.

EXHIBIT 3
FILE MANAGEMENT TO SUPPORT THE ADMINISTRATIVE RECORD



Site Specific Contracting for Removals

Washington DC 20460

OSWER Directive Initiation Request

1. Directive Number: 9242.2-02

2. Originator Information

Name of Contact Person	Mail Code	Office	Telephone Code
Bruce Engelbert		ERD/ROB	382-2188

3. Title

Site Specific Contracting fro Removals

4. Summary of Directive (include brief statement of purpose)

Provides direction on use of site specific contracts for removal actions.

5. Keywords: Superfund, CERCLA, SARA

6a. Does This Directive Supersede Previous Directive(s)? [X] No. [ ] Yes What directive (number, title)

b. Does It Supplement Previous Directive(s)? [X] No [ ] Yes What directive (number, title)

7. Draft Level

[ ] A – Signed by AA/DAA [ ] B – Signed by Office Director [ ] C – For Review & Comment [ ] D – In Development

8. Document to be distributed to States by Headquarters? [X] Yes [ ] No

This Request Meets OSWER Directives System Format Standards.

9. Signature of Lead Office Directives Coordinator	Date
Betti VanEpps OERR Directives Coordinator	4/10/89
10. Name and Title of Approving Official	**Date**
Henry L. Longest II, Director, OERR	4/10/89

EPA Form 1315-17 (Rev. 5-87) Previous editions are obsolete.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C 20460

APR 10 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPO

OSWER Directive #9242.2-02

MEMORANDUM

SUBJECT: Site-Specific Contracting for Removals

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

David J. O'Connor, Director
Procurement and Contracts Management Division

TO: Environmental Services Division Directors
Regions I, VI, VII
Waste Management Division Directors
Regions I, IV, V, VI, VIII
Emergency and Remedial Response Division Director
Region II
Hazardous Waste Management Division Directors
Regions III, VI
Toxics and Waste Management Division Director
Region IX
Hazardous Waste Division Director
Region X

Purpose:

This memorandum provides direction on the use of site-specific contracts for removal actions.

Background:

A key component of the removal response strategy is site-specific contracting. Site-specific contracts are desirable because they promote competition, which leads to getting the best cleanup price possible for removal actions. The removal program has made minimal use of site-specific contracts. In FY'88, no site-specific contracting was done. In FY'87, only 4 of the 256 removals started used this approach.

In FY'86, after an Inspector General audit of the Emergency Response Cleanup Services (ERCS) contracts and congressional hearings, a new removal contracting strategy was developed. The plan called for:

- Large zone ERCS. These contracts would ensure adequate capability to respond to emergency and time-critical releases.

- Regional ERCS (mini-ERCS). These contracts would supplement the zone ERCS, but would not have such strict minimum response times. The smaller size of these contracts would help to open up competition and get more companies involved in the program.

- Site-specific contracts. These contracts would get the government the best cost in those situations where the time for competition is available. In order to help reduce the necessary lead time, a strategy of technically pre-qualifying contractors (PQOPS) is being established. Again, the small and well defined nature of site-specific contracts will help to increase the number of companies participating in the program.

Objective:

This memorandum is intended to encourage the use of site-specific contracting in as many removal actions as the circumstances allow. Right now, many good opportunities for site-specific contracting are being overlooked. In each of these cases, we could be saving valuable funds, as well as ERCS capacity, that could be used for other removal actions. In non-emergency situations, a Region should always consider whether there will be time and resources to do a site-specific contract. The Regional removal program should work with its contracting officer (CO) to decide the best contracting approach.

Site-Specific Criteria:

Site-specific contracts are contracts, competed through an EPA CO, to obtain carefully defined cleanup services. Regions should consider the following factors when deciding whether or not to do a site-specific contract.

1. Lead Time -- Generally, a site-specific contract will take about four months to compete. Many removal actions are emergencies or must be started in less than four months. But 15 to 20 percent of removal actions, including most of those involving an alternative technology, have a sufficient planning horizon or will last long enough so that some portion of the work can be done through a site-specific contract. During the update of the removal Superfund Comprehensive Accomplishments Plan (SCAP) each quarter, you should give serious consideration to possible site-specific

contracting candidates. We understand that not all sites in the SCAP, with a scheduled start date beyond four months, are good candidates, since they may be low priority projects that are likely to be deferred or not done at all. In some cases, it will make sense to do site-specific contracts at actions that start out as emergencies. If the cleanup work will take a substantial amount of time, as is often the situation when a $2 million exemption is granted, perhaps it will be practical to do the latter stages of the work site-specifically. Except in very unusual circumstances, any removal where an Engineering Evaluation/Cost Analysis is necessary should be done through a site-specific contract.

2. Cost -- The larger the action, the greater the potential for savings if a site-specific contract is used. Actions that will cost less than $500 thousand are probably not good candidates for site-specific competition. Actions costing over $2 million should generally have some component of the work that is done on a site-specific basis.

3. Complexity -- Actions, or parts of large actions, that are relatively straightforward and uncomplicated, are the best candidates for site-specific contracting. Since site specific contracting requires being able to write a clear statement of work, unusual or poorly defined situations should be handled through the ERCS mechanisms. For example, a site that has a lot of unidentified materials should probably be done through ERCS, at least up to the transportation and disposal phase of the work. On the other hand, if the action is basically excavation and disposal or incineration, and the contamination type and amount is well understood, a site-specific contract may make sense.

4. Management -- Site-specific contract preparation and management will require CO assistance and a small amount of program FTE beyond what an ERCS action would require. Consequently, the projected dollar savings should outweigh the extra staff time that must be invested. This determination should be made in consultation with the appropriate CO, who should always be in on major contracting choices in non-emergency situations. In FY'90, Regions will get a small increment of FTE just for site-specific contracting. Also, the Environmental Response Team (ERT) and its Response Engineering and Analytical Contract are usually available to provide support in developing the statement of work for a site-specific contract.

Implementation:

In non-emergency situations, Regions should start with the assumption that a site-specific contract is the way to proceed. Site conditions, resource constraints or other factors may quickly convince the On-Scene Coordinator (OSC) that a zone or Regional ERCS contractor is the better response route. Where there is a site-specific potential, an early discussion with a CO is important. The CO can help sort through the schedule and steps to see if the approach is feasible. All of the Regions already have or soon will have their own CO, so this consultation will be relatively easy.

If the response will be done through a site-specific contract, the OSC is responsible for writing the scope of work, organizing any necessary technical evaluation of the offerors, and serving as project officer on the contract. The CO will take care of managing the advertisement, bid review, negotiations and actual award of the contract. Clearly, the process will take some additional OSC time (a rough estimate is 40 to 120 hours beyond what the project would probably take under ERCS). The ERT is often available to provide assistance in preparing the scope of work. And once the PQOPS pools of technically qualified contractors for incineration and fixation are in place later this summer, there will be time savings in the technical review process. In many cases, particularly those involving alternative technologies, the small incremental OSC time commitment is well worth the overall cost savings on the project.

Conclusion:

Site-specific contracts, under the right circumstances, can save considerable funds that can be used for other removal actions. There are no mandatory requirements or quotas for site-specific contracts. This approach should only be used where Regions believe that the removal action schedule and work requirements can be met. There are many instances where this will be the case, so the removal program needs to make a greater commitment to using site-specific contracts in the future.

Need for Contract Officers Authorization Before Contractor Activation

United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

EPA

DIRECTIVE NUMBER: 9242.6-03

TITLE: Need for Contract Officers Authorization Before Contractor Activation

APPROVAL DATE: 8/9/89

EFFECTIVE DATE: 8/9/89

ORIGINATING OFFICE: OERR/IO

☒ **FINAL**

☐ **DRAFT**

STATUS:
[ ] A- Pending OMB approval
[ ] B- Pending AA-OSWER approval
[ ] C- For review &/or comment
[ ] D- In development or circulating headquarters

REFERENCE (other documents):

OSWER OSWER OSWER

DIRECTIVE DIRECTIVE D

EPA

United States Environmental Protection Agency
Washington DC 20460

OSWER Directive Initiation Request

1 Directive Number: 9242.6-03

2. Originator Information

Name of Contact Person	Mail Code	Office	Telephone Code
Sherry Hawkins	OS-200	OERR/IO	202-382-2180

3. Title

Need For Contract Officers Authorization Before Contractor Activation

4 Summary of Directive (include brief statement of purpose)

This memo is to remind all OERR staff that contractor performed work must not be initiated until the contracting officer has given formal authorization.

5. Keywords: Superfund, CERCLA, SARA Contractor Activation

6a. Does This Directive Supersede Previous Directive(s)? [X] No. [ ] Yes What directive (number, title)

b. Does It Supplement Previous Directive(s)? [ ] No [ ] Yes What directive (number, title)

7 Draft Level

[ ] A – Signed by AA/DAA [X] B – Signed by Office Director [ ] C – For Review & Comment [ ] D – In Development

8. Document to be distributed to States by Headquarters? [ ] Yes [ ] No

This Request Meets OSWER Directives System Format Standards.

9. Signature of Lead Office Directives Coordinator	Date
10 Name and Title of Approving Official	Date

EPA Form 1315-17 (Rev. 5-87) Previous editions are obsolete.

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VE DIRECTIVE DIRECTIVE DIRECTIVE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 9 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OERR Directive No. 9242.6-03

MEMORANDUM

SUBJECT: Need for Contract Officers Authorization Before Contractor Activation

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

TO: All OERR Staff

Purpose

This memo is to remind all OERR Staff that contractor performed work must not be initiated until the contracting officer has given formal authorization.

Background

As you know, the issue of Superfund contracts management has been intensely analyzed by Congressional staff, GAO, the IG, and others. We must assure strict adherence to all contract procedures to avoid any appearance or occasion of mismanagement or conflict or interest. Furthermore, a contractor is at risk for any work performed before the authorization date.

Implementation

Until the contract is approved by the contracting officer, discussions concerning the project with the firm or potential firm must be related to preliminary scoping matters only; no work may commence before authorization from PCMD. To speed the procurement process, specify a date by which PCMD approval is needed. PCMD will always strive to accommodate specific data requirements; "ASAP" requests are processed after data specific requests.

cc: Cannon (OSWER
O'Connor (PCMD)
Harper (PCMD)
Dietrich (CORAS)

United States
Environmental Protection
Agency

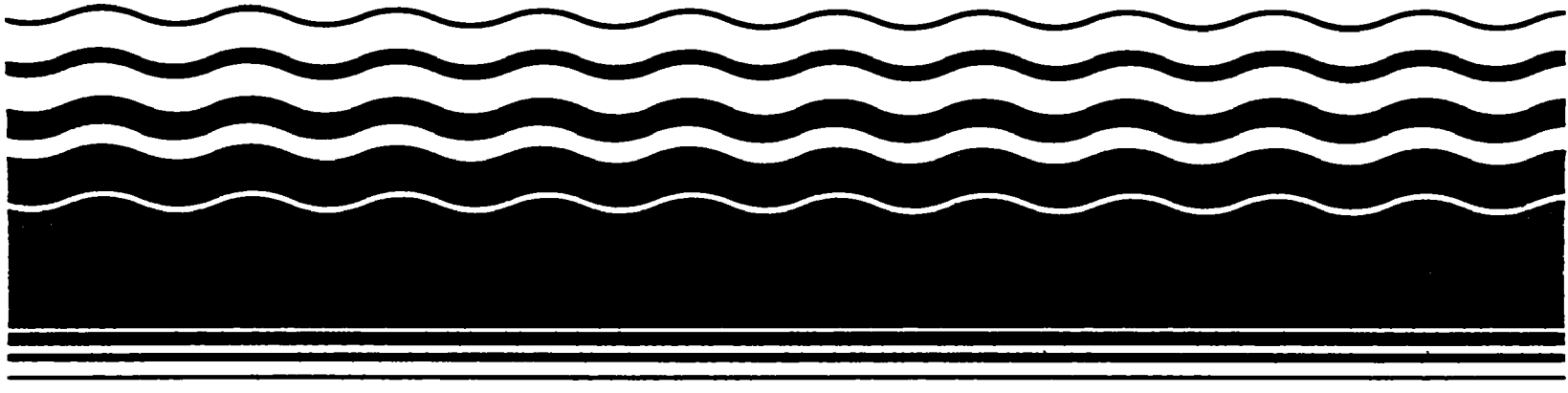
Solid Waste And
Emergency Response
(OS-240)

OERR 9200.0-10B
January 1991

EPA

Superfund Removal Procedures

Directives Notebook
Volume 2



OERR Directive 9200.0-10B
September 1991

SUPERFUND REMOVAL PROGRAM DIRECTIVES NOTEBOOK

VOLUME TWO

Office of Emergency and Remedial Response
U.S. Environmental Protection Agency
Washington, DC 20460

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AUGUST 1991

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Furthering the Use of Innovative Treatment Technologies in OSWER Programs (OSWER 9380.0-17)	06/10/91	

Relationship of the Removal and Remedial Programs Under the Revised NCP

United States Environmental Protection Agency
Washington, DC 20460

EPA OSWER Directive Initiation Request

Interim Directive Number: 9360.0-6A

Originator Information

Name of Contact Person	Mail Code	Telephone Number
Cheryl Hawkins	WH-5488	382-5650

Lead Office: ☐ OUST ☒ OERR ☐ OWPE ☐ OSW ☐ AA-OSWER

Approved for Review

Signature of Office Director: Timothy Fields (for H.L.) Date: 3/18/86

Title

"Relationship of The Removal and Remedial Programs Under the Revised NCP"

Summary of Directive

Revisions to the NCP redefine removal and remedial actions to expedite cleanup activities. This document addresses management issues that may arise between the two programs in Headquarters and the Regions when implementing the new program definitions.

Type of Directive (Manual, Policy Directive, Announcement, etc.)

Policy Directive

Status: ☐ Draft ☒ Final ☐ New ☐ Revision

Does this Directive Supersede Previous Directive(s)? ☒ Yes ☐ No Does it Supplement Previous Directive(s)? ☐ Yes ☐ No

If "Yes" to Either Question, What Directive (number, title) Supercedes draft document (Same Title) 9360.6 (9360.0-6)

Review Plan

☐ AA-OSWER ☐ OUST ☐ OECM ☐ Other (Specify)
☒ OERR ☒ OWPE ☐ OGC
☐ OSW ☐ Regions ☐ OPPE

This Request Meets OSWER Directives System Format

Signature of Lead Office Directives Officer: Nancy Wingfield Date: 2/23/86

Signature of OSWER Directives Officer: Date:

EPA Form 1315-17 (10-85)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 17 1986

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Relationship of the Removal and Remedial Programs Under the Revised NCP

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

TO: Environmental Services Division Directors, Regions I, VI, and VII
Waste Management Division Directors, Regions I, IV, V, VI, VII and VIII
Emergency and Remedial Response Division Director, Region II
Hazardous Waste Management Division Director, Region III
Toxics and Waste Management Division Director, Region IX
Hazardous Waste Division Director, Region X

Attached is the final issue paper entitled "Relationship of the Removal and Remedial Programs Under the Revised NCP". This paper has been revised to reflect comments and suggestions submitted by the Regions during the review of the draft paper. The comments also raised several additional issues, which we will defer for incorporation into future procedural guidance. Among these issues are program specific requirements for decision documentation, community relations activities, State involvement, public review and NEPA compliance, deletion activities, enforcement, and contract execution.

As I indicated in my previous memo on the topic, there are other policy issues, e.g., operation and maintenance, which we are examining as a result of this change in removal criteria. We intend to involve the Regions as we make decisions on all of these issues.

Attachment

cc: J. Winston Porter, OSWER
Jack McGraw, OSWER
Gene Lucero, OWPE
Walt Kovalick, OERR
Russ Wyer, HSCD
Tim Fields, ERD
Steve Lingle, HRSD
Sherry Hawkins, ERD
Margie Russell, OSWER
Dan Berry, OGC
Pam John, PCMD
Jim Lounsbury, PAS

Relationship of the Removal and Remedial Programs Under
the Revised National Contingency Plan

PURPOSE:

Revisions to the National Contingency Plan (NCP) redefine the response categories of "removal actions" and "remedial actions" so that removals now include all activities formerly considered immediate removals, planned removals, and initial remedial measures (IRMs). While these changes in response categories will expedite many cleanup activities by avoiding previous remedial requirements for remedial investigations/feasibility studies (RI/FSs) and full cost effectiveness analyses, this expanded definition of removal actions may raise questions regarding the relationship between the two programs in both Headquarters and the Regions. This memo addresses some of these questions and provides overall information on the interface of the removal and remedial programs under the new NCP.

BACKGROUND:

Earlier CERCLA program implementation tended to clearly differentiate certain activities as removal or remedial, and those activities fell accordingly into the removal or remedial program organizations. Subsequent experience in CERCLA program implementation and new program directions being implemented via the revised NCP indicate that a higher degree of program integration and flexibility will enable us to stabilize or cleanup a greater number of sites in a more expedited manner. In the case of cleanups, this will allow us to delete more sites from the National Priorities List (NPL). While this goal is seen as highly desirable, it creates some "gray" areas with regard to managing actions that were termed "initial remedial measures," but that are now defined as removals.

Despite the NCP changes, certain types of response actions continue to fall into discrete programmatic areas. In the view of OERR, the following actions are still logically located in the removal and remedial programs, respectively.

Removals are taken to abate or mitigate threats to public health, welfare, or the environment and are generally surface cleanups. Actions considered to be within the area of removal program responsibility are:

- all response actions at non-NPL sites and releases
- stabilization actions at NPL sites prior to initiating remedial activities
- classic emergencies arising at ongoing remedial actions that require On-Scene Coordinator (OSC) expertise and fast-track contractor activation
- emergency provision of an alternate water supply
- complete cleanup of NPL sites, where consistent with remedial program scheduling/activities, the public interest, and within the purview of a defensible removal action.

Remedial actions are generally complete site cleanups that address ground water impacts, where necessary. Actions within the area of remedial program responsibility are:

- traditional, pre-planned remedial activities

- removal actions determined to be necessary during the course of a remedial action, within the expertise of the remedial project manager (RPM), and for which sufficient time exists for competitive contracting procedures.

Certain activities or phases of a response action, however, may not lend themselves to classification into these specific program areas, but rather require effective program integration and management flexibility to implement successfully. Examples of these situations are:

- A massive drum removal at an NPL site resulting in nearly complete site cleanup which creates a question of whether the removal or remedial program should complete the cleanup.

- A completed removal at an NPL site which raises the question of whether the removal or remedial program should continue action and perform the remedial investigation under the CERCLA 104(b) authority to document that the removal action has cleaned up the site, in accordance with the NPL site deletion guidance and the NCP.

In situations such as these, there appears to be a need for a management prerogative to assign program responsibility on a case-by-case basis. A manager may determine that an IRM-type removal is necessary and that it should be handled by the remedial program for the sake of continuity in an on-going remedial action, or the manager may determine that the action should be performed by the removal program to expedite a time-sensitive response action.

DISCUSSION:

OERR supports the concept of organizational flexibility in this area so that IRM-type removals or certain other removal activities may be undertaken using either remedial or removal program resources. It seems reasonable to deal with these programmatic overlaps on a case-by-case basis that allows flexibility to 1) use appropriate program expertise, 2) use the most advantageous contract mechanism, 3) use realistic time and urgency factors when planning a response, and 4) assure consistency of removals with longer term remedial actions. The implementation of this concept would be the responsibility of Regional program managers who, when making actual response decisions, need the flexibility to assign available and appropriate expertise (OSC or RPM) and dollar resources to specific cleanup situations that may overlap traditional definitions of removal and remedial.

Since the goal of the program is to clean up sites as quickly as possible in the most cost effective manner, Fund expenditures must continue to be carefully controlled to assure expeditious cleanup or mitigation at reasonable cost to the public. Therefore, it is essential that the most appropriate contracting mechanisms are used to assure maximum return for expenditures. The remedial construction program, through the

Corps of Engineers (COE) and the REM contracts, uses the invitation for bid procedures to secure lump sum or fixed unit price contracts. The removal program uses Emergency Response Cleanup Services (ERCS) contracts to allow quick response on a pre-negotiated and pre-competed time and materials basis. In addition, the removal program may procure fixed price contracts on a case-by-case basis, if necessary, and if time permits.

IRM-type response activities may lend themselves, depending upon the circumstances, to any of these procurement mechanisms. The ERCS contract system provides expedited and knowledgeable response capability. REM contracts and COE contracts provide cleanup capability when time allows for full competition. ERCS should generally be reserved for removal and IRM-type situations requiring rapid response such as drum removals or lagoon drawdowns. Other IRM-type removals with 4-5 months lead time have probably been identified in the FY 86 SCAP and could be pursued through REM or remedial construction contracts. Thus, it may often be desirable to pursue fixed-price contracts to address certain removal actions where urgency is not a critical factor. Where urgency is a factor, ERCS is the preferred contract mode. It must be noted, however, that a contracting warrant and appropriate training is a prerequisite to an OSC or RPM using the ERCS contracts.

A test program is being developed by HSCD to facilitate removals at NPL sites where remedial actions are underway and time exists for competitive fixed price contracting. Removal actions taken under this pilot program will be performed by remedial contractors to ensure continuity with RI/FS activities and schedules as well as consistency with the final remedial alternative. The approach will entail the use of an Engineering Evaluation/Cost Analysis (EE/CA) procedure, plans and specifications development, competitive bidding and construction management to plan, design, and implement the project. Initial pilot cases will include corrections to a landfill and provision of alternate water supplies. Guidance for performing EE/CAs is under development.

Further, for certain "non-urgent" removals, it may be desirable to perform a limited cost analysis that is consistent with the Guidance Document for Cleanup of Surface Tank and Drum Sites and draft guidance on EE/CAs. Where time allows, such an analysis could help assure selection of the best technical option at the best price. Such an analysis would not be appropriate for an urgent removal situation.

Response personnel are also reminded that it is EPA policy to provide potentially responsible parties (PRPs) the opportunity to perform the response actions described in this memo pursuant to a CERCLA §106 Administrative Order on consent. Where PRPs have been identified and do not take appropriate or timely actions, EPA will issue a unilateral order where appropriate. Where the decision is made to initiate a Fund-financed action because of the exigencies of the situation, the Agency will also pursue cost recovery for all costs incurred in conducting the removal action. EPA will also pursue treble damages where PRPs fail to comply with an administrative order without sufficient cause. More specifically, once a site has been identified for removal action the Region must determine the immediacy and seriousness of the release situation.

At sites presenting an extremely urgent situation (e.g., delay of start-up of on-site work cannot exceed one week following determination of the need for a removal), the Region should make a reasonable effort to identify PRPs and notify the parties verbally as to their potential liability followed by a notice letter as soon as possible. The parties should also be given a limited time to respond to the request for conducting the removal action. In the event the negotiations are successful and PRPs agree to undertake the removal action, the agreement should be embodied in an Administrative Order under §106 of CERCLA. It is also EPA policy to proceed with a unilateral administrative order if PRPs fail to respond appropriately to the request provided necessary criteria are met. For non-urgent removals, procedures for obtaining PRP response should be essentially the same as those for remedial actions. Notice letters should be issued to PRPs, negotiations should be scheduled quickly in order to secure private party cleanup within an established timeframe consistent with the conditions presented by the site. After negotiations, the procedures for issuing administrative orders are the same as those described above.

CONCLUSIONS

Experience has demonstrated that all removals are not necessarily urgent and that all remedial actions are not necessarily deferrable. Having program flexibility to allow certain IRM-type measures to be performed under the supervision of remedial staff and be deferred (because of longer contracting procedures) or to have these actions performed by removal staff on an expedited schedule, gives managers a means of realistic and justifiable scheduling of response actions. This flexibility also allows for management continuity and accountability within programs, and for the use of appropriate expertise.

Use of Expanded Removal Authority to Address NPL and Proposed NPL Sites

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB -7 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Use of Expanded Removal Authority to Address NPL and Proposed NPL Sites

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

TO: Waste Management Division Directors, Regions I-X
Environmental Services Division Directors, Regions I, VI, and VII

The Superfund Amendments and Reautnorization Act of 1986 (SARA) and the recent National Contingency Plan (NCP) revisions expand removal authority in several ways. The Office of Solid Waste and Emergency Response (OSWER) is exploring methods to use this increased authority innovatively to enhance efforts to clean up sites on the proposed and final National Priorities List (NPL).

A number of provisions in SARA broaden removal authority. First, the amendments revise the statutory limits on removal actions from $1 million and 6 months to $2 million and 12 months. The new law also provides for a waiver of these limits where "continued response action is otherwise appropriate and consistent with the remedial action to be taken." The three "emergency criteria" contained in the prior law still exist. The new waiver, however, is independent of the original three exemption criteria. This means that an exemption may be granted if the proposed removal action meets the original three criteria, or the fourth criterion alone. Another new provision in SARA requires removal actions to "contribute to tne efficient performance of any long-term remedial action" to the extent practicable. Finally, SARA establishes a preference for using alternative technologies and resource recovery techniques to achieve more permanent solutions.

In addition, the NCP revisions expanded removal authority by authorizing removal actions to be taken in response to threats, rather than just immediate and significant threats. This increased authority allows remedial operable units, e.g., the former initial remedial measures, to be implemented under removal authority.

OSWER would like to examine whether these new legislative and regulatory removal authorities can be used to clean up, or substantially clean up, any of the final or proposed NPL sites. It may be possible to delete certain sites from the NPL, or to achieve substantial cleanup, by performing a remedial operable unit under the expanded removal authority. Each Region is, therefore, requested to evaluate its final and proposed NPL sites and to identify those sites that may be appropriately addressed using removal authority. Such sites must meet the criteria for initiation of a removal action in Section 300.65 of the NCP, and the potential response action should generally remain within the new $2 million/12 month removal limits. OSWER will consider approval of actions that exceed the $2 million limit by a reasonable amount if the additional funds are needed to conduct an efficient response. Complicated response actions that require extensive study, such as the cleanup of a contaminated aquifer, would more properly be addressed using remedial authority.

Each Region is requested to provide us with the following information:

- List of potential NPL sites for removal action.
- For each site, a brief description of
  - Site background
  - Threat
  - Proposed removal action
  - Estimated cleanup cost.

The appropriate removal, remedial, and enforcement personnel in the Region should coordinate with each other in this effort. Please submit this information to Tim Fields, Director, Emergency Response Division, no later than February 27, 1987.

cc: J. Winston Porter
Jack W. McGraw
Tim Fields
Russ Wyer
Superfund Branch Chiefs, Regions I-X

Unaddressed NPL Sites

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

JUL 7 1989

MEMORANDUM

SUBJECT: Unaddressed NPL Sites

FROM: Bruce A. Engelbert, Chief
Response Operations Branch

TO: OHM Coordinators
Regions I-X

I have attached the memorandum from Henry Longest, which requests that information be supplied regarding unaddressed NPL sites. As we discussed in Kansas City, you need to develop realistic schedules for conducting the removal site assessments and provide this schedule and any other corrections or information regarding these sites to us by July 21, 1989. CERCLIS will be used to track the completion of removal site assessments and this information should be entered into the new CERCLIS field so that we can accurately track progress in this area. For the Federal facilities included in the attached listing, CERCLA fund money may not be used to conduct the removal site assessments. Other government agencies are responsible for Federal facilities. If you have any additional questions, please feel free to call me on 382-2188.

Attachment

cc: Tim Fields, ERD
ROB Staff
John Riley, RSCB
Christina Griffin, RSCB

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 6 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPO

OSWER Directive = 9200.2-

MEMORANDUM

SUBJECT: Unaddressed NPL Sites

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response (OS-200)

TO: Director, Waste Management Division
Regions I, IV, V, VII, VIII
Director, Emergency and Remedial Response Division
Region II
Director, Hazardous Waste Management Division
Regions III, VI
Director, Toxics and Waste Management Division
Region IX
Director, Hazardous Waste Division, Region X
Director, Environmental Services Division
Regions I, VI, VII

Purpose: The purpose of this memo is to request submission, by July 21st, 1989, of a status report on unaddressed NPL sites, and to reiterate our intention to complete removal assessments at all unaddressed sites by September 30, 1989.

Background: Through the recently released Superfund Management Review, the Administrator has directed us to quickly assess NPL sites to determine whether actions (fund-lead or enforcement) are needed to render sites safe from immediate hazards to public health and the environment. In implementing this initiative, we have set a goal to conduct removal assessments at all unaddressed NPL sites by the end of FY 1989 (unaddressed sites are sites which have had neither removal nor remedial activity).

As you may be aware, I have recently instructed my staff to begin an investigation of these unaddressed NPL sites. This effort was initiated with a March 6th memo to the Division Directors requesting a status report on all unaddressed, final NPL sites. Your responses to that memo provided much insight into the nature of these sites. Perhaps most importantly, your replies indicated that many of these sites have received some substantive action either through State efforts or the efforts of other government agencies (as in the case of Federal facilities).

Implementation: To immediately implement the recommendations of the Management Review, I am expanding our investigation to include sites proposed for addition to the NPL as well as those added to the final list since the March memo and I am including the

requirement that removal assessments be conducted at these unaddressed NPL sites. Since the removal assessment requirement was not part of the original March exercise, I have attached the March 6th list of unaddressed, final NPL sites (Attachment A) for your review. The attachment listing the new group of sites (Attachment B) is broken into two categories; those sites which were proposed to the NPL prior to Update 7 (June 1988) and those sites proposed in Updates 7 and 8.

As with the March exercise, I am requesting that you review your site lists (Attachment B only) and determine if the CERCLIS data showing no removal, remedial, or enforcement activity is correct. Please pay particular attention to whether State enforcement lead or Federal facility activity has or should be indicated. If the data is correct, provide me with your planned course of action for the site in question including current site status and plans for any upcoming RI/FS or removal activity or associated enforcement activity.

You will need to use both Attachments A and B for the removal assessment exercise. Sites which we believe have received an adequate removal assessment are marked with an * beside the EPA I.D. on the attachments. As removal assessments are completed at the remaining sites, enter this data into CERCLIS. To allow for this, we have created a new event in the database for you to record the completion of the removal assessment. We will monitor progress towards our September 30th goal through the database. In conducting the removal assessment, Regions should be sure to draw on the wealth of data gathered during the course of the listing process. This data can also be used in determining if a removal assessment has already been conducted for the site in question.

If you have any questions regarding the site status reports or the attached lists, please contact Tom Sheckells at 8-382-2466. Questions concerning the removal assessments should be referred to Bruce Engelbert at 8-382-2188. A recap of the implementation schedule for this memo follows:

Action	Timeframe
Review attached list of unaddressed sites (Attachment B). Correct CERCLIS if data is incorrect, submit site status report to HQ on legitimate unaddressed sites.	Status reports/CERCLIS corrections due COB 7/21
Conduct removal assessments at unaddressed NPL sites (Attachments A and B). Code completion dates into CERCLIS.	September 30, 1989

Attachments

cc: Superfund Branch Chiefs, Regions I-X
Jon Cannon
OERR Division Directors
Bruce Engelbert
Penny Hansen

Attachment A
(For use in removal assessment analysis only)

Region	Sitename	EPA I.D.
1	Davis (GSR) Landfill	RID980731459*
	Haverhill Municipal LF	MAD980523336*
	Revere Textile Prints	CTD004532610
	Shpack Landfill	MAD980503973
2	Anchor Chemicals	NYD001485226
	Griffiss Air Force Base	NY4571924451
	Jones Sanitation	NYD980534556
	Naval Air Engineering	NJ7170023744
	Rocket Fuel Site	NYD980535124
	Vestal Water Supply 4-2	NYD980652267
3	Follandsbee Site	WVD004336749
	Metal Banks	PAD046557096
	Stanley Kessler	PAD014269971
4	Koppers Co. Inc.	SCD003353026
	Leonard Chem Co.	SCD991279324
	Olin Corp/McIntosh Plant	ALD008188708
	Palmetto Recycling Inc.	SCD037398120
5	Boise Cascade/Onan/Medtro	MND053417515
	Delevan Muni Well #4	WID980820062
	East Bethel Demolition	MND981088180
	Freeway Sanitary Landfill	MND038384004
	Joliet Army Ammo Plant Mfg	IL7213820460
	Joslyn Mfg and Supply	MND044799856
	Kent City Mobile Home	MID981089915
	Koppers Co/Galesburg	ILD990817991
	Koppers Coke	MND000819359
	Lauer I San Landfill	WID058735994
	McGraw-Edison Company	MID005339676
	Nutting Truck & Caster Co.	MND006154017
	Olmsted County San Ldfl	MND000874354
	Perham Arsenic	MND980609572
	SCA Independent Landfill	MID000724930
	Scrap Processing Inc.	WID046536785
	Southwest Ottawa County	MID980608780
	Sparta Landfill	MID000268136
	Spartan Chem Co.	MID079300125
	St. Augusta Ldfl Engen.	MND981002256
	St. Regis Paper Co.	MND057597940
	Tomah Armory	WID980610299*
	Tomah Fairground Area	WID980616841*
	Waite Park Wells	MND981002249

Region	Sitename	EPA I.D.
5	Waste Mgmt. of Michigan	MID060179587
	Waste Research and Reclam.	WID990829475
	Windom Muni Dump	MND980034516
6	None	
7	Obee Road Site	KSD980631766
8	Mouat Industries	MTD021997689*
9	Mather AFB (AC & W Disp.)	CA8570024143
	McClellan AFB (36 Areas)	CA4570024337
10	Bangor Ordinance Disposal	WA7170027265
	Kaiser Aluminum Mead Work	WAD000065508
	McChord AFB	WA8570024200
	Pesticide Lab - Yakima	WAD120513957
	Umatilla Army Depot	OR6213820917

Attachment B

Unaddressed Pre-Update 7 Sites

Final Sites

R1	Nutmeg Valley Road	CTD980669261*
R2	W.R. Grace/Wayne Interim Storage	NJ1891837980
R3	USA Letterkenny Southeast	PA6213820503
R5	Douglas Road Uniroyal Inc.	IND980607881
	Joliet Army Ammo Plant LAP	IL0210090049
	Omega Hills North Landfill	WID000808568
	Savanna Army Depot	IL3210020803
	Southside Sanitary Landfill	IND980607360
	Tomah Municipal Sanitary Lanfill	WID980610307*
	TRW Inc. Minerva Plant	OHD004179339
R6	Lone Star Army Ammunition	TX72138218319
	Castle Air Force Base	CA3570024551
	Moffett Naval Air Station	CA2170090078
	Norton Air Force Base (LF #2)	CA4570024245

Proposed Sites

R2	Naval Weapons Sta. Earle-Site A	NJ0170022172
R3	Buckingham County Landfill	VAD089027973
	Culpepper Wood Preservers	VAD059165282
	Dover Gas Light Co.	DED980693550*
	IBM Corp. (Manassas Plant)	VAD064872575
	Mobay, New Martinsville	WVD056866312
	Pigeon Point Landfill	DED980494603
	River Road Landfill	PAD000439083
	Rohm and Haas Landfill	PAD091637975
	Transicoil Inc.	PAD057152365
	Tyler Refrigeration Pit	DED980705545
	USA Aberdeen - Edgewood	MD2210020036*
	USA Aberdeen, Michaelsvill	MD3210021355*
	USN Naval Air Development Center	PA6170024545*
R4	Diamond Shamrock Corp	GAD990741092*
	Olin Chemical Group	GAD040690737
	Piper Aircraft Corp.	FLD004054284*
	Rochester Property	SCD980840698*
R5	Barrels Inc.	MID017188673
	Firestone Industrial Products	IND980605877
	H O D Landfill	ILD980605836
	Hooker Montague Plant	MID006014906
	Kerr-McGee Kress Creek	ILD980823991

Unaddressed Pre-Update 7 Sites

Proposed Sites

R5	Kysor Industrial Corp.	MID043681840
	Lacks Industries Inc.	MID006014666
	Stauffer Chem Co. Chicago	ILD005110143
R6	Air Force Plant #4	TX7572024605*
R7	Frit Industries	IAD041103193
	US Nameplate	IAD054758958*
R8	Midvale Slag	UTD081834277*
R9	Kunia Wells I	HID980894943
	Kunia Wells II	HID980895049
	Marley Cooling Tower Co.	CAD009140120
	Mililani Wells	HID980895031
	Waiwa Shaft	HI7170090016
	Waipahu Wells	HID980895023
	Waipio Heights Wells II	HID980895015
R10	Naval Air Station Ault Fld	WA5170090059
	Naval Air Station Seaplane Base	WA6170090058
	Naval Undersea Warfare	WA1170023419
	Old Inland Pit	WAD980982557*

Unaddressed NPL Sites (Updates 7 and 8)

Final Sites

R1	Bennington Landfill	VTD981064223*
	Burgess Brothers Landfill	VTD003965415*
	Holton Circle	NHD981063860
R2	Action Anodizing & Plating	NYD072366453
	Global Landfill	NJD063160667
	Sydney Landfill	NYD980507677
R3	Berkley Prod Co Dump	PAD980538649
	Boarhead Farms	PAD047726161*
	Bush Valley Landfill	MDD980504195*
	Elizabethtown Landfill	PAD980539712
R4	ABC One Hour Cleaners	NCD024644494*
	Cedartown Municipal Landfill	GAD980495402*
	Elmore Waste Disposal	SCD980839542
	New Hanover County Airport	NCD981021157
	Red-Penn Sanitation Co.	KYD981469794
	T.H. Agriculture and Nutrition	GAD042101261
	Wilson Concepts of Florida	FLD041184383
R5	Carter Lee Lumber Co.	IND016395899
	Continental Steel Corp.	IND001213503
	Hechimovich Landfill	WID052906088
	Interstate Pollution Control	ILT180011975
	Parsons Chemical Works	MID980476907*
	SE Rockford Groundwater	ILD981000417
	Yeoman Creek Landfill	ILD980500102
R6	Cal West Metals (SBA)	NMD097960272*
	Cleveland Mill	NMD981155930*
	Fourth Street Abandoned Refinery	OKD980696470*
	Gulf Coast Vacuum Service	LAD980750137*
	PAB Oil and Chemical Service	LAD980749~~139~~*
R7	Hydro-Flex Inc.	KSD007135429
	Mid-America Tanning Co.	IAD085824688*
	Pester Refinery	KSD000829846*
R8	Old Minot Landfill	NDD980959548*
R9	Modesto Groundwater Contamination	CAD981997752
	Newmark Wellfield	CAD981434517
	Valley Wood Preserving	CAD063020143
R10	Fairchild Air Force Base	WA9571924647
	Joseph Forest Products	ORD068782820*
	Yakima Plating Co.	WAD040187890*

Unaddressed NPL Sites (Updates 7 and 8)

Proposed Sites

R1	Atlas Tack Co.	MAD001026319*
	Barkhamsted-New Hartford	CTD980732333*
	BFI/Rockingham	VTD980520092
	Cheshire Associates Property	CTD981067317
	Darling Hill Dump	VTD980520118
	Durham Meadows	CTD001452093
	Gallup's Quarry	CTD108960972*
	Parker Landfill	VTD981062441
	Precision Plating	CTD051316313
	Rose Hill Regional Landfill	RID980521025
	Saco Municipal Landfill	MED980504393*
	Tansitor Electronics Inc.	VTD000509174
R2	Higgins Disposal Service Inc.	NJD053102232
	Jones Chemical Inc.	NYD000813428
	Naval Security Group	PR4170027383
	Niagara Mohawk/Operations HQ	NYD980664361
	Tri-City Barrel	NYD980509285
	Witco Chemical Corp.	NJD045653854
R3	AIW Frank	PAD004351003
	Anne Arundel Co. Landfill	MDD980705057*
	Bell Landfill	PAD980705107*
	Berks Landfill	PAD000651810*
	Jack's Creek/Sitkin Smelt	PAD980829493
	Kent City Landfill	DED980705727
	Occidental Chem/Firestone	PAD980229298
	Recticon/Allied Steel	PAD002353969
	Saegertown Industrial Area	PAD980692487
	Suffolk City Landfill	VAD980917983
	Sussex Co. Landfill #5	DED980494637
R4	Agrico Chemical Site	FLD980221857
	Anodyne, Inc.	FLD981014368
	Beaunit Corp./Circular Knit	SCD000447268
	Benfield Industries, Inc.	NCD981026479
	Beulah Landfill	FLD980494660
	BMI Textron	FLD052172954
	Brantley Landfill	KYD980501019
	Caldwell Lace Leather Co.	KYD045738291
	Carrier Air Conditioning	TND044062222
	Cedartown Industries Inc.	GAD095840674*
	Chem-Form Inc.	FLD080174402*
	Firestone Tire and Rubber	GAD990855074
	Fort Hartford Coal Stone	KYD980844625*
	Genral Tire and Rubber Company	KYD006371074
	Green River Disposal Land	KYD980501076
	Hevi-Duty Electric Co.	NCD039102959

Unaddressed NPL Sites (Updates 7 and 8)

Proposed Sites

R4	JFD Electronics/Channel Master	NCD122263825
	Lexington County Landfill	SCD980558043
	Madison County Sanitary Landfill	FLD981019235
	Murray Ohio Manufacturing	TND981014954
	Redwing Carriers Inc.	ALD980844385*
	T. H. Agriculture Nutrition Co.	ALD007454085*
	Townsend Saw Chain Co.	SCD980558050
	USMC Camp Lejuene	NC6170022580
	Wingate Road Municipal Incineration	FLD981021470
	Woodbury Chemical Co.	FLD004146346*
	Woolfolk Chemical Works	GAD003269578*
R5	Adams County Quincy Landfill	ILD980607055
	Albion Sheridan Township Landfill	MID980504450
	Allied Paper/Portage Creek	MID006007306
	Amoco Chemical Corp.	ILD002994259
	Beloit Corp.	ILD021440375
	Central Illinois Public Service Co.	ILD981781065
	Dupage County Landfill	ILD980606305
	Fort Howard Paper Co.	WID006136659
	Himco Dump	IND980500292
	Kaydon Corp.	MID006016703
	Lenz Oil Service Inc.	ILD005451711
	Madison Metro Sewage Sludge	WID078934403
	Muskegon Chem Co.	MID072569510
	Sauk County Landfill	WID980610141
	State Disposal Landfill	MID980609341
	Tippecanoe Sanitary Landfill	IND980997639
	USAF Wright Patterson Base	OH7571724312
	Warner Electric Brake and Clutch	ILD006114151
	Waste Mgmt. of Wis-Brookfield	WID980901235
	Whiteford Sales and Serv Nat Lease	IND980999791
	Woodstock Municipal Landfill	ILD980605943
R6	D. L. Mud Inc.	LAD981058019*
	Lee Acres Landfill (USDOI)	NMD980750020*
	Mosley Road Sanitary Landfill	OKD980620868*
	Pagano Salvage	NMD980749980*
	Prewitt Abandoned Refinery	NMD980622773*
	Rio Grande Oil Co. Refinery	TXD980795736*
	Sunray Oil Co. Refinery	OKD000764357*
	Tex-Tin Corp.	TXD062113329*
R7	E. I. Dupont De Nemours	IAD980685804
	Electro-Coatings Inc.	IAD005279039
	John Deere (Ottumwa Works)	IAD005291182
	Lehigh Portland Cement Co.	IAD005288634
	Northwestern States Portland Cement	IAD980852461

Unaddressed NPL Sites (Update 7 and 8)

Proposed Sites

R7	Oronogo-Duenwig Mining	MOD980686281
	Peoples Natural Gas Co.	IAD980852578*
	Sheller-Globe Corp. Disposal	IAD980630750
	St. Louis Airport/HIS/Futura	MOD980633176
	29th and Mead Groundwater	KSD007241656
R8	Comet Oil Co.	MTD980403554*
R9	Advanced Micro Devices #9	CAT080034234
	Brown & Bryant Inc.	CAD052384021*
	Concord Naval Weapons Station	CA7170024528
	Crazy Horse Sanitary Landfill	CAD980498455
	CTS Printex	CAD009212838
	El Toro Marine Corps Air Station	CA6170023208
	Fresno Sanitary Landfill	CAD980636914
	GBF & Pittsburg Dumps	CAD980498562*
	Hewlett Packard I Palo Alto	CAD980884209
	Hexcel Corp.	CAD058783952
	Intersil	CAD041472341
	Kaiser Steel Corp.	CAD008274938*
	Kearney KPF	CAD981429715
	Pacific Coast Pipe Lines	CAD980636781
	Riverbank Army Ammunition	CA7210020759
	Sola Optical USA Inc.	CAD981171523
	Solvent Service Inc.	CAD059494310
	Sulphur Bank Mercury Mine	CAD980893275*
	Synertek # (Bldg 1)	CAD990832735
	TRW Microwave	CAD009159088
	Yuma Marine Corps Station	AZ0971590062
R10	Centralia Municipal Landfill	WAD980836662
	Eastern Michaud Flats Contamination	IDD984666610
	Hanford 100-Area (DOE)	WA3890090076
	Hanford 1100-Area (DOE)	WA4890090075
	Hanford 200-Area (DOE)	WA1890090078
	Hanford 300-Area (DOE)	WA2890090077
	Kerr-Mcgee Chem Corp.	IDD041310707
	Monsanto Soda Springs Plant	IDD081830994
	Northwest Trans. (S. Harkness St.)	WAD027315621*
	Pacific Car & Foundry Co.	WAD009249210
	Pasco Sanitary Landfill	WAD991281874

Use of Removal Approaches to Speed Up Remedial Action Projects

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

Cristina Griffin

JUL 6 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPO

OSWER Directive No. 9355.0-25A

MEMORANDUM

SUBJECT: Use of Removal Approaches to Speed Up Remedial Action Projects

FROM: Jonathan Z. Cannon
Acting Assistant Administrator

TO: Environmental Services Division Directors
Regions I, VI, VII
Waste Management Division Directors
Regions I, IV, V, VI, VII, VIII
Emergency and Remedial Response Division Director
Region II
Hazardous Waste Management Division Directors
Regions III, VI
Toxics and Waste Management Division Director
Region IX
Hazardous Waste Division Director
Region X

Purpose:

This memorandum defines the basic requirements to be met when a Region chooses to use removal authorities and contracting methods to speed up remedial projects.

Background:

Several Regions have expressed interest in the use of removal authorities and contracting methods to speed up remedial actions on National Priorities List (NPL) sites where surface cleanups may result in a total site cleanup or completion of a major portion of the site. Memoranda containing conditions for this approach were forwarded to Region IV on March 18, 1988, and July 11, 1988. (OSWER Directive No. 9355.0-25). Region IV has used this approach on eight sites. Three of these sites are now scheduled to be deleted from the NPL this fiscal year. Region III has also used this approach at two NPL sites.

Several issues arose in defining and implementing this approach, which required coordination of policies and procedures between both the remedial ai removal programs. This coordination resulted in a unique set of requirements which each Region must meet when undertaking the use of removal authorities to achieve early action at NPL sites.

Objective:

This policy is aimed at speeding up response at some NPL sites. The purpose is not to establish an alternative to remedial contracting methods but to provide an additional response option until such time as rapid remedial contracting alternatives are fully developed. This document supersedes previous memoranda on this topic. This memorandum describes the criteria and other considerations for effective utilization of this approach. The requirements outlined in this memorandum do not apply to the usual 40 to 50 emergency and time-critical removal actions conducted by the removal program at NPL sites each year.

Implementation:

The following are the key requirements which must be met before removal authorities or removal contractors can be used to perform remedial actions at NPL sites.

1) All sites must have a signed Record of Decision (ROD). Should the proposed response activities entail a substantive change from the remedy specified in the ROD, the Region must either amend the ROD or publish an explanation of significant differences, whichever is appropriate, prior to commencing the cleanup.

2) Sufficient time and enforcement resources must be allocated to the extent feasible to conduct a potential responsible party (PRP) search and obtain information about PRP's through Section 104(e) actions. Follow-up PRP Search activities should be conducted where necessary. If PRP's are identified during this process, the Region should send a notice letter, and, consistent with CERCLA Section 122(a) and (e), issue special notice or advise the PRP that such procedures will not be utilized. If site exigencies require early response, the Region may chose to issue notice orally and follow up in writing. Assuming that there is sufficient time, the Region should conclude Section 106 negotiations with the PRP prior to initiation of any response action.

3) These cases draw upon removal authorities, but are considered remedial actions. Consequently, if the Region takes an enforcement action, it must utilize a consent decree or issue a Unilateral Administrative Order. If compliance is not achieved and time is critical (typical of many removals) the Region should take over the response and pursue cost recovery, seeking treble damages and/or other penalties.

4) All activities must be well documented for cost recovery.

5) A signed State Superfund Contract must be obtained from the State, prior to the start of the action, providing the Section 104(c) assurances for cost sharing, operation and maintenance, off-site disposal and, when applicable, 20-year waste capacity.

6) The proposed response action at the site must meet the National Contingency Plan (NCP) criteria for removal actions in section 300.65.

7) All proposed response activities must be described in a signed removal action memorandum. If the response should exceed the statutory limits of 12 months or $2 million, it will be necessary for the Region to prepare an exemption request. In the case where site costs are expected to exceed the $2 million limit, Headquarters approval must be obtained prior to commencing the removal action. These exemption requests must be prepared as early as possible in the process. Only Regional approval is required for exemption requests where activities are expected to exceed the 12-month limit.

8) All funding, activity codes, account numbers, SCAP and CERCLIS data will use remedial codes. This will ensure that these activities are reported on and tracked as remedial actions. Funds will come from the remedial portion of the Region's Advice of Allowance (AOA). All projected starts should be entered into CERCLIS with their projected obligations data for the appropriate quarter of the fiscal year.

9) Community relations requirements must be met and an administrative record must be established for each site. The public comment period must be observed in accordance with NCP requirements for both the remedial and removal programs.

10. Generally at the completion of this cleanup work, the site should be ready for deletion. OSWER Directive 9320.2-3A procedures must be followed to delete the site from the NPL. When a major portion (significant operable unit) of work is undertaken using these procedures and the site does not qualify for deletion, unusual circumstances (e.g., emergency) must preclude the use of remedial contracting mechanisms.

Future Plans

The remedial program has two initiatives underway to provide the contractual mechanisms and construction management systems needed to expedite projects within the remedial process and authorities. One is the Corps of Engineers new rapid response contracts used to expedite smaller pieces of some large site cleanups they manage. The second is the subcontracting provision of the Alternative Remedial Contracts Strategy (ARCS). ARCS will more typically be used for smaller construction projects such as those anticipated for coverage under this policy. With the inclusion of experienced engineering and construction management contractors in the ARCS program, opportunities open up for the use of more expeditious construction subcontracts for some sites with plans for early initiation of construction based on limited design.

Alternatively, other subcontracting vehicles such as basic ordering agreement and other methods of bidder prequalification might be used to reduce procurement lead time. More guidance on the use of these mechanisms will be issued. It is expected that as the Regions gain experience with the ARCS program and these subcontracting mechanisms, the use of removal authorities and program mechanisms to speed up remedial projects will be phased out.

Other Considerations:

If removal authorities are going to be used, careful consideration must be given to the type of contract that is selected for the work. Obtaining the best price and maximizing competition are always major goals, as in using competitive contracting mechanisms to the maximum extent practicable. The Emergency Response Cleanup Services (ERCS) contracts may be the most appropriate vehicle where rapid response is necessary under emergency and time-critical circumstances. However, a Region should always consider using the Prequalified Offerors Procurement Strategy (PQOPS) or other site-specific contracting mechanisms. This is especially true if the project is a non-emergency situation where the consistency waiver to the $2 million limit is used.

When use of alternative technologies is specified in the ROD, PQOPS should be considered. The use of this arrangement is most appropriate when a 3 to 5 month lead time is available. This procurement strategy is about to be implemented for mobile incineration. PQOPS for other technologies will follow. When the lead time is approximately 4 months and PQOPS is unavailable, use of site-specific subcontracts under the ERCS contracts may be feasible. This approach may be used only where the prime contractor has not proposed rates for the site's particular cleanup activity. In addition, many Regions have Regional ERCS contracts with 24 to 72 hour response times which may be more cost-effective than the Zone ERCS contracts. In all cases, the Region should keep in mind that achieving the maximum competition is a primary goal of both the removal and remedial programs, taking into account the need for rapid response and the magnitude of the risks posed.

A final factor to consider is removal contracts capacity. Generally, this policy should not be used to do expensive remedial work. It is intended to help expedite deletion from the NPL of projects of modest scope. This approach cannot be used where the adequacy of removal contracts capacity is jeopardized. Being able to always promptly and fully respond to the normal removal workload is a higher priority than doing the remedial work that is the subject of this policy.

In summary, use of removal authorities or removal (e.g., ERCS) contracts to take early action at NPL sites is an alternative in certain limited situations. The site must meet the criteria for a removal action as well as fulfill all the regular remedial requirements. This strategy will enable the Regions to complete cleanup at certain NPL sites in a more expeditious and efficient way and to start the necessary deletion process.

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Accelerated Response at NPL Sites Guidance

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

DEC 15 1989 OSWER Directive No. 9200.2-02

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Accelerated Response at NPL Sites Guidance
(Superfund Management Review: Recommendation No. 22)

FROM: Don R. Clay
Assistant Administrator

TO: Director, Waste Management Division
Regions I, IV, V, VII, VIII
Director, Emergency and Remedial Response Division
Region II
Director, Hazardous Waste Management Division
Regions III, VI
Director, Toxic and Hazardous Waste Management Division
Region IX
Director, Hazardous Waste Division
Region X
Director, Environmental Services Division
Regions I, VI, VII
Regional Counsels, Regions I-X

PURPOSE

The purpose of this memorandum is to transmit Agency guidance on accelerating responses at National Priorities List (NPL) sites.

BACKGROUND

Pursuant to the Superfund Management Review, a workgroup was formed to develop guidance to assist the Regions in taking expedited approaches to site cleanups and in making NPL sites "safer." After evaluation of Regional comments, the guidance was split into two separate documents. The attached guidance, the first of the two documents, describes available procedures and contract mechanisms to allow the Regions to take action at NPL sites more quickly under both removal and remedial authority.

IMPLEMENTATION

Specifically, the attached guidance requires that you:

- Ensure that all pre-remedial, removal, remedial, and enforcement staff are familiar with the need to accelerate responses at NPL sites;

- o Use Superfund removal and remedial authority, as appropriate, to take accelerated actions at those NPL sites where feasible and prudent;

- o Employ enforcement authority promptly at NPL sites to encourage increased PRP involvement in site cleanup;

- o Establish mechanisms to ensure proper coordination and funding of accelerated responses within the Regions; and

- o Promote the operation of Superfund as "one program" through use of elements such as improved interoffice communication and cross-training of Agency personnel.

If you have any questions on this guidance, please contact Hans Crump-Wiesner, Acting Director, Emergency Response Division, at FTS 475-8720, or Scott Maid at FTS 382-4671.

Attachment

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OSWER Directive #9200.2-02

Accelerated Response at National Priorities List Sites[1]

1.0 INTRODUCTION

1.1 Background

In June 1989, the Environmental Protection Agency (EPA) completed a study entitled "A Management Review of the Superfund Program" (Superfund Management Review). This document outlined a new long-term strategy for management of Superfund and described the need for EPA guidance on expediting response at National Priorities List (NPL) sites. The report also emphasized elimination of immediate risk to public health and safety and the minimization of long-term risk from hazardous substances at NPL sites as new measures of program success.

The Superfund Management Review specifically recommended that EPA "take expedited approaches to site cleanup whenever possible" (p. 3-13). The report also emphasized the need for creative or alternative approaches for improving the effectiveness and timeliness of remediation at NPL sites. Recommendations from the Superfund Management Review were further discussed in a September 18, 1989, memorandum from F. Henry Habicht to the Regional Administrators, entitled "Immediate Actions to Implement the Superfund Management Review."

1.2 Purpose

This document focuses on accelerating responses at NPL sites and coordinating available removal, remedial, and enforcement procedures and contract mechanisms in order to accomplish this. This guidance is intended for Regional site managers, including On-Scene Coordinators (OSCs), Site Assessment Managers (SAMs), and Remedial Project Managers (RPMs), enforcement staff, and other Regional and Headquarters Superfund personnel. By implementing these procedures, we may accelerate all types of response actions, and encourage management of NPL sites under "one program."

1.3 Scope

Specifically, this guidance addresses the following areas:

- What is an accelerated response? (Section 2.1)

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[1] The policies and procedures established in this document are intended solely for the guidance of EPA personnel. They are not intended, and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. EPA reserves the right to act at variance with these policies and procedures and to change them at any time without public notice.

- What are the available mechanisms to accelerate responses at NPL sites? (Section 2.2)
- What are the enforcement aspects of accelerated response? (Section 3.0)
- What additional factors should be considered in an accelerated response? (Section 4.0)
- How may the various Superfund program offices work as "one program" to accelerate responses? (Section 5.0)

2.0 ACCELERATED RESPONSE

Accelerated responses may be used in many situations where site managers want to act on sites quickly. Site managers have access to a variety of mechanisms for accelerating responses to threats at NPL sites. In most cases, the tools are modifications of established response options that have been in common use in the Superfund program. Regions should follow the provisions, described below, whenever practicable to expedite cleanups at NPL sites.

2.1 What Is An Accelerated Response?

An accelerated response is an action taken at an NPL site using streamlined response mechanisms, with the purpose of acting quickly to reduce acute risk to human health and the environment. Accelerated responses can help Regions reduce risk from these sites, and can allow for more efficient use of EPA resources.

If evaluation of a site indicates that an accelerated response is warranted, then appropriate action should be taken, by:

- Conducting a removal action in accordance with section 300.65 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP)[2] (proposed NCP section 300.415); or
- Preparing and executing an early action operable unit Record of Decision (ROD) based on existing data or a limited data gathering effort; or

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[2] For ease of use, references to both the old (1985) NCP and the proposed (1988) NCP sections are provided in the text. It is important to note, however, that the 1985 NCP remains in full effect until a revised NCP is promulgated. The revised NCP, which was proposed on December 21, 1988 (53 FR 51394) is expected to be finalized in 1990, at which point the revised section numbers will become effective.

- o Implementing techniques to expedite the planning and design process prior to remedial construction.

2.2 What Are The Available Mechanisms?

Removal Actions

Removal actions are used to prevent, abate, minimize, stabilize, or mitigate releases or threats of releases of hazardous substances, pollutants, or contaminants that pose a threat to public health or the environment. Section 300.65 of the NCP (proposed NCP section 300.415) describes factors for determining that a removal action is appropriate (e.g., contamination of drinking water, threat of fire or explosion, potential for migration) and the types of removal actions that are appropriate in certain situations. Removal actions are performed at NPL and non-NPL sites. Approximately 40 removal actions have been conducted annually at NPL sites.

A site manager may, in certain situations, choose to use removal authorities and contracting methods to accelerate response at NPL sites. Actions with a planning period of less than six months are generally (but not always) performed prior to the development of the ROD. If a removal action is indicated at an NPL site, and adequate planning time (i.e., greater than six months) is available before the start of the removal, an engineering evaluation/cost analysis (EE/CA) should be conducted as part of the non-time-critical removal. Alternatively, a remedial investigation/feasibility study (RI/FS) can be conducted. EE/CAs contain evaluations of possible alternative technologies, selection of the response, and document the decisionmaking process. The EE/CA must be made available for public comment as part of the administrative record, in compliance with the public participation procedures for non-time-critical removal actions described in §300.820 of the proposed NCP.

For any category of removal action, the appropriateness of the action is not limited to the factors explicitly described in section 300.65 of the NCP, nor does the NCP limit the responses EPA may take to the examples given in the NCP. Action Memoranda must be completed for all removal actions and must include all information described in the "Superfund Removal Procedures Manual," Chapter III-C.8. Expedited enforcement activities, such as expedited PRP searches and use of model administrative orders, are appropriate for these actions.

Continuation Of Removal Action. As an acute threat at an NPL site is being addressed by a removal action, it may be possible that an incremental expansion in the scope of the removal action would help to further protect human health and the environment and lead to expediting overall cleanup of the site. Regions may determine on a case-by-case basis whether this is appropriate at a site. The following factors should be considered in such case-by-case evaluations:

Scope of Continued Action

- After an acute threat at an NPL site is addressed by a removal action, Regions should consider whether there is any appropriate action that would allow further protection of human health and the environment. This may require employing a removal or remedial action to complete an operable unit. The aim of the accelerated response is to reduce risk to human health and the environment at the site.

Concurrence

- The decision to accelerate response through use of removal authority must be made in consultation with pre-remedial, remedial, removal, and enforcement program managers. The State should also be involved whenever the State is expected to play a role in the action. If the action does not meet removal criteria, however, the accelerated response option chosen must be performed as a remedial action.

- The Region must weigh the loss of cost-share against the need for, and efficiency of, accelerating the response at a site on a case-by-case basis. Regions should attempt to obtain agreement from States on the proposed course of action before proceeding with any accelerated response option.

- If the cleanup will exceed the $2 million statutory limit for a removal action, then Headquarters approval of an emergency or consistency exemption is necessary. If no exemption applies, the accelerated response option chosen must be performed as a remedial action.

- If the removal response will be nationally significant (e.g., involving dioxins or Indian lands), Headquarters concurrence will be necessary. Headquarters concurrence will also be necessary if the action employs innovative or emerging alternative technology.

- The public's interest and concern in the site should be taken into account when deciding what the response should be.

Restrictions

- The State, remedial program, PRP, or other authority must be willing to conduct post-removal site control (PRSC) where needed following a Fund-financed removal action (see section 4.4). The Region may pursue unilateral enforcement action, including judicial action if needed, to obtain PRSC. If arrangements for PRSC cannot be made, the accelerated response must be performed as a remedial action.

- If the action will require extensive, long-term response, such as restoration of a contaminated aquifer, the response should be performed as a remedial action.

Contract Resources

- Regional resources (including resources that may be transferred from the remedial program) must be adequate to meet the requirements for an accelerated removal response at the site without compromising emergency response capability in the Region. If resources for accelerated responses at NPL sites cannot be provided without compromising emergency and time-critical response capabilities in the Region, the accelerated response must be performed and funded as a remedial action.

- An assessment of removal and remedial contract capacity should be performed in order to determine the capacity, availability, and suitability of response contractors to the site in question. Regions must evaluate relative contract capacity before an accelerated response can be continued at the site.

Removal Approaches To Remedial Actions. Remedial action may be conducted using removal contracting methods where the action complies with all removal as well as remedial requirements. In these circumstances, remedial funding is used to implement a ROD at an accelerated rate. Guidance on this response option was issued to the Regions on July 6, 1989 (see "Use of Removal Approaches to Speed Up Remedial Action Projects," OSWER Directive #9355.0-25A). These actions are remedial actions. The term "removial," which has been used informally to characterize these actions, should not be used.

The response must meet both remedial and removal program requirements. Time is saved by using removal contractors, and through the use of an abbreviated and less formal design procedure. Remedial funding is provided through a ROD and a state cost-share is provided through a Superfund state contract. For all purposes, including enforcement, these actions are remedial actions. All agreements with PRPs must be embodied in a consent decree. Since this response approach uses large amounts of limited Emergency Response Cleanup Services (ERCS) capacity, it should only be used in unusual emergency or time-critical circumstances. New and streamlined remedial alternatives should obviate the need for this course of action in most cases.

Remedial Actions

The purpose of the remedial action process is to implement remedies that reduce, control, or eliminate risks to human health and the environment. Only those sites included on the NPL are eligible for Fund-financed remedial action (NCP section 300.68). The remedial process generally includes an RI/FS, a proposed plan, a ROD, engineering design, and implementation of the remedial action. All remedial actions must comply with the requirements of §300.68 of the NCP (§§300.430 and 300.435 of the proposed NCP).

A site manager may, in certain situations, choose to use remedial authorities and contracting methods to accelerate response at an NPL site. This may be accomplished through the implementation of an early action operable

unit ROD (for example, to remove drums) and the use of streamlined remedial contracts. Early actions may make it possible to provide earlier protection of public health and the environment, and the actions may also help provide information that may be used to improve the phasing and design of later remedial stages.

Site managers can break actions into distinct portions, which are known as "operable units," to achieve quicker response. An operable unit is "a discrete part of the entire response action that decreases a release, threat of release, or pathway of exposure" (NCP section 300.6; see also proposed NCP Subpart A). Operable units can be designated to accelerate remediation for portions of the site, but all operable units conducted as remedial actions must have RODs. Separate enforcement agreements may be reached for individual operable units.

Expediting Remedial Actions. After signing a ROD, accelerated responses may be implemented under remedial authority. The most obvious method to accelerate remedial action is to initiate construction sooner, i.e., speed up the planning and design process. Once this is achieved, contracting and construction options can be explored to best enhance site remediation. This section briefly describes techniques for expediting remedial construction. (The techniques are covered in greater detail in OSWER Directive #9355.5-02/FS, "Expediting Remedial Construction.") These techniques are applicable to all Superfund projects; however, they are geared toward small (less than $5 million), well defined projects using proven technologies.

Remedial Management Strategy. The remedial management strategy (RMS) is a systematic approach used to identify and establish the preferred contracting strategies to be used in the implementation of a remedial action. The objective is to look at each of the operable units that are part of the remedy described in the ROD and lay out a strategy for construction that meets all of the constraints imposed on the project. The RMS establishes the overall course of action for the project. It is at this point that decisions are made about phasing portions of the project, fast-tracking design and construction, employing limited designs for specific elements, or utilizing alternative procurement methods.

Phasing Remedial Design and Construction. An analysis of remedial design/remedial action (RD/RA) project elements results in the determination that some can be effectively phased or time-sequenced to accelerate them through the design and remediation process. Phasing may achieve an overall fast-track schedule and thereby mitigate the continuing threat of the site to the environment and public safety. Large, complex projects (or operable units) may be broken down into smaller, more manageable response elements. Elements may be worked in unison, but each individual element has its own schedule and moves at its own rate through the remediation process.

Fast-Tracking RD/RA. Fast-tracking might be considered a subset of phasing. Where phasing breaks large complex projects into smaller more manageable units, fast-tracking is a method to accelerate the implementation of those individual elements. There are several techniques that can be used to fast-track RD/RA:

- o Expedite RD Discretionary steps in the RD process may be eliminated or shortened. Site managers must realize, however, that short-cutting the process involves some risk. For example, deciding to use only data collected during the RI/FS for design is one method of expediting. However, the design risks being delayed if the RI/FS data turns out to be marginal or incomplete.

- o Use of Removal Authority. As mentioned in the section on Removal Approaches to Remedial Actions, removal contracting methods and remedial funding can be used to implement RD/RA on an accelerated basis.

- o Optimize RD Optimization is the rearrangement of the sequence in which RD elements are performed to enhance the overall schedule. For example, the site access portion of a design could be completed and construction initiated while the rest of the design is still on-going.

- o Fast-Track Construction. Many large projects can be divided into separate stages of construction. This is generally accomplished by awarding each stage of work for construction as soon as the design effort on that particular stage of work has been completed. This approach has the advantage that the project will be started and completed sooner than would be possible if it were necessary to wait until all design work had been completed. Another aspect of fast-track construction is ordering items that require long lead-times in advance of the time they will be needed on the job.

Preplaced and Pre-Qualified Contracts. One method to expedite initiation of remedial construction is to use preplaced contracts or pre-qualified contractors. There are several options currently available for use. These methods require approximately 30-60 days to initiate construction activities by eliminating the solicitation and audit requirements of site-specific contracts, thus reducing the time from design completion to construction initiation.

The U.S. Army Corps of Engineers (USACE) has developed methods to expedite the initiation of remedial action at Superfund sites by implementing two innovative contracting strategies: Preplaced Remedial Action (PRA) and Rapid Response (RR) contracts. Both may be used for projects when delaying the remedial action for normal procurement actions may result in detrimental effects on human health or the environment. PRA contracts are structured to implement full-scale remedial actions. RR contracts are for demolition actions, closures, point source contamination control, and site stabilization. They are limited to $2 million per delivery order and may be used for projects where it is necessary to abate, stabilize, mitigate, or eliminate hazardous or contaminated materials or structures.

The Pre-qualified Offerors Procurement Strategy (PQOPS), when completely in place, will provide a list of prequalified contractors that have the capability of performing a specified technology (i.e., incineration, fixation). All contractors on the list will have been technically evaluated and deemed

qualified to perform the specified work. However, they are limited to providing the equipment for a specific technology and do not include broad response support (e.g., site access, excavation, site closure) to fully implement the remedy. The transportable incineration system (TIS) PQOP is in place and the fixation/solidification system (FSS) PQOP will be in place during FY 90.

3.0 WHAT ARE THE ENFORCEMENT ASPECTS OF ACCELERATED RESPONSE?

The Superfund Management Review placed great emphasis on the prompt use of enforcement authority at NPL sites. At sites where there is accelerated response, enforcement and program staff must anticipate each other's needs. Good communications are essential. For example, those evaluating a NPL site, who discover the probable need for accelerated action, need to contact enforcement personnel promptly so that this change can be incorporated into the enforcement strategy for the site. Conversely, enforcement staff must appreciate how delays in performing enforcement activities may affect timing of site response.

Site managers must take advantage of enforcement authorities whenever possible. The enforcement authorities that are available to EPA include strong liability provisions, administrative order authority, judicial enforcement authority, and the authority and funding to take direct action to clean up sites and subsequently recover costs. When developing an accelerated response action, the following enforcement activities should be taken into account.

Enforcement Strategy

Enforcement personnel should take a site-specific approach when developing enforcement strategy. The approach should generally cover the items discussed here (e.g., PRP search, notice to PRPs and States). If enforcement authority is not used, site managers must document why.

PRP Search

If the site is on the NPL, an expedited PRP search can be conducted by focusing on owners and operators that are known and generators that are readily identifiable. PRP searches are discussed in detail in the "Enforcement Project Management Handbook," OSWER Directive #9837.2 (July 1989); see also the "PRP Search Manual," OSWER Directive #9834.3-1A and the "PRP Search Supplemental Guidance for Sites in the Remedial Program," OSWER Directive #9834.3-2A.

Notice to PRPs

Where possible, it is usually advantageous to notify PRPs of their potential liability before transmitting to the PRPs a draft administrative order on consent. Moreover, except for emergencies, PRPs should be notified prior to issuance of a unilateral administrative order. If PRPs have not been notified, a notice letter should be issued. For additional information on enforcement activities, see Section 6.0, Bibliography, for a listing of applicable OSWER Directives.

Notification of the State

Prior to issuing an administrative order, EPA must notify the State. In situations where there is little time available before initiation of site activity, the State may be notified by telephone, followed by written confirmation.

Administrative Order on Consent (AOC)

If the response is an accelerated removal action and PRPs are willing to perform the action, the PRPs' conduct of an accelerated response should be pursuant to an AOC (CERCLA §106). If the accelerated response follows a ROD and is a remedial action, PRP conduct of the action should be pursuant to a consent decree (CERCLA §122). Moreover, settlements that include owners must include an agreement for access to the site. If, during negotiations, site conditions dictate the need for immediate response, the site manager should discontinue negotiations and initiate on-site response. Whenever appropriate, a unilateral order should be issued to allow EPA to seek treble damages and/or possibly convince the PRPs to take over the response effort.

Unilateral Administrative Order (AOU)

Generally, when negotiations become protracted or in critical situations (including some emergencies where time allows), EPA policy is to proceed with a CERCLA §106(a) AOU to viable PRPs before Fund activation. There are exceptions, such as: sites where there is an immediate need to respond; where PRP liability is very uncertain; where there are unique technical problems; or where there are problems with the technical capability of the PRP to conduct the removal action.

4.0 WHAT ADDITIONAL FACTORS SHOULD BE CONSIDERED?

4.1 ARARs

The Superfund Amendments and Reauthorization Act of 1986 (SARA) required that on-site remedial actions comply with applicable or relevant and appropriate requirements (ARARs) of other federal and state environmental laws. Although CERCLA only requires compliance with ARARs for remedial actions, the current NCP requires removals to comply with Federal ARARs to the extent practicable. EPA policy under the proposed NCP (§300.415) requires removal actions to comply with State and Federal ARARs to the extent practicable. Until this policy is promulgated by regulation, compliance with State ARARs during removal actions must be justified based upon protectiveness. Factors used in determining whether removal compliance with ARARs is practicable include: (1) the urgency of the situation, and (2) the scope of the removal action to be conducted, which includes consideration of the statutory limits for removals. Off-site actions must always comply with applicable requirements. (For a statement of EPA's off-site policy, see 50 FR 45933, November 5, 1985, as revised November 13, 1986 in OSWER Directive #9834.11.) Remedial actions, including those discussed in the section on p. 5, Removal Approaches

to Remedial Actions, must comply with all ARARs identified in the ROD, unless an ARAR is waived.

Waivers of ARARs (CERCLA section 121(d)(4)) also may be used for removal as well as remedial actions where they apply. See the document "CERCLA Compliance With Other Laws Manual" (OSWER Directive #9234.1-01) for additional information.

4.2 Public Participation

Informed public involvement in the decision-making process is a key element in the Superfund program. The Superfund Management Review identified that the public wants greater and earlier involvement in the process. As a steward of the environment, EPA must be fully responsive to the concerns of the public if it wishes to retain the public's confidence.

Before a ROD can be signed for an early remedial action, a proposed plan must be circulated, and a 30-day public comment period must be held. An opportunity for public hearing must also be provided. The current NCP provides for a 21-day comment period. However, the proposed NCP provides for a minimum of 30 days for public comment. Adequate information on the proposed action and a limited number of alternatives must also be available to the public along with the proposed plan. This information may, however, be presented in any type of document, including but not limited to an RI/FS or a focused feasibility study.

Public participation requirements for removal actions are set forth in the proposed NCP sections 300.415 and 300.820, and the "Superfund Removal Procedures Manual," Chapter III-F.6. Remedial action requirements are set forth in the proposed NCP sections 300.430 and 300.435, and the Community Relations Handbook.

4.3 Alternative Technologies

As noted in the Superfund Management Review, EPA should continue to encourage the employment of alternative technologies to treat hazardous substances, pollutants, or contaminants at Superfund sites. It is important that technologies selected for removal actions at NPL sites be consistent with planned remedial work and contribute to permanent remedies. OSWER Directive #9355.0-26 (February 1989) reaffirms the use of treatment technologies at Superfund sites and summarizes guidance documents and activities that encourage and support the use of innovative treatment technologies.

Also, OSWER Directive #9380.3-01 (July 12, 1989) describes a treatability data base which is being developed by the Office of Research and Development (ORD) to aid in expediting technology selection on a site-specific basis for the removal and remedial programs.

4.4 Post-Removal Site Control (PRSC)

Provisions for PRSC must be made before removal action initiation. PRSC may be a removal or remedial response under the statute. For remedial actions

a state contract or Superfund cooperative agreement must be in place prior to remedial action initiation in order to assure any State operation and maintenance responsibilities. Information and guidelines on PRSC may be found in the proposed NCP section 300.415 and the "Superfund Removal Procedures Manual," Chapter III-H.2.

4.5 Documentation

The various offices responsible for NPL sites in the Regions should work together to ensure that documentation for sites is adequate to support decision-making and, if appropriate, cost recovery. This is very important at every Superfund site, but it will be especially important if a site is selected for accelerated response. The response action must be sufficiently documented in order to fully justify the rationale for the Region's actions; that is, to explain why a certain activity at an NPL site is being conducted on an accelerated basis and to specify the authority under which the response is being conducted. See NCP section 300.69, and "Interim Guidance on Administrative Records for Selection of CERCLA Response Actions," OSWER Directive #9833.3A.

It is EPA's policy to develop decision documents for responses at sites in order to support the decision and remedy selection and to completely document costs to support cost recovery. Documentation of cleanups must also show that human health and the environment have been protected along all possible pathways of exposure. If a removal response cannot provide sufficient documentation to support the eventual deletion of the site from the NPL, then the site may be completed as a remedial action. Every removal action must demonstrate how it will contribute to any long-term remedial action to be taken at the given site.

5.0 HOW MAY SUPERFUND WORK AS "ONE PROGRAM?"

5.1 Promoting Communication

In order to foster the development of Superfund as "one program," EPA must encourage an increased level of cooperation among the various program offices that administer and support Superfund. The Superfund Management Review states that many of the difficulties Superfund has encountered in the past may be traced to the lack of proper communication between programs. We must institute procedures to improve coordination of site activities among the different Superfund program offices, i.e., pre-remedial, remedial, removal, and enforcement, to provide the internal support necessary for implementing Superfund as "one program." It is also important to ensure that EPA coordination with appropriate authorities located outside the Superfund program (e.g., Agency for Toxic Substances and Disease Registry [ATSDR]) takes place in a consistent manner.

Information on sites should be shared freely among programs, and changes in site status likewise should be communicated to all affected offices. For example, the removal staff may be asked by the remedial staff to conduct a removal site evaluation whenever a new site is proposed for inclusion on the

NPL, and enforcement staff may work with pre-remedial staff on identification of PRPs. Pre-remedial reviewers should share with remedial and removal staff any PA/SI or Hazard Ranking System (HRS) information that would indicate a need for early action. It is important for accelerated responses that technical and professional concerns of all four program offices about NPL sites be identified and addressed early in the response process.

5.2 Training

Superfund managers should encourage cross-training for pre-remedial, remedial, enforcement, and removal staff to allow SAMs, RPMs, and OSCs to learn how the entire Superfund response system works. It is important for site personnel to have a working knowledge of all programs. For example, pre-remedial and remedial staff should understand the capabilities of the removal program so that they can help ensure that removal action is taken where appropriate, and removal staff should know what remedial criteria will be considered before sites can be deleted from the NPL. Regional managers should encourage rotational assignments.

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* draft document

Procedures for Completion and Deletion of NPL Sites: Five Year Review

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 29 1989

OSWER Directive 9320.2-3B

MEMORANDUM

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

SUBJECT: Update to the "Procedures for Completion and Deletion of National Priorities List Sites" Guidance Document Regarding the Performance of Five-Year Reviews
(Superfund Management Review: Recommendation No. 2)

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

Bruce M. Diamond, Director
Office of Waste Programs Enforcement

TO: Director, Waste Management Division
Regions I, IV, V, VII, and VIII
Director, Emergency and Remedial Response Division
Region II
Director, Hazardous Waste Management Division
Regions III, VI, and IX
Director, Hazardous Waste Division
Region X

PURPOSE

This memorandum incorporates into the "Procedures for Completion and Deletion of National Priorities List Sites" guidance document (OSWER Directive 9320.2-3A) EPA's policy to conduct at least one Five-Year Review prior to deleting sites from the National Priorities List (NPL). This memorandum: (1) implements Recommendation No. 2 contained in the Administrator's Management Review; (2) is a necessary follow-up to the October 30, 1989 Jonathan Cannon, Acting Assistant Administrator, policy directive to EPA Regional Administrators which explains which sites will require five-year reviews, and how the policy will affect deletions; and (3) identifies how EPA will administratively amend the deletion process to account for this policy directive.

BACKGROUND

On October 30, 1989, the Acting Assistant Administrator for the Office of Solid Waste and Emergency Response (OSWER) issued a policy directive concerning the performance of CERCLA 121(c) Five-year reviews and the relationship of such reviews to the deletion of sites from the NPL. This policy directive noted that EPA will ensure that five-year reviews are conducted for all remedial actions which result in hazardous substances, pollutants, or

contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure. This means that EPA will conduct reviews of a remedial action unless the site has been cleaned to at least health-protective levels and such levels allow for unlimited use and unrestricted exposure. Consequently, EPA will conduct five-year reviews of all remedies requiring any access or land-use restrictions or control, including remedies that attain health-protective levels for the current use, but which include restrictions on activities due to limits on exposure. Reviews will begin no more than five years after the initiation of a remedial action. The directive set out the policy that a site subject to five-year reviews should generally not be deleted from the NPL until at least one such review has been conducted following completion of all remedial actions at a site (except operation and maintenance).

Although SARA provides that CERCLA Section 121 (including 121 (c)) applies only to actions resulting from RODs signed post-SARA, the policy directive also notes that EPA believes as a matter of policy that it would be inappropriate to distinguish between pre- and post-SARA RODs in determining whether to conduct five-year reviews. Furthermore, also as a matter of policy, EPA will examine previously deleted sites to assess the appropriateness of conducting five-year reviews for those remedial actions which result in hazardous substances, pollutants, or contaminants remaining above levels that allow for unlimited use and unrestricted exposure. The purpose of such an examination would be to determine whether such remedies remain protective.

EPA is also currently developing guidance on the nature and extent of five-year reviews. EPA will revise and reissue the guidance on deletion/completion of NPL sites upon the issuance of the guidance on five-year reviews, which is expected in 1990.

IMPLEMENTATION

The following update of the April 1989 OSWER Directive 9320.2-3A, "Procedures for Completion and Deletion of NPL Sites", provides the administrative requirements which should be followed prior to deletion of sites from the NPL as a result of EPA's October 30, 1989 Five-Year Review policy directive. Effective immediately, these procedures should be followed for all sites affected by the Five-Year Review policy. Any questions regarding the attached update may be directed to Ed Hanlon of OSWER's Hazardous Site Control Division (HSCD) at FTS: 475-9753. Until the completion/deletion guidance is fully revised and reissued, please contact Allen Dotson, HSCD, at FTS: 382-5755, to determine the current policy on five-year reviews.

Attachment

CC: Regional Superfund Branch Chiefs
Offices of Regional Counsel - Regional Branch Chiefs

Attachment

12/29/89 Amendment to the April 1989 OSWER Directive 9320.2-3A, "Procedures for Completion and Deletion of National Priorities List Sites (NPL)"

1. Disclaimer, "Notice," Amendment:

a) Page ii. Add the following as the second paragraph:

"The policies set out in this memorandum are intended solely for the guidance of Government personnel. They are not intended, nor can they be relied upon, to create any rights enforceable by any party in litigation with the United States. EPA officials may decide to follow the guidance provided in this memorandum, or to act at variance with the guidance, based on an analysis of specific site circumstances. The Agency also reserves the right to change this guidance at any time without public notice."

2. Chapter 1, "Introduction," Amendment:

a) Page 2. Add the following as the fifth paragraph under Introduction:

"EPA will ensure that five-year reviews are conducted at all sites at which a selected remedial action results in hazardous substances, pollutants, or contaminants remaining at a site above levels that allow for unlimited use and unrestricted exposure. EPA will generally not delete a site for which five-year reviews are required until one such review has been conducted following completion of all remedial actions at a site (except operation and maintenance). EPA Headquarters also intends to revise and reissue this guidance (OSWER Directive 9320.2-3A, as amended December 29, 1989) when the final policy on when and how to conduct five-year reviews is released. Until the reissuance of this completion/deletion guidance, EPA Regions should consult with EPA Headquarter's Hazardous Site Control Division to determine when and how the five-year reviews should be considered and conducted."

3. Chapter 2, "Site Completion," Amendments:

a) Page 3. Add the following as the second paragraph under the sub-heading: "Final Operable Unit Remedial Actions":

"For Fund-financed remedial actions, the lead and support agencies should conduct a joint inspection at the conclusion of construction of the remedial action and concur through a joint memorandum that (a) the remedy has been constructed in accordance with the ROD and with the remedial design, and (b) a period for evaluating the operation of the remedy commences at that time, and should continue until the completion of any activities necessary to ensure that the remedy is fully operational and functional. Once the remedy is considered operational and functional by the party contracting for construction, a Remedial Action Report should be prepared by the party contracting for construction to officially provide its assurance that the work was performed within desired specifications, and is considered operational and functional. The lead and support agencies should then conduct a joint inspection and execute a joint memorandum accepting the Remedial Action Report."

b) Page 3. Change the second sentence under the subheading "No Action Sites" as follows:

"It does not include sites with RODs requiring only monitoring or institutional controls; these types of sites will be considered "Limited Action Sites" which will require five-year reviews to ensure protection of human health and the environment".

c) Page 3. Add the following to the third sentence under the subheading "No Action Sites":

"...have been addressed (e.g., O&M assurances, need for five-year reviews, and institutional controls)."

d) Page 5. The following new text will supersede the old text of the "LTRA Sites" subsection:

"Long Term Response Action (LTRA) Sites

An "Interim Close Out Report for LTRA Sites", prepared by the Region and approved by the RA, will be required of all LTRA sites. This report will contain final information for all completed operable units at the site and describe the LTRA activities to be performed, the cleanup levels to be achieved for the LTRA portion of the site, and any five-year review responsibilities (as discussed in the next section). This report will act as the determining factor for designating sites as LTRAs on the NPL and for internal Superfund tracking. In addition, once a ground or surface water restoration LTRA operable unit is operating

as designed, States may assume responsibility for operation of the LTRA.

The "Interim Close Out Report for LTRA Sites" will be amended when cleanup levels are achieved to include final information for the LTRA operable units of the site in order to satisfy completion requirements. The "Interim Close Out Report for LTRA Sites" and the amendment together will constitute the final Close Out Report for the site. The LTRA site will then be recategorized on the NPL as either a "Site Awaiting Deletion" or a "Five-Year Review Site""

e) Page 5. The following new text will be added as a separate subsection after the "LTRA Sites" subsection:

"Five-Year Review Sites

An "Interim Close Out Report for Five-Year Review Sites", prepared by the Region and approved by the RA, will be required of all Five-Year Review sites (this may incorporate by reference interim or final Close Out Reports already prepared). This report will contain final information for all completed operable units at the site and describe the Five-Year Review activities to be performed. This report will also act as the determining factor for designating sites as Five-Year Review sites on the NPL and for internal Superfund tracking. This report will be amended when at least one five-year review has been conducted following the completion of the remedial action (except operation and maintenance), and any appropriate actions have been taken to ensure that the site remains protective of human health and the environment. The "Interim Close Out Report for Five-Year Review Sites", and the amendment, together will constitute the final Close Out Report for the site. States may conduct five-year reviews under/pursuant to Cooperative Agreements or Superfund State Contracts with EPA, and submit five-year review reports to EPA.

For LTRA's such as bioremediation, flushing, and groundwater pump and treat where health-based levels may not be achieved on site for an extended period of time during and/or after site remediation, EPA will conduct five-year reviews from the date on which the first contract is awarded for work to install, construct, or implement the LTRA operable unit. Even at sites that are expected to achieve health-based levels at the completion of remedial action, EPA will, as a matter of policy, assure the conduct of five-year reviews when the remedial action will require more than five years to complete.

An Interim Close Out Report for Five Year Review Sites would be required, for example, for a landfill closure site which is not an LTRA site. However, one Interim Close Out Report may be prepared for those sites which are designated both as an LTRA as well as a five-year review site. In these cases, the Interim Close Out Report will be amended twice, as follows: (a) when at least one five-year review has been conducted following the completion of the remedial action (except operation and maintenance), and any appropriate actions have been taken to ensure that the site remains protective of human health and the environment; and (b) when the LTRA cleanup levels are achieved, to include final information for the LTRA operable units of the site in order to satisfy completion requirements."

4. Chapter 3, "The Close Out Report," Amendments:

a) Page 7. Add the following separate category (as component 6) to the listed components which are necessary to be addressed in the Close Out Report:

"6) Five-Year Review

- Statement explaining: (a) that at least one five-year review has been conducted following completion of all remedial actions at the site (except operation and maintenance), and that any appropriate actions have been taken to ensure that the site remains protective of human health and the environment; or (b) why no five-year review was required. (EPA Headquarters will revise and reissue this completion/deletion guidance when the final policy on when and how to conduct five-year reviews is released. Until the reissuance of this guidance, EPA Regions should consult with EPA Headquarter's Hazardous Site Control Division to identify when and how the five-year reviews should be considered and conducted.)

- Assurance that, where appropriate, an acceptable and detailed workplan is in place for the performance of future five-year reviews, and is sufficient to determine whether the protectiveness of the remedy(s) for each operable unit, and of the site as a whole, is maintained. (A five-year review workplan may be incorporated into the operation and maintenance assurance agreements and workplans.)

b) Page 8, Exhibit 2. Add the following item to the "Contribution to Close-Out Report" section across from the "Remedial Action" cleanup activity:

"o Five-year review plan, where appropriate"

5. Chapter 4, "NPL Deletion Criteria," Amendment:

a) Page 10. Add the following paragraphs after the third deletion criteria:

"In addition to the above, for all remedial actions which result in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, it is EPA's policy that sites should generally not be deleted from the NPL until at least one five-year review has been conducted following completion of all remedial actions at a site (except operation and maintenance), any appropriate actions have been taken to ensure that the site remains protective of public health and the environment, and the site meets EPA's deletion criteria as outlined above. EPA must also assure that five-year reviews will continue to be conducted at the site until no hazardous substances, pollutants, or contaminants remain above levels that allow for unlimited use and unrestricted exposure. States may conduct five-year reviews under/pursuant to Cooperative Agreements or Superfund State Contracts with EPA, and submit five-year review reports to EPA.

An exception to this requirement involves situations where a Consent Decree contained language specifically committing EPA to delete a site from the NPL upon completion of certain response activities. In such cases, EPA Regions must consult with EPA Headquarters prior to initiation of any deletion activities. However, such an exception would apply only to the general policy of not deleting sites before completion of the first five-year review, not to the requirement to conduct reviews. EPA would still need to assure that five-year reviews will be conducted at the site. Given the October 30, 1989 policy directive from the Acting Assistant Administrator for OSWER regarding the performance of five-year reviews and their relationship to the deletion process, Consent Decrees should now require one five-year review following the completion of the remedial action (except operation and maintenance) before deletion."

6. Chapter 5, "The Deletion Process," Amendments:

a) Page 10. Revise the first sentence of the first paragraph as follows:

"The deletion process may begin after approval of the Close Out Report by the RA, and after RA and/or the State's approval of at least one five-year review at those sites which require five-year reviews."

b) Page 11, Exhibit 3. Add the following step immediately under the "Approved Close Out Report" step:

"Where Appropriate, Conduct At Least One Five-Year Review"

c) Page 12. Add the following immediately under "Close Out Report" in the suggested list of documents for the deletion docket:

"Initial Five-Year Review report, where appropriate"

d) Page 13. Add the following separate bullet item to the "Supplementary Information: Item IV - Basis for Intended Site Deletion(s)" section, immediately under the description of O&M procedures:

"Description of the results of the initial five-year review, where appropriate, as well as reasoning for the need for future five-year reviews, and plans for performance of such reviews, in accordance with EPA's requirements for protectiveness at the time of each future review."

7. Appendix A, "Completion Process Diagrams," Amendment:

a) Pages A-1 through A-4. Add the following immediately above the "NPL Deletion" item in the "Completion Scenario" charts for Remedial Sites, LTRA Sites, No Action Sites, and Removal Sites:

"Where Appropriate, Conduct At Least One Five-Year Review"

8. Appendix B, "Sample Close Out Report," Amendment:

a) Page B-6. Add the following separate chapter, as the new Chapter V, prior to the "PROTECTIVENESS" Chapter, to provide a summary of the Five-Year Review which, if appropriate, was conducted, and what actions, if any, were taken as a result of that Review, as follows:

"V. SUMMARY OF FIVE YEAR REVIEW STATUS

Consistent with the requirements of the October 30, 1989 policy directive from the Acting Assistant Administrator for OSWER which describes EPA's general policy of not deleting sites before completion of the

first five year review following completion of all remedial actions at a site (except operation and maintenance), a five year review was completed and signed by the EPA Region IX Office on _____. Based on the findings of this five year review, EPA and the State of California have determined that all remedial actions conducted at the site remain protective of public health, welfare, and the environment.

EPA Region IX entered into a Superfund State Contract with the State of California on _____ to assure the performance of future five-year reviews at this site by the State. An acceptable and detailed workplan is in place for the performance of future five-year reviews. This workplan has been incorporated into the operation and maintenance plan already in place. If necessary, it will be revised at the time of each five-year review."

9. <u>Appendix C, "Sample Notice of Intent To Delete," Amendments:</u>

a) Page C-3. Add the following paragraphs after the third deletion criteria under Chapter II:

"In addition to the above, for all remedial actions which result in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, it is EPA's policy that sites should generally not be deleted from the NPL until at least one five-year review has been conducted following completion of all remedial actions at a site (except operation and maintenance), any appropriate actions have been taken to ensure that the site remains protective of public health and the environment, and the site meets EPA's deletion criteria as outlined above. EPA must also assure that five-year reviews will continue to be conducted at the site until no hazardous substances, pollutants, or contaminants remain above levels that allow for unlimited use and unrestricted exposure. States may conduct five-year reviews under/pursuant to Cooperative Agreements or Superfund State Contracts with EPA, and submit five-year review reports to EPA.

An exception to this requirement involves situations where a Consent Decree contained language specifically committing EPA to delete a site from the NPL upon completion of certain response activities. In such cases, EPA Regions must consult with EPA Headquarters prior to initiation of any deletion activities. However, such an exception would apply only to the general policy of not deleting sites before completion of the first five-year review, not to the requirement to conduct

reviews. EPA would still need to assure that five-year reviews will be conducted at the site. Given the October 30, 1989 policy directive from the Acting Assistant Administrator for OSWER regarding the performance of five-year reviews and their relationship to the deletion process, Consent Decrees should now require one five-year review following completion of the remedial action (except operation and maintenance) before deletion."

b) Page C-3. Add the following as the new procedure 1. under Chapter III:

"1. EPA Region II entered into a Superfund State Contract with the State of New Jersey to conduct five-year reviews at this site. New Jersey conducted the first five-year review on _____. EPA and the State find that the remedy continues to provide adequate protection of human health and the environment.

c) Page C-5. Add the following after the sentence beginning with "A five year..." in the paragraph beginning with "The institutional controls...", and delete the existing last sentence which begins "That Program...":

"EPA Region II entered into a Superfund State Contract with the State of New Jersey to conduct five-year reviews at this site. New Jersey conducted the first five-year review on _____. EPA and the State find that the remedy continues to provide adequate protection of human health and the environment.

An acceptable and detailed workplan is in place for the performance of future five-year reviews. This workplan has been incorporated into the operation and maintenance plan already in place, and has been sufficiently prepared to allow the EPA and the State of New Jersey to determine whether the protectiveness of the remedy for the site will be maintained over time. If necessary, it will be revised at the time of each five-year review."

10. <u>Appendix E, "Sample Notice of Deletion," Amendment:</u>

a) Page E-1. Change the last sentence of the **SUMMARY** section as follows:

"Moreover, EPA and the State of _____ have determined that remedial actions conducted at the site to date remain protective of public health, welfare, and the environment."

Interim Guidance on Addressing Immediate Threats at NPL Sites

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C 20460

JAN 30 1990

OSWER Directive No. 9200.2-03

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Interim Guidance on Addressing Immediate Threats at NPL Sites (Superfund Management Review: Recommendation No. 22)

FROM: Don R. Clay
Assistant Administrator

TO: Director, Waste Management Division
Regions I, IV, V, VII, VIII
Director, Emergency and Remedial Response Division
Region II
Director Hazardous Waste Management Division
Regions III, VI
Director, Toxic and Hazardous Waste Management Division
Region IX
Director, Hazardous Waste Division
Region X
Director, Environmental Services Division
Regions I, VI, VII
Regional Counsel, Regions I-X

PURPOSE

The purpose of this memorandum is to transmit Agency guidance on addressing immediate threats at National Priorities List (NPL) sites.

BACKGROUND

As a result of the Superfund Management Review, the Administrator committed that by September 30, 1990, all NPL sites would be free from immediate threats. Subsequently, this commitment became a Presidential-level "Management-By-Objective." The Office of Solid Waste and Emergency Response (OSWER) formed a workgroup to develop guidance to assist the Regions in taking expedited approaches to site cleanups and in making NPL sites "safer." On December 15, 1989, EPA issued the guidance "Accelerated Response at National Priorities List Sites" (OSWER Directive #9200.2-02) to address expediting cleanup. The question of making NPL sites "safer" is being addressed by the following directive, which provides procedures to help the Regions identify, document, and eliminate to the extent possible, immediate threats at proposed and final NPL sites. This document on addressing immediate threats and the previous OSWER Directive #9200.2-02 on accelerated response should be used together as companion pieces.

IMPLEMENTATION

Specifically, the attached OSWER directive requires that you:

- Establish Region-wide procedures to routinely review all NPL sites (the guidance outlines examples of procedures);
- By September 30, 1990, review all final NPL sites for the presence of immediate threats, document the findings of the review, and take action at all NPL sites that have immediate threats (the guidance provides documentation statements);
- Thereafter, review and document the status of every final NPL site at least once every two years, at minimum reviewing half of the final NPL sites one year, the other half the next. The documentation memorandum will be due on January 1 of each year starting with January 1, 1992;
- Conduct an initial removal site evaluation at each newly proposed NPL site within three months of the date of proposal (the guidance explains some exceptions);
- Take action at all proposed and final NPL sites that have immediate threats; and
- Complete an environmental indicator form for all removal actions completed at NPL sites this fiscal year.

This directive is effective immediately and Regions should begin developing procedures and reviewing their sites. However, this is being issued as interim guidance to consider any comments you may have. For example, you may wish to suggest a due date different than January 1 (see third bullet above). Please send your comments to: Hans Crump, Acting Director, Emergency Response Division (OS-210), EPA, 401 M Street SW, Washington, D.C. 20460 by March 1, 1990.

If you have any questions Hans Crump may be reached at FTS 475-8720, or you may call Scott Maid at FTS 382-4671.

Attachment

cc: Henry Longest II, OERR
Lloyd Guerci, OWPE
Lisa Friedman, OGC
Hans Crump, ERD
Clem Rastatter, OPM
Larry Reed, HSED
Russ Wyer, HSCD
Superfund Branch Chiefs, Regions I-X
OHM Coordinators, Regions I-X
Pre-Remedial Section Chiefs, Regions I-X

Addressing Immediate Threats At National Priorities List Sites[1]

1.0 INTRODUCTION

1.1 Background

Two major recommendations of the study commissioned by the Environmental Protection Agency (EPA) in June 1989, entitled "A Management Review of the Superfund Program" (Superfund Management Review), were to expedite response at National Priorities List (NPL) sites and to make these sites safer. On December 15, 1989, EPA issued the guidance "Accelerated Response at National Priorities List Sites" (OSWER Directive #9200.2-02) to address the first recommendation. The directive described removal, remedial, and enforcement procedures and contract mechanisms for use by the Regions to accelerate CERCLA response actions at NPL sites. The following directive addresses the recommendation to make NPL sites safer. Because it refers to some sections of the accelerated response guidance, it should be used as a companion piece to that guidance.

1.2 Purpose

This document provides detailed procedures and guidance for evaluating and addressing immediate threats at NPL sites this year and in the following years. It provides that proposed new additions to the NPL undergo a removal site evaluation to identify the presence of immediate threats. It also provides that final NPL sites be reviewed at least once every two years to ensure, to the extent possible, that all NPL sites are free from immediate threats. This guidance is intended for Regional site managers, including On-Scene Coordinators, Site Assessment Managers, Remedial Project Managers, enforcement staff, and other Regional and Headquarters Superfund personnel and managers.[2]

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[1] The policies and procedures established in this document are intended solely for the guidance of EPA personnel. They are not intended, and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. EPA reserves the right to act at variance with these policies and procedures and to change them at any time without public notice.

[2] Federal agencies with facilities listed on the NPL are encouraged to follow this guidance. Federal agencies with facilities on the NPL have primary responsibility for evaluating and documenting threats at their sites. (EPA may respond to emergencies at some Federal facilities; for more information see E.O. 12580.)

1.3 Scope Of Guidance

Specifically, the guidance will discuss the following topics:

(1) Identifying and addressing immediate threats at NPL sites (Section 2.0); and

(2) Procedures for reviewing and documenting that NPL sites do not pose immediate threats (Section 3.0).

2.0 IDENTIFYING AND ADDRESSING IMMEDIATE THREATS AT NPL SITES

The Agency's goal is to protect public health and the environment as much as possible from the risks posed by NPL sites, both short-term and long-term. Public health and the environment can be protected from short-term risks at NPL sites by stabilizing or mitigating immediate threats. Immediate threats to human health and the environment that result from deterioration of NPL site conditions before the completion of remedial action must be addressed as soon as possible.

The sections below discuss how the Agency will work to identify and address immediate threats. Section 2.1 explains what we mean by immediate threat and gives examples of problems that the Regions should be looking for. Sections 2.2 and 2.3 explain the evaluation and review process. Section 2.4 briefly discusses the mechanisms available for addressing immediate threats identified at NPL sites.

2.1 Considerations During The Review And Evaluation Process

The goal of the review and evaluation process discussed below (in sections 2.2 and 2.3) is to identify, document, and eliminate to the extent possible immediate threats that may be posed by NPL sites.[3] For example, the review and evaluation process should attempt to identify threats of fire or explosion, direct contact threats, significant threats of near-term migration, and other relatively predictable threats. Direct contact threats might include (but are not limited to) situations such as uncontrolled waste piles, overflowing lagoons,

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[3] Documentation that there are no immediate threats at an NPL site is not related to evidence of possible imminent and substantial endangerment. An endangerment is a threatened or potential harm. An endangerment is imminent if the conditions that give rise to it are present, even though the harm might not be realized for years. An endangerment is substantial if there is reasonable cause to believe that someone or something may be exposed to a risk of harm from a release or threatened release. The mere threat of harm or potential harm to public health, public welfare, or the environment is sufficient. The endangerment need not be immediate to be imminent.

contaminated drinking water, and uncontrolled access to sites where conditions on the surface pose health threats. Significant threats of near-term migration might include extensive contamination on the soil surface that would be spread by a heavy rain or snow. Generally, these situations should be addressed as quickly as possible to alleviate the threat. In addition, NPL sites should not have, on the surface, tanks and drums containing hazardous substances. In most cases, such waste on NPL sites should be addressed by a removal or remedial action (see section 2.4 below on mechanisms for addressing immediate threats). The reviewer should also consider whether conditions might have worsened at the site subsequent to the initial site evaluation as a result of weather, physical plant deterioration, vandalism, or other causes that would indicate the need for additional evaluations or a response action.

It is important that all Superfund site managers (including remedial project managers and site assessment managers), staff, and site contractors (such as the Field Investigation Team) be knowledgeable about the capabilities of the removal program, including the factors in §300.65 of the NCP (section 300.415 of the proposed NCP).[4] The removal criteria in the NCP should be considered whenever a site is investigated at the Preliminary Assessment and/or Site Inspection (PA/SI) stage and when NPL sites are reviewed or evaluated for immediate threats. In addition, information collected as part of the PA/SI and removal site evaluations at NPL sites should be used, as appropriate, to develop long-term plans for remedial action for the sites.

The reviews and evaluations of NPL sites can generally be based on easily obtainable information for each site, as judged by the Region. In past discussions, Regions have asked to what extent they will be expected to sample ground water as part of the review process. If sampling wells exist, it may be appropriate to sample the water. However, drilling new sampling wells is generally not appropriate (i.e., usually it should be done as part of the Remedial Investigation/Feasibility Study (RI/FS) process, not during an NPL site review or removal site evaluation).

2.2 Evaluating Newly Proposed NPL Sites

Because conditions at sites newly proposed for inclusion on the NPL may pose immediate threats to human health or the environment, it is important that a removal site evaluation be routinely conducted within a short period after a site has been proposed (if the site has not been evaluated recently before proposal). A removal site evaluation helps ascertain the current condition of

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[4] For ease of use, references to both the old (1985) NCP and the proposed (1988) NCP sections are provided in the text. It is important to note, however, that the 1985 NCP remains in full effect until a revised NCP is promulgated. The revised NCP, which was proposed on December 21, 1988 (53 FR 51394), is expected to be finalized in 1990. The revised section numbers will become effective on the effective date of the regulation.

the site and whether there are any immediate threats such as fire, explosion, or direct contact (see section 2.1 above) that should be addressed.

Therefore, effective immediately, all Regions must complete a removal site evaluation at each newly proposed NPL site within three months of the date the site is officially proposed for inclusion on the NPL (unless it is not appropriate; see next paragraph). The components of a removal site evaluation are described in section 300.410 of the proposed NCP. This evaluation should include review of any available PA/SI information and, except in extenuating circumstances, a site visit. When the evaluation is completed, the information should be entered into CERCLIS (see section 3.3 below) and a memorandum containing the statements in section 3.3 below should be sent from the appropriate Regional Division Director to the Regional Administrator, with a copy to the Director of the Emergency Response Division, Headquarters (ERD). Regions may choose to issue just one memorandum for all of the sites in the Region listed in a proposed update or may issue a separate memorandum for each site.

In some situations, Regional staff may believe that a removal site evaluation is not appropriate or cannot be completed within three months of the date of proposal. For example, if the Region has recently (e.g., in the twelve month period before proposal) conducted a removal site evaluation or a removal action and believes another site evaluation is not needed, it may not be appropriate to conduct another one. As another example, if a particular proposed NPL update includes a large number of sites in one Region, the Region may need more than three months to complete all the evaluations. In such situations, the Region should contact the Regional Coordinator in ERD. Then the appropriate Regional Division Director should send a memorandum to the Regional Administrator with a copy to the Director of ERD. The memo should briefly explain the reason that a removal site evaluation is not being conducted or is being delayed. For those that are delayed, the memo should explain when they will be completed.

2.3 Reviewing The Status Of Final NPL Sites

Because NPL sites can deteriorate while awaiting final remedial action, it is important to review all NPL sites periodically to ensure that there are no immediate threats. Such a periodic review also assists Regions in ensuring that the worst sites are addressed first.

Therefore, in keeping with commitments made to implement the Superfund Management Review, all Regions must, by September 30, 1990, document that there are presently no immediate threats, or that they are taking action, at all sites on the final NPL (see section 3.3 for information on documentation).

After this initial review and documentation, subsequent documentation memoranda will be due on January 1 of each year starting with January 1, 1992. Regions must review and document the status of every final NPL site at least once every two years, reviewing half the final NPL sites each year (using the procedures developed under section 3.1 and the statements in 3.3). This means

that after the initial review of all of the final NPL sites in 1990, Regions will review and document the status of half the final NPL sites again by January 1, 1992, the other half by January 1, 1993, and so on. This requirement recognizes that while sites must be reviewed routinely to achieve Agency goals, the reviews should not be so frequent that they create an excessive resource burden for the Regions. In addition, reviewing half of the sites one year and the other half the next should assist Regions in planning their workload and budget cycle. In keeping with the principle of addressing "worst sites first," Regions should consider the results of the 1990 review in deciding which half of the final NPL sites to review in 1991 (in order to document the results in 1992). If a proposed site makes the final NPL, generally it should be reviewed two years after the removal site evaluation (see section 2.2 above) or after it becomes final, whichever is later (unless a problem is suspected or an earlier review is deemed appropriate).

All documentation memoranda must be signed by a Regional Division Director and sent to the Regional Administrator with a copy to the Director of ERD. Section 3.0 describes procedures for accomplishing the review/documentation process.

Note: The purpose of the review and documentation is not to mandate that sites be visited but instead to ensure that site circumstances are considered at least every two years. Thus, specific site circumstances should dictate how each site will be reviewed for immediate threats. For example, some sites may be free from surface contamination, known to be very stable, or have extensive existing data. In these cases, there may be no concern in documenting the site as free from immediate threats without a recent site visit because weather, vandalism, etc., could not cause further harm. Regions may need to visit or use other methods to review other sites more frequently.

2.4 Mechanisms For Addressing Immediate Threats

Once the immediate threats have been identified, they should be addressed in a timely manner. The December 15, 1989, directive on accelerated response at NPL sites (OSWER Directive #9200.2-02) describes the removal and remedial mechanisms available for addressing NPL sites. Any of the mechanisms described there may be used for addressing immediate threats as well as for accelerating response. The type of threat found, the amount of time available before the threat must be addressed, and the resources available (e.g., personnel and contractor) will dictate whether remedial or removal authority should be used to address immediate threats. Generally, the removal program will be used to respond to immediate threats that must be addressed quickly (see the accelerated response directive for more information on the removal and remedial programs; e.g., the guidance explains the requirement for issuing an action memo for removal actions, etc.). The remedial program may be used to respond to some threats identified during the review process, especially when found during an on-going RI/FS and there is sufficient time to complete a Record of Decision and conduct an accelerated remedial action. As discussed in the directive on accelerated response, site managers must take advantage of enforcement authorities whenever possible.

3.0 PROCEDURES FOR REVIEWING AND DOCUMENTING THAT NPL SITES DO NOT POSE IMMEDIATE THREATS

The following sections describe the types of procedures that Regions may use to review their NPL sites and document the findings. Section 3.1 describes optional procedures that the Regions may consider to review final NPL sites for immediate threats (the procedures do not apply to proposed NPL sites because Regions generally will conduct a formal removal site evaluation on proposed sites). Section 3.2 discusses options for structuring the review. Section 3.3 presents statements which all Regions must use to document that final NPL sites do not present an immediate threat or that action is being taken. Section 3.4 gives information on environmental indicators.

3.1 Review Procedures For Final NPL Sites

The Regions must develop internal procedures specifying how they will accomplish the review/documentation process. The procedures must explain which offices will be responsible for the initial review, how sites will be handled if further evaluation is needed, and who will sign the documentation memorandum (in some Regions, more than one Division Director may be involved). The Regions should establish their procedures for review of NPL sites as soon as possible, in order to allow sufficient time to complete the necessary work involved in meeting the September 30, 1990, deadline.

The Regions have wide latitude in the formulation of a review/documentation process. For example, some Regions may choose to have site managers (i.e., staff responsible for NPL sites on a day-to-day basis) conduct the initial review, referring questionable sites for further evaluation by the removal program, or the Regions may choose to have the removal program perform the entire evaluation. Alternatively, a Region may choose to establish a task force of staff from all Superfund programs to coordinate Regional reviews of NPL sites.

The Regions may choose to adopt any of the abovementioned options, or use any combination of approaches as appropriate, or may instead develop different procedures to accomplish the review. Flexibility is necessary in order to accommodate Regions with a small number of final NPL sites that may want to organize the review process differently from Regions with a large number of final NPL sites. In all cases, however, the final documentation consists of the statements and CERCLIS report discussed in section 3.3.

3.2 Structuring The Review Of Final NPL Sites

Regardless of the approach chosen and depending on the number of final NPL sites, the Regions may wish to conduct their reviews throughout the year. For example, if a Region has 200 final NPL sites (not counting Federal facilities; see footnote 2) the Region may wish to structure the review process so that 25 sites are reviewed each quarter (because the status of half of the sites will be reviewed and documented each year). In this case, the Region may wish to issue a

documentation memo on a quarterly basis for each group of sites or may choose to wait and document all of the site reviews once a year, noting that the actual reviews were done on a quarterly basis and will continue on this basis in the coming year. Regional plans should also take into account the fact that additional sites will be finalized and/or proposed for the NPL during the two-year review period. Regions will have to conduct removal site evaluations at these sites within three months of proposal (see section 2.2). In any case, the review (and findings if additional evaluation/action is needed) should be entered into CERCLIS when the review is completed.

3.3 Documenting The Results Of The Reviews And Evaluations (Final and Proposed NPL Sites)

Regions must use the following statements, as appropriate, to document that they have reviewed all final NPL sites (except Federal facilities; see footnote 2). The statements should also be used to document findings of the removal site evaluations conducted at newly proposed sites (see section 2.2).

Within the next several months Headquarters will add a new event type to CERCLIS and write new reports to assist the Regions in tracking their reviews and documenting the results. Headquarters will send guidance on the new event and reports to Regional offices in the near future. The CERCLIS reports will be the attachments indicated in the statements below.

Documentation for sites where a response (remedial or removal) is ongoing or planned (for planned actions, statement generally should be used only where response action is planned to be taken within twelve months of the date of the memorandum):

"The following sites have response action ongoing or are scheduled for response action to alleviate immediate threats at these sites. The attachment [CERCLIS report] shows the quarter and year when the work is scheduled to begin (for planned actions) or when work started (for ongoing actions)."

Documentation that sites do not have immediate threats:

"I have reviewed the available information on the sites listed in attachment ___ [CERCLIS report] and, based on this information, there are presently no immediate threats at these sites. The Agency, at its discretion, may take further action at these sites under CERCLA section 104, 106, or 122."

For final NPL sites, each Region is required to issue only one documentation memorandum per year (but may issue more than one as described in section 3.2 above). The memo must contain the statements and attachments described above and cover all of the final NPL sites in the Region that are being reviewed/documented that year. For proposed NPL sites, a Region may issue one memo for each site or

may group the sites. A Regional Division Director must sign the memorandum containing the appropriate statements and send it to the Regional Administrator with a copy to the Director, Emergency Response Division. As mentioned earlier, the first documentation memo (with the attachments) is due September 30, 1990, for all final NPL sites (except Federal facilities). Subsequent memos are due for half of the final NPL sites every year, starting on January 1, 1992. Memoranda for proposed NPL sites are due 3 months after proposal.

3.4 Environmental Indicators

Regions must complete an environmental indicator form for all removal actions completed at proposed or final NPL sites this fiscal year, i.e., FY 90. This will support the documentation and public explanation of what has been done to fulfill the Administrator's commitment on this Presidential objective. The environmental indicator forms and instructions will be sent to the Oil and Hazardous Material Coordinator in each Region in the near future.

4.0 BIBLIOGRAPHY

Guidance

"A Management Review of the Superfund Program," Report from U.S. EPA, Washington, DC (6/89)

OSWER Directive No. 9200.2-02, "Accelerated Response at National Priorities List Sites" (12/15/89)

Statutes and Regulations

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended, 42 U.S.C. 9601-9657

The National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300 (11/20/85)

The National Oil and Hazardous Substances Pollution Contingency Plan, Proposed Rule, 40 CFR Part 300, 53 Federal Register 51394-51520 (12/21/88)

Guidance for State-Lead Removal Actions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 10 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OSWER Directive # 9375.1-4-W

MEMORANDUM

SUBJECT: Addendum to the Manual: State Participation in the Superfund Program -- Appendix W, "Guidance for State-Lead Removal Actions"

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

TO: Waste Management Division Directors, Regions I-X
Environmental Services Division Directors, Regions I, VI, and VII

Attached is interim final guidance on State-lead removal actions, issued as Appendix W to the State Participation in the Superfund Program manual. This guidance sets forth the policy and procedures for executing Cooperative Agreements with States for non-time-critical removal actions. The guidance is intended to provide the Regions with a new management tool for handling your workload and further delegating program responsibilities to States.

Appendix W has been developed by the Emergency Response Division in cooperation with the Hazardous Site Control Division, as well as Regional and State personnel who served on the workgroup. Two prior versions of this guidance document have been issued for Regional review and comment. This interim final guidance, issued as OSWER Directive 9375.1-4-W, has been revised to incorporate Regional comments where appropriate.

The final guidance is divided into four major sections:

- Section I: Scope of State-Lead Removal Actions
- Section II: Development of Cooperative Agreement Application Packages
- Section III: Administering Cooperative Agreements
- Section IV Closeout of Response Agreements

In addition, where applicable to removals, the final guidance incorporates existing procedures and requirements for executing Cooperative Agreements for remedial actions as contained in Chapters I-X of the State Participation in the Superfund Program manual. In order to streamline the guidance development process, sections of the manual relevant to the removal program have been cross-referenced in the State-lead removals guidance. Response personnel, therefore, must have access to the manual in order to execute Cooperative Agreements with States for removal actions.

Questions or comments concerning implementation of this new program should be directed to Don Kraft, Special Assistant to the Director of the Emergency Response Division at (202) 382-2452.

Attachment

cc: OHM Coordinators, EPA Regions I-X
Tim Fields
Don Kraft

APPENDIX W

GUIDANCE FOR STATE-LEAD REMOVAL ACTIONS

OSWER DIRECTIVE
9375.1-4-W

PREFACE

This guidance sets forth the policy and procedures for awarding to States the authority and funds necessary to lead a CERCLA-funded removal action. It is intended to provide Regions with a new management tool for handling their workload and as a mechanism for further delegating program responsibilities to States. Under this program, States may lead non-time-critical removal actions at NPL and non-NPL sites. Authority to enter into a Cooperative Agreement with interested States rests with the Regional Administrator as set forth in Delegation 14-1-B (Superfund State Contracts and Cooperative Agreements for Removal Actions).

Provisions of this guidance may be subject to revision given CERCLA Reauthorization, proposed revisions to the National Contingency Plan and removal program policy/guidance development activities. In addition, it is anticipated that revisions to the operating procedures set forth in the guidance may be necessary once Regions have obtained experience in implementing Cooperative Agreements with States.

This guidance has been developed by OSWER's Emergency Response Division (ERD) in cooperation with the Hazardous Site Control Division. Regional staff participating in the implementation of State-lead removal actions should contact their appropriate Regional grant personnel or HQ ERD Regional Coordinator if questions or problems arise when executing a Cooperative Agreement.

APPENDIX W

GUIDANCE FOR STATE-LEAD REMOVAL ACTIONS

I. SCOPE OF STATE-LEAD REMOVAL ACTIONS

A. Types of Cooperative Agreements

A State must enter into a Cooperative Agreement with EPA before beginning a response action using CERCLA funds. A Cooperative Agreement is the mechanism established by the Federal Grant and Cooperative Agreement Act that a Federal agency uses to provide States or political subdivisions with funding assistance while retaining significant involvement in the project. The Cooperative Agreement documents the respective responsibilities of the recipient of Federal funds and the agency providing the assistance. Cooperative Agreements are used to:

- Transfer funds for specific project(s)
- Document the State's statutory and regulatory responsibilities and assurances
- Approve project-specific budgets and scopes of work
- Identify any special program requirements related to the project
- Document the Federal agency's role and responsibilities during the project.

There are two types of Cooperative Agreements: 1) a site-specific Cooperative Agreement; and 2) a multi-site Cooperative Agreement (MSCA). State-lead removal actions may be executed via a site-specific or multi-site Cooperative Agreement.

1. Site-specific Cooperative Agreements are appropriate mechanisms to fund response activities required at a single site. These agreements cover one removal action at one site and can be amended to include subsequent removal activities and to provide funds necessary to complete the action at that site.

2. A multi-site Cooperative Agreement is an "umbrella" Cooperative Agreement that, under one funding document, may include several response activities at more than one site within a State. MSCAs should be used in situations where sites are within close proximity. States requesting to lead removal actions at more than

one site may choose to develop a MSCA or an existing MSCA may be amended to include a State-lead removal. If the State agency identified to lead Superfund response actions is different from the agency certified under an existing agreement with EPA, the State must submit to EPA a letter (signed by the Governor or Attorney General) indicating it has the authority to accept Federal funds and make the required assurances.

B. Types of Actions

1. State-lead removal actions initially will be limited to non-time-critical removals at NPL and non-NPL sites. All time-critical removal actions will be Federal-lead, including actions that are initially categorized as non-time-critical, but due to extenuating circumstances, the Regional Administrator (RA) has determined to be more appropriate for a Federal-lead response (e.g., a time-critical response becomes necessary, required response is more extensive than anticipated and exceeds State capabilities). Cooperative Agreements must contain a special condition to this effect.

(a) Non-time-critical removals appropriate for State-lead are actions where initiation of cleanup or stabilization efforts may be delayed for approximately six months or more from the time the threat is discovered.

(b) Non-time-critical removals include all activities formerly categorized as initial remedial measures (IRMs) under the remedial program and longer term removals that can be planned in advance.

(c) To date, State experience in leading non-time-critical actions has been limited to IRM-type activities previously conducted under the remedial program. Examples of State-lead IRM-type responses include fence construction, erosion control and off-site disposal of hazardous waste. Additional examples are provided in Exhibit 1.

2. The Superfund Comprehensive Accomplishments Plan (SCAP) process will be used as a planning/management tool for identifying removal actions appropriate for State-lead. Only removals that are listed on the approved or revised SCAP can be State-lead.

(a) Funds may not be obligated for State-lead removal actions that do not appear on the approved SCAP. Removal actions under consideration for State-lead must be listed on the SCAP at least one quarter in advance. However, these actions may

EXHIBIT 1

EXAMPLES OF STATE-LEAD IRM PROJECTS CONDUCTED UNDER THE REMEDIAL PROGRAM

- Excavation and off-site disposal of surface and buried waste materials and contaminated soil
- Fence construction
- Bank stabilization
- Water supply treatment of municipal well
- Installation of carbon filters on private wells
- Construction of lagoon perimeter dike
- Temporary cap for lagoons
- Posting of cautionary signs along creek
- Storm water control

be projected on the SCAP for more than one quarter in advance since, by definition, non-time-critical removals are actions where initiation of cleanup or stabilization efforts may be delayed for approximately six months or more from the time the threat is discovered.

(b) Removal actions identified for State-lead must be on the SCAP before the Action Memorandum and Cooperative Agreement can be approved. Preparation of the Action Memorandum and Cooperative Agreement application can begin, however, before the removal action is placed on the SCAP.

(c) Revisions to the approved SCAP require coordination with EPA Headquarters. Regional Oil and Hazardous Materials (OHM) Coordinators are responsible for initiating any necessary SCAP updates/revisions to ensure that sites identified for State-lead are placed on the SCAP, as required. OHM Coordinators should contact their designated Emergency Response Division (ERD) Regional Coordinator in EPA Headquarters when updates/revisions to the SCAP are required.

C. Scope of Activities

1. All CERCLA-funded preliminary assessment and section 104(b) activities undertaken to assess the extent of contamination and to determine whether the incident meets the NCP and CERCLA criteria for removal action will be Federal-lead. This does not preclude States from leading pre-remedial activities under a remedial Cooperative Agreement.

2. All Engineering Evaluations/Cost Analyses (EE/CAs) necessary to meet the requirements of the National Environmental Policy Act (NEPA) will be Federal-lead.

3. All enforcement activities, including Potentially Responsible Party (PRP) search, and notification and negotiation with PRPs will be Federal-lead. State-lead enforcement activities for removal actions may be considered once the program has been implemented.

4. Only those activities authorized in the initial or amended Action Memorandum will be State-lead, including any post removal site control (formerly operation and maintenance or O&M) that is CERCLA-funded.

(a) States will procure and lead all contractor cleanup and stabilization activities, including operation and maintenance activities authorized in the Action Memorandum.

(b) Once response begins, no party other than the State may direct the response activities being performed either by the State or its contractor(s). However, at the discretion of the RA, a response may be determined to be more appropriate for Federal-lead (see section I.B.1 of this guidance).

D. Approval of State-Lead Removals

1. The RA will determine, on a case-by-case basis, removal actions appropriate for State-lead. Factors the RA should consider when evaluating a State's request to lead a CERCLA-funded removal include, but are not limited to:

- State experience in leading activities conducted under the remedial program (e.g., IRM-type actions) that are similar to the response actions required to clean up or to stabilize the release at the site under evaluation for State-lead.

- State experience in responding to hazardous substance spills/incidents independent of Federal involvement/funds.

- Existence of a State Contingency Plan for hazardous substance release response.

2. A Removal Action Memorandum and Cooperative Agreement are required for all State-lead removal actions. The Action Memorandum will be an integral part of the Cooperative Agreement and must be approved before an Agreement can be awarded to the State. A copy of the approved Action Memorandum will be made available to the State and will be provided when the Agreement is awarded, if not before. All Cooperative Agreements, and amendments to the Agreement, will be negotiated at the Regional level and approved by the Regional Administrator. OSCs or RPMs, as appropriate, will be the State's primary EPA contact for developing and negotiating Cooperative Agreements.

(a) EPA will prepare the Action Memoranda in accordance with current program procedures, and in close cooperation/consultation with the State. EPA will always select the response/activities to be taken at the site in consultation with the State. The Action Memorandum must document that the removal will be State-lead and identify what cleanup or stabilization actions must be taken within a specified cost and duration. The Action Memorandum must also identify activities that will be Federal-lead (e.g., enforcement activities).

- In accordance with program policy and procedures, the AA, OSWER must approve all Action Memoranda for removal actions initially or ultimately expected to exceed the statutory limitation on cost; otherwise, the RA will approve the Action Memoranda, including exemptions to the limitation on time, with OSWER concurrence required on proposed precedent-setting non-NPL removals.

- Changes in project scope and exemptions to the statutory limitations on cost and duration must be documented and approved in accordance with current removal program procedures before the Cooperative Agreement is amended. In order to expedite the approval process, State Project Officers (SPOs) should contact the assigned OSC/RPM as soon as it is known that an amendment to the Action Memorandum is necessary.

These procedures are discussed briefly in Section III of this guidance and in more detail in the Superfund Removal Procedures manual.

(b) States are responsible for preparing the Cooperative Agreement package, which must include a Cooperative Agreement Application, EPA Form 5700-33, and the attachments discussed in section II (Development of Cooperative Agreement Application Packages) of this guidance.

E. Funding Mechanism

1. State-lead removal actions will be funded via a Letter of Credit.

(a) Under this method, CERCLA funds are provided to a State through an existing Letter of Credit established at a Federal Reserve Bank chosen by the State. The State uses — or "draws down" — funds from the credit account to cover its immediate cash needs.

(b) Under a Letter of Credit, funds are obligated when the RA signs the Cooperative Agreement and sends it as an offer of award to the State; funds become accessible to the State on an as-needed basis upon execution of the Cooperative Agreement.

The State Participation Manual provides additional information on the Letter of Credit funding method.

F. Procurement Methods/Conditions

Under a removal Cooperative Agreement, States must award a fixed price subagreement (lump sum, unit price or a combination of the two) when procuring contractor support, regardless of the procurement method selected, unless it receives the Award Official's prior written approval.

1. Methods of procurement that States may use include small purchase, formal advertisement, competitive negotiation, or non-competitive negotiation, as appropriate.

2. All procurement subagreements must adhere to any Engineering Evaluations/Cost Analyses that may have been conducted by EPA for the project covered in the Cooperative Agreement. A special condition to this effect should be included in the Cooperative Agreement.

3. To conduct procurement activities under the Superfund program, a State must either have an internal procurement system that complies with the requirements of 40 CFR Part 33 (Procurement under Assistance Agreements) or must use Part 33 as its procurement regulation and allow EPA preaward review of proposed procurement actions. Additional information on this requirement is provided in section II.2(a) of this guidance and Volume II of the State Participation Manual.

G. State Assurances

In order to enter into a Cooperative Agreement for a removal action, EPA policy requires States to provide assurances for (1) sharing in the cost of cleanup at publicly operated sites, (2) providing a facility in compliance with the Resource Conservation and Recovery Act for off-site treatment, storage, or disposal of substances taken from a site, and (3) assuming responsibility for post removal site control (formerly termed operation and maintenance or O&M). OSCs/RPMs are responsible for monitoring State compliance with these requirements.

1. States are not required to share in the cost of a removal action, unless that removal is conducted at an NPL site that was publicly operated (either by a State or a political subdivision thereof) at the time of a release and a remedial action is ultimately undertaken at the site. In these situations, States are required to pay 50 percent of all removal costs. A State is not required to pay its cost share for the removal until the remedial action is funded by EPA.

2. States are statutorily required to ensure the availability of a hazardous waste treatment, storage or disposal facility, if a remedial action requires off-site treatment, storage, or disposal of hazardous substances. Such facilities must be in compliance with Subtitle C of RCRA and a RCRA compliance inspection must have been completed at the facility within the six-month period prior to the receipt of wastes. According to current EPA policy on off-site disposal (OSWER Directive #9330.2-3), non-time-critical removal actions are subject to these requirements. SPOs should contact their EPA-designated OSC/RPM or Regional RCRA Off-site Contact (RROC) for assistance in identifying disposal facilities and resolving issues pertaining to off-site disposal.

3. Removal program policy allows for payment of post removal site control within the twelve months time limit for the entire removal. The State must assume responsibility for post removal site control at the conclusion of the removal action. EPA may include funds for post removal site control for the project period covered in the Action Memorandum. However, a State must assume responsibility for post removal site control after the completion of the CERCLA-financed action. The Cooperative Agreement Application or a special condition must provide an assurance that the State will assume responsibility for all post removal site control as long as necessary once the action is complete.

II. DEVELOPMENT OF COOPERATIVE AGREEMENT APPLICATION PACKAGES

The State is responsibile for developing the Cooperative Agreement Application package. While the OSC/RPM will be the State's primary EPA contact for developing and negotiating Cooperative Agreements for removals, Regions may elect to assign administrative responsibilities to Regional staff other than the OSC/RPM. State officials responsible for response agreements, usually State Project Officers (SPOs)*, should work closely with an EPA-designated OSC/RPM when developing the Cooperative Agreement. Additional support to the OSC/RPM will be available through the ERD Regional Coordinators in EPA Headquarters. OSCs/RPMs and OHM Coordinators are responsible for reviewing the Cooperative Agreement Application for accuracy and completeness.

A. The Cooperative Agreement Application

The Cooperative Agreement Application package must include EPA Form 5700-33 and several attachments. The application form and the required attachments are briefly discussed below. Additional information is provided in EPA's manual entitled State Participation in the Superfund Program.

1. When applying for CERCLA funds, a State must complete EPA Form 5700-33, Application for Federal Assistance — State and Local Nonconstruction Programs. This form consists of five parts:

- Part I - General Summary Information
- Part II - Project Approval Information
- Part III - Budget Information
- Part IV - Project Narrative Statement
- Part V - Assurances.

General instructions for completing each part are included in the application form. The State should ensure that costs included in the application are allowable for payment under CERCLA. To be allowable, proposed costs must be consistent with section 111 of CERCLA and with Federal cost principles outlined in the OMB Circular A-87, "Cost Principles for State and Local Governments." The State may seek assistance from the OSC/RPM in determining which costs may be allowable. Final determination of the reasonableness of the cost estimates in the application will be made by the EPA Award Official. Exhibit 2 presents the content and Exhibit 3 the appropriate level of detail required for completing Cooperative Agreement budget information.

2. Attachments to the Cooperative Agreement Application

A Cooperative Agreement Application for removal actions must include the following attachments:

- State certification letter
- Procurement System Certification, EPA Form 5700-49
- Intergovernmental review comments
- Community relations plan, if applicable
- Quality assurance/quality control (QA/QC) plan
- Site safety plan

These attachments are briefly discussed below. More detailed information is provided in the State Participation Manual.

* While the term State Project Officer is used throughout the guidance to denote a State's counterpart to an EPA OSC/RPM, it is recognized that different terminology may be used among the States.

EXHIBIT 2
OBJECT CLASS CATEGORIES CONTENT REQUIRED FOR COMPLETING
COOPERATIVE AGREEMENT BUDGET SHEETS

CATEGORY	CONTENT - THE STATE MAY INCLUDE:
Personnel	• Costs of wages paid to State employees who are engaged in response activities. (Calculated either as a percentage of time or level of effort (LOE) basis.)
Fringe Benefits	• Fringe benefits for State employees, calculated as a fixed percentage of salary or by some other agreed-upon method.
Travel	• Costs incurred by State employees for travel necessary for response activities.
Equipment	• Purchase price of necessary equipment that the State furnishes, less its residual value after project completion. If equipment costs are based on usage rates, the costs are calculated by a standard depreciation usage method or in accordance with OMB Circular A-102, Attach. N.
Materials and Supplies	• Purchase price of any necessary materials and supplies the State furnishes.
Contractual Services	• Costs associated with reimbursing contractor services, including direct and indirect contractor costs and a reasonable profit for personal services and nonconstruction contracts. (See 40 CFR Part 33 and OMB Circular A-87.)*
Other Direct Costs	• Costs such as equipment rental, real property purchase (see 40 CFR Part 30), and miscellaneous costs.
Indirect Costs	• The State may include indirect costs.

* In accordance with the Prompt Payment Act (PL 97-177), Federal funds may not be used for payment of interest penalties to contractors when bills are paid late.

EXHIBIT 3
OBJECT CLASS CATEGORIES
APPROPRIATE LEVEL OF DETAIL FOR ITEMIZED
COOPERATIVE AGREEMENT APPLICATION BUDGET

CATEGORY	INFORMATION
Personnel	• Positions of staff • Number of hours • Salary of staff (annual or hourly rate) • Estimates of personnel costs, by position
Fringe Benefits	• Basis (percentage or other) upon which fringe benefits are calculated • Estimates of fringe benefit costs, by position
Travel	• Purpose and estimated number of trips • Starting point and destination • Transportation method • Per Diem while on travel • Number of persons traveling • Estimated cost of trips
Equipment	• Number and type(s) of equipment to be purchased • Price of each piece
Materials and Supplies	• Type(s) of materials and supplies to be furnished • Total prices
Contractual Services	• Estimated number of personal services or nonconstruction contracts • Nature of contract services • Estimated total cost for each contract*

* Estimates should allow for bid and activity contingencies.

(a) A certification letter must be included in the Cooperative Agreement Application package. This letter must be signed by the Governor or Attorney General and must indicate that the agency entering into the agreement has both the authority to do so and to make the assurances required by EPA as discussed in section I.G of this guidance. This letter may be a generic, one-time statement that covers all sites within the State, or it may be site-specific. If a State chooses to submit certification letters on a site-specific basis, a certification letter must be provided for each site covered under a multi-site Cooperative Agreement.

(b) In order to conduct procurement activities under the Superfund program, a State either must have an internal procurement system that meets the intent of EPA's regulations, Procurement Under Assistance Agreements (40 CFR Part 33), or it must follow Part 33 when it conducts procurement and allow EPA pre-award review. The procurement certification form, EPA Form 5700-48 (Procurement System Certification), demonstrates whether or not the State's procurement system is equivalent to EPA requirements. The certification is valid for two years or for the length of the project period established in the assistance agreement, which ever is greater. If the State has previously provided this certification to EPA, the State needs only to indicate in Part A of the form the date the certification was originally submitted.

(c) In accordance with Executive Order 12372, State-lead removal proposals are subject to intergovernmental review before EPA will obligate funds. Intergovernmental review is implemented under 40 CFR Part 29, Intergovernmental Review of EPA Programs and Activities. Under this regulation, if the State has an established review process that includes the project in question, an applicant must formally notify its designated single point of contact, as well as any directly affected governmental entities and areawide or regional planning agencies that it is seeking Federal assistance and comply with the State's review process. A copy of the notification should be sent to the appropriate EPA Regional office. Any comments received in response to this notification must be attached to the Cooperative Agreement Application. Funds will not be obligated to the State until representatives of the State have had an opportunity to comment on the proposed project(s). The intergovernmental review process should be initiated at least one quarter prior to obligation of funds for response at a site. This lead time is necessary to meet the required 60-day State review period

and to allow time for EPA to respond to State and local comments. EPA must accommodate, or explain why it cannot accommodate, any comment received during the formal process before it can award funds to the State.

(d) Section 300.67(b) of the National Contingency Plan (NCP) requires a formal community relations plan (CRP) for all removal actions that last longer than 45 days (Note: proposed revisions to the NCP change this requirement to 120 days). States are therefore required to develop and implement a CRP for all removal actions that are expected to extend beyond this designated time frame. Additional information on CRPs and guidance for developing these plans is provided in the Superfund Removal Procedures manual and in EPA's manual entitled Community Relations in Superfund: A Handbook. States may submit the CRP separately from the Cooperative Agreement Application package. In that event, either the Cooperative Agreement Application or a special condition must provide that the State will submit the CRP prior to beginning on-site activities. The CRP is subject to EPA review and approval.

(e) As required by 40 CFR Part 30.302(d)(2), a State must submit within 30 days of receiving its Cooperative Agreement the QA/QC procedures it intends to use in environmental monitoring. These include any sample collection and analysis activities that may be necessary during the response. One generic QA/QC plan is sufficient for an MSCA. In addition, however, States are required to develop a site-specific Quality Assurance Project Plan (QAPP) to describe the measurement systems it intends to use on a site. When preparing the QA/QC plan and QAPP, States must meet Superfund program data requirements, including the following:

- Data produced must be able to withstand the scrutiny of litigative proceedings, thus requiring appropriate chain-of-custody, document control and QA/QC documentation.

- Data collection must be cost-effective. Costs of generating the data cannot significantly exceed costs associated with similar analyses provided by the EPA Contract Laboratory Program (CLP).

- Data turnaround times must meet project needs.

The QA/QC plan must be reviewed by the EPA Regional QA Officer and the RPM/OSC and must be approved by the Award Official before any sampling can begin for a project.

(f) States are required to have a site safety plan in place before field activities can commence. A site-specific plan must be developed for each removal action. Each safety plan must provide for the protection of on-site personnel and area residents. Plans must be consistent with site conditions and must cover all phases of incident operations. Site safety plans must also comply with all applicable Federal, State and local Occupational Safety and Health (OSH) laws and Occupational Safety and Health Administration (OSHA) standards. Each site-specific safety plan must be submitted to the OSC/RPM for review to ensure removal program requirements are met. Additional information on site safety plans is provided in the Superfund Removal Procedures manual. Site safety plans may be submitted to EPA after the Cooperative Agreement has been signed providing that the application or a special condition provides that the plan will be submitted for EPA review before on-site activities begin.

III. ADMINISTERING COOPERATIVE AGREEMENTS

OSCs/RPMs and SPOs are responsible for ensuring that response activities are conducted according to the agreed-upon scope of work, budget, and schedule included in the Cooperative Agreement and Action Memorandum. The State official responsible for directing response activities, usually the SPO, must ensure that all on-site activities are consistent with CERCLA, the NCP and removal program policies and procedures. Daily on-site presence by SPOs is therefore required when response activities are underway. The OSC/RPM and SPO should maintain close communication at all times to monitor progress effectively. This can include meetings, phone calls, written correspondence, and review of contractor monthly progress reports. In addition, the OSC/RPM and SPO must notify each other immediately of any unscheduled or unanticipated events (e.g., a fire or explosion on site that may require an emergency response by EPA) that may have a direct impact on the project and/or on the terms of the response agreement.

This section briefly discusses State reporting and cost documentation requirements, monitoring State financial commitments and procedures for agreement adjustments. Additional information on response agreement administration and reporting and cost documentation requirements is provided in the State Participation Manual.

A. Reporting Requirements

When entering into a Cooperative Agreement, States are subject to a number of reporting requirements, including submittal of technical progress reports, financial status reports and other reports as required in the Cooperative Agreement. These reporting requirements are discussed briefly below.

1. For removal actions, States must submit quarterly technical progress reports within 30 days of the end of each Federal fiscal quarter and at the end of each response. These reports are submitted to the Region and present information on activities performed during the quarter and on total work to date. Exhibit 4 lists the minimum elements that State technical progress reports should contain for removal actions.

(a) The OSC/RPM is responsible for reviewing technical progress reports and providing any necessary direction or assistance to the State, as required. The content of State reports should be tailored to specific requirements of the response activities as covered in the Action Memorandum and the provisions of the Cooperative Agreement. All information should be site-specific and the OSC/RPM and SPO should reach an initial agreement on the content and format of these reports during negotiation of the Cooperative Agreement. For certain removal actions, EPA may require daily communication from the State, including submission of contractor progress reports. A special condition to this effect should be included in the Cooperative Agreement at the time the agreement is negotiated and may include a provision that the State require from its contractor submission of daily and/or weekly progress reports.

(b) In addition, the State must prepare and submit a final technical progress report to the OSC/RPM within 90 days after the completion of the removal action. Removal actions are complete when the scope of work in the Action Memorandum has been completed and the State has demobilized. The Cooperative Agreement is closed out when all administrative/financial reporting requirements are completed. See section IV of this guidance.

2. Once a removal action has been completed, States must submit a final Financial Status Report (FSR), Standard Form 269, and any ancillary reports. Ancillary reports include statistical or monitoring data, operation and maintenance manuals and other reports as required in the Cooperative Agreement. The State should

EXHIBIT 4
CONTENT OF STATE TECHNICAL PROGRESS REPORTS

- Description of activities and tasks completed to date, by site
- Estimates (percentages) of work completed for each activity, by site, including a basis for the estimates
- Itemization of expenditures by object class for each response included in the Cooperative Agreement, including both expenditures for the quarter and the cumulative expenditures to date
- Estimated variances in cost and time to complete the project
- Narrative explanation of any trends observed
- Description of any actions taken or planned to resolve problems or delays encountered

submit a final FSR and all ancillary reports to the OSC/RPM within 90 calendar days after completion of the removal action.

(a) The State must provide EPA with the opportunity to verify that the removal has been successfully completed. At the conclusion of the removal, joint EPA/State final inspection may be required to confirm that the removal action has been implemented properly and that all outstanding action items are resolved. The State and EPA will jointly inspect the project to confirm that all outstanding action items are resolved. The State shall prepare a final inspection report describing any outstanding items and their resolutions. A copy of this report shall be submitted to the EPA OSC/RPM.

(b) In addition, a Final OSC Report must be prepared by the State at the conclusion of each removal action in accordance with the NCP and removal program policy and procedures. This report will be prepared by the SPO, in consultation with the OSC/RPM, and must be signed by the SPO. The Final OSC Report is subject to the approval of the OSC/RPM and therefore must be signed by the OSC/RPM.

B. Cost Documentation Requirements

When entering into a Cooperative Agreement, States must also adhere to certain cost documentation requirements as set forth in 40 CFR Parts 30 and 33 and all additional Superfund-specific requirements or procedures for documenting State expenditure of CERCLA funds.

1. For removal actions, State accounting and recordkeeping activities must be detailed on a site-specific basis to ensure effective cost recovery. States must also track and report expenditures by object class category. Superfund procedures include documentation and recordkeeping measures intended to protect the integrity of site data, such as:

   (a) Notifying EPA of archive research by third parties unless authorized in writing by EPA

   (b) Requiring all microform copying of original documentation to be done in accordance with, or in a manner equivalent to, the technical requirements for copying Federal government records (36 CFR section 1230 et seq.).

2. In addition, the Superfund program adheres to the general Agency-wide policy that, when requested by EPA, States must provide documentation to support cost recovery litigation and

related efforts. Documentation must be available for use as evidence to answer questions such as what work was authorized, what work was completed, what charges were incurred for the work, and what payments were made for the work.

C. Monitoring Financial Commitments

OSCs/RPMs are responsible for ensuring that State expenditure of CERCLA funds corresponds to technical progress at the site and is within the cost ceiling in the Action Memorandum and Cooperative Agreement. Costs incurred by the State may not exceed the amount obligated for the response in the Cooperative Agreement.

1. The OSC/RPM should review State drawdowns on a monthly basis, using drawdown information available from the Regional financial management office. Key documents for this review include the Financial Management System (FMS) Outlay Report and the State's quarterly reports.

2. Funds awarded under a Cooperative Agreement are assigned an activity (e.g., removal action) and site code. The OSC/RPM should ensure that the State is drawing funds from the proper account for the site and for the action funded. The account from which drawdowns are made, identified in the FMS Outlay Report and the State quarterly reports, must match the action being conducted.

3. Under a multi-site Cooperative Agreement, when a removal at a particular site has been completed, remaining funds may be used to fund removal activities at another site covered by the same Agreement. Such funds, however, must be officially transferred to the appropriate account. A transfer of funds between sites under a MSCA requires a formal amendment to the Cooperative Agreement to move the funds from one account to another. Funds remaining in a site account at the completion of a removal should be deobligated and returned to EPA unless the State requires additional funds to support other removal actions covered in the same Cooperative Agreement. All amendments to Cooperative Agreements will be negotiated at the Regional level. This requirement will ensure that the statutory limitation on cost is adhered to when there is a need to transfer funds.

D. Agreement Adjustments

Agreement adjustments consist of alterations in the amount, terms, conditions, project period, project scope or some other administrative, technical, or financial aspect of the Action Memorandum or Cooperative Agreement. Depending upon the significance of the change, adjustments

to the Agreement can be made, either through formal amendments or in writing, between the OSC/RPM and the SPO. Modifications to Action Memoranda are subject to current removal procedures and policy. All modifications to the initial Action Memorandum (e.g., ceiling increases, exemptions to the statutory limits on cost and duration) must be documented in an amended Cooperative Agreement, but only after the Action Memorandum requesting the modification has been approved. Circumstances where a Cooperative Agreement and Action Memorandum must be formally amended are presented below.

1. A Cooperative Agreement must be amended when it requires a significant change. These occur when:

- Objectives and/or scope of the project, as funded, are altered
- Funds obligated under one accounting code will be used for a different activity or a different site
- There is <u>any</u> increase or <u>substantial</u> decrease in the project period or budget
- A rebudgeting of funds occurs, such as a transfer between contractural services and another object class category or a change in the amount of indirect costs
- Changes to special conditions to the Cooperative Agreement award document.

(a) Formal amendments are not required for minor project changes that are consistent with the project's objectives. Minor changes include shifts between object class categories (except as indicated above) and adjustments to the work plan within the scope and objectives of the funded project. Minor project changes should be approved in writing by the OSC/RPM or the Regional Administrator, as appropriate.

(b) Responsibility for requesting and obtaining approval of modifications to the Cooperative Agreement rests with the SPO and OSC/RPM. The SPO or the OSC/RPM identifies the need for an adjustment and the SPO initiates the approval process by submitting a request to the Region. The OSC/RPM then determines whether a formal amendment is needed, and if so, transmits the request to the Regional Administrator. If the RA signs the amendment, it is sent to the State for acceptance and is executed upon signature by an authorized State official.

2. According to standard removal program policy and procedures, special requests, in the form of Action Memoranda, must be prepared when the following are required after approval of the initial Action Memorandum:

- An increase in the project's established cost ceiling
- Exemptions to the statutory limitations on cost and duration
- Changes in scope of work
- Changes among cost categories where no change in total project ceiling is required.

Guidance on the procedures for requesting and obtaining approval for these changes is set forth in the Superfund Removal Procedures manual. OSCs/RPMs are responsible for preparing these requests and obtaining the necessary concurrence, as well as ensuring that the Cooperative Agreement is amended accordingly.

IV. CLOSEOUT OF RESPONSE AGREEMENTS

In order to close out a Cooperative Agreement, EPA must determine that the State has completed the removal action and complied with all applicable administrative requirements under the agreement. The general closeout responsibilities of the State and the OSC/RPM are briefly discussed below.

A. State Responsibilities

1. A State must complete the work specified in the Cooperative Agreement and the Action Memorandum and produce the required reports (e.g., final FSR and technical progress report), manuals, plans and other information. The State is responsible for ensuring that all products and reports necessary for closeout are submitted to EPA, as required.

2. The SPO is responsible for the completion of the final report as described in the Cooperative Agreement including the reports and activities as follows:

- Draft and final technical report
- Final FSR
- Ancillary products such as O&M manuals
- Property/equipment report
- Other required reports.

B. EPA OSC Responsibilities

1. OSCs/RPMs are responsible for ensuring that the State has provided all required reports and is in compliance with the provisions of the Cooperative Agreement and Action Memorandum.

2. Specific OSC/RPM responsibilities are as follows:

- Reviews/inspects work in the project and arranges for acceptance or correction
- Reviews and approves required reports
- Follows through on delinquencies or deficiencies
- Ensures that all disputes and audit exceptions are resolved
- Transmits final determinations on any outstanding issues
- Documents the closure in the official file
- Maintains the official records.

The State Participation Manual provides detailed guidance on closing out response agreements. OSCs/RPMs should refer to the State Participation Manual for additional information on the requirements/procedures for closing out Cooperative Agreements.

Clarification on Allowability of Management Assistence to States for ERAs and Removals

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OSWER DIRECTIVE 9375.1-13

JUN 10 1983

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONS

MEMORANDUM

SUBJECT: Clarification on Allowability of Management Assistance to States for ERAs and Removals

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

TO: Waste Management Division Directors
Regions I - X

PURPOSE

This memorandum is intended to clarify Agency policy on the allowability of providing funds to States for management assistance activities for expedited response actions (ERAs) conducted during Federal-lead response actions and for Federal-lead removals.

BACKGROUND

Current guidance does not specifically address the allowability of funding management assistance for State participation in Federal-lead ERAs or removals. Several Regions have received requests from States for funding management assistance to support ERAs, and Regions have asked for clarification from Headquarters on this issue. In addition, some States have requested funding to support removal actions, and OERR believes that clarification is required on the allowability of funding State involvement in Federal-lead removals as well.

POLICY ON ALLOWABILITY

If an existing management assistance cooperative agreement does not appear to have sufficient funds to cover a State's role in supporting an ERA being conducted during Federal-lead remedial response, the Region and State can amend the cooperative agreement to include the unexpected increase in State support. If the State is not already receiving management assistance for a Federal-lead activity when an ERA becomes necessary, the Region can provide management assistance via a cooperative agreement if the State feels its role in the ERA warrants such financial assistance.

States may not receive funds for management assistance on Federal-lead time-critical removals due to their emergency nature and related time constraints. These constraints do not allow sufficient time to negotiate and award funding of State support. Further, management assistance will generally not be provided for Federal-lead non-time-critical removals. However, funding may be considered on a case-by-case basis subject to availability of funds when removal actions are complex and State support is expected to be extensive. Prior to consideration of funding management assistance for State involvement in any removals, Regions must consult with Headquarters.

IMPLEMENTATION

Funding for ERA assistance must be shown on the budget sheet for the management assistance cooperative agreement as a separate activity and tasks associated with this activity should be described in the Statement of Work for the agreement. Requirements for State cost-share depend on the phase of the remedial project during which the ERA is conducted. State cost share is not required for management assistance if the ERA is conducted during the RI/FS at publicly operated sites but cost share is required if the ERA is conducted after a ROD has been signed. Management assistance provided for the remedial action phase of response must be cost shared by the State at the same percentage as the remedial action.

Management assistance for Federal-lead removal activities will be funded via site-specific cooperative agreements only and should not be incorporated into Multi-site/activity Cooperative Agreements.

CONTACTS

If you have any questions on funding management assistance for ERAs, please contact Jan Wine on 382-2443. Questions on removals should be directed to Cristina Griffin on 382-2307.

cc: Harvey Pippen, GAD
Lisa Karpf, OIG

Issuance of Administrative Orders for Immediate Removal Actions

United States Environmental Protection Agency
Washington, DC 20460

EPA OSWER Directive Initiation Request

Interim Directive Nu: 9833.1

Originator Information

Name of Contact Person	Mail Code	Telephone Number
John Cross	WH-527	475-6770

Lead Office: ☐ OERR ☐ OSW ☐ OUST ☒ OWPE ☐ AA-OSWER

Approved for Review

Signature of Office Director: M. G. [illegible] Date: 5-30-86

Title

Issuance of Administrative Orders for Immediate Removal Actions

Summary of Directive

This sets forth guidance on issuing Administrative Orders for immediate removal actions under CERCLA. This guidance should be used in conjunction with the recently issued Guidance Memorandum on the Use and Issuance of Administrative Orders under Section 106(a) of CERCLA dated September 8, 1983.

Key Words: administrative orders, immediate, guidance removal actions,

Type of Directive *(Manual, Policy Directive, Announcement, etc.)*: Guidance Memorandum

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Does this Directive Supersede Previous Directive(s)? ☐ Yes ☒ No Does It Supplement Previous Directive(s)? ☐ Yes ☐

If "Yes" to Either Question, What Directive *(number, title)*

Review Plan
☐ AA-OSWER ☐ OUST ☐ OECM ☒ Other *(Specify)*
☐ OERR ☐ OWPE ☐ OGC
☐ OSW ☐ Regions ☐ OPPE

This Request Meets OSWER Directives System Format

Signature of Lead Office Directives Officer: M. C. [illegible] Date: 5-30-86

Signature of OSWER Directives Officer: Date:

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 21 1984

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Issuance of Administrative Orders for Immediate Removal Actions

FROM: Lee M. Thomas
Assistant Administrator

TO: Regional Administrators, Regions I-X
Air & Waste Management Division Directors
Regions III, IV, VI, VII, VIII, X
Waste Management Division Directors, Regions I, V
Director, Office of Emergency and Remedial Response, Region II
Toxics and Waste Management Division Director, Region IX
Environmental Services Division Directors, Regions I - X
Regional Counsel, Regions I - X

This memorandum sets forth guidance on issuing Administrative Orders for immediate removal actions under CERCLA. This guidance should be used in conjunction with the recently issued Guidance Memorandum on Use and Issuance of Administrative Orders under Section 106(a) of CERCLA dated September 8, 1983.

Since becoming the Assistant Administrator, OSWER, I have sought to implement a "balanced" CERCLA program which uses both the administrative and civil judicial enforcement provisions of the Act--as well as the Fund--to secure clean up of hazardous waste sites. One of my primary enforcement goals is to increase the use of Administrative Orders for immediate removals. Orders are particularly useful in immediate removal situations, since they can be issued quickly, can require discrete segments of work (e.g., surface cleanup) and carry the threat of additional damages and penalties in the event of non-compliance.

We estimate that Administrative Orders may be appropriate for a significant percentage of immediate removal situations. Increased resources will be provided to the Regions, and I expect the Regions to devote resources to accomplishing this goal of increased Administrative Orders for removals.

In addition, the Regions must develop a satisfactory organizational structure if the Administrative Order program is to succeed. The organization of enforcement personnel varies among the Regions. The majority of the Regions keep their "remedial" and "removal" personnel in different divisions. Since CERCLA enforcement has (until now) concentrated heavily on remedial sites, most regional technical enforcement personnel have been assigned to the remedial response units (generally, the Air and

Hazardous Material Divisions). Personnel responsible for immediate and planned removals have usually been assigned to the Environmental Services Division which, as a general rule, has not been assigned enforcement personnel.

Obviously, the ability of a Region to implement this new policy requires both close coordination among the immediate response staff and their colleagues in the technical enforcement and regional counsel offices and an organizational structure capable of developing and issuing quality orders. Regions that do not currently dedicate technical enforcement staff to their immediate removal program should assure that appropriate personnel are in place in the technical enforcement office to implement this policy and to handle the workload.

I. BACKGROUND

CERCLA identifies two types of response actions for which the Fund can be used: removal actions and remedial actions. The National Contingency Plan (NCP) further refines the former category into "immediate" and "planned" removals and describes the process and procedures for proceeding with these forms of response. (See Federal Register 31180; July 16, 1982). Please refer to the attached appendix for an outline of the relevant CERCLA and NCP provisions regarding removal activity, Administrative Orders and enforcement.

Because of the large number of sites which pose a health hazard, the Office of Emergency and Remedial Response (OERR) defines the category of immediate removals according to the immediacy and severity of the hazard to the public health or environment. These categories establish a guide for the purpose of assessing the length of time within which the Agency must respond to the event. Agency response to situations which require immediate response (e.g., threats of fire, explosion or spills) normally takes place in a matter of hours or one or two days at the most; Agency response to other situations (e.g., rusting barrels that have not yet begun to leak, holding ponds that may overflow with the advent of the rainy season) normally takes place during a period which may range from a week to a month.

This guidance is most applicable to the latter situation; i.e., the Regions should consider issuing Administrative Orders in situations when there is at least one week between the time the On-Scene Coordinator (OSC) determines that an immediate removal is warranted and the time that actual on-site response must begin.

Administrative Orders are a useful enforcement tool in these types of immediate removals situations, for the following reasons. First, they encourage private party response, particularly since it

is OSWER policy to meet, if at all possible, with responsible parties after the Order is issued if a meeting is requested. The results of an OWPE analysis of 49 completed immediate removals indicate that the elapsed time between the request for funds and the start of site response ranged from eight days to more than three weeks for 24 of the sites. This clearly indicates that there is time to issue Administrative Orders in appropriate situations, and the process described in this memorandum can be implemented in as little time as a week, if necessary. Second, removals require discrete units of work (e.g., barrel or contaminated soil removal) which makes responsible party compliance and Agency compliance monitoring easier. Third, the costs of immediate removals are generally moderate; this increases the probability of private party compliance.

In the event of non-compliance with an Administrative Order, the Agency is prepared to quickly initiate a Fund-financed response and seek fines/treble damages from the responsible parties. Since the treble damages will be based on the Fund dollars expended, these situations are particularly amenable to establishing treble damage claims, which the Agency will seek to recover in its §107 cost recovery actions. (The average obligation for 110 prior immediate removals undertaken by the Agency was approximately $275,000). Issuance of Administrative Orders for these situations also may improve the equitable position of the Agency in subsequent cost recovery cases.

II. CRITERIA FOR ISSUING ADMINISTRATIVE ORDERS

First, of course, the Agency must meet the legal threshold that an imminent and substantial endangerment to public health or the environment may exist.[1] Information which can be used and evaluated by the OSC or his supervisor to make this determination include:

1. Notification in accordance with CERCLA §103 (a), (b) or (c)
2. Investigations by government authorities conducted pursuant to CERCLA §104 (e) or other statutory authority.

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[1]The Agency must be able to properly document and justify both its assertion that an immediate and significant risk of harm to human life or health or to the environment exists and its choice of the ultimate response action at a site in order to be able to oppose a challenge to the Order and to successfully litigate any subsequent cost recovery action. Adequate documentation consists of photographs, samples, monitoring or other documented site analysis. The Agency should follow chain of custody procedures to maintain the integrity of samples taken at the site. Please refer to the Cost Recovery Guidance, issued August 26, 1983 for more detailed guidance. The Revised Superfund Removal Guidance to be issued in late February 1984 will also provide additional guidance on immediate removal assessments.

3. Notification of a release by a federal or state permit holder when required by the permit.
4. Inventory efforts or random/incidental observation by government agencies or the public.

If the facts reach the legal thresholds of CERCLA §106, several policy criteria for deciding whether to issue an Order for an immediate removal should be considered. The first of these is the amount of time available before site response must begin. This determination will usually be made by the OSC. An Order may be appropriate if there is a minimum of one week available for issuing the Order and meeting with the recipients (see further below) between the time of the decision to seek funds for the immediate removal and the initiation of on-site response. (Of course if an order can be issued in less than a week the Regions are not bound by the "one week minimum". However, the Regions should always attempt to have 48 - 72 hours available for the recipients to request and conduct a conference.)

A second policy criterion is the number of potential recipients of the Order and their financial viability. There should be a "manageable" number of responsible parties and they should be collectively capable of undertaking site response. The Regions will use their best judgement to decide what constitutes a "manageable" number of responsible parties and assess the capability of the parties to undertake the response for any individual immediate removal situation. (For a more lengthy discussion of criteria to consider when issuing an Administrative Order, please refer to the Administrative Order guidance.) When there is a large number of potentially responsible parties, Orders need not be issued to all of the parties. In this type of situation the Region should issue the Orders only to those parties most likely to comply. The Region, however, is not precluded from issuing Orders to all the parties if it so desires.

These criteria are to be used as general guidelines for determining whether an Administrative Order should be issued for an immediate removal. The varying factual circumstances presented in any potential removal action mandate that each Region conduct this necessary factual analysis to decide the appropriateness of an Order.

III. PROCESS FOR ISSUING ADMINISTRATIVE ORDERS

The timely development and issuance of Administrative Orders for immediate removals will require effective coordination among the OSC, technical enforcement personnel and the legal counsel in both the Regions and Headquarters. OSWER will not dictate how the Regions must organize or adjust personnel in order to accomplish this task, but it will expect the Regions to have a system in place which is capable of implementing an administrative order program for immediate removals.

The procedures for developing and issuing orders follow:

The decision by the OSC or his superior to request funds for an immediate removal also triggers the process for deciding whether to issue an Administrative Order.

The OSC will inform the technical enforcement branch (or other appropriate enforcement personnel if no separate branch exists) and the Regional Counsel that a request for a Fund-financed immediate removal is being developed. Appropriate personnel in OERR and OWPE should also be informed of this action. While the OSC and his staff prepare the 10-point document,[2] technical enforcement personnel and the Regional Counsel should begin to identify responsible parties and assess their financial ability to conduct site cleanup.

The OSC or the Regional Counsel will attempt to orally contact (with written follow-up) potentially responsible parties in order to secure private-party response in lieu of the Fund. While previous Agency policy was to proceed with Fund-financed response if the responsible parties refused to act, the Agency will now issue administrative orders in appropriate circumstances before initiating Fund action, so long as the site does not pose an unreasonable risk of harm to the public health, welfare or the environment.

Regardless of whether a responsible party agrees or not to undertake the removal, development of the 10-point document should proceed as usual. However, the OSC and technical enforcement staff (in consultation with the Regional Counsel) shall apply the criteria outlined in Part A (above) to recommend to the Regional Administrator whether to issue an Administrative Order. The decision to issue the order rests with the Regional Administrator, subject to the current delegations.

If the Regional Administrator decides to issue an Administrative Order, the Order will be drafted by technical enforcement personnel with the advice of the Regional Counsel. The technical information contained in the 10-point document will normally provide the basis for the Order's "Findings of Fact" while the Agency's intended response actions will serve as the remedy the recipient is required to implement.

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[2]Requests for less than $250,000 can be approved by the Regional Administrator while requests for more than $250,000 require the approval of OERR. (It is anticipated that within the month, the Regional Administrators will be delegated the authority to obligate up to $1 million for removal actions.) The ten point document itself must justify its cost estimates and be consistent with the NCP. With the issuance of the Revised Superfund Removal Guidance, the 10 point document will become an Action Memorandum.

Since Administrative Orders will normally be issued in situations in which site response is not required for at least one week, OSWER policy is to provide recipients when possible an opportunity to meet with Agency personnel to discuss the terms of the Order and the means for compliance. Therefore, the Order should include the following provisions:[3]

1. A statement of the imminent and substantial danger pursuant to §106 of CERCLA and the risk of harm under §300.65 of the NCP.
2. A statement of the authority of the issuing official (normally the Regional Administrator) to issue the Order and why the recipient is liable under §107.
3. The steps the recipient must take to comply with the order, (following the provisions of the ten-point document in order to be as specific as possible).
4. A mandatory timetable for performing and completing the response. (The timetable should include at least one short term interim deadline so the Agency will have the ability if necessary, to demonstrate non-compliance before the project completion date.)
5. A provision informing the recipient that his duty to obey the terms of the order takes effect 72 hours after he receives the order.
6. A provision informing the recipient that he may orally contact the Agency to request a conference on the Order. The recipient must follow up his oral request in writing.
7. A provision specifying a date certain by which responses (either oral or written) to the Order must be received.
8. A provision which states that EPA reserves the right to undertake the action if emergency circumstances dictate such action and that such action in no way relieves the parties of responsibility for the costs of such actions.
9. A provision which requires: proper chain of custody procedures to be followed for any testing and sampling, adequate recordkeeping of activities (so records may be used as evidence in any future enforcement case), cooperation from employees of any contractor who engages in site activity, and availability of such employees to the U.S. in preparation and trial of a subsequent enforcement case.

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[3]Refer to the General Administrative Order Guidance for examples of model orders and conference procedures.

Under a separate delegations memorandum to the Regions, the concurrence requirement will be waived for all Administrative Orders for immediate removals with obligations of $1,000,000 or less. Within two weeks of issuance of the Order, the Regions are to send a copy of the final Order to OWPE.

As a matter of policy, in order to increase the likelihood of compliance, the Agency encourages the convening of a conference with the recipients of an Administrative Order. Since Administrative Orders will generally be issued for immediate removal situations which do not require response in less than one week, the Agency will normally attempt to hold a meeting with the recipient, if requested by the recipient. The conference should be convened on an expedited basis (e.g., within 72 hours after the Order is issued) if the recipient orally requests the conference. However, the Agency retains the right to "waive" a conference if immediate response is warranted because of deteriorating conditions at the site. The Regional Administrator shall have the authority to decide whether to eliminate the conference prior to or following the issuance of the Administrative Order. If the Regional Administrator waives the opportunity for a personal conference, a regional representative, must at least give the parties an opportunity to be heard by telephone before the effective date of the Order. In general, conferences concerning removal actions should be used to clarify the requirements of the Order rather than as an opportunity to negotiate the requirements.

The Agency must create a good administrative record of its meetings with the recipient of an Order for either enforcement of the Order or cost recovery after a Fund-financed cleanup. The Agency participants should prepare a written summary of the conference containing:

1. The date and participants.
2. A summary of the significant issues raised and arguments/ data used by the recipient to contest the Order.
3. The result of the conference (e.g. agreements reached with the recipient, indication from the recipient of an unwillingness to comply with the Order)

The presiding official, (designated by the Regional Administrator) must also prepare a statement which addresses any significant arguments raised by the recipient and recommends whether any modifications to the Order are warranted. (See the September 8, 1983 Administrative Order Guidance for a complete discussion of the procedures and "ground rules" for conducting the conference and the time frames for holding them.)

If the recipient agrees to undertake the stipulated response measures, the agreement may be in the form of a Consent Order. The OSC will monitor compliance with the Order and recommend additional enforcement action if the terms of the Consent Order are breached. If the recipient does not agree to undertake the measures contained in the Order, the Agency will generally not refer a case to the Department of Justice to force compliance because of the time constraints presented by the emergency. Rather, the Fund will be used for site response and the recipient(s) will be sued for cost recovery--including punitive damages in appropriate cases.

IV. USE OF THE FUND WHILE THE ADMINISTRATIVE ORDER IS BEING ISSUED

Normally, once an Order has been deemed appropriate for an immediate removal situation, the CERCLA Fund shall not be used to undertake a federally-funded immediate removal during the time period in which the Agency develops the Order, issues it to the responsible party, and conducts the conference.

However, if site conditions deteriorate-- presenting a corresponding increase in the threat that the site presents-- the Fund can be used for response while the Administrative Order process continues. In such instances, the Regional Administrator can approve the use of Funds below $250K and request the Assistant Administrator, OSWER, to release funds if the response work will be greater than $250K.[4] The Administrative Order process should continue since the parties may undertake site response at the next convenient break in activity.

Thus, if there are deteriorating conditions at the site, the OSC should continue all steps necessary for undertaking a Fund-financed response while the Order is being developed. The 10-point document should be prepared and receive the concurrence of all officials up through the Regional Administrator or the Director, OERR.

However, no actual obligation of Funds for site response will normally occur until after the Order has been issued and the conference has been held. Since the Order will only be issued in situations where an immediate response can be delayed, there will normally be time to see the Administrative Order process through to conclusion. The conference must be held within the time period specified in the Order (which will correspond to the time the Agency has before the response activity needs to begin). Since

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[4] If deteriorating conditions require the Fund to respond while the Order is still being issued, OSWER assumes that the Fund will take all response actions necessary at the site (e.g., remove all barrels, not merely those that may be about to leak).

the timing of the obligation will vary according to the estimated time needed to mobilize equipment and personnel, the OSC should work closely with the technical enforcement and Regional Counsel staff during the drafting of the Order to assure that the time period established for issuing the Order is synchronized with the time requirements for site response.

If the conference does not result in private party response--or if changing conditions at the site require accelerated response--the Fund-financed immediate removal will take place. If Fund-financed activity does begin, the Order may be written to require the potentially responsible parties to undertake site activity at the next convenient break point in activity. If the parties still fail to undertake the site response activity, enforcement efforts will emphasize cost recovery with the additional imposition of fines/penalties as appropriate.

V. COST RECOVERY

The Agency will normally not initiate a civil action in the event of non-compliance with an Order but instead will seek to recover costs and damages after a Fund-financed response. Therefore, while enforcement personnel are carrying out the Administrative Order process, they should also be aware of the requirements for a successful cost recovery action. They must be able to document the following factors (some of which are the same ones necessary for the issuance of the Administrative Order itself).

1. The need for the immediate removal (evidence of an imminent and substantial endangerment or threat of endangerment to public health, welfare or the environment)
2. Liability of the responsible parties (evidence to support the contention that the parties meet the liability standard of §107)
3. Proof that the Fund-financed response activity was "not inconsistent" with the requirements of the NCP.
4. Documentation of all eligible costs for site-specific Fund expenditures.

Enforcement personnel must assure sufficient documentation of these factors from the period in which the 10-point document is developed and Funds are obligated through the actual clean up of the site. These cost recovery requirements must be met regardless of whether there will be a simple cost recovery action (if no Administrative Order is issued) or an action for response costs plus damages (if the Order is not complied with). The Agency must assure that evidence is preserved for any subsequent enforcement action. Proper chain of custody procedures must be used for any

sampling or testing, and adequate records of site activity must be kept. Employees of any contractor used for site activity must cooperate with and be made available to the U.S. in preparation and trial of any subsequent enforcement action. Enforcement, program and legal offices should work together throughout the case development.

VI. FOLLOW-UP

This guidance represents a substantial departure from prior practice, and I expect that it will take some time to implement. For these reasons, I will be reviewing all immediate removals referred to Headquarters for compliance with this guidance. In addition, for immediate removals under $250,000, I will ask the Directors, OWPE and OERR to review the compliance with this guidance quarterly, and to advise me accordingly.

Appendix

cc: Gene Lucero, OWPE
William Hedeman, OERR
Kirk Sniff, OECM
Dan Berry, OGC

APPENDIX

Authority/Requirements/Enforcement of Administrative Orders for Removal Actions under CERCLA

Under §106(a) of CERCLA:

If, EPA, acting on behalf of the President:

determines that there may be an imminent and substantial endangerment to the public health or welfare or the environment because of

an actual or threatened release of a hazardous substance from a facility

may, after notice to the affected state,

issue such orders as may be necessary to protect public health and welfare and the environment.

Under §106(b) of CERCLA:

EPA may take action in the appropriate U.S. district court, against any person who willfully violates or fails or refuses to comply with any Order issued under §106(a), to enforce such order and

may fine such person not more than $5,000 for each day such violations occur or such failure to comply continues.

Under §107(c)(3) of CERCLA:

Any person who is liable for a release or threat of release of a hazardous substance that:

fails without sufficient cause to properly provide removal action upon order of the President pursuant to §106

may be liable to the United States for punitive damages in an amount at least equal to and not more than three times, the amount of any costs incurred by the Fund as a result of such failure to take proper action.

Civil action may be commenced against any such person to recover the punitive damages. These punitive damages shall be in addition to any costs recovered from such person pursuant to §112(c).

Any monies received in punitive damages shalL be deposited in the Fund.

National Contingency Plan Requirements for Immediate Removals

Under §300.65 of the NCP:

Immediate Removal action is appropriate when the lead agency determines that:

- the initiation of the removal action will prevent or mitigate immediate and significant risk of harm to human life or health or to the environment from such situations as:

    1. Human, animal, or food chain exposure to acutely toxic substances
    2. Contamination of drinking water supply
    3. Fire and/or explosion
    4. Similarly acute situations

Immediate removal action may include but are not limited to:

1. Collecting and analyzing samples to determine the source and dispersion of the hazardous substance
2. Providing alternative water supplies
3. Installing security fencing or other measures to limit access
4. Controlling the source of the release
5. Measuring and sampling
6. Moving hazardous substances off-site for storage, destruction, treatment or disposal
7. Placing physical barriers to deter the spread of the release
8. Controlling the water discharge from an upstream impoundment
9. Recommending to the appropriate authorities the evacuation of threatened individuals
10. Using chemicals and other materials in accordance with Supart H to restrain the spread of the substance and mitigate its effects
11. Executing damage control or salvage operations

Procedures for Authorizing Application for Civil Search Warrants Under CERCLA

Memorandum

Subject	Date
Procedures for Authorizing Application for Civil Search Warrants Under CERCLA	April 3, 1987

To	From
All EES Attorneys	David T. Buente, Jr. Chief, Environmental Enforcement Section

Under § 104(e) of CERCLA, as amended by SARA, the United States may seek access by warrant, administrative order, or court order. If access is obtained by administrative order, the appropriate documents are issued by relevant client agencies. If access is to be obtained by court order, then the Assistant Attorney General of the Land and Natural Resources Division must approve the complaint, upon referral from the relevant client agency according to ordinary procedures. For access to be sought through application on a civil CERCLA warrant,[1] the instant memorandum will confirm the procedures to be used by the Department of Justice.

Under ¶5.320-A-2 of the U.S. Attorney's Manual, application for warrant under CERCLA may not be handled unilaterally by the U.S. Attorneys. Applications for such warrants must be coordinated through the Environmental Enforcement Section.

Clearance through the Environmental Enforcement Section is important for a variety of reasons. First, the nature of the governmental activities involved under CERCLA civil warrants may be much broader and last considerably longer than an inspection under the other federal environmental regulatory statutes. Typically the latter require only a few days or weeks to conduct routine environmental sampling. Under CERCLA, access may be sought under a warrant for not only sampling, but even simple

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[1] The memorandum does not cover procedures for seeking a criminal search warrant where a CERCLA violation may be involved. All such matters are to be referred to the Director, Environmental Crimes Unit, EES.

removal-type activity, e.g., security/fencing, limited drum removal. The greater relative complexity of the governmental activity involved can be expected to provoke more challenges to CERCLA civil warrants than those under other statutes and the issues raised by CERCLA warrants may be much more complex. Second, this is a relatively new and vital area of the law. We must ensure that maximum efforts are made to develop this critical area of the law in an excellent manner. EES lawyers must make all reasonable efforts to ensure that exercises of the civil warrant authority under CERCLA will be vindicated by the federal courts, through proper presentation of facts and legal arguments by Departmental attorneys with experience in this area. Finally, since our experience has shown that judicial challenges to civil CERCLA warrants tend to move very rapidly, sometimes on an emergency motion basis, EES needs to work closely with client agencies on these matters so that the Division's Appellate Section is advised and prepared with sufficient lead time to expeditiously address appellate proceedings.

Coordinating these warrant applications through EES must be done on an expedited basis so that client agencies' program objectives are achieved. Moreover, our resources must not be consumed by duplicative work. Balancing the needs for careful warrant application preparations with that for expeditious handling of these matters, we will use the following procedures:

1. The client agency will telephonically notify the relevant EES Assistant Chief or Senior Lawyer when the Agency plans to seek a civil warrant.

2. The client agency will follow-up the request by expeditiously transmitting a short memorandum concisely explaining why the warrant is needed with a draft copy of the warrant application and supporting affidavits.

3. Upon receipt of the telephonic notification or written request, whichever first occurs, the EES Assistant Chief or Sr. Lawyer will arrange for either an EES staff attorney or an AUSA to handle the review and prosecution of the application. Unless a dispute develops between EES/AUSA personnel and the client agency, the EES Assistant Chief or Sr. Lawyer may approve the application. If such a dispute develops, it must be brought to the attention of the Chief or Deputy Chief, EES for resolution.

4. Handling of these matters is to be afforded priority on our docket. Moreover, the Chief or Assistant Chief of the Appellate Section shall be advised of each application request by the EES Assistant Chief or Sr. Lawyer as soon as possible after notification by the client agency, so that Appellate can be prepared to handle expeditiously appeal matters.

5. All civil actions to enforce civil CERCLA warrants, by way of application for civil contempt or other judicial orders, shall be authorized in writing by the Assistant Attorney General. Such actions shall be afforded highest priority on the docket.

For general advice/guidance on handling CERCLA civil warrant matters, contact John Fleuchaus, ORCM-Waste, 382-3109.

Attachment

Entry and Continued Access Under CERCLA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN - 5 1987

OSWER DIRECTIVE
9829.2

OFFICE OF
ENFORCEMENT AND
COMPLIANCE MONITORING

MEMORANDUM

SUBJECT: Entry and Continued Access Under CERCLA

FROM: Thomas L. Adams, Jr.
Assistant Administrator

TO: Regional Administrators I-X
Regional Counsels I-X

I. INTRODUCTION

This memorandum sets forth EPA's policy on entry and continued access to facilities by EPA officers, employees, and representatives for the purposes of response and civil enforcement activities under CERCLA. 1/ In short, the policy recommends that EPA should, in the first instance, seek to obtain access through consent. Entry on consent is preferable across the full range of onsite activities. If consent is denied, EPA should use judicial process or an administrative order to gain access. The appropriate type of judicial process varies depending on the nature of the onsite activity. When entry is needed for short-term and non-intrusive activities, an ex parte, judicial warrant should be sought. In situations involving long-term or intrusive access, EPA should generally file suit to obtain a court order.

The memorandum's first section addresses the recently amended access provision in CERCLA. The memorandum then sets forth EPA policy on obtaining entry and the procedures which should be used to implement this policy, including separate discussions on consent, warrants, court orders, and administrative orders.

1/ This policy does not address information requests under Section 104(e)(2).

II. STATUTORY AUTHORITY

EPA needs access to private property to conduct investigations, studies, and cleanups. The Superfund Amendments and Reauthorization Act of 1986 (SARA) explicitly grants EPA 2/ the authority to enter property for each of these purposes. Section 104(e)(1) provides that entry is permitted for "determining the need for response, or choosing or taking any response action under this title, or otherwise enforcing the provisions of this title."

SARA also establishes a standard for when access may be sought and defines what property may be entered. EPA may exercise its entry authority "if there is a reasonable basis to believe there may be a release or threat of a release of a hazardous substance or pollutant or contaminant." § 104(e)(1). SARA, however, does not require that there be a release or threatened release on the property to be entered. 3/ Places and properties subject to entry under Section 104(e) include any place any hazardous substance may be or has been generated, stored, treated, disposed of, or transported from; any place a hazardous substance has or may have been released; any place which is or may be threatened by the release of a hazardous substance; or any place where entry is needed to determine the need for response or the appropriate response, or to effectuate a response action under CERCLA. § 104(e)(3). EPA is also authorized to enter any place or property adjacent to the places and properties described in the previous sentence. § 104(e)(1).

EPA is granted explicit power to enforce its entry authority in Section 104(e)(5). Under that provision EPA may either issue an administrative order directing compliance with an entry request or proceed immediately to federal district court for injunctive relief. Orders may be issued where consent to entry is denied. Prior to the effective date of the order, EPA must provide such notice and opportunity for consultation as is reasonably appropriate under the circumstances. If EPA issues an order, the order can be enforced in court. Where there is a "reasonable basis to believe there may be a release or threat of a release of a hazardous substance or pollutant or contaminant," courts are instructed to enforce an EPA request or order unless the EPA

2/ Although CERCLA and SARA confer authority upon the President that authority has been delegated to the EPA Administrator. Exec. Order No. 12580, § 2(g) and (i), 52 Fed. Reg. 1923 (1987).

3/ The House Energy and Commerce bill at one point contained this limitation. H.R. Rep. No. 99-253 Part 1, 99th Cong,. 1st Sess., 158 (1985). This limitation, however, was dropped prior to introduction of the bill for floor debate. See H.R. 2817, 99th Cong., 1st Sess., 131 Cong. Rec. H10857 (December 4, 1985).

"demand for entry or inspection is arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law." § 104(e)(5). The legislative history makes clear that courts should enforce an EPA demand or order for entry if EPA's finding that there is a reasonable basis to believe there may be a release or threat of release is not arbitrary and capricious. 132 Cong. Rec. S14929 (October 3, 1986) (Statement of Sen. Thurmond); 132 Cong. Rec. H9582 (October 8, 1986) (Statement of Rep. Glickman). See United States v. Standard Equipment, Inc., No. C83-252M (W.D. Wash. November 3, 1986). In addition, a penalty not to exceed $25,000/day may be assessed by the court for failure to comply with an EPA order or the provisions of subsection (e).

Finally, Section 104(e)(6) contains a savings provision which preserves EPA's power to secure access in "any lawful manner." This broad savings provision is significant coming in the wake of the Supreme Court's holding that:

> When Congress invests an agency with enforcement and investigatory authority, it is not necessary to identify explicitly each and every technique that may be used in the course of executing the statutory mission.
>
> . . . Regulatory or enforcement authority generally carries with it all the modes of inquiry and investigation traditionally employed or useful to execute the authority granted.

Dow Chemical Co. v. United States, 90 L.Ed. 2d 226, 234 (1986). 4/ One lawful means of gaining access covered by this paragraph is use of judicially-issued warrants. See S. Rep. No. 99-11, 99th Cong. 1st Sess. 26 (1985).

In numerous instances prior to the passage of SARA, EPA obtained court rulings affirming its authority to enter property to conduct CERCLA activities. 5/ Following enactment of SARA,

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4/ See also, Mobil Oil Corp. v. EPA, 716 F.2d 1187, 1189 (7th Cir. 1983), cert. denied, 466 U.S. 980 (1984) (EPA authority to sample effluent under Section 308 of the Clean Water Act broadly construed); CEDs, Inc. v. EPA, 745 F.2d 1092 (7th Cir. 1984), cert. denied, 471 U.S. 1015 (1985).

5/ United States v. Pepper Steel and Alloy, Inc., No. 83-1717-CIV-EPS (S.D. Fla. October 10, 1986); Bunker Limited Partnership v. United States, No. 85-3133 (D. Idaho October 21, 1985); United States v. Coleman Evans Wood Preserving Co., No. 85-211-CIV-J-16 (M.D. Fla. June 10, 1985); United States v. Baird & McGuire Co. No. 83-3002-Y (D. Mass. May 2, 1985); United States v. United Nuclear Corp., 22 ERC 1791, 15 ELR 20443 (D.N.M. April 18, 1985).

several courts have ordered siteowners to permit EPA access. United States v. Long, No. C-1-87-167 (S.D. Ohio May 13, 1987); United States v. Dickerson, No. 84-76-VAL (M.D. Ga. May 4, 1987); United States v. Standard Equipment, Inc., No. C83-252M (W.D. Wash. Nov. 3, 1986). Further, the one adverse ruling on EPA's right of access has been vacated by the Supreme Court. Outboard Marine Corp. v. Thomas, 773 F.2d 883 (7th Cir. 1985), vacated, 93 L. Ed. 2d 695 (1986).

III. EPA ACCESS POLICY

EPA needs access to sites for several types of activities, including:

- preliminary site investigations;
- removal actions;
- RI/FSs; and
- remedial actions.

Within each of these categories, the scope of the work and the time needed to complete that work may vary substantially. This memorandum sets Agency policy on what means should be used to gain access over the range of these various activities.

EPA may seek access through consent, warrant, administrative order, or court order. Consent is the preferred means of gaining access for all activities because it is consistent with EPA policy of seeking voluntary cooperation from responsible parties and the public. In certain circumstances, however, the Region should consider obtaining judicial authorization or issuing an administrative order in addition to obtaining consent. For example, where uncertainty exists whether a siteowner will continue to permit access over an extended period, reliance on consent alone may result in a substantial delay if that consent is withdrawn.

When consent is denied, EPA should seek judicial authorization or should issue an administrative order. If the judicial route is chosen, EPA may seek an ex parte warrant or a court order. Warrants are traditionally granted for short-term entries. Generally, warrants should not be used when the EPA access will involve long-term occupation or highly intrusive activities. Clearly, warrants are appropriate for preliminary site investigations. On the other hand, because of the long, involved nature of remedial actions, access for such projects should be sought through a request for a court order. Neither removals nor RI/FSs, however, can be rigidly matched with a given judicial access procedure. Depending on the activities to be undertaken and the circumstances at the site, either a warrant or a court order may be appropriate.

In deciding whether to use a warrant or a court order when access is needed for a removal or to conduct a RI/FS, the following general principles should be considered. First, if the activity will take longer than 60 days a court order normally is appropriate. Second, even if the activity will take less than 60 days, when the entry involves removal of large quantities of soil or destruction of permanent fixtures, a court order may again be appropriate. Finally, warrants should not be used if EPA action will substantially interfere with the operation of onsite business activities. These issues must be resolved on a case-by-case basis.

If EPA needs to gain access for a responsible party who has agreed to undertake cleanup activities under an administrative order or judicial decree, EPA may, in appropriate circumstances, designate the responsible party as EPA's authorized representative solely for the purpose of access, and exercise the authorities contained in Section 104(e) on behalf of the responsible party. Such a procedure may only be used where the responsible party demonstrates to EPA's satisfaction that it has made best efforts to obtain access. A further condition on the use of this procedure is that the responsible party agree to indemnify and hold harmless EPA and the United States for all claims related to injuries and damages caused by acts or omissions of the responsible party. The responsible party should also be advised that the expenses incurred by the government in gaining access for the responsible party are response costs for which the responsible party is liable. Before designating any responsible party as an authorized representative, the Region should consult with the Office of Enforcement and Compliance Monitoring.

IV. ACCESS PROCEDURES

A. Entry on Consent

1. General Procedures

The following procedures should be observed in seeking consent:

Initial Contact. Prior to visiting a site, EPA personnel 6/ should consider contacting the siteowner to determine if consent will be forthcoming. EPA personnel should use this opportunity to explain EPA's access authority, the purpose for which entry is needed, and the activities which will be conducted.

6/ As used in this guidance, the term "EPA personnel" includes contractors acting as EPA's authorized representatives.

Arrival. EPA personnel should arrive at the site at a reasonable time of day under the circumstances. In most instances this will mean during normal working hours. When there is a demonstrable need to enter a site at other times, however, arrival need not be limited to this timeframe. Entry must be reasonable given the exigencies of the situation.

Identification. EPA personnel should show proper identification upon arrival.

Request for Entry. In asking for consent, EPA personnel should state the purpose for which entry is sought and describe the activities to be conducted. EPA personnel should also present a date-stamped written request to the owner or person-in-charge. A copy of this request should be retained by EPA. Consent to entry must be sought from the owner 7/ or the person-in-charge at that time.

If practicable under the circumstances, consent to entry should be memorialized in writing. A sample consent form is attached. Although oral consents are routinely approved by the courts, a signed consent form protects the Agency by serving as a permanent record of a transaction which may be raised as a defense or in a claim for damages many years later. If a site-owner is unwilling to sign a consent form but nonetheless orally agrees to allow access, EPA should document this oral consent by a follow-up letter confirming the consent.

Since EPA contractors often are involved in gaining access in the first instance, the Regions should ensure that their contractors are acquainted with these procedures.

2. Denial of Entry

If consent is denied, EPA personnel or contractors, before leaving, should attempt to determine the grounds for the denial. EPA personnel, however, should not threaten the siteowner with penalties or other monetary liability or make any other remarks which could be construed as threatening. EPA personnel may explain EPA's statutory access authority, the grounds upon which this authority may be exercised, and that the authority may be enforced in court.

7/ If EPA's planned site activities will not have a physical effect on the property, EPA generally need not seek consent from the owner of leased property where the lessee is in possession. The proper person in those circumstances is the lessee. But where EPA entry will have a substantial physical effect on the property, both the lessee and the property-owner should be contacted since in this instance interests of both will be involved.

3. Conditions Upon Entry

Persons on whose property EPA wishes to enter often attempt to place conditions upon entry. EPA personnel should not agree to conditions which restrict or impede the manner or extent of an inspection or response action, impose indemnity or compensatory obligations on EPA, or operate as a release of liability. The imposition of conditions of this nature on entry should be treated as denial of consent and a warrant or order should be obtained. See U.S. EPA, General Counsel Opinions, "Visitors' Release and Hold Harmless Agreements as a Condition to Entry of EPA Employees on Industrial Facilities," Gen'l and Admin. at 125 (11/8/72). If persons are concerned about confidentiality, they should be made aware that business secrets are protected by the statute and Agency regulations. 42 U.S.C. § 9604(e); 40 C.F.R. § 2.203(b). EPA personnel should enter into no further agreements regarding confidentiality.

B. Warrants

1. General Procedures

To secure a warrant, the following procedures should be observed:

Contact Regional Counsel. EPA personnel should discuss with Regional Counsel the facts regarding the denial of consent or other factors justifying a warrant and the circumstances which give rise to the need for entry.

Contact Department of Justice. If after consultation with Regional Counsel a decision is made to seek a warrant, the Regional Counsel must contact directly the Environmental Enforcement Section in the Land and Natural Resources Division at the Department of Justice. 8/ The person to call at the Department is the Assistant Chief in the Environmental Enforcement Section assigned to the Region. The Assistant Chief will then arrange, in a timely manner, for the matter to be handled by either an Environmental Enforcement Section attorney or a U.S. Attorney. The Region must send to the Environmental Enforcement Section, by Magnafax or other

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8/ This procedure is necessary to comply with internal Department of Justice delegations of authority. Referral to a local U.S. Attorney's office is not sufficient for CERCLA warrants. The Environmental Enforcement Section of the Department of Justice must approve all warrant applications. (See Memorandum from David T. Buente, Jr. to All Environmental Enforcement Attorneys, "Procedures for Authorizing Applications for Civil Search Warrants Under CERCLA" (4/3/87) attached).

expedited means, a draft warrant application and a short memorandum concisely stating why the warrant is needed.

Prepare Warrant Application. The warrant application must contain the following:

1) a statement of EPA's authority to inspect; (see § II, supra)

2) a clear identification of the name and location of the site and, if known, the name(s) of the owner and operator of the site;

3) a statement explaining the grounds for a finding of a reasonable basis for entry (i.e., a reasonable basis to believe that there may be a release or threatened release of a hazardous substance or pollutant or contaminant) and the purpose for entry (i.e., determining the need for response, or choosing or taking any response action, or otherwise enforcing CERCLA);

4) affidavits supporting the asserted reasonable basis for entry and describing any attempts to gain access on consent, if applicable; and

5) a specific description of the extent, nature, and timing of the inspection;

Following preparation of the warrant application, the Justice Department attorney will file the application with the local U.S. Magistrate.

EPA may ask the Justice Department attorney to seek the assistance of the United States Marshals Service in executing the warrant where EPA perceives a danger to the personnel executing the warrant or where there is the possibility that evidence will be destroyed.

2. Reasonable Basis for Entry

A warrant for access on a civil matter may be obtained upon a showing of a reasonable basis for entry. This reasonable basis may be established either by presenting specific evidence relating to the facility to be entered or by demonstrating that the entry is part of a neutral administrative inspection plan.

A specific evidence standard is incorporated in SARA as a condition on EPA's exercise of its access authority: EPA must have "a reasonable basis to believe there may be a release or

threat of a release of a hazardous substance or pollutant or contaminant." § 104(e)(1). SARA's express specific evidence standard is consistent with how courts have formulated the specific evidence test in the absence of statutory guidance. E.g., West Point-Pepperell, Inc. v. Donovan, 689 F. 2d 950, 958 (11th Cir. 1982) (there must be a "showing of specific evidence sufficient to support a reasonable suspicion of a violation").

In drafting a warrant application, conclusory allegations regarding the specific evidence standard under subsection 104(e) will not suffice. Courts generally have refused to approve warrants where the application contains mere boilerplate assertions of statutory violations. Warrant applications have been granted, on the other hand, where the application contained detailed attestations by government officials or third-party complaints which have some indicia of reliability. Ideally, EPA warrant applications should contain an affidavit of a person who has personally observed conditions which indicate that there may be a release or threat of a release of a hazardous substance. If they are available, sampling results, although not required, should also be attached. Warrant applications based on citizen, employee, or competitor complaints should include details that establish the complainant's credibility. 9/

C. Court Orders

The provisions in CERCLA authorizing EPA access may be enforced by court order. To obtain a court order for entry, the Region should follow the normal referral process. If only access is required, the referral package can obviously be much abbreviated. If timing is critical, EPA HQ will move expeditiously and will refer the case orally if necessary. The Regions, however, should attempt to anticipate the sites at which access may prove problematic and should allow sufficient lead time for the referral process and the operation of the courts. The Regions should also not enter lengthy negotiations with landowners over access. EPA and DOJ are prepared to litigate aggressively to establish EPA's right of access.

9/ If information gathered in a civil investigation suggests that a criminal violation may have occurred, EPA personnel should consult the guidance on parallel proceedings. (Memorandum from Courtney Price to Assistant Administrators et al., "Policy and Procedures on Parallel Proceedings at the Environmental Protection Agency" (1/23/84)). Use of CERCLA's information-gathering authority in criminal investigations is addressed in separate guidance. (Memorandum from Courtney M. Price to Assistant Administrators et al., "The Use of Administrative Discovery Devices in the Development of Cases Assigned to the Office of Criminal Investigations" (2/16/84)).

Prior to seeking a court order, EPA should request access, generally in writing, and assemble the record related to access. The showing necessary to obtain a court order is the same as for obtaining a warrant: EPA must show a reasonable basis to believe that there may be a release or a threat of a release of a hazardous substance or pollutant or contaminant. An EPA finding on whether there is reason to believe a release has occurred or is about to occur must be reviewed on the arbitrary and capricious standard. § 104(e)(5) (B)(i). If the matter is not already in court, EPA must file a complaint seeking injunctive and declaratory relief. Simultaneous to filing the complaint, EPA may, if necessary, file a motion, supported by affidavits documenting the release or threatened release, requesting an immediate order in aid of access. If the matter is already in litigation, EPA may proceed by motion to seek an order granting access. 10/

In a memorandum supporting EPA's request for relief it should be made clear that by invoking judicial process, EPA is not inviting judicial review of its decision to undertake response. action or of any administrative determinations with regard to the response action. Section 113(h) of SARA bars judicial review of removal or remedial action except in five enumerated circumstances. A judicial action to compel access is not one of the exceptions. Statements on the floor of the House and the Senate confirm that EPA enforcement of its access authority does not provide an opportunity for judicial review of response decisions. Senator Thurmond, chairman of the Judiciary Committee, remarked that when EPA requests a court to compel access "there is no jurisdiction at that time to review any response action . . .

10/ Parenthetically, it should be noted that the broad equitable power granted to courts in Section 106 can also be relied on to obtain a court order. An additional source of authority for courts in this regard is the All Writs Act, 28 U.S.C. § 1651. The Act authorizes federal courts to "issue all writs necessary or appropriate in aid of their respective jurisdictions . . . ." 28 U.S.C. § 1651. This authority "extends under appropriate circumstances, to persons who, though not parties to the original action or engaged in wrongdoing are in a position to frustrate the implementation of a court order . . . ." United States v. New York Telephone Co., 434 U.S. 159, 174 (1977). Thus, the All Writs Act may prove useful as a means of compelling persons not a party to a consent decree to cooperate with EPA and other settling parties in execution of the decree. The use of the All Writs Act, however, may be limited in light of the Supreme Court's interpretation of the Act in Pennsylvania Bureau of Correction v. United States Marshal Service, 88 L. Ed. 2d 189 (1985).

[T]he court may only review whether the Agency's conclusion that there is a release or threatened release of hazardous substances is arbitrary or capricious." 132 Cong. Rec. S14929 (October 3, 1986) (Statement of Sen. Thurmond); 132 Cong. Rec. 119582 (October 8, 1986) (Statement of Rep. Glickman); see United States v. Standard Equipment, Inc., No. C83-252M (W.D. Wash. Nov. 3, 1986).

D. Administrative Orders

If a siteowner denies an EPA request for access, EPA may issue an adminstrative order directing compliance with the request. § 104(e)(5)(A). Each administrative order must include a finding by the Regional Administrator that there exists a reasonable belief that there may be a release or threat of release of a hazardous substance and a description of the purpose for the entry and of the activities to be conducted and their probable duration. The order should indicate the nature of the prior request for access. Further, the order should advise the respondent that the administrative record upon which the order was issued is available for review and that an EPA officer or employee will be available to confer with respondent prior to the effective date of the order. The length of the time period during which such a conferences may be requested should be reasonable under the circumstances. In deciding what is a reasonable time period, consideration should be given to the interference access will cause with onsite operations, the threat to human health and the environment posed by the site, and the extent of prior contacts with the respondent. The order should advise the respondent that penalties of up to $25,000 per day may be assessed by a court against any party who unreasonably fails to comply with an order. § 104(e)(5). Following the time period for the conference and any conference, the issuing official should send a document to the respondent summarizing any conference, EPA's resolution of any objections, and stating the effective date of the order.

If, following issuance of an administrative order, the siteowner continues to refuse access to EPA, the order may be enforced in federal court. EPA should not use self-help to execute orders. Courts are required to enforce administrative orders where there is a reasonable basis to believe that there may be a release or threat of a release of a hazardous substance. EPA's determination in this regard must be upheld unless it is arbitrary and capricious. § 104(e)(5)(B)(i). EPA will seek penalties from those parties who unreasonably fail to comply with orders.

All administrative orders for access must be concurred on by the Office of Enforcement and Compliance Monitoring prior to issuance.

DISCLAIMER

The policies and procedures established in this document are intended solely for the guidance of government personnel. They are not intended, and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. The Agency reserves the right to act at variance with these policies and procedures and to change them at any time without public notice.

Attachments

CONSENT FOR ACCESS TO PROPERTY

Name: _____

Address of Property: _____

_____

I consent to officers, employees, and authorized representatives of the United States Environmental Protection Agency (EPA) entering and having continued access to my property for the following purposes:

[the taking of such soil, water, and air samples as may be determined to be necessary;]

[the sampling of any solids or liquids stored or disposed of on site;]

[the drilling of holes and installation of monitoring wells for subsurface investigation;]

[other actions related to the investigation of surface or subsurface contamination;]

[the taking of a response action including . . . .]

I realize that these actions by EPA are undertaken pursuant to its response and enforcement responsibilities under the Comprehensive Environmental Response, Compensation and Liability Act (Superfund), 42 U.S.C. § 9601 et seq.

This written permission is given by me voluntarily with knowlege of my right to refuse and without threats or promises of any kind.

_____ _____

Date Signature

Interim Guidance on Notice Letters, Negotiations, and Information Exchange

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

9834.10

OCT 19 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Transmittal of Notice Letter Guidance

FROM: Gene Lucero, Director
Office of Waste Programs Enforcement

TO: Addressees

Attached is the "Interim Guidance on Notice Letters, Negotiations, and Information Exchange." Note that Appendix C containing model notice letters is not included in this package, but will be distributed under separate cover in the next couple of weeks.

Attachment

Addressees:

Directors, Waste Management Divisions, Regions I,IV,V,VII,VIII
Director, Emergency and Remedial Response Division, Region II
Director, Hazardous Waste Management Division, Region III
Directors, Air and Waste Management Division, Regions II,VI
Director, Toxics and Waste Management Division, Region IX
Director, Hazardous Waste Division, Region X

9834.10

INTERIM GUIDANCE ON NOTICE LETTERS, NEGOTIATIONS, AND INFORMATION EXCHANGE

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

983410

OCT 19 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Interim Guidance on Notice Letters, Negotiations, and Information Exchange

FROM: J. Winston Porter
Assistant Administrator

TO: Regional Administrators

I. INTRODUCTION

The Superfund Amendments and Reauthorization Act of 1986 (SARA), which amends the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), maintains the importance of a strong Superfund enforcement program.[1] In particular, SARA emphasizes the importance of entering into negotiations and reaching settlements with potentially responsible parties (PRPs) to allow PRPs to conduct or finance response actions. SARA generally codified the Agency's Interim CERCLA Settlement Policy but also established some new authorities and procedures that were designed to facilitate settlements.

A fundamental goal of the CERCLA enforcement program is to facilitate voluntary settlements. EPA believes that such settlements are most likely to occur when EPA interacts frequently with PRPs. Frequent interaction is important because it provides the opportunity to share information about a site and may reduce delays in conducting response actions caused by the lack of communication. Important mechanisms for promoting interaction and facilitating communication between EPA and PRPs include issuing notice letters, entering into negotiations, and exchanging information with PRPs.

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[1] CERCLA of 1980 as amended by SARA of 1986 is referred to in this guidance as CERCLA.

This guidance replaces the October 12, 1984 guidance on "Procedures for Issuing Notice Letters" and the October 9, 1985 guidance on "Timely Initiation of Responsible Party Searches, Issuance of Notice Letters, and Release of Information." [2] Although certain procedures and the timing of various activities have been modified, this guidance retains many fundamental aspects of the October 12, 1984 and October 9, 1985 guidances. In particular, this guidance re-emphasizes the importance of timely issuance of notice letters and the exchange of information between EPA and PRPs. In addition, this guidance incorporates a moratorium and "formal" period of negotiation (referred to as a negotiation moratorium) into the settlement process. EPA's commitment to carrying out these activities is crucial for supporting our fundamental goal of facilitating negotiated settlements.

II. PURPOSE AND SCOPE OF GUIDANCE

The purpose of this guidance is to assist the Regions in establishing procedures for the issuance of notice letters to PRPs, for the conduct of negotiations between EPA and PRPs, and for the exchange of information between EPA and PRPs.

This guidance addresses the use of both "general" and "special" notice letters for removal and remedial actions. Special notice letters differ from general notice letters because special notices trigger the negotiation moratorium. The negotiation moratorium is the period of time where a moratorium is imposed on certain EPA actions and a period of "formal" negotiations is established between EPA and PRPs.

Use of both general and special notice letters are discretionary. However, the Regions are expected to issue general and special notices for the vast majority of remedial actions. Such notice letters will be issued for remedial investigations/feasibility studies (RI/FSs) and remedial designs/remedial actions (RD/RAs). Although it is generally appropriate to issue a "removal notice" for all removal actions, the Regions are not expected to invoke the §122(e) special notice procedures for most removals.

This guidance also addresses the timing, duration, and conclusion of the negotiation moratorium. Finally, this guidance discusses the process of information exchange between EPA and PRPs, including requests for and releases of site-specific information.

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[2] These guidances were issued under OSWER Directive Numbers 9834.1 and 9834.2, respectively.

III. STATUTORY AUTHORITY

A. SETTLEMENTS

Sections 104(a), 122(a), and 122(e)(6) authorize settlements and establish certain conditions for allowing PRPs to conduct or finance response actions. Section 104(a) authorizes EPA to enter into an agreement with PRPs to allow PRPs to conduct or finance response actions in accordance with §122 if EPA determines that the PRPs will conduct the response action properly and promptly. Under §104(a), PRPs cannot conduct the RI/FS unless EPA determines that the PRP is qualified to perform the RI/FS, EPA contracts with or arranges for a qualified person other than the PRP to assist EPA in overseeing and reviewing the RI/FS, and the PRP agrees to reimburse the Fund for the costs EPA incurs in overseeing and reviewing the PRP's RI/FS.

Section 122(a) similarly authorizes EPA to enter into agreements with PRPs to perform response actions if EPA determines the action will be conducted properly. Section 122(a) also provides for EPA, when practicable and in the public interest, to facilitate settlements with PRPs to expedite effective remedial actions and to minimize litigation.

Section 122(e)(6) provides that no PRP may undertake any remedial action at a facility where EPA or a PRP pursuant to an administrative order or consent decree under CERCLA has initiated an RI/FS unless the remedial action has been authorized by EPA.

B. SPECIAL NOTICE PROCEDURES AND INFORMATION RELEASE

Sections 122(e) and 122(a) contain provisions relating to the special notice procedures and the release of information to PRPs. Section 122(e) provides for EPA to utilize the special notice procedures if EPA determines that a period of negotiation would facilitate an agreement with PRPs and would expedite remedial actions. Section 122(e) also provides for EPA to release certain information to PRPs. Such information includes, to the extent available, the names and addresses of other PRPs, the volume and nature of substances contributed by each PRP, and a ranking by volume of the substances at the facility.[3] In

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[3] Congress recognized that there may be limitations to the availability of information at early phases of the response action. In particular, Congress noted that the RI/FS special notice need not be accompanied by information on volume and nature of waste and ranking if this information is not available at the start of the RI/FS. A separate notice and information release should be provided for private parties who actually conduct the remedial action and information on volume, nature and ranking of wastes should be made available routinely at this

addition, this section provides for EPA to make such information available in advance of the special notice upon request by a PRP in accordance with procedures provided by EPA.

Issuance of a special notice triggers a moratorium on the commencement of certain actions by EPA under §104 or §106. The purpose of the moratorium is to provide for a period of negotiation between EPA and PRPs. The moratorium prohibits EPA from commencing any response action under §104(a), and an RI/FS under §104(b), or an action under §106 for 60 days after receipt of the notice. If EPA determines that a "good faith offer" has been submitted by the PRP within 60 days after receipt of the special notice, EPA shall not commence an action under §104(a) or take any action against any person under §106 for an additional 60 days or commence an RI/FS under §104(b) for an additional 30 days.

Under §122(e)(2)(a), EPA may commence any additional other studies or investigations authorized under §104(b), including the remedial design, during the negotiation period. Under §122(e)(2)(C), if an additional PRP is identified during the negotiation period or after an agreement has been entered into, EPA may bring the additional party into the negotiation or may enter into a separate agreement with the PRP. Under §122(e)(5), EPA is not prohibited from undertaking a response or enforcement action during the negotiation period when there is a significant threat to public health or the environment.

Section 122(a) provides that if EPA decides not to use the special notice procedures established under §122(e), EPA is required to notify PRPs in writing of this decision along with an explanation why it is inappropriate to use such procedures. The decision by EPA to use or not to use the special notice procedures is not subject to judicial review.

IV. INFORMATION EXCHANGE

The exchange of information between EPA and PRPs is crucial for facilitating settlements. Information exchange should be an ongoing process of communication. EPA uses information obtained from PRPs to determine potential liability, to determine the need for response, and to support the selection of the remedy. PRPs use information obtained from EPA to organize among themselves and to develop a "good faith offer" to conduct or finance response actions.

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time. See the Conference Report on the Superfund Amendments and Reauthorization Act of 1986, 99 Cong., 2d Sess. Report 99-962 pp. 253 (1986).

A. INFORMATION REQUESTS

EPA may request information from PRPs about various activities and conditions under §104(e) of CERCLA and under §3007(a) of the Resource Conservation and Recovery Act (RCRA). In addition, EPA may issue administrative subpoenas under §122(e)(3)(b) of CERCLA. Information commonly requested includes details concerning waste operations and waste management practices, the type and amount of substances contributed by each PRP, as well as the name of other PRPs that contributed substances to the site.

Information requests should be issued as early as practicable and may be issued as a separate letter during the PRP search process, as part of the general notice letter, or through an administrative subpoena. A detailed discussion about the use of information request letters and administrative subpoenas is contained in the forthcoming "Guidance on Use and Enforcement of Information Requests and Administrative Subpoenas under CERCLA §§104(e) and 122(e)."

The Regions have the discretion to decide whether to issue an information request as a separate letter during the PRP search or as a component of a general notice letter. Issuing a separate information request letter in advance of the general notice may be advantageous in situations where information from PRPs is needed to determine whether it is appropriate to issue a notice letter to such parties.

Information requests should be developed in accordance with the forthcoming guidance on information requests and administrative subpoenas as mentioned above. An information request should also indicate that EPA plans to vigorously enforce information requests with the new enforcement tools authorized under SARA which include issuing orders under §104(e)(5). Finally, the information request should indicate that it is the PRPs responsibility to inform EPA whether information they provide to EPA is confidential and subject to protection under §104(e) of CERCLA.

B. INFORMATION RELEASE

It is important to gather and release site-specific information to PRPs as soon as reasonably practicable. Gathering and releasing such information early in the process will not only expedite response and enforcement activities but will help PRPs organize and negotiate among themselves as well.

As indicated, §122(e)(1) provides for the release of certain information to PRPs to the extent such information is available. Such information includes the names and addresses of other PRPs, the volume and nature of substances contributed by each PRP, and

a ranking by volume of the substances at the facility. This information is to be provided to PRPs in advance of the special notice in accordance with procedures developed by EPA.

Congress recognized the limitations to EPA's ability to make certain information available to PRPs, especially early in the response process. Therefore, this information can be released only to the extent such information is available. If the Regions have information on volume, the Regions should develop volumetric rankings and should make such information available to PRPs as soon as practicable. However, due to their preliminary and summary nature, EPA will not expend resources to explain or defend any list or ranking. Lists or rankings released to PRPs and others should always contain appropriate disclaimers.

The Regions are encouraged to release information to PRPs as soon as reasonably possible. The Regions may respond directly to individual PRP requests for information, may use the notice letters as vehicles to release such information to PRPs, or may establish alternative mechanisms in some situations as discussed below. The Regions are strongly encouraged to use the notice letters to release site-specific information. In particular, use of the general notice may provide a convenient opportunity to release information in advance of the special notice pursuant to the statutory provision that EPA release such information in advance of the special notice in accordance with procedures developed by EPA.

Although it is generally preferable to release information to individual PRPs through notice letters, alternative mechanisms may be used in unusual circumstances. For example, in instances where there are many PRPs and/or where there is a substantial amount of information to be released, the Regions may consider making the information available through a central mechanism (e.g. through a PRP steering committee if one has been formed and if the committee has agreed to be a clearinghouse for distributing information to other PRPs). An alternative would be to indicate in the notice letter that the Region has site-specific information that will be made available to the PRPs in a manner specified in the letter.

V. NOTICE LETTERS AND NEGOTIATION MORATORIUM FOR RI/FS AND RD/RA

This guidance creates a systematic process for issuing three separate notice letters for remedial actions. The three notice letters are 1) the general notice, 2) the RI/FS special notice, and 3) the RD/RA special notice. Even though the RI/FS and RD/RA special notice letters are separate letters, they are discussed in the same section below since the content of these letters is basically the same. In instances where the content of the RI/FS and RD/RA special notices differ, separate sections are presented.

Also, this guidance is written with the assumption that each notice letter will be issued in sequence. Consequently, the guidance has been structured so that certain information provided or requested in one letter is not repeated in a subsequent letter. The content of actual letters may, however, need to be modified in situations where this process is not followed.

For example, there may be a situation where site activities are already underway and where the Region is ready to issue the RI/FS special notice but has not issued a general notice. In this instance, it would not be necessary to wait to send the special notice until after a general notice is issued. However, it may be appropriate to include certain aspects of the general notice into the special notice.

A. PURPOSE OF NOTICE LETTERS

The purpose of the general notice is to inform PRPs of their potential liability for future response costs, to begin or continue the process of information exchange, and to initiate the process of "informal" negotiations. In addition, the general notice informs PRPs about the possible use of the §122(e) special notice procedures and the subsequent moratorium and "formal" negotiation period.

The purpose of the special notice is similar to the general notice, except that the special notice is also used to invoke the statutory moratorium on certain EPA actions and to initiate the process of "formal" negotiations. Although the general notice does not trigger a moratorium on any EPA action and does not invoke a "formal" period of negotiation, the general notice is expected to initiate a dialogue between EPA and PRPs. Issuance of a general notice should be viewed as a mechanism for initiating negotiations whereas issuance of a special notice should be viewed as a mechanism for concluding negotiations.

The term "informal" negotiations does not mean that such negotiations are not serious efforts to reach a settlement. Rather "informal" negotiations refers to any negotiations that are not conducted as part of the negotiation moratorium triggered by issuance of a special notice under §122(a). The terms "informal" and "formal" negotiations are used to draw a distinction between negotiations which are and are not covered by the §122(e) moratorium.

B. GENERAL NOTICE LETTER

Agency notification procedures should provide PRPs with sufficient time to organize and develop a reasonable offer to conduct or finance the response action. Toward this end, the

Regions should contact PRPs prior to issuing a §122(e) special notice by issuing a general notice letter.

1. Whether to Issue General Notice

A general notice letter should be issued at the vast majority of sites that are proposed for or listed on the National Priorities List (NPL) where negotiations for the RI/FS and RD/RA have not yet been initiated. Circumstances where it may not be appropriate to issue the general notice include sites where a notice pursuant to previous guidance was issued prior to the reauthorization of CERCLA or where the Region is ready to issue a special notice at the site. These exceptions are important for minimizing any possible disruption to ongoing activities.

2. Timing of General Notice

The general notice letter should be sent to PRPs as early in the process as possible, preferably once the site has been proposed for inclusion on the NPL. Early receipt of the general notice will ensure that PRPs have adequate knowledge of their potential liability as well as a realistic opportunity to participate in settlement negotiations. When a separate information request letter has been sent to PRPs prior to the general notice, the information request should be sent as early as possible to avoid any delay in issuing the general notice.

3. Recipients of General Notice

General notice letters should be sent to all parties where there is sufficient evidence to make a preliminary determination of potential liability under §107 of CERCLA. If there is doubt about whether available information supports issuance of the general notice, separate information request letters may be sent to such parties prior to issuing the notice. If a Federal agency has been identified as a generator at a facility not owned/operated by the Federal agency, such agency should be routinely notified like other PRPs.

If additional PRPs are identified after the general notice but before the RI/FS special notice is issued, the Regions should provide a general notice to those additional PRPs. If additional PRPs are identified after general and special notices are issued, the additional PRPs need not receive a general notice before receiving the appropriate special notice. However, relevant aspects of the general notice should be incorporated into the special notice.

Copies of the general notice should be provided to the Regional administrative record coordinator, the appropriate State

representative, the State or Federal trustee if a trustee for natural resources has been designated, and to EPA headquarters at the same time notices are sent to PRPs. The copies of notices to headquarters should be sent to the Information Management Section within the Program Management and Support Office of the Office of Waste Programs Enforcement (OWPE).

Providing copies to the administrative record coordinator is important for ensuring that the notice is placed in the administrative record.[4] Providing copies to the State representative and the State or Federal trustee is important for ensuring that States are appropriately informed about possible future negotiations.[5] Providing copies to OWPE is essential for permitting entry into the Superfund Enforcement Tracking System (SETS). Entry into sets will facilitate our efforts to track site activities and to respond to Congressional and other inquiries. Direct Regional input of data into SETS on notice letter recipients is planned for FY 1988.

It is not necessary to provide copies of each general notice to the administrative record coordinator, State representative, State or Federal trustee, or headquarters in instances where identical notices are provided to multiple PRPs. Where there are multiple PRPs at a site, a copy of one general notice with a list of other parties who have received the letter would suffice.

4. Contents of General Notice

The general notice letter should contain the following components: a) a notification of potential liability for response costs, b) a discussion about future notices and the possible future use of special notice procedures, c) a general discussion about site response activities, d) a request for information about the site (if appropriate), e) the release of certain site-specific information (where available), f) a discussion about the merits of forming a PRP steering committee, g) a notice regarding the development of an administrative record, and h) a deadline for response to the letter and information on the EPA representative to contact.

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[4] A discussion about placing notice letters in the administrative record is covered in the forthcoming "Guidance on the Administrative Record for Selecting a Response Action Under CERCLA" and in the preamble to the forthcoming revisions to the National Contingency Plan.

[5] State participation in negotiations is covered in the forthcoming "Interim Guidance on EPA-State Relations in CERCLA Enforcement."

a. Potential liability: The letter should inform parties that they are potentially liable for response costs under §107 of CERCLA, including the costs of conducting the RI/FS and RD/RA. The letter should define the scope of potential liability and should briefly explain why the parties have been identified as PRPs.

b. Future notice under §122(a) or §122(e): The letter should indicate that EPA will notify the party at an appropriate point in the future. The letter should specify that this notice will either be a §122(a) notice or a §122(e) special notice and should explain what these notices are.

The letter should indicate that the §122(a) notice is a notice which informs parties that EPA will not use the §122(e) special notice procedures. The letter should indicate that the notice will provide an explanation for the decision not to use the special notice procedures.

The letter should also indicate that a §122(e) special notice will invoke the negotiation moratorium. The letter should make clear that issuance of a §122(e) special notice letter is discretionary and may be used if EPA determines that use of such procedures would facilitate an agreement and expedite remedial action. The letter should also explain the purpose of the special notice and the subsequent negotiation moratorium. Informing PRPs about the special notice procedures and the negotiation moratorium will alert PRPs to possible future negotiations and increase their awareness of their opportunities for participation in such negotiations.

c. Site response activities: The letter should generally discuss the activities EPA plans to undertake at the site. Where appropriate, such activities should include scheduled start or completion dates for the RI/FS or RD/RA. Instances where it may not be appropriate to provide start or completion dates include situations where the general notice is issued very early in the process and where specific dates have not yet been set, or where it is expected that target dates are likely to change significantly.

d. Information request: The letter should request information on substances sent to or present at the site and the names of other PRPs pursuant to §104(e) of CERCLA and/or §3007(a) of RCRA if a separate information request has not already been issued. The content of the information request should be consistent with the forthcoming "Guidance on Use and Enforcement of Information Requests and Administrative Subpoenas Under CERCLA §104(e) and §122(e)."

e. Information release: At a minimum, the letter should release the names and addresses of other PRPs who have received the general notice letter. In addition, to the extent such information is available, the letter should include the volume and nature of substances contributed by each PRP and a ranking by volume of the substances at the facility if such information has not been previously released.

f. PRP steering committee: The letter should request that the PRPs identify a member of their organization who will represent their interests. In addition, the letter should recommend that PRPs form a steering committee to represent the group's interests in possible future negotiations. The letter should indicate that establishing a steering committee is important for facilitating negotiations with EPA.

g. Administrative record: The letter should be used as a vehicle for informing PRPs of the availability of an administrative record that will contain documents which form the basis for the Agency's decision on the selection of remedy. The letter should indicate that the record will be open to the public for inspection and comment. The letter should also provide information regarding the opening of the record and where it will be located.

h. PRP response and EPA contact: The letter should encourage PRPs to notify EPA by a specified date of their interest to participate in future negotiations. The letter should indicate that PRPs may respond as a group through a steering committee if one has been formed. The letter should also provide a cut off date for voluntary compliance with information requests (if a request for information is contained in the general notice). An appropriate time frame for the PRP response to an information request is generally thirty days from receipt of the letter. Finally, the letter should provide the name, phone number, and address of the EPA representative to contact.

C. RI/FS and RD/RA SPECIAL NOTICE LETTERS

Prior to EPA's conduct of the RI/FS and RD/RA, the Regions should either issue the special notice to PRPs or provide PRPs with an explanation why it was not appropriate to use the special notice procedures. Issuance of the special notice triggers a moratorium on EPA's conduct of the RI/FS and remedial action. While the statute does not impose a moratorium on EPA's conduct of the remedial design, the Agency will not generally conduct such activities during the moratorium. The purpose of the moratorium is to provide for a formal period of negotiation between EPA and PRPs where the PRPs will be encouraged to conduct or finance response activities.

The negotiation moratorium may last a total of 90 days for the RI/FS and 120 days for the RD/RA if EPA receives a "good faith offer" from PRPs within the first 60 days of the moratorium. The negotiation moratorium would conclude after 60 days if the PRPs do not provide EPA with a "good faith offer."

The initial 60 day moratorium begins on the date the PRPs receive the special notice via certified mail. In instances where there is more than one PRP and PRPs are likely to receive the special notice on different days, the date the moratorium begins should be seven days from the date the letters are mailed to the PRPs. In either case, the special notice must make clear when the negotiation moratorium begins and ends.

1. Whether to Issue RI/FS and RD/RA Special Notice

EPA has the discretion to use the special notice procedures when EPA determines that a period of negotiation would facilitate an agreement with PRPs and would expedite remedial actions. The Agency believes entering into such negotiations would generally facilitate settlements and plans to utilize the RI/FS and RD/RA special notice procedures in the vast majority of cases.

There are, however, some circumstances where it would generally not be appropriate to use such procedures. Such circumstances include 1) where past dealings with the PRPs strongly indicate they are unlikely to negotiate a settlement, 2) where EPA believes the PRPs have not been negotiating in good faith, 3) where no PRPs have been identified at the conclusion of the PRP search, 4) where PRPs lack the resources to conduct response activities, 5) where there are ongoing negotiations, or 6) where notice letters were already sent prior to the reauthorization of CERCLA and onging negotiations would not benefit by issuance of a special notice.

Special notices may be issued for operable units of remedial actions. The test for determining whether to issue a special notice for an operable unit is generally the same as for full-scale remedial actions. The general expectation is that separate special notices will be issued for each separate operable unit as long as issuing the notice would facilitate an agreement and would expedite the remedial action. However, special notices may also be issued for only major operable units or may cover a series of operable units if appropriate under the circumstances at the site.

For example, if several operable units will be conducted at a site as relatively separate and distinct response actions, it may be appropriate to consider using separate special notices which would trigger separate negotiation moratoriums. If a series of operable units will make up a remedial action it may be

appropriate to issue the special notice to cover only the major operable unit(s) or to cover several operable units.

2. Notifying PRPs When Not Appropriate to Issue RI/FS and RD/RA Special Notice

In instances where EPA decides it is inappropriate to issue the special notice, §122(a) provides for EPA to notify PRPs in writing of that decision. The notice must indicate the reasons why the Region determined that issuing the special notice and entering into "formal" negotiations was not appropriate. The notice should be provided to all PRPs that have been identified to date as well as to the Regional administrative record coordinator for placement in the record. Such notices should be provided as soon as practicable. In instances where the RI/FS or RD/RA have not yet been initiated, the notice should be sent prior to the initiation of such activities if possible.

In addition, the §122(a) notice should be used as a vehicle for informing PRPs that the Agency will establish or has established an administrative record containing technical documents supporting the Agency's decision on the selection of remedy. The notice should indicate that the record is open for public inspection and comment and should specify where the record will be or has been located.

3. DOJ Role in RI/FS and RD/RA Negotiations

The Regions should notify the Chief of the Environmental Enforcement Section in the Department of Justice (DOJ) prior to issuing special notice letters where settlement by a consent decree is contemplated. A copy of this memorandum should also be provided to the Office of Waste Programs Enforcement and the Office of Enforcement and Compliance Monitoring in Headquarters.

The memorandum to DOJ should indicate when the Region intends to issue the special notice. Because most RI/FS negotiations involve consent orders, notice to DOJ on the RI/FS is not ordinarily necessary. However, where a site is in litigation or where settlement by consent decree is expected, DOJ should be notified at least 30 days prior to issuing the RI/FS special notice. In addition, where the resolution of the matter by an administrative order is expected to involve a compromise of past or future response costs and the total response costs will exceed $500,000, DOJ is to be notified. DOJ's role will be to review the compromise of the claim pursuant to section 122(h)(1) but not to review the administrative order for the RI/FS. For RD/RA negotiations, the notice should be sent to DOJ at least 60 days prior to issuing the RD/RA special notice. The memorandum should also identify the EPA Regional representative DOJ should contact.

In addition, the Regions should consult with the Chief of the Environmental Enforcement Section prior to sending a copy of any draft consent decree or any outline of a draft consent decree to PRPs. The Regions are encouraged to include a draft consent decree with the RD/RA special notice or soon thereafter as discussed below.

4. Timing of RI/FS Special Notice

It is important that PRPs receive the RI/FS special notice letter as soon as practicable. Of greater importance, the letter must be sent sufficiently in advance of obligations for the RI/FS so that negotiations do not delay the initiation of the RI/FS by the Fund in the event the negotiations do not result in an agreement providing for the PRPs to conduct or finance the RI/FS. Timely receipt of the special notice will have a significant effect on the PRPs ability for meaningful participation in formal negotiations.

The RI/FS special notice letter should be sent to PRPs no later than 90 days prior to the scheduled date for initiating the RI/FS. The scheduled date for initiating the RI/FS refers to the date funds will be obligated to commence response activities. A minimum of 90 days is important for ensuring that the negotiation moratorium does not delay initiation of the RI/FS in the event negotiations do not result in a settlement. The time for service by mail should be taken into account.

5. Timing of RD/RA Special Notice

The timing of the RD/RA special notice letter will have a significant impact on both the success of negotiations and on EPA's ability to move forward with implementing a remedy without delay. As indicated earlier, "formal" negotiations pursuant to special notice are not the sole vehicle for reaching settlements. "Informal" negotiations must occur throughout the process and in advance of the special notice. To assure that "formal" negotiations are productive, EPA must initiate PRP search and information exchange activities as well as "informal" negotiations as early as possible.

The primary purpose of the special notice procedures is to facilitate settlements through negotiation. A primary concern in determining when to issue an RD/RA special notice is whether there is a likelihood that meaningful negotiations can be conducted at a given stage in the process. Another concern is that, to the extent practicable, the negotiations must be scheduled to minimize any delay in the remedial design and remedial action. A final concern is that negotiations be carried out in a way that does not undermine or have the appearance of undermining the public participation process.

This guidance establishes an approach which identifies when the Regions must generally issue the RD/RA special notice letter. The Regions may, however, adopt an alternative approach under appropriate circumstances. Appendix A contains illustrations of the three approaches discussed below. [6]

a. General Approach: Issue special notice when release draft FS and proposed plan for public comment. The Regions generally must issue the RD/RA special notice when the draft feasibility study (FS) and proposed plan [7] are released to the public for comment. As shown in Appendix A, issuance of the special notice with the release of the draft FS and proposed plan triggers the initial 60 day negotiation moratorium. The initial 60 day negotiation moratorium begins at the start of the 30 day public comment period and, in conjunction with the first 30 days of the 60 day extended negotiation moratorium, is concurrent with the Record of Decision (ROD) review and approval process. The remaining 30 days of the extended negotiation moratorium is concurrent with the initial phases of the remedial design. EPA's ability to sign the ROD is not affected by the duration of the negotiation moratorium. The ROD may be signed at any point after the close of the public comment period and the preparation of the responsiveness summary for the public.

In most cases, commencing formal negotiations at the same time that the draft FS and proposed plan are released will properly balance the considerations stated earlier relating to EPA's ability to conduct meaningful negotiations, to minimize delay in implementing the RD/RA, and to maintain the integrity of the public participation process. Under this approach, formal opportunity for PRP involvement would begin at an early yet concrete stage in the process. Early participation may be especially advantageous in situations where PRPs have not been previously or substantially involved in RI/FS activities. In addition, PRPs and the public would have knowledge of the possible range of alternatives through the draft FS and proposed

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[6] The time periods depicted in the following discussion and illustrated in Appendix A reflect "best case" scenarios where various response and enforcement activities are expected to be carried out without delay. For example, the public comment period lasts 30 days and does not take into account a possible extension.

[7] The proposed plan refers to the public participation document developed pursuant to §117(a). This is a non-legal, non-technical document that describes the alternatives in the FS, and specifies and provides a brief analysis of EPA's preferred alternative. A more detailed discussion of the proposed plan will be contained in the forthcoming "Guidance on Documenting Decisions at Superfund Sites" (referred to as the ROD Guidance).

plan prior to "formal" negotiations. This information is important for assisting the PRPs in developing a meaningful "good faith offer" for conducting or financing the RD/RA.

b. Alternative Approach: Issue special notice prior to release of draft FS and proposed plan for public comment. Although the Regions generally will issue the RD/RA special notice when the draft FS and proposed plan are released to the public for comment, the Regions are encouraged to issue the special notice earlier in the process if this action would facilitate the prospects for reaching a settlement. If a Region chooses to follow this approach, the Region should include with the special notice a summary or fact sheet of the alternatives EPA has screened and the alternatives the Agency is currently considering. *

As shown in Appendix A, the RD/RA special notice may be issued prior to EPA's release of the draft FS and proposed plan. Issuance of the special notice triggers the initial 60 day negotiation moratorium. The initial negotiation moratorium is concurrent with the review and release of the draft FS and proposed plan. The initial negotiation moratorium is completed prior to the initiation of the public comment period. The public comment period is concurrent with the first 30 days of the extended negotiation moratorium. The remaining 30 days of the extended negotiation moratorium is concurrent with the ROD review and approval process. The ROD could be signed and the negotiation moratorium could be concluded at about the same time. EPA's ability to sign the ROD is not affected by the negotiation moratorium. The ROD may be signed at any point after the close of the public comment period and the preparation of the responsiveness summary for the public.

In many cases, providing special notice at this early stage may be inappropriate because too much uncertainty would exist about the remedy to allow for meaningful negotiations. However, under other circumstances it may be appropriate to issue the

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* Release of a summary or fact sheet on the alternatives that have been screened and the alternatives that are being considered is important for facilitating negotiations at this early stage in the remedial process. This information will be useful to PRPs in developing their "good faith offer" for conducting or financing a response action and will be important for informing PRPs about the alternatives the Agency is considering at the site. The Regions should include the summary of alternatives or fact sheet in the administrative record for each site.

special notice early in the process, especially in situations where there is a relatively small group of PRPs, it is clear what the remedy is likely to be, and the remedy is not likely to be controversial.

Where circumstances permit issuance of the special notice at this early stage, an advantage to this approach is that the ROD review and approval process and the negotiation moratorium could be concluded at about the same time. This would help assure that cleanup occurs as soon as possible whether through a negotiated settlement or Fund-financed action. In addition, there would be an early opportunity to inform PRPs of various remedial alternatives under consideration by EPA prior to EPA's identification of the proposed plan. Early participation may be advantageous where PRPs have not been previously or substantially involved in RI/FS activities.

c. Alternative Approach: Issue special notice when the ROD is signed. Although the Regions generally will issue the RD/RA special notice letter when the draft FS and proposed plan are released to the public for comment, there may be some limited circumstances where it is appropriate to issue the notice later in the process (i.e. when the ROD is signed). This approach may be followed, however, only where the Region can provide adequate justification and where the Region has obtained prior approval from Headquarters. Approval must be obtained in writing from the Directors of the Office of Waste Programs Enforcement and the Office of Emergency and Remedial Response.

As shown in Appendix A, under this approach the RD/RA special notice would not be issued until the ROD is signed. Thus, the entire 60 to 120 day negotiation moratorium would not occur until the remedial design phase.

An advantage to this approach is that since the ROD would be signed and the remedy would be selected at the start of the RD/RA negotiation moratorium, the PRPs would know precisely which remedy the "good faith offer" and the negotiations should focus on. In addition, since the negotiations would begin after the close of the public comment period, the PRPs and EPA would have the benefit of knowing the public comments.

The major disadvantage to this approach is that the negotiation moratorium would not occur until the end of the process (i.e. not until the beginning of the remedial design phase). Issuing the special notice at this point would create the greatest potential for a subsequent delay in implementing the remedy.

Instances where it may, however, be appropriate to issue the special notice later in the process (i.e. not until the ROD is signed) may be where more time is needed to conduct informal negotiations, where the site is particularly complex, or where there is an extraordinarily large number of PRPs (e.g. hundreds of PRPs). Another example may be where there is little expectation that a Fund-financed remedial action will occur in the near future at an enforcement-lead site. If Fund-financed activities are not expected to occur and a later moratorium would facilitate cleanup, it may be less important to initiate and conclude negotiations early in the process.

6. Recipients of RI/FS and RD/RA Special Notice

The RI/FS and RD/RA special notice letters should be sent to all parties where there is sufficient evidence to make a preliminary determination of potential liability under §107 of CERCLA. If there is doubt about whether available information supports issuance of the RI/FS and RD/RA special notices, separate information request letters may be sent to such parties prior to issuing such notice. If a Federal agency has been identified as a generator at a facility not owned/operated by the Federal agency, such agency should be routinely notified like other PRPs.

Section 122(e)(2)(C) authorizes EPA to bring additional parties into negotiations or to enter into a separate agreement with parties when additional PRPs are identified during the negotiation period or after an agreement has been entered into. The Regions may provide a special notice to additional parties if they are identified after issuance of the RI/FS special notice letter. However, issuance of a special notice to additional parties would not change the duration of the negotiation moratorium. The special notice may invite PRPs to participate in remaining negotiations, but would not extend the pre-existing negotiation moratorium.

Copies of the special notices should be provided to the Regional administrative record coordinator, the appropriate State representative, the State or Federal trustee if a trustee for natural resources has been designated, and to EPA headquarters at the same time notices are sent to PRPs. The copies of notices to headquarters should be sent to the Information Management Section within the Program Management and Support Office of the Office of Waste Programs Enforcement (OWPE).

Providing copies to the administrative record coordinator is important for ensuring that the notice to be placed in the record. Providing copies to the State representative and the State or Federal trustee is important for ensuring that States are appropriately informed about possible future negotiations. Providing copies to OWPE is essential for permitting entry into

the Superfund Enforcement Tracking System (SETS). Entry into sets will facilitate our efforts to track site activities and to respond to Congressional and other inquiries. Direct Regional input of data into SETS on notice letter recipients is planned for FY 1988.

It is not necessary to provide copies of each special notice to the administrative record coordinator, State representative, State or Federal trustee, or headquarters in instances where identical notices are provided to multiple PRPs. Where there are multiple PRPs at a site, a copy of one special notice with a list of other parties who have received the letter would suffice.

7. Contents of RI/FS and RD/RA Special Notice

The RI/FS and RD/RA special notice letters should contain the following components: a) a notification of potential liability, b) a discussion about the special notice and subsequent negotiation moratorium, c) a discussion about the response activities to be conducted, d) a copy of a statement of work or workplan and a draft administrative order on consent for the RI/FS, e) a copy of a draft consent decree for the RD/RA (if possible), f) a discussion about what constitutes a "good faith offer" for the RI/FS, g) a discussion about what constitutes a "good faith offer" for the RD/RA, h) a release of certain site-specific information (where available and appropriate), i) a demand for payment of EPA costs incurred to date, j) a notification about the administrative record, and k) a deadline for response to the letter and the name of the EPA representative to contact.

a. Potential liability: The letter should specify that PRPs are potentially liable for the costs of conducting the RI/FS or the RD/RA. A detailed discussion about potential liability is not necessary particularly if the RI/FS or RD/RA special notice references the general notice.

b. Special notice and formal negotiations: The letter should discuss the purpose of the special notice and the subsequent negotiation moratorium. The level of detail will depend upon whether the PRP has received the general notice and whether the general notice provided an adequate discussion. At a minimum, the letter should make clear that EPA is inviting PRPs to participate in "formal" negotiations for PRP conduct of the RI/FS or RD/RA and that this letter automatically triggers the formal negotiation period. In addition, it is important that the special notice indicate the date the negotiation moratorium will conclude in the absence of and in the event of a "good faith offer." Finally, the letter should explain that a consent order or consent decree should be finalized by the end of the moratorium.

c. Response actions to be conducted: The letter should identify the response activities EPA plans to conduct at the site and provide scheduled dates for initiating such activities if appropriate.

d. Statement of work or workplan and draft administrative order on consent for RI/FS special notice: The letter should provide a statement of work or workplan and draft administrative order (AO) on consent. Such information is crucial to PRPs in their development of a "good faith offer" to EPA for conducting or financing the RI/FS and for ultimately facilitating settlements. The Regions are encouraged to provide the draft AO on consent with the notice letter if practicable. At a minimum, the letter should contain a copy of the statement of work with the expectation that the draft AO will follow as soon as practicable.

e. Draft consent decree for RD/RA special notice: The letter should contain a copy of the draft consent decree if possible. It is important that PRPs have the draft consent decree at the start of negotiations or soon thereafter since the decree contains important information which will assist PRPs in developing their "good faith offer" to EPA.

f. "Good faith offer" for RI/FS: The letter should indicate that a "good faith offer" is a written proposal which demonstrates the PRP's qualifications and willingness to conduct or finance the RI/FS. A "good faith offer" for the RI/FS should include the following:

- a statement of the PRPs willingness to conduct or finance the RI/FS which is generally consistent with EPA's statement of work or work plan and draft administrative order on consent or provides a sufficient basis for further negotiations;
- a paragraph-by-paragraph response to EPA's statement of work or workplan and draft administrative order on consent;
- a detailed statement of work or workplan identifying how the PRPs plan to proceed with the work;
- a demonstration of the PRPs technical capability to undertake the RI/FS. This should include a requirement that PRPs identify the firm they expect will conduct the work or that PRPs identify the process they will undertake to select a firm;
- a demonstration of the PRPs financial capability to finance the RI/FS;

- a statement of the PRPs willingness to reimburse EPA for the costs EPA incurs in overseeing the PRP conduct of the RI/FS as required by §104(a)(1); and

- the name, address, and phone number of the party or steering committee who will represent the PRPs in negotiations.

g. "Good faith offer" for RD/RA: The letter should indicate that a "good faith offer" is a written proposal which demonstrates the PRPs qualifications and willingness to conduct or finance the RD/RA. A "good faith offer" for the RD/RA should include the following:

- a statement of the PRPs willingness to conduct or finance the RD/RA which is generally consistent with EPA's proposed plan or which provides a sufficient basis for further negotiations in light of EPA's proposed plan;

- a paragraph-by-paragraph response to EPA's draft consent decree, including a response to other documents that may have been attached to the decree such as a technical scope of work for the proposed plan or access or preauthorization agreements;

- a detailed "statement of work" or "workplan" identifying how PRPs plan to proceed with the work;

- a demonstration of the PRPs technical capability to undertake the RD/RA. This should include a requirement that PRPs identify the firm they expect will conduct the work or that PRPs identify the process they will undertake to select a firm;

- a demonstration of the PRPs capability to finance the RD/RA;

- a statement of the PRPs willingness to reimburse EPA for past response and oversight costs;

- a discussion about the PRPs position on releases from liability and reopeners to liability; and

- the name, address, and phone number of the party or steering committee who will represent the PRPs in negotiations.

h. Information release: To the extent such information is available and to the extent such information has not been previously released, the letter should contain information on the names and addresses of other PRPs, the volume and nature of

substances contributed by each PRP, and a ranking by volume of the substances at the facility. Note that the release of information with the RI/FS and RD/RA special notices is not intended to require the release of information previously provided to PRPs.

i. Demand for payment: The letter should include a demand that PRPs reimburse EPA for the costs the Agency has incurred in conducting response activities at the site pursuant to §107(a). The letter should identify the action EPA undertook and the cost of conducting the action.. The letter should also indicate that the Agency anticipates expending additional funds on activities covered by this notice and other specified future activities. Finally, the letter should demand payment of interest for past and future response costs incurred by EPA pursuant to §107(a). Notice letters should not be delayed to obtain cost information where such information has not been previously collected.

j. Administrative record: The letter should be used as a vehicle for informing PRPs of the availability of an administrative record containing documents that form the basis for the Agency's decision on the selection of remedy. The letter should indicate that the record is open to the public for inspection and comment. The letter should also indicate where the record will be or has been located.

k. PRP response and EPA contact person: The letter should encourage PRPs to notify EPA of their interest to participate in negotiations. The letter should indicate that PRPs may respond as a group through a steering committee if a committee has been formed. In addition, the letter should provide the name, phone number, and address of the EPA representative to contact.

D. CONCLUSION OF NEGOTIATION MORATORIUM AND DEADLINE MANAGEMENT FOR RI/FS AND RD/RA

At the conclusion of the §122(e) negotiation moratorium, the Regions should have a fully negotiated administrative order on consent for the RI/FS and a fully negotiated consent decree for the RD/RA which has been signed by the PRPs. A signed document is necessary to show that an agreement has, in fact, been reached. [9]

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[9] Pre-SARA guidance for drafting an administrative order is provided in "Superfund Administrative Order: Workshop and Guidance Materials" (1985) and for drafting a consent decree in "Guidance on Drafting Consent Decrees in Hazardous Waste Cases" (May 1, 1985). These guidances are being revised to include SARA's requirements.

At the conclusion of the 120 day moratorium for the RD/RA a determination must be made on whether to continue settlement activities, whether the site should be cleaned up using Superfund money, or whether to initiate a §106 enforcement action. A continuation of settlement activities may include seeking an extension to the 120 day negotiation moratorium as discussed below, or sending a consent decree to the Department of Justice for lodging in the appropriate district court.

In instances where an agreement has been reached and fully negotiated but PRPs have not yet obtained signatures, it may be necessary to obtain an extension to the negotiation moratorium. Extensions may also be necessary where the agreement has not been fully negotiated but all major issues are resolved and outstanding issues are well defined and final language is imminent. Extensions to the negotiation moratorium can be obtained only in certain circumstances as discussed in the February 12, 1987 "Interim Guidance: Streamlining the CERCLA Settlement Decision Process." [10]

The timing of special notice letters will have a significant affect on our ability to successfully conclude negotiations at the end of the moratorium period. The Streamlined Settlement Policy provides for two different processes for obtaining extensions for the RI/FS and RD/RA moratoriums. The policy indicates that the Regional Administrator has the discretion to terminate or extend negotiations for the RI/FS after 90 days. However, extension of negotiations beyond an additional 30 days should be authorized by the Regional Administrator only in limited cases.

Relating to the RD/RA moratorium, the Streamlined Settlement Policy provides for either Regional or Headquarters approval of an extension under certain circumstances. An extension to the 120 day RD/RA moratorium may be granted for an additional 30 days by the Regional Administrator when settlement is likely and imminent. An additional extension beyond the 30 days may be approved only by the Assistant Administrator for the Office of Solid Waste and Emergency Response (OSWER) and only in rare and extraordinary circumstances.

This guidance re-emphasizes the importance of meeting the 90 day moratorium for the RI/FS and the 120 day moratorium for the RD/RA. To aid that policy, this guidance identifies three circumstances where the Regional Administrator and Assistant Administrator for OSWER may consider granting such extensions for the RD/RA moratorium.

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[10] This guidance was issued under OSWER Directive #9832.9.

First, it may be appropriate for the Regional Administrator or the Assistant Administrator to extend the 120 day moratorium for the RD/RA if EPA selects a remedy in the ROD which is significantly different from the Agency's stated preference in the proposed plan. This could mean that the focus of negotiations could change significantly, requiring additional time to reach agreement with PRPs.

The second example applies to Fund-lead sites. It may be appropriate for the Regional Administrator or the Assistant Administrator to extend the 120 day negotiation moratorium for the RD/RA if non-enforcement activities at the site (e.g. an extended public comment period or an extended ROD review and approval process) cause a significant delay in the Agency's ability to move forward in implementing a Fund-financed remedy. An extension to the negotiation moratorium may be especially appropriate if there is reason to believe a negotiated settlement is imminent. In other words, if the Fund is not ready to move forward in implementing the remedy at the end of the 120 day negotiation moratorium there is no reason to conclude negotiations if there is reason to believe an agreement can be reached.

The third example applies to enforcement-lead sites. It may be appropriate for the Regional Administrator or the Assistant Administrator to extend the 120 day negotiation moratorium for the RD/RA after a §106 litigation referral has been prepared and referred to the Department of Justice (DOJ) for action. In fact, the preparation and referral of a case to DOJ may be an important mechanism for providing the necessary impetus for reaching a voluntary settlement. In many cases it may be appropriate to issue a unilateral administrative order concurrent with the referral.

VI. NOTICE LETTERS AND NEGOTIATION MORATORIUM FOR REMOVAL ACTIONS

The notice letter process for removal actions differs from the notification process for remedial actions. As discussed above, the notification process for remedial actions involves issuance of three notice letters. The notification process for removals will involve only one notice letter which may or may not invoke the §122(e) special notice procedures as discussed below.

A. NOTICE LETTERS

1. Whether to Issue Removal Notice

The Regions should attempt to contact PRPs prior to initiating a Fund-financed removal action to inform PRPs of their potential liability where EPA will incur response costs or

to secure a private party response. This guidance encourages the Regions to seek PRP response through a written notice letter but the Regions may contact PRPs verbally (with a written follow-up notice). This is consistent with the guidance on "Issuance of Administrative Orders for Immediate Removal Actions" (2/21/84).

The Regions should issue notice letters to readily identifiable PRPs for removal actions in the vast majority of cases. The content of the notice will vary depending whether the notice will be used simply to notify PRPs of their potential liability for an action EPA has already taken or is about to take, whether the notice will be used to encourage a private party response through "informal" negotiations (i.e. negotiations not triggered by the §122(e) special notice procedures), or whether the notice will be used as a mechanism for invoking the §122(e) special notice procedures which provide for "formal" negotiations between EPA and PRPs.

2. <u>When to Use Special Notice Procedures for Removals</u>

The Regions should consider using the §122(e) special notice procedures only for those removals where the threat is of a nature that it is not necessary to initiate an onsite removal action for at least six months. The "six month planning time period" begins once the site evaluation is completed. This means that for the vast majority of removal actions the Regions will not be required to utilize the special notice procedures. It is not appropriate to utilize special notices for most removal actions because the subsequent moratorium may interfere with the Agency's ability to implement the remedy in a timely manner. In addition, it may not be worth expending the time and resources to enter into formal negotiations when a removal will be a relatively short term and inexpensive response action.

The Regions should include the following factors in their determination of whether it is appropriate to utilize the special notice procedures for removals with a six month planning lead time: 1) whether viable PRPs have been identified, 2) whether the PRPs are expected to respond favorably to the invitation to participate in negotiations and to conduct or finance the removal action, 3) whether issuance of the special notice could delay implementation of the removal action, and 4) whether it may be more appropriate to enter into "informal" negotiations in lieu of "formal" negotiations under §122(e).

In determining the PRPs viability, the Region should inquire about the PRPs financial and technical capability for conducting and/or financing the removal action in an effective and timely manner. In determining the PRPs willingness to undertake or finance the removal action, the Region should, at a minimum, obtain a verbal agreement from the PRPs prior to issuance of the special notice. In determining whether the special notice may

delay implementation of the remedy or in determining whether to enter into "informal" rather than "formal" negotiations, the Regions should consider whether the §122(e) negotiation moratorium would interfere with other activities at the site.

3. Notifying PRPs When Not Appropriate to Utilize Special Notice Procedures for Removals

EPA's decision on whether to use the special notice procedures for any response action is clearly discretionary. However, §122(a) requires the Agency to notify PRPs in writing when the Agency decides not to utilize such procedures. The removal notice provides a convenient vehicle for informing PRPs of EPA's decision not to utilize the special notice procedures. The notice should, therefore, inform PRPs of EPA's decision not to utilize such procedures when this determination has been made and should provide an explanation for that decision.

4. DOJ Role in Removal Negotiations

The Regions should consult with the Chief of the Environmental Enforcement Section of DOJ prior to issuing a special notice letter for removal actions where settlement by consent decree is contemplated, or where the settlement is expected to involve a compromise of past or future response costs and the total response costs will exceed $500,000. The Regions should consult with DOJ prior to releasing a draft consent decree to PRPs.

5. Timing of Removal Notice

A removal notice that does not invoke the special notice procedures should be provided to PRPs as soon as practicable. For removal notices that invoke the special notice procedures, the notice should be issued as early as possible but no later than 120 days before the scheduled date for initiating the removal action. The scheduled date for initiating the removal action is the date removal extramural cleanup contractor funds will be obligated and onsite cleanup will begin.

The timing of a notice which invokes the special notice procedures is critical because issuance of the notice triggers the subsequent 60 to 120 day moratorium on EPA conduct of the removal action. (The moratorium would last only 60 days in instances where the PRPs do not provide EPA with a "good faith offer"). Issuing the special notice at least 120 days before EPA will begin the removal ensures that the subsequent 120 day moratorium does not affect EPA's ability to implement the removal action in the event negotiations do not result in an agreement for PRP conduct of the removal action.

6. Recipients of Removal Notice

The removal notice should be sent to all parties where there is sufficient evidence to make a preliminary determination of potential liability under §107 of CERCLA. If a Federal agency has been identified as a generator at a facility not owned/operated by the Federal agency, such agency should be routinely notified like other PRPs.

Copies of removal notices should be provided to the Regional administrative record coordinator, the appropriate State representative, and to headquarters. Providing copies to the administrative record coordinator is important for ensuring that the notice to be placed in the record. Providing copies to the State representative is important for ensuring that States are appropriately informed about possible future negotiations.

Providing copies to the Information Management Section within the Program Management and Support Office of the Office of Waste Programs Enforcement for entry into the Superfund Enforcement Tracking System (SETS). Copies should be sent to OWPE at the same time they are sent to PRPs. Providing copies to OWPE is essential for facilitating our efforts to track site activities and to respond to Congressional and other inquiries.

It is not necessary to provide copies of each removal notice to the administrative record coordinator, State representative, State or Federal trustee, or headquarters in instances where identical notices are provided to multiple PRPs. Where there are multiple PRPs at a site, a copy of one removal notice with a list of other parties who have received the letter would suffice.

7. Contents of Removal Notice

As indicated, the content of the removal notice will vary depending upon whether the purpose of the letter is to simply inform PRPs of their potential liability or whether the letter will also be used to provide an opportunity for PRP involvement in negotiations either through "informal" or "formal" negotiations. The following highlights the components that should be included in the three different types of removal notices. The specific content of each component of the removal notice should be essentially the same as described earlier for RI/FS and RD/RA general and special notices, except where otherwise specified.

a. Notice of potential liability: If the purpose of the removal notice is simply to inform PRPs of their potential liability and to provide notice that the Agency has or is about to take a response action, the notice should contain the following components: a notice of potential liability; a discussion about site response activities that have been or will

be conducted at the site; a notice on the availability of an administrative record; and a notice pursuant §122(a) that the special notice procedures will not be used.

The notification under §122(a) should inform PRPs that the Agency will not (or did not) use the §122(e) special notice procedures for this particular response action and should provide an explanation for that decision. The letter should indicate that it is the Agency's policy not to use the special notice procedures for removals unless there is a six month planning lead time prior to the initiation of the response action. If the response action does involve a removal with a six month planning lead time but the Agency made a case-specific determination not to use the special notice procedures, the letter should provide an explanation why the use of such procedures was determined to be inappropriate for that particular response action.

b. Notice of potential liability and opportunity to enter into "informal" negotiations: If the purpose of the removal notice is to inform PRPs of their potential liability and to provide PRPs with an opportunity to enter into negotiations with EPA without invoking the §122(e) special notice procedures, the notice should contain the following components: a notice of potential liability; a discussion about site response activities that will be conducted at the site; a copy of the statement of work or workplan and draft administrative order on consent; a notification pursuant to §122(a) that the special notice procedures will not be used; a request that PRPs notify EPA within a specified period of time of their interest to participate in negotiations; a notice on the availability of the administrative record; and information on the EPA representative to contact. The §122(a) notification should contain the same information discussed in the proceeding paragraph.

c. Notice of potential liability and opportunity to enter into "formal" negotiations pursuant to §122(e) special notice procedures: If the purpose of the removal notice is to inform PRPs of their potential liability and to provide PRPs with an opportunity to enter into negotiations with EPA using the §122(e) special notice procedures, the notice should contain the following components: a notice of potential liability; a discussion about site response activities that will be conducted at the site; a discussion about the special notice procedures and the negotiation moratorium; a copy of the statement of work or workplan and draft administrative order on consent; a discussion about what constitutes a "good faith offer"; a request that PRPs notify EPA within a specified period of time indicating their interest to participate in negotiations; a notice on the availability of the administrative record; and information on the EPA representative to contact. The "good faith offer" should contain essentially the same components as described above for the RD/RA.

B. CONCLUSION OF NEGOTIATION MORATORIUM AND DEADLINE MANAGEMENT FOR REMOVALS

At the conclusion of the §122(e) negotiation moratorium for removal actions, the Regions should have a fully negotiated administrative order on consent which has been signed by the PRPs. (Where appropriate, a signed consent decree should be provided). A signed administrative order on consent (or a consent decree) will show that the negotiations have been successfully completed.

The expectation is that the negotiations will be concluded at the end of the 120 day moratorium and the Regions are strongly encouraged to conclude the negotiations within this period of time. In instances where the negotiations do not result in an agreement, the Regions may seek an extension to the 120 day moratorium, issue an administrative order, or proceed with a Fund-financed removal. Note that the Regional Administrator may grant an extension to the 120 day moratorium only in limited and appropriate circumstances.

C. ADMINISTRATIVE ORDERS AND NEGOTIATION MORATORIUM FOR REMOVALS

In most instances, use of the special notice procedures for removal actions will not affect existing policy on issuing administrative orders for removals since the special notice procedures will be issued for only a small portion of removals. For details on the Agency's policy on administrative orders refer to the guidance on "Issuance of Administrative Orders for Immediate Removals" (2/21/84).

It is necessary, however, to modify existing policy in one respect. In instances where Regions use the special notice procedures for a removal action and where issuance of an administrative order is necessary and appropriate, the Regions should not issue the order until the end of the negotiation moratorium. This ensures that the negotiation moratorium will be used to negotiate voluntary settlements.

VII. DISCLAIMER

The policies and procedures established in this document are intended solely for the guidance of Government personnel. They are not intended and can not be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. The Agency reserves the right to act at variance with these policies and procedures and to change them at any time without public notice.

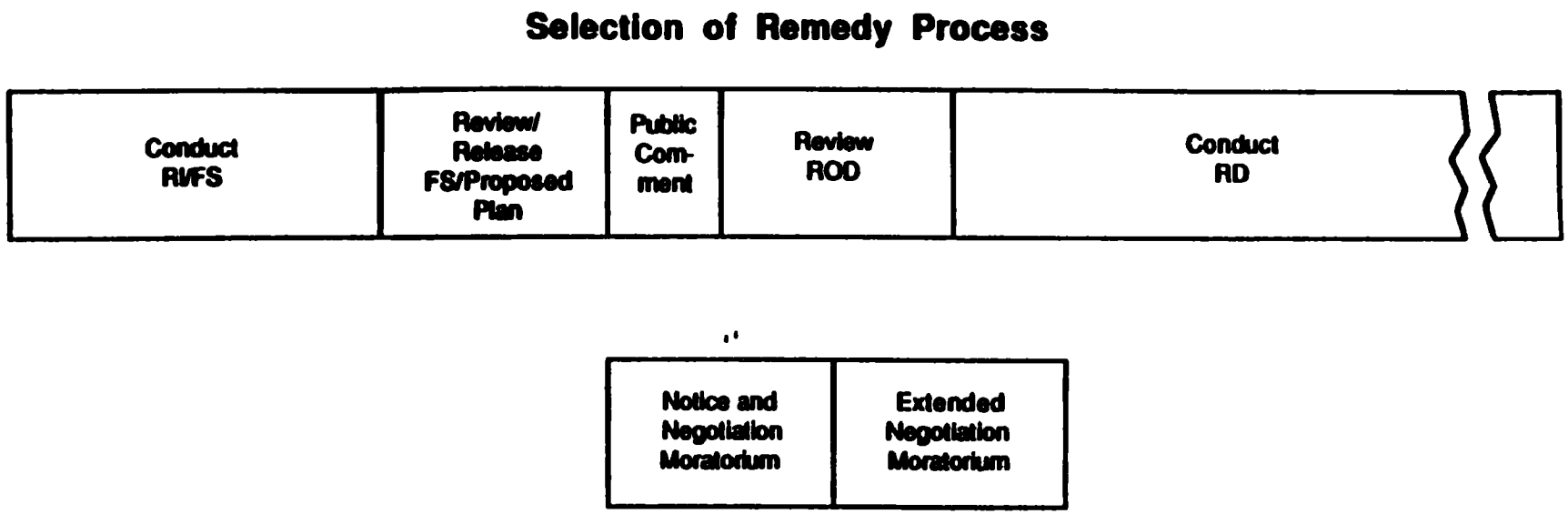
VIII. FOR FURTHER INFORMATION

For further information or questions concerning this guidance, please contact Kathy MacKinnon in the Office of Waste Programs Enforcement at FTS-475-6770.

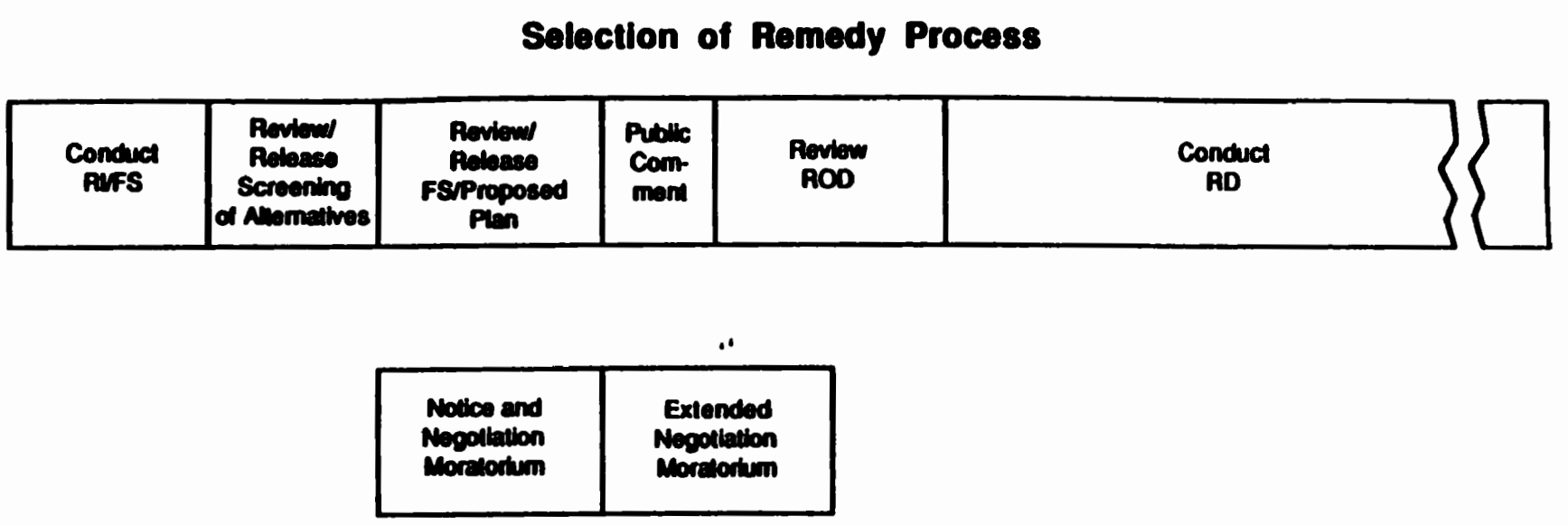
Appendix A

Timing of RD/RA Special Notice Letter

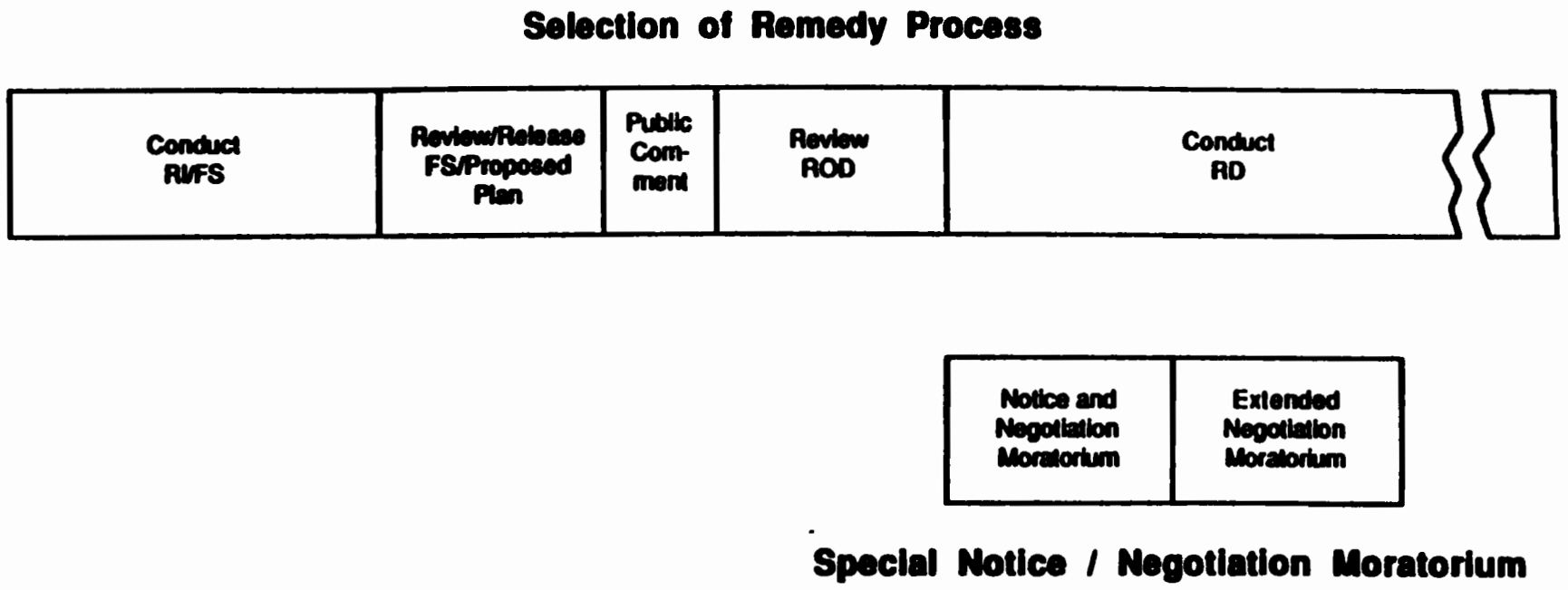
A. General Approach: Issue RD / RA Special Notice When Release Draft FS and Proposed Plan



B. Alternative Approach: Issue RD / RA Special Notice Prior to Release of Draft FS and Proposed Plan



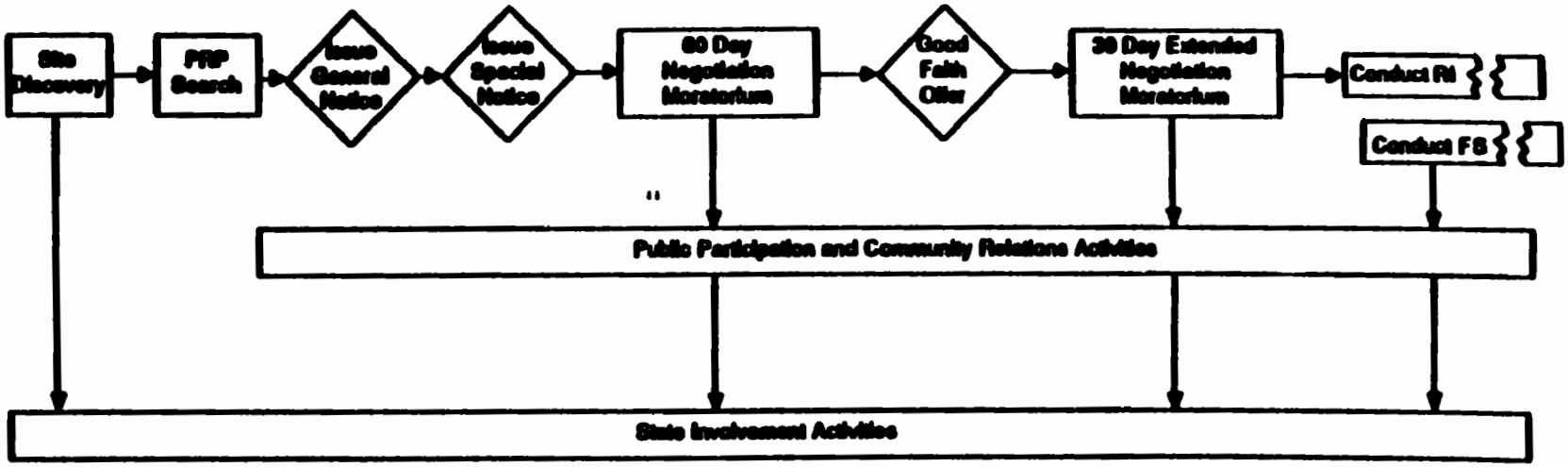
C. Alternative Approach: Issue RD / RA Special Notice Once ROD Signed



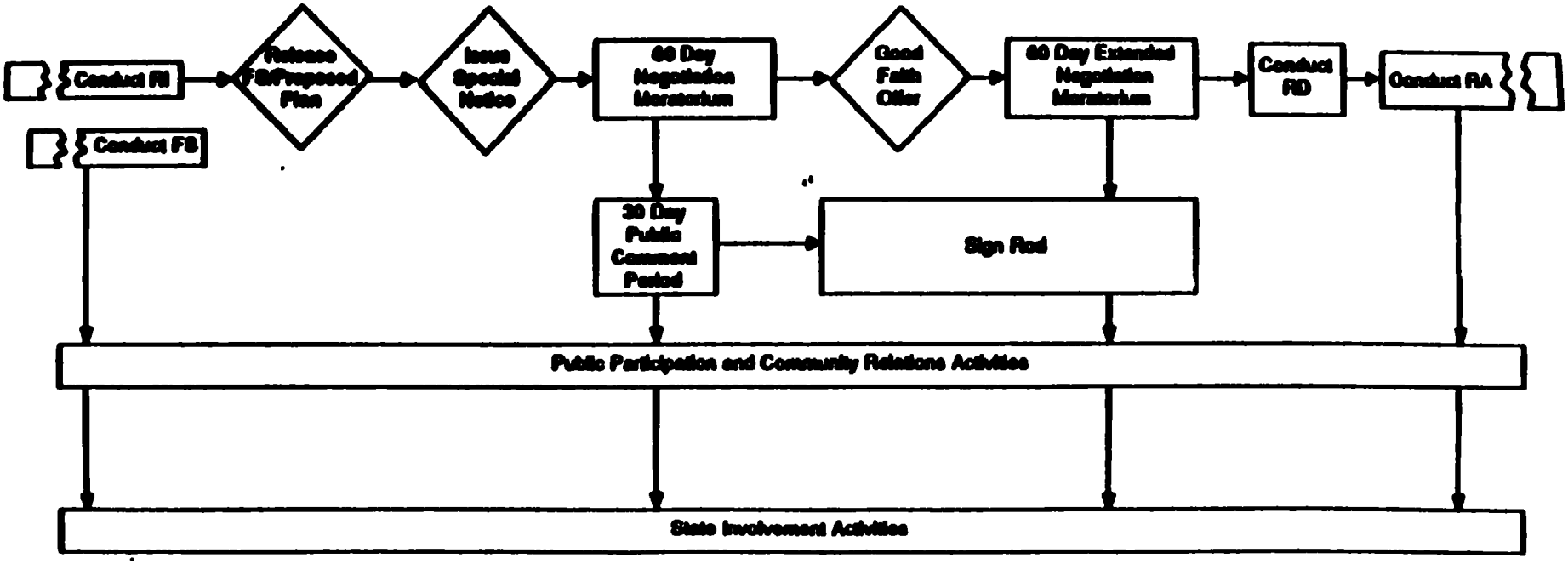
Appendix B

PRP Settlement Process for RI/FS and RD/RA

PRP Settlement Process for RI / FS



PRP Settlement Process for RD / RA



Draft Guidance on CERCLA 106 Administrative Orders for Removal Actions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 19 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Draft Guidance on CERCLA §106(a) Administrative Orders for Removal Actions

FROM: John Cross
Office of Waste Programs Enforcement

TO: Oil and Hazardous Materials Coordinators
Regions I-X

We are circulating an early draft of the Guidance on CERCLA §106(a) Administrative Orders for Removal Actions at this time to facilitate your discussion of §106 orders at the upcoming Removal Managers' meeting. The guidance is in preliminary form, and will be subsequently circulated for comment to Regional Enforcement Branch Chiefs and Regional Counsel.

The guidance is designed to reflect statutory changes implemented by SARA and changes in Agency policy due to Agency experience. The guidance is also consistent with the Agency's 90 Day Review Report and concepts endorsed by the Settlement Incentives and Disincentives Work Group. An endorsed draft guidance is expected to be distributed formally by the end of this summer jointly by OWPE and OECM.

If you wish to submit written comments on the draft guidance, please send them by pouch mail to Kathryn Nolan at EPA Headquarters, OWPE, OS-510. If you have any questions concerning this guidance, she can be reached at (FTS) 382-2034. Thank you for your assistance in the review of this document.

DRAFT

MEMORANDUM

SUBJECT: Guidance on Issuance of CERCLA §106(a) Administrative Orders for Removal Actions

FROM: Jonathan Z. Cannon, Acting Assistant Administrator
Solid Waste and Emergency Response

Edward E. Reich, Acting Assistant Administrator
Enforcement and Compliance Monitoring

TO: Regional Administrators,
Regions I-X

I. Introduction

This memorandum sets forth procedures regarding issuance o §106(a) administrative orders for removal actions under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (CERCLA or Superfund).[1] This guidance applies to unilateral enforcement actions and settlement agreements for potentially responsible party (PRP) conduct of removal actions based on §106 of CERCLA.[2] It is designed for use by On-Scene Coordinators (OSC), Office of Regional Counsel (ORC), and Removal Program Managers. For additional guidance on legal issues related

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[1] For guidance on the general purposes and principles of the Agency's administrative order authority under §106(a) of CERCLA, and more detailed procedures on implementation of that authority, see the (date) memorandum, "Guidance on CERCLA §106(a) Administrative Orders for Remedial Actions" (OSWER Directive number XXX). These memoranda together supersede the September 8, 1983 "Guidance Memorandum on Use and Issuance of Administrative Orders Under §106(a) of CERCLA" (OSWER Directive number 9833.0) and the February 21, 1984 guidance on "Issuance of Administrative Orders for Immediate Removal Actions" (OSWER Directive number 9833.1A). Changes to the guidances are the result of statutory amendments and Agency experience.

[2] For a discussion of general principles governir settlement agreements, see the Interim CERCLA Settlement Polic dated December 5, 1984 (OSWER Directive number 9835.0).

to §106 administrative orders, see the memorandum entitled "Guidance on CERCLA §106(a) Administrative Orders for Remedial Actions" (OSWER Directive number XXX).

In order to successfully conduct the largest number of removals, the Agency must secure private party response actions. To accomplish this, in appropriate circumstances, the Agency negotiates settlement agreements embodied in §106(a) consent administrative orders (consent orders) with parties willing to do the work. The Agency issues §106(a) unilateral administrative orders (unilateral orders) when private parties are not willing to undertake work as part of a consent order.[3]

Private party removals serve an important function in the Superfund response and enforcement process. Private party removals can free up the Fund for additional removal actions at sites without financially viable PRPs. PRPs are also introduced to the Superfund enforcement and settlement process, and therefore are more likely to cooperate if subsequent response actions are necessary. Finally, when private parties conduct the removal action, it eliminates the need for subsequent cost recovery actions, which frequently demand considerable time from Regional technical and legal staff, and frequently occur under statute of limitations deadlines.

II. General Procedures for Enforcement Removal Actions

Civil investigators working together with the OSC should conduct a PRP search immediately after the OSC determines the need for a removal action. While the OSC determines the scope of the removal, the OSC and/or ORC should develop an enforcement strategy. The exigencies of the circumstances, particularly in an emergency removal context, will affect the enforcement approach.

PRP Notification

Once PRPs have been identified, OSCs should notify them in writing that EPA is planning to conduct a response action at the site and that they are potentially liable. The notice should state that PRPs may agree to conduct the response action through a

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[3] Appendix A of this document defines the two types of §106 administrative orders and distinguishes them from their judicial counterparts. For guidance on the role of §106 judicial actions and procedures to follow for their implementation, see the memorandum, "Guidance on CERCLA Section 106 Judicial Actions," (Reich/Porter, 2/24/89) (OSWER Directive Number 9835.7). For information on issuing §106 unilateral administrative orders to Federal facilities, see "Enforcement Actions under RCRA and CERCLA at Federal Facilities," dated January 25, 1988 (OSWER Directive number XXX).

settlement agreement with the Agency. Although time may not permit settlement negotiations at sites where a true emergency exists, the Agency should attempt to notify all known PRPs prior to conducting any response action. OSCs may send this notice prior to fully delineating the scope of the removal. Advance notice to PRPs is particularly important at sites with multiple PRPs. To expedite the settlement process in time-critical situations, OSCs may initially contact PRPs orally. Oral notification should be followed by written confirmation. Written notice to PRPs at time-critical removal sites may take the form of a general notice letter or a CERCLA §122(a) letter. There is no need for oral notification at non-time-critical removal sites. At non-time-critical removal sites, OSCs should notify PRPs through special notice letters or CERCLA §122(a) letters. The Agency should issue CERCLA §122(a) letters when a decision is made not to issue special notice at a site. For examples of all three letters, see Appendix C of this guidance. For further information concerning special notice procedures, see the "Interim Guidance on Notice Letters, Negotiations and Information Exchange" (Adams/Porter _/_/_) (OSWER directive number 9834.10), 53 Fed. Reg. 5298 (1988).

Action Memorandum

Following PRP notice, OSCs should finalize the scope of the removal, determine whether to enhance the PRP search, and begin PRP negotiations. At the start of negotiations, OSCs should provid PRPs with a document which summarizes the work required at the sit (a statement of work) and establish a negotiations deadline. The statement of work should be accompanied by a draft consent order prepared by the Superfund Enforcement personnel and reviewed and approved by ORC.

A signed Action Memorandum should be prepared during negotiations. An Action Memorandum serves several purposes in addition to its traditional function of authorizing Fund financing at sites. During negotiations, it notifies PRPs that the Agency has the finances to conduct the removal with the Fund, and sue for treble damages. A signed Action Memorandum also constitutes an important part of the administrative record for the removal action response decision, and will be critical in any enforcement case initiated to enforce a unilateral order, in the event that an order is issued. A confidential addendum to the Action Memorandum sets forth the enforcement strategy.

Unilateral Orders/Consent Orders

If PRPs agree by the negotiation deadline to conduct the removal, a consent order should be signed. If PRPs do not agree by the negotiation deadline to conduct the removal, the negotiations team should strongly consider issuing a unilateral order. Unilateral orders should routinely be issued in cases which meet the criteria set forth in Part V of this guidance. Issuanc

of a unilateral order should be considered prior to either Fund financing or a judicial referral.[4] Unilateral orders give PRPs a final opportunity to participate in the cleanup process before a court compels them to do so. Under unilateral orders, PRPs incur liability for the cleanup, penalties and damages. Moreover, issuing a unilateral order prior to judicial referral should further support record review of the Agency's response action in any subsequent court proceeding.

If PRPs ask to settle with the Agency as they prepare the first deliverable under the unilateral order, OSCs and ORC may attempt to negotiate a consent order with the PRPs. Consent orders are beneficial to the Agency because EPA may recover past costs through a consent order.[5] However, in most situations, PRPs have already been given an opportunity to settle with the Agency prior to this point. Therefore, if PRPs do not readily agree to sign a consent order during these negotiations,[6] negotiations should be terminated and PRP conduct of the response action should continue under the unilateral order.

If PRPs agree to conduct the removal but not to sign a consent order, and the case does not meet the criteria for a unilateral order (i.e. no imminent and substantial endangerment), the Agency may conduct the removal with Fund finances. Where there are special circumstances, and where Fund financing is not available, PRPs may proceed with conduct of the removal under Agency oversight. At the outset of such PRP action, ORC must provide written notice to these PRPs. The written notice should notify PRPs that they will continue to be liable in the event that a subsequent response action is required at the site. This written notification protects the interests of the Agency in the event that the response action is not fully or adequately executed.

Oversight

Under both consent and unilateral orders, oversight should be conducted routinely to ensure PRP compliance with the terms of the order. OSCs must immediately bring work corrections and missed milestones to the PRPs' attention. Under a consent order, PRPs

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[4] See Appendix A, Part II for an explanation of a judicial referral.

[5] Under a unilateral order, past costs may be obtained through a demand letter or a cost recovery action.

[6] Any compromise of past costs must be conducted under the authority of CERCLA §122(h)(1). If a past cost is compromised and total past additional response costs at the site (i.e. work and money) exceed $300,000 excluding prejudgment interest, prior written approval of the compromise must be obtained from DOJ.

will be liable for stipulated penalties for noncompliance. The Agency should be prepared to obligate the Fund and/or refer the case to the Department of Justice (DOJ) should it be determined that the PRP does not intend to comply with the order. Through a judicial referral, the Agency may obtain stipulated penalties, §106 daily penalties, and/or PRP compliance with the order.

III. Statutory Requirements for Issuing §106(a) Consent and Unilateral Administrative Orders

Section 106(a) administrative orders for removal actions must meet several statutory requirements. These statutory requirements apply to both removal consent and unilateral administrative orders. The Action Memorandum should already contain the information needed to support these statutory requirements. OSCs should ensure that this information is adequately contained in the Action Memorandum. Superfund Enforcement Personnel and/or ORC should consult the Action Memorandum when drafting the removal consent and/or unilateral order.

The statutory requirements which apply to both consent and unilateral orders are described in numbers 1 - 4 below. The fifth statutory requirement set forth below applies only to unilateral orders.

1) Evidence of a Release or Threatened Release of a Hazardous Substance

A removal action may be funded by the Agency when there is information regarding release or threat of a release of a hazardous substance. Similarly, a unilateral order may be issued under section 106 where there is a release or a threatened release of a hazardous substance.[7] The nature of the determination of the release or threat of release should be identified in the order.

The hazardous substances that are the subject of the release or threat of release should be documented in the Action Memorandum. At least some of the hazardous substances should be referenced in the order as well.

2) Evidence that the Release or Threatened Release is from a Facility

The order should specify the physical location of the release or threatened release. This establishes that the release or threatened release is from a facility as defined in CERCLA §101(9).

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[7] See CERCLA section 101(22) for the definition of a release. CERCLA section 101(14) defines hazardous substances; see also 40 C.F.R. § 302.4.

3) Evidence of Imminent and Substantial Endangerment

The term imminent and substantial endangerment has a particular meaning in environmental statutes. An endangerment is a threatened or potential harm; actual harm need not be shown. An endangerment may be imminent if the conditions which give rise to it are present, even though they may not be realized for years. When §106(a) administrative orders are issued for removals, the data base available to support an endangerment finding may be limited. It will most likely consist of information from the inspection and preliminary sampling data. This information should be documented in the Action Memorandum and referenced in the unilateral order.

4) Notice to Affected State

Regions must notify the state prior to issuing a unilateral order. The affected state is interpreted to be the state where the facility with the release or threatened release is located. Written notification to the state should precede Federal action, if possible. When rapid response at a site is necessary, notice may be provided in a telephone call from the EPA Division Director to the director of the state lead agency responsible for the CERCLA program. Written confirmation of oral notice always must follow.

5) Persons who may Receive Unilateral Orders

The classes of persons who may receive unilateral orders include, at a minimum, the four classes of parties who are liable under section 107 of CERCLA. These classes generally are (1) present owners and operators, (2) past owners and operators at the time of disposal, (3) persons who arranged for treatment or disposal, and (4) transporters who selected the site. In addition, other persons may receive unilateral orders to assure relief. For example, unilateral orders may be issued to obtain the necessary cooperation of parties indispensible to completion of a response action.

See the previously mentioned guidance on §106 remedial administrative orders if greater detail is needed concerning these statutory requirements.

IV. Elements of Unilateral Administrative Orders

In addition to statutory prerequisites that must be satisfied before unilateral orders may be issued, other substantive elements are usually included in unilateral orders. These elements are necessary for the unilateral orders to be both enforceable and

effective.[8] A unilateral order should contain the following sections:

- Introduction and Jurisdiction;
- Parties Bound;
- Findings of Fact;
- Conclusions of Law and Determinations;
- Notice to the State;
- Work to be Performed;
- Quality Assurance;
- Modification of the Work Required;
- Compliance with Other Applicable Laws;
- Designated Project Coordinators and OSC Authority;
- Progress Reports, Notice of Delay;
- Access and Data/Document Availability;
- Administrative Record, Record Preservation;
- Reimbursement of Oversight Costs;
- Further Enforcement, Reservations, and Disclaimers;
- Effective Date/Subsequent Modification;
- Opportunity to Confer; and
- Termination and Satisfaction.

The guidance on §106 remedial administrative orders contains a discussion of the following provisions: Findings of Fact; Conclusions of Law and Determinations; Work to be Performed; Effective Date; and Opportunity to Confer. See also the Model Unilateral Order for Removals, dated XXX (OSWER Directive number XXX).

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[8] Although a unilateral order for a removal action should include an assertion that the removal action is consistent with the NCP, it is recognized that the NCP expressly exempts from certain provisions of its coverage removals conducted by PRPs pursuant to §106 of CERCLA. See 40 C.F.R. Part 300.65(h).

V. Factors for Issuing Unilateral Orders in Removal Actions

The following factors should be considered when issuing unilateral orders for removal actions. These factors differ from §106 judicial action factors because unilateral orders serve many different purposes. For a discussion of the policy criteria relevant to §106 judicial actions, see the Guidance on CERCLA Section 106 Judicial Actions, mentioned previously.

A) Immediacy of the Need to Respond

Generally, it will not be possible to issue unilateral orders for true emergency removals. At time-critical removal sites, if there is sufficient time (e.g., two weeks) before on-site activity must begin, a unilateral order may be issued. Alternatively, the Regional office may wish to stabilize site conditions and issue a unilateral order for the remainder of the removal action.

There is sufficient time at non-time-critical removals to issue a unilateral order before on-site activity must begin. By definition, non-time-critical removals have a planning period of more than six months before on-site activity must begin.

B) PRPs are Liable and No Indication that they are not Financially Viable

Unilateral orders should only be issued to PRPs for whom the Agency has sufficient evidence as to their liability. Information documenting PRP liability should have been secured through PRP searches, including §104 information requests. Unless there is information to the contrary, the Regions should assume that PRPs have the financial capability to conduct the removal.

C) The Response Action should be Specifically Defined

The unilateral order should define the removal response action with enough specificity to instruct the PRPs as to what is expected of them. A clearly defined response action is also necessary for the Agency to determine whether the PRPs have complied with the order. Where possible, this information may be directly incorporated into the unilateral order from the Action Memorandum. Where site conditions necessitate a "decide as proceed" approach and the removal action cannot be specifically defined, a unilateral order generally should not be issued.

D) Unique Technical Problems/Oversight

Where a removal action presents unusual implementation difficulties for the PRPs, or unique technical problems which may present unusual oversight difficulties for the Agency, the site may be inappropriate for a unilateral order.

E) PRP Technical Inability/Lack of Trustworthiness

Due to the technical inability of the PRPs, and/or their lack of trustworthiness, the Agency's oversight of nonsettling PRPs may differ from that of settling PRPs, despite the fact that PRPs operating under unilateral orders are subject to daily penalties for failure to comply with the terms of the order. Therefore, Regional offices should consider the technical ability of the PRPs and/or their trustworthiness prior to issuing a unilateral order.

F) Very Low Cost/Low Priority

Removal actions estimated to cost relatively little to conduct, and/or removal actions which are low in priority, may not be appropriate for unilateral orders.

G) Resources

If critical legal staff are not available to assist in a removal enforcement action, OSCs may conduct the cleanup through Fund financing, or stabilize the site and postpone enforcement action until enforcement resources are available.

VI. Follow-Up Procedures for Unilateral Orders

Agency policy is to provide PRPs an opportunity to discus implementation of a unilateral order with the Agency. The conference is not an adversarial hearing and does not constitute part of a proceeding to challenge the order. Instead, the conference is designed to ensure that the order is based on complete and accurate information, and to facilitate implementation. See the guidance on §106 remedial administrative orders for further information on the conference. In the case of removals without much lead time, the Agency may provide less formal conference procedures than that described in the §106 remedial administrative order guidance.

In the event of noncompliance with the unilateral order, Regions have flexibility to take one of the following actions: seek penalties to compel compliance with the order, takeover the project and utilize Fund financing, or seek a court order compelling PRP conduct of the removal action. Where the OSC decides that site specific circumstances require an immediate response, or the ORC assesses our likelihood of success at court to be minimal, Regions should utilize Fund financing. Therefore,

site circumstances may dictate the proper course of action.[9] The Agency may need first to stabilize the site before referring a case to DOJ. For further information, see the guidances on §106 remedial administrative orders and §106 judicial actions.

VII. Note on Purpose and Use of this Memorandum

The policy and procedures set forth herein, and internal office procedures adopted pursuant hereto, are intended solely for the guidance of attorneys and employees of the U.S. Environmental Protection Agency. They are not intended to, nor do they constitute rulemaking by the Agency, and may not be relied upon to create a right or benefit, substantive or procedural, enforceable at law or in equity by any person. The Agency may take any action which is at variance with the policies or procedures contained in this memorandum, or which is not in compliance with internal office procedures that may be adopted pursuant to these materials.

If you have any questions concerning any material contained herein, please call Kathryn Nolan (FTS) 202-382-2034 of the Office of Waste Programs Enforcement.

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[9] Under Agency policy, Regions have discretion to determine the proper course of action in the event of PRP noncompliance with unilateral orders. Regions have discretion to take courses of action other than Fund financing followed by cost recovery.

DRAFT

APPENDIX A

ADMINISTRATIVE AND JUDICIAL SETTLEMENT AND ENFORCEMENT TOOLS

I. Administrative Enforcement

Settlement: §106 Consent Administrative Orders

The Agency bases its removal settlement agreements on section 106 of CERCLA. Removal settlement agreements may be encompassed in §106 consent administrative orders or consent decrees. If PRPs do not adequately comply with §106 consent orders, the Agency may pursue stipulated penalties, §109 monetary penalties, and §106 daily penalties through a referral to DOJ (see below).

No Settlement: §106 Unilateral Administrative Orders

Where there is no settlement agreement, unilateral orders may be used to compel PRPs to conduct removals. Upon receipt of unilateral orders, PRPs may comply with the terms of the orders and conduct the removal, or they may decide to settle with the Agency. If PRPs decide to settle, the unilateral orders may be replaced with a consent order.

If PRPs do not comply with the unilateral order, a court may impose daily fines under §106(b)(1), and/or punitive damages in amount up to three times that expended from the Fund. Punitive damages may be obtained only in the event of a cleanup financed by the Fund. Therefore, if a settlement agreement cannot be reached, Regions should consider issuing a unilateral order. This facilitates Agency collection of penalties or punitive damages for noncompliance.

II. Judicial Enforcement

Noncompliance with the Order: §106 Judicial Actions

Administrative orders are not self-enforcing, nor can the Agency enforce them without assistance from the pertinent Federal District Court. The Agency seeks enforcement of its administrative orders in court through the assistance of the Department of Justice (DOJ). If PRPs refuse to comply with a unilateral order directing them to conduct a removal, and circumstances at the site do not require immediate site cleanup with Fund finances, the Agency should refer the case to DOJ. DOJ will file the case in court for judicial enforcement. Even if the Agency cleans up the site with Fund finances, the Agency may refer a case to DOJ for the collection of penalties or damages, along with a cost recovery action for Fund expenditures, from recalcitrant PRPs. Referrals to DOJ are necessary whether the Agency seeks compliance with the order or penalties. Referrals to DOJ are made through a section 106 judicial action.

APPENDIX B

Removal Actions--Scope of Response

Section 101(23) of CERCLA defines the term "removal" to include a variety of activities. Removal activities include, among others: monitoring, assessing and evaluating the release or threat of release of hazardous substances; disposal of removed material; measures to limit access; provision of alternative water supplies; and temporary evacuation and housing of threatened individuals not otherwise provided for. The National Contingency Plan and the February 1988 "Superfund Removal Procedures, Revision Number Three" (OSWER Directive number 9360.0-03B) divide the statutory concept of removals into Classic Emergencies, Time-Critical, and Non-Time-Critical removal actions. These determinations are based upon the site evaluation which examines the immediacy and the severity of the hazard to public health and the environment. The categories establish a scale for assessing the length of time within which the Agency must respond to an event. Once a site has been categorized, it does not change categories.

Classic emergency removal actions are undertaken if a release or threat of release requires response within hours of the lead agency's determination that a removal action is necessary. In classic emergency removal actions, on-site activity often lasts less than 30 days. During classic emergencies, response personnel may need to base their decisions on relatively limited data and act quickly. As a result, it is often difficult to ensure an adequate PRP response. Common examples of classic emergency removal actions include road accidents and spills, or fencing of a contaminated area.

Time-critical removal actions are those where, based on the site evaluation, the lead agency determines that a removal action is appropriate and that less than six months is available before cleanup activities begin on-site. Examples of time-critical removal actions include removal and transport of drums, barrels, tanks, or other bulk containers that contain or may contain hazardous substances to a RCRA-approved facility, or containment of wastes until a more in-depth study of the site can be conducted. Once site activity has been begun within six months and a site has been categorized as time critical, it does not change category to non-time-critical regardless of when the response is completed.

Non-time-critical removal actions are those where, based on the site evaluation, the lead agency determines that a removal action is appropriate and that a planning period of more than six months is available before on-site activities must begin. For non-time-critical removals, extensive data collection and analysis is conducted to more completely document the actual or potential health and environmental threat. The lead agency for non-time-critical removals will undertake an engineering evaluation/cost analysis (EE/CA) or its equivalent. EE/CAs contain evaluations of

possible alternative technologies, selection of the response, and documentation of the decision-making process. EE/CAs use a screening process and analysis of removal options based upon such factors as technical feasibility, institutional considerations, reasonableness of cost, timeliness of the option with respect to threat mitigation, environmental impacts, and the protectiveness of the option. This information will be subject to review and comment by the public prior to initiation of the affected removal. Non-time-critical removal actions include activities such as containment, treatment, disposal, or incineration of hazardous materials, or stabilization of berms, dikes, or impoundments.

Interim Final Guidance on Removal Action Levels at Contaminated Drinking Water Sites

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

OCT 6 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Interim Final Guidance on Removal Action Levels at Contaminated Drinking Water Sites (OSWER Directive 9360.1-10)

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

TO: Waste Management Division Directors, Regions I-X
Environmental Services Division Directors, Regions I, VI and VII

Attached is the interim final guidance on removal action levels at drinking water contamination sites. This guidance is effective immediately. The EPA Office of Drinking Water (ODW) and the Agency for Toxic Substances and Disease Registry (ATSDR) will also be developing guidance documents related to drinking water contamination in the near future. OERR will be working with ODW and ATSDR in an attempt to ensure a consistent approach between the agencies.

Questions or comments regarding this guidance or appropriate removal action levels should be directed to Jean Schumann, Emergency Response Division, WH-5488, FTS 382-4671.

Attachment

cc: Jack McGraw
Tom Devine
Gene Lucero
Marcia Williams
Walt Kovalick
Tim Fields, ERD
Russ Wyer, HSCD
Steve Lingle, HSED
Art Weissman, PAS
Michael Cook, ODW
Mark Greenwood, OGC
William Farland, CAG
Superfund Branch Chiefs, Regions I-X
OHM Coordinators, Regions I-X
Mark Bashor, ATSDR

REMOVAL ACTION LEVELS FOR CONTAMINATED DRINKING WATER SITES

Introduction

The purpose of this guidance is to establish "action levels" for providing alternate water supplies under Superfund removal authority at contaminated drinking water sites. The action level is the primary criterion that must be met for a site to qualify for removal response. The action levels established in this guidance must generally be satisfied before removal authority can be used at either National Priorities List (NPL) sites or non-NPL sites.

Under the 1982 National Contingency Plan (NCP), removal actions were taken in response to "immediate and significant" threats to human health or the environment. The removal program used the 10-Day Health Advisory as the principal benchmark to identify those drinking water contamination incidents that posed the most acute threats to human health. The November 1985 NCP broadened removal authority by authorizing response in situations that present a "threat" to human health or the environment. Therefore, removal actions may now be taken in less urgent situations than under the 1982 NCP.

In response to this expansion of removal authority, the Office of Emergency and Remedial Response (OERR) is revising removal program action levels for contaminated drinking water sites. This guidance expands the previous policy in a number of ways. First, the numeric action levels are now based on levels that are protective for a lifetime exposure rather than a 10-day exposure. Second, both carcinogenic and non-carcinogenic health effects are considered. Third, a reduction factor is used for volatiles to account for exposure due to inhalation. Finally, additional guidance is provided on the use of site-specific factors to trigger removal actions.

The action levels established in this guidance allow a site to qualify for removal response if either: 1) the numeric trigger is exceeded at the tap, or 2) site-specific factors otherwise indicate that a significant health threat exists. The guidance also discusses information sources on health threats from drinking water contamination, factors to consider in determining the extent of action, action levels vs. cleanup standards, prioritizing removal sites, and obtaining exemptions to the statutory limits for alternate water supply sites.

Action Level Based on Numeric Trigger

The numeric trigger is calculated using a model that establishes four different action levels, depending on whether the substance is also a potential human carcinogen and/or volatile. The model is explained below and summarized in Exhibit 1. Based on this model, Exhibit 2 lists the numeric action level for various substances that may be found in drinking water at Superfund sites. A site may qualify for removal response if the numeric trigger for the drinking water contaminant is exceeded at the tap of at least one residence ("residence" includes schools, businesses, etc.). (Note that the decision to initiate a removal action is based on other factors as well, such as the availability of other response mechanisms to initiate action in a timely manner.)

The first step in calculating the numeric trigger is determining whether the substance of concern is also a potential human carcinogen and/or volatile. For purposes of this guidance, a substance is a carcinogen if it falls into categories A, B, or C of EPA's carcinogen classification guidelines. (A substance should be considered a non-carcinogen if it is in categories D or E.) Volatile organic chemicals (VOCs) are generally of low molecular weight, high vapor pressure, and low solubility. For purposes of this guidance, VOCs include those chemicals identified as volatiles in the following documents: Test Methods for Evaluating Solid Waste, Vol. 1A, SW-846, 3rd ed., November 1986 (Chapter 2); Contract Lab Program Statement of Work, October 1986 (Exhibit C); Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water, September 1986 (available from Regional water program offices); and 40 CFR Part 264, Appendix IX (analytical methods 8010 and 8240 designate volatiles).

With the substance thus classified, the second step is to determine the appropriate action level in accordance with the categories below:

1. Non-volatile non-carcinogens -- Action level equals the Drinking Water Equivalent Level (DWEL).*

2. Volatile non-carcinogens -- Action level equals 50 percent of the DWEL.

3. Non-volatile carcinogens -- Action level is determined by comparing the DWEL to the 10^{-4} Lifetime Upperbound Cancer Risk Level, and choosing the lower of the two.

4. Volatile carcinogens -- Action level is determined by comparing 50 percent of the DWEL to the 10^{-4} Lifetime Upperbound Cancer Risk Level, and choosing the lower of the two.

The action level for methylene chloride, for example, is calculated as follows. Methylene chloride is a volatile and a potential human carcinogen (classified as a "B2" under EPA guidelines). The DWEL for methylene chloride equals 1750 ppb and the 10^{-4} Cancer Risk Level equals 48 ppb. The action level is determined by comparing 50 percent of the DWEL, or 875 ppb, to the 10^{-4} Cancer Risk Level, or 48 ppb, and choosing the lower of the two, which is 48 ppb. If at least one residence has methylene chloride levels that exceed 48 ppb at the tap, the site may qualify for removal response.

This model will provide an action level for many of the substances commonly encountered in drinking water at Superfund sites, including many solvents. However, OERR is still working on establishing an appropriate action level for certain substances in the two situations described below. Until action levels are developed, most decisions regarding these substances will be made in OERR. The modifications discussed below have been incorporated into Exhibits 1 and 2.

- The calculated action level for a substance is lower than or equal to the Maximum Contaminant Level (MCL) established under the Safe Drinking Water Act (SDWA). For example, for vinyl chloride, a volatile carcinogen, the calculated action level under this model is 1.5 ppb (1.5 ppb is the 10^{-4} Cancer Risk Level, which is lower than 50% of the DWEL). However, 1.5 ppb is lower than the MCL for vinyl chloride, which is 2 ppb. Given

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*DWEL = Reference Dose (RfD) x $\frac{70 \text{ kg}}{2 \text{ liters/day}}$

the limited scope of the removal program, it may not be appropriate for the removal program to trigger removal action at levels equal to or below the MCL. Therefore, OERR is currently examining whether it would be appropriate to establish an alternate action level for these substances that is above the MCL. Until an action level is established for these substances, removal action may be initiated if contaminant levels exceed the 10-Day Health Advisory. However, if contaminant levels are between the calculated action level and the 10-Day Health Advisory, OERR will review individual site conditions to determine if removal action should be taken.

- The calculated action level is based on the DWEL, but the 10-Day Health Advisory is lower than the DWEL. For most substances, the 10-Day Health Advisory is higher than the DWEL. In some cases, however, the 10-day advisory is lower than the DWEL. (This situation occurs primarily where 10-day exposure data were not available, so the 10-Day Health Advisories were based on other studies.) For example, the action level for barium (a non-volatile non-carcinogen) is based on the DWEL of 1800 ppb, but the 10-Day Health Advisory for barium is 1500 ppb. OERR is currently examining whether it would be appropriate to use the lower 10-day advisories as the removal action level. Until OERR determines if an alternate action level is appropriate for these substances, removal action may be initiated if contaminant levels exceed the DWEL. However, if contaminant levels are between the (lower) 10-Day Health Advisory and the DWEL, OERR will review individual site conditions to determine if removal action should be taken.

Action Level Based on Site-Specific Factors

A significant health threat may exist even though the numeric action level has not been exceeded. A removal action may be initiated if the health risk at a site has been analyzed in detail and the analysis indicates that a serious health risk is present due to site-specific factors. Examples of such factors include evidence that a contaminated groundwater plume is moving, contaminant levels will likely increase (e.g., increased pumping from an aquifer anticipated during summer months), people have been drinking contaminated water for a long period of time, multiple contaminants are likely to result in synergistic effects, there are sensitive members in the population at risk, etc.

With regard to a threat based on future contamination, as a general rule, removal action may be warranted where it can be projected that the numeric action level will be exceeded within 6 months. It is important to note that this 6 month period is not related to the definition of time-critical/non-time-critical removal actions. For example, where contaminant levels will likely exceed the DWEL by a significant amount within 6 months, a time-critical removal action would be appropriate. However, if contaminant levels will only exceed the DWEL by a minimal amount within 6 months, a non-time-critical removal action may be more appropriate. Future threat may therefore warrant either a time-critical or non-time-critical removal action.

When conditions such as those described above are present, the site may qualify for removal action even though a numeric indicator has not been exceeded. Decisions will be made on a case-by-case basis. OERR concurrence must be obtained before approving Action Memoranda for contaminated drinking water sites where the removal action decision is based solely on site-specific factors, even where site cost or time projections do not exceed the statutory limits on removal actions. However, if an emergency exists based on site-specific factors, action may be initiated immediately and OERR should be contacted as soon as possible.

Information Sources

DWELS, as well as RfDs and other relevant standards and advisories, are available to the Regions through the Integrated Risk Information System (IRIS). IRIS can be accessed on-line through E-mail; type in "IRIS" at the prompt rather than "mail." The EPA Office of Drinking Water has also established a Safe Drinking Water Hotline, which can provide information about relevant standards and criteria, and treatment techniques for contaminated drinking water. The Hotline telephone number is 800-426-4791 (in the Washington D.C. area, 382-5533).

Additional advice and information on health assessments at drinking water contamination sites may be obtained from the Agency for Toxic Substances and Disease Registry (ATSDR) and the Superfund Public Health Evaluation Manual (OSWER Directive #9285.4-01). ATSDR may be particularly helpful in providing advice on threats posed by site-specific factors.

OERR should be contacted if a substance of concern does not have a DWEL, RfD, and/or cancer risk level.

Determining the Extent of Action

Once it has been determined that a site qualifies for removal response based on a numeric trigger or site-specific factors, the Region must determine how many residences (including businesses, schools, etc.) will receive alternate water supplies. First, the area of impact should be estimated (both extent and magnitude of the threat) by considering factors such as the hydrogeology of the site, plume movement, and the likelihood of contaminant levels increasing. For sites where removal action is warranted because the numeric trigger has been exceeded at certain residences, the area of impact may be defined to include neighboring residences which are at risk, but do not exceed the numeric trigger.

After the area of impact is defined, the number of residences to be provided with alternate water supplies must be determined by considering cost vs. benefits received, the statutory limits on removal actions, and the availability of other response mechanisms. For example, response to widespread low-level contamination may be too extensive for removal action, and therefore, may be addressed more appropriately by the remedial program. In another case, a contaminated aquifer may affect a public water supply system and private wells, but Superfund resources may only be needed to address the private wells.

Determining the appropriate extent of action therefore involves analysis of both the area of impact and programmatic factors.

Action Levels vs. Cleanup Standards

The numeric action levels established in this guidance are not intended to be used as cleanup standards. The MCL, if available, will generally be the appropriate cleanup standard. (For guidance on the use of MCLs and MCLGs as cleanup standards, see "Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements," July 9, 1987, OSWER Directive 9234.0-05. Final guidance will be issued in the CERCLA Compliance with ARARs Manual.) This means that for any residence provided with an alternate water supply, the goal will generally be to meet MCLs. For example, if carbon filter units will be provided to treat drinking water contaminated with trichloroethylene (TCE), treated water should achieve 5 ppb TCE, the MCL.

Prioritizing Removal Sites

Sites may qualify for removal action under either the numeric indicator or site-specific factor approaches. For the purpose of prioritizing those sites that qualify for removal action, response should be initiated as soon as possible if contaminant levels exceed the 10-Day Health Advisory or site-specific factors otherwise indicate that an emergency exists.

Exemption to the Statutory Limits

To obtain an exemption to the $2 million/12 month limits on removal actions based on a continuing emergency, it will generally not be adequate to show that contaminant levels exceed the numeric action level by some minimal amount. An exemption may be justified if contaminant levels exceed the 10-Day Health Advisory, significantly exceed the numeric action level, or an emergency exists based on site-specific factors. A finding that contaminant levels exceed the numeric action level by a minimal amount may be appropriate, however, in "non-emergency" situations where an exemption is based on the new consistency waiver.

Summary of Policy

A contaminated drinking water site may qualify for removal response if: 1) the numeric action level (based on the DWEL and/or the 10^{-4} Lifetime Upperbound Cancer Risk Level) is exceeded, or 2) site-specific factors otherwise indicate the presence of a serious health threat. In prioritizing those sites that qualify for response under this model, Regions should give priority to sites where contaminant levels exceed the 10-Day Health Advisory or site-specific factors otherwise indicate that an emergency exists.

Exhibit 1: Summary of Action Level Decision Model

Do contaminant levels exceed the NUMERIC action level?

Is the substance a volatile and/or potential human carcinogen?

- Non-volatile non-carcinogens -- Action level equals the DWEL.
- Volatile non-carcinogens -- Action level equals 50% of the DWEL.
- Non-volatile carcinogens -- Action level is determined by comparing the DWEL to the 10^{-4} Lifetime Upperbound Cancer Risk Level, and choosing the lower of the two.
- Volatile carcinogens -- Action level is determined by comparing 50% of the DWEL to the 10^{-4} Lifetime Upperbound Cancer Risk Level, and choosing the lower of the two.

Do either of the two modifications to the numeric action level apply?

Is the numeric action level lower than or equal to the MCL, if available? If yes:

- If contaminant levels are between the numeric action level and the 10-Day Health Advisory, contact OERR to determine appropriate action.
- If contaminant levels exceed the 10-Day Health Advisory, action may be taken if the site otherwise qualifies for removal response.

If the action level is based on the DWEL, is the 10-Day Health Advisory lower than the DWEL? If yes:

- If contaminant levels are between the (lower) 10-Day Health Advisory and the DWEL, contact OERR to determine appropriate action.
- If contaminant levels exceed the DWEL, action may be taken if the site otherwise qualifies for removal response.

If contaminant levels do not exceed the numeric trigger, can the site qualify for removal response based on SITE-SPECIFIC FACTORS?

A site can qualify for removal response if the health risk at a site has been analyzed in detail and the analysis indicates that a serious health risk is present due to site-specific factors.

- ATSDR may be particularly helpful in providing advice on health risk due to site-specific factors.
- OERR concurrence must be obtained before approving Action Memoranda based on site-specific factors, even where the site will not exceed the statutory limits on removal actions.

Exhibit .

REMOVAL NUMERI ION LEVELS

3/87

FOR CONTAMINATED DRINKING WATER SITES

(ug/L)

Chemical	Volatile (Y/N)	EPA Carcinogen Group[a]	MCL	10-Day HA	DWEL[b]	10^{-4} Cancer Risk Level	Removal Action Level
Alachlor	N	B2	None	100	350	15	15
Barium	N	D	1000	1500[c]	1800	NA	1800[d]
Benzene	Y	A	5	235	NA	120	120
Cadmium	N	D	10	43[c]	17	NA	17
Carbofuran	N	E	None	50[c]	175	NA	175[d]
Carbon tetrachloride	Y	B2	5	160	24	27	12
Chlordane	N	B2	None	63	1.6	2.7	1.6
Chlorobenzene	Y	D	None	4300[c]	1505	NA	753
Chromium (total)	N	D	50	1400	168	NA	168
Cyanide	N	D	None	220[c]	770	NA	770[d]
o-Dichlorobenzene	Y	D	None	8930[c]	3115	NA	1558
p-Dichlorobenzene	Y	C	75	10700[c]	3500	175	175
1,2-Dichloroethane	Y	B2	5	740[c]	None	38	38
1,1-Dichloroethylene	Y	C	7	1000[c]	350	None	175
Cis-1,2-Dichloroethylene	Y	D	None	1000[c]	350	NA	175
Trans-1,2-Dichloroethylene	Y	D	None	1430[c]	350	NA	175
Dichloro ane/Methylene chlori	Y	B2	None	1500	1750	48	48

Exhibit .

REMOVAL NUMERI.. ...ION LEVELS

FOR CONTAMINATED DRINKING WATER SITES

(ug/L)

Chemical	Volatile (Y/N)	EPA Carcinogen Group[a]	MCL	10-Day HA	DWEL[b]	10^{-4} Cancer Risk Level	Removal Action Level
Endrin	N	E	0.2	5	1.6	NA	1.6
Ethylbenzene	Y	D	None	3200[c]	3395	NA	1698[d]
Heptachlor	N	B2	None	10	17	7.6	7.6
Lindane	N	C	4	1200	10	None	10
Mercury (inorganic)	N[e]	D	2	1.6[c]	5.5	NA	5.5[f]
Methoxychlor	N	D	100	2000	1750	NA	1750
Methyl ethyl ketone (MEK)	Y	D	None	7500[c]	864	NA	432
Nickel	N	D	None	1000	350	NA	350
Pentachlorophenol (PCP)	Y	D	None	300[c]	1050	NA	525[d]
Styrene	Y	C	None	2000[c]	7000	None	3500[d]
Tetrachloroethylene (PCE)	Y	B2/C	None	2000	500	66	66
Toulene	Y	D	None	3460[c]	12100	NA	6050[d]
Toxaphene	N	B2	5	40	None	3.1	40[g]
1,1,1-Trichloroethane	Y	D	200	35000[c]	1000	NA	500
Trichloroethylene	Y	B2	5	None	257	280	128
Vinyl chloride	Y	A	2	2600	None	1.5	1300[h]
Xylenes (total)	Y	D	None	7800c	2157	NA	1078

Exhibit 2

REMOVAL NUMERIC ACTION LEVELS

9/87

FOR CONTAMINATED DRINKING WATER SITES

(ug/L)

Chemical	Volatile (Y/N)	EPA Carcinogen Group[a]	MCL	10-Day HA	DWEL[b]	10^{-4} Cancer Risk Level	Removal Action Level

[a] Carcinogen group designation is from EPA carcinogen classification guidelines for effects from ingestion.

[b] DWEL = RfD x $\frac{70\ kg}{2\ l/day}$. (Note that the DWEL in health advisory documents produced by EPA's Office of Drinking Water may be slightly different due to rounding.)

[c] Because no suitable studies of appropriate duration were available, these 10-Day Health Advisories were based on Health Advisories of greater or lesser duration, e.g., 1-Day, Longer-term, and Lifetime Health Advisories.

[d] Removal action level is an interim value. OERR is examining whether it would be appropriate to use the lower 10-Day Health Advisory (50% for volatiles) as the action level. Until that time, if contaminant levels levels exceed the action level shown in the table, removal action may be taken. If contaminant levels exceed the 10-day advisory (50% for volatiles), but not the DWEL (50% for volatiles), consult OERR.

[e] Not soluble in water.

[f] Removal action may be initiated if mercury levels exceed the DWEL of 5.5 ug/L. If mercury levels exceed the 10-day advisory of 1.6 ug/L, but not 5.5 ug/L, consult OERR.

[g] Removal action may be initiated immediately if toxaphene levels exceed the 10-Day Health Advisory of 40 ug/L. If toxaphene levels exceed the 10^{-4} Cancer Risk Level of 3.1 ug/L, but not 40 ug/L, consult OERR.

[h] Removal action may be initiated immediately if vinyl chloride levels exceed 1300 ug/L, which is 50% of the 10-Day Health Advisory. If vinyl chloride levels exceed the 10^{-4} Cancer Risk Level of 1.5 ug/l, but not 1300 ug/L, consult OERR.

NA = Not appropriate.

Information on Drinking Water Action Levels

Bruce Engelbert

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 19 1990

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Information on Drinking Water Action Levels

FROM: Timothy Fields, Jr., Director
Emergency Response Division

TO: Superfund Branch Chiefs, Regions I-X
OHM Coordinators, Regions I-X

The purpose of this memorandum is to to provide you with updated information on removal program drinking water action levels, as described in OSWER Directive 9360.1-10. The OSWER Directive will eventually be amended to include this information, but it is being sent to you now to ensure that you receive the data as soon as possible. It is important to note that the drinking water action level is only one of several factors to consider in deciding whether a removal action is appropriate.

- Dichloromethane - Change the 10^{-4} Cancer Risk Level to 480 ppb (not 48), and the removal action level to 480 ppb.

- Alachlor - Change the 10^{-4} Cancer Risk Level to 44 ppb (not 15), and the removal action level to 44 ppb.

- Arsenic - ERD has had several requests about arsenic action levels. At the moment, there is considerable controversy within EPA and the scientific community about the carcinogenicity of arsenic. For now, rather than establishing an official action level, the removal program may consider taking action when arsenic levels exceed 50 ppb (the current MCL), but the Regions should always consult Headquarters for arsenic sites. (You must also consider whether the arsenic is naturally occurring, since SARA prohibits Superfund response to such releases unless it is an emergency and no one else can respond.)

- DBCP - The 10^{-4} Cancer Risk Level for DBCP is 2.5 ppb and the 10-Day Health Advisory is 50 ppb. The Agency is currently working on a proposed MCL for DBCP. The removal action level at this time will be 2.5 ppb, based on the cancer risk value, but it is important to keep in mind that Superfund should not be used to respond to releases that result from the lawful application of pesticides (unless an emergency exists). Many farming areas may show elevated levels of DBCP, but this may have been caused by normal use of the pesticide. Two items related to this are attached: 1) a July 1985 memo that addresses releases from lawfully applied pesticides and 2) a recent memo written by an OSC in Region 9, after consultation with Headquarters, regarding DBCP contamination.

- Vinyl chloride - Many OSCs have been concerned because the action level guidance provides that the Regions should not implement action for vinyl chloride unless concentrations exceed 1300 ppb (50% of the 10-Day Health Advisory). This does not mean, however, that alternate water supplies cannot be provided at lower levels for vinyl chloride. To clarify the current policy for vinyl chloride, the action level for immediate Regional response is 1300 ppb, but Headquarters may authorize action at lower levels. Specifically, Headquarters will consider response if levels exceed 2 ppb, the MCL. In determining whether action is appropriate, Headquarters will consider factors such as the source of the contamination, the scope of the response needed, and the availability of other response mechanisms.

  Headquarters consultation is required for these actions because the action level calculated under the general model (which would equal 1.5 ppb, the 10^{-4} Cancer Risk Level) is lower than the MCL of 2 ppb. The removal program needs to be careful about setting precedents for taking actions at or below the MCL, because any public water supply system in the country could then potentially qualify for removal response if contaminant concentrations exceeded the MCL. In general, public water supply systems are responsible for ensuring that their systems comply with MCLs.

- Chloroform - The DWEL is 350 ppb, the 10^{-4} Cancer Risk Level is 600 ppb, and the removal action level is 175 ppb (50% of the DWEL).

- List of removal alternate water supply sites - ERD recently sent the Regions a table prepared by TAT listing sites where the removal program has provided alternate water supplies in the past. Please change the following information on the Region 5 Main Street Wellfield site: the number of residences affected is 301, not 40,000, and the methods used include bottled water, carbon filtration, and water main connection in addition to air stripping.

- Risk additivity - At the recent "Removal Program Managers" meeting in Washington, D.C., ERD was requested to send the Regions information about adding risks from multiple chemicals in drinking water. In trying to collect this information from EPA sources, we found that there was some inconsistency in risk additivity policy within the Agency. The Superfund Toxics Integration Branch (TIB) will address this issue when they revise the Superfund Public Health Evaluation Manual this year. In the interim, risks from multiple contaminants in the drinking water should not be routinely summed in establishing action levels. However, if the Region is particularly concerned about possible synergistic effects or effects on the same target organ from the contaminants present, the Regions may contact the Superfund TIB for further assistance (FTS 475-9486). Information on health effects from various chemicals is available from the Integrated Risk Information System (IRIS).

If you have any questions regarding this information, you may contact Jean Schumann of my staff at FTS 382-4671.

Attachments

cc: Mark McClannahan, ATSDR
Hans Crump
Paul Nadeau
Dave Bennett
John Riley
Bruce Engelbert
Joe LaFornara

Policy on Flood Plains and Wetlands Assessment

03/19/87 United States Environmental Protection Agency
Washington, D.C. 20460

EPA OSWER Directive Initiation Request

1. Directive Number: 9280.0-02

2. Originator Information

Name of Contact Person	Mail Code	Office	Telephone Number
SMITH		OERR/PAS	382-3300

3. Title
POLICY ON FLOOD PLAINS AND WETLANDS ASSESSMENTS

4. Summary of Directive (include brief statement of purpose)

Discusses situations that require preparation of a flood plains or wetlands assessment, and the factors which should be considered in preparing an assessment for response actions undertaken pursuant to section 104 or 106 of CERCLA.
(8/85, 12 pp)

Supplements
9280.0-1.

5. Keywords
SUPERFUND, CERCLA, REMEDIAL PROGRAM, FLOOD PLAINS MANAGEMENT

6a. Does this Directive Supercede Previous Directive(s)? [ ] yes [X] No What directive (number, title)

b. Does it Supplement Previous Directives(s)? [X] yes [ ] No What directive (number, title)
9280.0-01

7. Draft Level
[ ] A - Signed by AA/DAA [ ] B - Signed by Office Director [ ] C - For Review & Comment [ ] In Development

This Request Meets OSWER Directives System Format

8. Signature of Lead Office Directives Coordinator	Date
9. Name and Title of Approving Official	Date
HEDEMAN/LUCERO	08/06/85

OSWER OSWER OSWER
DIRECTIVE DIRECTIVE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG -8 1985

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

OSWER Directive 9280.0-02

SUBJECT: Policy on Floodplains and Wetland Assessments for CERCLA Actions

FROM: William N. Hedeman, Jr., Director
Office of Emergency and Remedial Response
Gene Lucero, Director
Office of Waste Programs Enforcement

TO: Toxic and Waste Management Division Directors
Regions I-X

Response to releases of hazardous substances is often affected by floodplain and wetland issues. Under this policy Superfund actions must meet the substantive requirements of the Floodplain Management Executive Order (E.O. 11988), and the Protection of Wetlands Executive Order (E.O. 11990) (see attached), and Appendix A of 40 CFR Part 6, entitled Statement of Procedures on Floodplain Management and Wetland Protection. The purpose of Appendix A of 40 CFR Part 6 is to set forth EPA's policy and guidance for carrying out the provisions of Executive Orders 11988 and 11990. This memo discusses situations that require preparation of a floodplains or wetlands assessment, and the factors which should be considered in preparing an assessment, for response actions undertaken pursuant to section 104 or 106 of CERCLA.

For removal actions, the on-scene coordinator (OSC) must consider, to the extent practicable, taking into account the exigencies of the situation, the effect the response action will have on floodplains and wetlands. For remedial actions, a floodplain/wetlands assessment must be incorporated into the analysis conducted during the planning of the remedial action.

I. BACKGROUND

A. Floodplains

Floodplains are relatively flat areas or lowlands adjoining the channel of a river, stream or water course which have been or may be covered by floodwater. A flood is a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland and/or tidal waters and/or

the unusual and rapid accumulation or runoff of surface waters from any source. A reference to a floodplain should be accompanied by a modifier indicating the level of flooding, e.g., 100-year floodplain (one percent chance of flooding in any year).

Executive Order 11988 - Floodplain Management

Executive Order 11988 requires Federal agencies carrying out their responsibilities to take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains. To do this, Federal agencies must evaluate the potential effects of any actions they may take in a floodplain to ensure that their planning programs and budget requests reflect consideration of flood hazards and floodplain management, including the restoration and preservation of such land areas as natural undeveloped floodplains. This order emphasizes the importance of evaluating alternatives to avoid effects and incompatible development in the floodplains, of minimizing the potential harm to floodplains if the only practicable alternative requires siting an action in a floodplain and providing early and adequate opportunities for public review of plans and proposals involving actions in floodplains.

B. Wetlands

Wetlands are land areas which, because of their frequent inundation by surface or ground water, can support vegetative or aquatic life that requires saturated soil conditions. Wetlands generally include but are not limited to swamps, marshes, bogs and similar areas such as sloughs, pot holes, wet meadows, river overflows, mud flats and natural ponds.

Executive Order 11990 - Protection of Wetlands

Executive Order 11990 requires Federal agencies in carrying out their responsibilities to take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. The order emphasizes the importance of avoiding undertaking new construction located in wetlands unless there is no practicable alternative to that construction, minimizing the harm to wetlands if the only practicable alternative requires construction in the wetland, and providing early and adequate opportunities for public review of plans and proposals involving new construction in wetlands.

C. Statement of Procedures on Floodplain Management and Wetlands Protection - Appendix A to 40 CFR Part 6

EPA has promulgated regulations implementing procedures on the National Environmental Policy Act (NEPA) at 40 CFR Part 6. Appendix A of Part 6 (Appendix A) deals with procedures

on Floodplain Management and Wetland Protection. The purpose of Appendix A is to set forth Agency policy and guidance for carrying out the provisions of Executive Orders 11988 and 11990.

Appendix A provides that it is the intent of these Executive orders that, wherever possible, Federal agencies implement the floodplains/wetlands requirements through existing procedures, such as those internal procedures established to implement NEPA. In those instances where the environmental impacts of a proposed action are not significant enough to require an environmental impact statement (EIS) pursuant to section 102(2)(C) of NEPA, or where programs are not subject to the requirements of NEPA, alternative but equivalent floodplain/wetlands evaluation and public comment and notice procedures must be established. Furthermore, Appendix A prescribes the requirements for floodplain/wetlands review of proposed EPA actions.

II. POLICY

A. Removal Actions

Removal actions are exempt from compliance with section 102(2)(C) of NEPA because there is a fundamental conflict in statutory purpose between EIS requirements and EPA's removal authority. This conflict arises from the fact that it would be virtually impossible for EPA to follow the lengthy EIS process and at the same time expeditiously undertake removal actions.

1. Floodplain/Wetland Assessment

However, a floodplains/wetlands evaluation required by Appendix A would not be as lengthy as the EIS process. Therefore, the OSC or lead Agency should attempt to incorporate a floodplains/wetlands assessment into the preliminary assessment for the removal action. The floodplains/wetlands assessment must consider the following: whether or not the action will be located in or affect a floodplain or wetland; the impact of the action on the floodplain or wetland; the alternatives available; and measures to minimize potential harm to the floodplain or wetland if there is no practicable alternative to locating in or affecting the floodplain or wetland [for a more detailed explanation of these factors see Section III, Remedial Actions, of this policy]. However, because removal actions often involve situations requiring expeditious action to protect public health, welfare or the environment, it may not always be feasible to perform a floodplains/wetlands assessment. In those circumstances where a floodplain/wetland assessment cannot be performed, the OSC report or other

documents should specify the reasons. At the OSC's discretion, considering the exigencies of the situation, the OSC should consult with the Regional 404 Staff where wetlands/floodplains are involved or suspected to be involved.

For all lead agency removal actions where a floodplain/wetland assessment is performed and is proposed to be in or affecting a floodplain/wetland the OSC shall document the decision in the OSC report. The decision shall be accompanied by a Statement of Findings, not to exceed three pages that includes (i) the reasons why the proposed action must be located in or affects the floodplain/wetlands; (ii) a description of significant facts considered in making the decision to locate in or to affect the floodplain or wetland including alternative sites and actions; (iii) a statement indicating whether the proposed action conforms to applicable State or local floodplain/wetland protection standards; (iv) a description of the steps taken to design or modify the proposed action to minimize potential harm to or within the floodplain or wetland; and (v) a statement indicating how the proposed action affects the natural or beneficial values of the floodplain or wetland.

2. Opportunity for Citizen Comment

Appendix A has two public notice requirements. One is public notice when it is apparent that a proposed or potential agency action is likely to impact a floodplain or wetland and the other is public notice of the selected decision.

Because of the expeditious nature of removal actions extending 45 days or less, no formal community relations plan must be developed. Instead, a spokesperson will be designated by the lead agency to inform the community of actions being taken, to respond to inquiries and to provide information concerning the release. If the exigencies of the situation permit the performance of a floodplain/wetland assessment, the assessment must be included in the spokesperson's presentation. This will provide early public notice as required by Appendix A.

The OSC report, which contains the selected decision or the reasons why a floodplain/wetland assessment cannot be performed, must also be made available to the public. The OSC report will provide public notice of the selected decision as required by Appendix A.

If the required removal action extends over 45 days, a formal community relations plan must be developed. If the exigencies of the situation allow for a floodplain/wetland assessment, this assessment must be made available for a three week public comment period. This will provide early public notice and an opportunity for participation in the decisionmaking process as required by Appendix A.

If it is known that a floodplain/wetland assessment will be conducted at the time of the preparation of the Community Relations Plan than the public comment period must be noted in the plan. The OSC report, which contains the selected decision or the reasons why a floodplain/wetland assessment cannot be done, is also required for the "longer" removals and must be made available to the public. This will provide public notice of the selected decision as required by Appendix A.

B. Remedial Actions

An EIS is unnecessary for remedial actions provided in that EPA meets the standards for a functional equivalent exception to the EIS requirements of section 102(2)(C) of NEPA. To comply with the functional equivalent exception, the agency must have expertise in environmental matters and meet the following criteria. First, the agency's authorizing statute must provide substantive and procedural standards that ensure full and adequate consideration of environmental issues. Second, the agency must afford an opportunity for public participation in the evaluation of environmental factors prior to arriving at a final decision.

1. Consideration of Environmental Issues

Remedial actions satisfy the first criterion for a functional equivalent exception because of the mandate for environmental assessment contained in section 104 of CERCLA and the procedural safeguards developed by EPA for the remedial planning process. The language in section 104, that directs that remedial actions be necessary to protect public health, welfare, and the environment, establishes a standard mandating consideration of environmental effects. Moreover, the procedures set forth in the National Contingency Plan (NCP) establish a process for conducting an analysis during the planning of remedial actions that is similar in content to the evaluation underlying an EIS. This analysis is contained in the remedial investigation/feasibility study (RI/FS). Therefore, for a remedial action to comply with the alternative but equivalent floodplain/wetland evaluation contained in Appendix A of 40 CFR Part 6, a floodplain/wetlands assessment must be incorporated into the analysis conducted during the planning of remedial actions which is established by the NCP.

During the scoping of remedial response actions, the Remedial Project Manager (RPM) or the lead Agency in conjunction with Regional 404 staff, should identify any floodplain or wetlands located within the site area or that could be affected by the response action. If the area is predominantly privately owned, the RPM or the lead agency shall consult with the Federal Insurance Administration of the Federal Emergency Management Agency which has two maps that will be useful in identifying floodplains. The Flood Insurance Rate Map shows the boundaries and elevations of the 100 and 500 years floodplains. The other map, Flood Hazard Boundary Map, shows the appropriate area of the 100 years

zone. A copy of these maps can be obtained by calling 1-800-638-6620. For areas predominately State or Federally owned, consult with the controlling Federal or State agency. Maps are available for some wetland areas from the Fish and Wildlife Service (National Wetlands Inventory Maps) or from local and State planning agencies. Also, the Regional 404 staff has access to the most up to date wetlands area information.

If there are no floodplains/wetlands located within the site area or that could be affected by a response action, the feasibility study should so state, and the response action may proceed without further consideration of the procedures set forth below. However, if the site is located within a floodplain/wetland or if the proposed remedial action would affect a floodplain/wetland, the RPM or the lead agency must conduct a floodplain/wetland assessment which will be integrated into the feasibility study. In the RPM's discretion, the RPM should consult with the Regional 404 staff in cases that require a floodplains/wetlands assessment. Floodplain/Wetland assessments shall consist of a description of the proposed action, a discussion of its effect on the floodplain/wetlands, a description of the alternatives considered and their effects on the floodplains and wetlands, and measures to minimize potential harm to the floodplain/ wetland if there is no practicable alternative to locating in or affecting floodplain/wetlands.

a. Floodplain Assessment Of Alternatives

In assessing the alternatives and their effects on the floodplain and floodplain protection, the RPM or lead agency should consider such factors as environmental effects, community welfare, cost and technology. All possible alternatives must be considered, including the no action alternative. If one or more of the alternatives will be located in a floodplain, those alternatives may not be selected unless a determination is made that no practicable alternatives exists outside the floodplain.

If no practicable alternatives exist outside the floodplain, and the RPM or lead agency has determined or proposes to allow a remedial action to be located in a floodplain, then the RPM or lead agency shall act to minimize potential harm or avoid adverse effects to the floodplain. This includes acting to restore and preserve the natural and beneficial values of floodplains. The benefits of preserving floodplains in their natural or relatively undisturbed state include not only reduction of flood hazards, but maintenance of water quality standards, replenishment of ground water, soil conservation, the fostering of fish, wildlife and plant resources and the provision of recreational areas.

The following are possible methods for minimizing potenti harm to floodplains. This list, however, does not preclude th RPM or lead agency from using other measures that minimize potential harm or avoid adverse effects to floodplains.

1. Use minimum grading requirements.
2. Return the site to natural contours.
3. Maintain floodplain vegetation to reduce sedimentation.
4. Regulate methods used for grading, filling, soil removal and replacement to reduce sedimentation.
5. Require topsoil protection program.
6. Raise the site above the floodplain.
7. Construct new structures or facilities in floodplains in accordance with accepted floodproofing and other flood protection measures and elevate structures above the base flood level rather than filling inland, wherever practicable.

b. Wetland Assessment Of Alternatives

In assessing the alternatives and their effects on wetlands, the RPM or lead agency in conjunction with the Regional 404 staff, should consider such factors as environmental effects, community welfare, cost and technology. All possible alternatives must be considered, including the no action alternative If one or more of the alternatives will be located in a wetland, those alternatives may not be selected unless a determination is made that no practicable alternative exists outside the wetlands.

If no practicable alternative exists outside the wetlands, and the RPM or lead agency has determined or proposes to allow a remedial action to be located in a wetlands, then the RPM or lead agency shall act to minimize potential harm or to avoid adverse effects to the wetlands. This includes action to allow restoration and preservation of the natural and beneficial values of the wetlands. The benefits of preserving wetlands in their natural or relatively undisturbed state include the control of flood and storm hazards, maintenance of water quality standards and water supply, maintenance of natural systems, natural pollution abatement, conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber and food resources, and other uses of wetlands in the public interest including recreational, scientific and cultural uses. All impacts caused by an action occurring in a wetland must be evaluated and mitigated according to the EPA mitigation policy (under authority of the Clean Water Act section 404) in effect at the time of the proposed action, including the effects on the wetlands natural or beneficial value.

C. Documentation of Decision

For all lead agency response actions proposed to be in or affecting a floodplain/wetland the RPM or lead agency shall document their decision in the Record of Decision (ROD). The decision shall be accompanied by a Statement of Findings which may be included in the ROD support document or attached as a separate appendix. This statement will not exceed three pages and will include: (i) The reasons why the proposed action must be located in or affect the floodplain or wetlands; (ii) a description

of significant facts considered in making the decision to locate in or affect the floodplain or wetlands including alternative sites and actions; (iii) a statement indicating whether the proposed action conforms to applicable State or local floodplain/wetland protection standards; (iv) a description of the steps taken to design or modify the proposed act to minimize potential harm to or within the floodplain or wetlands; and (v) a statement indicating how the proposed action affects the natural or beneficial values of the floodplain or wetlands.

2. Opportunity for Response to Citizen Concerns

Remedial actions satisfy the second criterion for a functional equivalent exception because current Agency procedures for public comment on remedial actions and the proposed amendments to the NCP afford the public an ample opportunity for participation in the evaluation of environmental factors prior to arriving at a final decision. The proposed amendments to the NCP and the current Superfund Community Relations Policy provide for a minimum 21-day comment period on the feasibility study which outlines alternative remedial measures prior to selection of the final remedial response. This public involvement in the remedial planning process would enable remedial actions to meet the public participation requirement for the functional equivalent exception to NEPA.

Appendix A, however, appears to require two further public notice requirements. One is any early public notice when it is apparent that a proposed or potential agency action is likely to impact a floodplain or wetlands and the other is public notice of the selected decision.

Current Agency policy suggests that a fact sheet summarizing the feasibility study response alternatives and other issues, be provided to the public 2 weeks prior to the minimum 3 week public comment period for the feasibility study. The fact sheet will include a statement explaining whether a proposed or potential remedial action is likely to impact a floodplain or wetlands. This will provide early public notice as required by Appendix A.

Concerning the public notice of a selected decision, the Agency suggests that a public notice and updated fact sheet summarizing the ROD be provided to the public. In addition, when the ROD is signed, it becomes a public document. The public notice, fact sheet and the availability of the signed ROD in the information repositories will provide public notice of the selected decision as required by Appendix A. The updated fact sheet will contain the alternative selected, any effects the response will have on floodplain/wetlands, and the Statement of Findings described in the Documentation of Decision Section above.

In addition, the Agency suggests that public meetings and other community relations activities be held as specified in the community relations plan.

D. Summary

1. Removal Actions

For removal actions, EPA's policy is to pursue actions that will meet applicable or relevant standards, and criteria of the other Federal environmental laws that deal with floodplains/wetlands to the maximum extent practicable, considering the exigencies of the situation.

2. Remedial Actions

For remedial actions, EPA's policy is to pursue remedies that attain or exceed applicable and relevant standards of other Federal environmental laws that deal with floodplains/wetlands, unless specific circumstances exist as referenced in section 300.68(i)(5) of the NCP. CERCLA procedural and administrative requirements will be modified to provide safeguards similar to those provided under other laws. Applications for and receipt of permits is not required for on-site response actions taken under the Fund-financed or enforcement authorities of CERCLA (i.e., Clean Water Act 404 permits are not required).

III. COMPLIANCE WITH OTHER FLOODPLAIN/WETLAND LAWS

The Agency has concluded that cleanups pursuant to sections 104 and 106 of CERCLA should comply with other Federal environmental standards, as a matter of policy, but not as a matter of law, except in a limited set of circumstances. For example, Section 10 of the Rivers and Harbors Act of 1899 and section 404 of the Clean Water Act apply to dredge and fill activities and must be complied with except in very limited circumstances such as fund balancing. (See "CERCLA Compliance with other Environmental Statutes" 50 FR 5928). However, permits are not required for these actions. This policy has also been proposed in amendments to the NCP (50 FR 5862). In addition, Federal public health and environmental criteria and advisories and State standards shall be considered, with appropriate adjustment, in determining the appropriate response action. Therefore, the Agency should also consider State and local floodplain/wetland protection standards and other Federal guidance. If the Agency does not use applicable State and local standards, the reason why should be documented in the Record of Decision or the Statement of Findings prepared by the OSC.

IV. IMPLEMENTATION

This policy will apply to all removals and remedial investigations and feasibility studies that are initiated after August 1, 1985.

CERCLA Compliance with Other Environmental Statutes

United States
Environmental Protection
Agency

Office of
Solid Waste and
Emergency Response

EPA

DIRECTIVE NUMBER: 9234.0-02

TITLE: CERCLA Compliance with Other Environmental Statutes

APPROVAL DATE: October 2, 1985

EFFECTIVE DATE: October 2, 1985

ORIGINATING OFFICE: OERR/PAS

xx☑ **FINAL**

☐ **DRAFT**

STATUS:

REFERENCE (other documents):

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OCT - 2 1985

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OSWER DIRECTIVE 9234.0-2

MEMORANDUM

SUBJECT: CERCLA Compliance With Other Environmental Statutes

FROM: J. Winston Porter
Assistant Administrator

TO: Regional Administrator
Regions I-X

This memorandum sets forth the Environmental Protection Agency (EPA) policy on the applicability of the standards, criteria, advisories, and guidance of other State and Federal environmental and public health statutes to actions taken pursuant to sections 104 and 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). This policy addresses considerations for on-site and off-site actions taken under CERCLA.

I. Discussion

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the process for determining appropriate removal and/or remedial actions at Superfund sites. In the course of this process, EPA will give primary consideration to the selection of those response actions that are effective in preventing or, where prevention is not practicable, minimizing the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health, welfare, or the environment. As a general rule, this can be accomplished by pursuing remedies that attain or exceed the requirements of applicable or relevant and appropriate Federal public health or environmental laws. However, because of unique circumstances at particular sites, there may be alternatives that do not meet the standards of other laws, but that still provide protection of public health, welfare, and the environment.

Although response actions that prevent hazardous substances from migrating into the environment are seen as the most effective under CERCLA, actions which minimize migration must also be considered since CERCLA primarily addresses inadequate past disposal practices and resulting unique site conditions. At certain sites, it may be technically impracti environmentally unacceptable, or excessively costly to implem a response action that prevents migration or restores the site to its original, uncontaminated condition.

II. Policy

Section 104 of CERCLA requires that for off-site remedial actions, storage, destruction, treatment or secure disposition, be in compliance with subtitle C of the Resource Conservation and Recovery Act (RCRA). CERCLA is silent, however, concerning the requirements of other laws with regard to all other response actions taken pursuant to sections 104 and 106.

As a general rule, the Agency's policy is to attain or exceed applicable or relevant and appropriate Federal environmental and public health requirements in CERCLA response actions unless one of the specifically enumerated situations is present. Where such a situation is present and a requirement is not followed, the Agency must document and explain the reasons in the decision documents. Other Federal criteria, advisories, guidances, and State standards also will be considered and may be used in developing remedial alternatives, with adjustments for site-specific circumstances. If EPA does not use, or uses and adjusts any pertinent standards in this category, EPA will fully document the reasons why in the decision documents.

A. On-site Response Actions

(1) For removal actions, EPA's policy is to pursue actions that will meet applicable or relevant and appropriate requirements of other Federal environmental and public health laws to the maximum extent practicable, considering the exigencies of the situation.

(2) For remedial actions, EPA's policy is to pursue remedies that attain or exceed applicable or relevant and appropriate requirements of other Federal public health and environmental laws, unless the specific circumstances identified below exist.

CERCLA procedural and administrative requirements will be modified to provide safeguards similar to those provided under other laws. Application for and receipt of permits is not required for on-site response actions taken under the Fund-financed or enforcement authorities of CERCLA.

B. Off-Site Response Actions

CERCLA removal and remedial activities that involve the removal of hazardous substances from a CERCLA site to off-site facilities for proper storage, treatment or disposal must be in compliance with all applicable or relevant standards of Federal environmental and public health statutes.

Off-site facilities that are used for storage, treatment, or disposal of Superfund wastes must have all appropriate permits or authorizations.

If the facility or process that is being considered for receipt of the Superfund wastes has not been permitted or authorized, the State or responsible party will be required to obtain all appropriate permits. Furthermore, as stated in the Agency's off-site policy memorandum, "Procedures for Planning and Implementing Off-Site Response Actions", May 6, 1985, barring several exceptions enumerated in that memorandum, no CERCLA hazardous substances shall be taken off-site to a unit in a RCRA facility if the receiving Region's Administrator determines that the unit has significant RCRA violations or other environmental conditions that affect the satisfactory operation of the facility. A State's responsibility for obtaining any appropriate Federal, State or local permits (e.g., RCRA, TSCA, NPDES, UIC, Clean Air, etc.) will be specified in a contract or cooperative agreement with the State as part of its assurances required under section 104(c) of CERCLA.

III. Other Laws or Guidances That May Be Used to Determine the Appropriate Extent of Response Actions

Federal and State environmental and public health requirements, criteria, guidance and advisories fall into two categories:

- Federal requirements that are applicable or relevant and appropriate,
- Other Federal criteria, advisories, guidances, and State standards to be considered.

An initial list of both categories is attached.

A. Applicable or Relevant and Appropriate Federal Requirements

"Applicable" requirements are those Federal requirements that would be legally applicable, whether directly, or as incorporated by a federally authorized State program, if the response actions were not undertaken pursuant to CERCLA section 104 or 106.

"Relevant and Appropriate" requirements are those Federal requirements that, while not "applicable", are designed to apply to problems sufficiently similar to those encountered at CERCLA sites that their application is appropriate. Requirements may be relevant and appropriate if they would be "applicable" but for jurisdictional restrictions associated with the requirement.

For example, the RCRA 40 CFR Part 264 Subpart F Ground-Water Protection Standards would be applicable to the management or cleanup of hazardous wastes in ground water from hazardous waste management facilities if such actions

were not taken pursuant to CERCLA sections 104 or 106. Yet RCRA Subtitle C regulations, while not applicable to hazardous wastes disposed of prior to the November 19, 1980, effective date of those regulations, could be relevant to CERCLA response actions regardless of when the wastes were disposed of or managed.

B. Other Federal Criteria, Advisories, Guidances and State Standards to Be Considered

This category includes other standards, criteria, advisories and guidance that may be useful in developing Superfund remedies. These criteria, advisories and guidances were developed by EPA, other Federal agencies and the States. The concepts and data underlying these requirements may be used at Superfund sites in an appropriate way.

IV. Implementation

A. Removal Actions

For both on and off-site Fund-financed removal actions, the lead agency should consult with the Regional Response Team within the framework of the Regional Contingency Plan to determine the most effective action.

(1) On-site

For on-site removal actions, the lead agency shall, as appropriate, attempt to attain or exceed all Federal applicable or relevant and appropriate public health or environmental requirements. The lead agency also shall, as appropriate, consider other Federal criteria, guidances, and advisories as well as State standards in formulating the removal action. However, because removal actions often involve situations requiring expeditious action to protect public health, welfare, or the environment, it may not always be feasible to fully meet them. In those circumstances where they cannot be attained, the decision documents, OSC reports, or other documents should specify the reasons.

(2) Off-site

Off-site facilities that are used for storage, treatment, or disposal of Superfund wastes must have all appropriate permits or authorizations and, barring certain exceptions, enumerated in the off-site policy, no hazardous substance shall be taken off-site to a unit in a RCRA facility if the Region determines that the unit has significant RCRA violations or other environmental conditions that affect the satisfactory operation of the facility.

B. Remedial Actions

1. Presentation and Analysis of Alternatives

To the extent that it is both possible and appropriate, at least one remedial alternative shall be developed as part of the feasibility study (FS) in each of the following categories:

(a) Alternatives for treatment or disposal in an off-site facility, as appropriate;[1]

(b) Alternatives that attain applicable and relevant and appropriate Federal public health or environmental requirements;

(c) As appropriate, alternatives that exceed applicable and relevant and appropriate public health or environmental requirements[2];

(d) As appropriate, alternatives that do not attain applicable or relevant and appropriate public health or environmental requirements but will reduce the likelihood of present or future threat from the hazardous substances and that provide significant protection to public health, welfare and environment. This must include an alternative that closely approaches the level of protection provided by the applicable or relevant and appropriate requirements;

(e) A no action alternative.

2. Selection of Remedy

The decisionmaker will consider all of the alternatives arrayed in the feasibility study and will give primary consideration to remedies that attain or exceed applicable or relevant and appropriate Federal public health and environmental requirements. Where the selected remedy involves an EPA standard, criterion, or advisory, the decisionmaker will ensure appropriate coordination with affected EPA programs.

In appropriate cases, the decisionmaker may select a remedial action that includes both on- and off-site components.

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[1] These alternatives must be consistent with EPA's May 6, 1985 off-site policy, "Procedures for Planning and Implementing Off-Site Response Actions". In some cases, off-site disposal or treatment may not be feasible and this alternative may be eliminated during initial screening of alternatives. The decision documents should reflect this screening.

[2] For instance, the Agency might choose incineration as an alternative that exceeds what would be required by applicable standards because it is a more permanent and reliable solution than RCRA closure standards for land disposal facilities.

The decisionmaker may select an alternative that does not attain applicable or relevant standards in one of the five following circumstances:

(a) Interim Remedy - Where the selected alternative is not the final remedy and will become part of a more comprehensive remedy, the lead agency may select an interim remedy;

(b) Fund-Balancing - For Fund-financed responses only, the need for protection of public health, welfare and the environment at the facility under consideration for all of the alternatives that attain or exceed applicable or relevant and appropriate Federal requirements is, considering the amount of money available in the Fund, outweighed by the need for action at other sites that may present a threat to public health or welfare or the environment. In the event of Fund balancing, the lead agency shall select the alternative which most closely approaches the level of protection provided by applicable or relevant and appropriate Federal requirements, considering the specific Fund-balanced sum of money available for the immediate facility. Fund-balancing is not a consideration in determining the appropriate extent of remedy when the response will be performed by a potentially responsible party;

(c) Technical Impracticality - Where no alternative that attains or exceeds applicable or relevant and appropriate Federal public health or environmental requirements is technically practical to implement, the lead agency shall select the alternative that most closely approaches the level of protection provided by the applicable or relevant and appropriate requirements, and which is reasonable to implement from an engineering perspective;

(d) Unacceptable Environmental Impacts - Where all the alternatives that attain or exceed Federal public health or environmental requirements, if implemented, will result in significant adverse environmental impacts, the lead agency shall select the alternative that most closely approaches the level of protection provided by applicable or relevant and appropriate requirements, without resulting in significant adverse environmental impacts; or

(e) Overriding Public Interest Related to Enforcement - Where the remedy is to be carried out pursuant to CERCLA section 106, the Fund is unavailable, there is a strong public interest in expedited cleanup, and the litigation probably would not result in the desired remedy, the lead agency will select the alternative that most closely approaches applicable or relevant and appropriate Federal public health and environmental statutes in light of the need to invoke the exception.

Where one of these situations is present, the decision-maker may select an alternative which does not attain or exceed applicable or relevant and appropriate Federal public health or environmental requirements, yet still provides protection of the public health and welfare and the environment. The basis for not meeting the requirements must be fully documented and explained in the appropriate decision documents. The Agency anticipates that most final CERCLA remedial actions will attain or exceed applicable or relevant and appropriate public health or environmental requirements.

Other Federal criteria, advisories, guidances, and State standards also will be considered and may be used in developing remedial alternatives, with appropriate adjustments for site specific circumstances. If EPA does not use, or uses and adjusts any pertinent standards in this category, EPA will fully document the reasons why in the decision documents.

For Fund-financed actions, where State standards are part of the cost-effective remedy, the Fund will pay to attain those standards. Where the cost-effective remedy does not include those State standards, the State may pay the difference to attain them.

3. Administrative and Procedural Aspects

The following modifications will be made to the Superfund community relations program to ensure that it provides a similar level of public involvement to that provided by the permitting programs of other environmental laws:

- A fact sheet should be included with the public notice and feasibility study which is provided to the public 2 weeks before the 3 week public comment period. The fact sheet will clearly summarize the feasibility study response alternatives and other issues, including which alternatives attain or exceed Federal public health and environmental requirements. For those alternatives that do not attain applicable or relevant and appropriate requirements of other public health and environmental laws, the fact sheet shall identify how they do not attain the requirements and explain how they nonetheless meet the goals of CERCLA. The public notice should include a timetable in which a decision will be reached, any tentative determinations which the Agency has made, the location where relevant documents can be obtained, identification of community involvement opportunities, the name of an Agency contact, and other appropriate information.

- A public notice and updated fact sheet should be prepared upon (1) Agency selection of the final response action and (2) completion of the final engineering design. Prior to selecting the final engineering design, the Agency may hold a public meeting to inform the public of the design alternatives and to solicit comments.

- If a remedy is identified that is materially different from those proposed during the feasibility study public comment period, a new 3 week public comment period may be required prior to amending the Record of Decision, taking into consideration the features of the alternatives addressed in the public comment period.

The CERCLA enforcement community relations program will also be modified to provide for an enhanced public participation program for both consent decrees and administrative orders. This program will be substantially equivalent to the revised program for Fund-financed actions. Furthermore, consent decrees and administrative orders will incorporate administrative requirements (i. e. recordkeeping, monitoring) similar to those mandated by other environmental programs.

V. Applicability of Policy

This policy applies to two situations:

- a site-specific FS has not yet been initiated; the FS must fully comply with this policy.
- the FS has been initiated, but the remedy has not yet been selected; the requirements of this policy shall be incorporated into the FS and Record of Decision (ROD) as practicable.

This policy does not apply to RODs signed before February 12, 1985, the date of proposal of this policy.

If you have any questions or comments, please contact James Lounsbury, Director, Policy Analysis Staff (202 382-2182) or Stephen M. Smith of his staff (202 382-2200).

Attachment

POTENTIALLY APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

1. EPA's Office of Solid Waste administers, inter alia, the Resource Conservation and Recovery Act of 1976, as amended (Pub. L. 94-580, 90 Stat 95, 42 U.S.C. 6901 et seq.). Potentially applicable or relevant requirements pursuant to that Act are:

a. Open Dump Criteria - Pursuant to RCRA Subtitle D criteria for classification of solid waste disposal facilities (40 CFR Part 257).

Note: Only relevant to nonhazardous wastes.

b. In most situations Superfund wastes will be handled in accordance with RCRA Subtitle C requirements governing standards for owners and operators of hazardous waste treatment, storage, and disposal facilities: 40 CFR Part 264, for permitted facilities, and 40 CFR Part 265, for interim status facilities.

- Ground Water Protection (40 CFR 264.90-264.109).
- Ground-Water Monitoring (40 CFR 265.90-265.94).
- Closure and Post Closure (40 CFR 264.110-264.120, 265.110-265.112).
- Containers (40 CFR 264.170-264.178, 265.170-265.177).
- Tanks (40 CFR 264.190-264.200, 265.190-265.199).
- Surface Impoundments (40 CFR 264.220-264.249, 265.220-265.230).
- Waste Piles (40 CFR 264.250-264.269, 265.250-265.258)

- Land Treatment (40 CFR 264.270-264.299, 265.270-265.282).
- Landfills (40 CFR 264.300-264.339, 265.300-265.316).
- Incinerators (40 CFR 264.340-264.999, 265.340-265.369).
- Dioxin-containing Wastes, (50 FR 1978). Includes the the final rule for the listing of dioxin containing waste.

2. EPA's Office of Water administers several potentially applicable or relevant and appropriate statutes and regulations issued thereunder:

   a. Section 14.2 of the Public Health Service Act as amended by the Safe Drinking Water Act as amended (Pub. L. 93-523, 88 Stat 1660, 42 U.S.C. 300f et seq.)

      - Maximum Contaminant Levels (for all sources of drinking water exposure). (40 CFR 141.11-141.16)
      - Underground Injection Control Regulations. (40 CFR Parts 144, 145, 146, and 147)

   b. Clean Water Act as amended (Pub. L. 92-500, 86 Stat 816, 33 U.S.C. 1251 et. seq.)

      - Requirements established pursuant to sections 301, 302, 303 (including State water quality standards), 306, 307, (including Federal pretreatment requirements for discharge into a publicly owned treatment works), and 403 of the Clean Water Act. (40 CFR Parts 131, 400-469)

c. Marine Protection, Research, and Sanctuaries Act (33 U.S.C. 1401).

- Incineration at sea requirements. (40 CFR Part 220-225, 227, 228. See also 40 CFR 125.120-125.124)

3. EPA's Office of Pesticides and Toxic Substances

Toxic Substances Control Act (15 U.S.C. 2601).

- PCB Requirements Generally: 40 CFR Part 761; Manufacturing Processing, Distribution in Commerce, and Use of PCBs and PCB Items (40 CFR 761.20-761.30); Markings of PCBs and PCB Items (40 CFR 761.40-761.45); Storage and Disposal (40 CFR 761.60-761.79). Records and Reports (40 CFR 761.180-761.185). See also 40 CFR 129.105, 750.
- Disposal of Waste Material Containing TCDD. (40 CFR Part 775.180-775.197).

4. EPA's Office of External Affairs

- Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material (40 CFR Part 230).
- Procedures for denial or Restriction of Disposal Sites for Dredged Material (§404(c) Procedures, 40 CFR Part 231).

5. EPA's Office of Air and Radiation administers several potentially applicable or relevant and appropriate statutes and regulations issued thereunder:

a. The Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. 2022).

- Uranium mill tailing rules - Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, (40 CFR Part 192).

b. Clean Air Act (42 U.S.C. 7401).

- National Ambient Air Quality Standards for total suspended particulates (40 CFR Part 50.6-50.7)
- National Ambient Air Quality Standards for ozone (40 CFR 50.9).
- Standards for Protection Against Radiation - high and low level radioative waste rule, (10 CFR Part 20). See also 10 CFR Parts 10, 40, 60, 61, 72, 960, 961.
- National Emission Standard for Hazardous Air Pollutants for Asbestos, (40 CFR 61.140-61.156). See also 40 CFR 427.110-427.116, 763.
- National Emission Standard for Hazardous Air Pollutants for Radionuclides (40 CFR Part 61, 10 CFR 20.101-20.108).

6. Other Federal Requirements

a. OSHA requirements for workers engaged in response activities are codified under the Occupational Safety and Health Act of 1970 (29 U.S.C. 651). The relevant regulatory requirements are included under:

- Occupational Safety and Health Standards (General Industry Standards) (29 CFR PArt 1910).
- The Safety and Health Standards for Federal Service Contracts (29 CFR Part 1926).

- The Shipyard and Longshore Standards (29 CFR Parts 1915, 1918).
- Recordkeeping, reporting, and related regulations (29 CFR Part 1904).

b. Historic Sites, Buildings, and Antiquities Act (16 U.S.C. 461).

c. National Historic Preservation Act, 16 U.S.C. 470. Compliance with NEPA required pursuant to 7 CFR Part 650. Protection of Archaelogical Resources: Uniform Regulations -- Department of Defense (32 CFR Part 229, 229.4), Department of the Interior (43 CFR Part 7, 7.4).

D.O.T. Rules for the Transportation of Hazardous Materials, 49 CFR Parts 107, 171.1-171.500.

Regulation of activities in or affecting waters of the United States pursuant to 33 CFR Parts 320-329.

The following requirements are also triggered by Fund-financed actions:

- Endangered Species Act of 1973, 16 U.S.C. 1531. (Generally, 50 CFR Parts 81, 225, 402).

  Wild and Scenic Rivers Act, 16 U.S.C. 1271. Compliance with NEPA required pursuant to 36 CFR Part 297.
- Fish and Wildlife Coordination Act, 16 U.S.C. 661 note.
- Fish and Wildlife Improvement Act of 1978, and Fish and Wildlife Act of 1956, 16 U.S.C. 742a not

- Fish and Wildlife Conservation Act of 1980, 16 U.S.C. 2901. (Generally, 50 CFR Part 83).
- Coastal Zone Management Act of 1972, 16 U.S.C. 1451. (Generally, 15 CFR Part 930 and 15 CFR 923.45 for Air and Water Pollution Control Requirements).

OTHER FEDERAL CRITERIA, ADVISORIES, GUIDANCES, AND STATE STANDARDS TO BE CONSIDERED

1. Federal Criteria, Advisories and Procedures

- Health Effects Assessments (HEAs)
- Recommended Maximum Concentration Limits (RMCLs)
- Federal Water Quality Criteria (1976, 1980, 1984).

  Note: Federal Water Quality Criteria are not legally enforceable. State water quality standards are legally enforceable, developed using appropriate aspects of Federal Water Quality Criteria. In many cases, State water quality standards do not include specific numerical limitations on a large number of priority pollutants. When neither State standards nor MCLs exist for a given pollutant, Federal Water Quality Criteria are pertinent and therefore are to be considered.
- Pesticide registrations.
- Pesticide and food additive tolerances and action levels.

  Note: Germane portions of tolerances and action levels may be pertinent and therefore are to be considered in certain situations.
- Waste load allocation procedures, EPA Office of Water.
- Federal sole source aquifer requirements.

- Public health basis for the decision to list pollutants as hazardous under section 112 of the Clean Air Act.
- EPA's Ground-water Protection Strategy.
- New Source Performance Standards for Storage Vessels for Petroleum Liquids.
- TSCA health data.
- Pesticide registration data.
- TSCA chemical advisories (2 or 3 issued to date).
- Advisories issued by FWS and NWFS under the Fish and Wildlife Coordination Act.
- Executive Orders related to Floodplains (11988) and Wetlands (11990) as implemented by EPA's August 6, 1985, Policy on Floodplains and Wetlands Assessments for CERCLA Actions.
- TSCA Compliance Program Policy.
- OSHA health and safety standards that may be used to protect public health (non-workplace).
- Health Advisories, EPA Office of Water

2. <u>State Standards</u>

- State Requirements on Disposal and Transport of Radioactive wastes.
- State Approval of Water Supply System Additions or Developments.
- State Ground Water Withdrawal Approvals.
- Requirements of authorized (Subtitle C of RCRA) State

hazardous waste programs.

- State Implementation Plans and Delegated Programs Under Clean Air Act.

- All other State requirements, not delegated through EPA authority.
- Approved State NPDES programs under the Clean Water Act.
- Approved State UIC programs under the Safe Drinking Water Act.

Note: Many other State and local requirements could be pertinent. Forthcoming guidance will include a more comprehensive list.

3. <u>USEPA RCRA Guidance Documents</u>

- Draft Alternate Concentration Limits (ACL) Guidance

A. EPA's RCRA Design Guidelines

1. Surface Impoundments, Liners Systems, Final Cover and Freeboard Control.
2. Waste Pile Design - Liner Systems.
3. Land Treatment Units.
4. Landfill Design - Liner Systems and Final Cover.

B. Permitting Guidance Manuals

1. Permit Applicant's Guidance Manual for Hazardous Waste Land Treatment, Storage, Disposal Facilities.
2. Permit Writer's Guidance Manual for Hazardous Waste Land Treatment, Storage, and Disposal Facilities.
3. Permit Writer's Guidance Manual for Subpart F.
4. Permit Applicants Guidance Manual for the General Facility Standards.

5. Waste Analysis Plan Guidance Manual.
6. Permit Writer's Guidance Manual for Hazardous Waste Tanks.
7. Model Permit Application for Existing Incinerators.
8. Guidance Manual for Evaluating Permit Applications for the Operation of Hazardous Waste Incinerator Units.
9. A guide for Preparing RCRA Permit Applications for Existing Storage Facilities.
10. Guidance Manual on closure and post-closure Interim Status Standards.

C. Technical Resource Documents (TRDs)

1) Evaluating Cover Systems for Solid and Hazardous Waste.
2) Hydrologic Simulation of Solid Waste Disposal Sites.
3) Landfill and Surface Impoundment Performance Evaluation
4) Lining of Water Impoundment and Disposal Facilities.
5) Management of Hazardous Waste Leachate.
6) Guide to the Disposal of Chemically Stabilized and Solidified Waste.
7) Closure of Hazardous Waste Surface Impoundments.
8) Hazardous Waste Land Treatment.
9) Soil Properties, Classification, and Hydraulic Conductivity Testing.

D. Test Methods for Evaluating Solid Waste

1) Solid Waste Leaching Procedure Manual.
2) Methods for the Prediction of Leachate Plume Migration and Mixing.

3) Hydrologic Evaluation of Landfill Performance (HELP) Model Hydrologic Simulation on Solid Waste Disposal Sites.

4) Procedures for Modeling Flow Through Clay Liners to Determine Required Liner Thickness

5) Test Methods for Evaluating Solid Wastes

6) A Method for Determining the Compatibility of Hazardous Wastes

7) Guidance Manual on Hazardous Waste Compatibility

4. USEPA Office of Water Guidance Documents

A. Pretreatment Guidance Documents

1) 304(g) Guidance Document Revised Pretreatment Guidelines (3) Volumes)

B. Water Quality Guidance Documents

1) Ecological Evaluation of Proposed Discharge of Dredged Material into Ocean Waters (1977)

2) Technical Support Manual: Waterbody Surveys and Assessments for Conducting Use Attainability Analyses (1983)

3) Water-Related Environmental Fate of 129 Priority Pollutants (1979)

4) Water Quality Standards Handbook (1983)

5) Technical Support Document for Water Quality-based Toxics Control.

C. NPDES Guidance Documents

1) NPDES Best Management Practices Guidance Manual (June 1981)

2) Case studies on toxicity reduction evaluation (May 1983).

D. Ground Water/UIC Guidance Document

1) Designation of a USDW

2) Elements of Aquifer Identification

3) Interim guidance for public participation

4) Definition of major facilities

5) Corrective action requirements

6) Requirements applicable to wells injecting into, through or above an aquifer which has been exempted pursuant to §146.104(b)(4).

7) Guidance for UIC implementation on Indian lands.

5. <u>USEPA Manuals from the Office of Research and Development</u>

1) EW 846 methods - laboratory analytic methods

2) Lab protocols developed pursuant to Clean Water Act §304(h).

Discharge of Wastewater from CERCLA Sites into POTWs

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 15 1986

MEMORANDUM

SUBJECT: Discharge of Wastewater from CERCLA Sites into POTWS

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

Rebecca Hanmer, Director
Office of Water Enforcement and Permits

Gene A. Lucero, Director
Office of Waste Programs Enforcement

TO: Waste Management Division Directors
Regions I - X

Water Management Division Directors
Regions I - X

A number of emergency removals and remedial cleanup actions under CERCLA will involve consideration of publicly owned treatment works (POTWs) for discharge of wastewater. The current off-site policy (issued on May 6, 1985) does not address the set of concerns and issues unique to POTWs that must be evaluated during the Remedial Investigation and Feasibility Study (RI/FS) for discharge of CERCLA wastewater to POTWs.

Recently, we have had meetings with representatives of the Association of Metropolitan Sewerage Authorities (AMSA) to discuss technical and policy concerns related to the POTW/CERCLA issue. This memorandum is to highlight some of the major points under consideration which were shared with AMSA at their recent Winter Technical Conference. The Agency intends to develop policy on the use and selection of POTWs for CERCLA wastewater. Your comments are sought on the proposed criteria set forth herein. These criteria may be useful in evaluation of POTWs for response actions (fund financed or responsible party financed) to be taken in the interim.

Our position is that no CERCLA discharges to a POTW should occur unless handled in a manner demonstrated to be protective of human health and the environment. Full compliance with all applicable requirements of the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), and any other relevant or appropriate environmental statutes will be necessary .

The national pretreatment program, under the Clean Water Act, requires an analysis to determine whether the discharge of an industrial user of a POTW may pass through the POTW to cause receiving water quality problems or may interfere with POTW operations (including sludge disposal). If the analysis suggests that limits on the industrial user's discharge are needed to prevent pass through or interference, local limits or other safeguards, as necessary, must be established by the POTW and/or the NPDES permitting authority. The national pretreatment program requirements apply to the introduction of all non-domestic wastewater into any POTW, and include, among other things, the following elements:

- Prohibited discharge standards - prohibit the introduction of pollutants to the POTW which are ignitable, corrosive, excessively high in temperature, or which may cause interference or pass through at the POTW.

- Categorical discharge standards - include specific pretreatment standards which are established by EPA for the purpose of regulating industrial discharges in specific industrial categories.

- Local limits - where no categorical standards have been promulgated or where more stringent controls are necessary.

POTWs under consideration as potential receptors of CERCLA wastewaters may include those POTWs either with or without an approved pretreatment program. POTWs with an approved pretreatment program are required to have the mechanisms necessary to ensure compliance by industrial users with applicable pretreatment standards and requirements.* POTWs without an approved pretreatment program must be evaluated to determine whether sufficient mechanisms exist to allow the POTW to meet the requirements of the national pretreatment program in accepting CERCLA wastewaters. As noted above, pass through and interference are always prohibited, regardless of whether a POTW has an approved pretreatment program. POTWs without an approved pretreatment program must therefore have mechanisms which are adequate to apply the requirements of the national pretreatment program to specific situations.

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*POTWs with approved pretreatment programs must, among other things, establish procedures to notify industrial users (IUs) of applicable pretreatment standards and requirements, receive and analyze self-monitoring reports from IUs, sample and analyze industrial effluents, investigate noncompliance, and comply with public participation requirements.

Determination of a POTW's ability to accept CERCLA wastewater as an alternative to on-site treatment and direct discharge to receiving waters must be made during the Remedial Investigation/ Feasibility Study (RI/FS) process. During the remedial alternatives analysis, the appropriateness of using a POTW must be carefully evaluated. Water Division officials and their state counterparts should participate in the evaluation of any remedial alternatives recommending the use of a POTW, and should concur on the selection of the POTW.

If an alternative considers the discharge of wastewater from a CERCLA site into a POTW, the following points should be evaluated in the RI/FS prior to the selection of the remedy for the site:

- The quantity and quality of the CERCLA wastewater and its compatibility with the POTW (The constituents in the CERCLA wastewater must not cause pass through or interference, including unacceptable sludge contamination or a hazard to employees at the POTW; in some cases, control equipment at the CERCLA site may be appropriate in order to pretreat the CERCLA discharge prior to introduction to the POTW).

- The ability (i.e., legal authority, enforceable mechanisms, etc.) of the POTW to ensure compliance with applicable pretreatment standards and requirements, including monitoring and reporting requirements.

- The POTW's record of compliance with its NPDES permit and pretreatment program requirements to determine if the POTW is a suitable disposal site for the CERCLA wastewater.

- The potential for volatilization of the wastewater at the CERCLA site and POTW and its impact upon air quality.

- The potential for groundwater contamination from transport of CERCLA wastewater or impoundment at the POTW, and the need for groundwater monitoring.

- The potential effect of the CERCLA wastewaters upon the POTW's discharge as evaluated by maintenance of water quality standards in the POTW's receiving waters, including the narrative standard of "no toxics in toxic amounts".

- o The POTW's knowledge of and compliance with any applicable RCRA requirements or requirements of other environmental statutes (RCRA permit-by-rule requirements may be triggered if the POTW receives CERCLA wastewaters that are classified as "hazardous wastes" without prior mixing with domestic sewage, i.e., direct delivery to the POTW by truck, rail, or dedicated pipe; CERCLA wastewaters are not all necessarily considered hazardous wastes; case by case determinations have to be made).

- o The various costs of managing CERCLA wastewater, including all risks, liabilities, permit fees, etc. (It may be appropriate to reflect these costs in the POTW's connection fees and user charge system).

Based upon consideration of the above elements, the discharge of CERCLA wastewater to a POTW should be deemed inappropriate if the evaluation indicates that:

- o The constituents in the CERCLA discharge are not compatible with the POTW and will cause pass through, interference, toxic pollutants in toxic amounts in the POTW's receiving waters, unacceptable sludge contamination, or a hazard to employees of the POTW.

- o The impact of the transport mechanism and/or discharging of CERCLA wastewater into a POTW would result in unacceptable impacts upon any environmental media.

- o The POTW is determined to be an unacceptable receptor of CERCLA wastewaters based upon a review of the POTW's compliance history.

- o The use of the POTW is not cost-effective.

If consideration of the various elements indicates that the discharge of CERCLA wastewater to a POTW is deemed appropriate:

- o There should be early public involvement, including contact with POTW officials and users, in accordance with the CERCLA community relations plan and public participation requirements.

- o The NPDES permit and fact sheet may need to be modified to reflect the conditions of acceptance of CERCLA wastewaters; permit modification may be necessitated by the need to incorporate specific pretreatment requirements, local limits, monitoring requirements and/or limitations on additional pollutants of concern in the POTW's discharge or other factors.

Policy to be developed in the future will apply to all removal, remedial, and enforcement actions taken pursuant to CERCLA and Section 7003 of RCRA. We would appreciate your feedback on this memorandum and any experience in the use of POTWs for CERCLA removal or remedial actions that you have to offer.

If you have any comments or questions on this issue, please submit written comments to the workgroup co-chairs: Shirley Ross (FTS-382-5755) from the Office of Emergency and Remedial Response, or Victoria Price (FTS-382-5681) from the Office of Water.

cc: Ed Johnson
Russ Wyer
Tim Fields
Steve Lingle

Occupational Safety and Health Administration: Labor Federal Register Volume 51, No. 244

Friday
December 19, 1986

Part IV

Department of Labor

Occupational Safety and Health Administration

29 CFR Part 1910

Hazardous Waste Operations and Emergency Response; Interim Final Rule

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1910

[Docket No. S-760]

Hazardous Waste Operations and Emergency Response

AGENCY: Occupational Safety and Health Administration; Labor.

ACTION: Interim final rule.

SUMMARY: This interim final rule amends the Occupational Safety and Health Administration (OSHA) standards for hazardous materials in Subpart H of 29 CFR Part 1910 by adding a new § 1910.120 containing employee protection requirements for workers engaged in hazardous waste operations including emergency response to hazardous substance incidents.

Coverage includes employees involved in responses covered by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 as amended (CERCLA or "Superfund" Act) [Pub. L. 96-510, 42 U.S.C. 9601 *et seq.*, 94 Stat 2767] such as clean-up of hazardous waste sites, certain hazardous waste operations conducted under the Resource Conservation and Recovery Act of 1976 as amended (RCRA) [Pub. L. 94-580, 42 U.S.C. 6901 *et seq.*, 90 Stat 2795], and emergency response to incidents involving the handling, processing and transportation of hazardous substances.

The issuance of this interim final rule is mandated by section 126(e) of the "Superfund Amendments and Reauthorization Act of 1986" (SARA) [Pub. L. 99-499]. The interim final rule will regulate employee safety and health at hazardous waste operations and during emergency response to hazardous substance incidents until a final standard, also mandated by section 126 of SARA, is issued by OSHA and becomes effective. The final OSHA standard also mandated by section 126 of SARA is the subject of a Notice of Proposed Rulemaking which will be published shortly.

DATES: Interim rule effective December 19, 1986; various start-up dates have been established in paragraph (p) of the standard. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of December 19, 1986.

FOR FURTHER INFORMATION CONTACT: Mr. James F. Foster, U.S. Department of Labor, Occupational Safety and Health Administration, Division of Consumer Affairs, Room S-4220, 200 Constitution Avenue, NW., Washington, DC 20210, 202-523-8151.

This interim final rule was prepared by Michael B. Moore and Chappell D. Pierce, Directorate of Safety Standards, Office of Fire Protection Engineering and Systems Safety Standards, (202) 523-7225.

SUPPLEMENTARY INFORMATION:

I. Background

On October 17, 1986, the President signed into law the "Superfund Amendments and Reauthorization Act of 1986" (SARA) [Pub. L. 99-499]. As part of SARA the Secretary of Labor ("Secretary") is directed to issue an interim final rule within 60 days after the date of enactment, which is to provide no less protection for workers engaged in covered operations than the protections contained in the Environmental Protection Agency's (EPA), "Health and Safety Requirements for Employees Engaged in Field Activities" manual (EPA Order 1440.2) dated 1981 and the existing OSHA standards under Subpart C of 29 CFR Part 1926. SARA also directs the Secretary to issue, within one year, a final standard under section 6(b) of the Occupational Safety and Health Act of 1970 for the health and safety of employees engaged in hazardous waste operations. SARA further indicates that certain specific areas of employee protection (i.e., medical surveillance, personal protective equipment, training, and others) contained in section 126(b) are relevant to protect employees engaged in hazardous waste operations.

The interim final rule issued today becomes effective immediately and will remain in effect until one year after issuance of the final OSHA standard, which will be proposed shortly. Congress has clearly directed in section 126(e) that these interim final rules become effective upon issuance and the standard provides this. Implementation is to commence immediately, however, various start-up dates are set forth in paragraph (p) of the standard which recognize that full implementation cannot be completed immediately for some provisions. In addition OSHA will, of course, recognize greater feasibility constraints in the first three months of the standard and take those constraints into account in enforcement.

This interim final rule has been adopted from the language of the EPA manual entitled "Health and Safety Requirements for Employees Engaged in Field Activities" (1981) and the language of OSHA's safety and health standards in Subpart C of 29 CFR Part 1926. The interim final rule also contains language taken from various documents either jointly or solely by the EPA, OSHA, the U.S. Coast Guard, and the National Institute for Occupational Safety and Health (NIOSH). OSHA has specifically used the joint OSHA/EPA/USCG/NIOSH document entitled, *"Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities"* (Preamble Reference 6), as an outline in preparing this interim rule. This four agency manual has been developed as a result of the collaborative efforts of professionals representing the four agencies. These professionals, who are knowledgeable in hazardous waste operations, worked with over 100 experts and organizations in the development of the criteria contained in this manual. The manual was published in October 1985 and is public information. The manual is a guidance document for managers responsible for occupational safety and health programs at inactive hazardous waste sites. The manual is intended for use by government officials at all levels and contractors involved with hazardous waste operations. The manual provides general guidance and is intended to be used as a preliminary basis for developing a specific health and safety program for hazardous operations. Further the major subject areas listed in SARA section 126 are nearly identical to these major chapters listed in the manual.

Congress indicated that reasonably comprehensive protection was intended for employees at hazardous waste operations, as discussed below, covering more than the minimum requirements specified in the EPA manual (EPA Order 1440.2) and Subpart C of 29 CFR Part 1926. In light of the short period of time Congress directed for issuance of this standard, OSHA's utilization of recognized sources of guidance which have been created by experts in the area and utilizing the resources of relevant agencies is appropriate.

In view of the brief period given for the issuance of this document, it may be necessary to issue minor corrections in the near future.

II. Summary and Explanation of the Standard

Paragraph (a)—Scope, Application, and Definitions

In paragraph (a)(1), *Scope*, OSHA has defined the scope of the standard to include:

(i) Hazardous substance response operations under the Comprehensive Environmental Response, Compensation, and Liability Act (

as amended (CERCLA) including initial investigations at CERCLA sites before the presence or absence of hazardous substances has been ascertained;

(iii) Major corrective actions taken in clean-up operations under the Resource Conservation and Recovery Act of 1976 as amended (RCRA);

(iii) Operations involving hazardous waste storage. disposal and treatment facilities regulated under 40 CFR Parts 264 and 265 pursuant to RCRA except for small quantity generators and those employers with less than 90 days accumulation of hazardous wastes as defined in 40 CFR 262.34;

(iv) Hazardous waste operations sites that have been designated for clean-up by state or local governmental authorities; and

(v) Emergency response operations for releases of or substantial threats of releases of hazardous substances and post-emergency response operations to such releases.

Thus this standard will cover hazardous waste clean-up operations at CERCLA sites. RCRA sites. emergency response sites and those sites designated by State or local governments. It will also cover other hazardous waste operations. such as storage. disposal or treatment of hazardous waste at RCRA facilities.

OSHA believes that Congress intended the interim rule to have a broad scope and application. This is indicated by the legislative intent as reflected in the language of SARA. The language of section 126(e) explicitly states that the Secretary "shall issue interim final regulations *under this section*. . ." (emphasis supplied). "Under this section" refers to the entire section 126 of SARA. And. as previously noted. section 126(a) mandates safety and health standards for the protection of employees engaged in hazardous waste operations. Thus. OSHA believes Congress intended the interim final rule to mirror section 126 and provide protective provisions to employees engaged in hazardous waste operations.

The argument is buttressed further by the fact that section 126(e) states that the interim final rule shall provide *no less* (emphasis added) protection for workers employed by contractors and emergency response workers than the protection contained in the Environmental Protection Agency Manual "Health and Safety Requirements for Employees Engaged in Field Activities" and existing standards under Subpart C of 29 CFR Part 1926. The two sources cited in section 126(e) are not a limitation on the scope of the interim rule. Rather. this language establishes the minimum amount of protective provisions. with the broad parameters of employee protection delineated by the remainder of section 126.

This interpretation is reinforced because SARA is a freestanding statutory provision and not an amendment to CERCLA. The clear Congressional intent then is to provide protection to employees whenever they deal with hazardous wastes.

The hazards an employee faces at a RCRA. CERCLA. or emergency response site are the same hazards. The risk of exposure is to the same types of hazardous substances. The scope of the regulation fulfills the Congressional mandate: to effectively provide for employee health and safety at hazardous waste operations and emergency response incidents.

As indicated in the application provisions. different provisions of the standard apply to clean-up operations. regular hazardous waste operations and emergency response to take into account relevant differences.

Further the term "hazardous waste operation" is used in section 126(a) of SARA. "Hazardous waste" is also a term used in RCRA and there is no indication from SARA or its legislative history that RCRA facilities were to be excluded from coverage by this interim rule. This is a further reason why OSHA has included RCRA hazardous waste operations under the coverage of this interim final rule. However, small quantity generators: employers who have less than 90 days of hazardous waste accumulation: and solid waste disposal operations which do not involve hazardous waste are not covered by this interim final rule. Also. employees at hazardous waste sites who will not be exposed or do not have the potential to be exposed to hazardous substances are not covered by this interim final rule.

Emergency response employees who respond or will respond to incidents involving hazardous substances are covered by this interim final rule. Public employees of states that have agreements with OSHA under section 18 of the OSH Act must issue regulations at least as effective as these to protect public employees.

Municipal or other sanitary landfills that handle domestic wastes are not covered. Similar waste paper or scrap metal operations are generally not covered because of the type of wastes they handle. But they could be covered if they have clean-ups for or handle hazardous wastes meeting the scope provisions of the standard.

Operations with no exposure to on-site hazardous substances. i.e.. road building for site access. construction of on-site or the setting up of temporary facilities in the clean zone or the closure of a RCRA site involving the building of a clay cap over hazard wastes. are considered to be construction activities covered by the standards in 29 CFR Part 1926.

The scope and application provisions carry out the intent of Congress and are consistent with good occupational safety and health policy. Employees performing clean-up operations under CERCLA. RCRA (corrective actions) and post emergency response. generally those employees likely to have the highest exposures to hazardous substances over a longer period. are covered by virtually all the provisions of the rule. Employees exposed to hazardous wastes in routine RCRA hazardous waste operations. who are regularly exposed to hazardous wastes but in a more controlled environment. are covered by the more limited requirements of paragraph (o) of the interim final rule. Emergency response workers. exposed usually for short periods to often unknown but possibly high levels of hazardous substances. have specific provisions directed towards this situation.

In paragraph (a)(2), *Application:* OSHA designates the requirements which apply to the specific work activities covered by this interim final rule. The requirements set forth in paragraph (1) of this section specifically apply to the work conducted by emergency response personnel. such as fire fighters. emergency medical system (EMS) employees and police. when they respond to hazardous substance incidents.

The requirements set forth in paragraph (o) of this section specifically apply to the hazardous waste operations at RCRA sites which are involved in disposal. treatment. storage and handling of hazardous waste. The exclusion of small quantity operators and less than 90-day accumulators excludes from coverage by the interim rule operators such as dry cleaners and gas stations which come within the purview of RCRA but are not hazardous waste operators in the normal meaning of the term. The approximately 4.000 RCRA sites where reasonably large quantities of hazardous wastes are regularly handled. treated and stored are covered by the rule. This reflects the legislative intent. meets the normal meaning of hazardous waste operations and covers the type of safety and health hazards that this regulation is designed to control.

Most of the requirements of the interim rule apply to clean-up activities of hazardous substances or hazardous wastes at CERCLA sites, corrective actions at RCRA sites, and clean-up operations of hazardous substances at emergency incidents after emergency response personnel have concluded their duties.

The employer must also comply with the standards in 29 CFR Parts 1910 and 1926, as well as with the requirements specifically covered in this interim rule. If there is a conflict or overlap, the more protective provisions are to apply. Since this interim rule does not cover all of the hazards present at hazardous waste operations, other OSHA standards in Parts 1910 and 1926 apply also. Other OSHA standards cover many other hazards, and OSHA wants to make clear that the other standards continue to apply. Also, hazardous waste operators who are not within the scope of this standard are covered by the Parts 1910 and 1926 standards.

In paragraph (a)(3), *Definitions*, OSHA has defined various terms used in this rulemaking. The definitions for hazardous substances and hazardous wastes have been taken from the U.S Environmental Protection Agency (EPA) and U.S. Department of Transportation (DOT) regulations. This has been done to assure consistency and compatibility between this interim rule and the rules and regulations of the EPA and DOT. The remaining definitions have been taken for the most part from SARA, the four agency manual (Reference 6) or existing OSHA standards.

The term "established permissible exposure limit" is defined to give direction as to the appropriate degree of protection needed to be achieved by personal protective equipment and other similar purposes.

Paragraph (b)—General Requirements

In paragraph (b), *General requirements*, OSHA sets forth for the most part a summary of requirements which are specified in detail in later paragraphs. The preamble discussion for later paragraphs sets forth the reasons for the various provisions. Many of these requirements are part of the minimum requirements which Congress directed OSHA to issue in section 126(e) of SARA. The EPA manual (EPA Order 1440.2) referenced in section 126(e) requires extensive training and medical surveillance programs. Subpart C of 29 CFR Part 1926, also referenced, requires, in addition, accident prevention programs (§ 1926.20(b)), use of appropriate personal protective equipment (§ 1926.28), sanitation and illumination requirements (§§ 1926.26 and 1926.27), provisions on safe handling of toxic substances (§ 1926.21 (b)(5)), precautions in confined spaces (§ 1926.21(b)(6)) and similar provisions. Congress also directed additional provisions for the proposed regulation, which are considered relevant for the interim regulation. These include engineering controls, maximum exposure limits and monitoring, handling requirements, decontamination procedures and emergency response. Based on this comprehensive statutory direction OSHA believes that the intent of Congress is to have employers implement a safety and health program that will address the recognized serious hazards to employees involved in hazardous waste operations. Therefore, OSHA has incorporated the more important elements of section 126(b), along with the mandatory provisions of section 126(e) of SARA, into this rule. Each general requirement in paragraph (b) calls for employer action and directs the employer to the specific paragraph of this rule that contains the duties in greater detail.

OSHA believes that these requirements are necessary to assure adequate employee protection to the known hazards faced by employees. The language used in these requirements has been adapted from the various documents listed in the Reference section of this preamble.

Three of the subparagraphs in paragraph (b) do not reference other paragraphs in the regulation. Paragraph (b)(1) requires the employer to develop a safety and health program for hazardous waste operations. Such programs are part of the requirements mandated by SARA for the interim rule. Thus, Subpart C of 29 CFR Part 1926 requires such a program in § 1926.20(b) and EPA Order 1440.2 requires training in "safety plan development" (pg. 5). OSHA's experience also establishes that a safety and health program is necessary to protect employees so that hazards are assessed and control programs are systematically laid out. Prior OSHA section 6(b) health standards require a compliance plan to set forth a health program to protect employees from the hazard.

Paragraph (b)(14) requires compliance with Subpart P of 29 CFR Part 1926 which covers excavation. OSHA considers that those provisions already apply, but they are singled out because they are particularly important to monitor since much excavation activity occurs on hazardous waste sites.

Paragraph (b)(15) requires employers to notify contractors and subcontractors of the hazards identified by the employer at hazardous waste operations. Sections 126(b)(2) and (e) of SARA indicate Congress's specific interest in protecting employees of contractors and in involving contractors in the safe operation of hazardous waste sites. This provision assists the contractor to become aware of the risks so that the contractor's employees may be better protected.

Paragraph (c)—Site Characterization and Analysis

For an effective safety and health program, which Congress clearly intends for employees, the employer needs to know the hazards faced by employees in order to develop and implement effective control measures. Site characterization provides the information needed to identify site hazards and to select employee protection methods. The more accurate, detailed, and comprehensive the information available about a site, the more the protective measures can be tailored to the actual hazards that the employees may encounter. Congress clearly intended that such a requirement be included. Subpart C of 29 CFR Part 1926 referenced in section 126(e) of SARA requires "frequent and regu[illegible] inspections of the job site" (29 CFR 1926.20(b)(2)). Also section 126(b)(1) of SARA provides for site analysis. Also item #9 of the EPA manual (EPA Order 1440.2) addresses this practice.

Site characterization generally proceeds in three phases:

1. Prior to site entry, gather information away from the site, conduct reconnaissance from the site perimeter and conduct offsite characterization.

2. Conduct onsite surveys. During this phase, restrict site entry only to reconnaissance personnel.

3. Once the site has been determined safe for commencement of other activities, continue monitoring to provide an updated source of information about site conditions.

It is important to recognize that site characterization is a continuous process. At each phase of site characterization, information shall be obtained and evaluated to define the potential hazards of the site. This assessment shall be used to develop a safety and health plan for the next phase of work. In addition to the formal information gathering that takes place during the phases of site characterization described here, all site personnel should be constantly alert for new informa[illegible] about site conditions. Other requirements of this section have b[illegible] adopted from reference 6.

Paragraph (d)—Site Control.

As part of the employers' site safety and health plan, this paragraph requires the employer to consider site control to minimize potential contamination of employees. Several items need to be considered, such as establishing work zones, so that employees know the hazards in different areas and will keep out of hazardous areas where the employees' presence is not required. Use of a buddy system and good site communications will assist in rescue of employees who become unconscious, trapped or otherwise seriously disabled on site.

Site control is especially important in emergency situations. Paragraph (d) describes the basic components of a program to control the activities and movements of employees and equipment at a hazardous waste site.

Several site control procedures can be implemented to reduce employee exposure to chemical, physical, biological, and safety hazards. The degrees of site control necessary depends on site characteristics, site size, and the surrounding community. The site control program should be established in the planning stages of a project and modified based on new information and site assessments developed during site characterization. The appropriate sequence for implementing these measures should be determined on a site-specific basis. In many cases, it will be necessary to implement several measures simultaneously.

The text used in this paragraph has been adapted from Reference 6, Item 9 of the EPA manual (Order 1440.2) indicates the need for this. In addition Subpart C of 29 CFR Part 1926 provides for regular inspection of job sites so hazards on the site can be controlled.

Paragraph (e)—Training.

The interim final rule includes specific provisions for initial and review training of employees before they are permitted to engage in hazardous waste operations that could expose them to safety and health hazards. Both the EPA manual and 29 CFR 1926.21 and 1926.22 referred to in section 126(e) of SARA have training and information requirements. The EPA manual has specific provisions for basic, intermediate and advanced training. It requires 40 hours training for employees managing uncontrolled hazardous waste sites, 24 hours for employees engaged in routine activities and 32 hours for intermediate activities. Additionally, section 126 generally has requirements for extensive training programs. The clear congressional intent of the interim final rule training provisions is to provide employees with the knowledge and skills necessary to perform hazardous waste clean-up operations with minimal risk to their safety and health.

The provisions for employees include a minimum of 40 hours of initial instruction off the site, and a minimum of 3 days of actual field experience under the direct supervision of a trained and experienced supervisor, at the time of job assignment. This amount of training is specifically directed by Congress for the interim final rule by its reference to the EPA manual which basically requires this amount of training for hazardous waste operators and Congress has specifically imposed these hour and day requirements under section 126(d) of SARA for the proposed final standard. There are slight differences between the EPA manual and section 126(c) of SARA. But they are sufficiently slight so that OSHA believes it appropriate to make the interim final rule consistent with what Congress directs for the proposed final rule so that employers need not make minor modifications to their training programs after two years.

In addition there are often many hazards at a waste site. The employee needs to be trained to recognize the hazards and appropriate work practices to minimize those hazards. The employee also needs to be well trained in the use of respirators and other forms of PPE. Without training those may not be used effectively and will not provide adequate protection. An extensive training program is necessary to achieve these objectives. The paragraph specifies these and the other items needed for effective training to avoid hazards.

Managers and supervisors directly responsible for hazardous waste site operations are to receive the same training as that of employees and at least eight additional hours of specialized training on managing hazardous waste operations. Since these people are responsible for directing others, it is necessary to enhance their ability to provide guidance and to make informed decisions. Both the EPA manual and section 126(e) of SARA direct eight hours of additional training for supervisors and managers.

The provisions also state that employees shall be retrained on an annual basis on relevant matters such as review of health hazards and use of personal protective equipment. Employees at hazardous waste operations face serious health and safety risks. Reminders are needed of this and of work practices to avoid hazards. Personal protective equipment provides much of their protection. If there is no retraining in the use, care and maintenance of said equipment, such equipment is unlikely to be utilized in a manner to provide adequate protection. The regulation provides for eight hours of annual retraining. The EPA manual for refresher training (Item =10) requires this amount of training.

In all areas of training, whether it be for general site employees, on-site supervisors or for the use of specific equipment, the level of training provided needs to be consistent with the worker's job function and responsibilities. The training information should be presented clearly and, as a further safeguard, refresher training should be supplied to reemphasize the initial training and to update employees on any new policies or procedures.

A less detailed training provision is provided for employees working at routine operation on RCRA sites. Those sites will have more stable working conditions and the hazards will be better identified and more carefully controlled. Therefore OSHA believes not as extensive training is needed for those employees for the interim rule. OSHA specifies 24 hours for the required training based on the EPA manual which specifies this as the basic level of training for most routine field activities. OSHA in the proposal document will request comment whether this or a greater amount of training is appropriate for the permanent rule.

Paragraph (f)—Medical Surveillance

The interim final rule both includes specific provisions for baseline and periodic medical examinations. The EPA manual referred to in section 126(e) of SARA has requirements for both initial or baseline and periodic medical examinations. The examinations are to be provided to those routinely exposed to hazardous substances, to those whose duties are physically taxing and those who routinely wear respirators. In addition section 126(b) provides that routine medical examinations are to be provided to workers engaged in hazardous waste operations. Although the language is slightly different, the clear intent is to provide a comprehensive medical surveillance program for employees engaged in hazardous waste operations where it is medically prudent.

The paragraph states medical surveillance is to be provided to employees who have been or are expected to be exposed to hazardous substances or health hazards above established permissible exposure limits

for 30 or more days in a 12-month period or who wear respirators 30 days during the year. These are the employees who will be at greater health risk and employees who wear respirators need to be examined to determine whether they can safely do so as a routine matter. Some dividing line is needed. because employees who might be present on a hazardous waste site only a few days a year or working in areas such as offices or the periphery where exposures are low would not normally benefit from medical surveillance as their likely cumulative exposures to toxic chemicals would be very low probably not significantly higher than the general population. The EPA manual indicates some dividing line is appropriate because it directs medical surveillance only for employees "routinely" exposed

Wearing respirators for any part of each of 30 days will require medical surveillance because it indicates routine exposure to toxic chemicals. There is no requirement that there be 240 hours of respirator use before medical surveillance is required. Similarly being exposed over established safe levels to several chemicals each for less than 30 days but totalling more than 30 days per year requires medical surveillance. This indicates routine exposures to hazardous substances and also combinations of chemicals may cause synergistic effects creating greater health hazards than an individual chemical.

OSHA has based many of the details of medical surveillance on its experience in issuing health standards under section 6(b) of the OSH Act and as directed by section 6(b)(7) of the Act. Congress would be knowledgable that medical surveillance requirements in these standards represent OSHA's expert judgement of what is an appropriate medical surveillance program.

The appropriate medical tests and examinations depend on the substances an employee is exposed to and whether the employee wears a respirator. As employees on hazardous waste sites will be exposed to differing substances, the paragraph can not specifically state the required tests. Consequently the paragraph states that the employer provide to the physician information on exposures. respirator use. and duties on the site. The physician is then to determine the appropriate medical surveillance protocol in terms of specific tests and examinations. By the employer specifying duties the physician also can judge whether the employee can handle the arduousness of the work.

In situations where most of the employees on the site have similar exposures the protocol may be similar for all employees. Where different groups of employees on the site have substantially different exposures. several different protocols may be appropriate for the site s workers depending on exposures.

There are a number of sources for guidance on specific medical examination protocols. Chapter 5 of Reference 6 provides such guidance by groups of chemicals likely to be present on a site. It references other authorities. The manual should be supplied to the physician. It is also a basis for the medical surveillance program required by this paragraph. In addition. the EPA medical monitoring program guidelines referenced by the EPA manual provides guidance on specific protocols.

The paragraph requires an initial or baseline medical examination either prior to the start up date for employees who are currently working at hazardous waste sites or prior to initial assignment to an area where medical examinations will be required. The purpose is to take a detailed medical history and where possible develop a health baseline prior to any exposures so as to be able to evaluate changes which may be connected to hazardous substance exposures. In addition the initial examination will permit evaluation of whether the employee can appropriately wear respirators and whether the employee has preexisting conditions which would make exposure to hazardous substances inappropriate. An initial examination has been required by other OSHA health standards and is recommended in Reference 6.

The physician must be informed of what type of respirators and personal protective equipment an employee is likely to wear. The medical examination is to include appropriate tests to evaluate the employee's ability to wear respirators and PPE.

The physician will also specify the protocol of the periodic examinations. These may be different from the initial examination. for example. only an updated medical history would be required. The periodic examinations are required yearly. OSHA's experience in other health standards has been that this is an appropriate period and it is also recommended by Reference 6. EPA's medical monitoring program guidelines cross referenced in the EPA manual recommends baseline annual examination generally and a termination examination. It is reasonable to determine periodically whether exposures have brought medical changes and to identify conditions caused by chemicals at an early stage to permit more effective treatment. In some circumstances. the physician ma advise more frequent examinations.

Examinations are also to be provided when the employee brings to the employer s attention signs or symptoms indicating possible overexposure to hazardous substances. The employee is to be trained in recognizing what symptoms may indicate substances to which the employee is exposed. Examples may be dizziness or rashes. Examinations are also required, when medically appropriate. during emergencies when exposure to higher levels is possible. For example, a urinary phenol test is appropriate for employees exposed to high levels of benzene in an emergency.

Finally, a medical examination is required for employees who have been required to have medical examinations upon termination of employment or reassignment to an area where medical examinations are not required. This is to detect conditions which have developed prior to departure and is recommended by the EPA program.

The medical examination is to be provided under the supervision of a licensed physician. i.e., the person must be qualified to make medical judgements. As provided by section 6(b)(7) of the OSH Act. the employ to pay the cost of the examination addition provisions are included so the employee is not discouraged from taking the examination. The exam is to be given at a reasonable time and place. If given during regular working hours the employee shall receive the employer's normal pay for that time. If the exam is given outside regular working hours, the employee shall be paid his regular wages for the time spent taking and waiting for the examination.

The physician shall make a report to the employer of medical conditions which may make the employee at increased risk to work at the site and any recommendations on limitations on use of respirators and other PPE as a result of the medical conditions. This will provide guidance for the safe employment of the employee at the site. The physician shall not reveal diagnoses or conditions unrelated to employment. but shall inform the employee directly of those conditions and any and all occupationally related conditions.

The medical paragraph requires that appropriate records be kept to assist in future evaluation of the employee's health. Secondarily, this information may assist in research on occupational related disease. Records should be kept pursuant to the provisions of 29 CFP 1910.20. Full consideration was giv

that standard to appropriate retention periods.

Paragraph (g)—Engineering Controls, Work Practices, and Personal Protective Equipment

Anyone entering a hazardous waste site must be protected against potential hazards. The purpose of engineering controls, work practices, and PPE is to shield or isolate individuals from the chemical, physical, and biologic hazards that may be encountered at a hazardous waste site. Careful selection and use of adequate engineering controls, work practices and PPE should protect any employee from health and many other hazards including hazards to the respiratory system, skin, eyes, face, hands, feet, head, body, and hearing.

Requirements of both Subpart C of 29 CFR Part 1926 and the EPA manual mandated to be included in the standard by Congress cover the provision and use of personal protective equipment. See for example, 29 CFR 1926.28 and items 7(a), 9(e)(7) and 9(b)(2) of the EPA manual. In addition existing OSHA regulations which apply to hazardous waste operations, in 29 CFR Part 1910, Subpart Z require exposures to various toxic and hazardous substances to be controlled with engineering controls if feasible, otherwise with PPE. These requirements apply now to employers and workers on Superfund sites pursuant to EPA regulations in 40 CFR Part 300. Finally, Congress specified in section 126(b) that there should be both PPE and engineering control provisions for the permanent final standard.

Paragraph (g)(1) basically carries over the existing requirements of Subpart Z. OSHA regulated toxic and hazardous substances are to be controlled to the permissible exposure limit if feasible. If not feasible they are to be controlled with PPE.

Paragraph (g)(2) provides that to achieve established permissible exposures limits for substances not regulated by OSHA, the employer may use an appropriate combination of engineering controls, work practices, and PPE. As these are interim regulations, preference for engineering controls where not already required would not be appropriate because of the limited time frame of this regulation and the frequent inability to install such controls in a short period. In addition it is OSHA's experience that this is an appropriate approach based on the emergency temporary standards it has issued which are also in effect for a limited period. OSHA will ask for comment in these areas in the proposal document.

Examples of engineering controls which may be feasible are pressurized cabs on materials handling equipment or pressurized control rooms in materials handling areas. However, in many cases personal protective equipment will be the only feasible means for providing protection to employees engaged in hazardous waste operations. The selection of personal protective equipment (PPE) must be based on the information obtained during the site characterization and analysis, as is required by paragraph (g)(3)(i) of this standard. Once an estimate of the types of hazards and their potential concentration has been obtained, the proper respirators and protective clothing can be selected based on the performance characteristics of the PPE relative to the site hazards and work conditions, as is required by paragraph (g)(3)(ii) of the standard. These requirements are derived from Reference 6 and are also supported by a NIOSH document, "Personal Protective Equipment for Hazardous Materials Incidents: A Selection Guide." These two document also support the requirements of paragraphs (g)(2)(iii) and (g)(2)(iv) which require positive pressure respirators with escape provisions to be used in IDLH atmospheres and totally-encapsulating chemical protective suits to be used where contact of the skin by the substance would be an IDLH situation.

Proper respirator selection, as required by this standard and 29 CFR 1910.134, involves providing a sufficient protection factor through the type of respirator used, respirator fitting, work site conditions, and respirator selection and use program. Proper protective clothing selection, as required by this standard, involves choosing protective clothing made of materials and construction which will prevent breakthrough of hazardous substances by permeation and penetration, or reduce the level of exposure to a safe level during the employee's duration of contact. Information on the performance characteristics of PPE is available in test reports and manufacturer's literature. Appendix B provides non-mandatory guidelines on classifying substance hazards as four levels (A, B, C, and D), and matching four levels of appropriate protection provided by different protective ensembles. These guidelines may be used as a basis for protective clothing selection, and the selection further refined when more information is obtained, as provided for in paragraph (g)(2)(v) of the standard. (In certain circumstances, this standard does specify the appropriate level of protection. See paragraph (c)(4)(iii).) Paragraph (g)(3)(vi) cross reference the existing requirements to select and use PPE pursuant to the requirements of 29 CFR 1910, Subpart I.

Paragraph (g)(4) requires totally-encapsulating suit materials used for Level A protection (the highest level of protection) to provide protection from the specific hazards which have been identified as requiring that level of protection. The purpose of this requirement is to be certain that the suit selected is comprised of materials which will provide the necessary protection, since no one material will provide protection from all hazards. Paragraphs (g)(4)(ii) and (g)(4)(iii) require totally-encapsulating suits to be capable of maintaining positive air pressure to help prevent inward leakage of hazardous substances, and to be capable of preventing inward gas leakage of more than 0.5 percent. These requirements, which are based on testing of totally-encapsulating suits, are included to establish a minimum level of suit performance so that their level of protection can be quantified for proper selection. The example test methods in Appendix A for totally-encapsulating chemical protective suits were taken from draft American Society for Testing and Materials committee documents.

Paragraph (g)(5) requires a PPE program to be established. This requirement is based upon reference 6, 29 CFR 1926.28, EPA manual items 4 and 7(g), and is included, since, in most cases, PPE will be the only protection feasible for employee protection, and because the amount of protection afforded by PPE is dependent upon so many factors, such as selection, fit, work duration and conditions, and decontamination. The PPE program is required to insure that the level of protection afforded by PPE is sufficient and continues to be sufficient for employee safety during hazardous waste operations.

Paragraph (h)—Monitoring

It is essential that employers be provided with accurate information on employee exposures in order to implement the correct PPE, engineering controls, and work practices. Airborne contaminants can present a significant threat to employee safety and health. Thus, identification and quantification of these contaminants through air monitoring is an essential component of a safety and health program at a hazardous waste site. Reliable measurements of airborne contaminants are useful for selecting personal protective equipment, determining

whether engineering controls can achieve permissible exposure limits and which controls to use, delineating areas where protection is needed, assessing the potential health effects of exposure, and determining the need for specific medical monitoring. As mentioned above, section 126(e) of SARA mandates the use of PPE by its direction that at a minimum the requirements of the EPA manual and Subpart C be followed. Those include requirements for use of PPE. But PPE cannot be effectively used unless monitoring has identified the type of PPE to be used. This is a further reason to include this provision in the interim final rule.

The language of this paragraph was adapted from reference 6.

Paragraph (i)—Informational Programs

In paragraph (i), *Informational Programs*, OSHA is requiring employers, as part of their safety and health program, to develop and implement a site specific safety and health plan for each hazardous waste operation site.

The site safety and health plan shall be developed by the employer, utilizing the other parts of the organizational plan and the employer's safety and health program. The site safety and health plan will address the anticipated safety and health hazards of each work operation or activity and the means to eliminate the hazards or to effectively control them to prevent injury or illness.

This site safety and health plan is to include: (1) The names of those responsible for assuring that safe and healthful practices and procedures are followed on the whole site; (2) risk analysis or systems analysis for specific work tasks or operations on the site; (3) employee training assignments both off site and on-the-job-training on site; (4) the list of required personal protective equipment needed for each work task and operation on site; (5) the employer's medical surveillance program for the site; (6) the methods for identification and characterization of safety and health hazards on the site including the monitoring procedures that will be done throughout the work on site; (7) site control measures including those for establishing work zones on the site; (8) the necessary decontamination procedures which are matched to the kinds of anticipated contaminants to be cleaned from employees and equipment; (9) the standard operating procedures to be used by employees on site; and (10) the contingency plan for emergencies and confined space entry procedures. Safety meetings and briefings and site inspections shall also be mentioned in the plan as well as the procedures to be followed in changing or modifying the plan.

The site safety and health plan is necessary to protect employee health. There are many hazards at a hazardous waste operation which need to be determined and addressed. The plan provides that this will be done in a systematic manner so that hazards will not be missed and so that needed protective action will not be overlooked. The approach used has be adapted from reference 6.

Paragraph (j)—Handling Drums and Containers

The handling of drums and containers at hazardous waste sites poses one of the greatest dangers to hazardous waste site employees. Hazards include detonations, fires, explosions, vapor generation, and physical injury resulting from moving heavy containers by hand and working around stacked drums, heavy equipment, and deteriorated drums. While these hazards are always present, proper work practices can minimize the risks to site personnel. Handling and storage of hazardous substances is addressed in item (a) of the EPA manual.

Containers are handled during characterization and removal of their contents and during other operations. Many of the hazards encountered during the handling of drums occur during the handling of containers. The relative size of a container when compared to the size of a drum is no indication of the degree of hazard posed by the container. They should be treated in accordance with the level of hazard posed by their contents not by their size. The language used in this paragraph was adapted from Reference 6.

Paragraph (k)—Decontamination

As part of the care of PPE required by this standard, decontamination is a necessary practice to properly protect those employees who may be exposed to hazardous substances. Decontamination provisions protect an employee from being exposed to hazardous substances which would otherwise be on the employee's PPE when it is removed. The standard requires that a decontamination plan be developed and implemented before any employees or equipment may enter areas on site where potential for exposure to hazardous substances exists.

As required by the standard, decontamination procedures and areas shall be developed to minimize hazardous exposures to employees whose equipment and PPE are being decontaminated, as well as to employees who are assisting in the decontamination of workers and equipment. These measures are required since without proper procedures and decontamination areas, employees may be unknowingly exposed to hazardous substances which have contacted, or otherwise adhered to equipment and clothing. The standard also requires that all employees, clothing, equipment and decontamination fluids and equipment be decontaminated or disposed of before leaving a contaminated area. These provisions are required so that contaminated persons and materials do not leave the "hot zone" and thereby expose other employees and persons to hazardous substances.

Decontamination methods and cleaning fluids must be matched to the particular hazardous substance at the site in order for the decontamination procedures to be effective in removing the hazards from PPE and other equipment. No one decontamination fluid will be effective for all hazardous substances. As required by the standard the decontamination program must be effective and it must be monitored by the site safety and health officer to maintain its effectiveness. These requirements are included so that employees are not exposed to hazard substances by reusing PPE and other equipment which are still contaminate

The language used in this paragraph was adapted from reference 6.

Paragraph (l)—Emergency Response

Section 126(e) of SARA specifically discusses protecting "emergency response workers," in addition in the EPA manual under items 4 and 9 and in 29 CFR 1928.23 and 1928.24 call for preparations and planning for emergencies. Congress made its intent clear that emergency planning and response is an important part of any employer's safety and health program and indicated that it is to be addressed in the interim final rule.

In paragraph (l)(1), *Emergency Response, General*, OSHA is requiring employers covered in paragraph (a)(2)(ii), who are involved in hazardous waste operations, as part of their on-site contingency planning to develop and implement an emergency response plan. These employers are to inform all their employees on the waste site about the emergency response plan. The plan is to be available for use prior to the start of work on the site. The plan will be a part of the site safety and health plan. The elements of the emergency response plan will include: (1) Recognition of emergencies; (2) methods or procedur for alerting employees on site; (3)

evacuation procedures and routes to places of refuge or safe distances away from the danger area; (4) means and methods for emergency medical treatment and first aid; (5) line of authority for employees; and (6) on-site decontamination procedures; site control means and methods for evaluating the plan.

Employers whose employees will be responding to hazardous substance emergency incidents from their regular work location or duty station, such as a fire department, fire brigade or emergency medical service, will also be required to have an emergency response plan. These employees which may be called upon to respond to hazardous substance emergency incidents involving a railroad tank car, motor carrier tank truck or to a plant location are considered off-site emergency response activities under this section. The emergency response plan is to include the incident command system required in paragraph (l)(3) of this section.

In paragraph (l)(2), *Hazardous waste operations, on-site emergency response.* OSHA is requiring the training of on-site emergency response personnel to have the same basic training as for the other employees involved in on-site hazardous waste operations plus the training needed to develop and retain the necessary skills for anticipated emergency response activities. Also, the procedures for handling hazardous substances on-site emergency incidents are to be oriented to the specific site and made a part of the emergency response plan.

The requirement of paragraphs (l)(3) and (l)(4) apply more broadly to all employers whose employees respond to off-site emergency incidents. In paragraph (l)(3), *Off-site emergency response,* OSHA is mandating that employers, such as fire departments, emergency medical and first-aid squads, fire brigades, etc., conduct monthly training sessions for their employees totalling 24 hours annually.

Note.—OSHA does not have jurisdiction over state and local government employees. OSHA state plan states must issue regulations as effective as these to cover state and local government employees in the state.

Training activities, such as breathing apparatus use, training, hose handling and preplanning may be used as training subjects for the monthly sessions provided hazardous substance incident operations are included in the presentation, discussion or drill. These training sessions and drills must involve at least 24 hours of training on an annual basis.

The incident command system shall be established by these employers for the incidents that will be under their control and shall be interfaced with the other organizations or agencies who may respond to such an incident. The National Transportation Safety Board, as a result of its investigation of hazardous materials incidents, has consistently recommended that better state and local emergency response planning be done to reduce the loss of life and property and that a system using a command post and on-scene commander be implemented. (See *Special Investigation Report: On-scene Coordination Among Agencies at Hazardous Materials Accidents,* NTSB-HZM-79-3, September 13, 1979; and *Multiple Vehicle Collisions and Fire, Caldecott Tunnel near Oakland, California,* NTSB/HAR-83/01, National Transportation Safety Board, Washington, DC, April 7, 1982, for further information.) Where available, state and local district emergency response plans shall be utilized in developing the incident command system and the emergency response plan to assure compatability with the other emergency responding agencies or employers.

In paragraph (l)(4), *Hazardous materials teams,* OSHA is requiring employers, who utilize specially trained teams involved in intimate contact with controlling or handling hazardous substances, to provide special training for the affected employees in such areas as care and use of chemical protective clothing, techniques and procedures for stopping or controlling leaking containers and decontamination of clothing and equipment for anticipated hazardous substance incidents. The employer is to make available to each team member a physical examination by a licensed physician and to implement a medical surveillance program in accordance with the requirements of paragraph (f) of this section.

In paragraph (l)(5), OSHA is requiring employers covered in paragraphs (a)(2)(i) and (ii) of this section, who will be involved in cleaning up hazardous waste after the emergency response activities are concluded, to comply with the same requirements that apply to others involved with hazardous waste clean-up operations. These hazardous waste clean-up operations will be typically done by special contractors and not by those agencies involved in responding to the initial emergency incident.

Paragraph (m)—Illumination

OSHA is required by SARA in section 126(e) to cover lighting of the worksite. In paragraph (m), *Illumination,* OSHA requires certain minimum illumination levels for work areas that are occupied by employees. Section 126(e) of SARA requires as a minimum the inclusion of the requirements of Subpart C of 29 CFR Part 1926. Section 1926.26 of that Subpart requires the amount of illumination set forth in this paragraph.

Paragraph (n)—Sanitation for Temporary Worksites

In paragraph (n), *Sanitation for temporary worksites,* OSHA sets minimum requirements for potable and non-potable water supplies, toilet facilities, and other areas related to sanitation at temporary workplaces. OSHA is mandated by SARA in section 126(e) to include sanitation requirements in the interim final rule since it requires the incorporation of provisions of Subpart C.

Paragraph (o)—Operations Conducted Under the Resource Conservation and Recovery Act of 1976 (RCRA)

OSHA is providing a separate paragraph for operations conducted at worksites involving hazardous waste storage, disposal and treatment operating under the Resource Conservation and Recovery Act of 1976 (RCRA). This separate paragraph of requirements is appropriate because RCRA site operations, (not including major corrective actions and their associated hazards which are like CERCLA sites and are covered by the main part of the standard) generally are different from the operations and hazards found on a CERCLA clean-up site. For example, RCRA sites covered by this paragraph tend for the most part to be fixed on-going operations involving the receiving, processing, storage, treatment, and disposal of hazardous wastes or substance from outside sources. CERCLA sites on the other hand are temporary emergency clean-up operations involving often undefined and substantial quantities of hazardous substances.

Consequently hazards should be better controlled and more routine and stable for the RCRA sites covered by this paragraph and so less extensive requirements are appropriate.

Paragraph (p)—Start-up Dates

Section 126(e) of SARA directs that these interim final regulations take effect on issuance. Consequently, these regulations do become effective on issuance. However, completion of

implementation for some provisions is not feasible immediately. For these provisions, commencement of implementation must begin immediately but completion of full compliance is required as soon as possible or feasible but in no case later than a specified date, which is no longer than three months.

It is OSHA's judgment that all provisions can be fully implemented by the periods specified. OSHA also believes that the immediate effectiveness provisions specifically apply to the mandatory requirements.

OSHA does not believe that Congress intended that work at current hazardous waste operations stop until implementation of all requirements can be feasibly completed. This paragraph so indicates. However, for new sites, these requirements can be completed in advance. It is not OSHA's intention that emergency actions necessary to protect the public safety and health be prevented because in a particular circumstance it is not feasible to carry out particular requirements of this standard in the time needed to respond to the emergency

III. References

1. Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. 99-499

2. Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA or "Superfund"), Pub. L. 96-510, December 11, 1980, 94 Stat. 2767.

3. Resource Conservation and Recovery Act of 1976 (RCRA), Pub. L. 94-580, October 21, 1976, 90 Stat. 2795.

4. "Health and Safety Requirements for Employees Engaged in Field Activities", Environmental Protection Agency Order 1440.2, U.S. Environmental Protection Agency, July 12, 1981.

5. Subparts C and D of 29 CFR Part 1926.

6. "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities.", Occupational Safety and Health Administration, Environmental Protection Agency, U.S. Coast Guard, and National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 85-115, October 1985.

IV. Regulatory Impact Analysis, Regulatory Flexibility Analysis and Environmental Impact Analysis

OSHA anticipates that this interim final standard will have a significant impact upon employers and their employees who work at CERCLA sites and at some RCRA sites; and who respond to emergency clean-ups of hazardous substance spills. OSHA has had little time since the enactment of SARA to collect information concerning these industries. As a result, the currently available information is insufficient for OSHA to use to estimate the potential benefits and costs that would occur as a consequence of compliance with this interim final rule. OSHA is collecting additional information to be used in conjunction with the information from the comments that will be received in response to publication of the proposed rule covering hazardous waste operations. This information will be sufficient for OSHA to provide a complete Regulatory Impact Analysis for the final rule that will govern hazardous waste operations.

Regulatory Flexibility Act Analysis. The requirements of the Regulatory Flexibility Act are not applicable to this interim final rule, under 5 U.S.C. 603(a), because notice and comment proposed rulemaking under the Administrative Procedures Act, or any other statute, is not required.

Environmental Impact Analysis. The National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 *et seq*), as implemented by the regulations (40 CFR Part 1500) of the Council on Environmental Quality (CEQ), requires that federal agencies assess their regulatory actions to determine if there is a potential for a significant impact on the quality of the human environment and, if necessary, to prepare an environmental impact statement.

In accordance with these requirements and DOL NEPA Compliance Procedures (29 CFR Part 11, Subpart B, section 11.10(a)(4)), OSHA has determined that due to the compressed rulemaking schedule imposed by the Congress in issuing the interim regulation, no environmental impact statement will be prepared for this interim rule.

In similar situations, for example, when an emergency temporary standard (ETS) has been issued, the courts have held that NEPA does not require advance preparation of an environmental statement for an ETS (*Dry Color Manufacturing Association* v. *U.S. Department of Labor*: 486 F. 2d 98, 107 (3rd Cir. 1973)). This interim final standard is similar in nature to an ETS issued for relatively brief periods for short notice pursuant to section 6(c) of the Occupational Safety and Health Act of 1970 and section 101(b) of the Federal Mine Safety and Health Act of 1977. The DOL NEPA regulations set forth in 29 CFR Part 11, Subpart B, section 11.10(a)(4), provide that in these situations the regulations set forth in 40 CFR Parts 1500 *et seq* may not be strictly observable.

OSHA, however, will assess the environmental effects of the proposed permanent regulation of hazardous waste sites. The possibility that increased training related to emplo safety and health protection will als affect and reduce inadvertent environmental releases of hazardous substances at waste sites will be analyzed. The results of this study will be available for review and comment prior to the hearing on the proposed permanent standard and will be an appropriate issue for discussion at the public hearings scheduled for the proceeding.

In the interim, OSHA welcomes any comments on any environmental effects that might occur as a result of promulgation of a rule on hazardous waste sites.

V. International Trade

OSHA has preliminarily concluded that this interim final rule will not significantly affect international trade. The firms that will be primarily affected by this interim final rule deal with hazardous waste products and are not involved in international trade. In addition, the hazardous wastes to be handled under this interim final rule are primarily by-products from previously manufactured goods and consequently, any potential costs would not be borne by the goods that are currently being traded. Nevertheless, the information that OSHA is collecting and the information that will be supplied in response to the publication of the proposed rule covering Hazardous Waste Operations will be carefully reviewed and analyzed to establish the potential impacts of the final rule upon international trade.

VI. State Plan States

This Federal Register document adds an interim final rule (section 1910.120, "Hazardous Waste Operations and Emergency Response") to existing Subpart H of 29 CFR Part 1910, OSHA's general industry standards on hazardous materials. The 25 States with their own OSHA approved occupational safety and health plans must develop a comparable standard applicable to both the private and public (State and local government employees) sectors within six months of the publication date of this interim final rule or show OSHA why there is no need for action, e.g., because an existing state standard covering this area is already "at least as effective" as the new Federal standard. These states are Alaska, Arizona, California, Connecticut (for state and local government employees only), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, New York (for state and local government employee

only). North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Virgin Islands, Washington, and Wyoming. Until such time as a state standard is promulgated, Federal OSHA will provide interim enforcement assistance, as appropriate, in these states.

List of Subjects in 29 CFR Part 1910

Containers, Drums, Emergency response, Flammable and combustible liquids, Hazardous materials, Hazardous substances, Hazardous wastes, Incorporation by reference, Materials handling and storage, Personal protective equipment, Storage areas, Training, Waste disposal.

VII. Immediate Effectiveness and Absence of Notice and Comment

Section 126(e) of SARA specifically provides that the "Secretary of Labor shall issue interim final regulations under this section within 60 days . . ." after date of enactment. The express use of the phrase "interim final regulations," which in the rulemaking context commonly describes a rule issued without notice and comment, in connection with the extremely limited time frame provided by this section, makes clear that Congress intended this rule to be issued without the time-consuming process of notice and comment. The Agency, therefore, concludes that neither the notice and comment rulemaking provisions of the OSH Act nor those of the Administrative Procedures Act are applicable to the issuance of this interim final rule. The Agency also expressly finds that "good cause" exists under 5 U.S.C. 553(b)(B) for not providing notice and comment because notice and comment procedures, under these circumstances, would be impractical and contrary to the public interest.

Section 126(e) also expressly provides that "Such interim final regulations shall take effect upon issuance. . . ." OSHA finds this specific direction of law requires the Agency to issue this rule with an immediate effective date and, further, constitutes good cause not to delay the effective date of this rule until 30 days after publication under 5 U.S.C. 553(d).

Authority

This document has been prepared under the direction of John A. Pendergrass, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC. Pursuant to section 126(e) of the Superfund Amendments and Reauthorization Act of 1986 (Pub. L. 99-499), Sections 6 and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 655, 657), Sections 3 and 4 of the Administrative Procedures Act (5 U.S.C. 552(a), 553), and Secretary of Labor's Order 9-83 (48 FR 35736), 29 CFR Part 1910 is amended by adding a new § 1910.120, Hazardous Waste Operations, as set forth below, effective December 19, 1986.

Signed at Washington, DC this 16th day of December 1986.

John A. Pendergrass,

Assistant Secretary of Labor.

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

1. The Authority citation for Subpart H of Part 1910 is amended by adding the following:

Authority: * * * Section 1910.120 issued under the authority of section 126(e) of the Superfund Amendments and Reauthorization Act of 1986 (Pub. L. 99-499), Sections 6 and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 655, 657), sections 3 and 4 of the Administrative Procedure Act (5 U.S.C. 552(a), 533) and Secretary of Labor's Order 9-83 (48 FR 35736).

2. Part 1910 of Title 29 of the Code of Federal Regulations is amended by adding a new § 1910.120 to read as follows:

§ 1910.120 Hazardous waste operations and emergency response.

(a) *Scope, application, and definitions.*—(1) *Scope.* This section covers employers and employees engaged in the following operations:

(i) Hazardous substance response operations under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended (42 U.S.C. 9601 *et seq*) (CERCLA), including initial investigations at CERCLA sites before the presence or absence of hazardous substances has been ascertained;

(ii) Major corrective actions taken in clean-up operations under the Resource Conservation and Recovery Act of 1976 as amended (42 U.S.C. 6901 *et seq*) (RCRA);

(iii) Operations involving hazardous waste storage, disposal and treatment facilities regulated under 40 CFR Parts 264 and 265 pursuant to RCRA, except for small quantity generators and those employers with less than 90 days accumulation of hazardous wastes as defined in 40 CFR 262.34;

(iv) Hazardous waste operations sites that have been designated for clean-up by state or local governmental authorities; and

(v) Emergency response operations for releases of or substantial threats of releases of hazardous substances and post-emergency response operations for such releases.

(2) *Application.* (i) All requirements of Part 1910 and Part 1926 of Title 29 of the Code of Federal Regulations apply pursuant to their terms to hazardous waste operations (whether covered by this section or not). In addition the provisions of this section apply to operations covered by this section. If there is a conflict or overlap, the provision more protective of employee safety and health shall apply. 29 CFR 1910.5(c)(1) is not applicable.

(ii) All paragraphs of this section except paragraph (o) apply to hazardous substance response operations under CERCLA, major corrective actions taken in clean-up operations under RCRA, post-emergency response operations, and hazardous waste operations that have been designated for clean-up by state or local governmental authorities.

(iii) Only the requirements of paragraph (o) of this section apply to those operations involving hazardous waste storage, disposal, and treatment facilities regulated under 40 CFR Parts 264 and 265, except for small quantity generators and those employers with less than 90 days accumulation of hazardous wastes as defined in 40 CFR 262.34.

(iv) Paragraph (l) of this section applies to emergency response operations for releases of or substantial threats of releases of hazardous substances.

(3) *Definitions*—*"Buddy system"* means a system of organizing employees into work groups in such a manner that each employee of the work group is designated to observe the activities of at least one other employee in the work group. The purpose of the buddy system is to provide quick assistance to those other employees in the event of an emergency.

"Decontamination" means the removal of hazardous substances from employees and their equipment to the extent necessary to preclude the occurrence of foreseeable adverse health effects.

"Emergency response" means response to any occurrence which results, or is likely to result, in a release of a hazardous substance due to an unforeseen event.

"Established permissible exposure limit" means the inhalation or dermal permissible exposure limit specified in 29 CFR Part 1910, Subpart Z, or if none is specified the exposure limits in "NIOSH Recommendations for Occupational Health Standards" dated September 1986 incorporated by reference, or if neither of the above is specified, the standards specified by the American Conference of Governmental Industrial Hygienists in their publication "Threshold Limit Values and Biological Exposure Indices for 1986-87" dated

1986 incorporated by reference, or if none of the above is specified, a limit based upon a published study or manufacturers' safety data sheet brought to the employer's attention. The two documents incorporated by reference are available for purchase from the following:

NIOSH, Publications Dissemination, Division of Standards Development and Technology Transfer, National Institute for Occupational Safety and Health, 4676 Columbia Parkway, Cincinnati, OH 45226, (513) 841-4287

American Conference of Governmental Industrial Hygienists, 6500 Glenway Ave., Building D-7, Cincinnati, OH 45211-4438, (513) 661-7881

and are available for inspection and copying at the OSHA Docket Office, Docket No. S-760, Room N-3671, 200 Constitution Ave., NW., Washington, DC 20210.

"Hazardous substance" means any substance designated or listed under (i) through (iv) below, exposure to which results or may result in adverse effects on the health or safety of employees:

(i) any substance defined under section 101(14) of CERCLA,

(ii) any biological agent and other disease-causing agent as defined in section 104(a)(2) of CERCLA,

(iii) any substance listed by the U.S. Department of Transportation and regulated as hazardous materials under 49 CFR 172.101 and appendices, and

(iv) hazardous waste.

"Hazardous waste" means (i) a waste or combination of wastes as defined in 40 CFR 261.3, or (ii) those substances defined in 49 CFR 171.8.

Hazardous waste operation" means any operation involving employee exposure to hazardous wastes, hazardous substances, or any combination of hazardous wastes and hazardous substances that are conducted within the scope of this standard.

"Hazardous waste site" or *"site"* means any facility or location at which hazardous waste operations within the scope of this standard take place.

"Health hazard" means a chemical, mixture of chemicals or a pathogen for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. Further definition of the terms used above can be found in Appendix A to 29 CFR 1910.1200.

"IDLH" or *"Immediately dangerous to life or health"* means any condition that poses an immediate threat to life, or which is likely to result in acute or immediate severe health effects. This includes oxygen deficiency conditions.

"Immediate severe health effects" means any acute clinical sign or symptom of a serious, exposure-related reaction manifested within 72 hours after exposure to a hazardous substance.

"Oxygen deficiency" means that concentration of oxygen by volume below which air supplying respiratory protection must be provided. It exists in atmospheres where the percentage of oxygen by volume is less than 19.5 percent oxygen.

"Site safety and health officer" means the individual located on a hazardous waste site who is responsible to the employer and has the authority and knowledge necessary to implement the site safety and health plan and verify compliance with applicable safety and health requirements.

(b) *General requirements*—(1) *Safety and health program.* Each employer shall develop and implement a safety and health program for its employees involved in hazardous waste operations. The program, as a minimum, shall incorporate the requirements of this section and be provided, as appropriate, to any subcontractor or its representative who will be involved with the hazardous waste operation. The program shall be designed to identify, evaluate, and control safety and health hazards and provide for emergency response for hazardous waste operations.

(2) *Site characterization and analysis.* Hazardous waste sites shall be evaluated in accordance with paragraph (c) of this section to identify specific site hazards and to determine the appropriate safety and health control procedures needed to protect employees from the identified hazards.

(3) *Site control.* Site control procedures shall be implemented in accordance with paragraph (d) of this section before clean-up work begins to control employee exposure to hazardous substances.

(4) *Training.* Initial or refresher or review training meeting the requirements of paragraph (e) of this section shall be provided to employees before they are permitted to engage in hazardous waste operations that could expose them to hazardous substance safety, or health hazards.

(5) *Medical surveillance.* Medical surveillance shall be provided in accordance with paragraph (f) of this section for employees exposed or potentially exposed to hazardous substances or health hazards or who wear respirators.

(6) *Engineering controls, work practices and personal protective equipment.* Engineering controls, work practices, personal protective equipment, or a combination of these shall be implemented in accordance with paragraph (g) of this section to protect employees from exposure to hazardous substances and health hazards.

(7) *Monitoring.* Monitoring shall be performed in accordance with paragraph (h) of this section to assure proper selection of engineering controls, work practices and personal protective equipment so that employees are not exposed to levels which exceed established permissible exposure limits for hazardous substances.

(8) *Informational program.* Employees, contractors, and subcontractors or their representative shall be informed of the degree and nature of safety and health hazards specific to the work site by using the safety and health plan outlined in paragraph (i) of this section.

(9) *Material handling.* Hazardous substances and contaminated soils, liquids, and other residues shall be handled, transported, labeled, and disposed of in accordance with paragraph (j) of this section.

(10) *Decontamination.* Procedures for all phases of decontamination shall be developed and implemented in accordance with paragraph (k) of this section.

(11) *Emergency response.* Emergency response to hazardous waste operation incidents shall be conducted in accordance with paragraph (l) of this section.

(12) *Illumination.* Areas accessible to employees shall be lighted in accordance with the requirements of paragraph (m) of this section.

(13) *Sanitation.* Facilities for employee sanitation shall be provided in accordance with paragraph (n) of this section.

(14) *Site excavation.* Site excavations created during initial site preparation or during hazardous waste operations shall be shored or sloped to prevent accidental collapse and conducted in accordance with Subpart P of 29 CFR Part 1926.

(15) *Contractors and sub-contractors.* An employer who retains contractor(

sub-contractor services for work in hazardous waste operations shall inform those contractors. sub-contractors. or their representatives of any potential fire. explosion. health or other safety hazards of the hazardous waste operation that have been identified by the employer.

(c) *Site characterization and analysis.* (1) A preliminary evaluation of a site's characteristics shall be performed prior to site entry by a trained person to aid in the selection of appropriate employee protection methods prior to site entry. During site entry. a more detailed evaluation of the site's specific characteristics shall be performed by a trained person to further identify existing site hazards and to further aid in the selection of the appropriate engineering controls and personal protective equipment for the tasks to be performed.

(2) All suspected conditions that may pose inhalation or skin absorption hazards that are immediately dangerous to life or health (IDLH) or other conditions that may cause death or serious harm shall be identified during the preliminary survey and evaluated during the detailed survey. Examples of such hazards include. but are not limited to. confined space entry. potentially explosive or flammable situations. visible vapor clouds. or areas where biological indicators such as dead animals or vegetation are located.

(3) The following information to the extent available shall be obtained by the employer prior to allowing employees to enter a site:

(i) Location and approximate size of the site.

(ii) Description of the response activity and/or the job task to be performed.

(iii) Duration of the planned employee activity.

(iv) Site topography.

(v) Site accessibility by air and roads.

(vi) Pathways for hazardous substance dispersion.

(vii) Present status and capabilities of emergency response teams that would provide assistance to on-site employees at the time of an emergency.

(viii) Hazardous substances and health hazards involved or expected at the site and their chemical and physical properties.

(4) Personal protective equipment (PPE) shall be provided and used during initial site entry in accordance with the following requirements:

(i) Based upon the results of the preliminary site evaluation. an ensemble of PPE shall be selected and used during initial site entry which will provide protection to a level of exposure below established permissible exposure limits for known or suspected hazardous substances and health hazards and will provide protection against other known and suspected hazards identified during the preliminary site evaluation.

(ii) An escape self-contained breathing apparatus of at least five minutes duration shall be carried by employees or kept available at their immediate work station if positive-pressure self-contained breathing apparatus is not used as part of the entry ensemble.

(iii) If the preliminary site evaluation does not produce sufficient information to identify the hazards or suspected hazards of the site an ensemble of Level B PPE shall be provided as minimum protection and direct reading instruments shall be carried for identifying IDLH conditions. (See Appendix B for guidelines on Level B protective equipment.)

(iv) Once the hazards of the site have been positively identified. the appropriate PPE shall be selected and used in accordance with paragraph (g) of this section.

(5) The following monitoring shall be conducted during site entry when the site evaluation produces information which show the potential for ionizing radiation or IDLH conditions. or when the site information is not sufficient to rule out these possible conditions:

(i) Monitoring for hazardous levels of ionizing radiation.

(ii) Monitoring the air with appropriate test equipment for IDLH and other conditions that may cause death or serious harm (combustible or explosive atmospheres. oxygen deficiency. toxic substances.)

(iii) Visually observe for signs of actual or potential IDLH or other dangerous conditions.

(6) Once the presence and concentrations of specific hazardous substances and health hazards have been established. the risks associated with these substances shall be identified. Employees who will be working on the site shall be informed of any risks that have been identified.

Note.—Risks to consider include. but are not limited to:

Exposures exceeding the appropriate Threshold Limit Values (TLVs). Permissible Exposure Limits (PELs). or Recommended Exposure Limits (RELs).

IDLH Concentrations.

Potential Skin Absorption and Irritation Sources.

Potential Eye Irritation Sources.

Explosion Sensitivity and Flammability Ranges.

(7) Any information concerning the chemical. physical. and toxicologic properties of each substance known or expected to be present on site that is available to the employer and relevant to the duties an employee is expected to perform shall be made available to all employees prior to the commencement of their work activities.

(8) An ongoing air monitoring program in accordance with paragraph (h) of this section shall be implemented after site characterization has determined the site is safe for the start-up of operations.

(d) *Site control.* (1) A site control program for preventing contamination of employees shall be developed during the planning stages of a hazardous waste operation clean-up.

(2) The site control program shall. as a minimum. include: A site map; site work zones; the use of a "buddy system"; site communications; the standard operating procedures or safe work practices; and. identification of nearest medical assistance.

(e) *Training.* (1) All employees (such as equipment operators and general laborers) exposed to hazardous substances. health hazards. or safety hazards shall be thoroughly trained in the following:

(i) Names of personnel and alternates responsible for site safety and health;

(ii) Safety. health and other hazards present on the site;

(iii) Use of PPE;

(iv) Work practices by which the employee can minimize risks from hazards;

(v) Safe use of engineering controls and equipment on the site;

(vi) Medical surveillance requirements including recognition of symptoms and signs which might indicate over exposure to hazards; and

(vii) Paragraphs (G) through (K) of the site safety and health plan set forth in paragraph (i)(2)(i) of this section.

(2) All employees shall at the time of job assignment receive a minimum of 40 hours of initial instruction off the site, and a minimum of three days of actual field experience under the direct supervision of a trained, experienced supervisor. Workers who may be exposed to unique or special hazards shall be provided additional training. The level of training provided shall be consistent with the employee's job function and responsibilities.

(3) On-site management and supervisors directly responsible for or who supervise employees engaged in hazardous waste operations shall receive training as provided in paragraph (e)(1) and (e)(2) of this section and at least eight additional hours of specialized training on managing such operations at the time of job assignment.

(4) Trainers shall have received a level of training higher than and including the subject matter of the level of instruction that they are providing.

(5) Employees shall not participate in field activities until they have been trained to a level required by their job function and responsibility.

(6) Employees and supervisors that have received and successfully completed the training and field experience specified in paragraphs (e)(1), (e)(2) and (e)(3) of this section shall be certified by their instructor as having completed the necessary training. Any person who has not been so certified or meets the requirements of paragraph (e)(1) of this section shall be prohibited from engaging in hazardous waste operations after March 18, 1987.

(7) Employees who are responsible for responding to hazardous emergency situations that may expose them to hazardous substances shall be trained in how to respond to expected emergencies.

(8) Employees specified in paragraph (e)(1) and managers specified in paragraph (e)(3) of this section shall receive eight hours of refresher training annually on the items specified in paragraph (e)(1) of this section and other relevant topics.

(9) Employers who can show by an employee's work experience and/or training that the employee has had initial training equivalent to that training required in paragraphs (e)(1), (e)(2), and (e)(3) of this section shall be considered as meeting the initial training requirements of those paragraphs. Equivalent training includes the training that existing employees might have already received from actual, on-site experience.

(f) *Medical surveillance*—(1) *Employees covered.* A medical surveillance program shall be instituted by the employer for:

(i) all employees who are or may be exposed to hazardous substances or health hazards at or above the established permissible exposure limits for these substances, without regard to the use of respirators, for 30 days or more a year, or

(ii) all employees who wear a respirator for 30 days or more a year, or

(iii) HAZMAT employees specified in paragraph (1)(4) of this section while engaged in hazardous waste operations covered by this section.

(iv) The employer shall make medical examinations or consultations available to all employees who may have been exposed in an emergency situation to hazardous substances at concentrations above the permissible exposure limits.

(2) *Frequency of medical examinations and consultations.* Medical examinations and consultations shall also be made available by the employer to each employee covered under paragraph (f)(1) of this section on the following schedules:

(i) Prior to assignment or for employees covered on the effective date of this standard as specified in paragraph (p) of this section.

(ii) At least once every twelve months for each employee covered.

(iii) At termination of employment or reassignment to an area where the employee would not be covered if the employee has not had an examination within the last six months.

(iv) As soon as possible, upon notification by an employee either that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards

(v) At more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary.

(3) *Content of medical examinations and consultations.* (i) Medical examinations required by paragraph (f)(2) of this section shall include a medical and work history with special emphasis on symptoms related to the handling of hazardous substances and to fitness for duty including the ability to wear any required PPE under conditions (i.e., temperature extremes) that may be expected at the work site.

(ii) The content of medical examinations or consultations made available to employees pursuant to paragraph (f) shall be determined by the examining physician.

(4) *Examination by a physician and costs.* All medical examinations and procedures shall be performed by or under the supervision of a licensed physician, and shall be provided without cost to the employee, without loss of pay, and at a reasonable time and place.

(5) *Information provided to the physician.* The employer shall provide the following information to the examining physician:

(i) A copy of this standard and its appendices.

(ii) A description of the employee's duties as they relate to the employee's exposures.

(iii) The employee's exposure levels or anticipated exposure levels.

(iv) A description of any personal protective equipment used or to be used, and

(v) Information from previous medical examinations of the employee which is not readily available to the examining physician.

(6) *Physician's written opinion.* (i) The employer shall obtain and furnish the employee with a copy of a written opinion from the examining physician containing the following:

(A) The results of the medical examination and tests.

(B) The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health.

(C) The physician's recommended limitations upon the employees assigned work.

(D) A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further examination or treatment.

(ii) The written opinion obtained by the employer shall not reveal specific findings or diagnoses unrelated to occupational exposure.

(7) *Recordkeeping.* (i) An accurate record of the medical surveillance required by paragraph (f)(1) of this section shall be retained. This record shall be retained for the period specified and meet the criteria of 29 CFR 1910.20.

(ii) The record required in paragraph (f)(5)(i) of this section shall include at least the following information:

(A) The name and social security number of the employee;

(B) Physicians' written opinions;

(C) Any employee medical complaints related to exposure to hazardous substances;

(D) A copy of the information which shall be provided to the examining physician by the employer, with the exception of the standard and its appendices.

(iii) The employer shall ensure that this record is retained for the period specified in 29 CFR 1910.20.

(g) *Engineering controls, work practices, and personal protective equipment for employee protection*—(1) *Engineering controls, work practices and PPE.* (i) Engineering controls and work practices shall be instituted to reduce and maintain employee exposure to or below the permissible exposure limits of those hazardous substances regulated by 29 CFR Part 1910, Subpart Z, except to the extent that such controls and practices are not feasible.

Note.—Engineering controls which may be feasible are the use of pressurized cabs or control booths on equipment, and/or the use of remotely operated material handling equipment. Work practices which may be feasible are removing all nonessential employees from potential exposure during opening of drums, wetting down dusty

operations and locating employees upwind of possible hazards.

(ii) Whenever engineering controls and work practices are not feasible, PPE shall be used to protect employees to reduce exposure to below established permissible exposure limits.

(iii) The employer shall not implement a schedule of employee rotation as a means of compliance with permissible exposure limits.

(2) *Engineering controls, work practices, and personal protective equipment for substances not regulated in Subpart Z.* An appropriate combination of engineering controls, work practices, and personal protective equipment shall be established to reduce and maintain employee exposure to or below the established permissible exposure limit for hazardous substances not regulated by 29 CFR Part 1910, Subpart Z and health hazards.

(3) *Personal protective equipment selection.* (i) Personal protective equipment (PPE) shall be selected and used which will protect employees from the hazards and potential hazards they are likely to encounter as identified during the site characterization and analysis.

(ii) Personal protective equipment selection shall be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the site.

(iii) Positive pressure self-contained breathing apparatus, or positive pressure air-line respirators equipped with an escape air supply shall be used in IDLH conditions.

(iv) Totally-encapsulating chemical protective suits (Level A protection) shall be used in conditions where contact of the skin by the hazardous substance may result in an IDLH situation.

(v) The level of protection provided by PPE selection shall be increased when additional information or site conditions show that increased protection is necessary to reduce employee exposure below established permissible exposure limits for hazardous substance and health hazards. (See Appendix B for guidance on selecting PPE ensembles.)

Note.—The level of protection provided may be decreased when additional information or site conditions show that decreased protection will not result in hazardous exposures to employees.

(vi) Personal protective equipment shall be selected and used to meet the requirements of 29 CFR Part 1910, Subpart I, and additional requirements specified in this section.

(4) *Totally-encapsulating chemical protective suits.* (i) Totally-encapsulating suit materials used for Level A protection shall protect employees from the particular hazards which are identified during site characterization and analysis.

(ii) Totally-encapsulating suits shall be capable of maintaining positive air pressure. (See Appendix A.)

(iii) Totally-encapsulating suits shall be capable of preventing inward test gas leakage of more than 0.5 percent. (See Appendix A.)

(5) *Personal protective equipment (PPE) program.* A personal protective equipment program shall be established for hazardous waste operations. The PPE program shall address the following elements:

(i) Site hazards.
(ii) PPE selection.
(iii) PPE use.
(iv) Work mission duration.
(v) PPE maintenance and storage.
(vi) PPE decontamination.
(vii) PPE training and proper fitting.
(viii) PPE donning and doffing procedures.
(ix) PPE inspection.
(x) PPE in-use monitoring.
(xi) Evaluation of the effectiveness of the PPE program, and
(xii) Limitations during temperature extremes.

(h) *Monitoring.* (1) Air monitoring shall be used to identify and quantify airborne levels of hazardous substances in order to determine the appropriate level of employee protection needed on site.

(2) As a first step, air monitoring shall be conducted to identify any IDLH and other dangerous situations, such as the presence of flammable atmospheres, oxygen-deficient environments, toxic levels of airborne contaminants, and radioactive materials.

(3) As a minimum, periodic monitoring shall be conducted when:

(i) Work begins on a different portion of the site.

(ii) Contaminants other than those previously identified are being handled.

(iii) A different type of operation is initiated (e.g., drum opening as opposed to exploratory well drilling.)

(iv) Employees are handling leaking drums or containers or working in areas with obvious liquid contamination (e.g., a spill or lagoon.)

(4) High-risk employees, e.g., those closest to the source of contaminant generation, shall receive personal monitoring sufficient to characterize employee exposure.

(i) *Informational programs.*—(1) *General.* As part of the safety and health program required in paragraph (b)(1) of this section, the employer shall develop and implement a site safety and health plan meeting the requirements of paragraph (i)(2) of this section for each hazardous waste operation.

(2) *Site safety and health plan.* The site safety and health plan, which shall be available on the site for inspection by employees, their designated representatives, and OSHA personnel, shall address the safety and health hazards of each phase of site operation and include the requirements and procedures for employee protection.

(i) The site safety and health plan, as a minimum, shall address the following:

(A) Names of key personnel and alternates responsible for site safety and health and appointment of a site safety and health officer.

(B) A safety and health risk analysis for each site task and operation.

(C) Employee training assignments.

(D) Personal protective equipment to be used by employees for each of the site tasks and operations being conducted.

(E) Medical surveillance requirements.

(F) Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used. Methods of maintenance and calibration of monitoring and sampling equipment to be used.

(G) Site control measures.

(H) Decontamination procedures.

(I) Site's standard operating procedures.

(J) A contingency plan meeting the requirements of paragraphs (1)(1) and (1)(2) of this section for safe and effective responses to emergencies including the necessary PPE and other equipment.

(K) Confined space entry procedures.

(ii) Pre-entry briefings shall be held prior to initiating any site activity and at such other times as necessary to ensure that employees are apprised of the site safety and health plan and that it is being followed.

(iii) Inspections shall be conducted by the site safety and health officer or, in the absence of that individual, another individual acting on behalf of the employer as necessary to determine the effectiveness of the site safety and health plan. Any deficiencies in the effectiveness of the site safety and health plan shall be corrected by the employer.

(j) *Handling drums and containers.*—(1) *General.* (i) Drums and containers used during the clean-up shall meet the

appropriate DOT, OSHA, and EPA regulations for the wastes that they contain.

(ii) Drums and containers shall be inspected and their integrity shall be assured prior to being moved. Drums or containers that cannot be inspected before being moved because of inaccessible storage conditions shall be moved to an accessible location and inspected prior to further handling.

(iii) Unlabeled drums and containers shall be considered to contain hazardous substances and handled accordingly until the contents are positively identified and labeled.

(iv) Site operations shall be organized to minimize the amount of drum or container movement.

(v) Prior to movement of drums or containers, all employees exposed to the transfer operation shall be warned of the potential hazards associated with the contents of the drums or containers.

(vi) U.S. Department of Transportation specified salvage drums or containers and suitable quantities of proper absorbent shall be kept available and used in areas where spills, leaks, or ruptures may occur.

(vii) Where major spills may occur, a spill containment program shall be implemented to contain and isolate the entire volume of the hazardous substance being transferred.

(viii) Drums and containers that cannot be moved without rupture, leakage, or spillage shall be emptied into a sound container using a device classified for the material being transferred.

(ix) A ground-penetrating system or other type of detection system or device shall be used to estimate the location and depth of drums or containers.

(x) Soil or covering material shall be removed with caution to prevent drum or container rupture.

(xi) Fire extinguishing equipment meeting the requirements of 29 CFR Part 1910, Subpart L shall be on hand and ready for use to control small fires.

(2) *Opening drums and containers.* The following procedures shall be followed in areas where drums or containers are being opened:

(i) Where an airline respirator system is used, connections to the bank of air cylinders shall be protected from contamination and the entire system shall be protected from physical damage.

(ii) Employees not actually involved in opening drums or containers shall be kept a safe distance from the drums or containers being opened.

(iii) If employees must work near or adjacent to drums or containers being opened, a suitable shield that does not interfere with the work operation shall be placed between the employee and the drums or containers being opened to protect the employee in case of accidental explosion.

(iv) Controls for drum or container opening equipment, monitoring equipment, and fire suppression equipment shall be located behind the explosion-resistant barrier.

(v) Material handling equipment and hand tools shall be of the type to prevent sources of ignition.

(vi) Drums and containers shall be opened in such a manner that excess interior pressure will be safely relieved. If pressure cannot be relieved from a remote location, appropriate shielding shall be placed between the employee and the drums or containers to reduce the risk of employee injury.

(vii) Employees shall not stand upon or work from drums or containers.

(3) *Electrical material handling equipment.* Electrical material handling equipment used to transfer drums and containers shall:

(i) Be positioned and operated to minimize sources of ignition related to the equipment from igniting vapors released from ruptured drums or containers, or

(ii) Meet the requirements of 29 CFR 1910.307 and be of the appropriate electrical classification for the materials being handled.

(4) *Radioactive wastes.* Drums and containers containing radioactive wastes shall not be handled until such time as their hazard to employees is properly assessed.

(5) *Shock sensitive wastes.*

Caution: Shipping of shock sensitive wastes may be prohibited under U.S. Department of Transportation regulations. Employers and their shippers should refer to 49 CFR 173.21 and 173.50.

As a minimum, the following special precautions shall be taken when drums and containers containing or suspected of containing shock-sensitive wastes are handled:

(i) All non-essential employees shall be evacuated from the area of transfer.

(ii) Material handling equipment shall be provided with explosive containment devices or protective shields to protect equipment operators from exploding containers.

(iii) An employee alarm system capable of being perceived above surrounding light and noise conditions shall be used to signal the commencement and completion of explosive waste handling activities.

(iv) Continuous communications (i.e., portable radios, hand signals, telephones, as appropriate) shall be maintained between the employee in charge of the immediate handling and the site safety officer or command post until such time as the handling operation is completed. Communication equipment or methods that could cause shock sensitive materials to explode shall not be used.

(v) Drums and containers under pressure, as evidenced by bulging or swelling, shall not be moved until such time as the cause for excess pressure is determined and appropriate containment procedures have been implemented to protect employees from explosive relief of the drum.

(vi) Drums and containers containing packaged laboratory wastes shall be considered to contain shock-sensitive or explosive materials until they have been characterized.

(6) *Laboratory waste packs.* In addition to the requirements of paragraph (j)(5) of this section, the following precautions shall be taken, as a minimum, in handling laboratory waste packs (lab packs):

(i) Lab packs shall be opened only when necessary and then only by an individual knowledgeable in the inspection, classification, and segregation of the containers within the pack according the hazards of the wastes.

(ii) If crystalline material is noted any container, the contents shall be handled as a shock-sensitive waste u... the contents are identified.

(7) *Sampling drums and containers.* Sampling of containers and drums shall be done in accordance with a sampling procedure which is part of the site safety and health plan developed for and available to employees and others at the specific worksite.

(8) *Shipping and transport.* (i) Drums and containers shall be identified and classified prior to packaging for shipment.

(ii) Drum or container staging areas shall be kept to the minimum number necessary to safely identify and classify materials and prepare them for transport.

(iii) Staging areas shall be provided with adequate access and egress routes.

(iv) Bulking of hazardous wastes shall be permitted only after a thorough characterization of the materials has been completed.

(9) *Tank and vault procedures.* (i) Tanks and vaults containing hazardous substances shall be handled in a manner similar to that for drums and containers, taking into consideration the size of the tank or vault.

(ii) Appropriate tank or vault entry procedures meeting paragraph

(i)(2)(i)(K) of this section shall be followed whenever employees must enter a tank or vault.

(k) *Decontamination.* (1) A decontamination procedure shall be developed, communicated to employees and implemented before any employees or equipment may enter areas on site where po'ential for exposure to hazardous substances exists.

(2) Standard operating procedures shall be developed to minimize employee contact with hazardous substances or with equipment that has contacted hazardous substances.

(3) Decontamination shall be performed in areas that will minimize the exposure of uncontaminated employees or equipment to contaminated employees or equipment.

(4) All employees leaving a contaminated area shall be appropriately decontaminated; all clothing and equipment leaving a contaminated area shall be appropriately disposed of or decontaminated.

(5) Decontamination procedures shall be monitored by the site safety and health officer to determine their effectiveness. When such procedures are found to be ineffective, appropriate steps shall be taken to correct any deficiencies.

(6) All equipment and solvents used for decontamination shall be decontaminated or disposed of properly.

(7) Protective clothing and equipment shall be decontaminated, cleaned, laundered, maintained or replaced as needed to maintain their effectiveness.

(8) Impermeable protective clothing which contacts or is likely to have contacted hazardous substances shall be decontaminated before being removed by the employee.

(9) Employees whose non-impermeable clothing becomes wetted with hazardous substances shall immediately remove that clothing and proceed to shower. The clothing shall be disposed of or decontaminated before it is removed from the work zone.

(10) Unauthorized employees shall not remove protective clothing or equipment from change rooms.

(11) Commercial laundries or cleaning establishments that decontaminate protective clothing or equipment shall be informed of the potentially harmful effects of exposures to hazardous substances.

(12) Where the decontamination procedure indicates a need for showers and change rooms, they shall be provided and meet the requirements of 29 CFR 1910.141.

(l) *Emergency response*—(1) *General.* (i) An emergency response plan shall be developed and implemented to handle anticipated on-site emergencies prior to the commencement of hazardous waste operations. Emergency response activities to all other hazardous waste operations shall follow an emergency response plan meeting the requirements of this section.

(ii) *Elements of an emergency response plan.* The employer shall develop an emergency response plan for on-site and off-site emergencies which shall address, as a minimum, the following:

(A) Pre-emergency planning.

(B) Personnel roles, lines of authority, training, and communication.

(C) Emergency recognition and prevention.

(D) Safe distances and places of refuge.

(E) Site security and control.

(F) Evacuation routes and procedures.

(G) Decontamination.

(H) Emergency medical treatment and first aid.

(I) Emergency alerting and response procedures.

(J) Critique of response and follow-up.

(K) PPE and emergency equipment.

(2) *On-site emergency response*—(i) *Training.* Training for site emergency response shall be conducted in accordance with paragraph (e) of this section.

(ii) *Procedures for handling site emergency incidents.* (A) In addition to the elements for the emergency response plan required in paragraph (l)(1)(ii) above, the following elements shall be included for site emergency response plans:

(*1*) Site topography, layout, and prevailing weather conditions.

(*2*) Procedures for reporting incidents to local, state, and federal governmental agencies.

(B) The site emergency response plan shall be a separate section of the Site Safety and Health Plan.

(C) The site emergency response plan shall be compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and federal agencies.

(D) The site emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.

(E) The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.

(F) An employee alarm system shall be installed in accordance with 29 CFR 1910.165 to notify employees of an on-site emergency situation, to stop work activities if necessary, to lower background noise in order to speed communication, and to begin emergency procedures.

(G) Based upon the information available at time of the emergency, the employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the on-site emergency response plan.

(3) *Off-site emergency response*—(i) *Training.* Training for handling emergency responses involving hazardous substances shall be conducted on a monthly basis and shall be at least 24 hours annually. The training shall include as a minimum recognition of hazards, selection, care, and use of personal protective equipment and safe operating procedures to be used at the incident scene.

(ii) *Procedures for handling off-site emergency incidents.* (A) The senior officer responding to an incident involving a hazardous substance or waste shall establish an Incident Command System (ICS). All emergency responders and their communications shall be coordinated and controlled through the individual in charge of the ICS.

(B) The individual in charge of the ICS shall identify, to the extent possible, all hazardous substances or conditions present.

(C) Based on the hazardous substances and/or conditions present, the individual in charge of the ICS shall implement appropriate emergency operations, and assure that the personal protective equipment worn is appropriate for the hazards to be encountered. However, personal protective equipment shall meet, at a minimum, the criteria contained in 29 CFR 1910.156(e) when worn while performing fire fighting operations beyond the incipient stage.

(D) Self-contained breathing apparatus shall be worn at all times during emergency operations involving exposure to hazardous substances or health hazards. After October 18, 1988 only positive pressure self-contained respirators shall be used.

(E) The individual in charge of the ICS shall limit the number of emergency response personnel at the emergency site to those who are actively performing emergency operations. However, operations in hazardous areas shall be performed using the buddy system in groups of two or more.

(F) Back-up personnel shall be standing by with equipment ready to

provide assistance or rescue. Qualified basic life support personnel, as a minimum, shall also be standing by with medical equipment and transportation capability.

(G) The individual in charge of the ICS shall designate a safety officer, who is knowledgeable in fire fighting or rescue operations and hazardous substance handling procedures, with specific responsibility to identify and evaluate hazards and to provide direction with respect to the safety of operations for the emergency at hand.

(H) When activities are judged by the safety officer to be unsafe and/or to involve an imminent danger condition, the safety officer shall have the authority to alter, suspend, or terminate those activities. The safety officer shall immediately inform the individual in charge of the ICS of any actions taken to correct these hazards at an emergency scene.

(I) After emergency operations have terminated, the individual in charge of the ICS shall implement appropriate decontamination procedures.

(4) *Hazardous materials teams (HAZMAT).* (i) Employees who are members of the HAZMAT team, employees designated by the employer to plug, patch or otherwise temporarily control or stop leaks from containers which hold hazardous substances or health hazards shall be given training in accordance with paragraph (l)(3) of this section that includes the care and use of chemical protective clothing and procedures to be followed when working on leaking drums, containers, tanks, or bulk transport vehicles.

(ii) Members of HAZMAT teams shall receive an annual physical examination by a licensed physician and be provided medical surveillance as required in paragraph (f) of this section.

(iii) Personal protective clothing and equipment to be used by HAZMAT team members shall meet the requirements of paragraph (g) of this section.

(iv) Approved self-contained compressed air breathing apparatus may be used with approved cylinders from other approved self-contained compressed air breathing apparatus provided that such cylinders are of the same capacity and pressure rating. All compressed air cylinders used with self-contained breathing apparatus shall meet U.S. Department of Transportation and National Institute for Occupational Safety and Health criteria.

(5) *Post-emergency response operations.* Upon completion of the emergency response, if it is determined that it is necessary to remove hazardous substances, health hazards and materials contaminated with them such as contaminated soil or other elements of the natural environment, then such operations shall meet all the requirements of paragraphs (b) through (n) of this section.

(m) *Illumination.* Work areas shall be lighted to not less than the minimum illumination intensities listed in Table H-102.1 while any work is in progress:

TABLE H-102.1.—MINIMUM ILLUMINATION INTENSITIES IN FOOT-CANDLES

Foot-candles	Area or operations
5	General site areas.
3	Excavation and waste areas, accessways, active storage areas, loading platforms, refueling, and field maintenance areas.
5	Indoors: warehouses, corridors, hallways, and exitways.
5	Tunnels, shafts, and general underground work areas: (Exception: minimum of 10 foot-candles is required at tunnel and shaft heading during drilling, mucking, and scaling. Bureau of Mines approved cap lights shall be acceptable for use in the tunnel heading.)
10	General shops (e.g., mechanical and electrical equipment rooms, active storerooms, barracks or living quarters, locker or dressing rooms, dining areas, and indoor toilets and workrooms).
30	First aid stations, infirmaries, and offices.

(n) *Sanitation at temporary workplaces.*—(1) *Potable water.* (i) An adequate supply of potable water shall be provided on the site.

(ii) Portable containers used to dispense drinking water shall be capable of being tightly closed, and equipped with a tap. Water shall not be dipped from containers.

(iii) Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose.

(iv) Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

(2) *Nonpotable water.* (i) Outlets for nonpotable water, such as water for industrial or firefighting purposes shall be identified to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes.

(ii) There shall be no cross-connection, open or potential, between a system furnishing potable water and a system furnishing nonpotable water.

(3) *Toilets facilities.* (i) Toilets shall be provided for employees according to Table H-102.2.

TABLE H-102.2.—TOILET FACILITIES

Number of employees	Minimum number of facilities
20 or fewer	One.
More than 20, fewer than 200	One toilet seat and 1 urinal per 40 employees.
More than 200	One toilet seat and 1 urinal per 50 employees.

(ii) Under temporary field conditions, provisions shall be made to assure not less than one toilet facility is available.

(iii) Hazardous waste sites, not provided with a sanitary sewer, shall be provided with the following toilet facilities unless prohibited by local codes:

(A) Privies;

(B) Chemical toilets;

(C) Recirculating toilets; or

(D) Combustion toilets.

(iv) The requirements of this paragraph for sanitation facilities shall not apply to mobile crews having transportation readily available to nearby toilet facilities.

(4) *Food handling.* All employees' food service facilities and operations shall meet the applicable laws, ordinances, and regulations of the jurisdictions in which they are located.

(5) *Temporary sleeping quarters.* When temporary sleeping quarters are provided, they shall be heated, ventilated, and lighted.

(6) *Washing facilities.* The employer shall provide adequate washing facilities for employees engaged in operations where hazardous substances may be harmful to employees. Such facilities shall be in near proximity to the worksite, within controlled access work zones and shall be so equipped as to enable employees to remove hazardous substances.

(o) *Certain Operations Conducted under the Resource Conservation and Recovery Act of 1976 (RCRA).* Employers conducting operations specified in paragraph (g)(2)(iii) of this section shall:

(1) Implement a hazard communication program meeting the requirements of 29 CFR 1910.1200;

(2) Implement a medical surveillance program meeting the requirements of paragraph (f) of this section;

(3) Develop and implement a safety and health program for employees involved in hazardous waste operations. The program shall be designed to identify, evaluate and control safety and health hazards and provide for emergency response to their facilities for the purpose of employee protection;

(4) Develop and implement a decontamination procedure in accordance with paragraph (k) of this section, and

(5) Develop and implement a training program for employees involved with hazardous waste operations to enable each employee to perform their assigned duties and functions in a safe and healthful manner so as not to endanger themselves or other employees. The initial training shall be for 24 hours and refresher training shall be for eight hours annually.

(p) *Start up dates*—(1) *Training and medical provisions.* Initial training and medical surveillance as specified by paragraph (e) and (f) of this section shall be commenced on the effective date of this standard, and be fully implemented as soon as possible but no later than March 16, 1987. Employees may continue in their work assignments until March 16, 1987 though training and medical examinations have not been completed so long as all feasible training and examinations have been completed.

(2) *Safety and health program.* The employer shall develop and implement a safety and health program as required by paragraph (b)(1) of this section as soon as is feasible and have it completed and implemented no later than March 16, 1987.

(3) *Engineering controls, work practices, and personal protective equipment.* (i) The engineering controls, work practices and personal protective equipment required by paragraph (g)(2) of this section shall be implemented as soon as feasible and implementation shall be completed no later than March 16, 1987.

(ii) The engineering controls, work practices and personal protective equipment required by paragraph (g)(1) of this section are existing requirements of other OSHA standards and continues to be required from the effective date of this standard.

(4) *Site safety and health plan.* The site safety and health plan required by paragraph (i)(2) of this section shall be completed as soon as feasible but no later than February 16, 1987.

(5) *Certain operations conducted under RCRA.* The requirements specified by paragraph (o) of this section shall be instituted by March 16, 1987.

(6) *Other requirements.* Requirements of this standard which do not have a separate start-up date and have not been required by other OSHA standards shall be carried out from the effective date of this standard.

(7) *New operations.* Operations covered by this section which are started after March 16, 1987, shall be in compliance with this section from the start of their operation.

Appendices to § 1910.120—Hazardous Waste Operations and Emergency Response

Note.—*The following appendices serve as non-mandatory guidelines to assist employees and employers in complying with the appropriate requirements of this section.*

Appendix A—Personal Protective Equipment Test Methods

This appendix sets forth the non-mandatory examples of tests which may be used to evaluate compliance with paragraphs 1910.120(g)(4) (ii) and (iii). Other tests and other challenge agents may be used to evaluate compliance.

A. Fully-Encapsulated Suit Pressure Test

1.0—Scope

1.1 This practice measures the ability of a gas tight totally-encapsulating chemical protective suit material, seams, and closures to maintain a fixed positive pressure. The results of this practice allow the gas tight integrity of a total-encapsulating chemical protective suit to be evaluated.

1.2 Resistance of the suit materials to permeation, penetration, and degradation by specific hazardous substances is not determined by this test method.

2.0—Description of Terms

2.1 Totally-encapsulated chemical protective suit (TECP suit)—A full body garment which is constructed of protective clothing materials; covers the wearer's torso, head, arms, and legs; may cover the wearer's hands and feet with tightly attached gloves and boots; completely encloses the wearer by itself or in combination with the wearer's respiratory equipment, gloves, and boots.

2.2 Protective clothing material—Any material or combination of materials used in an item of clothing for the purpose of isolating parts of the body from direct contact with a potentially hazardous liquid or gaseous chemicals.

2.3 "Gas tight"—for the purpose of this practice the limited flow of a gas under pressure from the inside of a TECP suit to atmosphere at a prescribed pressure and time interval.

2.4 "Shall"—This term indicates a mandatory requirement.

2.5 "Should"—This term indicates a recommendation or that which is advised but not required.

2.6 "May"—This term is used to state a permissive use or an alternative method to a specific requirement.

3.0—Summary of Practice

3.1 The TECP suit is visually inspected and modified for the test. The test apparatus is attached to the suit to permit inflation to the pre-test suit expansion pressure for removal of suit wrinkles and creases. The pressure is lowered to the test pressure and monitored for three minutes. If the pressure drop is excessive, the TECP suit fails the tests and is removed from service. After leak location and repair the test is repeated.

4.0—Required Supplies

4.1 Source of compressed air.

4.2 Test apparatus for suit testing including a pressure measurement device with a sensitivity of at least ¼ inch water gauge.

4.3 Vent valve closure plugs or sealing tape.

4.4 Soapy water solution and soft brush.

4.5 Stop watch or appropriate timing device.

5.0—Safety Precautions

5.1 Care shall be taken to provide the correct pressure safety devices required for the source of compressed air used.

6.0—Test Procedure

6.1 Prior to each test, the tester shall perform a visual inspection of the suit. Check the suit for seam integrity by visually examining the seams and gently pulling on the seams. Ensure that all air supply lines, fittings, visor, zippers, and valves are secure and show no signs of deterioration.

6.1.1 Seal off the vent valves along with any other normal inlet or exhaust points (such as umbilical air line fittings or face piece opening) with tape or other appropriate means (caps, plugs, fixture, etc.). Care should be exercised in the sealing process not to damage any of the suit components.

6.1.2 Close all closure assemblies.

6.1.3 Prepare the suit for inflation by providing an improvised connection point on the suit for connecting an airline. Attach the pressure test apparatus to the suit to permit suit inflation from a compressed air source equipped with a pressure indicating regulator. The leak tightness of the pressure test apparatus should be tested before and after each test by closing off the end of the tubing attached to the suit and assuring a pressure of three inches water gauge for three minutes can be maintained. If a component is removed for the test, that component shall be replaced and a second test conducted with another component removed to permit a complete tests of the ensemble.

6.1.4 The pre-test expansion pressure (A) and the suit test pressure (B) shall be supplied by the suit manufacturer but in no case shall they be less than: A=3 inches water gauge and B=2 inches water gauge. The ending suit pressure (C) shall be no less than 80% (⅘) of the test pressure (B); i.e., the pressure drop shall not exceed 20% (⅕) of the test pressure (B).

6.1.5 Inflate the suit until the pressure inside is equal to pressure "A", the pre-test expansion suit pressure. Allow at least one minute to fill out the wrinkles in the suit. Release sufficient air to reduce the suit pressure to pressure "B", the suit test pressure. Begin timing. At the end of three minutes, record the suit pressure as pressure "C," the ending suit pressure. The difference between the suit test pressure and the ending suit test pressure (B−C) shall be defined as the suit pressure drop.

6.1.6 If the suit pressure drop is more than 20 percent (⅕) of the suit test pressure B during the three minute test period, the suit fails the test and shall be removed from service.

7.0—Retest Procedure

7.1 If the suit fails the test check for leaks by inflating the suit to pressure A and brushing or wiping the entire suit (including

seams. closures. lens gaskets. glove-to-sleeve joints. etc.) with a mild soap and water solution. Observe the suit for the formation of soap bubbles. which is an indication of a leak. Repair all identified leaks.

7.2 Retest the TECP suit as outlined in Test procedure 6.0.

8.0—Report

8.1 Each TECP suit tested by this practice shall have the following information recorded.

8.1.1 Unique identification number identifying brand name. date of purchase. material of construction. and unique fit features: e.g., special breathing apparatus.

8.1.2 The actual values for test pressures. A. B. and C shall be recorded along with the specific observation times. If the ending pressure (C) is less than 80% of the test pressure (B) the suit shall be identified as failing the test. When possible. the specific leak location shall be identified in the test records. Retest pressure data shall be recorded as an additional test.

8.1.3 The source of the test apparatus used shall be identified and the sensitivity of the pressure gauge shall be recorded.

8.1.4 Records shall be kept for each pressure test even if repairs are being made at the test location.

Caution

Visually inspect all parts of the suit to be sure they are positioned correctly and secured tightly before putting the suit back into service. Special care should be taken to examine each exhaust valve to make sure it is not blocked.

Care should also be exercised to assure that the inside and outside of the suit is completely dry before it is put into storage.

B. Fully-Encapsulated Suit Qualitative Leak Test

1.0—Scope

1.1 This practice semi-qualitatively tests gas tight totally-encapsulating chemical protective suit integrity by detecting inward leakage of ammonia vapor. Since no modifications are made to the suit to carry out this test. the results from this practice provide a realistic test for the integrity of the entire suit.

1.2 Resistance of the suit materials to permeation. penetration. and degradation is not determined by this test method.

2.0—Description of Terms

2.1 Totally-encapsulated chemical protective suit (TECP suit)—A full body garment which is constructed of protective clothing materials: covers the wearer's torso. head. arms. and legs: may cover the wearer's hands and feet with tightly attached gloves and boots: completely encloses the wearer by itself or in combination with the wearer's respiratory equipment. gloves. and boots.

2.2 Protective clothing material—Any material or combination of materials used in an item of clothing for the purpose of isolating parts of the body from direct contact with a potentially hazardous liquid or gaseous chemicals.

2.3 "Gas tight"—for the purpose of this practice the limited flow of a gas under pressure from the inside of a TECP suit to atmosphere at a prescribed pressure and time interval.

2.4 Shall"—This term indicates a mandatory requirement.

2.5 Should —This term indicates a recommendation or that which is advised but not required.

2.6 "May"—This term is used to state a permissive use or an alternative method to a specific requirement.

2.7 Intrusion Coefficient—A number expressing the level of protection provided by a gas tight totally-encapsulating chemical protective suit. The intrusion coefficient is calculated by dividing the test room challenge agent concentration by the concentration of challenge agent found inside the suit. The accuracy of the intrusion coefficient is dependent on the challenge agent monitoring methods. The larger the intrusion coefficient the greater the protection provided by the TECP suit.

3.0—Summary of Recommended Practice

3.1 The volume of ammonia solution required to generate the test atmosphere is determined using the directions outlined in 6.1. The suit is donned by a person wearing the appropriate respiratory equipment (normally a self-contained breathing apparatus) and worn inside the enclosed test room. The ammonia solution is taken by the suited individual into the test room and poured into an open plastic pan. A two-minute evaporation period is observed before the test room concentration is measured using a high range ammonia length of stain detector tube. When the ammonia reaches a concentration of between 1000 and 1200 ppm. the suited individual starts a standardized exercise protocol to stress and flex the suit. After this protocol is completed the test room concentration is measured again. The suited individual exits the test room and his stand-by person measures the ammonia concentration inside the suit using a low range ammonia length of stain detector tube or other more sensitive ammonia detector. A stand-by person is required to observe the test individual during the test procedure. aid the person in donning and doffing the TECP suit and monitor the suit interior. The intrusion coefficient of the suit can be calculated by dividing the average test area concentration by the interior suit concentration. A colorimetric indicator strip of bromophenol blue is placed on the inside of the suit face piece lens so that the suited individual is able to detect a color change and know if the suit has a significant leak. If a color change is observed the individual should leave the test room immediately.

4.0—Required Supplies

4.1 A supply of concentrated ammonia (58 percent ammonium hydroxide by weight).

4.2 A supply of bromophenol/blue indicating paper. sensitive to 5–10 ppm ammonia or greater over a two-minute period of exposure.

4.3 A supply of high range (0.5–10 volume percent) and low range (5–700 ppm) detector tubes for ammonia and the corresponding sampling pump. More sensitive ammonia detectors can be substituted for the low range detector tubes to improve the sensitivity of this practice.

4.4 A plastic pan (PVC) at least 12" by 12" and a half pint plastic container (PVC) with tightly closing lid.

4.5 Volumetric measuring device of at least 50 milliliters in volume with an accuracy of at least ±1 milliliters.

5.0—Safety Precautions

5.1 Concentrated ammonia is a corrosive volatile liquid requiring eye. skin. and respiratory protection.

5.2 Since the threshold limit value for ammonia is 25 ppm. only persons wearing the appropriate respirator protection shall be in the chamber. Normally only the person wearing the total-encapsulating suit will be inside the chamber. A stand-by person shall have a self-contained breathing apparatus. or equivalent breathing apparatus. available to enter the test area should the suited individual need assistance.

5.3 A method to monitor the suited individual must be used during this test. Visual contact is the simplest but other methods using communication devices are acceptable.

5.4 The test room shall be large enough to allow the exercise protocol to be carried out and ventilated to allow for easy exhaust of the ammonia test atmosphere after the test(s) are completed.

5.5 Individuals shall be medically screened for the use of respiratory protection and checked for allergies to ammonia before participating in this test procedure.

6.0—Test Procedure

6.1.1 Measure the test area to the nea. foot and calculate its volume in cubic feet. Multiply the test area volume by 0.2 milliliters of ammonia per cubic foot of test area volume to determine the approximate volume of ammonia required to generate 1000 ppm in the test area.

6.1.2 Measure this volume from the supply of concentrated ammonia and place it into a closed plastic container.

6.1.3 Place the jar. several high range ammonia detector tubes and the pump in the clean test pan and locate it near the test area entry door so that the suited individual has easy access to these supplies.

6.2.1 In a non-contaminated atmosphere. open a presealed ammonia indicator strip and fasten one end of the strip to the inside of suit face shield lens where it can be seen by the wearer. Care shall be taken not to contaminate the detector part of the indicator paper by touching it. A small piece of masking tape or equivalent should be used to attach the indicator strip to the interior of the suit face shield.

6.2.2 If problems are encountered with this method of attachment the indicator strip can be attached to the outside of the respirator face piece being used during the test. assuming the face piece is worn within the TECP suit.

6.3 Don the respiratory protective device normally used with the suit and then don the TECP suit to be tested. Check to be sure all openings which are intended to be sealed (zippers. gloves. etc.) are completely seale DO NOT. however. plug off any venting valves.

6.4 Step into the enclosed test room such as a closet, bathroom, or test booth, equipped with an exhaust fan. No air should be exhausted from the chamber during the test because this will dilute the ammonia challenge concentrations.

6.5 Open the container with the pre-measured volume of ammonia within the enclosed test room, and pour the liquid into the empty plastic test pan. Wait two minutes to allow for adequate volatilization of the ammonia. A small mixing fan can be used near the evaporation pan to increase the evaporation rate of ammonia.

6.6 After two minutes a determination of the ammonia concentration within the chamber should be made using the high range colorimetric detector tube. A concentration of 1000 ppm ammonia or greater shall be generated before the exercises are started.

6.7 To test the integrity of the suit the following four minute exercise protocol should be followed:

6.7.1 Raising the arms above the head with at least 15 raising motions completed in one minute.

6.7.2 Walking in place for one minute with at least 15 raising motions of each leg in a one-minute period.

6.7.3 Touching the toes with a least 10 complete motions of the arms from above the head to touching of the toes in a one-minute period.

6.7.4 Deep knee bends with at least 10 complete standing and squatting motions in a one-minute period.

6.8 At any time during the test should the colorimetric indicating paper change colors the test should be stopped and section 6.10 and 6.12 initiated.

6.9 After completion of the test exercise, the test area concentration should be measured again using the high range colorimetric detector tube.

6.10 Exit the test area.

6.11 The opening created by the suit zipper or other appropriate suit penetration should be used to determine the ammonia concentration in the suit with the low range length of stain detector tube or other ammonia monitor. The internal TECP suit air should be sampled far enough from the enclosed test area to prevent a false ammonia reading.

6.12 After completion of the measurement of the suit interior ammonia concentration the test is concluded and the suit is doffed and the respirator removed.

6.13 The ventilating fan for the test room should be turned on and allowed to run for enough time to remove the ammonia gas.

6.14 Any detectable ammonia in the suit interior (5 ppm NH_3 or more for the length of stain detector tube) indicates the suit fails the test. When other ammonia detectors are used, a lower level of detection is possible and it should be specified as the pass fail criteria.

6.15 By following this practice an intrusion coefficient of approximately 200 or more can be measured with the suit in a completely operational condition.

7.0—Retest Procedures

7.1 If the suit fails this test check for leaks by following the pressure test in test A above.

7.2 Retest the TECP suit as outlined in the test procedure 6.0.

8.0—Report

8.1 Each gas tight totally-encapsulating chemical protective suit tested by this practice shall have the following information recorded.

8.1.1 Unique identification number identifying brand name, date of purchase, material of construction, and unique suit features: e.g., special breathing apparatus.

8.1.2 General description of test room used for test.

8.1.3 Brand name and purchase date of ammonia detector strips.

8.1.4 Brand name, sampling range, and expiration date of the length of stain ammonia detector tubes. The brand name and model of the sampling pump should also be recorded. If another type of ammonia detector is used, it should be identified along with its minimum detection limit for ammonia.

8.1.5 Actual test results shall list the two test area concentrations, their average, the interior suit concentration, and the calculated intrusion coefficient. Retest data shall be recorded as an additional test.

8.2 The evaluation of the data shall be specified as "suit passed" or "suit failed" and the date of the test. Any detectable ammonia (5 ppm or greater for the length of stain detector tube) in the suit interior indicates the suit fails this test. When other ammonia detectors are used, a lower level of detection is possible and it should be specified as the pass fail criteria.

Caution

Visually inspect all parts of the suit to be sure they are positioned correctly and secured tightly before putting the suit back into service. Special care should be taken to examine each exhaust valve to make sure it is not blocked.

Care should also be exercised to assure that the inside and outside of the suit is completely dry before it is put into storage.

Appendix B—General Description and Discussion of the Levels of Protection and Protective Gear

This appendix sets forth information about personal protective equipment (PPE) protection levels which may be used to assist employers in complying with the PPE requirements of this section.

As required by the standard, PPE must be selected which will protect employees from the specific hazards which they are likely to encounter during their work on-site.

Selection of the appropriate PPE is a complex process which must take into consideration a variety of factors. Key factors involved in this process are identification of the hazards, or suspected hazards, their routes of potential hazard to employees (inhalation, skin absorption, ingestion, and eye or skin contact), and the performance of the PPE *materials* (and seams) in providing a barrier to these hazards. The amount of protection provided by PPE is material-hazard specific. That is, protective equipment materials will protect well against some hazardous substances and poorly, or not at all, against others. In many instances, protective equipment materials cannot be found which will provide continuous protection from the particular hazardous substance. In these cases the breakthrough time of the protective material should exceed the work durations, or the exposure after breakthrough must not pose a hazardous level.

Other factors in this selection process to be considered are matching the PPE to the employee's work requirements and task-specific conditions. The durability of PPE materials, such as tear strength and seam strength, in relation to the employee's tasks must be considered. The effects of PPE in relation to heat stress and task duration are a factor in selecting and using PPE. In some cases layers of PPE may be necessary to provide sufficient protection, or to protect expensive PPE inner garments, suits or equipment.

The more that is known about the hazards at the site, the easier the job of PPE selection becomes. As more information about the hazards and conditions at the site becomes available, the site supervisor can make decisions to up-grade or down-grade the level of PPE protection to match the tasks at hand.

The following are guidelines which an employer can use to begin the selection of the appropriate PPE. As noted above, the site information may suggest the use of combinations of PPE selected from the different protection levels (i.e., A, B, C, or D), as being more suitable to the hazards of the work. It should be cautioned that the listing below does not fully address the performance of the specific PPE material in relation to the specific hazards at the job site, and that PPE selection, evaluation and re-selection is an ongoing process until sufficient information about the hazards and PPE performance is obtained.

Part A. Personal protective equipment has been divided into four categories based on the degree of protection afforded and are as follows (See Part B of this appendix for further explanation of Levels A, B, C, and D hazards):

1. *Level A*—To be selected when the greatest level of skin, respiratory, and eye protection is required.

Level A equipment: used as appropriate

1. Pressure-demand, full face-piece self-contained breathing apparatus (SCBA), or pressure-demand supplied air respirator with escape SCBA, approved by the National Institute for Occupational Safety and Health (NIOSH).
2. Totally-encapsulating chemical-protective suit.
3. Coveralls.*
4. Long underwear.*
5. Gloves, outer, chemical-resistant.
6. Gloves, inner, chemical-resistant.
7. Boots, chemical-resistant, steel toe and shank.
8. Hard hat (under suit)*
9. Disposable protective suit, gloves and boots (Depending on suit construction, may be worn over totally-encapsulating suit).
10. Two-way radios (worn inside encapsulating suit).

*Optional, as applicable.

II. *Level B*—The highest level of respiratory protection is necessary but a lesser level of skin protection is needed.

Level B equipment: used as appropriate

1. Pressure-demand, full-facepiece self-contained breathing apparatus (SCBA), or pressure-demand supplied air respirator with escape SCBA (NIOSH approved).
2. Hooded chemical-resistant clothing (overalls and long-sleeved jacket; coveralls; one or two-piece chemical-splash suit; disposable chemical-resistant overalls).
3. Coveralls*.
4. Gloves, outer, chemical-resistant.
5. Gloves, inner, chemical-resistant.
6. Boots, outer, chemical-resistant steel toe and shank.
7. Boot-covers, outer, chemical-resistant (disposable)*.
8. Hard hat.
9. Two-way radios (worn inside encapsulating suit).
10. Face shield.*

*Optional, as applicable.

III. *Level C*—The concentration(s) and type(s) of airborne substance(S) is known and the criteria for using air purifying respirators are met.

Level C equipment: used as appropriate

1. Full-face or half-mask, air purifying, canisterequipped respirators (NIOSH approved).
2. Hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls).
3. Coveralls*.
4. Gloves, outer, chemical-resistant.
5. Gloves, inner, chemical-resistant.
6. Boots (outer), chemical-resistant steel toe and shank*.
7. Boot-covers, outer, chemical-resistant (disposable)*.
8. Hard hat
9. Escape mask*
10. Two-way radios (worn under outside protective clothing).
11. Face shield*

*Optional, as applicable.

IV. *Level D*—A work uniform affording minimal protection: used for nuisance contamination only.

Level D equipment: used as appropriate

1. Coveralls.
2. Gloves*
3. Boots/shoes, chemical-resistant steel toe and shank.
4. Boots, outer, chemical-resistant (disposable)*.
5. Safety glasses or chemical splash goggles*.
6. Hard hat.
7. Escape mask*.
8. Face shield*.

*Optional, as applicable.

Part B. The types of hazards for which levels A, B, C, and D protection are appropriate are described below:

I. *Level A*—Level A protection should be used when:

1. The hazardous substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on either the measured (or potential for) high concentration of atmospheric vapors, gases, or particulates; or the site operations and work functions involve a high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials that are harmful to skin or capable of being absorbed through the intact skin.
2. Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible, or
3. Operations must be conducted in confined, poorly ventilated areas and the absence of conditions requiring Level A have not yet been determined.

II. Level B protection should be used when:

1. The type and atmospheric concentration of substances have been identified and require a high level of respiratory protection, but less skin protection.

Note.—This involves atmospheres with IDLH concentrations of specific substances that do not represent a severe skin hazard; or that do not meet the criteria for use of air-purifying respirators.

2. The atmosphere contains less than 19.5 percent oxygen, or
3. The presence of incompletely identified vapors or gases is indicated by a direct-reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemicals harmful to skin or capable of being absorbed through the intact skin.

III. Level C protection should be used when:

1. The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect or be absorbed through any exposed skin.
2. The types of air contaminants have been identified, concentrations measured, and a canister respirator is available that can remove the contaminants, and
3. All criteria for the use of air-purifying respirators are met.

IV. Level D protection should be used when:

1. The atmosphere contains no known hazard, and
2. Work functions preclude splashes, immersion, or the potential for unexpected inhalation of or contact with hazardous levels of any chemicals.

Note.—As stated before combinations of personal protective equipment other than those described for Levels A, B, C, and D protection may be more appropriate and may be used to provide the proper level of protection.

Appendix C—Compliance Guidelines

1. *Occupational Safety and Health Program.* Each hazardous waste site clean-up effort will require a site specific occupational safety and health program headed by the site coordinator or the employer's representative. The program will be designed for the protection of employees at the site. The program will need to be developed before work begins on the site and implemented as work proceeds. The program is to facilitate coordination and communication among personnel responsible for the various activities which will take place at the site. It will provide the overall means for planning and implementing the needed safety and health training and job orientation of employees, who will be working at the site. The program will provide the means for identifying and controlling worksite hazards and the means for monitoring program effectiveness. The program will need to cover the responsibilities and authority of the site coordinator for the safety and health of employees at the site, and the relationships with contractors or support services as to what each employer's safety and health responsibilities are for their employees on the site. Each contractor on the site needs to have its own safety and health program so structured that it will smoothly interface with the program of the site coordinator.

Each site safety and health program will need to include the following: (1) Policy statements of the line of authority and accountability for implementing the program, the objectives of the program and the role of the site safety and health officer or manager and staff; (2) means or methods for the development of procedures for identifying and controlling workplace hazards at the site; (3) means or methods for the development and communication to employees of the various plans, work rules, standard operating procedures and practices that pertain to individual employees and supervisors; (4) the training of supervisors and employees to develop the needed skills and knowledge to perform their work in a safe and healthful manner; (5) means to anticipate and prepare for emergency situations and; (6) information feedback to aid in evaluating the progra and for improving the effectiveness of t program. The management and employe should be trying continually to improve the effectiveness of the program thereby enhancing the protection being afforded those working on the site.

Accidents on the site should be investigated to provide information on how such occurrences can be avoided in the future. When injuries or illnesses occur on the site, they will need to be investigated to determine what needs to be done to prevent this incident from occurring again. Such information will need to be used as feedback on the effectiveness of the program and the information turned into positive steps to prevent any reoccurrence. Receipt of employee suggestions or complaints relating to safety and health issues involved with site activities is also a feedback mechanism that needs to be used effectively to improve the program and may serve in part as an evaluative tool(s).

2. *Training.* The employer is encouraged to utilize those training programs that have been recognized by the National Institute of Environmental Health Sciences through its training grants program. These training and educational programs are being developed for the employees who work directly with hazardous substances. For further information about these programs contact: National Institute of Environmental Health Sciences, P.O. Box 12233, Research Triangle Park, NC 27709.

Training programs for emergency service organizations are available from the U.S. National Fire Academy, Emittsburg, MD the various state fire training schools. Th

International Society of Fire Service Instructors, Ashland, MA is another resource.

J. *Decontamination.* Decontamination procedures should be tailored to the specific hazards of the site and will vary in complexity, and number of steps, depending on the level of hazard and the employee's exposure to the hazard. Decontamination procedures and PPE decontamination methods will vary depending upon the specific substance, since one procedure or method will not work for all substances. Evaluation of decontamination methods and procedures should be performed, as necessary, to assure that employees are not exposed to hazards by reusing PPE. References in Appendix D may be used for guidance in establishing an effective decontamination program.

K. Emergency response plans. States, along with designated districts within the states, will be developing or have developed emergency response plans. These district and state plans are to be utilized in the emergency response plans called for in this standard. Each employer needs to assure that its emergency response plan is compatible with the local plan. In addition, the CAER program of the Chemical Manufacturers Association (CMA) is another helpful resource in formulating an effective emergency response plan. Also the current Emergency Response Guidebook from the U.S. Department of Transportation, CMA's CHEMTREC and the Fire Service Emergency Management Handbook should be used as resources as well.

Appendix D—References to Appendix

The following references to the Appendix may be consulted for further information on the subject of this notice:

1. OSHA Instruction DFO CPL 2.70—January 29, 1986. *Special Emphasis Program: Hazardous Waste Sites.*

2. OSHA Instruction DFO CPL 2-2.37A—January 29, 1986. *Technical Assistance and Guidelines for Superfund and Other Hazardous Waste Site Activities.*

3. OSHA Instruction OTS CPL 2.74—January 29, 1986. *Hazardous Waste Activity Form. OSHA 173.*

4. *Hazardous Waste Inspections Reference Manual.* U.S. Department of Labor. Occupational Safety and Health Administration. 1986.

5. Memorandum of Understanding Among the National Institute for Occupational Safety and Health, the Occupational Safety and Health Administration, the United States Coast Guard, and the United States Environmental Protection Agency. *Guidance for Worker Protection During Hazardous Waste Site Investigations and Clean-up and Hazardous Substance Emergencies.* December 18, 1980.

6. *National Priorities List.* 1st Edition. October 1984: U.S. Environmental Protection Agency. Revised periodically.

7. *The Decontamination of Response Personnel.* Field Standard Operating Procedures (F.S.O.P.) 7: U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division. December 1984.

8. *Preparation of a Site Safety Plan.* Field Standard Operating Procedures (F.S.O.P.) 9: U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division. April 1985.

9. *Standard Operating Safety Guidelines:* U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division, Environmental Response Team: November 1984.

10. *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities.* National Institute for Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), U.S. Coast Guard (USCG), and Environmental Protection Agency (EPA): October 1985.

11. *Protecting Health and Safety at Hazardous Waste Sites: An Overview.* U.S. Environmental Protection Agency. EPA/625/9-85/006: September 1985.

12. *Hazardous Waste Sites and Hazardous Substance Emergencies.* NIOSH Worker Bulletin. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health: December 1982.

13. *Personal Protective Equipment for Hazardous Materials Incidents: A Selection Guide:* U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health: October 1984.

14. *Fire Service Emergency Management Handbook.* Federal Emergency Management Agency, Washington, DC, January 1985.

15. *Emergency Response Guidebook.* U.S. Department of Transportation, Washington, DC, 1983.

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Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements

United States Environmental Protection Agency
Washington, DC 20460

EPA OSWER Directive Initiation Request

1 Directive Number: 9234.0-05

2. Originator Information

Name of Contact Person	Mail Code	Office	Telephone Number
Arthur Weissman	WH-548D	OSWER/OERR/OPM/PAS	382-2182

3 Title

Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements

4 Summary of Directive *(include brief statement of purpose)* The guidance addresses the requirement in CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986, that remedial actions comply with applicable or relevant and appropriate requirements (ARARs) of Federal laws and more stringent, promulgated State laws. The guidance describes how requirements are generally to be identified and applied, and discusses specifically compliance with State requirements and certain surface water and groundwater standards.

5 Keywords

Superfund, CERCLA, SARA, Other environemtnal requirements, Compliance

6a. Does this Directive Supersede Previous Directive(s)? ☐ Yes ☒ No What directive *(number, title)*

b Does It Supplement Previous Directive(s)? ☒ Yes ☐ No What Directive *(number, title)*

9234.0-02 CERCLA Compliance with other Environmental Statutes

7 Draft Level

☐ A — Signed by AA/DAA ☐ B — Signed by Office Director ☐ C — For Review & Comment ☐ In Development

This Request Meets OSWER Directives System Format

8. Signature of Lead Office Directives Coordinator — Date: 6/26/87

9 Name and Title of Approving Official — Date: 7/9/87

J. Winston Porter, Assistant Administrator

OSWER DIRECTIVE OSWER DIRECTIVE OSWE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 9 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

9234.0-05

MEMORANDUM

SUBJECT: Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements

FROM: J. Winston Porter
Assistant Administrator

TO: Addressees

Executive Summary

The guidance addresses the requirement in CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986, that remedial actions comply with applicable or relevant and appropriate requirements (ARARs) of Federal laws and more stringent, promulgated State laws. The guidance describes how requirements are generally to be identified and applied, and discusses specifically compliance with State requirements and certain surface water and groundwater standards. "Applicable" and "relevant and appropriate" are defined, and the three types of ARARs (chemical-, location-, and action-specific) are described. Guidance is given on how and at what points ARARs are to be used in the remedial process. Eligible State requirements are defined, with particular reference to "promulgated," and direction is given on evaluating siting laws and on using the waiver regarding consistency of application. Finally, the guidance discusses the use of water standards specified in the law (MCLGs, FWQC, ACLs), and describes the use of MCLs as cleanup standards for surface water or groundwater that is or may be used for drinking.

Purpose

This memorandum provides interim guidance on compliance with other Federal and State environmental laws in conducting CERCLA remedial actions. The guidance is intended to help define the nature, scope, and use of applicable or relevant and appropriate requirements. The guidance is not intended to be comprehensive or exhaustive. The Agency is currently developing a guidance manual that provides detailed information on potential ARARs in the major Federal environmental statutes.

Background

Section 121(d) of CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), requires that Fund-financed, enforcement, and Federal facility remedial actions comply with requirements or standards under Federal and State environmental laws. The requirements that must be complied with are those that are applicable or relevant and appropriate to the hazardous substances, pollutants, or contaminants at a site or to the circumstances of the release. Compliance is required at the completion of the remedial action for hazardous substances, pollutants, or contaminants that remain on-site. Any such requirements may be waived under six conditions provided that protection of human health and environment is still assured.

SARA essentially codified and expanded upon the Agency's Compliance Policy, which was included in the National Contingency Plan (revised November 20, 1985). The major difference between that policy and the new statutory requirement is that the latter includes more stringent, promulgated State environmental standards as potentially applicable or relevant and appropriate requirements, and Maximum Contaminant Level Goals and Federal Water Quality Criteria as potentially relevant and appropriate requirements.

GENERAL GUIDANCE ON IDENTIFYING AND USING ARARs

This section defines what ARARs are, describes the different types of ARARs, and discusses how they are applied to the remedial process.

Definition of ARARs

A requirement under other environmental laws may be either "applicable" or "relevant and appropriate" to a remedial action, but not both. A two-tier test may be applied: first, to determine whether a given requirement is applicable; then, if it is not applicable, to determine whether it is nevertheless relevant and appropriate.

Applicable requirements means those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under Federal or State law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site.

"Applicability" implies that the remedial action or the circumstances at the site satisfy all of the jurisdictional prerequisites of a requirement. For example, the minimum technology requirement for landfills under RCRA would apply if a new hazardous waste landfill unit (or an expansion of an existing unit) were to be built on a CERCLA site.

Relevant and appropriate requirements means those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under Federal or State law that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA

site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site.

The relevance and appropriateness of a requirement can be judged by comparing a number of factors, including the characteristics of the remedial action, the hazardous substances in question, or the physical circumstances of the site, with those addressed in the requirement. It is also helpful to look at the objective and origin of the requirement. For example, while RCRA regulations are not applicable to closing undisturbed hazardous waste in place, the RCRA regulation for closure by capping may be deemed relevant and appropriate.

A requirement that is judged to be relevant and appropriate must be complied with to the same degree as if it were applicable. However, there is more discretion in this determination: it is possible for only part of a requirement to be considered relevant and appropriate, the rest being dismissed if judged not to be relevant and appropriate in a given case.

Non-promulgated advisories or guidance documents issued by Federal or State governments do not have the status of potential ARARs. However, as described below, they may be considered in determining the necessary level of cleanup for protection of health or environment.

Types of ARARs

There are several different types of requirements that Superfund actions may have to comply with. The classification of ARARs below is offered for illustrative purposes.

° Ambient or chemical-specific requirements set health or risk-based concentration limits or ranges in various environmental media for specific hazardous substances, pollutants, or contaminants. Examples: Maximum Contaminant Levels, National Ambient Air Quality Standards.

These requirements may set protective cleanup levels for the chemicals of concern in the designated media, or else indicate an acceptable level of discharge (e.g., air emission or wastewater discharge taking into account water quality standards) where one occurs in a remedial activity. If a chemical has more than one such requirement, the more stringent ARAR should be complied with.

There are at present a limited number of actual ambient or chemical-specific requirements. In order to achieve remedies that are protective of health and environment, it may frequently be necessary to use chemical-specific advisory levels such as Carcinogenic Potency Factors or Reference Doses. While not actually ARARs, these chemical-specific advisory levels may factor significantly into the establishment of protective cleanup levels. Guidance for establishing such chemical-specific, health-based cleanup levels is given in the Superfund Public Health Evaluation Manual (EPA 540/1-86/060, Oct. 1986).

• Performance, design, or other action-specific requirements set controls or restrictions on particular kinds of activities related to management of hazardous substances, pollutants, or contaminants. Examples: RCRA regulations for closure of hazardous waste storage or disposal units; RCRA incineration standards; Clean Water Act pretreatment standards for discharges to POTWs.

These requirements are triggered not by the specific chemicals present at a site but rather by the particular remedial activities that are selected to accomplish a remedy. Since there are usually several alternative actions for any remedial site, very different requirements can come into play. These action-specific requirements may specify particular performance levels, actions, or technologies, as well as specific levels (or a methodology for setting specific levels) for discharged or residual chemicals.

• Locational requirements set restrictions on activities depending on the characteristics of a site or its immediate environs. Examples: Federal and State siting laws for hazardous waste facilities; sites on National Register of Historic Places.

These requirements function like action-specific requirements. Alternative remedial actions may be restricted or precluded depending on the location or characteristics of the site and the requirements that apply to it.

Using ARARs

This section explains how and where requirements may be applied in the remedial planning process.

First, actual ARARs can be identified only on a site-specific basis. They depend on the specific chemicals at a site, the particular actions proposed as a remedy, and the site characteristics. Guidance is being developed on the potential ARARs under the major Federal environmental statutes for various activities, locations, and chemicals.

Where there are no specific ARARs for a chemical or situation, or where such ARARs are not sufficient to be protective, one should identify pertinent health advisory levels (such as Reference Doses or Carcinogenic Potency Factors) as described above in order to ensure that a remedy is protective.

The different ARARs that may apply to a site and its remedial action should be identified and considered at multiple points in the remedial planning process, namely:

- During scoping of the RI/FS, chemical-specific and location-specific ARARs may be identified on a preliminary basis.
- During the site characterization phase of the Remedial Investigation, when the public health evaluation is conducted to assess risks at a site, the chemical-specific ARARs and advisories and location-specific ARARs are identified more comprehensively and used to help determine the cleanup goals.

- During development of remedial alternatives in the Feasibility Study, action-specific ARARs are identified for each of the proposed alternatives and considered along with other ARARs and advisories.
- During detailed analysis of alternatives all the ARARs and advisories for each alternative are examined as a package to determine what is needed to comply with other laws and be protective.
- When an alternative is selected it must be able to attain all ARARs unless one of the six statutory waivers is invoked.
- During remedial design the technical specifications of construction must ensure attainment of ARARs.

Note that CERCLA §121(e) exempts any on-site response action from having to obtain a Federal, State, or local permit.

In general, on-site actions need comply only with the substantive aspects of these requirements, not with the administrative aspects. That is, neither applications nor other administrative procedures such as permitting or administrative reviews are considered ARARs for actions conducted entirely on-site, and therefore should not be pursued during the remedial planning or the remedial action. However, the RI/FS, Record of Decision, and design documents should demonstrate full compliance with all substantive requirements that are ARARs. Also, other Federal and State program offices should be consulted as appropriate to ensure that remedies are substantively compliant with identified ARARs.

GUIDANCE ON IDENTIFYING STATE ARARs

This section describes the basic factors to be considered in identifying State requirements for Superfund remedial actions.

As mandated by CERCLA §121(d)(2)(A), remedies must comply with "any promulgated standard, requirement, criteria, or limitation under a State environmental or facility siting law that is more stringent than any Federal standard, requirement, criteria, or limitation" if the former is applicable or relevant and appropriate to the hazardous substance or release in question.

States are required by CERCLA to identify State ARARs "in a timely manner," that is, in sufficient time to avoid inordinate delay or duplication of effort in the remedial process. Regions should expect to work closely with their States so that the appropriate ARARs are identified at critical stages in the process. At a minimum, chemical-specific and location-specific ARARs should be identified after site characterization, and action-specific ARARs should be identified after initial screening of alternatives (prior to detailed analysis) for alternatives that pass through the screening. To the extent possible, Regions and States should negotiate to try to resolve any differences of opinion about ARARs.

Eligible Requirements

The statute specifically limits the scope of potential requirements to those that are promulgated. "Promulgated" requirements are laws imposed by State legislative bodies and regulations developed by State agencies that are of general applicability and are legally enforceable.

State advisories, guidance, or other non-binding policies, as well as standards that are not of general application, cannot be treated as requirements under CERCLA. However, as with their Federal counterparts, State advisories may still be considered in determining an appropriate, protective remedy.

General State goals that are duly promulgated (such as a non-degradation law) have the same weight as explicit, numerical standards, although the former have to be interpreted in terms of a site and therefore may allow more flexibility in approach. Similarly, State laws or regulations that prescribe methods for deriving numerical standards for specific cases may also be potential requirements.

On-site actions need comply only with the substantive aspects of a State requirement, not with the administrative aspects. Where the requirement involves review by a State board based on explicit criteria, the best approach is to incorporate the substantive criteria into the RI/FS and remedy selection process and to maintain close consultation with appropriate State representatives.

Limitations on State Siting Laws

CERCLA §121(d)(2)(C) puts special limitations on the applicability of State requirements or siting laws for hazardous waste facilities that could result in a State-wide prohibition of land disposal. Specifically, in order to be treated as potentially applicable or relevant and appropriate requirements, such laws must:

1) be of general applicability and be formally adopted
2) be based on technical (e.g., hydrogeologic) or other relevant considerations
3) not be intended to preclude land disposal for reasons other than protection of health or environment.

In addition, the State must arrange and pay for additional costs for out-of-State or other disposal necessitated by such a law.

The first criterion is similar to the criterion that a requirement be promulgated, as discussed above. The second criterion requires that such a law be based on sound scientific or technical considerations, such as groundwater flow, surficial geology, and engineering design. The third criterion requires some evidence that health or environmental protection motivates the prescribed restrictions; the introductory sections of a law, the nature of the technical considerations, or the legislative history can be used to make this determination.

Consistency of Application

CERCLA §121(d)(4)(E) allows a State requirement to be waived if it has not been consistently applied by the State in similar circumstances at other remedial actions. The waiver cannot be used if the State has demonstrated the intention to consistently apply the requirement.

Consistency of application by a State may be determined by examining the following:

- Application of requirement at similar sites or in similar response circumstances (considering nature of contaminants or media affected, characteristics of waste and facility, degree of danger or risk, etc.)
- Proportion of cases (including enforcement actions) in which requirement was not applied out of total actions where it could have been applied
- Reason for non-application of requirement in past cases
- Intention to consistently apply requirement in future as shown by policy statements, legislative history, site remedial planning documents, or State responses to Federal-lead sites; newly promulgated requirements shall be presumed to embody this intention unless there is contrary evidence.

All previous actions by States since promulgation that relate to similar remedial actions may be considered in evaluating consistency.

GUIDANCE ON APPLYING SPECIFIED WATER STANDARDS

CERCLA §121(d)(2)(A) and (B) explicitly mention three kinds of surface water or groundwater standards with which compliance is potentially required - Maximum Contaminant Level Goals (MCLGs), Federal Water Quality Criteria (FWQC), and alternate concentration limits (ACLs) where human exposure is to be limited. This section describes these requirements and how they may be applied to Superfund remedial actions. The guidance is based on Federal requirements and policies; more stringent, promulgated State requirements (such as a stricter classification scheme for groundwater) may result in application of even stricter standards than those specified here.

Background

These three standards or criteria each derive from separate statutes and have different purposes and uses.

MCLGs are developed under the Safe Drinking Water Act as chemical-specific health goals used in setting enforceable drinking water standards, known as Maximum Contaminant Levels (MCLs), for public water supply systems. MCLGs are based entirely on health considerations and do not take cost or feasibility into account. Moreover, as health goals MCLGs are set at levels where no known or anticipated health effects may occur, including an adequate margin of safety. MCLs are required to be set as close as feasible to the respective MCLGs, taking into consideration the best technology, treatment techniques, and other factors (including cost). However, as the standard for public water supplies, MCLs are fully protective of human health and (for carcinogens) fall within the acceptable risk range of 10^{-4} to 10^{-7}. Furthermore, for non-carcinogens, which are the majority of contaminants, MCLs will nearly always be set at the same level as the respective MCLGs. Also, these standards assure that even sensitive populations will experience no adverse health effects. Thus, there will be no difference in the protectiveness of MCLGs and MCLs for most contaminants, and, as discussed above, MCLs provide a sufficient level of protectiveness even for carcinogens.

FWQC are developed under the Clean Water Act as guidelines from which States determine their water quality standards. Different FWQC are derived for protection of human health and protection of aquatic life.

ACLs are one of three possible standards available under the Subpart F Groundwater Protection Standards of RCRA. For setting both a trigger and a cleanup level for remediating groundwater contamination, an ACL, the background concentration, or for a small group of chemicals the MCL can be selected for a given site.

Statutory Mandate

CERCLA §121(d)(2) states that remedial actions shall attain applicable or relevant and appropriate requirements under the Safe Drinking Water Act, the Clean Water Act, and RCRA, and specifically shall attain MCLGs and FWQC where they are relevant and appropriate under the circumstances of the release or threatened release. It further states that for FWQC this determination will be based on the designated or potential use of the water, the media affected, the purposes of the criteria, and current information.

CERCLA §121(d)(2)(B)(ii) limits the use of ACLs that are set above health-based levels based on projections that health-based levels will be achieved at a likely point of human exposure. Such a point of exposure may not be beyond the Superfund facility boundary unless the groundwater discharges into surface water and does not cause a statistically significant increase of contaminants in the surface water. To apply such an ACL outside the facility, moreover, the remedial action must include enforceable measures to prevent use of any contaminated groundwater.

Application

In determining the applicable or relevant and appropriate requirements for remedial actions involving contaminated surface water or groundwater, the most important factors to consider are the uses and potential uses of the water and the purposes for which the potential requirements are intended.

The actual or potential use of water, and the manner in which it is used, will determine what kinds of requirements may be applicable or relevant and appropriate. For Class III-type groundwater that is not suitable for drinking because of high salinity or widespread contamination and that does not affect drinkable groundwater, drinking water standards are neither applicable nor relevant and appropriate. For Class I- and Class II-type groundwater or surface water that is or may be used for drinking, drinking water standards are applicable or relevant and appropriate, and the surface water or groundwater must ultimately be cleaned up to such levels.

For water that is or may be used for drinking, the Maximum Contaminant Levels (MCLs) set under the Safe Drinking Water Act are generally the applicable or relevant and appropriate standard. MCLs are applicable at the tap where the water will be provided directly to 25 or more people or will be supplied to 15 or more service connections. Otherwise, where

surface water or groundwater is or may be used for drinking, MCLs are generally relevant and appropriate as cleanup standards for the surface water or the groundwater.

A standard for drinking water for a contaminant for which there is an MCL may be more stringent than the MCL to ensure adequate protection in special circumstances, such as where either multiple contaminants in groundwater or multiple pathways of exposure present extraordinary risks. In setting a level more stringent than the MCL in such cases, a site-specific determination should be made by considering MCLGs, the Agency's policy on the use of appropriate risk ranges for carcinogens, levels of quantification, and other pertinent guidelines. Prior consultation with Headquarters is encouraged in such cases.

When MCLs do not exist for contaminants identified at the site, cleanup levels should be set using chemical-specific advisory levels. Cleanup levels should be selected such that the total risk of all contaminants falls within the acceptable risk range of 10^{-4} to 10^{-7}. In cases where noncarcinogens are present, cleanup levels should be based on acceptable levels of exposure as determined by the Reference Dose, taking into account the effects of other contaminants at the site.

It should be noted that while MCLs are generally the cleanup standards, as described above, the treatment necessary to attain an MCL level for one chemical (or a protective level for a chemical without an MCL) may result in an actual level for another chemical that is below its respective MCL (or protective level).

A more stringent FWQC for aquatic life may be found relevant and appropriate when there are environmental factors that are being considered at a site, such as protection of aquatic organisms. The Agency is still formulating a position with respect to the use of FWQC for protection of human health.

Guidance on the use of ACLs based on limitations on exposure will be forthcoming.

* * *

Further Information

For further information on the subject matter in this interim guidance, contact Steve Smith (FTS-382-2200) or Arthur Weissman (FTS-382-2182) of the Policy and Analysis Staff, Office of Emergency and Remedial Response.

Addressees

Regional Administrators, Regions I-X
Regional Counsel, Regions I-X
Director, Waste Management Division, Regions I, IV, V, VII, and VIII
Director, Emergency and Remedial Response Division, Region II
Director, Hazardous Waste Management Division, Regions III and VI
Director, Toxics and Waste Management Division, Region IX
Director, Hazardous Waste Division, Region X
Environmental Services Division Directors, Region I, VI, and VII

Notification of Restrictions on Reimbursement of Private Party Costs for Removal Actions

OSWER Directive 9225-3

United States Environmental Protection Agency
Washington, DC 20460

EPA

OSWER Directive Initiation Request

Interim Directive Number: 9225.0-3

Originator Information

Name of Contact Person	Mail Code	Telephone Number
Jackie Dziuben	WH-548	382-2452

Lead Office: ☑ OERR ☐ OSW ☐ OUST ☐ OWPE ☐ AA-OSWER

Approved for Review

Signature of Office Director: N. Wingstone for H. Longest — Date: 11/27/85

Title

Notification of Restrictions on Reimbursement of Private Party Costs for Removal Actions

Summary of Directive

Outlines the restrictive provisions of CERCLA regarding private party reimbursement for removal costs. Directs the Regions to ensure affected communities are informed of these provisions.

(Signed H. Longest, November 25, 1985)

OK to mail
Nancy Wingstone
11/27/85

Type of Directive (Manual, Policy Directive, Announcement, etc.): Policy directive

Status: ☐ Draft ☑ Final — ☑ New ☐ Revision

Does this Directive Supersede Previous Directive(s)? ☐ Yes ☑ No — Does it Supplement Previous Directive(s)? ☐ Yes ☑ No

If "Yes" to Either Question, What Directive (number, title)

Review/Plan

☐ AA-OSWER ☐ OUST ☐ CECM ☐ Other (Specify)
☑ OERR ☐ OWPE ☑ OGC
☐ OSW ☐ Regions ☐ OPPE

This Request Meets OSWER Directives System Format

Signature of Lead Office Directives Officer: Nancy Wingstone — Date: 11/27/85

Signature of OSWER Directives Officer: Sherry Fields for R. Herman — Date: 11/27/85

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 25 1985

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Notification of Restrictions on Reimbursement of Private Party Costs for Removal Actions

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response (WH-548)

TO: Superfund Branch Chiefs, Regions I-X
Oil and Hazardous Materials Coordinators, Regions I-X

The purpose of this memorandum is to request that you ensure that communities are informed of the restrictive provisions of CERCLA regarding reimbursement of private party response costs in carrying out the NCP. Attached is the statutory and regulatory language governing private party reimbursement. The requirement for prior approval conserves the Fund and ensures that actions by others do not create further health or environmental threats.

In several communities, residents paid the costs for hooking-up their homes to the public water supply when local well water was found to be contaminated. Since this action was taken without prior EPA approval, the residents could not be reimbursed from the Fund, even though the actions taken were approved in the scope of work for that removal.

To avoid such situations in the future, when a removal action that will affect private residences is approved, the OSC shall attempt to notify all residents involved that expenses incurred by residents are incurred at their risk and expense, and are not reimbursable by the Federal government. When time is sufficient for consideration of preauthorization requests, the OSC should advise residents of CERCLA and NCP provisions regarding private party reimbursement. Such notification might well involve printed statements that only preauthorized actions by private parties are eligible for reimbursement. Further, the OSC should be cautious in making statements that can be construed by community members as a promise by EPA to reimburse them for cleanup costs.

Most Superfund cleanup actions should be undertaken by the responsible party, by a State under a duly authorized Superfund contract or cooperative agreement, or by EPA contractors. Very few private party preauthorizations are anticipated, and those that are granted will occur under extraordinary circumstances. Should Regional response personnel receive a request for preauthorization from a private citizen to undertake removal actions, however, the request must be forwarded to Headquarters within five working days of receipt. It should be sent to:

William O. Ross
Hazardous Site Control Division (WH-548E)
U.S. Environmental Protection Agency
Washington, D.C. 20460

If you have any questions regarding this memorandum, please contact Jackie Dziuban of the Emergency Response Division at (202) 382-2452. Thank you for your cooperation in this matter.

ATTACHMENT

Section 111(a)(2) of CERCLA provides that money in the Fund may be used for:

> "payment of any claim for necessary response costs incurred by any other person as a result of carrying out the national contingency plan established under section 311(c) of the Clean Water Act and amended by section 105 of this title: Provided, however, That such costs must be approved under said plan and certified by the responsible Federal official." (Emphasis in original)

Section 300.25(d) of the National Contingency Plan provides:

> "If any person other than the Federal government or a State or person operating under contract or cooperative agreement with the United States takes response action and intends to seek reimbursement from the Fund, such actions, to be in conformity with this Plan for purposes of section 111(a)(2) of CERCLA, may only be reimbursed if such person notifies the Administrator of EPA or his/her designee prior to taking such action and receives prior approval to take such action." (Emphasis supplied)

Analytical Support for Superfund

United States Environmental Protection Agency
Washington DC 20460

EPA OSWER Directive Initiation Request

Interim Directive Number: 9240.0-2

Originator Information

Originator Contact Person	Mail Code	Telephone Number
Stan Kowell	WH548A	382 7906

Lead Office		Approved for Review	
		Signature of Office Director	Date
☒ OERR	☐ OUST		
☐ OSW	☐ OWPE		
	☐ AA-OSWER		

Title

Analytical Support for Superfund

Summary of Directive

A review of alternative Superfund sample analysis resources (CLP, ESD, REM, FIT, TAT, ERCS, AND ESAT).

General guidance regarding the use of the analysis resource given above.

Request that each Region manage and monitor the use of said resources via an integrated management and tracking systems which provides for:

1. a site project manager accountable for specifying project needs.
2. an interface with the lab services of the ESD and the CLP.
3. a planning and scheduling function.
4. maintenance of a data base which includes sample sources, where sent, turnaround times, cost and QA.
5. documented adherence to QA practices.

Type of Directive (Manual, Policy Directive, Announcement, etc.)	Status	
Policy and Procedural Guidance	☐ Draft ☒ Final	☒ New ☐ Revision

Does this Directive Supersede Previous Directive(s)? ☐ Yes ☒ No Does it Supplement Previous Directive(s)? ☐ Yes ☒ No

If "Yes" to Either Question, What Directive (number, title)

Review Plan

☐ AA-OSWER	☐ OUST	☐ CECM	☐ Other (Specify)
☐ OERR	☐ OWPE	☐ CGC	
☐ OSW	☐ Regions	☐ CPSC	

Request Meets OSWER Directives System Format

Signature of Lead Office Directives Officer	Date
Richard C. Hyde	3/20/86
Signature of OSWER Directives Officer	Date

EPA Form 1315-17 (10-85)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 20 1986

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

SUBJECT: Analytical Support for Superfund

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

TO: Waste Management Division Directors
Regions I - X

Environmental Services Division Directors
Regions I, VI, and VII

The purposes of this memorandum are:

- to review the alternative Superfund sample analysis resources that are available to you;
- to provide some general guidance regarding the use of these resources; and
- to request that each Region manage and monitor the use of these resources.

The two principal sources of Superfund program analytical support have been the Regional laboratories and the Contract Laboratory Program (CLP). Additional contractor sources are Remedial (REM), Field Investigation Teams (FIT), Technical Assistance Teams (TAT) or Emergency Response Cleanup Services (ERCS) and their subcontractors, and the Environmental Services Assistance Teams (ESAT) Program. ESAT is currently being developed to supplement the Regional laboratory staffing levels with contractor employees. We expect to have the ESAT contracts awarded and operational before the end of the first quarter in FY '87.

As a general rule, the Regional labs should be used to analyze samples where responsiveness and flexibility are paramount requirements. Analyses requiring quick response, methodology fine-tuning, and close interaction between the analyst and the data user are best done in Regional labs. In FY '86, we are using a total of 109 EPA work years to analyze samples, review data, and manage sample workload in support of Superfund activities. In FY '87, we will supplement EPA resources with 100 ESAT work years.

The CLP is the laboratory service that should be used for routine high volume sample analysis requiring consistency of methodology, 30 to 40 day turn-around times, and data of known and documented quality. Faster turn-around times can be obtained by using the Special Analytical Services (SAS) option of the CLP. SAS can also be used to analyze unusual matrices with non-standard methodology. In addition, SAS has frequently been used to enhance routine CLP analyses by incorporating a desired method or parameter change consistently across an analytical case. In FY '85, the CLP analyzed 70,400 samples at a total analysis cost of $32,998,143. The CLP will be able to analyze over 80,000 samples in FY '87. It should be viewed as your primary resource for the above described services.

The analytical resources available from the remedial and removal contractors include both fixed laboratory support, and mobile laboratories and portable instruments for use in the field. The amount of support available from these sources is limited when compared to the CLP and must be effectively managed. Attached are descriptions of emergency response removal, remedial and enforcement program needs and some suggestions on how the remedial/removal contractor resources can be used to supplement the CLP and ESD activities.

The choice of which analytical service to use should be driven by the data requirements of each program activity. The Regional laboratories and the CLP have well established and recognized Quality Assurance programs. However, whenever they cannot meet program requirements, you may use the other contracting modes at your disposal as long as you assure that basic requirements are met. In particular, you should be sensitive to costs, to clear definition of work, to enforcement needs, and to quality assurance requirements.

Careful management of analytical support services is important because of the large commitment of both FTE and dollar resources to this effort. The need for good Regional management and coordination was emphasized in the May 17, 1985 report of the Superfund Laboratory Services Management Review Group established by the Administrator. Although several Regions have already taken important initiatives in this area, I want to emphasize the importance of including all analytical services in this management system. Specifically, I believe that it is essential that each Region have an integrated management and tracking system that meets the following requirements as a minimum:

1. Site project manager accountability for specifying project needs and acquiring appropriate analytical services for the project.

2. A point of interface with the laboratory services of the ESD and CLP that can inform the project manager of the availability of these services and schedule sample analysis.

3. A planning and scheduling function closely linked to the overall site planning process and that will provide accurate projections of analytical needs and close week-to-week program contact on scheduled and actual sample shipments.

4. Maintenance of a data base to monitor costs and schedules for remedial, removal, and enforcement samples. At a minimum these data should include:

   - records on where samples were sent for analysis, i.e., ESD lab, CLP, or other (e.g., remedial or removal) contractor lab; this should be keyed to the source of the samples.

   - data on turn-around times, cost, and QA requirements for samples not analyzed through the CLP.

5. Documented adherence to appropriate quality assurance practices and procedures.

I believe it should be each Region's choice as to what organizational units should provide these integrated management functions. My concern is simply that the functions exist in each Region and that they have the ability to both manage the process and provide useful information to Regional and Headquarters managers.

Attachment

cc: Environmental Services Division Directors
Regions II, III, IV, V, VIII, IX, and X

Carol Finch
Office of Regional Operations

Gene Lucero
Office of Waste Programs and Enforcement

REMEDIAL PROGRAM ANALYTICAL REQUIREMENTS

The primary requirement for analytical support under the remedial program is the RI/FS. Specific requirements include a variety of analytical techniques and protocols tailored towards site specific requirements for quantity, quality, timeliness and cost. Four key phases of analytical support have been identified within the RI/FS process:

PHASE 1- INITIAL CHARACTERIZATION-- The first phase is the up-front field analysis to characterize the problems at the site and the probable extent of contamination. The key requirements of this phase are the ability to take a fairly large number of samples and perform the analyses quickly and inexpensively. This may be accomplished through portable field instruments and mobile laboratories operated by the remedial contractors. The information provided by this process is used to design the second phase of sampling.

PHASE 2- DETAILED SITE SAMPLING-- The second phase entails a more focused sampling to accurately define the extent of contamination. This information is used during the feasibility study to support the development and evaluation of alternative remedial actions, and during the ROD process to support key decisions on the appropriate extent of remedy and selection of the cost effective remedy. Therefore, QA/QC requirements are essential. The primary analytical resource for this phase is the CLP, with judicious use of ESD or remedial contractor laboratories to meet special program requirements.

PHASE 3- FILLING IN DATA GAPS-- The third phase is best characterized as "filling in" the data gaps identified during the feasibility study. These are normally highly focused samples designed to answer particular questions regarding the analysis of alternatives or determining the extent of remedy. Quick turn-around is a key concern for these analyses to avoid delaying the completion of the project; however, data quality must be commensurate with the intended use of the data in the decision-making process. Sources available for these analyses include the remedial contractor in-house laboratories, special analytical services under the CLP, and the ESD lab.

PHASE 4- PROJECT ENGINEERING-- The fourth phase involves special analyses to support bench and pilot scale testing and treatability studies to assess the technical performance of a particular technology or to provide engineering data for remedial design. Normally, this work is done by the remedial contractors.

Two efforts are currently underway which should better define these requirements. The first is the development of Data Quality Objectives (DQOs) for RI/FSs. The DQOs will define on a site specific basis data quality requirements for the various decisions that are required during the RI/FS. The second is the RI/FS pilot program which is intended to improve the quality and timeliness of the RI/FS through closer integration and phasing of data collection activities with the feasibility study components of remedial alternative development, screening and evaluation. These efforts will provide more detailed criteria on the various sources of analytical support, QA/QC requirements, and the best way of integrating these into the RI/FS process.

The emergency response program requires analytical services throughout the response process. Phases of an emergency or removal action that may require analytical support include: 1) preliminary assessment to determine whether an emergency response is appropriate; 2) site investigation, including verification of the identity, concentration, and/or location of hazardous substances, including data to support selection of the appropriate removal action; 3) proper disposal of contaminated materials; and 4) verification that the removal action was effective, including site samples to determine full cleanup and long-term monitoring. Each of these activities requires that the Region specify the analytical needs consistent with the incident to be addressed. Considerations include analytical services, turnaround time, quality assurance (QA), and cost (see table below). These considerations can vary by the phase of the response, and whether the incident is a clear-cut, time-critical emergency or a removal action where timeliness is needed, but not critical.

Generally, either TAT or ERCS obtains analytical services with the approval of the OSC. Use of CLP Routine Analytical Services (RAS) is generally inappropriate if turnaround times of less than 30 days are required. However, CLP Special Analytical Services (SAS) may be able to provide turnaround times of 14 days or less if special requests are submitted. Support from Regional or State laboratories also should be considered. Regional laboratories may be able to provide cost-effective, rapid analyses through the ESAT program. When the CLP or Regional laboratory mechanisms are not utilized, TAT obtains laboratory support through TAT Special Projects. ERCS contractors often rely on OSC or TAT recommendations, or in some cases, access private laboratories based on pre-existing verbal arrangements.

CONSIDERATIONS FOR REMOVAL PROGRAM ANALYTICAL NEEDS
(Importance of Time, QA, and Cost)

	I Preliminary Assessment For Emergency Response	II Site Investigation	III Disposal Screen	IV Verification/ Monitoring
Time	High, particularly if acute threat of human exposure to high-hazard substances.	Medium. Reasonable turnaround time needed for removal decision process.	Medium. Reasonable turnaround time needed to proceed with removal action and disposal.	Medium/Low. Verification of cleanup during and after removal requires better turnaround time than does long-term monitoring.
QA	Medium. Need usable data, but not high QA at expense of timeliness.	High. Need verifiable data to make removal decisions, document for cost recovery.	Medium. Data quality does not need to be high for waste compatibility and disposal.	Medium. Need usable data, but not high QA at expense of cost considerations.
Cost	Low. Other considerations are more important in a suspected emergency.	Medium. Standard analyses and medium time frame allow more cost consideration.	High. Standard analyses and medium time frame allow more cost consideration.	High. Standard analysis and longer time frame allow more cost consideration.

ENFORCEMENT ANALYTICAL REQUIREMENTS

The enforcement analytical needs fall into two categories: 1) RI/FS and 2) case support. The majority of the analytical needs for enforcement are for RI/FS on enforcement lead sites. Since these studies are being done by the same contractors who conduct RI/FS for Fund lead sites, the remedial program analytical requirements also apply to these studies. For the second category, civil case support, analytical needs can arise long after the RI/FS is completed and limited data are needed to support a file case. In this instance the preference is to utilize the Regional and other EPA laboraories. However, each Region should decide on a case-by-case basis how to manage its resources, and judicious use of CLP and other contractor analytical services may be necessary. For those sites where samples are taken for criminal case support, only EPA laboratories should be used.

Guidance on Producing Superfund Guidance Documents

GUIDELINES FOR PRODUCING SUPERFUND DOCUMENTS

I. ISSUE STATEMENT: The purpose of these guidelines is to provide writers of Superfund documents with assistance in writing guidance documents that are more usable and accessible. Guidance documents which are well-written can be expected to result in greater program effectiveness.

II. EXECUTIVE SUMMARY

These guidelines address the need to improve Superfund guidance documents for the benefit of users. They are designed to assist writers of guidance to produce documents that are readable, concise, well-referenced, and to the point.

Quality in guidance is necessary because a significant number of guidance users are decentralized, receive quantities of information demanding their attention, and engage in a variety of tasks which require immediate access to information.

This document also addresses issues of availability, cross-referencing, indexing, and follow-up contacts. Writing techniques are suggested that can result in streamlined documents written in clear English, and that provide an appropriate level of detail. Formatting suggestions are made to facilitate condensation for use in field manuals or electronic indexing or filing.

III. INTRODUCTION AND BACKGROUND

Reauthorized Superfund will generate a considerable volume of additional guidance. Many Superfund guidance users are decentralized in Regional, State, or field offices and must address complex issues which require immediate answers under field conditions. They need documents organized for easy, quick access with emphasis on readability and conciseness. The reader should be able to ascertain where additional written information can be found, and which individuals within the Agency can provide additional information.

These problems can in part be addressed by the way in which the guidance is written. These guidelines suggest certain techniques which can assist the writer in obtaining the desired result. They also discuss cross-referencing, instructions for entry in the OSWER Directives System, and contacts for securing additional information. The end result should be to assist the writer in preparing a more usable document.

A. Purpose of Guidance

Superfund guidance is primarily intended to help users implement the program effectively and consistently. Individual documents may be designed to serve one or more of the following purposes:

•To provide information and direction regarding procedures, policies, and technical developments which assist program personnel in conducting daily business uniformly and consistently throughout the country. This establishes a pattern for solving specific types of problems.

•In lieu of regulation. Where regulations are silent, and formal policy documents are inappropriate, guidance documents can provide general direction to assist the user in solving particular types of problems.

•As a response to requests for assistance from persons implementing the program.

In Superfund, the actual writing of guidance usually occurs in Headquarters program offices, developed by workgroups which represent a cross-section of the users. However, it can originate from top-down or bottom-up, depending upon who perceives the need for the guidance and who initiates the process. Much of the Superfund Guidance has been developed through a bottom-up procedure, with significant contributions coming from Regions, States, and other user groups.

Guidance should be used for the same variety of reasons that it is written: to assure the consistent, effective implementation of the program. While guidance is intended to be flexible, e.g., to be applied to a situation consistent with best professional judgement, it can also be used to strengthen the manager's position in handling unfamiliar situations.

B. Types of Guidance

Currently, four types of non-regulatory Superfund documents are produced and generically referred to as "guidance":

- Guidance Documents - White with grey border + Type
- Procedural Documents - white with green border + Type
- Technical Documents - White with Superfund Red border + Type
- Manuals - Green with white border + Type

Each serves a different function, as discussed below. Individual documents may stand alone or make reference to others; taken together, they form a body of information which establishes pattern and practice as the program matures.

• Guidance Documents explain what can be done to fulfill the requirements of a regulation or policy.

Generally, they cover a subject broadly and even comprehensively, but

should not spell out specific steps of an approach. Instead, they explain ideas which might be considered rather than how a required analysis or test might be conducted; or they may describe an analytic process, but do not discuss the mechanics of carrying out the process.

EXAMPLE: Guidance on Remedial Investigations and Feasibility Studies Under CERCLA; Relationship of the Removal and Remedial Program Under the Revised NCP

• Procedural Documents describe specifically how to conduct an analysis or activity; they provide a sufficient level of detail to complete an action without need for additional guidelines. They often provide a step-by-step procedure for conducting an action, including how to fill out forms where appropriate. They may also deal with the concrete mechanics or methods of an operation.

EXAMPLE: ERCS Contracts Users' Manual; Quality Assurance/Field Operations Methods Manual

• Technical Documents provide scientific or engineering information relevant to program activities. They act as reference documents for use in complying with requirements, but do not explicitly relate the technical information to requirements. They are often products of scientific research or development conducted for program support.

EXAMPLE: Remedial Action at Waste Disposal Sites; Mobile Treatment Technologies for Superfund Wastes

• Manuals combine features of all of the above categories, particularly guidance and procedural documents. They enable users to carry out the program activities or requirements discussed without need for other supporting program documents.

EXAMPLE: Public Health Evaluation Manual; Compliance Manual

IV. GUIDELINES FOR WRITING SUPERFUND DOCUMENTS

A. Keeping the User In Mind

Users of guidance represent a cross-section of individuals having a wide variety of responsibilities. Guidance is used in Headquarters to define the program and to measure the program's effect when assessing results. It is used by Regional and State administrative offices to provide direction to office and field staff and to contractors and PRPs. Some of those in the latter categories may have little or no knowledge of the inner workings of EPA or the Superfund program. Thus, the guidance, combined with direction or verbal information obtained from Agency personnel, may constitute the basis of their experience with the Agency.

In addition, field personnel who are away from their offices for long periods of time, with limited telephone access and limited storage and transporting capabilities, require documents that are accessible as well as brief, transportable, and concise.

Insofar as possible, when creating a guidance document, writers should consider the audiences. The bottom line is that if the guidance is not (1) accessible, (2) readable (3) brief and to the point (4) clear and (5) transportable, it probably will not be read--and if it's not read, it will not be used.

B. Structuring a Guidance Document

Field and program personnel who work with a wide spectrum of problems need documents that are easily and quickly consulted to provide immediate information. They do not have time to search voluminous material to secure an answer to what appears to them to be a straightforward question. A consistent format saves many hours of research time for the user.

The following proposed structure allows the reader to become quickly oriented to the issues at hand, then proceed to in-depth material which can be absorbed as time allows.

• Issue Statement - The document should begin with a clear, concise statement of the issue to be discussed.

• Executive Summary - This section serves two purposes, and may also be serving several different audiences. First, it should enable the reader to quickly determine if the document is pertinent. It sketches the most important points, and indicates where in the document more in-depth information is contained. Secondly, it can convey a basic message to the policy manager who may never read the entire document. In many documents, it also acts as a briefing for upper level managers regarding the major policy issues embodied in the larger document.

• Introduction and Background - This section introduces the material to be presented, may provide historical reference, cites pertinent regulations, statutes or other existing documents and sources of related information. It can also provide lead-in for the prescriptive material which follows in the next segment.

• Prescriptive Material. This segment provides any prescriptive material applicable to the matter at hand, flagged or underlined. (Prescriptive material is defined as that which is mandated or required by law or regulation.)

• Expository Information. The narrative that constitutes the actual guidance is placed here, together with case studies, examples, and other appropriate illustrative material. This provides the next level of detail for the reader who has concluded that this document addresses the needs of the situation and now wishes in-depth information.

• Referencing Section. This segment includes cross-referencing to other documents, identified by their OSWER identification number, if available; or by their date and source where no OSWER number has been assigned. In addition, it should include the name of a contact with phone number for obtaining further information. Larger, more comprehensive documents might include glossaries and indexes.

C. Language and Streamlining Techniques

The choice of language affects the user's ability and/or willingness to implement the guidance. Because "guidance," by definition, is not prescriptive unless it cites specific regulatory or statutory requirements. the language style should be flexible rather than rigid. The most common illustration of flexibility is the use of "may," which is flexible, rather than "must" or "shall," which connote inflexibility.

When guidance contains prescriptive material, it should be referenced back to the appropriate regulatory or statutory citation. It is then advisable to separate or set off the prescriptive material by means of starring, flagging, underlining, or paragraphing so that it stands out.

Streamlining means coming immediately to the point or heart of the matter with a minimum of verbiage. It results from visualizing the finished product and producing a final document that mirrors this concept.

Below are a series of suggestions which can assist the writer in producing readable, usable guidance.

- Outline the document, and write from the outline. Outlines need not be formal; they can take the form of concise bullets that become the organizing points for the document, and can even be developed into topic sentences. Picture the user and the constraints under which that individual operates. Visualize the final document and its intended purpose for the program and for the user.

- Establish a style consistent with the purpose of the document. Remain with that style until the document is completed. While style can be individual, it is also true that each of the four document types has its own style, and that style has an effect on the reader.

For example, technical documents which inform the user of new technology or new information tend to be most effective when the style is concise and direct.

Procedural documents often set forth specific steps, tasks, or operational steps which the reader is to follow. These documents are sometimes the least flexible of the four types. The style should be simple and straightforward, with complete, direct sentences. Emphasis should be on an orderly, clear presentation.

Guidance documents frequently offer an array of options and case studies, to which the user may apply best professional judgment in adapting to the situation at hand, within the broad parameters of the guidance. The writing style can be somewhat more flexible and expository.

Manuals, in that they stand alone in implementing part of a program, frequently combine elements of the other documents. They may be the most lengthy of the four, and may include technical information with specific procedures and an array of options. Style

will therefore emerge as a composite of the others.

In selecting the appropriate style, it is useful to remember that nouns and action verbs written in the active voice supply greater power and emphasis than writing with adjectives and adverbs and in passive voice. Further, impersonal language increases the rigidity or inflexibility of the document. The language used in a regulation or directive is more impersonal than that used in a simple memorandum.

For example:

Rigid: "To comply with this provision, the owner/operator must determine whether a bulk hazardous waste is a liquid or contains free liquid. EPA regulations define "free liquids" as "liquids which readily separate from the solid portion of a waste under ambient temperature or pressure." (40 CFR 260.10)...EPA believes that the Paint Filter Liquids Test is the appropriate test to be used to determine the absence or presence of free liquids in bulk and containerized waste."
(Note the prescriptive material quoted and referenced)

Flexible: "This step is designed to facilitate responses to clear-cut, time-critical emergencies for which only limited data are available. In those cases, OSCs may have to rely primarily on findings of the preliminary assessment, without significant additional data collection....Where the OSC has determined that the incident is not time-critical, a more thorough analysis...will be possible before recommending a...response."

• Limit explanation. Select simple words and omit needless words. The reader has limited reading time. "Less is more" is often a useful concept in government writing.

For example:

Excessive Detail: "Implementing the notification program will require both staff time and the direct expenditure of funds. You will find guidelines on typical costs of various activities throughout this handbook. The available funding and staffing level will have an impact, for example, on how extensive the public education program can be and which methods of form distribution can be used. State budget allocations will also impact the types of activities possible. Some states will find that they have adequate staffing but little money to pay for printing and travel, while other States may experience the opposite."

Concise: The scope of the rulemaking will be limited to municipal landfills because, currently, reliable data on which to construct and defend sound Criteria exist only for municipal waste landfills. Moreover, by limiting the rule, the Agency can expect to promulgate the revisions within the Statutory deadline of March 31, 1988.

•Avoid unexplained acronyms, unexplained technical terms, and program-specific language not part of the general experience of the reader. The standard Agency practice of writing a phrase in full with the acronym in parentheses at the beginning of the article is helpful. Even so, assumptions that the reader has the same working knowledge of the subject as the writer can be unwarranted. Many readers find themselves intensely irritated at government writing which requires the constant translation of acronyms and jargon. In extensive documents requiring acronyms, inclusion of a glossary can be helpful.

For example:

(1) "You should begin exploring mechanisms to implement CA's with OFA Regional counterparts early in the FY about sites in Regions targeted for CERCLA action. This should be accomplished by review of the NPL, the SMP, and the SCAP. The SCAP commitments should be reflected, as appropriate, in the SEA's for your Region."

(2) "You should begin exploring mechanisms to implement cooperative arrangements with Office of Federal Activities (OFA) Regional counterparts early in the fiscal year. This should be accomplished by review of the National Priorities List (NPL), the Site Management Plan (SMP), and the Superfund Comprehensive Accomplishments Plan, (SCAP). The SCAP commitments should be reflected, as appropriate, in the State/EPA Agreements for your Region."

•Summarize when appropriate. Use of summaries depends upon the degree of complexity of the material being presented. When the material is lengthy and complex, it may be useful to summarize at the end of sections or chapters, or it may be useful to present a final summary at the end of the document. Another effective technique is the use of bullet points at the beginning of sections to highlight main points. In addition, careful construction of the Executive Summary assists both writer and reader in keeping to the point.

•When revising and rewriting, look for redundancy, strive for clarity, and reduce detail when possible. Then recheck the editing to be sure the meaning hasn't been lost. Short, complete sentences placed in logical order with logical paragraphing simplify the work of the reader. All paragraphs should have topic sentences at the beginning or the end. The final editing effort is the comparison of the finished product with the writer's initial concept and the mental picture of the user. How well do they match? Will the reader be able and willing to understand the writer's message? Only when the match is achieved, is it time for others to review the document.

D. Content.

Appropriate Level of Detail. There are two considerations with regard to detail. The first is that the level of detail should be appropriate

to the document. As a rule, procedural documents require the most detail and specificity, technical documents somewhat less, and guidance documents least of the three. Manuals will be a composite and should have a level of detail appropriate to the subject.

Secondly, consideration should be given to the amount of detail needed by the various users. While the material may be applicable to a variety of situations, some users may need less detail. Where more detail is required, it should be presented and organized so that it does not distract such users.

It is the writer's job to determine the appropriate level of detail in planning and outlining the document.

Technically Correct. The writer is responsible for presenting a final document that is technically correct and to conduct whatever reviews and checks are necessary to assure that the document is in fact correct.

Prescriptive Only When Required. Guidance should be assumed to be "guidance" unless otherwise stated. "Best professional judgment" should be assumed unless the document specifically flags prescriptive (mandatory) material. When these flags are present, statutory or regulatory references should be cited, as well as appropriate back-up policy or precedential material. Otherwise, flexibility should be assumed and language should be constructed accordingly.

Filing, Indexing, and Follow-Up Information have been discussed in Section B. However, each document should end with a section that provides assistance in obtaining additional data, and in filing and cross-referencing.

E. Classification.

Documents have been classified for general use in the Superfund Program. The four classification types previously discussed are designed to be broad and flexible, while giving users a clear idea of the kind of information presented in each. As the system evolves, it is anticipated that each kind of document will be identified by a characteristic cover which makes it easily identifiable.

In addition to the Superfund classification system, each document will, of course, be assigned an OSWER Directives Number and be included in that indexing system. Beyond that, institutional users (Regional or State offices, others) may wish to develop their own internal filing or reference system. The classification system, plus the Issue Statement and Executive Summary at the beginning of each document, will facilitate the design of such a system.

(F) Considerations in Publishing a Document

Once a document text has been prepared and approved for publication, a variety of publication requirements and procedures are triggered. Since these are important in assuring that all agency requirements are met, they

will be the subject of a subsequent procedural guidance. Coordination of publication procedures is the responsibility of the Office of Program Management, OERR.

FOLLOW-UP INFORMATION OR CONTACTS

(1) For general writing information - THE ELEMENTS OF STYLE, by William Strunk, Jr. and E.B. White, Third Edition, MacMillan Publishing Co., Inc., New York 1979.

(2) For information about OSWER Directives System - Contact Sherry Fielding, OSWER Directives Coordinator, Immediate Office, Assistant Administrator for Solid Waste and Emergency Planning - FTS 382-4483

(3) For information about the Guidance Review Project or OERR Guidance, contact Arthur B. Weissman, Policy Analysis Staff, Superfund Program, FTS 382-2182.

Comparison of EPA and Commonwealth of Kentucky PCB Cleanup Standards

COMPARISON OF EPA AND COMMONWEALTH OF KENTUCKY PCB CLEANUP STANDARDS

The following paragraphs briefly summarize EPA and Commonwealth of Kentucky statutes applicable to PCB cleanup standards. In the case of the EPA regulations, some of the contaminant levels are regulatory standards, while others are simply recommended levels. EPA standards will soon change, as described below. The Kentucky cleanup standards for PCBs are based on general language in the Kentucky Hazardous Substances Statute as described below.

EPA

EPA has established various PCB cleanup standards or recommendations under the Toxic Substances Control Act (TSCA), the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), and the Comprehensive Environmental Response, Cleanup and Liability Act (CERCLA). While TSCA currently has the major role in PCB regulation, the EPA has announced its intent to further regulate PCB wastes under the Resource Conservation and Recovery Act (RCRA).

TSCA

Under Section 17 of TSCA, EPA considers spills, leaks, or other uncontrolled discharges of PBCs in concentrations equal to or greater than 50 ppm to be improper disposal of PCBs. TSCA Section 17 provides EPA with the authority to compel responsible parties to clean up spills at such levels of contamination.

A recent "TSCA PCB Cleanup Policy" (signed 3/20/87 and effective thirty days after publication in the Federal Register) will establish PCB cleanup standards for the majority of PCB spill situations. Certain spill situations described in that policy will not, however, be subject to these standards, based on site-specific conditions and the discretion of EPA Regional offices.

Spills, leaks or other discharges occurring before this policy becomes effective have been or will be cleaned up to levels ranging between background and 50 ppm depending on Regional discretion and site characteristics.

CWA

Under the CWA, EPA set contaminant levels, based on toxicity and risk assessments, for adoption under state programs. These are not regulatory levels by definiton, however, they will function as such under state authority. The states must set levels that are at least as strict or more strict. The CWA recommended maximum levels are 2 ug/l (24-hour average) for freshwater, and 0.03 ug/l (24-hour average) for saltwater based on acute toxicity to aquatic life; and 0.79 ng/l (based on 10^{-5} lifetime cancer risk), 0.079 ng/l (based on 10^{-6} lifetime cancer risk), and 0.0079 ng/l (based on 10^{-7} lifetime cancer risks).

SDWA

Under the SDWA, EPA has suggested levels of maximum allowable contamination. These health-based levels of maximum PCB contamination include the 10-day health advisory levels of 100 ug/day (children) and 700 ug/day (adult); and for Aroclor, 100 ug/l (child) and 350 ug/l (adult). The Agency will recommend a cleanup level of 0.005 ug/l for PCBs in drinking water based on a 10^{-5} lifetime cancer risk.

CERCLA

CERCLA recommended cleanup levels are based on the consideration of soil/air partition coefficients and the potential for ingestion, and dermal and inhalation exposure. There is currently insufficient data to develop advisory levels for one-day and long-term, non-cancer effects. The non-cancer 10-day advisory level is 42 ug/g on site, and 47 ug/g, based on inhalation exposure, at the perimeter of the site. The chronic intake advisory, 10^{-6} cancer risk (upper bound estimate) is 0.6 ug/g without cover, or 6 ug/g with 25 cm of clean soil cover (i.e., PCB < 0.1 ppm), on site; and 2 ug/g without cover, or 20 ug/g with 25 cm clean soil cover, at the site perimeter.

Site-specific factors, ARARs, and Regional discretion each play a role in CERCLA final cleanup levels. ARARs include TSCA, CWA, SDWA and the guidelines, standards and recommendations of the Food and Drug Administration, the American Conference of Governmental Industrial Hygienists, the National Institute of Occupational Safety and Health, the National Academy of Science, and the Occupational Safety and Health Administration. Current RCRA regulations pertain to PCB disposal requirements.

The Regions have discretionary authority to set more stringent cleanup standards on a site-by-site basis. Region IV, which includes Kentucky, adheres to TSCA cleanup standards.

Kentucky

Kentucky cleans up hazardous substances to background levels wherever practicable. This standard is based on Kentucky Revised Statutes (KRS) 224.877. "Definitions-Regulations-Notification-Minimization-Emergency plan-Powers of department," paragraph (4) as follows:

"(4) Persons having possession of or control over a hazardous substance being discharged or who caused the discharge shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from any discharge into the air, lands or waters of the Commonwealth."

As described by Alex Barber, Kentucky Department of Environmental Protection Division of Waste Management, Kentucky cleans up PCBs to background levels unless it is not practicable to do so. Such a situation may arise when soil contaminated above background is removed down to bedrock. Generally cleanup to background levels will result in lower cleanup levels than EPA's 50 ppm action level.

Kentucky may allow contamination up to 10 ppm, if the site is covered with a state-approved cap.

PCB contamination in water is regulated by 401 Kentucky Administrative Regulations 5:031 Section 4. The state standards are based on CWA Section 304 criteria. The state standard for ambient warm water is .0014 ppb. For finished water the standard is .0013 ppb, based on SDWA.

Summary--

EPA's specific standards and recommendations provide for protection of human health and the environment at PCB cleanups particulary as ARARs are incorporated in CERCLA cleanups. The Kentucky cleanup to background may, in some cases, exceed EPA cleanup standards. Kentucky water standards for PCB contamination are based on the federal CWA and SDWA.

Concurrence on Payment of Relocation Costs for Business During Removal

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C. 20460

JUN 15 1987

MEMORANDUM

OFFICE OF GENERAL COUNSEL

SUBJECT: Concurrence on Payment of Relocation Costs for Business During Removal

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

J. Daniel Berry
Associate General Counsel
Grants, Contracts, and General Law Division

TO: Stephen Luftig, Director
Emergency and Remedial Response Division
Region II

Douglas B. Blazey, Regional Counsel
Region II

You have asked for our concurrence in the use of the Hazardous Substance Superfund (the Superfund) to pay costs associated with the relocation of a business during the course of a removal action carried out under the Comprehensive Environmental Response, Compensation and Liability Act, as amended (CERCLA). Given the equities in this particular case, it is our view that it is appropriate to reimburse the business for temporary relocation costs. Any costs related to business losses are, of course, not reimbursable from the Superfund.

As we understand the facts, EPA took a removal action in a building at the Signo/Mt. Vernon, New York site in which RPM, a laminating company, conducted business. EPA advised RPM that it could not safely operate its business while the removal team was working. Subsequently, the Occupational Safety and Health Administration posted a notice of Alleged Imminent Hazard in the building and the county health department issued a Notice of Closure. The Agency for Toxic Substances and Disease Registry also recommended that RPM be excluded from the building because of the potential threat to its employees. RPM moved its operations to another location and is seeking reimbursement for its costs.

Section 101(23) of CERCLA defines "removal" to include such actions "as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or the environment, which

may otherwise result from a release or threat of release. The term includes, in addition, without being limited to . . . temporary evacuation and housing of threatened individuals not otherwise provided for . . .". You have suggested that this authority is sufficiently broad to include temporary relocation of businesses as well as residents. We agree that the statute can be read to support such an interpretation.

We intend to address the temporary relocation of businesses during a removal action under the relocation functions delegated to the Federal Emergency Management Agency (FEMA). We are currently working with FEMA to determine the appropriate reimbursement for RPM, and to develop guidance and regulations for any future temporary business relocation.

We understand that FEMA's regional office will be working directly with you to develop the information necessary for RPM's reimbursement. If there are any questions on this matter, please contact Tim Fields or Lisa Guarneiri at FTS 475-8110.

cc: Walt Kovalick
Timothy Fields
Hans Crump
Linda Garczynski
Mark Mjoness
Lisa Guarneiri
Michael Hirsch, FEMA
Dennis W. Kwiatkowski, FEMA
Charles Robinson, FEMA
Fred Kubel, Region II
Charles Fitzsimmons, Region II

4/1/87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: MAR 23 1987

SUBJECT: Attached Memorandum Regarding Relocation Costs of a Business

FROM: Christopher J. Daggett
Regional Administrator

TO: Francis S. Blake
General Counsel

and

Winston J. Porter
Assistant Administrator
Solid Waste and Emergency
Response

Enclosed is a copy of a memo that Doug Blazey and Steve Luftig have sent to their colleagues in your offices requesting assistance on a particularly novel question. I feel we need an answer quickly and wanted you to know that the principles in RPM have been in contact with Lee's and my office regarding their plight.

I feel we should assist them and am sympathetic to many of the points they raise. It is likely that we will be sued if a financial settlement is not reached. I believe the general public expects Superfund to support some reimbursement for a displaced business assuming we are statutorily authorized to make such payments.

Your interest in this matter would be appreciated.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAR 2 0 1987 REGION II

SUBJECT: Relocation Costs of Business in Removal Action

FROM: Douglas R. [illegible] and Stephen Luftig, Director
Regional Counsel Emergency and Remedial
Response Division

TO: J. Daniel Berry, Acting and Henry L. Longest II
Associate General Counsel Director, Office of Emergency
for Grants and General Law and Remedial Response

This is to advise you that Region II would like to use Fund money to cover a business' relocation costs resulting from an EPA removal action. It is our understanding that the Agency has never done this before, therefore, we would like your concurrence on this action.

I. BACKGROUND

RPM is a small family operated laminating company, which employs 22 people and is located in Mt. Vernon, Westchester County, New York. RPM rents a portion of the 2nd floor and all of the first floor of a building located at 200-208 S. 14th Avenue, Mt. Vernon, New York. EPA is undertaking a removal action on a portion of the second floor and the entire third floor of the same building. The removal action involves the removal of various shock-sensitive explosives, flammable liquids, flammable solids, poisons, combustibles, oxidizers and acids.

EPA advised RPM that it could not operate its business while EPA was physically conducting removal activities inside the building. EPA was concerned not only for RPM's safety during the physical removal activities in the building, but also for the removal team's safety while undertaking the clean-up operation. EPA further advised RPM that it had no objections if RPM worked during the evening when the removal team was not actually working in the building.* Subsequent to this, the Occupational Safety and Health Administration ("OSHA") posted a notice of "Alleged Imminent Hazard" and the Westchester County Department of Health ("DOH") issued a Notice of Closure. The basis for DOH's Notice of Closure was the hazard RPM's presence might have on the general public. In addition, the Agency for Toxic Substances and Disease Registry ("ATSDR") recommended, initially in a January 1987 letter and in at least two documents in February 1987, that RPM be excluded from the building due to the threat to RPM and the surrounding community. Unable to conduct its business in the building, RPM made arrangements to move some of its lighter equipment to a temporary location where the work that could be performed, i.e. cutting, was performed and the remaining aspects of the work were subcontracted out.

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*/From the beginning, the OSC thought it would be appropriate to compensate RPM, if possible, for its losses and asked ORC to investigate this matter. As the removal action progressed, however, the issue crystillized into whether RPM'S relocation costs could be compensated.

After being excluded from the building for several weeks, RPM purchased an option to buy the building, at a cost of allegedly $50,000, where it had temporarily located its cutting operation. Before RPM exercised its option on the new building, OSHA rescinded its Notice of Alleged Imminent Danger and the Westchester County Department of Health rescinded its Notice of Closure. Although ATSDR did not rescind its recommendation, RPM was permitted to re-enter the building.* Under an agreement reached with the On Scene Coordinator, RPM is permitted to work 1 day a week and evenings, when EPA is not in the building working.

The Region feels that we can compensate RPM, using money from the Hazardous Substance Trust Fund, for its re-location costs to the temporary premises.**

RPM has requested payment for relocation expenses to the temporary location as well as expenses it will incur in a complete and permanent move to the "temporary" location. The issue of what costs are eligible for reimbursement is a distinct topic from the narrow question of whether we are authorized to pay any business relocation costs under CERCLA. As you may know, EPA has interagency agreement with the Federal Emergency Management Agency ("FEMA") to reimburse it for all relocation activities undertaken by FEMA pursuant to CERCLA response actions. FEMA has detailed accounting and eligibility requirements based at least, in part, upon the

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*/Pursuant to RPM's concurrence, EPA is using a portion of RPM's leased premises as a storage area for some of the segregated chemicals.

**/Since RPM has already expended the money for the initial relocation and some of the rent, EPA would be reimbursing RPM for these expenses. We recognize that normally there needs to be EPA preauthorization (40 C.F.R. §300.25) before EPA reimburses a person incurring response costs. We feel, however, that such a preauthorization is implied from the combination of the actions of EPA, OSHA, DOH and ATSDR. To require a more formal pre-authorization (such as an Order or a written statement) would not be reasonable in circumstances like this. Specifically, rather than having parties voluntarily agree to do that which is requested by the federal and local governments in implementing a response action, parties will wait until they are required to co-operate, either through the judicial or administrative processes. All of this time and effort, in the long run, will slow down our removal actions.

requirements of the Uniform Relocation Act. Whether all questions that arise as to the propriety of certain expenses are answered by FEMA regulations and policies is an open question. However, we see little efficiency in pursuing these issues until the threshold question of basic eligibility is resolved.* The Region has also been asked to consider RPM's relocation expenses to the new building as a response cost. The Region would welcome your opinion on this issue as well.

The pertinent dates of the events in this case are as follows:

December 8-17, 1986 - EPA conducted a preliminary assessment and inspection of the site. EPA advised RPM that the business can not be operated when the removal team was physically working inside the building.

December 17 - January 7, 1987 - RPM continued to work normal hours. (Appropriate for holiday season)

January 8, 1987 - EPA began removal activities inside the building. RPM advised by the OSC to stay out of the building because the ether was being sampled.

January 9, 1987 - Ether still being sampled. OSC advised RPM to stay out of the building.

January 9, 1987 - Agency for Toxic Substances and Disease Registry ("ATSDR"), based on a review of the videotape of the interior of the building and a partial list of the contents of the building, made an assessment that the building constituted an imminent fire and explosion hazard. ATSDR recommended that RPM be immediately excluded from the building.

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*/For example, RPM contends that it was required to relocate because "permitted" night operations would not allow it to send out and receive shipments during the day.

Further, because the heavy equipment could not be easily dismantled and relocated in a temporary facility, RPM utilized subcontractors for certain operations because of its disrupted work place. Many financial issues arise from these "tangled" operations.

To further complicate matters, RPM is likely to permanently relocate to its "temporary" location and has alledgedly paid $50,000 for an option to buy the new facility. The potential relocation costs are, therefore, significantly higher because heavy equipment now located at the response site, must be dismantled, moved and re-aligned by experts. One of RPM's estimates of this move is $150,000. Moreover, we understand that RPM's lease at the response site expires in September 1987 and that a permanent relocation was contemplated by that time in any event.

January 12 - 14, 1987 - RPM worked evenings when the removal team was not in the building. EPA hired a van service to transport the employees. EPA also accepted deliveries and made shipments for RPM during the day when RPM could not be in the building.

January 14, 1987 - Occupational Safety and Health Administration posted a notice of "Alleged Imminent Danger" (The notice is not a closure order. It serves as a warning to workers that there is an alleged dangerous condition in the workplace.)

January 15, 1987 - Dr. Anita Curran, Commissioner of the Westchester County Department of Health issued an Notice of Closure to RPM.

January 15, 1987 - RPM excluded from the building.

January 22 and 29, 1987 - Hearing held on the Notice of Closure. Agreement reached that RPM must stay out of the building until all of the explosives that have been identified as of January 26, 1987 are removed, provided, however, that the order would be reinstated if EPA disclosed the existence of additional explosives or materials that the Commissioner felt constituted an imminent hazard. Approximately 600 pounds of shock sensitive material were found on 1/27/87.

January 30, 1987 - ATSDR strongly recommended to the Westchester Department of Health that evacation of RPM be continued. (letter is attached)

February 3, 1987 - ATSDR recommended that RPM be excluded from the building until: The building is completely inventoried; all leaking containers are overpacked; all explosive or shock sensitive materials have been removed; incompatible substances have been segregated; a Fire Marshall is on site at all times; and EPA reviews and approves RPM's proposed activities in the building.

February 10, 1987 - RPM locates another building in which to temporarily operate.

February 17 - 27, 1987 - RPM began moving some of its equipment out of the building between the hours of 7 and 9 in the morning.

EPA goes in the building at 9. RPM continues to move material out each morning for subcontracting. They have set up shop at another temporary location. They do their own cutting, and then subcontract the work out.

February, 1987 - RPM purchases an option to buy another building from which to operate its business.

February 27, 1987 - Dr. Curran, after talking to the OSC, gave RPM permission to enter the building on February 28 and March 1 to manufacture some goods. EPA stopped its activities inside the building for those two days.

March 10, 1987 - OSHA lifted its Notice of Alleged Imminent Danger. Westchester County Department of Health lifted its Notice of Closure.

March 11, 1987 - RPM begins working 1 day and four nights in the building. The day work is conditioned on whether EPA is removing explosives from the building or sampling unknowns.

II. WHETHER RPM'S RELOCATION EXPENSES CONSTITUTE A RESPONSE COST IN THE CONTEXT OF A REMOVAL ACTION

Section 101(23) of the Comprehensive Environmental Response, Compenstion and Liability Act, as amended, 42 U.S.C. §§ 9601 et seq. (hereinafter "CERCLA") defines a removal action as:

> "the clean up or removal of released hazardous substances from the environment, such actions as may be necessary taken in the event of a threat of release of hazardous substances into the environment, such actions as may be necessary to monitor, assess and evaluate the release or threat of release of hazardous substances, the disposal of removed material, or the taking of such other action as may be necessary to prevent minimize or mitigate damage to the public health, welfare or the environment, which may otherwise result from a release or threatened release ... (emphasis added)

EPA's initial basis for exluding RPM from the building was due to the fear that the removal team might do something that would cause a release and harm RPM as well as EPA. ATSDR and the Westchester County Department of Health, however, made recommendations of exclusion and excluded RPM from the building at all times because RPM might do something that would cause a release in the removal area and thereby threaten the public health and welfare. Indeed, RPM worked with various chemicals, including TCE and heat in its laminating business. There is no fire wall between the RPM premises and the premises where the removal action is taking place. The removal area contained, and to some extent still does contain, many shock sensitive, flammable and other dangerous chemicals". Hence, excluding RPM from the building was an action necessary to "prevent, minimize or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release".

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slives it has identified most of the shock sensitive ls and has placed them either in magazines located on in a walk-in vault, also located on site.

Consequently, RPM's exclusion* from the building was a part of the removal action being undertaken at the site, for which RPM incurred, among other costs (i.e. business losses), relocation costs. The only issue remaining is whether those relocation costs be compensated from the Fund.

II. WHETHER RPM's RESPONSE COSTS ARE COMPENSABLE UNDER CERCLA

One of the many purposes of CERCLA is compensation of innocent victims of a release of hazardous substances or pollutants or contaminents which may affect the public health or welfare. In that regard, a person whose water supply is contaminated, through no fault of his own, is often provided bottled drinking water by EPA, paid for out of the Fund. In many instances, businesses, such as restaurants, are provided bottled water by EPA. Hence, a legitimate use of the Fund is to compensate innocent victims of pollution.

Section 101(23), in defining "removal", is silent as to relocation of businesses without specifically excluding the possibility of compensation. Indeed, the closest the definition comes to addressing relocation at all is:

> The term includes, in addition, without being limited to, ... temporary evacuation and housing of threatened individuals not otherwise provided for ...

Hence, a strong argument can be made that businesses can be compensated for their relocation costs.**

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*/We believe it is inconsequential that the County, rather than EPA, took the legal action to actually exclude RPM from the building. The National Contingency Plan, 40 C.F.R. §§ 300.22 and .24 requires the federal government to work together with state and local governments to respond expeditiously to emergency situations. To argue that the County's closure order was not intimately related to and a part of the total response action taking place at the site is inconsistant with the cooperative intent of CERCLA.

**/ Moreover, if the instant action was a remedial action, RPM would be compensated for its relocation expenses. Section 101(24) in defining "remedial" action provides in part:

> "...The term includes the costs of permanent relocation of residents and business ... [which] the President determines that alone or in combination with other measures, ... may otherwise be necessary to protect the public health or welfare ...

It is clear that the definition of "removal" neither explicitly or implicitly prohibits compensation of a business for its relocation costs. The phrase the "taking of such other actions as may be necessary to prevent, minimize or mitigate damage to the public health or welfare or to the environment" 42 U.S.C. § 101(23), gives EPA very broad authority to determine what actions are necessary in any given situation. Further, the list of actions that constitute removal actions contained in Section 101(23) is preceded by the term "without being limited to". Hence, just what constitutes a removal action lies within the sound discretion of EPA.

Without making any broad assertions with respect to compensating businesses for the relocation costs in removal actions, the Region feels that the circumstances and equities of this case justify compensation. The only reason that RPM relocated from the site was because of EPA's removal action. Hence, any costs incurred by RPM should be considered a response cost and paid for by the fund.

IV. CONCLUSION

We have tried to set forth, as clearly as possible, the factual setting which underlies the conclusion that RPM should be compensated for its relocation costs. We would appreciate your concurrence with the Region's belief that RPM's relocation to its temporary site, reasonable rent and the move back to the site, constitute response costs which can be compensated from the Fund. We also invite your opinion on how to treat the relocation expenses that RPM may incur, should it decide to exercise its option to buy the new building.*

Thank you for your cooperation on this matter.

cc: Timothy Fields
William Ross

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*/The Region is in the process of discussing with Region 7 the procedures it uses during the relocations it has been involved with and to find out whether it has either temporarily or permanently relocated businesses. We are also in the process of determining whether the FEMA has any regulations or procedures regarding which relocation costs can fairly be paid, as well as trying to determine ourselves, what costs constitute relocation costs and whether they are compensable, and if so, what portion is compensable.

Employee Occupational Health and Safety

EPA

United States Environmental Protection Agency
Washington DC 20460

OSWER Directive Initiation Request

1 Directive Number: 9285.3-02

2. Originator Information

Name of Contact Person	Mail Code	Office	Telephone Code
Rod Turpin	EDison,NJ	ERD/ERT	340-6745

3. Title

Employee Occupational Health & Safety

4 Summary of Directive (include brief statement of purpose)

Provides instructions reminding EPA employees that they must comply with OSHA.

5. Keywords: Superfund, CERCLA, SARA

6a. Does This Directive Supersede Previous Directive(s)? ☐ No. ☐ Yes What directive (number, title)

b. Does It Supplement Previous Directive(s)? ☐ No ☐ Yes What directive (number, title)

7 Draft Level

☐ A – Signed by AA/DAA ☐ B – Signed by Office Director ☐ C – For Review & Comment ☐ D – In Development

8. Document to be distributed to States by Headquarters? ☐ Yes ☐ No

This Request Meets OSWER Directives System Format Standards.

9. Signature of Lead Office Directives Coordinator	Date
Richard Hyde	7/7/87
10. Name and Title of Approving Official	**Date**
Win Porter, Assistant Administrator	7/7/87

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 7 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESP
OSWER Directive 9285.3-(

MEMORANDUM

SUBJECT: Employee Occupational Health and Safety

FROM: J. Winston Porter, Assistant Administrator
Office of Solid Waste and Emergency Response

TO: Addressees

As we initiate our field activities under the Superfund Amendments and Reauthorization Act of 1986 (SARA), I wish to remind everyone that all EPA employees are required to comply with the Federal Occupational Health and Safety Act (OSHA). In addition to complying with such federal standards as 29 CFR 1910/1926, EPA employees must also adhere to the appropriate EPA orders, policies, and guidelines pertaining to employee occupational healt and safety. For example, EPA Order 1440.3 requires all EPA employees using respiratory protection devices to participate in a medical monitoring program. I want to encourage all Regions and OSWER offices to continue to implement effective medical monitoring programs for its employees. EPA Order 1440.2 requires all EPA employees engaged in routine field activities to be trained and to receive training certification levels commensurate with the degree of anticipated hazards. EPA Order 1440 specifies the responsibilities of all Agency employees in this area.

More recently, section 126(a) of SARA requires the Secretary of Labor, within one year of the date of enactment, to promulgate standards (29 CFR 1910.120) for health and safety protection of employees engaged in hazardous waste operations. The Secretary is also required in Subsection 126(e) to issue interim final regulations within 60 days after enactment of SARA. The interim final rule was published in the Federal Register (Vol. 51, No. 244, pages 45654 - 45675) on December 19, 1986. This interim final rule took effect upon the date of issuance (December 19, 1986), and it was OSHA's judgment that all provisions could be fully implemented not later than 90 days after issuance (March 17, 1987). As with other OSHA Section 6 Standards, EPA is required to comply with 29 CFR 1910.120 per Executive Order 12196 (February 1980).

In addition, section 126(f) of SARA requires the Administrator of EPA, within 90 days after the promulgation of final regulations under section 126(a), (January 17, 1988), to promulgate standards identical to 29 CFR 1910.120 (those promulgated by the Secretary of Labor under section 126(a)). EPA's Workgroup No. 2427 (Hazardous Waste Operations and Emergency Response Worker Protection Standards), chaired by Rod Turpin, Safety and Occupational Health Manager, Environmental Response Team (ERT), Edison, NJ, has been established and includes representatives of five (5) EPA Regions, two (2) States, and OSHA. In addition, the following EPA Headquarters offices are represented: Office of Policy, Planning and Evaluation, Office of Pesticides and Toxic Substances, Office of General Counsel, Office of Research and Development, Office of Solid Waste and Emergency Response, and the Occupational Health and Safety Staff. The objective of this Workgroup is to:

1. Promulgate EPA Worker Health and Safety Standards identical to OSHA's standards (29 CFR 1910.120)for those 27 States which do not have in effect an approved State Plan under the Occupational Safety and Health Act of 1970.

2. Develop an implementation/enforcement strategy for these EPA standards.

In order to better implement both EPA and OSHA Occupational Health and Safety requirements, OSWER has established an Integrated Health and Safety Program for the sole purpose of assisting OSWER in providing a safe and healthy work environment for its field activities. This program is managed by Rod Turpin, ERT, Edison, NJ. Please feel free to call him at 201-321-6745 (FTS 340-6745) for any additional information.

Thank you in advance for your assistance and dedication in making our work environment a safe and healthy one.

Addressees:

Regional Administrators, Regions I - X
Henry L. Longest II (WH-548)
Marcia E. Williams (WH-562)
Ronald Brand (WH-562A)
Gene A. Lucero (WH-527)

cc: David Weitzman (PM-273F)
Waste Management Division Directors, EPA Regions I-X
Environmental Services Division Directors, EPA Regions I-X

EPA Interim Guidance on Indemnification of Superfund Response Action Contractors Under Section 119 of SARA

11/OSWER

United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

EPA

DIRECTIVE NUMBER: 9835.5

TITLE: EPA Interim Guidance on Indemnification of Superfund Response Action Contractors under Section 119 of SARA

APPROVAL DATE: October 6, 1987

EFFECTIVE DATE: October 6, 1987

ORIGINATING OFFICE: OWPE

☒ **FINAL**

☐ **DRAFT**

LEVEL OF DRAFT

- ☒ A — Signed by AA or DAA
- ☐ B — Signed by Office Director
- ☐ C — Review & Comment

REFERENCE (other documents):

SWER OSWER OSWER
DIRECTIVE DIRECTIVE DI

EPA

United States Environmental Protection Agency
Washington, DC 20460

OSWER Directive Initiation Request

1 Directive Number: 9835.5

2. Originator Information

Name of Contact Person	Mail Code	Office	Telephone Code
Tom Gillis	WH 527	OWPE	382-4524

3 Title
EPA Interim Guidance on Indemnification of Superfund Contractors under Section 119 of SARA

4 Summary of Directive (include brief statement of purpose)
Provide Guidance to EPA Regional Personnel on EPA Superfund RAC Indemnification; including EPA Interim Guidelines, Procedures for Processing Indemnification Requests, and Model Indemnification Contract Language.

5 Keywords
Superfund, CERCLA, Indemnification, RAC, Contrator, Liability, Contracts

6a Does This Directive Supersede Previous Directive(s)? [X] No [ ] Yes What directive (number, title)

b Does It Supplement Previous Directive(s)? [X] No [ ] Yes What directive (number, title)

7 Draft Level
[X] A – Signed by AA/DAA [ ] B – Signed by Office Director [ ] C – For Review & Comment [ ] D – In Development

8. Document to be distributed to States by Headquarters? [ ] Yes [X] No

This Request Meets OSWER Directives System Format Standards.

9 Signature of Lead Office Directives Coordinator	Date
Darlene M. Williams	10/6/87
10 Name and Title of Approving Official	Date

EPA Form 1315-17 (Rev. 5-87) Previous editions are obsolete

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OSWER Directive 9835.5

OCT 6 1987

MEMORANDUM

SUBJECT: EPA Interim Guidance on Indemnification of Superfund Response Action Contractors Under Section 119 of SARA

FROM: J. Winston Porter, Assistant Administrator
Office of Solid Waste and Emergency Response

C. Morgan Kinghorn, Acting Assistant Administrator
Office of Administration and Resources Management

TO: Regional Administrator, Regions I-X
Regional Counsel, Regions I-X
Director, Waste Management Division
Regions I, IV, V, VII, and VIII
Director, Emergency and Remedial Response Division
Region II
Director, Hazardous Waste Management Division
Region III and VI
Director, Toxics and Waste Management Division
Region IX
Director, Hazardous Waste Division
Region X
Director, Environmental Services Division
Regions I, VI, and VII

Purpose

Subject to certain restrictions, Section 119 of the Superfund Amendments and Reauthorization Act of 1986 (SARA) authorizes the Environmental Protection Agency (EPA)[1] to provide indemnification[2] to response action contractors (RACs) working at Superfund sites for States, potentially responsible parties (PRPs), and EPA (including RACs working for the U.S. Army Corps).

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[1] Under Executive Order 12580, the President has also authorized other Federal agencies to indemnify RACs working for those agencies.

[2] "Indemnification" is an agreement whereby one party agrees to reimburse a second party for losses (in this case liability losses) suffered by the second party.

of Engineers at EPA-lead sites)[3]. The purpose of this memo is to describe how EPA may provide indemnification to RACs using Section 119 authority.

Background

Response action contractors have traditionally relied on commercial liability insurance or indemnification to sufficiently offset their potential liability risks from participation in the Superfund program. During the Superfund reauthorization debate, the RAC community identified several factors which, the RACs contended, impaired their ability to adequately offset risk. These factors included:

- Potential subjection to strict, joint and several liability under Superfund and under some state laws; and
- Inability of the commercial liability insurance market to provide liability insurance coverage to RACs involved in the Superfund cleanup program that is both adequate and affordable.

Prior to the reauthorization of CERCLA, EPA provided indemnification to RACs working for EPA through contract authority implementing CERCLA. EPA took this step in order to retain qualified contractors, given the absence of pollution liability insurance coverage. Under this old indemnification agreement, the Federal government indemnified RACs above an initial $1 million for third party liabilities and defense expenses. The indemnification agreement was void in cases of gross negligence or willful misconduct.

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[3] SARA Section 119(e)(2) defines "response action contractor" as:

a. any person who enters into a response action contract (which is defined in part as any written contract or agreement to provide any CERCLA removal or remedial action at a facility listed on the NPL, or to provide any ancillary services related to such response) with respect to any release or threatened release of a hazardous substance or pollutant or contaminant from a facility and is carrying out such a contract; and
b. any person retained or hired by the person who enters into a response action contract, to provide any services related to a response action; and
c. any person, public or nonprofit private entity, conducting a field demonstration pursuant to SARA Section 311(b) (i.e., the "Alternative or Innovative Treatment Technology Research and Demonstration Program").

Section 119 of SARA responds to many of the concerns of the RAC community by:

- Establishing a standard of negligence for actions brought against RACs under Federal law;[4]
- Authorizing EPA to provide to RACs, on a discretionary basis, limited indemnification against pollution liability arising from RAC negligence; and
- Providing express statutory authority for indemnification and a funding mechanism.

The approach taken in Section 119 provisions is based on the following key points:

- A Federal liability standard of negligence, combined with RAC indemnification which is subject to limits and deductibles, provides adequate performance incentives for RACs working in the Superfund program;
- RAC indemnification provides an adequate substitute for insurance;
- Discretionary indemnification is an interim vehicle that will keep the Superfund program operative until the insurance industry returns to the RAC liability insurance market; and
- Discretionary indemnification does not create a Federally intrusive insurance program that interferes with private sector efforts to develop RAC liability insurance coverage.

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[4] The Federal standard of negligence under Section 119 applies only to Federal law. It does not preclude States from applying their own statutory law or common law liability standards, which may in some cases be strict liability. Response action contractors sued in Federal courts are under a "standard of care" defined by Federal law as negligence. However, if an action is brought under state law, a strict liability standard could apply.

EPA Task Force on RAC Indemnification

To avoid program delays, a Task Force was established to determine how EPA will provide indemnification to RACs working in the Superfund program. The Task Force is composed of representatives from EPA's Office of Waste Programs Enforcement (OWPE), Office of Emergency and Remedial Response (OERR), Office of Solid Waste (OSW), Office of General Counsel (OGC), Office of the Comptroller (OC), Office of Administration (OA), and the U.S. Army Corps of Engineers. The primary goals of the Task Force are to:

- Establish an EPA RAC indemnification program;
- Develop Section 119 RAC final indemnification guidelines and regulations;
- Ensure a forum for adequate public comment on RAC indemnification; and
- Promote private sector provision of RAC pollution liability insurance in the future by providing technical assistance to the insurance industry.

The Task Force will attempt to reach these goals by producing several work products that: (1) carefully analyze and estimate the potential pollution liability risk to which RACs are exposed by participating in the Superfund cleanup program; (2) determine what the final EPA indemnification terms and conditions will be; (3) prepare the Agency for implementing an interim RAC indemnification program; and (4) develop the Section 119 regulations.

Interim EPA Indemnification Guidelines

SARA Section 119 now provides EPA's sole authority to extend indemnification to RACs working in the Superfund program. Delegation of authority from the President authorizing EPA to use Section 119 provisions was issued through Executive Order 12580 on January 26, 1987. The delegation authorizes EPA to use Section 119 indemnification authority from the date of enactment (DOE) of SARA. Consequently, EPA must adhere to Section 119 provisions from SARA DOE (October 17, 1986).

Section 119(c)(7) requires that EPA promulgate regulations for carrying out indemnification provisions and, prior to promulgation of the regulations, develop guidelines to carry out use of Section 119 indemnification authority. Because of the complexity of the issues, EPA is proceeding deliberately in establishing these guidelines and is seeking substantial public

comment. Meanwhile, EPA is providing contractors with Section 119 coverage on an interim basis, using procedures outlined in this memorandum. Ultimately, this coverage will be amended to reflect guidance and regulations that will be developed in conformance with Section 119 requirements.

As further described in this memorandum, authorization to provide indemnification will be made by OSWER with concurrence from the Office of the Comptroller (OC). Authorization to indemnify will be made upon receipt of a recommendation from the Task Force. The OC will provide concurrence (or non-concurrence) with recommendations to indemnify within seven calendar days of receipt of a recommendation. Execution of indemnity agreements will be made by appropriate Agency administrative offices.

Section 119(c)(4) mandates that RACs must meet the following requirements before they can receive Federal indemnification for potential pollution liability associated with Superfund response action activities:

- The RAC must make diligent efforts to obtain insurance coverage from non-Federal sources to cover pollution liability; and

- In the case of a RAC contract covering more than one facility, the RAC agrees to continue to make such diligent efforts each time the RAC begins work under the contract at a new facility.

Section 119(c)(4) also requires that the following circumstances must exist before a RAC can receive Federal indemnification for potential pollution liability associated with Superfund response action activities:

- At the time the response action contract is entered into, insurance is not available, at a "fair and reasonable price", in sufficient quantity to offset potential RAC pollution liability risk; and

- Adequate insurance to cover such liability is not generally available at the time the response action contract is entered into.

In future guidance (i.e., the guidance which is to be published for public comment), EPA plans to include guidelines for determining whether insurance is "generally available" or is "fairly and reasonably priced". For the purpose of this interim guidance, EPA has determined, based on information currently available, that Superfund RACs are unable to obtain reasonably priced pollution liability insurance. Therefore, RACs are eligible to receive indemnification under Section 119 from DOE of

SARA. However, EPA will require that RACs seeking Federal indemnification meet the following requirements:

- Within 30 days of signing an indemnification agreement with EPA, RACs must submit to EPA (or to the appropriate State Contracting Officer) written documentation concerning the efforts they have made to date to secure pollution liability insurance coverage (e.g., a RAC could submit a written statement from an insurance broker stating that the RAC has attempted to secure pollution liability coverage from insurance carriers in the past six months).

- If the RAC has secured pollution liability coverage, it must submit to EPA (or to the State Contracting Officer) a copy of the policy and declaration page; and

- Every twelve months (or more frequently, if EPA determines that there has been a significant change in circumstances concerning the availability of pollution liability insurance) the RAC must submit to EPA (or to the State Contracting Officer) written documentation addressing the additional efforts the RAC has made to secure pollution liability insurance coverage including:

  - Copies of applications submitted to three known underwriters of pollution liability insurance;

  - If pollution liability coverage was denied by an underwriter, a summary of the reasons why such coverage was denied;

  - A status report of any pollution liability insurance obtained. The report would include: 1) type of coverage; 2) premium charged; 3) limits of coverage; 4) deductible levels, and any other major terms and conditions of the insurance coverage. A copy of the actual policy and declaration page could be provided in lieu of a written status report;

  - If pollution liability coverage was offered by an underwriter, but not accepted by the RAC, a report on the insurance offered (such as the "status report" required above), and a summary of the reasons why such coverage was not accepted; and

  - A status report concerning the alternative pollution liability risk transfer mechanisms the RAC has pursued other than commercial pollution liability insurance (e.g., risk retention groups, purchasing groups, association captives).

This information should be forwarded to the appropriate EPA official (or State Contracting Officer). This information will be reviewed by the Task Force as needed.

As required under the interim guidelines listed above, EPA expects RACs to demonstrate the extent to which they have attempted to secure pollution liability insurance coverage. EPA also expects that RACs will continue to monitor the market for pollution liability insurance, and continue to seek and secure such insurance coverage (however limited) from commercial insurance carriers or through alternative risk transfer mechanisms (e.g., self-insurance pools).

Indemnification of RACs Working for EPA

Pre-SARA indemnification terms will apply to work performed at a site after the date of enactment (DOE) of SARA if response work at the site was initiated under an EPA contract prior to the DOE of SARA.

EPA will enter into new indemnification agreements (See Attachment A), subject to Section 119 authority, with:

- RACs who are currently working under contract with EPA, for work they will initiate at a new site after DOE of SARA; and
- RACs receiving new contracts (or new cooperative agreements, in the case of Site Demonstration projects) with EPA after DOE of SARA for Superfund response action activities.

RACs currently under contract with EPA have been alerted to the changes that will be forthcoming to their indemnification agreements with EPA. EPA headquarters personnel in the Procurement and Contracts Management Division of the Office of Administration have been trained on the use of Section 119 and, with the assistance of the Task Force, will administer Section 119 indemnification interim procedures for EPA contractors. Requests for indemnification of EPA contractors will be subject to the approval of OSWER and concurrence of OC.

Indemnification of RACs Working for States

Section 119(c)(2) authorizes the indemnification of RACs working for States or political subdivisions of States (pursuant to a Section 104(d)(1) agreement with EPA) for new work initiated at Superfund sites from DOE of SARA. EPA may indemnify RACs performing response action activities for a State at a State-lead Superfund site after DOE of SARA. EPA will offer indemnification to RACs working for a State only if:

- The RAC's response action is part of new site work initiated at a Superfund site after DOE of SARA and it is related directly to cleanup of the site;
- RACs working for a State must meet all of the circumstances and issuance requirements set forth by Section 119(c)(4), as listed above; and
- RACs working for a State must meet all of EPA's interim guideline requirements, as listed previously on pages five and six.

EPA will not offer indemnification to RACs for site work they performed for States prior to DOE of SARA. Any EPA indemnification provided to a RAC(s) working for a State(s) will be subject to limits, deductibles, and other restrictions as required by Section 119(c)(5).

Until EPA issues final guidance and regulations, all requests for EPA indemnification of a RAC working for a State at a Superfund site will be processed via the Task Force. States should submit requests to both the Indemnification Task Force, c/o Director, Office of Emergency and Remedial Response (OERR), and to the Regional Superfund Branch Chief. Requests should identify the Regional Site Coordinator and State contact, and should include pertinent information regarding Section 119(c)(4) requirements as discussed previously. If the Task Force recommends approval of the indemnification request, the Office of the Comptroller will provide concurrence (or non-concurrence) within seven calendar days of receipt of the recommendation. Final approval for EPA indemnification of a State RAC will be made by the Director of the Office of Emergency and Remedial Response. If approval is authorized, then the Grants Administration Division will implement the approval through a special condition to be included in the State/EPA cooperative agreement (See Attachment A).

Indemnification of RACs working for Other Federal Agencies

Section 119(c)(2) authorizes the indemnification of RACs working for other Federal agencies at Superfund sites from DOE of SARA. A delegation of authority from the President authorizing other Federal Agencies to use Section 119 provisions was issued on January 26, 1987. Other Federal agencies follow all EPA guidance and regulations with respect to Section 119. Other Federal agencies that use Section 119 authority must provide their own source of funds (e.g.,their agency appropriation) to pay all indemnification costs (e.g., claims and legal defense costs).

At some Superfund sites, the U.S. Army Corps of Engineers manages response actions pursuant to an interagency agreement with EPA. For Section 119 indemnification purposes, any RAC working as a contractor for the Corps of Engineers at such sites (and where, for remedial actions, the site is listed on the NPL) is considered to be working for EPA rather than for some "other Federal agency". EPA will offer the same indemnification to contractors procured by the Corps of Engineers that it offers to contractors procured by EPA.

Indemnification of RACs Working for PRPs

Under Section 119(c)(2) authority, EPA can, in limited circumstances and subject to strict financial tests, indemnify RACs performing response action activities for PRPs subject to a consent order or decree at Superfund sites after DOE of SARA. EPA will use its authority to indemnify RACs working for PRPs only in extremely limited cases, e.g., where EPA indemnification of the PRP RAC is the solution of last resort. EPA will offer indemnification to RACs working for PRPs only if:

- The PRPs are unable to provide adequate indemnification, and as a result, are unable to obtain the services of a qualified RAC;
- The RAC's response action is part of new site work initiated at a Superfund site after DOE of SARA, and the action is related specifically to the cleanup of the site;
- RACs working for PRPs meet all of the issuance requirements set forth by Section 119(c)(4);
- The circumstances set forth in Section 119(c)(4) exist; and
- RACs working for PRPs meet all of EPA's interim guideline requirements.

EPA will not offer indemnification to RACs for work performed for PRPs prior to DOE of SARA, nor for any PRP RAC response activity that is not related specifically to a remedy at a Superfund site.

Further, Section 119(c)(5)(C) of SARA requires that, before EPA can enter into an indemnification agreement with a RAC performing work under contract with a PRP(s) at a Superfund site(s), EPA must determine the amount which the PRP(s) is able to indemnify the RAC. In making such a determination, EPA shall take into account the total net assets and resources of the PRP(s) with respect to the facility at the time of such determinations. If EPA determines that the amount which the PRP(s) is able to indemnify the RAC is inadequate, then EPA may enter into an indemnification agreement with the RAC to meet the anticipated shortfall. EPA will consider the combined capabilities of all the PRPs at a site to determine whether, as a group, they are capable of providing adequate coverage. In general, the Agency expects to use this provision only in cases where PRPs are small firms with few assets. Therefore, Regions should not make requests for Federal indemnification where PRPs are large corporations with substantial assets or where the PRPs, as a group, have substantial assets. As a result, EPA does not expect requests for Federal indemnification to become an integral part of settlement negotiations.

EPA plans to provide additional guidance in the future concerning the determinations that need to be made as a prerequisite to indemnifying RACs working for PRPs (such as defining "net assets and resources" of the PRPs, and whether the PRPs are "unable to provide adequate indemnification"). Until EPA distributes this guidance, all such determinations will be made by the Task Force.

EPA indemnification of a RAC working for a PRP is a measure of last resort. If EPA does provide indemnification in these cases, the consent decree (or order) should specify terms and conditions, using the model EPA indemnification agreement for RACs working for PRPs shown in Attachment A. If EPA enters into an indemnification agreement with a RAC working for a PRP(s), the RAC must:

- Retain financial responsibility for a deductible amount if commercial pollution liability insurance is unavailable or unreasonably priced; and

- Exhaust all administrative, judicial, and common law claims for indemnification against all PRPs participating in the cleanup of the facility before EPA can pay a claim.

If a RAC has received partial indemnification from a PRP(s), EPA may also provide indemnification in cases where the PRP indemnification is deemed insufficient, and in mixed funding cases. EPA may provide indemnification above the PRP indemnification. The consent decree should specify the terms and conditions using the model EPA indemnification agreement shown in Attachment A.

All requests for EPA indemnification of a RAC working for a PRP(s) at a Superfund site should be submitted to both the Indemnification Task Force, c/o Director, Office of Waste Programs Enforcement (OWPE), and to the Regional Superfund Enforcement Branch Chief. Please identify the Regional Site Coordinator and the Regional Counsel's Site Representative. Include pertinent information regarding the number of PRPs, financial profile of the PRPs, type of work to be performed, etc., such that the Task Force can make determinations per Section 119(c)(4) and Section 119(c)(5).

Upon determining that a RAC meets all of the circumstances and requirements set forth in Section 119 and in EPA interim guidelines, the Task Force will evaluate an amount to which the PRP(s) is able to indemnify the RAC and an amount to which EPA will indemnify the RAC in excess of the PRP indemnification amount. Any EPA indemnification provided to a RAC(s) working for PRP(s) will be subject to limits, deductibles, and other limitations as required by Section 119(c)(5). If the Task Force recommends approval of the indemnification request, the Office of the Comptroller will provide concurrence (or non-concurrence) within seven calendar days of receipt of the recommendation. Final approval for EPA indemnification of a PRP RAC will be made by the Director of OWPE.

RACS Working for PRPs Without EPA Indemnification

Those RACs working for PRPs at Superfund sites who do not receive indemnification from EPA may either receive no indemnification at all, or may receive indemnification from PRPs only. For those RACs working with no indemnification, PRPs should demonstrate that the RAC is qualified to perform the work adequately, has sufficient financial capability to complete the projected work, and demonstrates financial responsibility for potential third party liability costs. This can be ensured through a combination of adequate competition in the contract procurement process and a demonstration of financial responsibility. Such a demonstration can consist of purchase of performance bonds, letters of credit, insurance, maintenance of a trust fund, etc. A consent decree should specify the aforementioned.

For those RACs receiving indemnification from PRPs only (and where EPA deems the indemnification to be adequate), RACs should be qualified to perform work adequately. This can be ensured through a combination of adequate competition in the contract procurement process, and through a demonstration of financial responsibility. The PRP indemnification is sufficient demonstration of financial responsibility; therefore, performance bonds, letters of credit, etc., are not required. The consent decree should specify the aforementioned as well as the indemnification terms and conditions.

Publicly Owned Treatment Works

Section 119(c)(5)(D) specifically prohibits EPA from indemnifying an owner or operator of a facility regulated under the Solid Waste Disposal Act. Therefore, publicly owned treatment works subject to permit-by-rule provisions cannot be indemnified (nor can any other permit-by-rule facility, such as an underground injection facility). The intent of this provision is to prohibit EPA from offering indemnification to off-site treaters or disposers of Superfund hazardous waste. Therefore, while POTWs not subject to RCRA regulation (i.e., POTWs without a permit-by-rule) are not explicitly prohibited from EPA indemnification authority under Section 119, the Agency has determined that an extension of indemnification authority to any POTW would not be consistent with Congressional intent in Section 119. Therefore, EPA will not provide indemnification to POTWs under Section 119 authority.

Summary

This memorandum describes the current Federal indemnification provisions for response action contractors working in the Superfund program as provided in Section 119 of SARA. The statute gives the Federal government the discretionary authority to indemnify RACs for liability arising out of negligence. Acts of gross negligence and willful misconduct are expressly excluded from the indemnity provision. The Section 119 indemnity provision does not preempt the rights of States to enforce a standard of strict liability.

Federal indemnification is meant to be an interim vehicle which will keep the Superfund program operative until the insurance industry returns to the market. It is not intended to create a Federally intrusive program that will interfere with private sector efforts to develop RAC liability insurance coverage.

Please direct all questions and comments to Robert Mason at FTS 382-4015 or Tom Gillis at FTS 382-4524

Attachments
A. Model Indemnification Agreements
B. CERCLA (as amended) Section 119

cc: Administrator
Deputy Administrator
General Counsel
Regional Grants Office, Regions I-X
Regional Financial Management Office, Regions I-X
Regional Superfund Branch Chiefs, Regions I-X

Attachment A

MODEL INDEMNIFICATION AGREEMENTS

This attachment contains model EPA indemnification agreements for use by EPA, States, and PRPs when RACs seek indemnification from EPA. Any deviation from the model language must be approved by the EPA Indemnification Task Force. Four models are attached:

I. Model EPA/RAC Indemnification Agreement
II. Model State Cooperative Agreement Indemnification Special Condition
III. Model EPA/RAC Indemnification Agreement for RACs under Contract with PRPs
IV. Model EPA/ SITES Program Technology Vendor Indemnification Agreement

I

MODEL EPA/RAC INDEMNIFICATION AGREEMENT

Insurance -- Liability to Third Persons --
Commercial Organizations
(EPAAR 1552.228-70) (APR 1984) (with deviation)

(a) This Clause H_____ will be modified by the mutual agreement of the parties hereto within 180 days of the EPA's promulgation of final guidelines for carrying out the provisions of Section 119 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA).

(b) The Contractor shall procure and maintain such insurance as is required by law or regulation, including that required by FAR Part 28, in effect as of the date of execution of this contract, and any such insurance as the Contracting officer may, from time to time, require with respect to performance of this contract.

(c) At a minimum, the Contractor shall procure and maintain the following types of insurance.

(1) Workmen's compensation and occupational disease insurance in amounts to satisfy State law;

(2) Employer's liability insurance in the minimum amount of $100,000 per occurrence;

(3) Comprehensive general liability insurance for bodily injury, death or loss of or damage to property of third persons in the minimum amount of $1,000,000 per occurrence;

(4) When vessels are used in the performance of the contract, vessel collision liability and indemnity liability insurance in such amounts as the Contracting Officer may require or approve: provided, that the Contractor may, with the approval of the Contracting Officer, maintain a self-insurance program. All insurance required pursuant to the provisions of this paragraph shall be in such form and for such periods of time as the Contracting Officer may, from time to time, require or approve and with insurers approved by the Contracting Officer.

(d) The Contractor further agrees that it will make diligent efforts throughout contract performance in accordance with EPA guidelines to obtain adequate pollution liability insurance.

(e) The Contractor agrees, to the extent and in the manner required by the Contracting Officer, to submit for the approval of the Contracting Officer all insurance maintained by the Contractor in connection with the performance of this contract and for which the Contractor seeks reimbursement hereunder. The

Contractor's submission shall include documentation demonstrating its diligent efforts to obtain pollution liability insurance.

(f) The Contractor shall be reimbursed, for the portion allocable to this contract, the reasonable cost of insurance (including reserves for self-insurance) as required or approved pursuant to the provisions of this contract clause.

(g)(1) Pursuant to Section 119 of CERCLA, the EPA will hold harmless and indemnify the Contractor against any liability (including the expenses of litigation or settlement) for negligence arising out of the Contractor's performance under this contract in carrying out response action activities. Such indemnification shall apply only to liability not compensated by insurance or otherwise and shall apply only to liability which results from a release of any hazardous substance or pollutant or contaminant if such release arises out of the response action activities of this contract. Further, any liability within the deductible amounts of the Contractor's insurance will not be covered under this contract clause H _____.

(2) For purposes of this clause (g), if the Contracting Officer has determined that the insurance identified in paragraph (d) is not available at a reasonable cost, the Government will hold harmless and indemnify the Contractor for liability to the extent such liability exceeds $100,000.00.

(3) The Contractor shall not be reimbursed for liabilities as defined in (g) (including the expenses of litigation or settlement) that were caused by the conduct of the Contractor (including any conduct of its directors, managers, staff, representatives or employees) which was grossly negligent, constituted intentional misconduct, or demonstrated a lack of good faith. Further, the Contractor shall not be indemnified for liability arising under strict tort liability, or any other basis of liability other than negligence.

(h) The Government may discharge its liability under this contract clause by making payments directly to the Contractor or directly to parties to whom the Contractor may be liable.

(i) With prior written approval of the Contracting Officer, the Contractor may include in any subcontract under this contract the same provisions in this clause whereby the Contractor shall indemnify the subcontractor. Such a subcontract shall provide the same rights and duties and the same provisions for notice, furnishings of evidence or proof, and the like, between the Contractor and the subcontractor as are established by this clause. Similar indemnification may be provided for subcontractors at any time upon the same terms and conditions. Subcontracts providing for indemnification within the purview of this contract clause shall provide for prompt notification to the

Contractor which is covered by this contract clause, and shall entitle the Government, at its election, to control, or assist in the settlement or defense of any such claim or action. The Government will indemnify the Contractor with respect to his obligation to subcontractors under such subcontract provisions. The Government may discharge its obligations under this paragraph by making payments directly to subcontractors or to parties to whom the subcontractors may be liable.

(j) If insurance coverage required or approved by the Contracting Officer is reduced without the Contracting Officer's approval, the liability of the Government under this contract clause will not be increased by reason of such reduction.

(k) The Contractor shall:

(1) Promptly notify the Contracting Officer of any claim or action against the Contractor or any subcontractor which reasonably may be expected to involve indemnification under this contract clause;

(2) Furnish evidence or proof of any claim covered by this contract clause in the manner and form required by the Government; and

(3) Immediately furnish the Government copies of all pertinent papers received by the Contractor. The Government may direct, control, or assist the settlement or defense of any such claim or action. The Contractor shall comply with the Government's directions, and execute any authorizations required in regard to such settlement or defense.

(l) Reimbursement for any liabilities under this contract clause will not exceed appropriations available from CERCLA's Hazardous Substance Superfund (except to the extent that Congress may make appropriations to specifically fund any deficiencies) at the time such liabilities are represented by final judgments or by settlements approved in writing by the Government.

II

MODEL STATE COOPERATIVE AGREEMENT INDEMNIFICATION SPECIAL CONDITION

EPA INDEMNIFICATION

EPA will provide indemnification pursuant to Section 119 of CERCLA, as amended, to contractors carrying out response actions under this agreement provided that the State certifies to EPA that:

1. The contracts awarded under this agreement are defined in section 119(e) of CERCLA, as amended;

2. The contracts awarded under this agreement include the following clause that exclusively governs EPA indemnification:

   (see attached clause)

3. At the end of each calendar year and at the end of each project period, all statements and materials related to pollution liability insurance submitted by the Contractors to the State Contracting Officer will be transferred to EPA.

. Attachment

(1) Pursuant to Section 119 of CERCLA, the EPA will hold harmless and indemnify the Contractor against any third party liability (including the expenses of litigation or settlement) for negligence arising out of the Contractor's performance under this contract in carrying out response action activities. Such indemnification shall apply only to liability not compensated by insurance or otherwise and shall apply only to liability which results from a release of any hazardous substance or pollutant or contaminant if such release arises out of the response action activities of this contract. Further, any liability within the deductible amounts of the Contractor's insurance required by this contract will not be covered by this clause. This Clause will be modified by the mutual agreement of the parties hereto within 180 days of the EPA's promulgation of final guidelines for carrying out the provisions of Section 119 (CERCLA).

(A) The Contractor shall submit to the State Contracting Officer within 30 days of award a written statement from an insurance broker stating that the Contractor has attempted to secure pollution liability coverage from insurance carriers in the past six months;

(B) If the Contractor has secured pollution liability coverage, it must submit a copy of the policy and declaration page to the State Contracting Officer; and

(C) Every twelve months, or as directed by the EPA, the Contractor shall submit to the State Contracting Officer written documentation of the additional efforts made by the contractor to secure pollution liability insurance coverage, including:

- Copies of applications to three known underwriters of pollution liability insurance;
- A status report of any pollution liability insurance obtained, to include type of coverage, premium charged, limits of coverage, deductibles and major terms and conditions of coverage (e.g., a copy of the actual declaration page could be provided in lieu of a status report);
- If pollution liability coverage was offered by an underwriter, but not accepted by the RAC, a report on the insurance offered (such as the "status report" required above), and a summary of the reasons why such coverage was not accepted;
- If pollution liability coverage was rejected by the underwriter, a summary of the reasons why such coverage was denied; and

- o A status report on what alternative pollution liability risk transfer mechanisms the contractor has pursued other than commercial pollution liability insurance (e.g., captives, letters of credit, group purchasing of insurance, etc.).

(2) For purposes of this clause, the EPA will hold harmless and indemnify the Contractor for liability described herein to the extent such liability exceeds $100,000.00.

(3) The Contractor shall not be reimbursed for liabilities as defined herein (including the expenses of litigation or settlement) that were caused by the conduct of the Contractor (including any conduct of its directors, managers, staff, representatives or employees) which was grossly negligent, constituted intentional misconduct, or demonstrated a lack of good faith. Further, the Contractor shall not be indemnified for liability arising under strict tort liability, or any other basis of liability other than negligence.

(4) The EPA may discharge its liability under this contract clause by making payments directly to the Contractor or directly to parties to whom the Contractor may be liable.

(5) With prior written approval of the State Contracting Officer, the Contractor may include in any subcontract under this contract the same provisions in this clause whereby the Contractor shall indemnify the subcontractor. Such a subcontract shall provide the same rights and duties and the same provisions for notice, furnishings of evidence or proof, and the like, between the Contractor and the subcontractor as are established by this clause. Similar indemnification may be provided for subcontractors at any time upon the same terms and conditions. Subcontracts providing for indemnification within the purview of this contract clause shall provide for prompt notification to the Contractor which is covered by this contract clause, and shall entitle the EPA, at its election, to control, or assist in the settlement or defense of any such claim or action. The EPA will indemnify the Contractor with respect to his obligation to subcontractors under such subcontract provisions. The EPA may discharge its obligations under this paragraph by making payments directly to subcontractors or to parties to whom the subcontractors may be liable.

(6) If insurance coverage required or approved by the State Contracting Officer is reduced without the State Contracting Officer's approval, the liability of the EPA under this contract clause will not be increased by reason of such reduction.

(7) The Contractor shall:

- Promptly notify the Assistant Administrator, OSWER, EPA of any claim or action against the Contractor or any subcontractor which reasonably may be expected to involve indemnification under this contract clause.

- Furnish evidence or proof of any claim covered by this contract clause in the manner and form required by the EPA.

- Immediately furnish the EPA copies of all pertinent papers received by the Contractor. The EPA may direct, control, or assist the settlement or defense of any such claim or action. The Contractor shall comply with the EPA's directions, and execute any authorizations required in regard to such settlement or defense.

- Submit any disagreements concerning EPA indemnification to the Assistant Administrator, OSWER, EPA for resolution. Decision by the Assistant Administrator will constitute final Agency action.

(8) Reimbursement for any liabilities under this contract clause is available exclusively from the EPA and will not exceed appropriations available from CERCLA's Hazardous Substance Superfund (except to the extent that Congress may make appropriations to specifically fund any deficiencies) at the time such liabilities are represented by final judgement or by settlements approved in writing by the EPA.

(9) Nothing in this clause shall be construed as an indemnification agreement between the State and the Contractor.

(10) Nothing in this contract shall be construed to create, either expressly or by implication, any contractual relationship between EPA and the Contractor except as specifically provided in this clause. EPA is not authorized to represent or act on behalf of the State in any manner relating to this contract and has no responsibility with regard to the mutual obligations of the State and the Contractor as provided herein.

III

MODEL EPA/RAC INDEMNIFICATION AGREEMENT FOR RACS UNDER CONTRACT WITH PRPS

MODEL CLAUSES FOR PRP CONTRACTS

Sec. _____ Pollution Liability Insurance and Contractor Indemnification

A. Pollution Liability Insurance

(1) The Contractor shall obtain such pollution liability insurance (hereinafter insurance) as the EPA determines is available at a fair and reasonable price at the time of contract award. The cost of such insurance is an allowable contract cost.

(2) The Contractor shall report to EPA on its efforts to obtain pollution liability insurance.

(A) Within 30 days of signing this agreement, the Contractor shall submit to the EPA a written statement from an insurance broker stating that the Contractor has attempted to secure pollution liability coverage from insurance carriers in the past six months;

(B) If the Contractor has secured pollution liability coverage, it must submit a copy of the policy and declaration page to EPA; and

(C) Every twelve months, or as directed by the EPA, the Contractor shall submit to the EPA written documentation of the additional efforts made by the contractor to secure pollution liability insurance coverage including:

- Copies of applications to three known underwriters of pollution liability insurance;
- A status report of any pollution liability insurance obtained, to include type of coverage, premium charged, limits of coverage, deductibles and major terms and conditions of coverage (e.g., a copy of the actual declaration page could be provided in lieu of a status report);
- If pollution liability coverage was offered by an underwriter, but not accepted by the RAC, a report on the insurance offered (such as the "status report" required above), and a summary of the reasons why such coverage was not accepted;
- If pollution liability coverage was rejected by the underwriter, a summary of the reasons why such coverage was denied; and

- A status report on what alternative pollution liability risk transfer mechanisms the contractor has pursued other than commercial pollution liability insurance (e.g., captives, letters of credit, group purchasing of insurance, etc.).

(3) If, during the period of this contract, EPA determines that insurance or additional insurance is available, the contractor shall obtain such insurance.

B. PRP Indemnification

[The following are minimum clauses. PRPs may include additional, non-conflicting terms.]

(1) The PRPs will hold harmless and indemnify the Contractor against any third party liability (including the expense of litigation or settlement) for negligence arising out of the Contractor's performance of this contract in carrying out response action activities. Such indemnification shall apply only to liability which results from a release of a hazardous substance, pollutant, or contaminant if such release arises out of the response action activities in this contract. Indemnification under this paragraph will apply only to liability not compensated by insurance, not within the deductible amounts of the Contractor's insurance in paragraph A, above, nor within the deductible in paragraph D, below. Indemnification provided under this paragraph shall not exceed $_____ (amount determined by EPA).

(2) Any liability subject to indemnification shall be presented first under this paragraph.

(3) The PRPs are individually and collectively responsible for the indemnification under this paragraph, unless otherwise specifically provided within.

(4) If the PRPs fail to satisfy the indemnification claim within 60 days of its presentation, the Contractor will notify the EPA of such failure.

C. EPA Indemnification

(1) Pursuant to Section 119 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), the EPA will hold harmless and indemnify the Contractor against any third party liability (including the expenses of litigation or settlement) for negligence arising out of the Contractor's performance under this contract in carrying

out response action activities. Such indemnification shall apply only to liability not compensated by insurance, indemnification provided in accordance with paragraph B, above, or otherwise and shall apply only to liability which results from a release of any hazardous substance or pollutant or contaminant if such release arises out of the response action activities of this contract. Further, any liability within the deductible amounts of the Contractor's insurance in paragraph A, above, or the deductible in paragraph D, below, will not be covered by this paragraph.

(2) This paragraph will be modified by the mutual agreement of the parties hereto within 180 days of the EPA's promulgation of final guidelines for carrying out the provisions of Section 119 of CERCLA.

(3) The Contractor shall not be reimbursed for liabilities as defined herein (including the expenses of litigation or settlement) that were caused by the conduct of the Contractor (including any conduct of its directors, managers, staff, representatives or employees) which was grossly negligent, constituted intentional misconduct, or demonstrated a lack of good faith. Further, the Contractor shall not be indemnified for liability arising under strict tort liability, or any other basis of liability other than negligence.

(4) The EPA may discharge its liability under this contract paragraph by making payments directly to the Contractor or directly to parties to whom the Contractor may be liable.

(5) With prior written approval of the EPA, the Contractor may include in any subcontract under this contract the same provisions in this clause whereby the Contractor shall indemnify the subcontractor. Such a subcontract shall provide the same rights and duties and the same provisions for notice, furnishings of evidence or proof, and the like, between the Contractor and the subcontractor as are established by this paragraph. Similar indemnification may be provided for subcontractors at any time upon the same terms and conditions. Subcontracts providing for indemnification within the purview of this paragraph shall provide for prompt notification to the Contractor which is covered by this paragraph, and shall entitle the EPA, at its election, to control, or assist in the settlement or defense of any such claim or action. The EPA will indemnify the Contractor with respect to his obligation to subcontractors under such subcontract provisions. The EPA may discharge its obligations under this paragraph by making payments directly to subcontractors or to parties to whom the subcontractors may be liable.

(6) If insurance coverage required in paragraph A, above, is reduced without the EPA's approval, the liability of the EPA

under this paragraph will not be increased by reason of such reduction.

(7) The Contractor shall:

- Promptly notify the Assistant Administrator, OSWER, EPA of any claim or action against the Contractor or any subcontractor which reasonably may be expected to involve indemnification under this paragraph.

- Furnish evidence or proof of any claim covered by this paragraph in the manner and form required by the EPA.

- Immediately furnish the EPA copies of all pertinent papers received by the Contractor. The EPA may direct, control, or assist the settlement or defense of any such claim or action. The Contractor shall comply with the EPA's directions, and execute any authorizations required in regard to such settlement or defense.

- Submit any disagreements concerning EPA indemnification to the Assistant Administrator, OSWER, EPA for resolution. Decision by the Assistant Administrator will constitute final Agency action.

(8) The Contractor may present a claim for indemnification under this paragraph only after compliance with the provisions in paragraphs B, above, and C, below.

(9) If the PRPs fail to indemnify the Contractor in the amount provided in paragraph B, above, no indemnification for that amount will be paid under this paragraph until the Contractor demonstrates to EPA's satisfaction that it has exhausted all administrative and judicial claims for indemnification under paragraph B, above, and any common law claims for indemnification that it has against the PRPs. Evidence of exhaustion of claims may include a judicial order dismissing the Contractor's claims, documentation of the Contractor's unsuccessful efforts to enforce a judgement against the PRPs, or documentation of the Contractor's unsuccessful claims in a bankruptcy proceeding involving the PRPs.

(10) Reimbursement for any liabilities under this paragraph will not exceed appropriations available from CERCLA's Hazardous Substance Superfund (except to the extent that Congress may make appropriations to specifically fund any deficiencies) at the time such liabilities are represented by final judgement or by settlements approved in writing by the EPA.

(11) Nothing in this contract shall be construed to create, either expressly or by implication, any contractual relationship between EPA and the Contractor except as specifically provided in this section. EPA is not authorized to represent or act on behalf of the (PRPs) in any manner relating to this contract and has no responsibility with regard to the mutual obligations of the (PRPs) and the Contractor as provided herein.

D. Contractor Deductible

The Contractor shall pay the first $100,000.00 of any liability subject to indemnification under this contract before seeking indemnification under paragraphs B and C, above.

IV

MODEL EPA/ SITES PROGRAM TECHNOLOGY VENDOR INDEMNIFICATION AGREEMENT

EPA Indemnification

(1) Pursuant to Section 119 of CERCLA, the EPA will hold harmless and indemnify the Recipient against any liability (including the expenses of litigation or settlement) for negligence arising out of the Recipient's performance under this cooperative agreement in carrying out response action activities through the Superfund Innovative Technology Evaluation program under Section 311(b) of CERCLA. Such indemnification shall apply only to liability not compensated by insurance or otherwise and shall apply only to liability which results from a release of any hazardous substance or pollutant or contaminant if such release arises out of the response action activities of this cooperative agreement. Further, any liability within the deductible amounts of the Recipient's insurance will not be covered under this clause. If the recipient has secured pollution liability coverage, it must submit a copy of the policy and the declaration page to EPA.

(2) Every twelve months, or as directed by the EPA, the Recipient shall submit to the Contracting Officer written documentation of the additional efforts made by the recipient to secure pollution liability insurance coverage, including:

- Copies of applications to three known underwriters of pollution liability insurance;
- A status report of any pollution liability insurance obtained, to include type of coverage, premium charged, limits of coverage, deductibles and major terms and conditions of coverage (e.g., a copy of the actual declaration page could be provided in lieu of a status report);
- If pollution liability coverage was rejected by the underwriter, a summary of the reasons why such coverage was denied; and

(3) For purposes of this clause, the Government will hold harmless and indemnify the Recipient for liability to the extent such liability exceeds $100,000.00.

(4) The Recipient shall not be reimbursed for liabilities as defined herein (including the expenses of litigation or settlement) that were caused by the conduct of the Recipient (including any conduct of its directors, managers, staff, representatives or employees) which was grossly negligent, constituted intentional misconduct, or demonstrated a lack of good faith. Further, the Recipient shall not be indemnified for liability arising under strict tort liability, or any other basis of liability other than negligence.

(5) The Government may discharge its liability under this cooperative agreement clause by making payments directly to the Recipient or directly to parties to whom the Recipient may be liable.

(6) With prior written approval of the Contracting Officer, the Recipient may include in any subcontract under this cooperative agreement the same provisions in this clause whereby the Recipient shall indemnify the subcontractor. Such a subcontract shall provide the same rights and duties and the same provisions for notice between the Recipient and the subcontractor as are established by this clause. Similar indemnification may be provided for subcontractors at any time upon the same terms and conditions. Subcontracts providing for indemnification within the purview of this cooperative agreement clause shall provide for prompt notification to the Recipient which is covered by this cooperative agreement clause, and shall entitle the Government, at its election, to control, or assist in the settlement or defense of any such claim or action. The Government will indemnify the Recipient with respect to his obligation to subcontractors under such subcontract provisions. The Government may discharge its obligations under this paragraph by making payments directly to subcontractors or to parties to whom the subcontractors may be liable.

(7) If insurance coverage required or approved by the Contracting Officer is reduced without the Contracting Officer's approval, the liability of the Government under this cooperative agreement clause will not be increased by reason of such reduction.

(8) The Recipient shall:

(a) Promptly notify the Assistant Administrator, OSWER, EPA of any claim or action against the Recipient or any subcontractor which reasonably may be expected to involve indemnification under this cooperative agreement clause;

(b) Furnish evidence or proof of any claim covered by this cooperative agreement clause in the manner and form required by the Government;

(c) Immediately furnish the Government copies of all pertinent papers received by the Recipient. The Government may direct, control, or assist the settlement or defense of any such claim or action. The Recipient shall comply with the Government's directions, and execute any authorizations required in regard to such settlement or defense; and

(d) Submit any disagreements concerning EPA indemnification to the Assistant Administrator, OSWER, EPA for resolution.

Decision by the Assistant Administrator will constitute final Agency action.

(9) Reimbursement for any liabilities under this cooperative agreement clause will not exceed appropriations available from CERCLA's Hazardous Substance Superfund (except to the extent that Congress may make appropriations to specifically fund any deficiencies) at the time such liabilities are represented by final judgement or by settlements approved in writing by the Government.

(10) This Clause will be modified by the mutual agreement of the parties hereto within 180 days of the EPA's promulgation of final guidelines for carrying out the provisions of Section 119 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA).

ATTACHMENT B

CERCLA (AS AMENDED)

SECTION 119

high priority to facilities where the release of hazardous substances or pollutants or contaminants has resulted in the closing of drinking water wells or has contaminated a principal drinking water supply.

SEC. 111. RESPONSE ACTION CONTRACTORS.

(a) LIABILITY OF RESPONSE ACTION CONTRACTORS.—

(1) RESPONSE ACTION CONTRACTORS.—A person who is a response action contractor with respect to any release or threatened release of a hazardous substance or pollutant or contaminant from a vessel or facility shall not be liable under this title or under any other Federal law to any person for injuries, costs, damages, expenses, or other liability (including but not limited to claims for indemnification or contribution and claims by third parties for death, personal injury, illness or loss of or damage to property or economic loss) which results from such release or threatened release.

(2) NEGLIGENCE, ETC.—Paragraph (1) shall not apply in the case of a release that is caused by conduct of the response action contractor which is negligent, grossly negligent, or which constitutes intentional misconduct.

(3) EFFECT ON WARRANTIES; EMPLOYER LIABILITY.—Nothing in this subsection shall affect the liability of any person under any warranty under Federal, State, or common law. Nothing in this subsection shall affect the liability of an employer who is a response action contractor to any employee of such employer under any provision of law, including any provision of any law relating to worker's compensation.

(4) GOVERNMENTAL EMPLOYEES.—A state employee or an employee of a political subdivision who provides services relating to response action while acting within the scope of his authority as a governmental employee shall have the same exemption from liability (subject to the other provisions of this section) as is provided to the response action contractor under this section.

(b) SAVINGS PROVISIONS.—

(1) LIABILITY OF OTHER PERSONS.—The defense provided by section 107(b)(3) shall not be available to any potentially responsible party with respect to any costs or damages caused by any act or omission of a response action contractor. Except as provided in subsection (a)(4) and the preceding sentence, nothing in this section shall affect the liability under this Act or under any other Federal or State law of any person, other than a response action contractor.

(2) BURDEN OF PLAINTIFF.—Nothing in this section shall affect the plaintiff's burden of establishing liability under this title.

(c) INDEMNIFICATION.—

(1) IN GENERAL.—The President may agree to hold harmless and indemnify any response action contractor meeting the requirements of this subsection against any liability (including the expenses of litigation or settlement) for negligence arising out of the contractor's performance in carrying out response action activities under this title, unless such liability was

caused by conduct of the contractor which was grossly negligent or which constituted intentional misconduct.

(2) APPLICABILITY.—This subsection shall apply only with respect to a response action carried out under written agreement with—

(A) the President;

(B) any Federal agency;

(C) a State or political subdivision which has entered into a contract or cooperative agreement in accordance with section 104(d)(1) of this title; or

(D) any potentially responsible party carrying out any agreement under section 122 (relating to settlements) or section 106 (relating to abatement).

(3) SOURCE OF FUNDING.—This subsection shall not be subject to section 1301 or 1341 of title 31 of the United States Code or section 3732 of the Revised Statutes (41 U.S.C. 11) or to section 3 of the Superfund Amendments and Reauthorization Act of 1986. For purposes of section 111, amounts expended pursuant to this subsection for indemnification of any response action contractor (except with respect to federally owned or operated facilities) shall be considered governmental response costs incurred pursuant to section 104. If sufficient funds are unavailable in the Hazardous Substance Superfund established under subchapter A of chapter 98 of the Internal Revenue Code of 1954 to make payments pursuant to such indemnification or if the Fund is repealed, there are authorized to be appropriated such amounts as may be necessary to make such payments.

(4) REQUIREMENTS.—An indemnification agreement may be provided under this subsection only if the President determines that each of the following requirements are met:

(A) The liability covered by the indemnification agreement exceeds or is not covered by insurance available, at a fair and reasonable price, to the contractor at the time the contractor enters into the contract to provide response action, and adequate insurance to cover such liability is not generally available at the time the response action contract is entered into.

(B) The response action contractor has made diligent efforts to obtain insurance coverage from non-Federal sources to cover such liability.

(C) In the case of a response action contract covering more than one facility, the response action contractor agrees to continue to make such diligent efforts each time the contractor begins work under the contract at a new facility.

(5) LIMITATIONS.—

(A) LIABILITY COVERED.—Indemnification under this subsection shall apply only to response action contractor liability which results from a release of any hazardous substance or pollutant or contaminant if such release arises out of response action activities.

(B) DEDUCTIBLES AND LIMITS.—An indemnification agreement under this subsection shall include deductibles and shall place limits on the amount of indemnification to be made available.

(C) CONTRACTS WITH POTENTIALLY RESPONSIBLE PARTIES.—

(i) DECISION TO INDEMNIFY.—In deciding whether to enter into an indemnification agreement with a response action contractor carrying out a written contract or agreement with any potentially responsible party, the President shall determine an amount which the potentially responsible party is able to indemnify the contractor. The President may enter into such an indemnification agreement only if the President determines that such amount of indemnification is inadequate to cover any reasonable potential liability of the contractor arising out of the contractor's negligence in performing the contract or agreement with such party. The President shall make the determinations in the preceding sentences (with respect to the amount and the adequacy of the amount) taking into account the total net assets and resources of potentially responsible parties with respect to the facility at the time of such determinations.

(ii) CONDITIONS.—The President may pay a claim under an indemnification agreement referred to in clause (i) for the amount determined under clause (i) only if the contractor has exhausted all administrative, judicial, and common law claims for indemnification against all potentially responsible parties participating in the clean-up of the facility with respect to the liability of the contractor arising out of the contractor's negligence in performing the contract or agreement with such party. Such indemnification agreement shall require such contractor to pay any deductible established under subparagraph (B) before the contractor may recover any amount from the potentially responsible party or under the indemnification agreement.

(D) RCRA FACILITIES.—No owner or operator of a facility regulated under the Solid Waste Disposal Act may be indemnified under this subsection with respect to such facility.

(E) PERSONS RETAINED OR HIRED.—A person retained or hired by a person described in subsection (e)(2)(B) shall be eligible for indemnification under this subsection only if the President specifically approves of the retaining or hiring of such person.

(6) COST RECOVERY.—For purposes of section 107, amounts expended pursuant to this subsection for indemnification of any person who is a response action contractor with respect to any release or threatened release shall be considered a cost of response incurred by the United States Government with respect to such release.

(7) REGULATIONS.—The President shall promulgate regulations for carrying out the provisions of this subsection. Before promulgation of the regulations, the President shall develop guidelines to carry out this section. Development of such guidelines shall include reasonable opportunity for public comment

(8) STUDY.—The Comptroller General shall conduct a study in the fiscal year ending September 30, 1989, on the application of this subsection, including whether indemnification agreements under this subsection are being used, the number of claims that have been filed under such agreements, and the need for this subsection. The Comptroller General shall report the findings of the study to Congress no later than September 30, 1989.

(d) EXCEPTION.—The exemption provided under subsection (a) and the authority of the President to offer indemnification under subsection (c) shall not apply to any person covered by the provisions of paragraph (1), (2), (3), or (4) of section 107(a) with respect to the release or threatened release concerned if such person would be covered by such provisions even if such person had not carried out any actions referred to in subsection (e) of this section.

(e) DEFINITIONS.—For purposes of this section—

(1) RESPONSE ACTION CONTRACT.—The term "response action contract" means any written contract or agreement entered into by a response action contractor (as defined in paragraph (2)(A) of this subsection) with—

(A) the President;

(B) any Federal agency;

(C) a State or political subdivision which has entered into a contract or cooperative agreement in accordance with section 104(d)(1) of this Act; or

(D) any potentially responsible party carrying out an agreement under section 106 or 122;

to provide any remedial action under this Act at a facility listed on the National Priorities List, or any removal under this Act, with respect to any release or threatened release of a hazardous substance or pollutant or contaminant from the facility or to provide any evaluation, planning, engineering, surveying and mapping, design, construction, equipment, or any ancillary services thereto for such facility.

(2) RESPONSE ACTION CONTRACTOR.—The term "response action contractor" means—

(A) any—

(i) person who enters into a response action contract with respect to any release or threatened release of a hazardous substance or pollutant or contaminant from a facility and is carrying out such contract; and

(ii) person, public or nonprofit private entity, conducting a field demonstration pursuant to section 311(b); and

(B) any person who is retained or hired by a person described in subparagraph (A) to provide any services relating to a response action.

(3) INSURANCE.—The term "insurance" means liability insurance which is fair and reasonably priced, as determined by the President, and which is made available at the time the contractor enters into the response action contract to provide response action.

(f) COMPETITION.—Response action contractors and subcontractors for program management, construction

be selected in accordance with title IX of the Federal Property and Administrative Services Act of 1949. The Federal selection procedures shall apply to appropriate contracts negotiated by all Federal governmental agencies involved in carrying out this Act. Such procedures shall be followed by response action contractors and subcontractors.

SEC. 120. FEDERAL FACILITIES.

(a) APPLICATION OF ACT TO FEDERAL GOVERNMENT.—

(1) IN GENERAL.—Each department, agency, and instrumentality of the United States (including the executive, legislative, and judicial branches of government) shall be subject to, and comply with, this Act in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity, including liability under section 107 of this Act. Nothing in this section shall be construed to affect the liability of any person or entity under sections 106 and 107.

(2) APPLICATION OF REQUIREMENTS TO FEDERAL FACILITIES.—All guidelines, rules, regulations, and criteria which are applicable to preliminary assessments carried out under this Act for facilities at which hazardous substances are located, applicable to evaluations of such facilities under the National Contingency Plan, applicable to inclusion on the National Priorities List, or applicable to remedial actions at such facilities shall also be applicable to facilities which are owned or operated by a department, agency, or instrumentality of the United States in the same manner and to the extent as such guidelines, rules, regulations, and criteria are applicable to other facilities. No department, agency, or instrumentality of the United States may adopt or utilize any such guidelines, rules, regulations, or criteria which are inconsistent with the guidelines, rules, regulations, and criteria established by the Administrator under this Act.

(3) EXCEPTIONS.—This subsection shall not apply to the extent otherwise provided in this section with respect to applicable time periods. This subsection shall also not apply to any requirements relating to bonding, insurance, or financial responsibility. Nothing in this Act shall be construed to require a State to comply with section 104(c)(3) in the case of a facility which is owned or operated by any department, agency, or instrumentality of the United States.

(4) STATE LAWS.—State laws concerning removal and remedial action, including State laws regarding enforcement, shall apply to removal and remedial action at facilities owned or operated by a department, agency, or instrumentality of the United States when such facilities are not included on the National Priorities List. The preceding sentence shall not apply to the extent a State law would apply any standard or requirement to such facilities which is more stringent than the standards and requirements applicable to facilities which are not owned or operated by any such department, agency, or instrumentality.

(b) [illegible]CE.—Each department, agency, and instrumentality of the Uni[illegible]tes shall add to the inventory of Federal agency hazard-

ous waste facilities required to be submitted under section 3016 of the Solid Waste Disposal Act (in addition to the information required under section 3016(a)(3) of such Act) information on contamination from each facility owned or operated by the department, agency, or instrumentality if such contamination affects contiguous or adjacent property owned by the department, agency, or instrumentality or by any other person, including a description of the monitoring data obtained.

(c) FEDERAL AGENCY HAZARDOUS WASTE COMPLIANCE DOCKET.—The Administrator shall establish a special Federal Agency Hazardous Waste Compliance Docket (hereinafter in this section referred to as the "docket") which shall contain each of the following:

(1) All information submitted under section 3016 of the Solid Waste Disposal Act and subsection (b) of this section regarding any Federal facility and notice of each subsequent action taken under this Act with respect to the facility.

(2) Information submitted by each department, agency, or instrumentality of the United States under section 3005 or 3010 of such Act.

(3) Information submitted by the department, agency, or instrumentality under section 103 of this Act.

The docket shall be available for public inspection at reasonable times. Six months after establishment of the docket and every 6 months thereafter, the Administrator shall publish in the Federal Register a list of the Federal facilities which have been included in the docket during the immediately preceding 6-month period. Such publication shall also indicate where in the appropriate regional office of the Environmental Protection Agency additional information may be obtained with respect to any facility on the docket. The Administrator shall establish a program to provide information to the public with respect to facilities which are included in the docket under this subsection.

(d) ASSESSMENT AND EVALUATION.—Not later than 18 months after the enactment of the Superfund Amendments and Reauthorization Act of 1986, the Administrator shall take steps to assure that a preliminary assessment is conducted for each facility on the docket. Following such preliminary assessment, the Administrator shall, where appropriate—

(1) evaluate such facilities in accordance with the criteria established in accordance with section 105 under the National Contingency Plan for determining priorities among releases; and

(2) include such facilities on the National Priorities List maintained under such plan if the facility meets such criteria.

Such criteria shall be applied in the same manner as the criteria are applied to facilities which are owned or operated by other persons. Evaluation and listing under this subsection shall be completed not later than 30 months after such date of enactment. Upon the receipt of a petition from the Governor of any State, the Administrator shall make such an evaluation of any facility included in the docket.

(e) REQUIRED ACTION BY DEPARTMENT.—

(1) RIFS.—Not later than 6 months after the inclusion of any facility on the National Priorities List, the department, agency

Significant New Legislation-Federal Employees Liability Reform and Tort Compensation Act of 1988

UNITED STATES ENVIRONMENTAL PROTECTION AGENC
WASHINGTON D C 20460

DEC 30 1988

OFFICE OF
GENERAL COUNSEL

MEMORANDUM

SUBJECT: Significant New Legislation - Federal Employees Liability Reform and Tort Compensation Act of 1988

FROM: Craig Annear
Associate General Counsel
Grants, Contracts and General Law Division

TO: General Counsel
Deputy General Counsels
Regional Counsels
Associate General Counsels
Assistant General Counsels

On November 18, 1988, the President signed into law the "Federal Employees Liability Reform and Tort Compensation Act of 1988." P.L. 100-694 (copy attached). The purpose of this Act is to protect Federal employees from personal liability for common law torts committed within the scope of their employment while providing persons injured by such acts with a remedy against the United States.

This Act was in response to the United States Supreme Court's decision in Westfall v. Erwin, 108 S. Ct. 580, 98 L. Ed 2d 619, 56 U.S.L.W. 4081 (1988). In Westfall the Court held that Federal employees have absolute immunity from state-law tort suits only to the extent that their actions were within the scope of employment and were discretionary. The Act changes the Westfall standards by requiring that a Federal employee only has to show that he/she was acting within the scope of employment to be absolutely immune from the tort suit.

The Act provides that suit against the United States under the Federal Tort Claims Act, 28 U.S.C. 2671 et seq., is the exclusive remedy for a person injured by the tortious conduct of a Federal employee who is acting within the scope of his/her employment. The Act applies only to common law or state-law tort suits. It does not cover an alleged violation of the Constitution of the United States or a violation of a statute of

the United States under which an action against the individual is otherwise authorized.

The Act authorizes the Attorney General to determine and certify that the employee was acting within the scope of employment. Where such certification is made, an action in Federal court is deemed an action against the United States with the United States substituted for the named employee. Where the action is in State court, following certification the Attorney General is authorized to remove the suit to Federal court and to substitute the United States for the employee. Additionally, the employee is given the right to have the issue of scope of employment determined by the court where the Attorney General refuses to certify. The Act is effective for all claims, civil actions, and proceedings pending on, or filed on or after November 18, 1988.

If you have questions or require additional information, Ray Spears, of my staff, is available to assist you. Ray can be reached at FTS 382-4548.

Attachment

OSHA Final Rule, Hazardous Waste Operations and Emergency Response (29 CFR 1910)

federal register

Monday
March 6, 1989

Part III

Department of Labor

Occupational Safety and Health Administration

29 CFR Part 1910

Hazardous Waste Operations and Emergency Response; Final Rule

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1910

[Docket No. S-780A]

Hazardous Waste Operations and Emergency Response

AGENCY: Occupational Safety and Health Administration; Labor.

ACTION: Final rule.

SUMMARY: The Occupational Safety and Health Administration (OSHA) is amending the OSHA standard for hazardous waste operations and emergency response found in 29 CFR 1910.120. This final rule will replace the existing interim final rule required by Congress in the Superfund Amendments and Reauthorization Act of 1986 (as amended) (SARA) (Pub. L. 99-499, 29 U.S.C. 655 note). When this final rule becomes effective one year from today, the interim final rule promulgated December 19, 1986 (51 FR 45654) will be revoked. The interim final rule remains in effect until then. The Notice of Proposed Rulemaking for this final rule was published in the Federal Register on August 10, 1987 (52 FR 29620).

This rule will regulate the safety and health of employees involved in clean-up operations at uncontrolled hazardous waste sites being cleaned-up under government mandate, in certain hazardous waste treatment, storage, and disposal (TSD) operations conducted under the Resource, Conservation and Recovery Act of 1976 as amended (RCRA) [42 U.S.C. 6901 *et seq*], and in any emergency response to incidents involving hazardous substances.

This standard provides for employee protection during initial site characterization and analysis, monitoring activities, materials handling activities, training, and emergency response.

DATES: This final rule will become effective March 6, 1990.

Paperwork authorization has been granted by the Office of Management and Budget (OMB) under control number 1218-0139.

ADDRESS: In compliance with 28 U.S.C. 2112(a), the Agency designates for receipt of petitions for review of the standard, the Associate Solicitor for Occupational Safety and Health, Office of the Solicitor, Room S-4004, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210.

FOR FURTHER INFORMATION CONTACT: Mr. James F. Foster, U.S. Department of Labor, Occupational Safety and Health Administration, Division of Consumer Affairs, Room N-3647, 200 Constitution Avenue NW., Washington, DC 20210, 202-523-8151.

SUPPLEMENTARY INFORMATION:

I. Background

The U.S. Environmental Protection Agency estimates that approximately 57 million metric tons of hazardous waste are produced each year in the United States.[1] These wastes must be treated and stored or disposed in a manner that protects the environment from the adverse affects of the various constituents of those wastes.

In response to the need to protect the environment from the improper disposal of these hazardous wastes, Congress, over the years, has enacted several pieces of legislation intended to control the nation's hazardous waste problem. Federal laws passed in 1965 [2] and 1970 [3] initially addressed solid waste disposal. Several other pieces of legislation have been enacted by Congress that have ultimately led to the development of this rule and they are discussed below.

A. The Resource Conservation and Recovery Act of 1976

The first comprehensive, federal effort to deal with the solid waste problem in general, and hazardous waste specifically, came with the passage of the Resource Conservation and Recovery Act of 1976 (RCRA) [4]. The act provides for the development of federal and state programs for otherwise unregulated land disposal of waste materials and for the development of resource recovery programs. It regulates anyone engaged in the creation, transportation, treatment, and disposal of "hazardous wastes." It also regulates facilities for the disposal of all solid wastes and prohibits the use of open dumps for solid wastes in favor of requiring sanitary landfills.

There are, however, many hazardous waste disposal sites that were created prior to the passage of RCRA. These sites are often abandoned and contain unknown quantities of unknown wastes.

B. The Comprehensive Environmental Response, Compensation and Liability Act of 1980

In response to the need to clean-up and properly reclaim these pre-RCRA sites, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) [5] commonly known as "Superfund." Superfund established two related funds to be used for the immediate removal of hazardous substances released into the environment. Superfund is intended to establish a mechanism of response for the immediate clean-up of hazardous waste contamination from accidental spills and from chronic environmental damage such as is associated with abandoned hazardous waste disposal sites.

The treatment and disposal of hazardous wastes under RCRA and CERCLA creates a significant risk to the safety and health of employees who work in treatment and disposal operations. Exposure to hazardous wastes through skin contact, skin absorption, and inhalation pose the most significant risks to employees. Employee exposure to these risks occurs when employees respond to hazardous substance or waste emergencies, when they work with hazardous wastes during storage, treatment and disposal operations or when they participate in the clean-up of abandoned-waste sites.

This risk of exposure and the need for protecting employees exposed to hazardous wastes is addressed in the "Superfund Amendments and Reauthorization Act of 1986" (SARA).

C. Superfund Amendments and Reauthorization Act of 1986

On October 17, 1986, the President signed into law the "Superfund Amendments and Reauthorization Act of 1986" (SARA).[6] As part of SARA, in section 126 of Title I, Congress addressed the risk of injury to employees by providing that the Secretary of Labor ("Secretary") issue interim final worker protection regulations within 60 days after the date of enactment of SARA that would provide no less protection for workers engaged in hazardous waste operations than the protections contained in the U.S. Environmental Protection Agency's (EPA) "Health and Safety Requirements for Employees Engaged in Field Activities" manual (EPA Order 1440.2) dated 1981, and the existing OSHA standards under Subpart C of 29 CFR Part 1926. OSHA published these interim final regulations in the Federal Register on December 19, 1986 (51 FR 45654). A correction notice was published on May 4, 1987 (52 FR 16241).

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[1] U.S. Environmental Protection Agency, *Everybody's Problem Hazardous Waste* at 1 (1980).

[2] Solid Waste Disposal Act, Pub. L. No. 89-272, 79 Stat 99.

[3] Resource Recovery Act, Pub. L. No. 91-512, 84 Stat 1427 and Pub. L. 93-14, 87 Stat 11.

[4] 42 U.S.C. 6901 *et seq.*

[5] 42 U.S.C. 9601 *et seq.*

[6] Pub. L. 99-499.

With the exception of a few provisions that had delayed start-up dates. OSHA's interim final regulations became effective on December 19, 1988 in accordance with section 126(e) of SARA, and apply to all regulated workplaces until the final rule developed under sections 126 (a)–(d) becomes effective.

Section 126(a) of SARA provides that the Secretary shall " * * * pursuant to section 6 of the Occupational Safety and Health Act of 1970, promulgate standards for the health and safety of employees engaged in hazardous waste operations." These standards must be promulgated within one year after the date of enactment of SARA. This notice completes the development of those standards by issuing a final rule based upon the proposed regulations as indicated in sections 126(a) and 126(b) of SARA.

Pursuant to section 126(c) of SARA, the final regulations issued today are to take effect in one year. Section 126(c) also provides that the final regulations are to include each of the worker protection provisions listed in section 126(b), unless the Secretary determines that the evidence in the public record developed during this rulemaking and considered as a whole does not support inclusion of any such provision. A discussion of the public record for this rulemaking and the changes made to the proposed regulations issued August 10, 1987 follows.

This final rule has been adapted from the language of the proposed rule. Changes have been made to address more fully the provisions which Congress directed the Agency to cover and the comments made in the public record. OSHA utilized several sources for the proposal. These included the EPA manual entitled "Health and Safety Requirements for Employees Engaged in Field Activities" (1981), the language of OSHA's safety and health standards in Subpart C of 29 CFR Part 1926 and various documents issued either jointly or separately by the EPA, OSHA, the U.S. Coast Guard, and the National Institute for Occupational Safety and Health (NIOSH).

OSHA specifically used the joint OSHA/EPA/USCG/NIOSH manual entitled, *"Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities"* (Preamble Reference 6), as an outline in preparing the interim rule and the proposed rule. This manual was developed as a result of the collaborative efforts of professionals representing the four agencies. These professionals, who are knowledgeable in hazardous waste operations, worked with over 100 experts and organizations in the development of the criteria contained in this manual. The manual was published in October 1985 and is public information. The manual is a guidance document for managers responsible for occupational safety and health programs at inactive hazardous waste sites. The manual is intended for use by government officials at all levels and contractors involved in hazardous waste operations. The manual provides general guidance and is intended to be used as a preliminary basis for developing a specific health and safety program for hazardous waste operations. Further, the major subject areas listed in section 126(b) of SARA are nearly identical to the major chapters in the manual.

Based upon the extensive public comments and hearing testimony, OSHA has modified the proposal. The final rule takes into account the entire record. In addition, the language of this final rule clarifies some areas of confusion in the interim rule that OSHA has identified during the public comment period and since the promulgation of the interim final rule. The final rule also reorganizes some of the sections to clarify the standard.

D. Regulatory History

The Superfund Amendments and Reauthorization Act of 1986 (SARA) gave the Secretary of Labor 60 days to issue interim final regulations which would provide no less protection for workers employed by contractors and emergency response workers than the protections contained in the Environmental Protection Agency Manual (1981) "Health and Safety Requirements for Employees Engaged in Field Activities" and existing standards under the Occupational Safety and Health Act of 1970 found in Subpart C of Part 1926 of the Code of Federal Regulations. Those interim final regulations were to take effect upon issuance and would apply until final regulations became effective (SARA, § 126(e)). OSHA issued its interim final regulations on December 19, 1988 (51 FR 45854).

SARA also instructed the Secretary of Labor to promulgate, within one year after the date of the enactment of section 126 of SARA and pursuant to section 6 of the Occupational Safety and Health Act of 1970, standards for the health and safety protection of employees engaged in hazardous waste operations (SARA, section 126(a)). On August 10, 1987 OSHA issued a Notice of Proposed Rulemaking and Public Hearings (52 FR 29620). That Notice set forth OSHA's proposed language for its final rule and announced public hearings that would be held to gather further information to aid the agency in developing its permanent final rule.

Informal public hearings on the subject of this rulemaking were scheduled and held to afford interested parties the opportunity to comment on OSHA's proposals. The hearings were held October 13–16 and 20–21, 1987 in Washington, DC and October 27–28, 1987 in Seattle, Washington. The hearings originally scheduled for San Francisco, CA in the August 10, 1987 Notice of Proposed Rulemaking were rescheduled for Seattle, WA in an October 13, 1987 announcement (52 FR 37973).

Testimony from over 40 witnesses was presented at the hearings. Further, over 30 post hearing comments were submitted to the record of this rulemaking. In addition to the public hearings and the testimony received in response to those hearings, OSHA received over 125 written comments on its proposed language for a final rule.

II. Summary and Explanation of the Standard

Paragraph (a)—Scope, Application, and Definitions

1. *Scope.* OSHA proposed to define the scope of this final rule in paragraphs (a)(1) and (a)(2). *"Scope"* defines the specific worker populations to be covered by this rule.

The scope of this rulemaking has been an issue during the development and promulgation of the final rule. OSHA requested specific comment on whether the proposed rule was appropriate.

Eastman Kodak's comment (10–36) states, "The preamble of the proposed standard at page 29622 requested 'specific comment on whether [OSHA's] interpretation of scope is too broad or too narrow.' The scope of applicability of the standard, especially with regard to ongoing operations at hazardous waste management facilities regulated under RCRA and/or corresponding state programs, appears to be appropriate."

While the language of the final rule is somewhat different from the language of the proposed rule, the four major areas of scope remain essentially the same. These four areas of scope include (1) clean-up operations at uncontrolled hazardous waste disposal sites that have been identified for clean-up by a governmental health or environmental agency, (2) routine operations at hazardous waste treatment, storage and disposal facilities or those portions of any facility regulated by 40 CFR Parts 264 and 265, (3) emergency response

operations at sites where hazardous substances have been or may be released, and (4) corrective actions at RCRA sites. In addition OSHA has clarified that the agency intends to cover voluntary clean-ups at government identified sites.

OSHA's proposal addressed the three specific populations of workers at the above operations. First, it was proposed to regulate those operations where employees are engaged in the clean-up of uncontrolled hazardous waste sites. These operations include those hazardous substance response operations under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended (CERCLA), including initial investigations at CERCLA sites before the presence or absence of hazardous substances has been ascertained, those major corrective actions taken in clean-up operations under the Resource Conservation and Recovery Act of 1976 as amended (RCRA), and those hazardous waste operations at sites that have been designated for clean-up by state or local governmental authorities.

The second worker population proposed to be covered included those employees engaged in operations involving hazardous waste treatment, storage, and disposal (TSD) facilities regulated under 40 CFR Parts 264 and 265 pursuant to RCRA, except for small quantity generators and those employers with less than 90 days accumulation of hazardous wastes as defined in 40 CFR 262.34.

The third and final worker population proposed to be covered were those employees engaged in emergency response operations for releases or substantial threats of releases of hazardous substances, and post-emergency response operations to such releases at all workplaces.

In paragraph (a)(1)(i) of the final rule OSHA is regulating all government mandated clean-up operations at uncontrolled hazardous waste disposal sites. These operations were included in paragraphs (a)(1)(i) and (a)(1)(iii) of the proposal. For the purposes of this final rule, "Superfund" and other uncontrolled hazardous waste disposal sites include hazardous substance response operations at sites regulated under 40 CFR Part 300, Subpart F; RCRA closure activities conducted under 40 CFR Part 265, Subpart G; and those similar uncontrolled hazardous waste disposal sites that have been designated for clean-up by Federal, state or local governments.

OSHA intends and the change in language clarifies that all government mandated clean-ups are covered. These include not only sites on the various "Superfund" lists, but also all other government mandated clean-ups as well. The changed language makes clear that such clean-ups are covered whether or not they are financed by the government. The language further clarifies that clean-ups mandated by any level of government are covered.

In paragraph (a)(1)(ii) of the final rule, OSHA is regulating corrective actions at RCRA facilities. This paragraph adopts the language proposed in paragraph (a)(1)(ii) of the proposal with one change. The term 'major' has been deleted as a modifier of "corrective action." Several commenters requested clarification of the term "major corrective action." International Technologies, a major hazardous waste clean-up contractor, requested in their comment (10-44), "Please clarify 'major corrective actions conducted under RCRA.' What distinguishes 'major' corrective actions from other corrective actions?" The State of Indiana commented (10-23), "There is no definition of what constitutes a 'major corrective action' under RCRA." In addition, the term "major" is not used in EPA terminology.

"Corrective action" is a term unique to RCRA and has been defined for use with RCRA. OSHA's addition of the modifier "major" raised many definitional questions. Therefore OSHA, in the final rule, is deleting the word "major" to be consistent with EPA terminology and eliminate confusion. Rather than define "major corrective action," OSHA is amending the language of the proposal to include a phrase describing the level of corrective action that is to be regulated in the scope of this rule. OSHA will be regulating those corrective actions that potentially expose employees to a "safety or health hazard." OSHA is not concerned with those corrective actions that are intended to abate environmental risks without exposing employees to safety or health hazards. The phrase "safety or health hazard" in the introductory language is the phrase that OSHA has used to differentiate the type of releases that this standard regulates versus those release that may pose only environmental threats rather than safety or health threats to employees.

OSHA has decided to add a new paragraph (a)(1)(iii) to the final rule that would include within the scope of this rule those voluntary clean-up operations conducted at sites recognized by governmental bodies as uncontrolled hazardous waste disposal sites. All other voluntary clean-ups would be exempt from 29 CFR 1910.120. OSHA does not have the statutory responsibility to identify hazardo waste sites. It will leave to agencie. with that authority the responsibility to identify those sites. Those voluntary sites that are not recognized by the government as uncontrolled hazardous waste disposal sites would be exempt from 29 CFR 1910.120, however, they would still be regulated by the other OSHA general industry or construction industry standards applicable to the work being performed at the site.

OSHA did not propose to cover voluntary clean-ups of hazardous substances in its proposed rule. Many comments suggested this, however, the Agency has concluded that individuals involved in voluntary clean-ups may be exposed to the same safety and health risks at voluntary sites identified by the government whether or not the government is compelling action. However, it would be difficult to k. .w whether or not sites not identified by the government are hazardous waste sites without a structured evaluation system for such potential sites.

OSHA raised an issue on the scope in the preamble to the proposal that generated several comments. On page 29622 of the preamble to the proposal, OSHA listed several TSD facilities th would not be covered by the final ru The exemptions were taken from a li published by the U.S. EPA that are not directly regulated by U.S. EPA. However, the proposed standard's language did not grant these exemptions. Comments did not support the exemptions and OSHA did not believe that they were appropriate.

The particular exemption that generated the most comment exempted those TSD facilities which operate under a state hazardous waste program pursuant to RCRA section 3006. These state hazardous waste programs are recognized by U.S. EPA in a similar fashion to the OSHA state plan states under section 18 of the OSH Act. A number of commenters, such as the State of Indiana (10-23), objected to this type of exemption by OSHA as not being appropriate. They stated OSHA jurisdiction should not be impacted by U.S. EPA state agreements, but only those state agreements provided in the OSH Act. OSHA agrees with these commenters and therefore OSHA jurisdiction will be delegated to only those states which OSHA has formal agreements with under the OSH Act. However, it should be noted that the U.S. EPA jurisdictions under SARA section 128 may make use of their state agreements.

Other commenters, EXXON (10-33) and CONOCO (10-32), suggested that OSHA incorporate the exemptions on page 29822 as a separate paragraph in the final rule.

Typical TSD facilities range from the hazardous waste generator with a hazardous waste storage area to the large, complex hazardous waste disposal facility. EPA estimates that approximately 80 percent of all generators also treat, store, or dispose of their hazardous wastes and thereby qualify as a TSD facility. Over 30,000 TSD facilities notified EPA in 1980 that they would qualify for regulation under section 3004 of RCRA.

OSHA continues to regulate RCRA TSD facilities in paragraph (a)(1)(iv) of the final rule as it was proposed in the regulatory language of the proposal. The list of exemptions on page 29822 will not be incorporated into the final rule. OSHA believes that such a list would create too great a gap in the protection of workers. For example, with respect to workers at TSD facilities operating under a state hazardous waste program pursuant to RCRA section 3006, OSHA agrees with a comment made by the State of Indiana (10-23) that it is possible that the workers in those 42 authorized states identified by Indiana could be without the protections mandated by Congress.

In paragraph (a)(1)(v) OSHA would continue to regulate emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the operation as proposed in paragraph (a)(2) of the proposal. Such emergency response operations are not limited to those responses at uncontrolled hazardous waste disposal sites or RCRA TSD facilities. With respect to transportation incidents, responders to the scene are covered but operators (i.e., truck drivers and train crews) are not covered unless they become actively involved in the response action.

OSHA is making major revisions to proposed paragraph (1). These revisions have been made in response to comments concerning OSHA's involvement in regulating emergency response at every site involving hazardous substance release or potential release. Some of the comments were in favor of OSHA's continued involvement with emergency response (i.e., American Chemical Society, 10-44) and others were opposed to continued involvement (i.e., ECOLAB, 10-64). Others supported OSHA involvement in emergency response activities at uncontrolled hazardous waste sites and certain RCRA facilities but opposed the agency's involvement with non-waste clean-up or non-RCRA facilities (i.e., The Chlorine Institute, 10-24). Yet others called for two separate areas in the rule: one for hazardous waste operations, and one for emergency response (i.e., Allied Signal, 10-38). Others opposed coverage of emergency response to petroleum spills (CONOCO, Ex. 10-32).

OSHA after reviewing all the comments, continues to believe that it is the clear intent of Congress that any employees participating in an emergency response to the release or potential for release of hazardous substance be covered by this rulemaking. This Congressional intent applies to all such emergency responses including those both off and on hazardous waste sites.

The statutory language indicates that all emergency responses where the threat of hazardous substance spills exist are to be covered.

Section 126(b)(11) of SARA specifically provides that "requirements for emergency response" are to be included and is not limited to hazardous waste sites.

In addition, section 126(d)(4) states:

> Training of Emergency Response Personnel.—Such training standards shall set forth requirements for the training of workers who are responsible for responding to *hazardous emergency situations* who may be exposed to toxic substances in carrying out their responsibilities. (emphasis added)

This is very broad language that is not limited to hazardous waste operations or hazardous wastes or substances on CERCLA or RCRA sites. It covers all "hazardous emergency situations" for all "toxic substances" which would clearly cover all types of emergency response for chemical spills including chemical tanker spills and the like. It should also be noted that once a tank truck spills a toxic chemical in an emergency it creates a hazardous waste in the very real sense.

Further, the grant provision of the statute clearly indicates that grants can be made to train workers for emergency response at any location, not just on hazardous waste sites.

Section 126(g)(1) states:

> Grant Purposes.—Grants for the training and education of workers who are or may be engaged in activities related to hazardous waste removal or containment or *emergency response* may be under this section. (emphasis added)

Other statutory sections also indicate the legislative intent to cover all emergency responses where hazardous chemical spills are possible.

In addition to the statutory language, the documents cited by Congress as the minimum guides for OSHA to use in developing this rule refer to all emergency responses. The EPA manual and the OSHA construction standards referred to in the statute require preparations and planning for emergencies generally, not just for hazardous waste site emergencies.

In addition the legislative history indicates that Congress intended Section 126 to cover emergency response to all situations where spills of hazardous chemicals were a possibility and not just emergency response on hazardous waste sites. For example, Senator Hatch stated:

> This amendment will address the concerns that have been raised that the Department of Labor issue standards for employees engaged in hazardous waste operations, as well as emergency response. (9/26/86 Cong. Rec. pg. S-12031)

As discussed elsewhere in this preamble OSHA believes there is a clear need for training and other provisions to protect workers engaged in all emergency responses when there is the possibility of hazardous substance spills. This is needed whether or not the emergency occurs on a hazardous waste site. The agency believes that the hazards are the same in these cases.

Finally, other parts of SARA, in particular Title III, address emergency response actions and planning by communities and local government employers outside of the hazardous waste clean-up operation. The Congressional concerns on toxic emergencies also discussed in *Task Force on Toxic Emergencies*, Environmental and Energy Study Conference Special Report, September 18, 1986. This report stresses the need for training of emergency response personnel as well as emergency response planning and related areas. This was part of the legislative research which led to the passage of section 126 of SARA.

OSHA's final rule rulemaking divides emergency response into three separate areas. First, OSHA is regulating emergency response by employees at uncontrolled hazardous waste sites in paragraph (l) of the final rule. This paragraph contains the requirements that were in paragraphs (l)(1) and (l)(2) of the proposal and the interim rule. These regulations applied to the "on-site" operations of the interim rule. Second, OSHA is regulating emergency response at RCRA facilities in paragraph (p)(8). This paragraph contains the requirements that were in paragraphs (l)(1) and (l)(3) of the proposal and interim rule. These regulations applied to the "off-site"

operations of the interim rule. Third, OSHA is regulating emergency response to hazardous substance releases by employers not covered by paragraphs (l) and (p)(8) in paragraph (q). Paragraph (q) contains the requirements proposed in paragraphs (l)(1), (l)(3), (l)(4), and (l)(5) of the proposal and interim rule. These regulations were directed toward emergency response teams, industrial fire brigades, and hazardous materials teams.

In its proposal OSHA covered emergency response to releases of hazardous substances. The agency did not propose to limit emergency response to uncontrolled hazardous waste sites but decided instead to propose to cover all emergency response whether it was done at uncontrolled hazardous waste sites or anywhere else, including petrochemical and similar manufacturing facilities.

OSHA's decision to propose coverage of all emergency response was based upon the high risk associated with emergency response by untrained and unprotected employees and the need for proper training and equipment to be provided for emergency response to hazardous substance releases. In testimony during the public hearings on this rulemaking, Mr. William Bunner stated, "The highest-risk incidents are the persons who respond to spills and accidental releases of hazardous chemicals; and those personnel, particularly public first responders, have had the least protection in terms of chemical emergency response safety and health plans, training and equipment." (Tr. pgs. 24–25). Mr. Bunner goes on to state, "The real strength of 29 CFR 1910.120 is that it not only provides for a more consistent and thorough approach to protecting workers involved in hazardous waste operations, but also for personnel who face extremely high risk to life and health that's associated with chemical emergency response." (Tr. pg. 25).

Another witness, Mr. Ray Simpson, one of OSHA's expert witnesses on fire suppression, fire inspection, and training, testified, "I like to support any concept that advocates properly equipping, training, and supporting emergency responders. When I talk about an emergency responder, I'm not talking simply about fire fighters although that's basically my expertise. I'm talking about the emergency medical technicians, the people who handle the victims. I'm talking about the police officer who, many times, is first on the scene before any of us get there: the many who really must make, in some situations, the initial decision about what's going to happen. I have learned over these many years that the two greatest dangers that face us as emergency responders are ignorance or non-awareness of what we're facing and the lack of plan or any procedure that will take us to the end that we're trying to accomplish." (Tr. pgs. 29–30).

Margaret Seminario, Associate Director, Department of Occupational Safety, Health and Social Security of the American Federation of Labor-Congress of Industrial Organizations (AFL-CIO) also testified at OSHA's public hearings on the issue of emergency response. Ms. Seminario discussed the participation of the AFL-CIO in hearings before the House Subcommittee on Employment and Housing of the Government Operations Committee and the Safety and Health Subcommittee of Education and Labor. Ms. Seminario stated, "Those hearings dealt with the issues of the problems for hazardous waste workers in both Superfund operations and RCRA operations, but they also got into an issue that had really not been explored very fully: the problems facing emergency response workers, particularly for the AFL-CIO firefighters. The members of our firefighter's union were the ones who were called in when there were spills, leaks and other accidental releases. . . . These weren't hazardous waste sites, per se, at the time. They became hazardous waste sites and were defined as such after the fact; but they were routinely called in without information, without adequate protection to deal with these problems. That was an issue, as I said, that was fully explored in those hearings and it was the reason that, when we moved from those hearings into a legislative opportunity in Superfund, we looked beyond the language that we had come up with in the 1980 law which dealt only with hazardous waste and expanded it to include emergency response operations." (Tr. pgs. 345–346)

Further, OSHA still believes that Congress intended this rule to have such coverage. This is indicated by the language of SARA as well as the legislative history.

As OSHA stated in the preamble to the proposed rule, "The language of section 126(a) mandates safety and health standards for the protection of employees engaged "in hazardous waste operations." The term "hazardous waste operation" is not limited in the legislation and a response to spills of hazardous substances on the highway or from a railway tank car in order to control and contain the hazardous substance (which has become a waste once it is not contained) is in the common sense meaning a hazardous waste operation."

"This interpretation is reinforced by the fact that SARA is a free-standing statutory provision and not an amendment to CERCLA. The clear Congressional intent then is to provide protection to employees whenever they deal with hazardous wastes."

In addition section 126(d)(4) discussing training for emergency response personnel utilizes the very broad term "hazardous emergency situation." Section 126(g)(1) indicates that training grants may be given independently for emergency response training separate from hazardous waste removal training. Section 126(b)(11) also indicates emergency response is an independent concept separate from hazardous waste removal operation. For those and other reasons OSHA believes section 126 is intended to cover emergency response to hazardous substances whether on an uncontrolled hazardous waste disposal site, a RCRA site or elsewhere. However, the clarified language in the scope sections makes it clear the only employers whose employees have the reasonable possibility of engaging in emergency response are covered. Emergency response employees who respond or may respond to incidents involving hazardous substances are covered by this final rule to the extent that they are exposed to hazardous substances. State and local government employees in states that have agreements with OSHA under section 18 of the OSH Act must be regulated by state regulations at least as effective as these to protect public employees. Those state regulations must be issued within six months of the date of promulgation of this final rule.

However, some commenters have commented that OSHA has exceeded the intent of Congress with the scope of the proposed rule. Many of these commenters stated that OSHA's coverage of emergency response at sites other than specific cleanup or TSD facilities was too broad and unwarranted. AMOCO's comment (10–28) is representative of some of the comments made on this issue. In their comment AMOCO stated that, "Section 126(a) of SARA is the directive to OSHA to promulgate standards 'for the health and safety protection of employees engaged in hazardous waste operations.' There is no reference whatsoever in directive to promulgate standard [sic] with respect to emergency response activities outside of hazardous waste operations." However, other comments received from the petrochemical

industry support, on a limited basis. OSHA's decision to cover emergency response with the scope of the standard. CONOCO's comment (10-32) is representative of this point of view. CONOCO states, "Conoco's primary concern with the proposed rule centers on the extremely broad scope of employee coverage under this standard and compared to Congress' intent to cover 'hazardous waste operations and emergency response.' We believe that Congress intended section 126 of SARA to cover employees engaged in hazardous waste operations and emergency response to these operations on a full-time basis." While this comment would seem to support OSHA's coverage of employees engaged in emergency response, that support is limited to those employees engaged in response on a full-time basis at hazardous waste operations.

Based upon public testimony and written comments received into the record of this rulemaking, OSHA has concluded, that because of the high risk associated with emergency response to the releases of hazardous substances and the number of these incidents occurring, that coverage of workers conducting such emergency response activities is both appropriate and necessary.

OSHA believes that the scope of this final rule carries out the intent of Congress and is consistent with good occupational safety and health policy. Employees performing clean-up operations under CERCLA, RCRA (corrective actions) and state or local government designated sites—generally those employees likely to have the highest exposures to hazardous substances over a longer period—would be covered by virtually all the provisions of this final rule. Employees exposed to hazardous wastes in routine RCRA hazardous waste operations, who are regularly exposed to hazardous wastes but in a more controlled environment, would be covered by the more limited requirements of paragraphs (p) and (q). Emergency response workers, exposed usually for short periods to often unknown but possibly high levels of hazardous substances, would be regulated by paragraph (q).

2. *Application.* OSHA proposed to define the application of this final rule in paragraph (a)(3) of OSHA's Notice of Proposed Rulemaking (NPRM) published on August 10, 1987 (52 FR 29620). "*Application*" establishes which regulations within this rule apply to the specific worker populations to be protected by this rule.

In paragraph (a)(3)(i) OSHA proposed that the employer would have to comply with the standards in 29 CFR Parts 1910 and 1926, as well as with the requirements specifically covered in the proposed rule. If there were a conflict or overlap between standards, it was proposed that the more protective provisions would apply. Since this rule does not cover all of the hazards present at hazardous waste operations, other OSHA standards in Parts 1910 and 1926 should apply to ensure employee safety and health. Other OSHA standards regulate many other hazards, and OSHA wants to make clear that the other standards continue to apply. Also, OSHA proposed that hazardous waste operators who are not within the scope of this standard should continue to be regulated by the Parts 1910 and 1926 standards. OSHA is keeping those provisions in the final rule for the reasons stated with minor editorial changes for clarification.

In paragraph (a)(3)(ii), OSHA proposed that all paragraphs of section 1910.120 except paragraph (o) would apply to hazardous wastes operations at CERCLA sites, at major corrective action at RCRA sites, and at sites designated for clean-up by state and local governments. Paragraph (o) of the proposal addressed certain operations conducted under the Resource Conservation and Recovery Act of 1976 (RCRA).

OSHA recognizes that the hazards presented to employees engaged in clean-up operations involving uncontrolled hazardous wastes are far greater than those presented to employees engaged in the routine, day-to-day operations of an EPA licensed TSD facility.

OSHA has made two editorial changes in its proposed language in paragraph (a)(3)(ii) without changing the intent of the paragraph. First, rather than referring to each of the types of sites individually, OSHA is making reference to the scope paragraphs (a)(1)(i) through (a)(1)(iii) to identify the sites that this application paragraph addresses. The sites to be addressed remain the same as proposed. Second, because the codification of paragraphs has changed in this final rule due to changes made to the proposal, paragraph (p) of § 1910.120 rather than paragraph (o) will apply specifically to hazardous waste operations at RCRA sites which are involved in treatment, storage, disposal and handling of hazardous waste. The new requirements of paragraph (p) are discussed later in the preamble.

In paragraph (a)(3)(iii), OSHA proposed that the requirements set forth in paragraph (o) of section 1910.120 would apply specifically to the hazardous waste operations at RCRA sites which are involved in treatment, storage, disposal and handling of hazardous waste. The proposal contained a limited exclusion from these regulations for certain small quantity generators and less than 90-day accumulators, such as dry cleaners and gas stations, which come within the purview of RCRA, but are not hazardous waste operations in the normal meaning of the term. The exclusion was available to these operations depending upon the employer's decision to provide or not provide emergency response by employees to releases of, or substantial threats of releases of, hazardous substances.

OSHA proposed to exempt small quantity generators and less than 90 day accumulators from all parts of the rule if they did not provide emergency response by their employees to releases of, or substantial threats of releases of, hazardous substances. OSHA further proposed to exempt small quantity generators and less than 90 day accumulators from all parts of the rule except paragraph (l) if they did provide emergency response by their employees to releases of, or substantial threats of releases of, hazardous substances.

OSHA recognized that many small quantity generators are smaller businesses with limited employee populations. Since most of these establishments rely on the emergency response services of local fire and rescue departments, OSHA is providing a complete exemption from these proposed standards when the employer can show that employees are not required or encouraged to engage in emergency response, but are directed in the case of emergency spills of hazardous substances to maintain a safe distance and to call local fire or other emergency response organizations. In cases where such establishments do provide emergency response by employees, and thereby expose employees to hazardous substances, OSHA proposed that such employers meet the emergency response requirements of paragraph (l) of this proposed rule. OSHA concludes its proposal is supported by the record.

Without these exemptions, these regulations could be interpreted to cover gas stations, dry cleaners, and other small businesses which temporarily store small quantities of a hazardous waste. These businesses are not engaged in hazardous waste operations as that term is conceived of normally. In addition, it is not believed that Congress intended such businesses to be covered. They do not present the relatively high

exposure to a number of hazardous health risks to employees that hazardous waste sites typically do.

In paragraph (a)(3)(iv) OSHA proposed that the requirements set forth in paragraph (l) of this section would specifically apply to the work conducted by emergency response personnel when they respond to hazardous substance emergency incidents. Emergency response personnel include firefighters, EMS personnel, and police as well as other employees.

The regulation of employees providing emergency response has been discussed under the "Scope" portion of this preamble discussion. Further discussion of OSHA's changes to the emergency response portion of this rulemaking is contained in the discussion of paragraph (l) of the proposal.

OSHA also requested comment on what other operations should be and are intended by Congress to be covered, and whether specific operations should be excluded because of low exposures. For example, municipal or other sanitary landfills that handle domestic wastes would not normally be regulated by this rule. Similarly, waste paper or scrap metal operations would not normally be regulated because of the type of wastes they handle. However, both types of operations would be regulated if they have clean-ups for or handle hazardous wastes meeting the scope provisions of the standard.

Also, employees at hazardous waste disposal sites who will not be exposed to, or do not have the potential to be exposed to, hazardous substances are not covered by this rule. The provisions of these regulations are designed to protect employees who have or may have exposures, and would not be needed for those employees who do not.

Operations with no exposure to hazardous substances, i.e., road building for site access, construction of or the setting up of temporary facilities in the clean zone, or the closure of a RCRA site involving the building of a clay cap over hazard wastes, are considered to be construction activities covered by the standards in 29 CFR Part 1926.

As a result of the comments received during the public comment phase of this rulemaking, OSHA has made some changes to the degree of regulation for emergency response workers. However, the scope of this standard continues to cover such workers and paragraph (a)(2)(iv) identifies the new paragraphs within the rule that reflect the changes and identifies the standards that apply to emergency response operations.

3. *Definitions.* In paragraph (a)(4), *Definitions*, OSHA proposed to identify and define the various terms used in this rulemaking that may cause confusion. However, the following new definitions have been added as a result of comments made in the record: "published exposure level," and "uncontrolled hazardous waste site". Except for the definition of "established exposure level" which has been amended to define "published exposure level," no definitions have been removed from the proposal.

The term "established permissible exposure limit" was incorporated as part of the determination of whether medical surveillance was required. There were a number of comments on this definition.

One commenter, Four Seasons Industrial Services (10-5), believed that the definition should be broadened. Four Seasons stated, "The routes of chemical exposure are through inhalation, skin absorption, and ingestion. All of these have to be considered when dealing with permissible exposure limits. Your definition as written does not include ingestion." Other commenters were concerned that OSHA included the NIOSH Recommended Exposure Limits in the definition of PELs. The E. I. DuPont de Nemours, Co. (10-28) comments summarize many of those received against the NIOSH levels. DuPont stated, "NIOSH limits have not undergone public review and comment as have national consensus standards and regulatory exposure standards. Therefore, they should not be included in the definition of 'established exposure limits'." CONOCO (10-32) agreed when they stated, "These NIOSH limits are not subject to peer review or public comment as are OSHA's PELs. We encourage OSHA to remove the references to these NIOSH limits. We strongly urge OSHA to *only* use PELs given in 29 CFR 1910, Subpart Z."

Dr. James Melius, Division of Environment Health Assessment, State of New York Department of Health Medical Surveillance, and one of OSHA's expert witnesses in occupational medicine, stated in his testimony (Tr. pg. 115) that, "I think it's important that the OSHA standards be supplemented by information from NIOSH and ACGIH, both of which cover a larger number of chemicals or toxic substances and both of which include, or at least consider, more up to date information on the toxicity of these substances."

In addition, during the public hearings, OSHA, through its panel of staff members specifically asked Captain Richard A. Lemen, Director of the Division of Standards Development and Technology Transfer within NIOSH, about the peer review process of NIOSH RELs. Mr. Thomas Seymour directed the following question to Captain Lemen (Tr. pg. 195).

[Mr. Seymour:] We have received some feedback in our record about the order of the hierarchy that we have used for permissible exposure limits. There have been statements made that the RELs are not peer-reviewed, developed. I wonder if you might describe to us how the RELs have been developed by the National Institute for Occupational Safety and Health.

Captain Lemen's response (Tr. pgs 195–197) to Mr. Seymour was:

Okay. In response to the peer review question, I would say that probably the REL were more peer reviewed than most recommendations. The first process of developing an REL at National Institute for Occupational Safety and Health is to propose such a recommendation be developed to the Director of NIOSH through a position paper. That is then reviewed by senior NIOSH staff. Once that approval is given, a criteria manager then develops the recommended exposure standard in the form of a criteria document.

Once the criteria document has gone through several layers of review within NIOSH, it is then sent out for external review. On the average, we usually send it out to more than 40 experts in the field that document for their external comments.

We receive these comments back, incorporate those comments where appropriate. We then submit the document through the same internal review within NIOSH. It goes through every division within the Institute and it finally winds up in the senior review staff at the directors' level at our headquarters in Atlanta.

A meeting is then held with the Director of NIOSH at which time the criteria manager and the senior scientists within the Institute [review] all of the reviewers—external and internal reviewers—comments and a decision is made by the Director of NIOSH whether or not to publish a recommended exposure limit.

If the decision is to publish, then we do so and submit that criteria document to the Director of OSHA.

So it goes through a very extensive peer review process compared to, for example, an article submitted to peer-review journal which is written by a researcher and generally sent out to three to five individuals to review before it's placed in a peer review journal.

So the extensiveness of our review process, I think, is much greater than that for a peer-preview journal article.

In light of these comments OSHA has concluded that the NIOSH REL's have undergone the necessary peer review to be included in the standard's hierarchy of limits.

The term "established exposure levels" was defined in the proposal to indicate the levels which would trigger medical surveillance of the exposed employees. The term included not OSHA established PELs, but also

exposure limits suggested by NIOSH and ACGIH. After review of these and other comments, OSHA concludes that it is appropriate to go beyond the OSHA established PELs in triggering medical surveillance. First, medical surveillance is appropriate for workers exposed to toxic chemicals other than those covered by the PEL's. Second, because of the broadly-worded language in section 126(b)(3), which requires medical surveillance for workers engaged in hazardous waste operations "which would expose them to toxic substances." Some of these "toxic substances" are not included in the OSHA PELs. When OSHA completes its rulemaking on the air contamination proposal (PEL's project), there will be fewer toxic substances not covered by PEL's. But in light of Congressional language and the large number of hazardous chemicals present in an uncontrolled hazardous waste site, OSHA concludes that this definition is appropriate to protect employee safety and health.

The term "permissible exposure limits" was defined in the proposal as the inhalation or dermal permissible exposure limit specified in 29 CFR Part 1910, Subpart Z. As a result of the comments received in the record, OSHA has amended its definition that ignored the health limits specified in Subpart G, for "permissible exposure limits."

OSHA has amended the definition for "permissible exposure limits" to include a reference to Subpart G of Part 1910. It now includes both Subpart Z health hazards and those requirements in Subpart G of Part 1910.

First, OSHA has changed the term "established exposure levels" to the term "published exposure level" to reduce confusion. Second, the term "published exposure level" is defined as the exposure limits published in "NIOSH Recommendations for Occupational Health Standards" dated 1986, incorporated by reference, or if none is specified, the exposure limits published in the standards specified by the American Conference of Governmental Industrial Hygienists in their publication "Threshold Limit Values and Biological Exposure Indices for 1987–88" dated 1987, incorporated by reference. Third, the provisions of (f)(2) on medical surveillance have been changed to cover overexposures to both PEL's and, if none, then over-exposure to published exposure limits. OSHA concludes that with these changes the definitions are clear, comprehensive and carry out both statutory directives and appropriate medical criteria in determining whether medical surveillance is required. Some commenters stated a broader guide is necessary for respirator use and that is discussed under paragraph (g).

OSHA requested comment on the appropriateness of its definitions of hazardous waste, health hazard and hazardous substance and whether they were consistent with EPA and DOT practice. Several comments were received on these issues. One set of comments criticized OSHA's incorporation of petroleum and petroleum products in its definition of hazardous substances.

A typical comment was made by EXXON (10–33). In their comments EXXON presented the following discussion:

> Perhaps the most fundamental misinterpretation contained in this rule is the inclusion of petroleum and petroleum products in the definition of hazardous substance. As discussed in Comment II.A.4.v. below at pages 11 to 14 [internal EXXON comment references], Congress, the Environmental Protection Agency (EPA), and the Department of Transportation (DOT) have uniformly recognized the inappropriateness of characterizing petroleum as a hazardous substance. There is no indication in SARA Section 126 that Congress intended to change the petroleum exclusion or to subject petroleum releases to emergency response regulation.

EXXON further stated:

> It is EXXON's understanding that a situation is not an emergency response subject to the requirements of paragraph (1) unless there is a release of a "hazardous substance." Therefore it is essential that the definition of "hazardous substance" be accurate and correct:
>
> The proposed definition of "hazardous substance" references the Department of Transportation's definition of "hazardous materials" under 49 CFR 171.8. By so doing, petroleum and petroleum products have been included as hazardous substances; and, related spills may be subject to the burdensome requirements for emergency response operations.
>
> Congress, in the very CERCLA sections cited in the proposed definition of "hazardous substance," has recognized that petroleum and petroleum products are excluded from the federal definition of "hazardous substance." EPA regulations under CERCLA have incorporated this congressional directive. *See* 40 CFR Part 302 and discussion at 50 FR 13468, 13469 (April 4, 1985). DOT has specifically recognized this Federal petroleum exclusion and incorporated the exclusion in its definition of "hazardous substance." *See* 52 FR 24674 (July 1, 1987). As such, the proposed OSHA definition is inconsistent with the CERCLA, EPA and DOT definitions of "hazardous substance."
>
> The proposed definition of "hazardous waste" includes the EPA RCRA definition of hazardous waste and the DOT definitions at 49 CFR 171.8. The cited DOT regulation defines both hazardous substances and hazardous wastes. As noted above, the DOT definition of hazardous substance at 49 CFR 171.8 should properly be incorporated in the proposed OSHA definition of hazardous substance. It is not a waste definition. Therefore, the proposed definition of hazardous waste should be limited to waste materials; and, the DOT definition of hazardous substance should be clearly excluded.

OSHA does not agree with these arguments. Section 126 of SARA is directed to protecting workers from the hazards of all hazardous waste spills. Petroleum products create significant health and safety hazards. Many comments supported OSHA's incorporation of petroleum and petroleum products.

During the questioning of Dr. Kenneth H. Chase, M.D., President of the Washington Occupational Health Associates, Inc., Mr. Chappell Pierce of the OSHA panel asked Dr. Chase the following question (Tr. pg. 531):"Do you feel that medical monitoring for these types of products [petroleum products] is appropriate?"

Dr. Chase responded."Petroleum products is just too broad a term for me to answer that in a general way. Certain petroleum derivatives are more toxic than others. Some have acute toxicity; others subacute toxicity; and others, the concern is more about chronic toxicity that is most difficult to detect."

During the hearings, OSHA asked many of the individuals who testified if petroleum and petroleum products should be included in the definition of hazardous substances.

Representative of the responses made to this question was the testimony of the Prince Georges County Fire Department; the International Association of Fire Fighters, AFL–CIO; NIOSH; and the Seattle, Washington Fire Department.

Mr. Gregory Noll, the Hazardous Materials Coordinator for the Prince George's County Maryland Fire Department, testified on the issue (Tr. pg. 448). Mr. Thomas Seymour of the OSHA panel addressed Mr. Noll by stating: "I notice in your testimony, on page 3, that you indicate that at least 50 percent of your responses are involved with flammable liquids or gas emergencies. The definition that OSHA is using in this rulemaking for hazardous substances dealing with and covering flammable liquids and gases you find, then, appropriate?"

Mr. Noll responded, "I think realistically, from the perspective of fire service, we've been successfully handling flammable liquid and gas emergencies for a number of years. Today, with HAZMATs being the buzz word, certainly those categories of

commodities have been thrown into the hazardous materials field.

"We now regard them in the hazardous materials field from a practical perspective."

Mr. Thomas Seymour of the OSHA panel asked Mr. Richard Duffy of the International Association of Fire Fighters (Tr. pg. 110), "Mr. Duffy, we have had some previous commenters who have advocated that petroleum and petroleum products be excluded from the scope of the standard.

The example that you just gave about the propane tank inside the building exploding and killing fire fighters, what is your opinion about whether we should exclude petroleum products from this standard?"

Mr. Duffy responded: "I don't know how we would classify them. I would object to that. I mean, I don't know how to better qualify—I could talk to you for days about incidents involving petroleum products. I don't see any reason to exclude them any more than excluding the oxidizers or any group. I mean, you could pick lots of products and ask to exclude them. And I'm sure a lot of the lobbying entities can establish reasons for it. But I can't see any in terms for fire fighters."

Mr. Charles Gordon of the Department of Labor's Office of the Solicitor and a member of the OSHA panel asked Captain Richard A. Lemen, Director of the Division of Standards Development and Technology Transfer of, NIOSH the following question (Tr. pg. 200–201): "In the case of spills of petroleum or petroleum products in either an emergency response situation or as a hazardous waste dump were there are petroleum products as one of the major contaminants, is it appropriate for all the provisions of the OSHA standard or the recommendations to apply in those circumstances?"

Captain Lemen responded, "We believe it is appropriate and they should apply in those circumstances, as well."

Mr. Seymour also asked Deputy Chief Roger Ramsey of the Seattle Fire Department (Tr. pg. 142): "I gather from what you have also said that the definition we have, including the DOT hazardous material definition for hazardous substance and materials is appropriate, and that we should not exclude petroleum products from the coverage of this standard?"

Deputy Chief Ramsey responded, "Absolutely not."

Many spills and emergency response to these spills involve petroleum products. These spills present both health and safety risks. Training is necessary to protect employees who respond to petroleum spills as with other spills. In fact, these are usually the same employees.

OSHA concludes that it is crucial to cover responses to petroleum spills as well as all other spills because petroleum products constitute a substantial threat to employees responding to accidental releases of these substances. Many petroleum products present health hazards as well as fire and explosion hazards. In addition they often contain fractions which present high health hazards. For example, many contain benezene, a carcinogen to which employees may be exposed.

Therefore, OSHA is not amending its definition for "hazardous substance" to include the petroleum exclusion referenced by some of the commenters.

The other definitions are discussed in the preamble to the proposal for this rulemaking. There were no major comments. OSHA concludes that those definitions are appropriate for the reasons stated in the proposal preamble.

Paragraph (b)—Safety and Health Program

Paragraph (b) of the proposal has been reorganized for clarity as a result of the public comment. Basic requirements remain the same. Specific changes are discussed below. This paragraph basically requires that a written safety and health program cover safety and health organization and specific work practices to assure employee safety and health. OSHA has concluded that it is crucial for employee safety and health to have a written safety and health program that would force the systematic identification of site hazards and identify employee response to those hazards. The written plan is necessary to communicate hazards to employees for their awareness and protection. (See preamble discussion at 52 FR 29624.)

OSHA received many comments supporting the requirement for a written safety and health program (i.e, State of Wyoming, 10–9; James T. Dufour, 10–78; International Association of Fire Fighters Local 291, 10–12); other commenters have made suggestions for changes to the proposed language.

OSHA concludes that for the reasons stated a written program is necessary. The following discussion covers specific changes.

OSHA has included a non-mandatory note at the beginning of new paragraph (b) that explains the acceptability of safety and health programs developed and implemented to meet other Federal, state, or local regulations in meeting the requirements of this paragraph. Some commenters believed that OSHA's requirements for a safety and health program were somewhat duplicative of the contingency plans and emergency response plans required by the E.P.A. for its permit requirements (i.e., Tennessee Valley Authority, 10–43; National Paint and Coating Association, 10–72; Johnson Wax, 10–84). OSHA will permit existing programs that have been designed to meet other government or corporate requirements. For example, contingency plans developed under 40 CFR 265.50 are acceptable in meeting this requirement if they are supplemented with the provisions established by the OSHA standard. OSHA does not intend to require the duplication of efforts made to meet other governmental regulations. Therefore, any plan containing all of the elements required for the OSHA plan will be acceptable in meeting this requirement without the need for developing a separate OSHA plan.

In paragraph (b)(1) of the final rule OSHA has taken the language proposed in paragraphs (b)(1)(i), (b)(2), and (b)(3) of the proposal and subdivided it into paragraphs (b)(1)(i), (b)(1)(ii), (b)(1)(iii), and (b)(1)(iv). Paragraph (b)(1)(i) contains the first two sentences of the proposal along with two new sentences that clarify what the safety and health program shall include. OSHA has included the new sentences and the new note to this paragraph to provide further guidance to employers who may need assistance in developing their safety and health program.

In paragraph (b)(1)(ii) of the final rule OSHA is using the last sentence and the list of chapters proposed in paragraph (b)(1)(i) and subparagraphs (A) through (C). There are no changes made to the language as proposed other than a recodification of the paragraphs.

In paragraph (b)(1)(iii) of the final rule OSHA is using the exact language proposed in paragraph (b)(2). The proposed language has been moved to this paragraph because it contains a requirement that is of a general nature.

In paragraph (b)(1)(iv) of the final rule OSHA is using the language proposed in paragraph (b)(3)(i) with one exception. A new phrase would require the employer to inform contractors and subcontractors of the site emergency response procedures in addition to the proposed information. One commenter, CDM Federal Programs Corporation (10–83), suggested revised language to the proposal that would assure that the contractors and subcontractors received the site specific safety and health plan as well as the safety and health programs. OSHA agrees with the suggestion of the commenter and that

the new language accomplishes the recommended change suggested by CDM Federal Programs.

In paragraph (b)(1)(v) of the final rule OSHA is using the exact language of proposed paragraph (b)(3)(ii).

In paragraphs (b)(2), (b)(3), and (b)(4) of the final rule OSHA is using the exact language of paragraphs (b)(1)(ii), (b)(1)(iii), and (b)(1)(iv) of the proposal. One commenter, James T. Dufour (10-78), while supporting the use of safety and health plans as an appropriate communication tool for identifying site hazards, suggested that OSHA should require a more comprehensive review and control of the plan to assure its professional quality. OSHA believes that the language of paragraph (b)(4)(iv) would provide for this type of oversight and control. Therefore, the only change to paragraphs (b)(1)(ii) through (b)(1)(iv) is a recodification of the paragraphs.

Paragraph (c)—Site Characterization and Analysis.

The employer needs to know the hazards faced by employees in order to develop and implement effective control measures. Site characterization provides the information needed to identify site hazards and to select employee protection methods. The more accurate, detailed, and comprehensive the information available about a site, the more site protective measures can be tailored to the actual hazards that the employees may encounter. Congress clearly intended that such a requirement be included. Section 126(b)(1) of SARA provides that the proposal include "requirements for a formal hazard analysis of the site * * *."

It is important to recognize that site characterization is a continuous process. At each phase of site characterization, information is obtained and evaluated to define the potential hazards of the site. This assessment is to be used to develop a safety and health plan for the next phase of work. In addition to the formal information gathering that takes place during the phases of site characterization described above, all site personnel should be constantly alert for new information about site conditions.

In paragraph (c) of the final rule OSHA has used most of the language in paragraph (c) of the proposal. New headnotes have been added to the major paragraphs to make reading the requirements easier.

In paragraphs (c)(1) through (c)(4) of the final rule, OSHA has used the language of paragraphs (c)(1) through (c)(3) of the proposal. The reason for the one additional paragraph in the final rule is that OSHA has numbered the initial unnumbered paragraph in the proposal, and renumbered the rest. This is an editorial change and does not change any of the proposed requirements.

In paragraph (c)(5) of the final rule, OSHA is using the language of paragraph (c)(4) of the proposal with one change. Paragraph (c)(4)(ii) of the proposal has been revised as paragraph (c)(5)(ii). The new requirement still requires the use of a five minute escape self-contained breathing apparatus, however, its need is now based upon two conditions. In the proposal, all employees had to have access to an ESCBA during initial site entry. Two commenters, the State of Wyoming (10-9) and CDM Federal Programs Corporation (10-63), suggested that OSHA revise this requirement to recognize that the use of ESCBAs should be determined by the nature of the health hazards and the nature of the work to be performed. OSHA agrees that all employees who cannot be exposed to site conditions where possible health hazards may occur should not be required to carry ESCBAs. Therefore OSHA has amended its proposal as follows. Two conditions will now limit the employee population that must be provided access to ESCBA. They are (1) if positive-pressure self-contained breathing apparatus is not used as part of the entry personal protective equipment; and (2) if respiratory protection is warranted by the potential hazards identified during the preliminary site evaluation. Workers in populations where these two conditions are not met need not be provided with ESCBA.

Paragraphs (c)(5)(i), (c)(5)(iii), and (c)(5)(iv) contain the exact language as proposed in paragraphs (c)(4)(i), (c)(4)(iii), and (c)(4)(iv).

In paragraph (c)(6) of the final rule; OSHA is using the language from paragraph (c)(5) of the proposal with some changes.

In paragraph (c)(6)(ii) of the final rule, OSHA has required that direct reading instruments be used where available. In the proposal OSHA had required only that appropriate equipment be used. The agency believes that direct reading instruments, where they are available for specific chemical hazards, will provide a more expeditious assessment of the hazards when there is not enough time during a specific work cycle to send samples out to a laboratory for analysis. In some situations, employees may be present at a particular job site for only a brief time. Certain sampling techniques, other than direct reading instruments, may require a longer time for analysis than the employee's actual exposure time on the job. Therefore, OSHA is amending its proposal by recognizing direct reading instruments as an alternative to standard testing procedures. OSHA has added the phrase "appropriate direct reading test equipment" in place of "appropriate equipment."

OSHA has also added a paragraph (c)(6)(iv) that would require that an ongoing air monitoring program be implemented in accordance with paragraph (h) of the final rule after site characterization has determined that the site is safe for start-up of operations. This is not a new requirement since it uses the same language as that proposed in paragraph (c)(8) of the proposal. OSHA has moved the paragraph from its position in the proposal to paragraph (c)(6)(iv) of the final rule because it is related to the subject matter of paragraph (c)(6). OSHA considers this to be an editorial change because there is no change in the proposed language.

Paragraphs (c)(6)(i) and (c)(6)(iii) continue to use the language of proposed paragraphs (c)(5)(i) and (c)(5)(iii).

In paragraph (c)(7) of the final rule OSHA is using the language of proposed paragraph (c)(6) with one change. In the note which describes risks to be considered, OSHA has amended paragraph (a) by changing the language to reflect the exposure limits and levels to be used in the final rule. Direct reference to Permissible Exposure Limits (PELs), Threshold Limit Values (TLVs), or Recommended Exposure Limits (RELs) has been deleted and a reference is made to permissible exposure limits and published exposure levels as defined in the final rule. No substantive change is made since these terms incorporate PELs, TLVs, and RELs by definition.

Paragraph (d)—Site Control

In paragraph (d) of the final rule OSHA is using the language of paragraph (d) of the proposal. Minor editorial changes have been made for clarity without changing the proposed requirements. The need for requirements for site control is discussed at 52 FR 29625 in the preamble to our proposal. There were few substantive comments. OSHA concludes that these provisions are necessary as discussed in the proposal.

Paragraph (e)—Training

The proposed rule included specific provisions for initial and routine training of employees before they would be permitted to engage in hazardous waste operations that could expose them to

safety and health hazards. Section 126(b)(2) of SARA requires initial and recurrent training to be included in the final rule. The intent of the final training provisions is to provide employees with the knowledge and skills necessary to perform hazardous waste clean-up operations with minimal risk to their safety and health.

The proposed requirements for training in paragraph (e) addressed the needs of employees who will be working at CERCLA sites, certain RCRA sites, and sites designated or identified for clean-up by state or local governments.

The proposed provisions included a minimum of 40 hours of initial instruction off the site, and a minimum of three days of actual field experience under the direct supervision of a trained and experienced supervisor, at the time of job assignment. Congress has specifically imposed these hour and day requirements under section 126(d) of SARA for the proposed final standard. The proposed requirement represented a one-time effort by the employer for each employee covered by this standard. Employees would not need to be retrained for 40 hours at each site at which they work. Employees who had received the required training at one site could use that training to meet the proposed requirement at other sites even if it involved a different employer, provided the previous training addressed the hazards at the new site.

There are often many hazards at a waste site. The employee must be trained to recognize the hazards and appropriate work practices to minimize these hazards. The employee must also be well trained in the use of respirators and other forms of personal protective equipment. Without training, that equipment may not be used effectively and may not provide adequate protection. An extensive training program is necessary to assure that employees can use personal protective equipment effectively.

Managers and supervisors at regulated facilities, who are directly responsible for the site's operations, must have the same training as that of site employees and additional time for specialized training on managing hazardous waste operations. Since these managers and supervisors are responsible for directing others, it is necessary to enhance their ability to provide guidance and to make informed decisions. Section 126(d)(2) of SARA provides that there shall be eight hours of additional training for supervisors and managers.

The provisions also proposed that employees be retrained on an annual basis on relevant matters such as review of health hazards and the use of personal protective equipment. Employees at hazardous waste operations may face serious health and safety risks. Reminders are needed of this and of work practices necessary to avoid hazards. Personal protective equipment provides much of this protection. If there is no retraining in the use, care and maintenance of personal protective equipment, such equipment is unlikely to be properly utilized to provide adequate protection.

In all areas of training, whether it be for general site employees, supervisors at the site, or for the use of specific equipment, the level of training provided must be consistent with the worker's job function and responsibilities. Refresher training must be provided to reemphasize the initial training and to update employees on any new policies or procedures.

Section 126(d)(3) of SARA requires that OSHA provide for certification that an employee has received the training required by the standard. Section 126(d)(1) provides that OSHA not require training for employees who have already received equivalent training. The final standard has provisions to meet this directive.

OSHA requested comment as to whether its proposed training requirements were appropriate for hazardous waste operations. OSHA's proposed training requirements in paragraph (e) were limited to hazardous waste operations that involve the clean-up of uncontrolled hazardous waste disposal sites. Of all the issues raised by OSHA in its proposal, training was one that received a substantial amount of comment. Important comments directed to the paragraph (e) training requirements follow. Comments addressing the training of emergency response workers will be discussed later in this preamble under the appropriate paragraphs.

In paragraph (e)(1) of the final rule OSHA has combined the introductory paragraph of proposed paragraph (e) with the language proposed in paragraph (e)(5). The introductory paragraph of the proposal has been designated paragraph (e)(1)(i) and proposed paragraph (e)(5) has been designated (e)(1)(ii). OSHA considers this an editorial change which groups two general requirements under a single paragraph titled "General."

In paragraph (e)(2) of the final rule OSHA is using the language of paragraph (e)(1) in the proposal. Some minor changes are made to reflect the renumbering of the paragraph without changing any of the proposed requirements.

In paragraph (e)(3) of the [illegible] OSHA is revising the proposed wording of paragraph (e)(2) of the proposal. Several comments addressed the proposed 40-hour training requirement for all employees who work on hazardous waste sites (i.e., W[illegible] Insurance Company, 10–8; Internatic Technologies, 10–44; Cooperweld St 10–41; James T. Dufour, 10–78). Some the commenters believed that 40 hou of training for some employees at th type of site was excessive. For exam it was argued that 40 hours of trainin was excessive for general laborers w may be installing perimeter fencing around an unopened site and who ar not exposed to any hazards. This typ employee normally will not be wearn the type of protective equipment or b performing the type of tasks normall associated with removal of hazardou wastes. On the other hand, employee who will be "digging in the dirt" afte the site has been opened in order to remove hazardous waste may need additional training because of the typ of equipment they will be using and t types of hazards to which they will b exposed.

Wausau Insurance commented, "I f the 40 hour minimum training requirement is excessive for [illegible] employees who will never be [illegible] work above level D protection." The commenter continues, "The excessive training requirements of the current proposal add a significant burden to employers in situations where only lo levels of protection are required (e.g., level D and level C situations)."

OSHA has revised its proposal for hours of training for all employees engaged in hazardous waste operation at uncontrolled hazardous waste sites For general site workers, OSHA is retaining the 40-hour, three-day on-the job training requirement. OSHA has concluded that this level of training is necessary to protect general site workers because they are engaged in difficult work in areas with safety and health hazards. Moreover, OSHA believes the Congressional language is quite clear on this matter.

However, for certain types of other workers, OSHA has concluded that le training may be appropriate. For example, those workers who visit site only on occasion and then under the supervision of experienced site worke are required to have 24 hours of traini and one-day of on-the-job training OSHA has also concluded that th same level of training would be appropriate for those general s workers who work in areas wh been monitored and fully charac[illegible]

indicating that exposures are under both permissible exposure limits and published exposure limits and that respirators are not necessary.

In paragraph (e)(4) of the final rule OSHA is using the language proposed in paragraph (e)(3).

In paragraph (e)(5) of the final rule OSHA is using the language proposed in paragraph (e)(4) with the addition of a new sentence. Some commenters thought that the proposed language for the qualification of trainers was too broad and ambiguous. The State of Indiana (10–23) offered a representative comment: "Knowledge or training equivalent to (redundant phrase removed) a level of training higher than the level that they are presenting is no assurance that an employee is capable of providing adequate training to other employees."

Another commenter, the International Union of Operating Engineers (10–58), stated, "We believe it irresponsible to summarily state that trainers must be 'qualified,' without defining the term other than to suggest that one who knows more than the person he trains may be a qualified trainer."

Subsequent to the receipt of post-hearing briefs, Congress amended section 126(d) of SARA to require the Secretary of Labor to develop requirements for the certification of training programs offered to employees and employers who must meet the training requirements of this standard. OSHA will soon be publishing a Notice of Proposed Rulemaking to carry out this Congressional direction. The requirements of that rulemaking will expand on the provisions stated in this rulemaking.

In order to provide interim guidance to employees and employers in determining the competency of trainers and their qualifications, OSHA has added two sentences to the proposed language. These sentences require the use and demonstration of training, credentials and experience to show competency as a trainer.

In paragraph (e)(6) of the final rule OSHA is using the language of proposed paragraph (e)(6) with one minor change. In addition to permitting certification to be given by the classroom instructor, OSHA will also recognize certifications given by the head or supervisory instructor of the training facility. This change recognizes the fact that some training certificates are signed by the head instructor upon recommendation of the classroom instructor, rather than by the individual classroom instructor.

In paragraph (e)(7) of the final rule OSHA is using the exact language of proposed paragraph (e)(7).

In paragraph (e)(8) of the final rule OSHA is using the language of proposed paragraph (e)(8) with the addition of an example of the type of refresher training that OSHA would consider acceptable. OSHA considers, and has now suggested, that critiques of prior emergency response performance can serve as a means of refresher training. Critiques of performance during an emergency response can give employees a training experience in which they have actual knowledge of the acceptable or nonacceptable actions taken during the response. Such critiques can also provide employees with the experience they may need to perform in a more appropriate manner during their next response. The proposed requirement for annual refresher training has not been changed.

In paragraph (e)(9) of the final rule OSHA is using the exact language of paragraph (e)(9) in the proposal.

Paragraph (f)—Medical Surveillance

The proposed rule included specific provisions for baseline, periodic and termination medical examinations. Section 126(b)(3) of SARA provides that this rule include requirements for medical examinations of workers engaged in hazardous waste operations. In addition, the EPA manual referred to in section 126(e) of SARA has more detailed requirements for initial or baseline, periodic and termination medical examinations. The clear Congressional direction is to provide a comprehensive medical surveillance program for employees engaged in hazardous waste operations where it is medically prudent.

In paragraphs (f)(1) and (f)(2) OSHA is making some changes for clarity. In addition, OSHA is using the new term "permissible exposure limits or published exposure levels" instead of the term "established exposure levels." The reasoning for this change has been discussed under the paragraph of this preamble addressing definitions.

OSHA would like to clarify an issue concerning who is covered by medical surveillance under paragraph (f)(2) that has cause confusion since the promulgation of the interim final rule. After reviewing the record of comments addressing medical surveillance, it seems that several commenters, in particular from the fire service (i.e., 10–1, 10–3, 10–4, 10–12, 10–32 10–79), believe that all firefighters must have the medical surveillance protections of paragraph (f) since they may wear respirators 30 days or more a year. Firefighters responding to structural fires will typically wear self-contained breathing apparatus when they enter burning structures or other hazardous locations and they may make such responses 30 days or more a year. OSHA is not requiring all firefighters who wear respirators 30 days or more a year to have medical surveillance. Paragraph (f) applies only to individuals within the scope of paragraph (a)(1)(i) through (a)(1)(iii) as set forth in paragraph (a)(2)(ii). Typical firefighters from local fire departments do not fall within this scope. These firefighters are normally covered by the requirements of paragraph (q) as specified in paragraph (a)(2)(iv). Paragraph (q) does not contain requirements for medical surveillance of firefighters unless they are members of an organized and designated hazardous materials response team, are hazardous materials specialists, or have been injured due to an overexposure to health hazards during an emergency incident involving hazardous substances as established in paragraphs (e)(9) (i) and (ii) of the final rule.

In paragraph (f)(3) of the final OSHA is using the language proposed in paragraph (f)(2) with some changes. In new paragraph (f)(3)(i)(B), OSHA is adding the phrase "unless the attending physician believes a longer interval is appropriate" to the proposed language of paragraph (f)(2)(i)(B). Several commenters (State of Wyoming, 10–9; American Society of Safety Engineers, 10–29; Union Carbide Corporation, 10–56) suggested that an annual medical examination may be excessive for some employees, particularly when an attending physician can make a recommendation for a less frequent schedule. The American Society of Safety Engineers (10–29) stated, "This reviewer concurs in the approach that OSHA has outlined in this comment area that the practical health benefit of annual medical examination for hazardous waste operation workers is indeed uncertain. This is a broad area that requires input from the attending physician, the employee and the employer. It is recommended that annual medical examination *not* be required rigidly, that this be a flexible time frequency."

Wyoming (10–9) stated, "Periodic occupational health physical examination on an annual basis may not be warranted under all conditions." They go on to state, "It seems reasonable that a good occupational health program requiring physical examination would be based upon documented personal exposure levels and a medical physician's recommendation rather than on an arbitrary administrative decision to require personnel to undergo annual

periodic physicals if they fit into the categories under § 1910.120 (f)(1)(i) and (f)(1)(ii)."

Union Carbide (10–56) said, "The frequency of medical examinations and consultations in this proposed rule has been redefined and the proposed change clarifies the issue of medical surveillance but retains the annual requirement for 'all employees who wear a respirator * * *.' This frequency of examination is arbitrary. There is not medically-supportable rational for this annual requirement."

There were also comments in support of OSHA's annual physical examination requirement. The Occupational Health Nurses (10–30) stated, "AAOHN supports pre-exposure, annual, and exit examinations with provision of additional exams if over-exposure or signs or symptoms develop." Lockheed (10–45) responded to OSHA's question on whether examinations should be performed yearly, or at other intervals by stating, "Medical exams should be performed at least yearly."

GSX Chemical Services, Inc. (10–63) stated, "(12) Paragraph (f) describes medical surveillance requirements. The general program described by OSHA for pre-employment, annual, post-exposure, and termination medical examinations is excellent."

BP America, Inc. (10–65) stated, "The need for medical surveillance of workers who would be covered under the provisions of the proposed regulation is appropriate and is supported." They further state, "The proposed requirement to examine workers exposed in emergency situations, but not continue periodic surveillance simply because of the single episode, *per se*, is logical, and is strongly supported. Having such employees continue under periodic medical surveillance on the basis of the findings of the medical examination is, of course, appropriate."

Because of variations in employee exposures due to work schedules, annual physicals may not be medically necessary. OSHA concludes that annual medical examinations may not always be appropriate. Accordingly the standard is amended to permit the physician to reduce the frequency to not less than bi-annually if the physician believes it is appropriate. The physician may also increase the frequency if it is medically appropriate.

OSHA has also replaced the term "established exposure limits" with the phrase "permissible exposure limits or published exposure levels" in new paragraph (f)(3)(i)(D) since the terms have been redefined as previously explained.

The rest of the language in new paragraph (f)(3) remains as it was proposed in paragraph (f)(2).

In paragraph (f)(4)(i) of the final rule OSHA is using the exact language proposed in paragraph (f)(3)(i).

In paragraph (f)(4)(ii) of the final OSHA is using the language of proposed paragraph (f)(3)(ii) with one change. OSHA is still requiring that the content of medical examination and consultations be determined by the attending physician. However, OSHA has added language that would direct the employee, employer, and physician to Appendix D for guidelines in developing the examination.

Several commenters requested guidance on the content of the medical examinations required by the proposal. The Okolona Fire District (10–1) commented, "As written the current document is rather vague." They continued, ". . . the document should give guidance on what the physical examination should entail." The American Association of Occupational Health Nurses (10–30), suggested, "At least minimum content of the physical examination should be specified. An "exam" may be no more than visual inspection of an individual's eyes, ears and throat and have no relevance to the exposure situation."

Other commenters supported OSHA's proposal for the employer and the physician to determine examination protocols. Eastman Kodak (10–88) commented, "We support OSHA's position that the physician is best able to determine an appropriate medical surveillance protocol. As noted by OSHA, employees may be exposed to differing substances and may be required to use differing levels of personal protective equipment, such as respirators. In view of the particular circumstances presented, the physician is in the best position to formulate and follow an appropriate medical protocol. OSHA should not include a detailed protocol for medical surveillance." Lockheed (10–45) responded to OSHA's issue on protocols, "No. As with training, differences in amounts, kinds and combinations of exposures in different working situations require that protocol for medical surveillance be left to the discretion of the attending physician."

Dr. James Melius testified, "I'd like to direct most of my testimony to discussions of medical surveillance programs for hazardous waste and emergency response workers. I'd like to begin be saying that programs for both of these sets of workers are extremely important." (Tr. pg. 107) He goes on to say, "The medical surveillance program for the workers, therefore, [illegible] with initially assessing the [illegible] work at the site and their capability conducting that work. It should incl an assessment that focuses through medical history and initial physical examination on their cardiovascular respiratory system, also looking for signs of other major medical proble Selective testing may also be useful these instance, including pulmonary function testing, chest x-rays and electrocardiograms. However, the workers may differ in their benefits f this testing depending on their age an other risk factors." (Tr. pgs. 110–111)

OSHA believes both sides of the argument can be addressed by placin recommended criteria for medical examination protocols in the Appendi to this section. Some commenters ha suggested protocols that OSHA considered for placement in the Appendix. The St. Petersburg Fire Department (10–4) suggested, "A full physical examination: height, weight, eyesight, pulse, blood pressure, respiratory, skin examination, neurological examination, heart and lungs, medical history, and any other aspects determined by the physician. Also included are: Pulmonary fu [illegible] test, chest X-ray, urine analys blood test, and hearing exam The chapter on medical surve found in the OSHA/NIOSH/EPA/Coa Guard manual in Appendix F also provides guidance. OSHA also believe that the language of Appendix F will provide guidance for developing the examination protocol.

In paragraph (f)(5) of the final rule OSHA is using the language of paragraph (f)(4) in the proposal with or change. OSHA has added a recommendation that a physician licensed in occupational medicine be used to supervise or administer the examination. Several commenters suggested that the use of such a physician would assure a more comple occupation-oriented examination than one offered by a physician licensed in another field.

Representative of these comments was the suggestion of the American Association of Occupational Health Nurses (10–30). The AAOHN (10–30) stated, "The nature of the potential exposures in hazardous waste operations requires specialized knowledge in toxicology—knowledge of signs and symptoms and effects of exposure to various substances—r common in basic health professio curricula. This is information th occupational health nurses an physicians may have via advan

education degrees or continuing education, certification and experience." The AAOHN recommended that OSHA change its proposed language to require the examination to be performed "by a registered professional nurse or licensed physician with training and expertise in evaluating exposures to hazardous substances."

In recognition of AAOHN's comments, OSHA has added the recommendation for the use of a physician from the field of occupational health. The language of the final rule, while it does not preclude the use of occupational nurses, does not specifically call for the use of an occupational nurse. The final language requires that the examination be conducted under the supervision of a licensed physician and that would certainly allow the use of occupational nurses if the attending physician permits.

In paragraphs (f)(6), (f)(7) and (f)(8) of the final rule OSHA is using the exact language proposed in paragraphs (f)(5), (f)(6) and (f)(7)

Paragraph (g)—Engineering controls, work practices, and personal protective equipment for employee protection

OSHA is using the same opening paragraph for paragraph (g) that was in the opening paragraph for paragraph (g) in the proposal.

In paragraph (g)(1)(i) of the final rule OSHA is using the language of paragraph (g)(1)(i) of the proposal.

In paragraphs (g)(1)(ii) and (g)(1)(iii) of the final rule OSHA is using the exact language of paragraphs (g)(1)(ii) and (g)(1)(iii) of the proposal, except that the reference to Subpart G is deleted. A new paragraph (g)(1)(iv) is added to cross reference the requirements of Subpart G for clarity.

In paragraph (g)(2) of the final rule OSHA is using the language proposed in paragraph (g)(2) with some editorial modifications.

In paragraphs (g)(3), (g)(4) and (g)(5) of the final rule OSHA is using the language of paragraphs (g)(3), (g)(4) and (g)(5) in the proposal with minor editorial corrections to be consistent with the terms and language of the final rule.

Paragraph (h)—Monitoring

In paragraph (h)(1) of the final rule OSHA has combined the proposed language in the opening paragraph and paragraph (h)(1) of the proposal with a clarification. The new paragraphs are designated (h)(1)(i) and (h)(1)(ii).

In paragraph (h)(1)(i), OSHA has modified its proposed language by adding the phrase, "where it is not obvious that an exposure does or does not exist." OSHA is adding this phrase to clarify that monitoring is not necessary where the site environment or safety precautions taken by the employer prevent employee exposure to hazardous levels of chemical exposure. OSHA is only requiring monitoring where there may be a question as to an employee's exposure. When there is a question then the employer should monitor. Where there is no question of exposure, then monitoring is not necessary. For example, if it is obvious through site characterization and analysis that there are no exposures at the worksite, monitoring need not be performed unless worksite conditions or work practices change to the extent that workers could be potentially exposed to hazardous concentrations of chemical exposure. If an employer decides that employees should wear level B protection in an area where exposure will most probably be below the PEL's, then during initial entry monitoring will not be necessary because the employees are more than adequately protected.

In paragraphs (h)(2) and (h)(3) of the final rule, OSHA is using the language proposed in paragraphs (h)(2) and (h)(3) except for two changes. First, OSHA is adding language to clarify that monitoring should be used to determine exposure above permissible exposure limits which are not immediately dangerous to life or health. Second, OSHA is deleting proposed subparagraph (h)(3)(v) because it is too general in nature and the previous four subparagraphs adequately cover the hazard.

In paragraph (h)(4) OSHA is using the exact language proposed in paragraph (h)(4) with one addition. If employees with the highest exposure are overexposed, then representative samples of other employees who may be overexposed must be taken to determine if controls or PPE are needed.

Paragraph (i)—Informational programs

In paragraph (i) of the final rule OSHA is using the language of paragraph (i) of the proposal. Minor editorial changes have been made for clarity without changing the proposed requirements. The need for requirements for informational programs is discussed at 52 FR 29628 in the preamble to our proposal. There were few substantive comments. OSHA concludes that these provisions are necessary as discussed in the proposal.

Paragraph (j)—Handling drums and containers

In paragraph (j) of the final rule OSHA is using the language proposed in paragraph (j). Minor editorial changes have been made for clarity without changing the proposed requirements. The need for requirements for handling drums and containers is discussed at 52 FR 29629 in the preamble to our proposal. There were few substantive comments. OSHA concludes that these provisions are necessary as discussed in the proposal.

Paragraph (k)—Decontamination

In paragraph (k) of the final rule OSHA is using the language of paragraph (k) in the proposal. However, the agency has reorganized the paragraph and provided headnotes to make the reading of the paragraph easier. The need for requirements for decontamination is discussed at 52 FR 29629 in the preamble to our proposal. There were few substantive comments. OSHA concludes that these provisions are necessary as discussed in the proposal.

Paragraph (l)—Emergency response by employees at uncontrolled hazardous waste sites

In paragraph (l)(1) OSHA is using the exact language from proposed paragraph (l)(1)(i).

In paragraphs (l)(2)((i) through (l)(2)(xi) OSHA is using the exact text from paragraph (l)(1)(ii)(A) through (l)(1)(ii)(K).

In paragraph (l)(3) OSHA is using the language of proposed paragraph (l)(2)(i)(A) with some modification. The modifications are considered editorial and are made because of OSHA's reorganization of the overall proposed paragraph (l). In paragraph (l)(3) OSHA will require that employees performing emergency response at uncontrolled hazardous waste sites be trained in accordance with paragraph (e) of this section. This requirement is the same as proposed in the first part of proposed paragraph (l)(2)(i)(A). The portion of proposed paragraph (l)(2)(i)(A) that addresses training at RCRA sites is moved to the discussion of training in paragraph (p) of this rulemaking because of OSHA's reorganization of this paragraph.

The language proposed in paragraph (l)(2)(i)(B) has been moved to paragraph (e)(9) of this final rule. This move is considered editorial since it does not change any duties imposed on the employer, it only reflects the reorganization of proposed paragraph (l).

In paragraphs (l)(4)(i) through (l)(4)(vii) OSHA is using the exact language from paragraphs (l)(2)(ii)(A) through (l)(2)(ii)(G).

In summary, paragraphs (l)(1) through (l)(4) of the final rule use the language of paragraphs (l)(1) and (l)(2) of the proposal with some modifications due to the reorganization of the emergency response requirements of the proposal.

Paragraph (m)—Illumination

In paragraph (m) and Table H–120.2 of the final rule OSHA is using the language of paragraph (m) and Table H–102.1 of the proposal with one minor change. OSHA has combined the language of the opening paragraph and paragraph (m)(1) of the proposal into one paragraph designated paragraph (m). Minor editorial changes have been made for clarity without changing the proposed requirements. OSHA has combined the language of the opening paragraph and paragraph (m)(1) of the proposal into one paragraph designated paragraph (m). The need for requirements for illumination is discussed at 52 FR 29831 in the preamble to our proposal. There were few substantive comments. OSHA concludes that these provisions are necessary as discussed in the proposal.

Paragraph (n)—Sanitation at temporary workplaces

In paragraph (n) of the final rule OSHA is using the language of paragraph (n) in the proposal with some minor editorial changes. The opening paragraph of proposed paragraph (n) has been deleted because it is not a requirement, and Table H–102.2 has been renumbered Table H–102.3. Minor editorial changes have been made for clarity without changing the proposed requirements. The need for requirements for illumination is discussed at 52 FR 29831 in the preamble to our proposal. There were few substantive comments. OSHA concludes that these provisions are necessary as discussed in the proposal.

Paragraph (o)—New technology programs

In paragraph (o) of the final rule OSHA is using the language of proposed paragraph (p). This change is necessary due to the reorganization of the emergency response requirements and the moving of proposed paragraph (o). *Certain Operations Conducted Under the Resource Conservation and Recovery Act of 1976 (RCRA).* Proposed paragraph (o) has been moved to paragraph (p) of the final rule.

In paragraph (o)(1) of the final rule OSHA is using the exact language that was proposed in paragraph (p)(1).

In paragraph (o)(2) of the final rule OSHA has used the language of paragraph (p)(2) with some changes. OSHA has revised the paragraph to include some additional examples of acceptable means of suppression. The agency has also added additional information to provide guidance to the employer in making evaluations of products and new technologies. These changes are considered to be editorial since the requirement of the proposal has not changed.

Paragraph (p)—Certain operations conducted under the Resource Conservation and Recovery Act of 1976 (RCRA)

In paragraph (p) of the final rule OSHA is using the language proposed in paragraph (o) with some changes.

OSHA has revised the opening paragraph of the proposal to include large quantity generators of hazardous waste that store those wastes less than 90 days within the scope of this paragraph.

In paragraphs (p)(1), (p)(2), (p)(3), and (p)(4) of the final rule OSHA has used the proposed language of paragraphs (o)(1), (o)(2), (o)(3), and (o)(4) with some minor editorial changes. The proposed requirements for each individual paragraph remain the same.

OSHA is adding two new paragraphs, (p)(5) and (p)(6), to address new technology programs and material handling programs respectively. In paragraph (p)(5) OSHA requires the employer to develop and implement procedures for using new technologies and equipment. Congress, in the SARA legislation, directed OSHA to address new technology programs in its rule. The language of the proposal limited new technology programs to uncontrolled hazardous waste sites. OSHA is adding this paragraph to complete Congress's directive and to address these programs at RCRA TSD facilities.

In paragraph (p)(6) OSHA is requiring employers to develop and implement a material handling program for the same reasons as stated above.

In paragraph (p)(7) OSHA is using the language from paragraph (o)(5) of the proposal with some changes. In paragraph (p)(7)(i) OSHA is using the language of paragraph (o)(5)(i) with one change. OSHA has moved a requirement to paragraph (p)(7)(i) from the last sentence of proposed paragraph (o)(5)(ii) that requires employers to provide employees with a certificate indicating that they have successfully completed the training required in the paragraph. OSHA believes that the issuance of this certificate will make it easier for employers to determine if new employees have completed the necessary training and are ready for employment.

In paragraph (p)(7)
OSHA is using the langu
paragraph (o)(5)(ii) of the prop
two exceptions. First, the last s
of proposed paragraph (o)(5)(ii
been moved to paragraph (p)(7
final rule as discussed above. S
the requirement for eight hours
annual refresher training is add
paragraph. OSHA has added th
requirement to this paragraph b
the new format of the final rule
addresses training for new empl
and current employees separatel
proposal there was no distinctio
between the two groups of emplo

In paragraph (p)(7)(iii) OSHA h
added a new paragraph addressi
training of trainers who will be
providing the required training to
employees. OSHA received many
comments on trainers' qualificatio
The proposed language for RCRA
facilities did not address these
qualifications. Therefore OSHA is
requiring that trainers be properly
trained and qualified to conduct th
of training that they are expected t
provide.

In paragraph (p)(8) of the final O
is addressing emergency response
RCRA facilities. Paragraph (
addresses the subject mat
in paragraph (1) of the pro
paragraph applied to RCRA TSD
facilities. Most of the language used
this paragraph has been taken from
proposed paragraphs (l)(1).

In paragraph (p)(8)(i) of the final r
OSHA has used some of the languag
from paragraph (l)(1)(i) of the propos
The basic requirement for the
development and implementation of
written emergency action plan that
addresses site procedures for handli
emergency response is the same in th
final rule as it was in the proposal.
OSHA will still permit an exemption
from this paragraph if the employer
totally evacuates the facility at the ti
of the emergency and has an emergen
action plan meeting the requirements
29 CFR 1910.38(a). OSHA considers th
changes made in this paragraph to be
editorial since the proposed obligation
of the employer remain the same.

In paragraph (p)(8)(ii) of the final ru
OSHA has used the language of
proposed paragraph (l)(1)(ii). This
paragraph contains the minimum
elements that must be addressed in the
employers emergency response plan.
The basic elements of the required
remain the same as proposed.

As stated before, training an
certification of training were
many issues discussed during
rulemaking for this final rule. Several

commenters indicated that there was a need for more specific training criteria for the courses to be offered and the quality of the instructors presenting the courses. In light of those comments, OSHA has added a new paragraph (p)(8)(iii) that addresses emergency response training on RCRA TSD facilities. The language that is used in the final rule was developed from that suggested in the comments made to the record of this proceeding.

Basically OSHA is requiring that all employees who are expected to perform emergency response at RCRA TSD facilities be trained in how to safely perform emergency response duties prior to being called upon to perform those duties [See paragraph (p)(8)(iii)(A).] Examples of the types of training to be provided have been given. Exemptions are provided in Exception #1 and Exception #2 when employee exposure is reduced through pre-emergency planning that includes development of employee awareness of hazards. OSHA is also requiring that employees who have attended and successfully completed the training that is required in paragraph (p)(8) be certified as having done so. Employers would also have to certify the continued competency of employees on an annual basis [See paragraph (p)(8)(iii)(C)].

In paragraph (p)(8)(iv) of the final rule OSHA is addressing the procedures to be used for handling emergency incidents. The language in the final rule has been taken from paragraph (1)(2)(ii) and the requirements remain the same as proposed.

Paragraph (q)—Emergency response to hazardous substance releases not previously covered

In paragraph (q) OSHA is covering those emergency response situations that occur at locations other than uncontrolled hazardous waste sites and RCRA TSD facilities. The typical site covered by this paragraph would be a transportation accident where hazardous substances are or have the potential for leaking into the environment. Other sites covered by this paragraph would include hazardous substance releases at chemical manufacturing facilities such as the release that occurred at the Union Carbide plants in Buphol, India, and Institute, WV.

A typical scenario where this paragraph would be applicable would be the emergency response to a derailed tank car containing a hazardous substance that has begun to leak its contents into the atmosphere. The emergency response to this type of accident would usually include the first responders (i.e., witnesses, police, employees on the train), the first dispatched-responsers (i.e., the first due rescue and fire apparatus), any multiple alarm dispatches (i.e., additional fire and rescue apparatus, HAZMAT teams, state fire marshal, Coast Guard or Federal E.P.A. national response teams), and the clean-up crew (i.e., initial response employees of the site owner who clean-up the release). Employees of outside clean-up contractors would be covered by paragraphs (b) through (p).

As the clean-up scenario proceeds towards completion, the various employees on the scene will need different levels of training and protective equipment required in this paragraph.

In paragraph (q)(1) of the final rule OSHA is using the language taken from paragraph (l)(1)(i) with some minor editorial changes. OSHA wants to emphasize that employers who will evacuate their employees from the workplace when an emergency occurs and who do not permit any of their employees to assist in handling the emergency are exempt from the requirements of this paragraph if they provide an emergency action plan in accordance with § 1910.38(a).

In paragraph (q)(2) of the final rule OSHA is using the exact language of paragraph (l)(1)(ii).

In paragraph (q)(3) of the final rule OSHA is using the language proposed in paragraph (l)(3)(ii) with the following changes. In paragraph (q)(3)(i) OSHA has used the language proposed in paragraph (l)(3)(ii)(A) with some change. OSHA has deleted the requirement that the senior official responding to an hazardous substance emergency establish the Incident Command System (ICS). As a result of other requirements in this final rule, the Incident Command System should already be established prior to an emergency. The senior official responding to an incident scene should only need to take charge of the incident and begin to implement the preplanned ICS.

In paragraph (q)(3)(iv) OSHA has used the proposed language of paragraph (l)(3)(ii)(D) with a change. The proposed language required all employees engaged in emergency response and exposed to hazardous substances in any way to wear positive pressure self-contained breathing apparatus while engaged in emergency response. The final rule will require only those employees engaged in emergency response and exposed to hazardous substances "presenting an inhalation hazard or potential inhalation hazard" to wear positive pressure self-contained breathing apparatus. OSHA has made this change since several comments suggested that some individuals engaged in emergency response may be exposed to hazardous substances that do not pose an inhalation hazard and, therefore, would negate the need for respiratory protection. Such protection would become a burden to those employees engaged in operations not requiring the use of such equipment.

In paragraph (q)(3)(vi) of the final rule OSHA has used the language of paragraph (l)(3)(ii)(F) with the following change. In the proposal OSHA called for "qualified basic life support" personnel to be present at the site. In some emergency medical service (EMS) systems the term "basic-life support (BLS)" identifies a unique group of trained individuals who have received an established level of specialized training. Typically emergency medical response begins at the first-responder level, and progresses through basic-first aid and basic-life support to advanced-life support (ALS). The amount of training and expertise increases as individuals progress through the system. As a result of several comments, OSHA has decided to reduce the level of training required for a minimum stand-by capability at a hazardous waste sites. Employees trained and qualified in basic first aid have the basic skills such as initial patient assessment, maintenance of airway, control of bleeding, immobilization of fractures, and possibly cardiopulmonary resuscitation (CPR) to control injuries until a higher level responder arrives. If response time for BLS or ALS is long enough that it is necessary for this level of training to be at the site in case of an emergency, this rule does not prohibit the stationing of this level at the site. However, OSHA believes that if BLS or ALS service is available within a reasonable time, a qualified basic first aider can provide the necessary interim care.

The rest of the language in paragraph (q)(3) contains the language that was proposed in paragraph (l)(3)(ii) without change.

In paragraph (q)(4) of the final rule OSHA has used the language from paragraph (l)(3)(i)(C) with some minor editorial changes to reflect the changes made to other paragraphs in this rule. The basic requirement for the use and training of skilled support personnel remains the same as it was proposed.

In paragraph (q)(5) of the final rule OSHA has used the language from paragraph (l)(3)(i)(B) with one major change. OSHA has eliminated the requirement for 24 hours of training for specialist employees and has replaced it

with a requirement for annual training or demonstration of competency in their area of specialization. The required minimum hours of training was deleted because some employees may need more or may need less than 24 hours for their area of specialization. Specialized employees are by definition individuals specialized in their area of expertise and should only require whatever level of training is necessary to maintain their level of competency. OSHA considers the other changes made to the language of this paragraph to be editorial.

In paragraph (q)(6) of the final rule OSHA addresses the training requirements for employees who will be responding to hazardous materials incidents. In paragraph (q)(6) (i), (ii), (iii), and (iv) OSHA has provided tiered training criteria for those employees who may be designated as members of an emergency response team. The various levels of response and the required competency levels are based upon recognized levels of response being discussed in the hazardous materials response industry as recommended in several of the comments made during this rulemaking.

To illustrate OSHA's tiered approach to training, the following scenario describes a possible emergency response call.

A state trooper is on routine patrol along a highway passing through a residential and light industrial area of a large metropolitan city. Ahead in his path of travel, the trooper notices a multi-vehicle accident involving a large overturned tank truck. Immediately the trooper uses his radio to contact his dispatcher to report the accident. After letting the dispatcher know the location and type of accident, the trooper places his vehicle across the travel lanes of the highway approaching the accident site to stop traffic. While he is doing this the dispatcher is alerting the fire and rescue companies in the immediate area and dispatching an established number of fire and rescue vehicles. The trooper then surveys the accident scene from his vehicle trying to identify the type of cargo on the overturned truck. Seeing three different U.S. DOT placards on the vehicle the trooper makes note of the four digit numbers and checks his DOT Emergency Response Guide for a summary of actions to be taken for the chemicals identified on the placards. After determining his next on-site responsibility, he recontacts his dispatcher with the additional information and secures the scene. He stays away from the immediate accident site and does not become involved in rescue or site mitigation.

While the trooper has been securing the scene, the fire and rescue units dispatched after his first radio call begin to arrive on the scene with the additional information from the trooper's second call. The officer-in-charge (OIC) of the fire/rescue response stops his vehicles in a safe location and contacts the state trooper. After determining the type of accident and vehicles involved, the OIC takes control of the scene and directs his crews to take a predetermined defensive action in controlling a leak that has begun on the tanker. The OIC then contacts the dispatcher and reports his assessment of the accident scene including the fact that the tanker is now leaking. He requests the dispatcher to send him the closest hazardous materials response team. He also asks for representatives from the shipper of the liquid and the liquid's manufacturer.

In the meantime, firefighters have established a perimeter defense of the accident scene using fire hose lines and proper personal protective equipment. They begin to evacuate surrounding homes and businesses as indicated in the Emergency Response Guide in case the leaking tanker should explode. They construct dikes and diversion pits to contain water and chemical run-off from the fire hose lines. Rescue personnel, including emergency medical technicians, have made a preliminary assessment of the accident scene and have determined whether any individuals in the spill area are trapped in their vehicles or need immediate assistance. They report their observations to the OIC.

A decision is made by the OIC, based upon the reports of the police officer, the emergency response crew, and the data on the DOT placards, that no rescue attempts can be made safely until such time as the leaking liquid is positively identified and controlled by the HAZMAT team. The proper local authorities are notified under the requirements of SARA Title III.

As firefighters continue to provide defensive protection of the scene and as emergency medical technicians establish a triage area for the treatment of injured passengers, the HAZMAT team arrives and begins to take control of the accident scene. Hazardous materials technicians and specialists assess the scene and plan their attack on the leaking tanker.

After equiping themselves properly, the HAZMAT team makes a final, pre-attack evaluation of the scene, including a scan of the area with appropriate monitoring equipment, and reports its findings to the fire and rescue personnel. Based upon the results of the pre-a' evaluation and a determination by HAZMAT team members using monitoring equipment that the spill area is non-hazardous, rescue personnel now enter the area of the accident to provide emergency medical treatment to injured passengers and to extricate those passengers who may have been trapped in their vehicles. The HAZMAT team proceeds to the point of release and secures the leak.

After all the injured have been cared for and after the leak has been stopped, the firefighters and HAZMAT team begin to clean-up the accident scene in accordance with pre-planned procedures.

All four levels of hazardous materials response have played a role in this scenario. The state trooper, the first on the scene, is the first responder awareness level. The first responding fire and rescue companies who provided the defensive attack are the first responder operations level. The responding HAZMAT team had both hazardous materials technicians and hazardous materials specialists. In this scenario the state trooper would have to have a sufficient amount of training, the first responding fire/rescue companies would need eight hours of training, and the HAZMAT team would need 24 ho of training. The tiered training schedu is based upon the duties and responsibilities of the individuals involved in the various levels of response illustrated in the scenario.

In paragraph (q)(7) of the final rule OSHA is addressing the competency of the trainers who will be providing the training necessary for those employees responding to hazardous materials incidents. As discussed before, several commenters were concerned that OSHA's proposal for the qualifications of trainers was too weak.

In paragraph (q)(8) of the final rule OSHA is addressing refresher training for those employees who have been trained in accordance with paragraph (q)(6). In paragraph (l)(3)(i)(A) of the proposal OSHA addressed the training of employees who perform emergency response at non-hazardous waste clean-up sites. OSHA is using this proposed language in paragraphs (q)(8)(i) and (q)(8)(ii) because the language of the proposal was intended to cover the type of emergency response now regulated by paragraph (q).

In paragraph (q)(9) of the final rule OSHA is using the language of paragraph (l)(4)(ii) of the proposal with some editorial change. The basic requirement that employees who are members of an organized or designated

HAZMAT team and hazardous materials specialists receive a baseline physical examination in accordance with paragraph (f) of this section remains the same as proposed.

In paragraph (q)(10) of the final rule OSHA is using the proposed language of paragraph (l)(4)(iii).

In paragraph (q)(11) of the final rule OSHA is using the exact language as proposed in paragraph (l)(5). In paragraph (l)(5) OSHA regulated post-emergency clean-up and the language used in that paragraph has caused some confusion. Rather than change the basic requirement, OSHA is offering the following clarification of the intent of paragraph (q)(11):

Post-emergency response can be performed by two basic groups of employees: employees of the site, or employees from off of the site. Post-emergency clean-up begins when the individual in charge of the initial emergency response declares the site to be under control and ready for clean-up. For the purposes of this rule, paragraph (q)(11) will apply to those employees who come from other employers located off-of-the-site to perform post-emergency clean-up. Employees of the employer at the site where the release occurred, and who perform post-emergency clean-up, are considered, under this rule, to be part of the initial emergency response and not subject to paragraph (q)(11). The reason for this distinction is that employees at the site are more familiar with the types of emergencies that may occur and the types of clean-up operations that may have to take place. The more hazardous exposure to employees occurs when outside contractors or other off-site employees are brought into a strange environment and are expected to clean-up the residue from a release. With this clarification, OSHA concludes that no change to the proposed language is necessary.

III. Summary of the Preliminary Regulatory Impact and Regulatory Flexibility Analysis and Environmental Impact Assessment

Introduction

Executive Order 12291 (46 FR 13197, February 19, 1981) requires that a regulatory impact analysis be conducted for any rule having major economic consequences for the national economy, individual industries, geographical regions, or levels of government. In addition, the Regulatory Flexibility Act of 1980 (Pub. L. 96-353, 94 Stat. 1164 (5 U.S.C. 601 *et seq.*)) requires the Occupational Safety and Health Administration (OSHA) to determine whether a regulation will have a significant economic impact on a substantial number of small entities, and the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321, *et seq.*) requires the agency to assess the environmental consequences of regulatory actions.

In order to comply with these requirements, OSHA has prepared a Regulatory Impact and Regulatory Flexibility Analysis (RIA) for the hazardous waste operations and emergency response standard. This analysis includes a profile of the industries that will be affected, the estimated number of employees who are at risk from occupational exposures to hazardous wastes, technological feasibility, costs, benefits, and an overall economic impact of the standard. The RIA is available in the OSHA Docket Office.

Data Sources

The primary sources of information used for this analysis are: an April 1987 report by the Eastern Research Group (ERG) entitled, "Preparation of Data To Support a Regulatory Analysis and Environmental Assessment of the Proposed Standard for Working at Hazardous Waste Sites;" and the comments supplied in response to the Notice of Proposed Rulemaking, the comments made during the public hearings, and the post-hearing comments and submissions. The information contained in the ERG report was gathered from the Environmental Protection Agency sources, industry sources, experts in the area of hazardous waste management, etc. Consequently, OSHA believes that it has given due notice to all responsive parties and that the data used are the best available data for this final Regulatory Impact Analysis (RIA).

Industry Profile

The standard will affect about 20,000 uncontrolled hazardous waste sites, about 4,000 hazardous waste operations conducted under the Resource Conservation and Recovery Act (RCRA) of 1976, about 13,600 spills of hazardous materials that occur annually outside a fixed facility, and about 11,000 spills of hazardous material that occur annually inside a fixed facility. The firms that will be affected by this standard are as follows: about 100 contractors that perform hazardous waste site clean-ups, about 50 engineering or technical services firms that perform hazardous waste preliminary assessments or site investigations and remedial investigations or feasibility studies for hazardous waste site cleanups, about 300 RCRA-regulated commercial treatment, storage and disposal facilities; about 3,700 RCRA-regulated facilities that are operated by a hazardous waste generator; about 19,(state and local police departments; about 28,000 fire departments; about 7 private hazardous materials (HAZMA response teams; and about 22,000 manufactures that use in-hours personnel to respond to emergency spills of hazardous materials within th facility.

Population at Risk

As many as 1.758 million employees police officers, and firefighters may be at risk from exposure to hazardous waste or to hazardous materials durin an emergency response to a hazardous material spill. Of these employees, abc 14,000 work at uncontrolled hazardous waste site cleanups, 52,700 at RCRA-regulated facilities, 563,200 are police officers, 944,500 are firefighters, 7,500 are private HAZMAT members, and 176,000 are members of industrial fire brigades that provide in-plant emergency responses to hazardous material spills. Most of these employee however, do not work fulltime around hazardous waste. In fact, most police officers will not face a hazardous material emergency response and mos fire fighters and industrial fire brigade personnel, who are at risk, are annuall exposed to hazardous materials for on a few hours.

Feasibility

The standard does not require the us of any large-scale capital equipment th is not currently used in normal work operations. In addition, each provision requires equipment and work practices that are currently available. Thus, OSHA has determined that the standar is technologically feasible.

Benefits

This standard will protect 1.757 million employees and firefighters from health and safety hazards caused by their exposure to hazardous wastes. Th benefits of this standard are quantified in Chapter 3 of the Final Regulatory Analysis (FRA). The FRA indicates tha this standard will prevent 20 cancer deaths per year and from 6 to 20 deaths per year from cardiovascular, neurological, renal and liver disorders. The standard will also prevent 1,925 injuries per year involving 18,700 lost work days. The FRA also estimates tha 6 fatalities that are not illness related will be prevented. This last figure is likely to be an underestimate. Individua incidents which are discussed in

Chapter 3 and which may have been prevented by following the standard have sometimes led to more than 6 deaths. Also, the FRA does not take into account the benefits to the surrounding, non-worker community derived from the better handing of hazardous waste and emergency response incidents by the more qualified, properly trained and equiped response teams that are likely to result from compliance with this standard.

Chapter 3 of the FRA also presents risk rates. For example, the 17 excess cancer deaths per 1000 exposed hazardous waste workers for an occupational lifetime of exposures is likely to be reduced by 75 per cent.

OSHA concludes therefore, that this standard will substantially reduce the significant risk of material impairment of health which results from exposure to hazardous waste either at hazardous waste operations or from emergency response.

However, section 126 of SARA gives OSHA clear statutory directions to issue this standard and is reasonably explicit about what type of provisions should be included. Section 126 is also a free standing provision and not an amendment to the OSH Act. Accordingly, it evidences a legislative intent to issue these regulations without the specific need to quantify benefits and reach significant risk conclusions.

Cost of Compliance

OSHA used current work practices as its baseline for estimating the cost of full compliance with the standard. This estimated cost does not include any cost that is currently being incurred by employers as part of their work practices because those work practices, and therefore those costs, would continue whether or not the final standard were promulgated.

OSHA estimated that the total annualized incremental cost of full compliance with the standard will be about $153.422 million, of which $27.986 million will be spent by contractors on government-mandated clean-ups of uncontrolled hazardous waste sites, $18.372 million will be spent by RCRA-regulated facility cleanups and operations, $17.332 million will be spent by police departments, $50.553 million will be spent by fire departments, $4.226 million will be spent by private HAZMAT teams, and $29.179 million will be spent by industrial fire brigades. The provision with the largest annual cost of compliance is the employee training provision ($92.978 million), followed by the medical surveillance provision ($11.293 million), the use of escape self-contained breathing apparatus ($9.507 million), and the written plan to minimize employee exposure to hazardous materials during postemergency cleanups of hazardous materials spills ($8.381 million).

Economic Impacts

Most of the incremental cost of compliance will be paid by the government or the private firm responsible for the hazardous waste cleanup. OSHA calculated that it is economically feasible for every affected industry or group to comply with the standard. There may be an impact upon some labor markets as a consequence of the provision that only sufficiently experience employees, or employees certified to have received the necessary training at an appropriate training facility, will be allowed to work on hazardous waste sites. This provision will effectively curtail the current practice of using local subcontractors to provide short-term employees for hazardous waste site cleanups and limit the number of employees eligible to work at hazardous waste sites. This in turn, may increase future wage rates and the cost of hazardous waste site cleanups.

Regulatory Flexibility Analysis

Pursuant to the Regulatory Flexibility Act of 1980, the Assistant Secretary has assessed the expected impacts of the standard on small entities. Based on the available information, OSHA determined that the standard may have some impact upon some small entities. The cost of adequately training an employee off-site prior to working at a hazardous waste site cleanup will substantially reduce the use of subcontractor labor on a one-time basis. Thus, some local subcontractors face a potential reduction in hazardous waste site cleanup work. The majority of this subcontracted work will probably be performed by those subcontractors who concentrate upon this type of work. Subcontractors who have performed cleanup work but who do not elect to train employees needed to qualify for future work will probably be excluded from working in this market.

In addition, there could be an economic impact upon some small local fire departments depending upon the amount of financial resources available to them for additional training. With the allowance for different amounts of training hours depending upon the expected extent of involvement with hazardous materials spills, OSHA believes that this economic impact will not significantly affect a substantive number of local fire departments.

Environmental Impact Assessm[ent]
Finding of No Significant Impact

OSHA reviewed the final standard and concluded that no significant environmental impacts are likely to result from its promulgation. In OSHA's December 19, 1986, interim final rule for the protection of workers engaged in hazardous waste and emergency response operations, information was solicited from the public on various issues, including possible environmental impacts of the regulation. On the basis of the review detailed below, and in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.), the Council on Environmental Quality (CEQ) NEPA regulations (40 CFR Part 1500 et seq.), and the Department of Labor's implementing regulations for NEPA compliance (29 CFR Part 11), the Assistant Secretary determined that the standard will not have a significant impact on the external environment.

In most OSHA regulatory actions, two environments may be affected: (1) The workplace environment, and (2) the general human environment external to the workplace, including impacts on air and water pollution, solid waste, and energy and land use. The hazard[ous] waste standard, however, is uni[que] that it focuses on the external environment because during these operations, the workplace and the external environment are usually one and the same. The standard is also unusual in that it is the first regulation since the passage of the Occupational Safety and Health Act of 1970 (the Act) to be mandated specifically by Congress under section 126 of the Superfund Amendments and Reauthorization Act (SARA). As indicated in the earlier sections of this Notice, the provisions of section 126 detail those protections that OSHA must include for workers at hazardous waste and emergency response operations. For example, section 126 requires that provisions for site analysis, training, and medical surveillance, among others, be included in the standard. In addition, there is a wide range of OSHA, EPA, and other standards that already apply to some activities that occur at hazardous waste sites and during emergency response operations. For example, there are existing OSHA standards that cover construction activities, onsite machinery and equipment, selection and use of personal protective equipment, han[dling] of toxic and explosive materials, a[nd] general environmental and safe[ty] such as walking-working surfa[ces] and illumination. Moreover, the

standard, in many instances, either reflects OSHA regulations, procedures adopted by other federal agencies (e.g., EPA), or practices that are commonly used by those knowledgeable in hazardous waste and emergency response operations. To the extent that existing standards, rules, or standard operating procedures are incorporated into this rule, no significant change in the environment is anticipated.

Potential Positive Environmental Effects

While OSHA does not anticipate any significant environmental effects as a result of this standard, there is a potential for some beneficial impacts. In general, as the work practices and procedures requirements of the standard reduce the incidence of employee injury, an indirect result should be a reduction in the likelihood of environmental releases of hazardous materials. (Virtually all provisions of the standard can be categorized in this manner, because once they are implemented, they will have a positive influence on worker safety.) As these requirements also provide guidance for routine reactions to situations encountered in emergencies, they may help to reduce the severity of such emergencies. Additional potentially positive impacts might be categorized as follows: (1) Direct benefits associated with reduced incidences in, or the severity of, the release of hazardous materials, and (2) indirect benefits associated with the improved flow of information and increased worker awareness of hazardous materials or with improved worker preparedness (either for normal site operations or for unexpected accidents). The following discussion highlights those provisions with potentially beneficial environmental effects.

Monitoring (h). The requirements of this provision will increase the amount of monitoring for airborne hazardous substances at uncontrolled hazardous waste sites. In some cases, hazardous materials will be detected, and steps will be taken to more quickly control the release to the atmosphere, thereby providing an environmental benefit.

Handling drums and containers (j). A number of specific requirements of this paragraph will result in potentially positive environmental impacts. Relevant subsections include: inspecting drums and containers; making salvage drums or absorbents available; initiating a spill containment program; emptying unsound drums and containers; requiring ground penetrating radar; and decontaminating equipment. These are discussed briefly in the following sections.

Inspection of drums/containers before moving (j)(1)(iii). This section requires that drums and containers be inspected for their integrity prior to handling and moving. Under current practices at hazardous waste cleanup sites, drums and containers are often handled with mechanized equipment (e.g., a barrel grapple on a backhoe arm) before being inspected. If unsound drums rupture or leak, any solid contaminated by the rupture or leak is removed for disposal upon completion of drum handling operations. This provision will, through worker awareness, increase the probability of averting ruptures and leakage. In addition, any hazardous materials in containers that cannot be moved without rupturing will have to be transferred to safe containers (as required in paragraph (j)(1)(ix)), with obvious positive environmental effect. These procedures will reduce the volume of contaminated soil requiring disposal and will also lower the possibility that leachate or runoff will carry contaminants offsite. This requirement does not have an impact on emergency response actions because the routines outlined are already standard procedure.

Availability of salvage drums/absorbents (j)(1)(vii). This provision specifies that salvage drums or containers as well as suitable amounts of proper absorbent be kept available for use in areas where spills, leaks, or ruptures might occur. This requirement will result in increased availability of salvage drums and spill absorbents at uncontrolled hazardous waste sites and in emergency response situations where spills are imminent, thereby reducing the environmental consequences related to spills of hazardous materials. In those instances where salvage drums/absorbents would have been inadequate without this requirement, there is a potential benefit to the environment.

Implement a spill containment program (j)(1)(viii). The purpose of this provision is to develop a program to be implemented, in the event of a major spill, that would contain and isolate hazardous materials being transferred into containers and drums. To the extent that this program is implemented, there will be a potential for reducing the negative environmental effects that occur as a result of spills, leakage, etc. This requirement will reduce the environmental impact of potential spills at cleanup sites.

Empty unsound drum/containers (j)(1)(ix). Unsound containers often rupture during handling operations. This provision requires that drums and containers that cannot be moved without spillage, leakage, or rupture emptied into a sound container. This requirement will reduce the incidenc drum and container rupture and will provide concomitant environmental benefits.

Use of a ground penetrating syste estimate depth and location of containers (j)(1)(x). At present, when preliminary investigations at hazard waste sites indicate that buried drun or containers may be present, ground penetrating systems are frequently u to determine the depth and location the drums. The requirements of this provision will very likely cause an increase in the use of these systems, thereby reducing the number of instances in which buried containers would go undetected or where undetected containers would be accidentally ruptured during excavat activities. Where it applies, the requirement will help prevent accide ruptures and spills, improve the thoroughness of remedial actions, an benefit the site environment.

Develop Decontamination Proced (k). The requirement to clean and decontaminate equipment, personne and personal protective equipment prevent the migration of hazardous substances offsite, thereby benefittir the surrounding environment. It will eliminate or minimize the contamina of personnel. Decontamination is already standard practice at most cleanup sites.

Inform Contractors of Existing Hazards (b)(1)(iv). Under this provis contractors are to be informed of an "fire, explosion, health or other safet hazards" that are present. By ensurn that contractors know the location a nature of site hazards, this requirem will reduce the possibility that contractor activities will result in inadvertent releases or spills of hazardous materials.

Gather Information Before Site En (c)(4). Among the various requiremer for site evaluation are those for information to be gathered regarding (a) pathways for hazardous substanc dispersion, and (b) status and capab of emergency response teams. These procedural requirements will result i increased ability to predict and preve movement offsite of hazardous materials, will mitigate emergency situations quickly and effectively, an will reduce the possibility or severity contaminant release. As the requirements of the section mirror current practices, compliance will be accomplished with little difficulty.

Provide Worker Training (e). The training requirement will assure that

activities will be carried out by qualified personnel with the knowledge and ability to fulfill their job functions in a safe and responsible manner. To the extent that this occurs, there will be a potential benefit to the environment (in emergency-response situations, similar benefits accrue from emergency response training and RCRA-regulated facility employee training.) For example, worker training will result in a more careful handling of materials accompanied by a reduction in the potential for inadvertent spills, improper disposal, etc. In emergency situations this training will assure a more efficient and effective cleanup of hazardous materials or a quicker response to avert further hazardous material releases.

Informational Programs (i). These provisions include requirements for a site safety and health plan, pre-entry briefings, and site inspections. These requirements will not directly affect the existing environment; their purpose is to provide workers with the information necessary to carry out their activities safely. To the extent that this occurs, there will be a potential benefit to the environment. For example, implementing comprehensive site plans will reduce the incidence of accident releases of hazardous materials. Similarly, requiring pre-entry briefings will reduce the likelihood of employees unknowingly encountering contaminants or allowing their improper release or disposal.

Emergency Response Plan (l) and (r). The development and implementation of a response plan for on-site and off-site emergencies will provide for greater worker preparedness. In emergencies, workers will be able to respond more quickly and effectively, thereby benefitting the environment.

Potentially Negative Impacts

In some situations, there may be a potential for negative effects on the environment as a result of the standard. Any potential negative impacts, however, are not expected to be significant. To illustrate this, negative impacts may occur if there is an increase in the time required to implement specific cleanup and spill response activities, or to implement safe work practices or procedures required by the standard. Any such effects are likely to be negligible, however since response teams already have established operating procedures similar to those in OSHA's standard.

Another potential negative impact may result from the requirement that salvage drums and absorbents be readily available. This may increase the number of repacked hazardous waste drums and the amount of spent absorbent used, which could add to the amount of material that would require safe disposal. Similarly, the requirements for implementation of proper decontamination procedures for all equipment, personal protective gear, and personnel at hazardous waste emergencies, cleanup sites, and RCRA sites may result in an increase in the frequency and use of decontamination materials. This, in turn, could generate a larger volume of spent decontamination fluids which would then require proper handling and disposal. Again, any such impact should be negligible since decontamination is largely standard procedure for most hazardous waste operations. A possible exception may be during activities that take place in the early stages of site evaluation before cleanup, or at spill response, where decontamination procedures are not yet standardized.

Conclusion

To the extent that the work practices and procedures are implemented, increased worker awareness and preparedness will result in a safer and more healthful work environment, which may indirectly benefit the environment. Any negative impacts that may occur as a result of the implementation of these work practices or procedures are expected to be negligible. Based on this assessment and the information presented earlier in the preamble, OSHA concludes that no significant environmental changes are anticipated as a result of the standard.

IV. International Trade

OSHA has evaluated the potential impact that this final standard would have upon international trade. OSHA has determined that the final standard would have a minimal potential impact upon the prices of products, so that there would be no effective change in the level of exported or imported products.

V. OMB Approval Under the Paperwork Reduction Act

This section contains a collection of information pertaining to the preparation of a written safety and health plan site characterization and analysis, site control, training, medical surveillance, emergency controls, work practices, PPE, monitoring, informational programs, handling drums and containers, decontamination, emergency response planning, and emergency response drills. OMB has reviewed these collections and has approved them under approval number 1218-0139.

VI. Public Reporting Burden

Public reporting burden for the collection of information identified in paragraph IV above is estimated to average 3.7 hours per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other suggestions for reducing this burden to the Director, Directorate of Safety Standards Programs, OSHA Room N-3605, U.S. Department of Labor, Washington, DC 20210; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

VII. State Plan States

This Federal Register document amends an interim final rule (section 1910.120, "Hazardous Waste Operations and Emergency Response") in Subpart H of 29 CFR Part 1910, OSHA's general industry standards on hazardous materials. The 25 states with their own OSHA approved occupational safety and health plans must develop a comparable standard applicable to both the private and public (state and local government employees) sectors within six months of the publication date of this permanent final rule or show OSHA why there is no need for action, e.g., because an existing state standard covering this area is already "at least as effective" as the new Federal standard. These states are Alaska, Arizona, California (for state and local government employees only), Connecticut (for state and local government employees only), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, New York (for state and local government employees only), North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Virgin Islands, Washington, and Wyoming. After the effective date of this final rule, until such time as a state standard is promulgated, Federal OSHA will provide interim enforcement assistance, as appropriate, in these states.

VIII. Federal and State Coverage of the Public Sector and Volunteers

Federal OSHA is specifically precluded by section 3(5) of the Occupational Safety and Health Act from covering employees of any State or political subdivision thereof. However, States that elect to have their own occupational safety and health program

under a plan approved and monitored by OSHA under section 18(b) of the Act are required to extend their coverage to these employees (see section VII of this preamble for a list of these states). Thus, a State hazardous waste operations standard that is either identical to or at least as effective as this Federal OSHA standard will apply to public sector as well as private sector employees in these States. Public sector employees in States without State plans will be protected from exposure to hazardous waste under Title I, section 126(f) of the Superfund Amendments and Reauthorization Act of 1986 (SARA), administered by the U.S. Environmental Protection Agency (EPA). This section requires EPA to promulgate, within 90 days of the promulgation date of this Federal OSHA standard, an identical standard that applies to employees of State and local governments in each State which does not have an OSHA-approved State plan.

OSHA's hazardous waste operations standard and the identical or equivalent standards which will be promulgated by States with OSHA-approved State plans apply under certain circumstances to volunteer firefighters and other volunteers engaged in emergency response operations or hazardous waste operations within the scope of these standards (see paragraphs (a) (1) and (2) of this standard). In many communities, fire and other emergency response services are provided by volunteer companies. In some cases, these companies are established as independent, private sector entities. In others, they are considered a component of State or local government (see 29 CFR 1975.5 for factors to consider in determining whether or not an entity is a public agency). A volunteer working for a public or private entity in a State with an OSHA-approved State plan must be considered an employee under State law in order to be covered by the State's hazardous waste operations and emergency response standard—for example, because of an employer-employee relationship or because of pay, retirement benefits, health insurance coverage, workers' compensation benefits, etc. This determination is made by each State as part of its standards promulgation process. In a State without an OSHA-approved State plan, a private entity fire company with one or more paid employees would be covered under this Federal standard (29 CFR 1975.4).

IX. Federalism

This final regulation has been reviewed in accordance with Executive Order 12612 (52 FR 41685; October 30, 1987) regarding Federalism. Executive Order 12612 requires that agencies, to the extent possible, refrain from limiting state policy options, consult with states prior to taking any actions that would restrict state policy options, and take such actions only when there is clear constitutional authority and the presence of a problem of national scope. The Executive Order provides for preemption of state law only if there is a clear Congressional intent for the Agency to do so. Any such preemption is to be limited to the extent possible.

During the development of this rule, OSHA has, to the extent possible, refrained from limiting state policy options by developing a rule that permits flexibility on the part of the States through the use of performance language. We have also consulted with the States, in particular those states with approved state OSHA plans, during the public hearings and comment period called for in the notice of proposed rulemaking for this rule. We will continue to work with the States that have state occupational safety and health plans approved under section 18 of the OSHA Act to encourage those states to develop their own policies to achieve program objectives and continue to work with appropriate state officials as they present their state standards for approval.

This rulemaking is directed by Congress under the Superfund Amendments and Reauthorization Act of 1986 (SARA). The Constitutional authority and Congressional intent for Federal action in the area of worker protection standards for employees engaged in hazardous waste operations is mandated clearly in section 126 of SARA. Congress therefore has identified the protection of employees engaged in hazardous waste operations and emergency response as a problem of national scope through the enactment of SARA.

Section 18 of the Occupational Safety and Health Act (OSH Act), permits any state to develop its own independent state occupational safety and health program. Any state may develop and submit to OSHA, for approval and use, a state occupational safety and health program that provides, among other things, worker protection "at least as effective as" that protection provided under the Federal program.

With respect to Section 4 of Executive Order 12612, Section 18 of the OSH Act also expresses Congress' clear intent to preempt state laws relating to issues with respect to which Federal OSHA has promulgated occupational safety or health standards. Under the OSH Act, a state can avoid preemption only if it submits, and obtains Federal OSHA approval of, a plan for the developme of such standards and their enforcem as mentioned above. Occupational safety and health standards develope by such approved Plan-States must, among other things, be as least as effective in providing safe and health employment and places of employme as the Federal standards.

OSHA has used its regulatory preemption of State law to the minim level necessary to achieve the objecti of the OSH Act and section 126 of SARA.

Section 126 of SARA, under paragr (f), requires that the U.S. Environmen Protection Agency (EPA) provide tho state and local government workers v are not covered by the protections of approved OSHA state plans with protection that is identical to that provided under the Federal OSHA standards. Non-state and local government employees would be regulated by the Federal OSHA standard. State and local governmen workers, employed in 25 non-OSHA state plan states, would not normall covered by standards promulgated under Federal OSHA or approved st OSHA programs. OSHA has worked with EPA in the development of this final rule to assure that the protectio provided to all state and local government employees is consistent with that provided by the Federal OS standard and the OSH Act. EPA as t regulatory authority for the OSH state plan states will address their actions with respect to worker protection policies that have federal implications in their rulemaking.

This final rule is written so that employees engaged in hazardous wa operations and related emergency response operations in every state, including those state and local government employees in states regulated by EPA, would be protecte by general, performance oriented standards. To the extent that there a state or regional peculiarities caused the types of hazardous waste operations, including the types of related emergency response provide states with occupational safety and health plans approved by OSHA un section 18 of the OSH Act would be to develop their own state standard address any special problems. This would assure the compatibility of st or local emergency response plans developed independently by state o local emergency planning committe under Title III of SARA with Federa

worker protection standards issued by OSHA and EPA.

And, under the OSH Act, if a state develops its own OSHA approved state program, it could make additional requirements in its standards. States that will be covered by regulations issued by EPA under paragraph 126(f) of SARA will be provided the same option. Moreover, the performance nature of this final rule, of and by itself, allows for flexibility by states and owners or operators of hazardous wastes sites or providers of emergency response to provide as much safety as possible using varying methods consonant with the conditions in each state.

In summary, there is a clear national problem, identified by Congress, related to occupational safety and health in hazardous waste operations and related emergency response. While the individual states, if all acted collectively, might be able to deal with the safety problems involved, most have not elected to do so in the seventeen years since the enactment of the OSH Act. Those states which have elected to participate under section 18 of the OSH Act, would not be preempted by this final regulation and would be able to address special, local conditions within the framework provided by this performance oriented standard while ensuring that their standards are at least as effective as the Federal standard. State comments were invited on the proposal and those that were submitted to the record were fully considered prior to promulgation of this Final Rule.

The agency certifies that this document has been assessed in light of the principles, criteria, and requirements stated in sections 2 through 5 of Executive Order 12821. There are no provisions of this rulemaking that are inconsistent with the principles, criteria, and requirements stated in sections 2 through 5 of Executive Order 12821. States which have approved state occupational safety and health plans may incur additional costs associated with standards development and enforcement as a result of this rulemaking. Funding for these approved state plan programs is available from OSHA under section 18 of the OSH Act. This rulemaking would not change the State's ability to discharge traditional State governmental functions or other aspects of State sovereignty.

An outline of § 1910.120 is included for the convenience of the reader as follows:

Table of Contents

(4) Skilled support personnel.
(5) Specialist employees.
(6) Training.
(i) First responder awareness level.
(ii) First responder operations level.
(iii) Hazardous materials technician.
(iv) Hazardous materials specialist.
(v) On-scene commander.
(7) Trainers.
(8) Refresher training.
(9) Medical surveillance and consultation.
(10) Chemical protective clothing.
(11) Post-emergency response operations.

Appendices to § 1910.120—Hazardous Waste Operations and Emergency Response

Appendix A—Personnel Protective Equipment Test Methods.
Appendix B—General Description and Discussion of the Levels of Protection and Protective Gear.
Appendix C—Compliance Guidelines.
Appendix D—References.

List of Subjects in 29 CFR Part 1910

Containers, Drums, Emergency response, Flammable and combustible liquids, Hazardous materials, Hazardous substances, Hazardous wastes, Incorporation by reference, Materials handling and storage, Personal protective equipment, Storage areas, Training, Waste disposal.

Authority

This document has been prepared under the direction of John A. Pendergrass, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210. Pursuant to section 126 of the Superfund Amendments and Reauthorization Act of 1986 as amended (Pub. L. 99-499; 100 Stat. 1613 as amended by Pub. L. 100-202, section 101(f), 101 Stat. 1329-198, 29 U.S.C. 655 note), sections 6 and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 655, 657), section 4 of the Administrative Procedure Act (5 U.S.C. 553), 29 CFR Part 1911 and Secretary of Labor's Order 9-83 (48 FR 35736). It is proposed to amend 29 CFR Part 1910 by revising § 1910.120, Hazardous Waste Operations and Emergency Response, as set forth below.

Signed at Washington, DC this 28th day of February 1989.

John A. Pendergrass,
Assistant Secretary of Labor.

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

1. The authority citation for Subpart H of Part 1910 is amended by adding the following paragraph:

Authority: * * *

Section 1910.120 issued under the authority of section 126 of the Superfund Amendments and Reauthorization Act of 1986 as amended (29 U.S.C. 655 note), sections 6 and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 655, 657), section 4 of the Administrative Procedure Act (5 U.S.C. 553), 29 CFR Part 1911 and Secretary of Labor's Order 9-83 (48 FR 35736).

2. Section 1910.120 of Title 29 of the Code of Federal Regulations is revised to read as follows:

§ 1910.120 Hazardous waste operations and emergency response.

(a) *Scope, application, and definitions*—(1) *Scope.* This section covers the following operations, unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility for employee exposure to safety or health hazards:

(i) Clean-up operations required by a governmental body, whether Federal, state, local or other involving hazardous substances that are conducted at uncontrolled hazardous waste sites (including, but not limited to, the EPA's National Priority Site List (NPL), state priority site lists, sites recommended for the EPA NPL, and initial investigations of government identified sites which are conducted before the presence or absence of hazardous substances has been ascertained);

(ii) Corrective actions involving clean-up operations at sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA) as amended (42 U.S.C. 6901 *et seq.*);

(iii) Voluntary clean-up operations at sites recognized by Federal, state, local or other governmental bodies as uncontrolled hazardous waste sites;

(iv) Operations involving hazardous wastes that are conducted at treatment, storage, and disposal (TSD) facilities regulated by 40 CFR Parts 264 and 265 pursuant to RCRA; or by agencies under agreement with U.S.E.P.A. to implement RCRA regulations; and

(v) Emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard.

(2) *Application.* (i) All requirements of Part 1910 and Part 1926 of Title 29 of the Code of Federal Regulations apply pursuant to their terms to hazardous waste and emergency response operations whether covered by this section or not. If there is a conflict or overlap, the provision more protective of employee safety and health shall apply without regard to 29 CFR 1910.5(c)(1).

(ii) Hazardous substance clean-up operations within the scope of paragraphs (a)(1)(i) through (a)(1)(iii) of this section must comply with all paragraphs of this section except paragraphs (p) and (q).

(iii) Operations within the scope of paragraph (a)(1)(iv) of this section must comply only with the requirements of paragraph (p) of this section.

Exception: For large quantity generators of hazardous waste who store those wastes less than 90 days and for small quantity generators of hazardous waste, who have emergency response teams that respond to releases of, or substantial threats of releases of, hazardous substances, for their RCRA workplaces only paragraph (p)(8) of this section is applicable. Such generators of hazardous wastes who do not have emergency response teams that respond to releases of, or substantial threats of releases of, hazardous substances are exempt from the requirements of this section.

(iv) Emergency response operations for releases of, or substantial threats of releases of, hazardous substances which are not covered by paragraphs (a)(1)(i) through (a)(1)(iv) of this section must only comply with the requirements of paragraph (q) of this section.

(3) *Definitions*—*"Buddy system"* means a system of organizing employees into work groups in such a manner that each employee of the work group is designated to be observed by at least one other employee in the work group. The purpose of the buddy system is to provide rapid assistance to employees in the event of an emergency.

"Clean-up operation" means an operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared-up, or in any other manner processed or handled with the ultimate goal of making the site safer for people or the environment.

"Decontamination" means the removal of hazardous substances from employees and their equipment to the extent necessary to preclude the occurrence of foreseeable adverse health effects.

"Emergency response" or *"responding to emergencies"* means a response effort by employees from outside the

immediate release area or by other designated responders (i.e., mutual-aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area, or by maintenance personnel are not considered to be emergency responses within the scope of this standard. Responses to releases of hazardous substances where there is no potential safety or health hazard (i.e., fire, explosion, or chemical exposure) are not considered to be emergency responses.

"Facility" means (A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any water-borne vessel.

(3) *"Hazardous materials response (HAZMAT) team"* means an organized group of employees, designated by the employer, who are expected to perform work to handle and control actual or potential leaks or spills of hazardous substances requiring possible close approach to the substance. The team members perform responses to releases or potential releases of hazardous substances for the purpose of control or stabilization of the incident. A HAZMAT team is not a fire brigade nor is a typical fire brigade a HAZMAT team. A HAZMAT team, however, may be a separate component of a fire brigade or fire department.

"Hazardous substance" means any substance designated or listed under paragraphs (A) through (D) of this definition, exposure to which results or may result in adverse affects on the health or safety of employees:

(A) Any substance defined under section 101(14) of CERCLA;

(B) Any biological agent and other disease-causing agent as defined in section 101(33) of CERCLA;

(C) Any substance listed by the U.S. Department of Transportation as hazardous materials under 49 CFR 172.101 and appendices; and

(D) Hazardous waste as herein defined.

"Hazardous waste" means—

(A) A waste or combination of wastes as defined in 40 CFR 261.3, or

(B) Those substances defined as hazardous wastes in 49 CFR 171.8.

"Hazardous waste operation" means any operation conducted within the scope of this standard.

"Hazardous waste site" or "Site" means any facility or location within the scope of this standard at which hazardous waste operations take place.

"Health hazard" means a chemical, mixture of chemicals or a pathogen for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, heptatoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. It also includes stress due to temperature extremes. Further definition of the terms used above can be found in Appendix A to 29 CFR 1910.1200.

"IDLH" or *"Immediately dangerous to life or health"* means an atmospheric concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere.

"Oxygen deficiency" means that concentration of oxygen by volume below which atmosphere supplying respiratory protection must be provided. It exists in atmospheres where the percentage of oxygen by volume is less than 19.5 percent oxygen.

"Permissible exposure limit" means the exposure, inhalation or dermal permissible exposure limit specified in 29 CFR Part 1910, Subparts G and Z.

"Published exposure level" means the exposure limits published in "NIOSH Recommendations for Occupational Health Standards" dated 1986 incorporated by reference, or if none is specified, the exposure limits published in the standards specified by the American Conference of Governmental Industrial Hygienists in their publication "Threshold Limit Values and Biological Exposure Indices for 1987–88" dated 1987 incorporated by reference.

"Post emergency response" means that portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and clean-u[illegible] begun. If post emergency[illegible] performed by an employer's own employees who were part of the i[illegible] emergency response, it is conside[illegible] be part of the initial response and post emergency response. However, group of an employer's own empl[illegible] separate from the group providing response, performs the clean-up operation, then the separate group employees would be considered to performing post-emergency respon[illegible] and subject to paragraph (g)(11) of section.

"Qualified person" means a per[illegible] with specific training, knowledge a[illegible] experience in the area for which th[illegible] person has the responsibility and t[illegible] authority to control.

"Site safety and health supervis[illegible] official)" means the individual loca[illegible] on a hazardous waste site who is responsible to the employer and ha[illegible] authority and knowledge necessary[illegible] implement the site safety and healt[illegible] plan and verify compliance with[illegible] applicable safety and health requirements.

"Small quantity generator" mean[illegible] generator of hazardous wastes who[illegible] any calendar month generates n[illegible]m than 1,000 kilograms (2,205 [illegible] hazardous waste in that mo[illegible]

"Uncontrolled hazardous waste s[illegible] means an area where an accumulati[illegible] of hazardous waste creates a threat the health and safety of individuals the environment or both. Some sites found on public lands, such as those created by former municipal, county state landfills where illegal or poorly managed waste disposal has taken place. Other sites are found on priva property, often belonging to generato[illegible] or former generators of hazardous waste. Examples of such sites includ but are not limited to, surface impoundments, landfills, dumps, and tank or drum farms. Normal operatio at TSD sites are not covered by this definition.

(b) *Safety and health program.*

Note to (b): Safety and health programs developed and implemented to meet othe Federal, state, or local regulations are considered acceptable in meeting this requirement if they cover or are modified cover the topics required in this paragrap An additional or separate safety and heal program is not required by this paragraph.

(1) *General.* (i) Employers shall develop and implement a written saf and health program for their emp involved in hazardous waste op The program shall be designe identify, evaluate, and contro and health hazards, and provi

emergency response for hazardous waste operations. . . .

(ii) The written safety and health program shall incorporate the following:

(A) An organizational structure;

(B) A comprehensive workplan;

(C) A site-specific safety and health plan which need not repeat the employer's standard operating procedures required in paragraph (b)(1)(ii)(F) of this section;

(D) The safety and health training program;

(E) The medical surveillance program;

(F) The employer's standard operating procedures for safety and health; and

(G) Any necessary interface between general program and site specific activities.

(iii) *Site excavation.* Site excavations created during initial site preparation or during hazardous waste operations shall be shored or sloped as appropriate to prevent accidental collapse in accordance with Subpart P of 29 CFR Part 1926.

(iv) *Contractors and sub-contractors.* An employer who retains contractor or sub-contractor services for work in hazardous waste operations shall inform those contractors, sub-contractors, or their representatives of the site emergency response procedures and any potential fire, explosion, health, safety or other hazards of the hazardous waste operation that have been identified by the employer, including those identified in the employer's information program.

(v) *Program availability.* The written safety and health program shall be made available to any contractor or subcontractor or their representative who will be involved with the hazardous waste operation; to employees; to employee designated representatives; to OSHA personnel, and to personnel of other Federal, state, or local agencies with regulatory authority over the site.

(2) *Organizational structure part of the site program.*—(i) The organizational structure part of the program shall establish the specific chain of command and specify the overall responsibilities of supervisors and employees. It shall include, at a minimum, the following elements:

(A) A general supervisor who has the responsibility and authority to direct all hazardous waste operations.

(B) A site safety and health supervisor who has the responsibility and authority to develop and implement the site safety and health plan and verify compliance.

(C) All other personnel needed for hazardous waste site operations and emergency response and their general functions and responsibilities.

(D) The lines of authority, responsibility, and communication.

(ii) The organizational structure shall be reviewed and updated as necessary to reflect the current status of waste site operations.

(3) *Comprehensive workplan part of the site program.* The comprehensive workplan part of the program shall address the tasks and objectives of the site operations and the logistics and resources required to reach those tasks and objectives.

(i) The comprehensive workplan shall address anticipated clean-up activities as well as normal operating procedures which need not repeat the employer's procedures available elsewhere.

(ii) The comprehensive workplan shall define work tasks and objectives and identify the methods for accomplishing those tasks and objectives.

(iii) The comprehensive workplan shall establish personnel requirements for implementing the plan.

(iv) The comprehensive workplan shall provide for the implementation of the training required in paragraph (e) of this section.

(v) The comprehensive workplan shall provide for the implementation of the required informational programs required in paragraph (i) of this section.

(vi) The comprehensive workplan shall provide for the implementation of the medical surveillance program described in paragraph (f) of this section.

(4) *Site-specific safety and health plan part of the program.*—(i) *General.* The site safety and health plan, which must be kept on site, shall address the safety and health hazards of each phase of site operation and include the requirements and procedures for employee protection.

(ii) *Elements.* The site safety and health plan, as a minimum, shall address the following:

(A) A safety and health risk or hazard analysis for each site task and operation found in the workplan.

(B) Employee training assignments to assure compliance with paragraph (e) of this section.

(C) Personal protective equipment to be used by employees for each of the site tasks and operations being conducted as required by the personal protective equipment program in paragraph (g)(5) of this section.

(D) Medical surveillance requirements in accordance with the program in paragraph (f) of this section.

(E) Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of monitoring and sampling equipment to be used.

(F) Site control measures in accordance with the site control program required in paragraph (this section.

(G) Decontamination procedu accordance with paragraph (k) c section.

(H) An emergency response pl meeting the requirements of par (l) of this section for safe and eff responses to emergencies, inclu necessary PPE and other equipm

(I) Confined space entry proce

(J) A spill containment progra meeting the requirements of par (j) of this section.

(iii) *Pre-entry briefing.* The site specific safety and health plan sl provide for pre-entry briefings to prior to initiating any site activit at such other times as necessary ensure that employees are appris the site safety and health plan ar this plan is being followed. The information and data obtained fr characterization and analysis wc required in paragraph (c) of this shall be used to prepare and upd site safety and health plan.

(iv) *Effectiveness of site safet health plan.* Inspections shall be conducted by the site safety and supervisor or, in the absence of t individual, another individual w knowledgeable in occupational s and health, acting on behalf of th employer as necessary to determ effectiveness of the site safety an health plan. Any deficiencies in t effectiveness of the site safety an health plan shall be corrected by employer.

(c) *Site characterization and analysis.*—(1) *General.* Hazardou sites shall be evaluated in accor with this paragraph to identify s site hazards and to determine the appropriate safety and health cor procedures needed to protect em from the identified hazards.

(2) *Preliminary evaluation.* A preliminary evaluation of a site's characteristics shall be performe to site entry by a qualified perso order to aid in the selection of appropriate employee protection methods prior to site entry. Imme after initial site entry, a more det evaluation of the site's specific characteristics shall be performec qualified person in order to furthe identify existing site hazards and further aid in the selection of the appropriate engineering controls personal protective equipment for tasks to be performed.

(3) *Hazard identification.* All suspected conditions that may re

inhalation or skin absorption hazards that are immediately dangerous to life or health (IDLH), or other conditions that may cause death or serious harm, shall be identified during the preliminary survey and evaluated during the detailed survey. Examples of such hazards include, but are not limited to, confined space entry, potentially explosive or flammable situations, visible vapor clouds, or areas where biological indicators such as dead animals or vegetation are located.

(4) *Required information.* The following information to the extent available shall be obtained by the employer prior to allowing employees to enter a site:

(i) Location and approximate size of the site.

(ii) Description of the response activity and/or the job task to be performed.

(iii) Duration of the planned employee activity.

(iv) Site topography and accessibility by air and roads.

(v) Safety and health hazards expected at the site.

(vi) Pathways for hazardous substance dispersion.

(vii) Present status and capabilities of emergency response teams that would provide assistance to hazardous waste clean-up site employees at the time of an emergency.

(viii) Hazardous substances and health hazards involved or expected at the site, and their chemical and physical properties.

(5) *Personal protective equipment.* Personal protective equipment (PPE) shall be provided and used during initial site entry in accordance with the following requirements:

(i) Based upon the results of the preliminary site evaluation, an ensemble of PPE shall be selected and used during initial site entry which will provide protection to a level of exposure below permissible exposure limits and published exposure levels for known or suspected hazardous substances and health hazards, and which will provide protection against other known and suspected hazards identified during the preliminary site evaluation. If there is no permissible exposure limit or published exposure level, the employer may use other published studies and information as a guide to appropriate personal protective equipment.

(ii) If positive-pressure self-contained breathing apparatus is not used as part of the entry ensemble, and if respiratory protection is warranted by the potential hazards identified during the preliminary site evaluation, an escape self-contained breathing apparatus of at least five minute's duration shall be carried by employees during initial site entry.

(iii) If the preliminary site evaluation does not produce sufficient information to identify the hazards or suspected hazards of the site, an ensemble providing protection equivalent to Level B PPE shall be provided as minimum protection, and direct reading instruments shall be used as appropriate for identifying IDLH conditions. (See Appendix B for a description of Level B hazards and the recommendations for Level B protective equipment.)

(iv) Once the hazards of the site have been identified, the appropriate PPE shall be selected and used in accordance with paragraph (g) of this section.

(6) *Monitoring.* The following monitoring shall be conducted during initial site entry when the site evaluation produces information that shows the potential for ionizing radiation or IDLH conditions, or when the site information is not sufficient reasonably to eliminate these possible conditions:

(i) Monitoring with direct reading instruments for hazardous levels of ionizing radiation.

(ii) Monitoring the air with appropriate direct reading test equipment (i.e., combustible gas meters; detector tubes) for IDLH and other conditions that may cause death or serious harm (combustible or explosive atmospheres, oxygen deficiency, toxic substances).

(iii) Visually observing for signs of actual or potential IDLH or other dangerous conditions.

(iv) An ongoing air monitoring program in accordance with paragraph (h) of this section shall be implemented after site characterization has determined the site is safe for the start-up of operations.

(7) *Risk identification.* Once the presence and concentrations of specific hazardous substances and health hazards have been established, the risks associated with these substances shall be identified. Employees who will be working on the site shall be informed of any risks that have been identified. In situations covered by the Hazard Communication Standard, 29 CFR 1910.1200, training required by that standard need not be duplicated.

Note to (e)(7).—Risks to consider include, but are not limited to:

(a) Exposures exceeding the permissible exposure limits and published exposure levels.

(b) IDLH concentrations.

(c) Potential skin absorption and irritation sources.

(d) Potential eye irritation sources.

(e) Explosion sensitivity and flammability ranges.

(f) Oxygen deficiency.

(8) *Employee notification.* Any information concerning the chemical, physical, and toxicologic properties of each substance known or expected to be present on site that is available to the employer and relevant to the duties an employee is expected to perform shall be made available to the affected employees prior to the commencement of their work activities. The employer may utilize information developed for the hazard communication standard for this purpose.

(f) *Site control.*—(1) *General.* Appropriate site control procedures shall be implemented to control employee exposure to hazardous substances before clean-up work begins.

(2) *Site control program.* A site control program for protecting employees who is part of the employer's site safety and health program required in paragraph (b) of this section shall be developed during the planning stages of a hazardous waste clean-up operation and modified as necessary as new information becomes available.

(3) *Elements of the site control program.* The site control program shall, as a minimum, include: A site map; site work zones; the use of a "buddy system"; site communications including alerting means for emergencies; the standard operating procedures or safe work practices; and, identification of the nearest medical assistance. Where these requirements are covered elsewhere they need not be repeated.

(g) *Training.*—(1) *General.* (i) All employees working on site (such as but not limited to equipment operators, general laborers and others) exposed to hazardous substances, health hazards, or safety hazards and their supervisors and management responsible for the site shall receive training meeting the requirements of this paragraph before they are permitted to engage in hazardous waste operations that could expose them to hazardous substances, safety, or health hazards, and they shall receive review training as specified in this paragraph.

(ii) Employees shall not be permitted to participate in or supervise field activities until they have been trained to a level required by their job function and responsibility.

(2) *Elements to be covered.* The training shall thoroughly cover the following:

(i) Names of personnel and alternates responsible for site safety and health

(ii) Safety, health and other hazards present on the site;

(iii) Use of personal protective equipment;

(iv) Work practices by which the employee can minimize risks from hazards;

(v) Safe use of engineering controls and equipment on the site;

(vi) Medical surveillance requirements, including recognition of symptoms and signs which might indicate overexposure to hazards; and

(vii) The contents of paragraphs (C) through (J) of the site safety and health plan set forth in paragraph (b)(4)(ii) of this section.

(3) *Initial training.* (i) General site workers (such as equipment operators, general laborers and supervisory personnel) engaged in hazardous substance removal or other activities which expose or potentially expose workers to hazardous substances and health hazards shall receive a minimum of 40 hours of instruction off the site, and a minimum of three days actual field experience under the direct supervision of a trained, experienced supervisor.

(ii) Workers on site only occasionally for a specific limited task (such as, but not limited to, ground water monitoring, land surveying, or geo-physical surveying) and who are unlikely to be exposed over permissible exposure limits and published exposure limits shall receive a minimum of 24 hours of instruction off the site, and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

(iii) Workers regularly on site who work in areas which have been monitored and fully characterized indicating that exposures are under permissible exposure limits and published exposure limits where respirators are not necessary, and the characterization indicates that there are no health hazards or the possibility of an emergency developing, shall receive a minimum of 24 hours of instruction off the site and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

(iv) Workers with 24 hours of training who are covered by paragraphs (a)(3)(i) and (a)(3)(ii) of this section, and who become general site workers or who are required to wear respirators, shall have the additional 16 hours and two days of training necessary to total the training specified in paragraph (e)(3)(i).

(4) *Management and supervisor training.* On-site management and supervisors directly responsible for, or who supervise employees engaged in, hazardous waste operations shall receive 40 hours initial training, and three days of supervised field experience (the training may be reduced to 24 hours and one day if the only area of their responsibility is employees covered by paragraphs (e)(3)(ii) and (e)(3)(iii)) and at least eight additional hours of specialized training at the time of job assignment on such topics as, but not limited to, the employer's safety and health program and the associated employee training program, personal protective equipment program, spill containment program, and health hazard monitoring procedure and techniques.

(5) *Qualifications for trainers.* Trainers shall be qualified to instruct employees about the subject matter that is being presented in training. Such trainers shall have satisfactorily completed a training program for teaching the subjects they are expected to teach, or they shall have the academic credentials and instructional experience necessary for teaching the subjects. Instructors shall demonstrate competent instructional skills and knowledge of the applicable subject matter.

(6) *Training certification.* Employees and supervisors that have received and successfully completed the training and field experience specified in paragraphs (e)(1) through (e)(4) of this section shall be certified by their instructor or the head instructor and trained supervisor as having successfully completed the necessary training. A written certificate shall be given to each person so certified. Any person who has not been so certified or who does not meet the requirements of paragraph (e)(9) of this section shall be prohibited from engaging in hazardous waste operations.

(7) *Emergency response.* Employees who are engaged in responding to hazardous emergency situations at hazardous waste clean-up sites that may expose them to hazardous substances shall be trained in how to respond to such expected emergencies.

(8) *Refresher training.* Employees specified in paragraph (e)(1) of this section, and managers and supervisors specified in paragraph (e)(4) of this section, shall receive eight hours of refresher training annually on the items specified in paragraph (e)(2) and/or (e)(4) of this section, any critique of incidents that have occurred in the past year that can serve as training examples of related work, and other relevant topics.

(9) *Equivalent training.* Employers who can show by documentation or certification that an employee's work experience and/or training has resulted in training equivalent to that training required in paragraphs (e)(1) through (e)(4) of this section shall not be required to provide the initial training requirements of those paragraphs to such employees. However, certified employees new to a site shall receive appropriate, site specific training before site entry and have appropriate supervised field experience at the new site. Equivalent training includes academic training or the training that existing employees might have already received from actual hazardous waste site work experience.

(f) *Medical surveillance.*—(1) *General.* Employers engaged in operations specified in paragraphs (a)(1)(i) through (a)(1)(iv) of this section and not covered by (a)(2)(iii) exceptions and employers of employees specified in paragraph (q)(9) shall institute a medical surveillance program in accordance with this paragraph.

(2) *Employees covered.* The medical surveillance program shall be instituted by the employer for the following employees:

(i) All employees who are or may be exposed to hazardous substances or health hazards at or above the permissible exposure limits or, if there is no permissible exposure limit, above published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year;

(ii) All employees who wear a respirator for 30 days or more a year as required by § 1910.134;

(iii) All employees who are injured due to overexposure from an emergency incident involving hazardous substances or health hazards; or

(iv) Members of HAZMAT teams.

(3) *Frequency of medical examinations and consultations.* Medical examinations and consultations shall be made available by the employer to each employee covered under paragraph (f)(2) of this section on the following schedules:

(i) For employees covered under paragraphs (f)(2)(i), (f)(2)(ii), and (f)(2)(iv):

(A) Prior to assignment;

(B) At least once every twelve months for each employee covered unless the attending physician believes a longer interval (not greater than biennially) appropriate;

(C) At termination of employment or reassignment to an area where the employee would not be covered if the employee has not had an examination within the last six months;

(D) As soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible

overexposure to hazardous substances or health hazards, or that the employee has been injured or exposed above the permissible exposure limits or published exposure levels in an emergency situation:

(E) At more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary.

(ii) For employees covered under paragraph (f)(2)(iii) and for all employees including those of employers covered by paragraph (a)(1)(v) who may have been injured, received a health impairment, developed signs or symptoms which may have resulted from exposure to hazardous substances resulting from an emergency incident, or exposed during an emergency incident to hazardous substances at concentrations above the permissible exposure limits or the published exposure levels without the necessary personal protective equipment being used:

(A) As soon as possible following the emergency incident or development of signs or symptoms;

(B) At additional times, if the examining physician determines that follow-up examinations or consultations are medically necessary.

(4) *Content of medical examinations and consultations.* (i) Medical examinations required by paragraph (f)(3) of this section shall include a medical and work history (or updated history if one is in the employee's file) with special emphasis on symptoms related to the handling of hazardous substances and health hazards, and to fitness for duty including the ability to wear any required PPE under conditions (i.e., temperature extremes) that may be expected at the work site.

(ii) The content of medical examinations or consultations made available to employees pursuant to paragraph (f) shall be determined by the attending physician. The guidelines in the *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* (See Appendix D, Reference #10) should be consulted.

(5) *Examination by a physician and costs.* All medical examinations and procedures shall be performed by or under the supervision of a licensed physician, preferably one knowledgeable in occupational medicine, and shall be provided without cost to the employee, without loss of pay, and at a reasonable time and place.

(6) *Information provided to the physician.* The employer shall provide one copy of this standard and its appendices to the attending physician, and in addition the following for each employee:

(i) A description of the employee's duties as they relate to the employee's exposures.

(ii) The employee's exposure levels or anticipated exposure levels.

(iii) A description of any personal protective equipment used or to be used.

(iv) Information from previous medical examinations of the employee which is not readily available to the examining physician.

(v) Information required by § 1910.134.

(7) *Physician's written opinion.* (i) The employer shall obtain and furnish the employee with a copy of a written opinion from the attending physician containing the following:

(A) The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health from work in hazardous waste operations or emergency response, or from respirator use.

(B) The physician's recommended limitations upon the employee's assigned work.

(C) The results of the medical examination and tests if requested by the employee.

(D) A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further examination or treatment.

(ii) The written opinion obtained by the employer shall not reveal specific findings or diagnoses unrelated to occupational exposures.

(8) *Recordkeeping.* (i) An accurate record of the medical surveillance required by paragraph (f) of this section shall be retained. This record shall be retained for the period specified and meet the criteria of 29 CFR 1910.20.

(ii) The record required in paragraph (f)(8)(i) of this section shall include at least the following information:

(A) The name and social security number of the employee;

(B) Physician's written opinions, recommended limitations, and results of examinations and tests;

(C) Any employee medical complaints related to exposure to hazardous substances;

(D) A copy of the information provided to the examining physician by the employer, with the exception of the standard and its appendices.

(g) *Engineering controls, work practices, and personal protective equipment for employee protection.* Engineering controls, work practices, personal protective equipment, or a combination of these shall be implemented in accordance with this paragraph to protect employees from exposure to hazardous substances and safety and health hazards.

(1) *Engineering controls, work practices and PPE for substances regulated in Subparts G and Z.* (i) Engineering controls and work practices shall be instituted to reduce and maintain employee exposure to or below the permissible exposure limits for substances regulated by 29 CFR Part 1910, to the extent required by Subpart Z, except to the extent that such controls and practices are not feasible.

Note to (g)(1)(i): Engineering controls which may be feasible include the use of pressurized cabs or control booths on equipment, and/or the use of remotely operated material handling equipment. Work practices which may be feasible are removing all non-essential employees from potential exposure during opening of drums, wetting down dusty operations and locating employees upwind of possible hazards.

(ii) Whenever engineering controls and work practices are not feasible, PPE shall be used to reduce and maintain employee exposures to or below the permissible exposure limits or dose limits for substances regulated by 29 CFR Part 1910, Subpart Z.

(iii) The employer shall not implement a schedule of employee rotation as the means of compliance with permissible exposure limits or dose limits except when there is no other feasible way of complying with the airborne or dermal dose limits for ionizing radiation.

(iv) The provisions of 29 CFR, Subpart C, shall be followed.

(2) *Engineering controls, work practices, and PPE for substances not regulated in Subparts G and Z.* An appropriate combination of engineering controls, work practices and personal protective equipment shall be used to reduce and maintain employee exposure to or below published exposure levels for hazardous substances and health hazards not regulated by 29 CFR Part 1910, Subparts G and Z. The employer may use the published literature and MSDS as a guide in making the employer's determination as to what level of protection the employer believes is appropriate for hazardous substances and health hazards for which there is no permissible exposure limit or published exposure limit.

(3) *Personal protective equipment selection.* (i) Personal protective equipment (PPE) shall be selected and used which will protect employees from the hazards and potential hazards they are likely to encounter as identified during the site characterization and analysis.

(ii) Personal protective equipment selection shall be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the site.

(iii) Positive pressure self-contained breathing apparatus, or positive pressure air-line respirators equipped with an escape air supply, shall be used when chemical exposure levels present will create a substantial possibility of immediate death, immediate serious illness or injury, or impair the ability to escape.

(iv) Totally-encapsulating chemical protective suits (protection equivalent to Level A protection as recommended in Appendix B) shall be used in conditions where skin absorption of a hazardous substance may result in a substantial possibility of immediate death, immediate serious illness or injury, or impair the ability to escape.

(v) The level of protection provided by PPE selection shall be increased when additional information on site conditions indicates that increased protection is necessary to reduce employee exposures below permissible exposure limits and published exposure levels for hazardous substances and health hazards. (See Appendix B for guidance on selecting PPE ensembles.)

Note to (g)(3): The level of employee protection provided may be decreased when additional information or site conditions show that decreased protection will not result in hazardous exposures to employees.

(vi) Personal protective equipment shall be selected and used to meet the requirements of 29 CFR Part 1910, Subpart I, and additional requirements specified in this section.

(4) *Totally-encapsulating chemical protective suits.* (i) Totally-encapsulating suits shall protect employees from the particular hazards which are identified during site characterization and analysis.

(ii) Totally-encapsulating suits shall be capable of maintaining positive air pressure. (See Appendix A for a test method which may be used to evaluate this requirement.)

(iii) Totally-encapsulating suits shall be capable of preventing inward test gas leakage of more than 0.5 percent. (See Appendix A for a test method which may be used to evaluate this requirement.)

(5) *Personal protective equipment (PPE) program.* A written personal protective equipment program, which is part of the employer's safety and health program required in paragraph (b) of this section or required in paragraph (p)(1) of this section and which is also a part of the site-specific safety and health plan shall be established. The PPE program shall address the elements listed below. When elements, such as donning and doffing procedures, are provided by the manufacturer of a piece of equipment and are attached to the plan, they need not be rewritten into the plan as long as they adequately address the procedure or element.

(i) PPE selection based upon site hazards.

(ii) PPE use and limitations of the equipment.

(iii) Work mission duration.

(iv) PPE maintenance and storage.

(v) PPE decontamination and disposal.

(vi) PPE training and proper fitting.

(vii) PPE donning and doffing procedures.

(viii) PPE inspection procedures prior to, during, and after use.

(ix) Evaluation of the effectiveness of the PPE program, and

(x) Limitations during temperature extremes, heat stress, and other appropriate medical considerations.

(h) *Monitoring*—(1) *General.* (i) Monitoring shall be performed in accordance with this paragraph where there may be a question of employee exposure to hazardous concentrations of hazardous substances in order to assure proper selection of engineering controls, work practices and personal protective equipment so that employees are not exposed to levels which exceed permissible exposure limits or published exposure levels for hazardous substances.

(ii) Air monitoring shall be used to identify and quantify airborne levels of hazardous substances and safety and health hazards in order to determine the appropriate level of employee protection needed on site.

(2) *Initial entry.* Upon initial entry, representative air monitoring shall be conducted to identify any IDLH condition, exposure over permissible exposure limits or published exposure levels, exposure over a radioactive material's dose limits or other dangerous condition such as the presence of flammable atmospheres or oxygen-deficient environments.

(3) *Periodic monitoring.* Periodic monitoring shall be conducted when the possibility of an IDLH condition or flammable atmosphere has developed or when there is indication that exposures may have risen over permissible exposure limits or published exposure levels since prior monitoring. Situations where it shall be considered whether the possibility that exposures have risen are as follows:

(i) When work begins on a different portion of the site.

(ii) When contaminants other than those previously identified are being handled.

(iii) When a different type of operation is initiated (e.g., drum opening as opposed to exploratory well drilling)

(iv) When employees are handling leaking drums or containers or working in areas with obvious liquid contamination (e.g., a spill or lagoon).

(4) *Monitoring of high-risk employees.* After the actual clean-up phase of any hazardous waste operation commences, for example, when soil, surface water, containers are moved or disturbed; the employer shall monitor those employees likely to have the highest exposures to hazardous substances and health hazards likely to be present above permissible exposure limits or published exposure levels by using personal sampling frequently enough to characterize employee exposures. If the employees likely to have the highest exposure are over permissible exposure limits or published exposure limits, the monitoring shall continue to determine all employees likely to be above those limits. The employer may utilize a representative sampling approach by documenting that the employees and chemicals chosen for monitoring are based on the criteria stated above.

Note to (h): It is not required to monitor employees engaged in site characterization operations covered by paragraph (c) of this section.

(i) *Informational programs.* [illegible]loyer shall develop and implement a program which is part of the employer's safety and health program required in paragraph (b) of this section, to inform employees, contractors, and subcontractors (or their representatives) actually engaged in hazardous waste operations of the nature, level and degree of exposure likely as a result of participation in such hazardous waste operations. Employees, contractors and subcontractors working outside of the operations part of a site are not covered by this standard.

(j) *Handling drums and containers*—(1) *General.* (i) Hazardous substances and contaminated soils, liquids, and other residues shall be handled, transported, labeled, and disposed of in accordance with this paragraph.

(ii) Drums and containers used during the clean-up shall meet the appropriate DOT, OSHA, and EPA regulations for the wastes that they contain.

(iii) When practical, drums and containers shall be inspected and their integrity shall be assured prior to being

moved. Drums or containers that cannot be inspected before being moved because of storage conditions (i.e., buried beneath the earth, stacked behind other drums, stacked several tiers high in a pile, etc.) shall be moved to an accessible location and inspected prior to further handling.

(iv) Unlabelled drums and containers shall be considered to contain hazardous substances and handled accordingly until the contents are positively identified and labeled.

(v) Site operations shall be organized to minimize the amount of drum or container movement.

(vi) Prior to movement of drums or containers, all employees exposed to the transfer operation shall be warned of the potential hazards associated with the contents of the drums or containers.

(vii) U.S. Department of Transportation specified salvage drums or containers and suitable quantities of proper absorbent shall be kept available and used in areas where spills, leaks, or ruptures may occur.

(viii) Where major spills may occur, a spill containment program, which is part of the employer's safety and health program required in paragraph (b) of this section, shall be implemented to contain and isolate the entire volume of the hazardous substance being transferred.

(ix) Drums and containers that cannot be moved without rupture, leakage, or spillage shall be emptied into a sound container using a device classified for the material being transferred.

(x) A ground-penetrating system or other type of detection system or device shall be used to estimate the location and depth of buried drums or containers.

(xi) Soil or covering material shall be removed with caution to prevent drum or container rupture.

(xii) Fire extinguishing equipment meeting the requirements of 29 CFR Part 1910, Subpart L, shall be on hand and ready for use to control incipient fires.

(2) *Opening drums and containers.* The following procedures shall be followed in areas where drums or containers are being opened:

(i) Where an airline respirator system is used, connections to the source of air supply shall be protected from contamination and the entire system shall be protected from physical damage.

(ii) Employees not actually involved in opening drums or containers shall be kept a safe distance from the drums or containers being opened.

(iii) If employees must work near or adjacent to drums or containers being opened, a suitable shield that does not interfere with the work operation shall be placed between the employee and the drums or containers being opened to protect the employee in case of accidental explosion.

(iv) Controls for drum or container opening equipment, monitoring equipment, and fire suppression equipment shall be located behind the explosion-resistant barrier.

(v) When there is a reasonable possibility of flammable atmospheres being present, material handling equipment and hand tools shall be of the type to prevent sources of ignition.

(vi) Drums and containers shall be opened in such a manner that excess interior pressure will be safely relieved. If pressure can not be relieved from a remote location, appropriate shielding shall be placed between the employee and the drums or containers to reduce the risk of employee injury.

(vii) Employees shall not stand upon or work from drums or containers.

(3) *Material handling equipment.* Material handling equipment used to transfer drums and containers shall be selected, positioned and operated to minimize sources of ignition related to the equipment from igniting vapors released from ruptured drums or containers.

(4) *Radioactive wastes.* Drums and containers containing radioactive wastes shall not be handled until such time as their hazard to employees is properly assessed.

(5) *Shock sensitive wastes.* As a minimum, the following special precautions shall be taken when drums and containers containing or suspected of containing shock-sensitive wastes are handled:

(i) All non-essential employees shall be evacuated from the area of transfer.

(ii) Material handling equipment shall be provided with explosive containment devices or protective shields to protect equipment operators from exploding containers.

(iii) An employee alarm system capable of being perceived above surrounding light and noise conditions shall be used to signal the commencement and completion of explosive waste handling activities.

(iv) Continuous communications (i.e., portable radios, hand signals, telephones, as appropriate) shall be maintained between the employee-in-charge of the immediate handling area and both the site safety and health supervisor and the command post until such time as the handling operation is completed. Communication equipment or methods that could cause shock sensitive materials to explode shall not be used.

(v) Drums and containers pressure, as evidenced by b swelling, shall not be moved unless such time as the cause for excess pressure determined and appropriate containment procedures have been implemented to protect employees fr explosive relief of the drum.

(vi) Drums and containers containi packaged laboratory wastes shall be considered to contain shock-sensitive explosive materials until they have be characterized.

Caution: Shipping of shock sensitive wastes may be prohibited under U.S. Department of Transportation regulations. Employers and their shippers should refer 49 CFR 173.21 and 173.50.

(6) *Laboratory waste packs.* In addition to the requirements of paragraph (j)(5) of this section, the following precautions shall be taken, a a minimum, in handling laboratory waste packs (lab packs):

(i) Lab packs shall be opened only when necessary and then only by an individual knowledgeable in the inspection, classification, and segregation of the containers within th pack according to the hazards of the wastes.

(ii) If crystalline material is no any container, the contents sh handled as a shock-sensitive w the contents are identified.

(7) *Sampling of drum and container contents.* Sampling of containers and drums shall be done in accordance wit a sampling procedure which is part of the site safety and health plan developed for and available to employees and others at the specific worksite.

(8) *Shipping and transport.* (i) Drums and containers shall be identified and classified prior to packaging for shipment.

(ii) Drum or container staging areas shall be kept to the minimum number necessary to identify and classify materials safely and prepare them for transport.

(iii) Staging areas shall be provided with adequate access and egress routes

(iv) Bulking of hazardous wastes shal be permitted only after a thorough characterization of the materials has been completed.

(9) *Tank and vault procedures.* (i) Tanks and vaults containing hazardous substances shall be handled in a manne similar to that for drums and containers taking into consideration the size of tank or vault.

(ii) Appropriate tank or vault e procedures as described in the employer's safety and health pl

be followed whenever employees must enter a tank or vault.

(k) *Decontamination*—(1) *General.* Procedures for all phases of decontamination shall be developed and implemented in accordance with this paragraph.

(2) *Decontamination procedures.* (i) A decontamination procedure shall be developed, communicated to employees and implemented before any employees or equipment may enter areas on site where potential for exposure to hazardous substances exists.

(ii) Standard operating procedures shall be developed to minimize employee contact with hazardous substances or with equipment that has contacted hazardous substances.

(iii) All employees leaving a contaminated area shall be appropriately decontaminated; all contaminated clothing and equipment leaving a contaminated area shall be appropriately disposed of or decontaminated.

(iv) Decontamination procedures shall be monitored by the site safety and health supervisor to determine their effectiveness. When such procedures are found to be ineffective, appropriate steps shall be taken to correct any deficiencies.

(3) *Location.* Decontamination shall be performed in geographical areas that will minimize the exposure of uncontaminated employees or equipment to contaminated employees or equipment.

(4) *Equipment and solvents.* All equipment and solvents used for decontamination shall be decontaminated or disposed of properly.

(5) *Personal protective clothing and equipment.* (i) Protective clothing and equipment shall be decontaminated, cleaned, laundered, maintained or replaced as needed to maintain their effectiveness.

(ii) Employees whose non-impermeable clothing becomes wetted with hazardous substances shall immediately remove that clothing and proceed to shower. The clothing shall be disposed of or decontaminated before it is removed from the work zone.

(6) *Unauthorized employees.* Unauthorized employees shall not remove protective clothing or equipment from change rooms.

(7) *Commercial laundries or cleaning establishments.* Commercial laundries or cleaning establishments that decontaminate protective clothing or equipment shall be informed of the potentially harmful effects of exposures to hazardous substances.

(8) *Showers and change rooms.* Where the decontamination procedure indicates a need for regular showers and change rooms outside of a contaminated area, they shall be provided and meet the requirements of 29 CFR 1910.141. If temperature conditions prevent the effective use of water, then other effective means for cleansing shall be provided and used.

(l) *Emergency response by employees at uncontrolled hazardous waste sites*—(1) *Emergency response plan.* (i) An emergency response plan shall be developed and implemented by all employers within the scope of this section to handle anticipated emergencies prior to the commencement of hazardous waste operations. The plan shall be in writing and available for inspection and copying by employees, their representatives, OSHA personnel and other governmental agencies with relevant responsibilities.

(ii) Employers who will evacuate their employees from the workplace when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements of this paragraph if they provide an emergency action plan complying with section 1910.38(a) of this part.

(2) *Elements of an emergency response plan:* The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following:

(i) Pre-emergency planning.

(ii) Personnel roles, lines of authority, and communication.

(iii) Emergency recognition and prevention.

(iv) Safe distances and places of refuge.

(v) Site security and control.

(vi) Evacuation routes and procedures.

(vii) Decontamination procedures which are not covered by the site safety and health plan.

(viii) Emergency medical treatment and first aid.

(ix) Emergency alerting and response procedures.

(x) Critique of response and follow-up.

(xi) PPE and emergency equipment.

(3) *Procedures for handling emergency incidents.* (i) In addition to the elements for the emergency response plan required in paragraph (l)(2) of this section, the following elements shall be included for emergency response plans:

(A) Site topography, layout, and prevailing weather conditions.

(B) Procedures for reporting incidents to local, state, and federal governmental agencies.

(ii) The emergency response plan shall be a separate section of the Site Safety and Health Plan.

(iii) The emergency response plan shall be compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and federal agencies.

(iv) The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.

(v) The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.

(vi) An employee alarm system shall be installed in accordance with 29 CFR 1910.165 to notify employees of an emergency situation; to stop work activities if necessary; to lower background noise in order to speed communication; and to begin emergency procedures.

(vii) Based upon the information available at time of the emergency, the employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.

(m) *Illumination.* Areas accessible to employees shall be lighted to not less than the minimum illumination intensities listed in the following Table H-120.1 while any work is in progress:

TABLE H-120.1.—Minimum Illumination Intensities in Foot-Candles

Foot-candles	Area or operations
5	General site areas.
3	Excavation and waste areas, accessways, active storage areas, loading platforms, refueling, and field maintenance areas.
5	Indoors: Warehouses, corridors, hallways, and exitways.
5	Tunnels, shafts, and general underground work areas. (Exception: Minimum of 10 foot-candles is required at tunnel and shaft heading during drilling, mucking, and scaling. Mine Safety and Health Administration approved cap lights shall be acceptable for use in the tunnel heading.)
10	General shops (e.g., mechanical and electrical equipment rooms, active storerooms, barracks or living quarters, locker or dressing rooms, dining areas, and indoor toilets and workrooms.)
30	First aid stations, infirmaries, and offices.

(n) *Sanitation at temporary workplaces.*—(1) *Potable water.* (i) An adequate supply of potable water shall be provided on the site.

(ii) Portable containers used to dispense drinking water shall be

capable of being tightly closed, and equipped with a tap. Water shall not be dipped from containers.

(iii) Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose.

(iv) Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

(2) *Nonpotable water.* (i) Outlets for nonpotable water, such as water for firefighting purposes, shall be identified to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes.

(ii) There shall be no cross-connection, open or potential, between a system furnishing potable water and a system furnishing nonpotable water.

(3) *Toilet facilities.* (i) Toilets shall be provided for employees according to the following Table H-120.2.

TABLE H-120.2.—TOILET FACILITIES

Number of employees	Minimum number of facilities
20 or fewer	One.
More than 20, fewer than 200.	One toilet seat and one urinal per 40 employees.
More than 200	One toilet seat and one urinal per 50 employees.

(ii) Under temporary field conditions, provisions shall be made to assure that at least one toilet facility is available.

(iii) Hazardous waste sites not provided with a sanitary sewer shall be provided with the following toilet facilities unless prohibited by local codes:

(A) Chemical toilets;

(B) Recirculating toilets;

(C) Combustion toilets; or

(D) Flush toilets.

(iv) The requirements of this paragraph for sanitation facilities shall not apply to mobile crews having transportation readily available to nearby toilet facilities.

(v) Doors entering toilet facilities shall be provided with entrance locks controlled from inside the facility.

(4) *Food handling.* All food service facilities and operations for employees shall meet the applicable laws, ordinances, and regulations of the jurisdictions in which they are located.

(5) *Temporary sleeping quarters.* When temporary sleeping quarters are provided, they shall be heated, ventilated, and lighted.

(6) *Washing facilities.* The employer shall provide adequate washing facilities for employees engaged in operations where hazardous substances may be harmful to employees. Such facilities shall be in near proximity to the worksite; in areas where exposures are below permissible exposure limits and published exposure levels and which are under the controls of the employer; and shall be so equipped as to enable employees to remove hazardous substances from themselves.

(7) *Showers and change rooms.* When hazardous waste clean-up or removal operations commence on a site and the duration of the work will require six months or greater time to complete, the employer shall provide showers and change rooms for all employees exposed to hazardous substances and health hazards involved in hazardous waste clean-up or removal operations.

(i) Showers shall be provided and shall meet the requirements of 29 CFR 1910.141(d)(3).

(ii) Change rooms shall be provided and shall meet the requirements of 29 CFR 1910.141(e). Change rooms shall consist of two separate change areas separated by the shower area required in paragraph (n)(7)(i) of this section. One change area, with an exit leading off the worksite, shall provide employees with a clean area where they can remove, store, and put on street clothing. The second area, with an exit to the worksite, shall provide employees with an area where they can put on, remove and store work clothing and personal protective equipment.

(iii) Showers and change rooms shall be located in areas where exposures are below the permissible exposure limits and published exposure levels. If this cannot be accomplished, then a ventilation system shall be provided that will supply air that is below the permissible exposure limits and published exposure levels.

(iv) Employers shall assure that employees shower at the end of their work shift and when leaving the hazardous waste site.

(o) *New technology programs.* (1) The employer shall develop and implement procedures for the introduction of effective new technologies and equipment developed for the improved protection of employees working with hazardous waste clean-up operations, and the same shall be implemented as part of the site safety and health program to assure that employee protection is being maintained.

(2) New technologies, equipment or control measures available to the industry, such as the use of foams, absorbents, adsorbents, neutralizers, or other means to suppress the level of air contaminates while excavating the site or for spill control, shall be evaluated by employers or their representatives. Such an evaluation shall be done to determine the effectiveness of the new methods, materials, or equipment before implementing their use on a large scale for enhancing employee protection. Information and data from manufacturers or suppliers may be used as part of the employer's evaluation effort. Such evaluations shall be made available to OSHA upon request.

(p) *Certain Operations Conducted Under the Resource Conservation and Recovery Act of 1976 (RCRA).* Employers conducting operations at treatment, storage, and disposal (TSD) facilities specified in paragraph (a)(1)(iv) of this section not exempted by paragraph (a)(2)(iii) of this section shall provide and implement the programs specified in this paragraph.

(1) *Safety and health program.* The employer shall develop and implement a written safety and health program for employees involved in hazardous waste operations that shall be available for inspection by employees, their representatives and OSHA personnel. The program shall be designed to identify, evaluate and control safety and health hazards in their facilities for the purpose of employee protection, to provide for emergency response meeting the requirements of paragraph (p)(8) of this section and to address as appropriate site analysis, engineering controls, maximum exposure limits, hazardous waste handling procedures and uses of new technologies.

(2) *Hazard communication program.* The employer shall implement a hazard communication program meeting the requirements of 29 CFR 1910.1200 as part of the employer's safety and program.

Note to 1910.120.—The exemption for hazardous waste provided in § 1910.1200 is applicable to this section.

(3) *Medical surveillance program.* The employer shall develop and implement a medical surveillance program meeting the requirements of paragraph (f) of this section.

(4) *Decontamination program.* The employer shall develop and implement a decontamination procedure meeting the requirements of paragraph (k) of this section.

(5) *New technology program.* The employer shall develop and implement procedures meeting the requirements of paragraph (o) of this section for introducing new and innovative equipment into the workplace.

(6) *Material handling program.* Where employees will be handling drums or containers, the employer shall develop

and implement procedures meeting the requirements of paragraphs (j)(1) (ii) through (viii) and (xi) of this section, as well as (j)(3) and (j)(6) of this section prior to starting such work.

(7) *Training program*—(i) *New employees.* The employer shall develop and implement a training program, which is part of the employer's safety and health program, for employees involved with hazardous waste operations to enable employees to perform their assigned duties and functions in a safe and healthful manner so as not to endanger themselves or other employees. The initial training shall be for 24 hours and refresher training shall be for eight hours annually. Employees who have received the initial training required by this paragraph shall be given a written certificate attesting that they have successfully completed the necessary training.

(ii) *Current employees.* Employers who can show by an employee's previous work experience and/or training that the employee has had training equivalent to the initial training required by this paragraph, shall be considered as meeting the initial training requirements of this paragraph as to that employee. Equivalent training includes the training that existing employees might have already received from actual site work experience. Current employees shall receive eight hours of refresher training annually.

(iii) *Trainers.* Trainers who teach initial training shall have satisfactorily completed a training course for teaching the subjects they are expected to teach or they shall have the academic credentials and instruction experience necessary to demonstrate a good command of the subject matter of the courses and competent instructional skills.

(8) *Emergency response program*—(i) *Emergency response plan.* An emergency response plan shall be developed and implemented by all employers. Such plans need not duplicate any of the subjects fully addressed in the employer's contingency planning required by permits, such as those issued by the U.S. Environmental Protection Agency, provided that the contingency plan is made part of the emergency response plan. The emergency response plan shall be a written portion of the employers safety and health program required in paragraph (p)(1) of this section. Employers who will evacuate their employees from the worksite location when an emergency occurs and who do not permit any of their employees to assist in handling the emergency are exempt from the requirements of paragraph (p)(8) if they provide an emergency action plan complying with § 1910.38(a) of this part.

(ii) *Elements of an emergency response plan.* The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following areas to the extent that they are not addressed in any specific program required in this paragraph:

(A) Pre-emergency planning and coordination with outside parties.

(B) Personnel roles, lines of authority, and communication.

(C) Emergency recognition and prevention.

(D) Safe distances and places of refuge.

(E) Site security and control.

(F) Evacuation routes and procedures.

(G) Decontamination procedures.

(H) Emergency medical treatment and first aid.

(I) Emergency alerting and response procedures.

(J) Critique of response and follow-up.

(K) PPE and emergency equipment.

(iii) *Training.* (A) Training for emergency response employees shall be completed before they are called upon to perform in real emergencies. Such training shall include the elements of the emergency response plan, standard operating procedures the employer has established for the job, the personal protective equipment to be worn and procedures for handling emergency incidents.

Exception #1: An employer need not train all employees to the degree specified if the employer divides the work force in a manner such that a sufficient number of employees who have responsibility to control emergencies have the training specified, and all other employees, who may first respond to an emergency incident, have sufficient awareness training to recognize that an emergency response situation exists and that they are instructed in that case to summon the fully trained employees and not attempt control activities for which they are not trained.

Exception #2: An employer need not train all employees to the degree specified if arrangements have been made in advance for an outside fully-trained emergency response team to respond in a reasonable period and all employees, who may come to the incident first, have sufficient awareness training to recognize that an emergency response situation exists and they have been instructed to call the designated outside fully-trained emergency response team for assistance.

(B) Employee members of TSD facility emergency response organizations shall be trained to a level of competence in the recognition of health and safety hazards to protect themselves and other employees. This would include training in the methods used to minimize the risk from safety and health hazards; in the safe use of control equipment; in the selection and use of appropriate personal protective equipment; in the safe operating procedures to be used at the incident scene; in the techniques of coordination with other employees to minimize risks; in the appropriate response to over exposure from health hazards or injury to themselves and other employees; and in the recognition of subsequent symptoms which may result from over exposures.

(C) The employer shall certify that each covered employee has attended and successfully completed the training required in paragraph (p)(8)(iii) of this section, or shall certify the employee's competency at least yearly. The method used to demonstrate competency for certification of training shall be recorded and maintained by the employer.

(iv) *Procedures for handling emergency incidents.* (A) In addition to the elements for the emergency response plan required in paragraph (p)(8)(ii) of this section, the following elements shall be included for emergency response plans to the extent that they do not repeat any information already contained in the emergency response plan:

(*1*) Site topography, layout, and prevailing weather conditions.

(*2*) Procedures for reporting incidents to local, state, and federal governmental agencies.

(B) The emergency response plan shall be compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and federal agencies.

(C) The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.

(D) The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.

(E) An employee alarm system shall be installed in accordance with 29 CFR 1910.165 to notify employees of an emergency situation; to stop work activities if necessary; to lower background noise in order to speed communication; and to begin emergency procedures.

(F) Based upon the information available at time of the emergency, the employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to

implement the site emergency response plan.

(q) *Emergency response to hazardous substance releases.* This paragraph covers employers whose employees are engaged in emergency response no matter where it occurs except that it does not cover employees engaged in operations specified in paragraphs (a)(1)(i) through (a)(1)(iv) of this section. Those emergency response organizations who have developed and implemented programs equivalent to this paragraph for handling releases of hazardous substances pursuant to section 303 of the Superfund Amendments and Reauthorization Act of 1986 (Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. 11003) shall be deemed to have met the requirements of this paragraph.

(1) *Emergency response plan.* An emergency response plan shall be developed and implemented to handle anticipated emergencies prior to the commencement of emergency response operations. The plan shall be in writing and available for inspection and copying by employees, their representatives and OSHA personnel. Employers who will evacuate their employees from the workplace when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements of this paragraph if they provide an emergency action plan in accordance with § 1910.38(a) of this part.

(2) *Elements of an emergency response plan.* The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following to the extent that they are not addressed elsewhare:

(i) Pre-emergency planning and coordination with outside parties.

(ii) Personnel roles, lines of authority, training, and communication.

(iii) Emergency recognition and prevention.

(iv) Safe distances and places of refuge.

(v) Site security and control.

(vi) Evacuation routes and procedures.

(vii) Decontamination.

(viii) Emergency medical treatment and first aid.

(ix) Emergency alerting and response procedures.

(x) Critique of response and follow-up.

(xi) PPE and emergency equipment.

(xii) Emergency response organizations may use the local emergency response plan or the state emergency response plan or both, as part of their emergency response plan to avoid duplication. Those items of the emergency response plan that are being properly addressed by the SARA Title III plans may be substituted into their emergency plan or otherwise kept together for the employer and employee's use.

(3) *Procedures for handling emergency response.* (i) The senior emergency response official responding to an emergency shall become the individual in charge of a site-specific Incident Command System (ICS). All emergency responders and their communications shall be coordinated and controlled through the individual in charge of the ICS assisted by the senior official present for each employer.

Note to (q)(3)(i).—The "senior official" at an emergency response is the most senior official on the site who has the responsibility for controlling the operations at the site. Initially it is the senior officer on the first-due piece of responding emergency apparatus to arrive on the incident scene. As more senior officers arrive (i.e., battalion chief, fire chief, state law enforcement official, site coordinator, etc.) the position is passed up the line of authority which has been previously established.

(ii) The individual in charge of the ICS shall identify, to the extent possible, all hazardous substances or conditions present and shall address as appropriate site analysis, use of engineering controls, maximum exposure limits, hazardous substance handling procedures, and use of any new technologies.

(iii) Based on the hazardous substances and/or conditions present, the individual in charge of the ICS shall implement appropriate emergency operations, and assure that the personal protective equipment worn is appropriate for the hazards to be encountered. However, personal protective equipment shall meet, at a minimum, the criteria contained in 29 CFR 1910.156(e) when worn while performing fire fighting operations beyond the incipient stage for any incident or site.

(iv) Employees engaged in emergency response and exposed to hazardous substances presenting an inhalation hazard or potential inhalation hazard shall wear positive pressure self-contained breathing apparatus while engaged in emergency response, until such time that the individual in charge of the ICS determines through the use of air monitoring that a decreased level of respiratory protection will not result in hazardous exposures to employees.

(v) The individual in charge of the ICS shall limit the number of emergency response personnel at the emergency site, in those areas of potential or actual exposure to incident or site hazards, to those who are actively performing emergency operations. However, operations in hazardous areas shall be performed using the buddy system in groups of two or more.

(vi) Back-up personnel shall stand by with equipment ready to provide assistance or rescue. Advance first aid support personnel, as a minimum, shall also stand by with medical equipment and transportation capability.

(vii) The individual in charge of the ICS shall designate a safety official, who is knowledgable in the operations being implemented at the emergency response site, with specific responsibility to identify and evaluate hazards and to provide direction with respect to the safety of operations for the emergency at hand.

(viii) When activities are judged by the safety official to be an IDLH condition and/or to involve an imminent danger condition, the safety official shall have the authority to alter, suspend, or terminate those activities. The safety official shall immediately inform the individual in charge of the ICS of any actions needed to be taken to correct these hazards at an emergency scene.

(ix) After emergency operations have terminated, the individual in charge of the ICS shall implement appropriate decontamination procedures.

(x) When deemed necessary for meeting the tasks at hand, approved self-contained compressed air breathing apparatus may be used with approved cylinders from other approved self-contained compressed air breathing apparatus provided that such cylinders are of the same capacity and pressure rating. All compressed air cylinders used with self-contained breathing apparatus shall meet U.S. Department of Transportation and National Institute for Occupational Safety and Health criteria.

(4) *Skilled support personnel.* Personnel, not necessarily an employer's own employees, who are skilled in the operation of certain equipment, such as mechanized earth moving or digging equipment or crane and hoisting equipment, and who are needed temporarily to perform immediate emergency support work that cannot reasonably be performed in a timely fashion by an employer's own employees, and who will be or may be exposed to the hazards at an emergency response scene, are not required to meet the training required in this paragraph for the employer's regular employees. However, these personnel shall be given an initial briefing at the site prior to their participation in any emergency response. The initial briefing shall

include instruction in the wearing of appropriate personal protective equipment, what chemical hazards are involved, and what duties are to be performed. All other appropriate safety and health precautions provided to the employer's own employees shall be used to assure the safety and health of these personnel.

(5) *Specialist employees.* Employees who, in the course of their regular job duties, work with and are trained in the hazards of specific hazardous substances, and who will be called upon to provide technical advice or assistance at a hazardous substance release incident to the individual in charge, shall receive training or demonstrate competency in the area of their specialization annually.

(6) *Training.* Training shall be based on the duties and function to be performed by each responder of an emergency response organization. The skill and knowledge levels required for all new responders, those hired after the effective date of this standard, shall be conveyed to them through training before they are permitted to take part in actual emergency operations on an incident. Employees who participate, or are expected to participate, in emergency response, shall be given training in accordance with the following paragraphs:

(i) *First responder awareness level.* First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

(A) An understanding of what hazardous materials are, and the risks associated with them in an incident.

(B) An understanding of the potential outcomes associated with an emergency created when hazardous materials are present.

(C) The ability to recognize the presence of hazardous materials in an emergency.

(D) The ability to identify the hazardous materials, if possible.

(E) An understanding of the role of the first responder awareness individual in the employer's emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.

(F) The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.

(ii) *First responder operations level.* First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. First responders at the operational level shall have received at least eight hours of training or have had sufficient experience to objectively demonstrate competency in the following areas in addition to those listed for the awareness level and the employer shall so certify:

(A) Knowledge of the basic hazard and risk assessment techniques.

(B) Know how to select and use proper personal protective equipment provided to the first responder operational level.

(C) An understanding of basic hazardous materials terms.

(D) Know how to perform basic control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit.

(E) Know how to implement basic decontamination procedures.

(F) An understanding of the relevant standard operating procedures and termination procedures.

(iii) *Hazardous materials technician.* Hazardous materials technicians are individuals who respond to relsases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance. Hazardous materials technicians shall have received at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas and the employer shall so certify:

(A) Know how to implement the employer's emergency response plan.

(B) Know the classification, identification and verification of known and unknown materials by using field survey instruments and equipment.

(C) Be able to function within an assigned role in the Incident Command System.

(D) Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.

(E) Understand hazard and risk assessment techniques.

(F) Be able to perform advance control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit.

(G) Understand and implement decontamination procedures.

(H) Understand termination procedures.

(I) Understand basic chemical and toxicological terminology and behavior.

(iv) *Hazardous materials specialist.* Hazardous materials specialists are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with Federal, state, local and other government authorities in regards to site activities. Hazardous materials specialists shall have received at least 24 hours of training equal to the technician level and in addition have competency in the following areas and the employer shall so certify:

(A) Know how to implement the local emergency response plan.

(B) Understand classification, identification and verification of known and unknown materials by using advanced survey instruments and equipment.

(C) Know of the state emergency response plan.

(D) Be able to select and use proper specialized chemical personal protective equipment provided to the hazardous materials specialist.

(E) Understand in-depth hazard and risk techniques.

(F) Be able to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available.

(G) Be able to determine and implement decontamination procedures.

(H) Have the ability to develop a site safety and control plan.

(I) Understand chemical, radiological and toxicological terminology and behavior.

(v) *On scene incident commander.* Incident commanders, who will assume control of the incident scene beyond the

first responder awareness level, shall receive at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas and the employer shall so certify:

(A) Know and be able to implement the employer's incident command system.

(B) Know how to implement the employer's emergency response plan.

(C) Know and understand the hazards and risks associated with employees working in chemical protective clothing.

(D) Know how to implement the local emergency response plan.

(E) Know of the state emergency response plan and of the Federal Regional Response Team.

(F) Know and understand the importance of decontamination procedures.

(7) *Trainers.* Trainers who teach any of the above training subjects shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the U.S. Fire Academy, or they shall have the training and/or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a good command of the subject matter of the courses they are to teach.

(8) *Refresher training.* (i) Those employees who are trained in accordance with paragraph (q)(6) of this section shall receive annual refresher training of sufficient content and duration to maintain their competencies, or shall demonstrate competency in those areas at least yearly.

(ii) A statement shall be made of the training or competency, and if a statement of competency is made, the employer shall keep a record of the methodology used to demonstrate competency.

(9) *Medical surveillance and consultation.* (i) Members of an organized and designated HAZMAT team and hazardous materials specialists shall receive a baseline physical examination and be provided with medical surveillance as required in paragraph (f) of this section.

(ii) Any emergency response employees who exhibits signs or symptoms which may have resulted from exposure to hazardous substances during the course of an emergency incident, either immediately or subsequently, shall be provided with medical consultation as required in paragraph (f)(3)(ii) of this section.

(10) *Chemical protective clothing.* Chemical protective clothing and equipment to be used by organized and designated HAZMAT team members, or to be used by hazardous materials specialists, shall meet the requirements of paragraphs (g) (3) through (5) of this section.

(11) *Post-emergency response operations.* Upon completion of the emergency response, if it is determined that it is necessary to remove hazardous substances, health hazards, and materials contaminated with them (such as contaminated soil or other elements of the natural environment) from the site of the incident, the employer conducting the clean-up shall comply with one of the following:

(i) Meet all of the requirements of paragraphs (b) through (o) of this section; or

(ii) Where the clean-up is done on plant property using plant or workplace employees, such employees shall have completed the training requirements of the following: 29 CFR 1910.38(a); 1910.134; 1910.1200, and other appropriate safety and health training made necessary by the tasks that they are expected to be performed such as personal protective equipment and decontamination procedures. All equipment to be used in the performance of the clean-up work shall be in serviceable condition and shall have been inspected prior to use.

APPENDICES TO § 1910.120—HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE

Note: The following appendices serve as non-mandatory guidelines to assist employers and employees in complying with the appropriate requirements of this section. However paragraph 1910.120(g) makes mandatory in certain circumstances the use of Level A and Level B PPE protection.

Appendix A—Personal Protective Equipment Test Methods

This appendix sets forth the non-mandatory examples of tests which may be used to evaluate compliance with § 1910.120 (g)(4) (ii) and (iii). Other tests and other challenge agents may be used to evaluate compliance.

A. Totally-encapsulating chemical protective suit pressure test

1.0—Scope

1.1 This practice measures the ability of a gas tight totally-encapsulating chemical protective suit material, seams, and closures to maintain a fixed positive pressure. The results of this practice allow the gas tight integrity of a totally-encapsulating chemical protective suit to be evaluated.

1.2 Resistance of the suit materials to permeation, penetration, and degradation by specific hazardous substances is not determined by this test method.

2.0—Definition of terms

2.1 *"Totally-encapsulated chemical protective suit (TECP suit)"* means a full body garment which is constructed of protective clothing materials; covers the wearer's torso, head, arms, legs and respirator; may cover the wearer feet with tightly attached gloves and completely encloses the wearer and respirator by itself or in combination with wearer's gloves and boots.

2.2 *"Protective clothing material"* means any material or combination of materials used in an item of clothing for the purpose isolating parts of the body from direct cont with a potentially hazardous liquid or gaseous chemicals.

2.3 *"Gas tight"* means, for the purpose of this test method, the limited flow of a gas under pressure from the inside of a TECP s to atmosphere at a prescribed pressure and time interval.

3.0—Summary of test method

3.1 The TECP suit is visually inspected an modified for the test. The test apparatus is attached to the suit to permit inflation to the pre-test suit expansion pressure for removal of suit wrinkles and creases. The pressure is lowered to the test pressure and monitored for three minutes. If the pressure drop is excessive, the TECP suit fails the test and is removed from service. The test is repeated after leak location and repair.

4.0—Required Supplies

4.1 Source of compressed air.

4.2 Test apparatus for suit testing, includin a pressure measurement device with a sensitivity of at least ¼ inch water gauge.

4.3 Vent valve closure plugs or sealing tape

4.4 Soapy water solution and soft brush.

4.5 Stop watch or appropriate timing device.

5.0—Safety Precautions

5.1 Care shall be taken to provide correct pressure safety devices required for the source of compressed air used.

6.0—Test Procedure

6.1 Prior to each test, the tester shall perform a visual inspection of the suit. Check the suit for seam integrity by visually examining the seams and gently pulling on the seams. Ensure that all air supply lines, fittings, visor, zippers, and valves are secure and show no signs of deterioration.

6.1.1 Seal off the vent valves along with any other normal inlet or exhaust points (such as umbilical air line fittings or face piece opening) with tape or other appropriate means (caps, plugs, fixture, etc.). Care should be exercised in the sealing process not to damage any of the suit components.

6.1.2 Close all closure assemblies.

6.1.3 Prepare the suit for inflation by providing an improvised connection point on the suit for connecting an airline. Attach the pressure test apparatus to the suit to permit suit inflation from a compressed air source equipped with a pressure indicating regulator. The leak tightness of the pressure test apparatus should be tested before and after each test by closing off the end of the tubing attached to the suit and assuring a pressure of three inches water gauge for three minutes can be maintained. If a component is removed for the test, that component shall be replaced and a second test conducted with another component removed to permit a complete test of the ensemble.

6.1.4 The pre-test expansion pressur and the suit test pressure (B) shall be supplied by the suit manufacturer, but i

case shall they be less than: (A) = three inches water gauge; and (B) = two inches water gauge. The ending suit pressure (C) shall be no less than 80 percent of the test pressure (B); i.e., the pressure drop shall not exceed 20 percent of the test pressure (B).

6.1.5 Inflate the suit until the pressure inside is equal to pressure (A), the pre-test expansion suit pressure. Allow at least one minute to fill out the wrinkles in the suit. Release sufficient air to reduce the suit pressure to pressure (B), the suit test pressure. Begin timing. At the end of three minutes, record the suit pressure as pressure (C), the ending suit pressure. The difference between the suit test pressure and the ending suit test pressure (B–C) shall be defined as the suit pressure drop.

6.1.6 If the suit pressure drop is more than 20 percent of the suit test pressure (B) during the three-minute test period, the suit fails the test and shall be removed from service.

7.0—Retest Procedure

7.1 If the suit fails the test check for leaks by inflating the suit to pressure (A) and brushing or wiping the entire suit (including seams, closures, lens gaskets, glove-to-sleeve joints, etc.) with a mild soap and water solution. Observe the suit for the formation of soap bubbles, which is an indication of a leak. Repair all identified leaks.

7.2 Retest the TECP suit as outlined in Test procedure 6.0.

8.0—Report

8.1 Each TECP suit tested by this practice shall have the following information recorded:

8.1.1 Unique identification number, identifying brand name, date of purchase, material of construction, and unique fit features, e.g., special breathing apparatus.

8.1.2 The actual values for test pressures (A), (B), and (C) shall be recorded along with the specific observation times. If the ending pressure (C) is less than 80 percent of the test pressure (B), the suit shall be identified as failing the test. When possible, the specific leak location shall be identified in the test records. Retest pressure data shall be recorded as an additional test.

8.1.3 The source of the test apparatus used shall be identified and the sensitivity of the pressure gauge shall be recorded.

8.1.4 Records shall be kept for each pressure test even if repairs are being made at the test location.

Caution

Visually inspect all parts of the suit to be sure they are positioned correctly and secured tightly before putting the suit back into service. Special care should be taken to examine each exhaust valve to make sure it is not blocked.

Care should also be exercised to assure that the inside and outside of the suit is completely dry before it is put into storage.

B. Totally-encapsulating chemical protective suit qualitative leak test

1.0—Scope

1.1 This practice semi-qualitatively tests gas tight totally-encapsulating chemical protective suit integrity by detecting inward leakage of ammonia vapor. Since no modifications are made to the suit to carry out this test, the results from this practice provide a realistic test for the integrity of the entire suit.

1.2 Resistance of the suit materials to permeation, penetration, and degradation is not determined by this test method. ASTM test methods are available to test suit materials for these characteristics and the tests are usually conducted by the manufacturers of the suits.

2.0—Definition of terms

2.1 *"Totally-encapsulated chemical protective suit (TECP suit)* means a full body garment which is constructed of protective clothing materials; covers the wearer's torso, head, arms, legs and respirator; may cover the wearer's hands and feet with tightly attached gloves and boots; completely encloses the wearer and respirator by itself or in combination with the wearer's gloves, and boots.

2.2 *"Protective clothing material"* means any material or combination of materials used in an item of clothing for the purpose of isolating parts of the body from direct contact with a potentially hazardous liquid or gaseous chemicals.

2.3 *"Gas tight"* means, for the purpose of this test method, the limited flow of a gas under pressure from the inside of a TECP suit to atmosphere at a prescribed pressure and time interval.

2.4 *"Intrusion Coefficient"* means a number expressing the level of protection provided by a gas tight totally-encapsulating chemical protective suit. The intrusion coefficient is calculated by dividing the test room challenge agent concentration by the concentration of challenge agent found inside the suit. The accuracy of the intrusion coefficient is dependent on the challenge agent monitoring methods. The larger the intrusion coefficient the greater the protection provided by the TECP suit.

3.0—Summary of recommended practice

3.1 The volume of concentrated aqueous ammonia solution (ammonia hydroxide NH_4OH) required to generate the test atmosphere is determined using the directions outlined in 6.1. The suit is donned by a person wearing the appropriate respiratory equipment (either a positive pressure self-contained breathing apparatus or a positive pressure supplied air respirator) and worn inside the enclosed test room. The concentrated aqueous ammonia solution is taken by the suited individual into the test room and poured into an open plastic pan. A two-minute evaporation period is observed before the test room concentration is measured, using a high range ammonia length of stain detector tube. When the ammonia vapor reaches a concentration of between 1000 and 1200 ppm, the suited individual starts a standardized exercise protocol to stress and flex the suit. After this protocol is completed, the test room concentration is measured again. The suited individual exits the test room and his stand-by person measures the ammonia concentration inside the suit using a low range ammonia length of stain detector tube or other more sensitive ammonia detector. A stand-by person is required to observe the test individual during the test procedure; aid the person in donning and doffing the TECP suit; and monitor the suit interior. The intrusion coefficient of the suit can be calculated by dividing the average test area concentration by the interior suit concentration. A colorimetric ammonia indicator strip of bromophenol blue or equivalent is placed on the inside of the suit face piece lens so that the suited individual is able to detect a color change and know if the suit has a significant leak. If a color change is observed the individual shall leave the test room immediately.

4.0—Required supplies

4.1 A supply of concentrated aqueous (58 percent ammonium hydroxide by weight).

4.2 A supply of bromophenol/blue indicating paper or equivalent, sensitive to 5–10 ppm ammonia or greater over a two-minute period of exposure. [pH 3.0 (yellow) to pH 4.6 (blue)]

4.3 A supply of high range (0.5–10 volume percent) and low range (5–700 ppm) detector tubes for ammonia and the corresponding sampling pump. More sensitive ammonia detectors can be substituted for the low range detector tubes to improve the sensitivity of this practice.

4.4 A shallow plastic pan (PVC) at least 12":14":1" and a half pint plastic container (PVC) with tightly closing lid.

4.5 A graduated cylinder or other volumetric measuring device of at least 50 milliliters in volume with an accuracy of at least ± 1 milliliters.

5.0—Safety precautions

5.1 Concentrated aqueous ammonium hydroxide, NH_4OH, is a corrosive volatile liquid requiring eye, skin, and respiratory protection. The person conducting the test shall review the MSDS for aqueous ammonia.

5.2 Since the established permissible exposure limit for ammonia is 50 ppm, only persons wearing a positive pressure self-contained breathing apparatus or a positive pressure supplied air respirator shall be in the chamber. Normally only the person wearing the totally-encapsulating suit will be inside the chamber. A stand-by person shall have a positive pressure self-contained breathing apparatus, or a positive pressure supplied air respirator available to enter the test area should the suited individual need assistance.

5.3 A method to monitor the suited individual must be used during this test. Visual contact is the simplest but other methods using communication devices are acceptable.

5.4 The test room shall be large enough to allow the exercise protocol to be carried out and then to be ventilated to allow for easy exhaust of the ammonia test atmosphere after the test(s) are completed.

5.5 Individuals shall be medically screened for the use of respiratory protection and checked for allergies to ammonia before participating in this test procedure.

6.0—Test procedure

6.1.1 Measure the test area to the nearest foot and calculate its volume in cubic feet. Multiply the test area volume by 0.2 milliliters of concentrated aqueous ammonia solution per cubic foot of test area volume to determine the approximate volume of

concentrated aqueous ammonia required to generate 1000 ppm in the test area.

6.1.2 Measure this volume from the supply of concentrated aqueous ammonia and place it into a closed plastic container.

6.1.3 Place the container, several high range ammonia detector tubes, and the pump in the clean test pan and locate it near the test area entry door so that the suited individual has easy access to these supplies.

6.2.1 In a non-contaminated atmosphere, open a pre-sealed ammonia indicator strip and fasten one end of the strip to the inside of the suit face shield lens where it can be seen by the wearer. Moisten the indicator strip with distilled water. Care shall be taken not to contaminate the detector part of the indicator paper by touching it. A small piece of masking tape or equivalent should be used to attach the indicator strip to the interior of the suit face shield.

6.2.2 If problems are encountered with this method of attachment, the indicator strip can be attached to the outside of the respirator face piece lens being used during the test.

6.3 Don the respiratory protective device normally used with the suit, and then don the TECP suit to be tested. Check to be sure all openings which are intended to be sealed (zippers, gloves, etc.) are completely sealed. DO NOT, however, plug off any venting valves.

6.4 Step into the enclosed test room such as a closet, bathroom, or test booth, equipped with an exhaust fan. No air should be exhausted from the chamber during the test because this will dilute the ammonia challenge concentration.

6.5 Open the container with the pre-measured volume of concentrated aqueous ammonia within the enclosed test room, and pour the liquid into the empty plastic test pan. Wait two minutes to allow for adequate volatilization of the concentrated aqueous ammonia. A small mixing fan can be used near the evaporation pan to increase the evaporation rate of the ammonia solution.

6.6 After two minutes a determination of the ammonia concentration within the chamber should be made using the high range colorimetric detector tube. A concentration of 1000 ppm ammonia or greater shall be generated before the exercises are started.

6.7 To test the integrity of the suit the following four minute exercise protocol should be followed:

6.7.1 Raising the arms above the head with at least 15 raising motions completed in one minute.

6.7.2 Walking in place for one minute with at least 15 raising motions of each leg in a one-minute period.

6.7.3 Touching the toes with a least 10 complete motions of the arms from above the head to touching of the toes in a one-minute period.

6.7.4 Knee bends with at least 10 complete standing and squatting motions in a one-minute period.

6.8 If at any time during the test the colorimetric indicating paper should change colors, the test should be stopped and section 6.10 and 6.12 initiated (See ¶4.2).

6.9 After completion of the test exercise, the test area concentration should be measured again using the high range colorimetric detector tube.

6.10 Exit the test area.

6.11 The opening created by the suit zipper or other appropriate suit penetration should be used to determine the ammonia concentration in the suit with the low range length of stain detector tube or other ammonia monitor. The internal TECP suit air should be sampled far enough from the enclosed test area to prevent a false ammonia reading.

6.12 After completion of the measurement of the suit interior ammonia concentration the test is concluded and the suit is doffed and the respirator removed.

6.13 The ventilating fan for the test room should be turned on and allowed to run for enough time to remove the ammonia gas. The fan shall be vented to the outside of the building.

6.14 Any detectable ammonia in the suit interior (five ppm ammonia (NH_3) or more for the length of stain detector tube) indicates that the suit has failed the test. When other ammonia detectors are used a lower level of detection is possible, and it should be specified as the pass/fail criteria.

6.15 By following this test method, an intrusion coefficient of approximately 200 or more can be measured with the suit in a completely operational condition. If the intrusion coefficient is 200 or more, then the suit is suitable for emergency response and field use.

7.0—Retest procedures

7.1 If the suit fails this test, check for leaks by following the pressure test in test A above.

7.2 Retest the TECP suit as outlined in the test procedure 6.0.

8.0—Report

8.1 Each gas tight totally-encapsulating chemical protective suit tested by this practice shall have the following information recorded.

8.1.1 Unique identification number, identifying brand name, date of purchase, material of construction, and unique suit features e.g., special breathing apparatus.

8.1.2 General description of test room used for test.

8.1.3 Brand name and purchase date of ammonia detector strips and color change data.

8.1.4 Brand name, sampling range, and expiration date of the length of stain ammonia detector tubes. The brand name and model of the sampling pump should also be recorded. If another type of ammonia detector is used, it should be identified along with its minimum detection limit for ammonia.

8.1.5 Actual test results shall list the two test area concentrations, their average, the interior suit concentration, and the calculated intrusion coefficient. Retest data shall be recorded as an additional test.

8.2 The evaluation of the data shall be specified as "suit passed" or "suit failed," and the date of the test. Any detectable ammonia (five ppm or greater for the length of stain detector tube) in the suit interior indicates the suit has failed this test. When other ammonia detectors are used, a lower level of detection is possible and it shall specified as the pass fail criteria.

Caution

Visually inspect all parts of the suit to be sure they are positioned correctly and secured tightly before putting the suit back into service. Special care should be taken to examine each exhaust valve to make sure it is not blocked.

Care should also be exercised to assure that the inside and outside of the suit is completely dry before it is put into storage.

Appendix B—General Description and Discussion of the Levels of Protection and Protective Gear

This appendix sets forth information about personal protective equipment (PPE) protection levels which may be used to assist employers in complying with the PPE requirements of this section.

As required by the standard, PPE must be selected which will protect employees from the specific hazards which they are likely to encounter during their work on-site.

Selection of the appropriate PPE is a complex process which should take into consideration a variety of factors. Key factors involved in this process are identification of the hazards, or suspected hazards; their routes of potential hazard to employees (inhalation, skin absorption, ingestion, and eye or skin contact); and the performance of the PPE *materials* (and seams) in providing a barrier to these hazards. The amount of protection provided by PPE is material-hazard specific. That is, protective equipment materials will protect well against some hazardous substances and poorly, or not at all, against others. In many instances, protective equipment materials cannot be found which will provide continuous protection from the particular hazardous substance. In these cases the breakthrough time of the protective material should exceed the work durations, or the exposure after breakthrough may not pose a hazardous level.

Other factors in this selection process to be considered are matching the PPE to the employee's work requirements and task-specific conditions. The durability of PPE materials, such as tear strength and seam strength, should be considered in relation to the employee's tasks. The effects of PPE in relation to heat stress and task duration are a factor in selecting and using PPE. In some cases layers of PPE may be necessary to provide sufficient protection, or to protect expensive PPE inner garments, suits or equipment.

The more that is known about the hazards at the site, the easier the job of PPE selection becomes. As more information about the hazards and conditions at the site becomes available, the site supervisor can make decisions to up-grade or down-grade the level of PPE protection to match the tasks at hand.

The following are guidelines which an employer can use to begin the selection of the appropriate PPE. As noted above, the site information may suggest the use of combinations of PPE selected from the different protection levels (i.e., A, B, C, or D) as being more suitable to the hazards of the

work. It should be cautioned that the listing below does not fully address the performance of the specific PPE material in relation to the specific hazards at the job site, and that PPE selection, evaluation and re-selection is an ongoing process until sufficient information about the hazards and PPE performance is obtained.

Part A. Personal protective equipment is divided into four categories based on the degree of protection afforded. (See Part B of this appendix for further explanation of Levels A, B, C, and D hazards.)

I. *Level A*—To be selected when the greatest level of skin, respiratory, and eye protection is required.

The following constitute Level A equipment; it may be used as appropriate:

1. Positive pressure, full face-piece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA, approved by the National Institute for Occupational Safety and Health (NIOSH).
2. Totally-encapsulating chemical-protective suit.
3. Coveralls.[1]
4. Long underwear.[1]
5. Gloves, outer, chemical-resistant.
6. Gloves, inner, chemical-resistant.
7. Boots, chemical-resistant, steel toe and shank.
8. Hard hat (under suit).[1]
9. Disposable protective suit, gloves and boots (depending on suit construction, may be worn over totally-encapsulating suit).

II. *Level B*—The highest level of respiratory protection is necessary but a lesser level of skin protection is needed.

The following constitute Level B equipment; it may be used as appropriate.

1. Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).
2. Hooded chemical-resistant clothing (overalls and long-sleeved jacket; coveralls; one or two-piece chemical-splash suit; disposable chemical-resistant overalls).
3. Coveralls.[1]
4. Gloves, outer, chemical-resistant.
5. Gloves, inner, chemical-resistant.
6. Boots, outer, chemical-resistant steel toe and shank.
7. Boot-covers, outer, chemical-resistant (disposable).[1]
8. Hard hat.[1]
9. [Reserved]
10. Face shield.[1]

III. *Level C*—The concentration(s) and type(s) of airborne substance(s) is known and the criteria for using air purifying respirators are met.

The following constitute Level C equipment; it may be used as appropriate.

1. Full-face or half-mask, air purifying respirators (NIOSH approved).
2. Hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls).
3. Coveralls.[1]
4. Gloves, outer, chemical-resistant.
5. Gloves, inner, chemical-resistant.
6. Boots (outer), chemical-resistant steel toe and shank.[1]
7. Boot-covers, outer, chemical-resistant (disposable).[1]
8. Hard hat.[1]
9. Escape mask.[1]
10. Face shield.[1]

IV. *Level D*—A work uniform affording minimal protection, used for nuisance contamination only.

The following constitute Level D equipment; it may be used as appropriate:

1. Coveralls.
2. Gloves.[1]
3. Boots/shoes, chemical-resistant steel toe and shank.
4. Boots, outer, chemical-resistant (disposable).[1]
5. Safety glasses or chemical splash goggles*.
6. Hard hat.[1]
7. Escape mask.[1]
8. Face shield.[1]

Part B. The types of hazards for which levels A, B, C, and D protection are appropriate are described below:

I. *Level A*—Level A protection should be used when:

1. The hazardous substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on either the measured (or potential for) high concentration of atmospheric vapors, gases, or particulates; or the site operations and work functions involve a high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials that are harmful to skin or capable of being absorbed through the skin;
2. Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible; or
3. Operations are being conducted in confined, poorly ventilated areas, and the absence of conditions requiring Level A have not yet been determined.

II. *Level B*—Level B protection should be used when:

1. The type and atmospheric concentration of substances have been identified and require a high level of respiratory protection, but less skin protection;
2. The atmosphere contains less than 19.5 percent oxygen; or
3. The presence of incompletely identified vapors or gases is indicated by a direct-reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemicals harmful to skin or capable of being absorbed through the skin.

Note: This involves atmospheres with IDLH concentrations of specific substances that present severe inhalation hazards and that do not represent a severe skin hazard; or that do not meet the criteria for use of air-purifying respirators.

III. *Level C*—Level C protection should be used when:

1. The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect or be absorbed through any exposed skin;
2. The types of air contaminants have been identified, concentrations measured, and an air-purifying respirator is available that can remove the contaminants; and
3. All criteria for the use of air-purifying respirators are met.

IV. *Level D*—Level D protection should be used when:

1. The atmosphere contains no known hazard; and
2. Work functions preclude splashes, immersion, or the potential for unexpected inhalation of or contact with hazardous levels of any chemicals.

Note: As stated before, combinations of personal protective equipment other than those described for Levels A, B, C, and D protection may be more appropriate and may be used to provide the proper level of protection.

As an aid in selecting suitable chemical protective clothing, it should be noted that the National Fire Protection Association is developing standards on chemical protective clothing. These standards are currently undergoing public review prior to adoption, including:

NFPA 1991—Standard on Vapor-Protective Suits for Hazardous Chemical Emergencies (EPA Level A Protective Clothing)

NFPA 1991—Standard on Liquid Splash-Protective Suits for Hazardous Chemical Emergencies (EPA Level B Protective Clothing)

NFPA 1993—Standard on Liquid Splash-Protective Suits for Non-emergency, Non-flammable Hazardous Chemical Situations (EPA Level B Protective Clothing)

These standards would apply documentation and performance requirements to the manufacture of chemical protective suits. Chemical protective suits meeting these requirements would be labelled as compliant with the appropriate standard. When these standards are adopted by the National Fire Protection Association, it is recommended that chemical protective suits which meet these standards be used.

Appendix C—Compliance Guidelines

1. *Occupational Safety and Health Program.* Each hazardous waste site clean-up effort will require an occupational safety and health program headed by the site coordinator or the employer's representative. The purpose of the program will be the protection of employees at the site and will be an extension of the employer's overall safety and health program. The program will need to be developed before work begins on the site and implemented as work proceeds as stated in paragraph (b). The program is to facilitate coordination and communication of safety and health issues among personnel responsible for the various activities which will take place at the site. It will provide the overall means for planning and implementing the needed safety and health training and job orientation of employees who will be working at the site. The program will provide the means for identifying and controlling worksite hazards and the means for

[1] Optional, as applicable.

monitoring program effectiveness. The program will need to cover the responsibilities and authority of the site coordinator or the employer's manager on the site for the safety and health of employees at the site, and the relationships with contractors or support services as to what each employer's safety and health responsibilities are for their employees on the site. Each contractor on the site needs to have its own safety and health program so structured that it will smoothly interface with the program of the site coordinator or principal contractor.

Also those employers involved with treating, storing or disposal of hazardous waste as covered in paragraph (p) must have implemented a safety and health program for their employees. This program is to include the hazard communication program required in paragraph (p)(1) and the training required in paragraphs (p)(7) and (p)(8) as parts of the employers comprehensive overall safety and health program. This program is to be in writing.

Each site or workplace safety and health program will need to include the following: (1) Policy statements of the line of authority and accountability for implementing the program, the objectives of the program and the role of the site safety and health supervisor or manager and staff; (2) means or methods for the development of procedures for identifying and controlling workplace hazards at the site; (3) means or methods for the development and communication to employees of the various plans, work rules, standard operating procedures and practices that pertain to individual employees and supervisors; (4) means for the training of supervisors and employees to develop the needed skills and knowledge to perform their work in a safe and healthful manner; (5) means to anticipate and prepare for emergency situations; and (6) means for obtaining information feedback to aid in evaluating the program and for improving the effectiveness of the program. The management and employees should be trying continually to improve the effectiveness of the program thereby enhancing the protection being afforded those working on the site.

Accidents on the site or workplace should be investigated to provide information on how such occurrences can be avoided in the future. When injuries or illnesses occur on the site or workplace, they will need to be investigated to determine what needs to be done to prevent this incident from occurring again. Such information will need to be used as feedback on the effectiveness of the program and the information turned into positive steps to prevent any reoccurrence. Receipt of employee suggestions or complaints relating to safety and health issues involved with site or workplace activities is also a feedback mechanism that can be used effectively to improve the program and may serve in part as an evaluative tool(s).

For the development and implementation of the program to be the most effective, professional safety and health personnel should be used. Certified Safety Professionals, Board Certified Industrial Hygienists or Registered Professional Safety Engineers are good examples of professional stature for safety and health managers who will administer the employer's program.

2. *Training.* The training programs for employees subject to the requirements of paragraph (e) of this standard should address: the safety and health hazards employees should expect to find on hazardous waste clean-up sites; what control measures or techniques are effective for those hazards; what monitoring procedures are effective in characterizing exposure levels; what makes an effective employer's safety and health program; what a site safety and health plan should include; hands on training with personal protective equipment and clothing they may be expected to use; the contents of the OSHA standard relevant to the employee's duties and function; and, employee's responsibilities under OSHA and other regulations. Supervisors will need training in their responsibilities under the safety and health program and its subject areas such as the spill containment program, the personal protective equipment program, the medical surveillance program, the emergency response plan and other areas.

The training programs for employees subject to the requirements of paragraph (p) of this standard should address: the employers safety and health program elements impacting employees; the hazard communication program; the medical surveillance program; the hazards and the controls for such hazards that employees need to know for their job duties and functions. All require annual refresher training.

The training programs for employees covered by the requirements of paragraph (q) of this standard should address those competencies required for the various levels of response such as: the hazards associated with hazardous substances; hazard identification and awareness; notification of appropriate persons; the need for and use of personal protective equipment including respirators; the decontamination procedures to be used; preplanning activities for hazardous substance incidents including the emergency response plan; company standard operating procedures for hazardous substance emergency responses; the use of the incident command system and other subjects. Hands-on training should be stressed whenever possible. Critiques done after an incident which include an evaluation of what worked and what did not and how could the incident be better handled the next time may be counted as training time.

For hazardous materials specialists (usually members of hazardous materials teams), the training should address the care, use and/or testing of chemical protective clothing including totally encapsulating suits, the medical surveillance program, the standard operating procedures for the hazardous materials team including the use of plugging and patching equipment and other subject areas.

Officers and leaders who may be expected to be in charge at an incident should be fully knowledgeable of their company's incident command system. They should know where and how to obtain additional assistance and be familiar with the local district's emergency response plan and the state emergency response plan.

Specialist employees such as technical experts, medical experts or environmental experts that work with hazardous materials in their regular jobs, who may be sent to the incident scene by the shipper, manufacturer or governmental agency to advise and assist the person in charge of the incident should have training on an annual basis. Their training should include the care and use of personal protective equipment including respirators; knowledge of the incident command system and how they are to relate to it; and those areas needed to keep them current in their respective field as it relates to safety and health involving specific hazardous substances.

Those skilled support personnel, such as employees who work for public works departments or equipment operators who operate bulldozers, sand trucks, backhoes, etc., who may be called to the incident scene to provide emergency support assistance, should have at least a safety and health briefing before entering the area of potential or actual exposure. These skilled support personnel, who have not been a part of the emergency response plan and do not meet the training requirements, should be made aware of the hazards they face and should be provided all necessary protective clothing and equipment required for their tasks.

3. *Decontamination.* Decontamination procedures should be tailored to the specific hazards of the site, and may vary in complexity and number of steps, depending on the level of hazard and the employee's exposure to the hazard. Decontamination procedures and PPE decontamination methods will vary depending upon the specific substance, since one procedure or method may not work for all substances. Evaluation of decontamination methods and procedures should be performed, as necessary, to assure that employees are not exposed to hazards by re-using PPE. References in Appendix F may be used for guidance in establishing an effective decontamination program. In addition, the U.S. Coast Guard's Manual, "Policy Guidance for Response to Hazardous Chemical Releases," U.S. Department of Transportation, Washington, DC (COMDTINST M16465.30) is a good reference for establishing an effective decontamination program.

4. *Emergency response plans.* States, along with designated districts within the states, will be developing or have developed local emergency response plans. These state and district plans should be utilized in the emergency response plans called for in the standard. Each employer should assure that its emergency response plan is compatible with the local plan. The major reference being used to aid in developing the state and local district plans is the *Hazardous Materials Emergency Planning Guide*, NRT-1. The current Emergency Response Guidebook from the U.S. Department of Transportation, CMA's CHEMTREC and the Fire Service Emergency Management Handbook may also be used as resources.

Employers involved with treatment, storage, and disposal facilities for hazardous waste, which have the required contingency plan called for by their permit, would not need to duplicate the same planning elements. Those items of the emergency response plan that are properly addressed in the contingency plan may be substituted into the emergency response plan required in 1910.120 or otherwise kept together for employer and employee use.

8. *Personal protective equipment programs.* The purpose of personal protective clothing and equipment (PPE) is to shield or isolate individuals from the chemical, physical, and biologic hazards that may be encountered at a hazardous substance site.

As discussed in Appendix B, no single combination of protective equipment and clothing is capable of protecting against all hazards. Thus PPE should be used in conjunction with other protective methods and its effectiveness evaluated periodically.

The use of PPE can itself create significant worker hazards, such as heat stress, physical and psychological stress, and impaired vision, mobility, and communication. For any given situation, equipment and clothing should be selected that provide an adequate level of protection. However, over-protection, as well as under-protection, can be hazardous and should be avoided where possible.

Two basic objectives of any PPE program should be to protect the wearer from safety and health hazards, and to prevent injury to the wearer from incorrect use and/or malfunction of the PPE. To accomplish these goals, a comprehensive PPE program should include hazard identification, medical monitoring, environmental surveillance, selection, use, maintenance, and decontamination of PPE and its associated training.

The written PPE program should include policy statements, procedures, and guidelines. Copies should be made available to all employees, and a reference copy should be made available at the worksite. Technical data on equipment, maintenance manuals, relevant regulations, and other essential information should also be collected and maintained.

6. *Incident command system (ICS).* Paragraph 1910.120(q)(3)(ii) requires the implementation of an ICS. The ICS is an organized approach to effectively control and *manage* operations at an emergency incident. The individual in charge of the ICS is the senior official responding to the incident. The ICS is not much different than the "command post" approach used for many years by the fire service. During large complex fires involving several companies and many pieces of apparatus, a command post would be established. This enabled *one* individual to be in charge of managing the incident, rather than having several officers from different companies making separate, and sometimes conflicting, decisions. The individual in charge of the command post would delegate responsibility for performing various tasks to subordinate officers. Additionally, all communications were routed through the command post to reduce the number of radio transmissions and eliminate confusion. However, strategy, tactics, and all decisions were made by one individual.

The ICS is a very similar system, except it is implemented for emergency response to all incidents, both large and small, that involve hazardous substances.

For a small incident, the individual in charge of the ICS may perform many tasks of the ICS. There may not be any, or little, delegation of tasks to subordinates. For example, in response to a small incident, the individual in charge of the ICS, in addition to normal command activities, may become the safety officer and may designate only one employee (with proper equipment) as a back-up to provide assistance if needed. OSHA does recommend, however, that at least two employees be designated as back-up personnel since the assistance needed may include rescue.

To illustrate the operation of the ICS, the following scenario might develop during a small incident, such as an overturned tank truck with a small leak of flammable liquid.

The first responding senior officer would implement and take command of the ICS. That person would size-up the incident and determine if additional personnel and apparatus were necessary; would determine what actions to take to control the leak; and, determine the proper level of personal protective equipment. If additional assistance is not needed, the individual in charge of the ICS would implement actions to stop and control the leak using the fewest number of personnel that can effectively accomplish the tasks. The individual in charge of the ICS then would designate himself as the safety officer and two other employees as a back-up in case rescue may become necessary. In this scenario, decontamination procedures would not be necessary.

A large complex incident may require many employees and difficult, time-consuming efforts to control. In these situations, the individual in charge of the ICS will want to delegate different tasks to subordinates in order to maintain a span of control that will keep the number of subordinates, that are reporting, to a manageable level.

Delegation of task at large incidents may be by location, where the incident scene is divided into sectors, and subordinate officers coordinate activities within the sector that they have been assigned.

Delegation of tasks can also be by function. Some of the functions that the individual in charge of the ICS may want to delegate at a large incident are: medical services; evacuation; water supply; resources (equipment, apparatus); media relations; safety; and, site control (integrate activities with police for crowd and traffic control). Also for a large incident, the individual in charge of the ICS will designate several employees as back-up personnel; and a number of safety officers to monitor conditions and recommend safety precautions.

Therefore, no matter what size or complexity an incident may be, by implementing an ICS there will be *one individual in charge* who makes the decisions and gives directions; and, all actions, and communications are coordinated through one central point of command. Such a system should reduce confusion, improve safety, organize and coordinate actions, and should facilitate effective management of the incident.

7. *Site Safety and Control Plans.* The safety and security of response personnel and others in the area of an emergency response incident site should be of primary concern to the incident commander. The use of a site safety and control plan could greatly assist those in charge of assuring the safety and health of employees on the site.

A comprehensive site safety and control plan should include the following: summary analysis of hazards on the site and a risk analysis of those hazards; site map or sketch; site work zones (clean zone, transition or decontamination zone, work or hot zone); use of the buddy system; site communications; command post or command center; standard operating procedures and safe work practices; medical assistance and triage area; hazard monitoring plan (air contaminate monitoring, etc.); decontamination procedures and area; and other relevant areas. This plan should be a part of the employer's emergency response plan or an extension of it to the specific site.

8. *Medical surveillance programs.* Workers handling hazardous substances may be exposed to toxic chemicals, safety hazards, biologic hazards, and radiation. Therefore, a medical surveillance program is essential to assess and monitor workers' health and fitness for employment in hazardous waste operations and during the course of work; to provide emergency and other treatment as needed; and to keep accurate records for future reference.

The *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* developed by the National Institute for Occupational Safety and Health (NIOSH), the Occupational Safety and Health Administration (OSHA), the U.S. Coast Guard (USCG), and the Environmental Protection Agency (EPA); October 1985 provides an excellent example of the types of medical testing that should be done as part of a medical surveillance program.

Appendix D—References

The following references may be consulted for further information on the subject of this standard:

1. OSHA Instruction DFO CPL 2.70—January 29, 1986. *Special Emphasis Program: Hazardous Waste Sites.*

2. OSHA Instruction DFO CPL 2-2.37A—January 29, 1986. *Technical Assistance and Guidelines for Superfund and Other Hazardous Waste Site Activities.*

3. OSHA Instruction DTS CPL 2.74—January 29, 1986. *Hazardous Waste Activity Form. OSHA 173.*

4. *Hazardous Waste Inspections Reference Manual.* U.S. Department of Labor. Occupational Safety and Health Administration. 1986.

5. Memorandum of Understanding Among the National Institute for Occupational Safety and Health, the Occupational Safety and Health Administration, the United States Coast Guard, and the United States Environmental Protection Agency. *Guidance for Worker Protection During Hazardous*

Waste Site Investigations and Clean-up and Hazardous Substance Emergencies. December 18, 1980.

6. *National Priorities List,* 1st Edition. October 1984; U.S. Environmental Protection Agency, Revised periodically.

7. *The Decontamination of Response Personnel.* Field Standard Operating Procedures (F.S.O.P.) 7; U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division, December 1984.

8. *Preparation of a Site Safety Plan.* Field Standard Operating Procedures (F.S.O.P.) 9; U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division, April 1985.

9. *Standard Operating Safety Guidelines:* U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division, Environmental Response Team; November 1984.

10. *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities,* National Institute for Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), U.S. Coast Guard (USCG), and Environmental Protection Agency (EPA); October 1985.

11. *Protecting Health and Safety at Hazardous Waste Sites: An Overview,* U.S. Environmental Protection Agency, EPA/625/9-85/006; September 1985.

12. *Hazardous Waste Sites and Hazardous Substance Emergencies.* NIOSH Worker Bulletin, U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health; December 1982.

13. *Personal Protective Equipment for Hazardous Materials Incidents: A Selection Guide;* U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health; October 1984.

14. *Fire Service Emergency Management Handbook,* International Association of Fire Chiefs Foundation, 101 East Holly Avenue, Unit 10B, Sterling, VA 22170, January 1985.

15. *Emergency Response Guidebook.* U.S Department of Transportation, Washington, DC, 1987.

16. *Report to the Congress on Hazardous Materials Training, Planning and Preparedness.* Federal Emergency Management Agency, Washington, DC, July 1988.

17. *Workbook for Fire Command,* Alan V. Brunacini and J. David Beageron, National Fire Protection Association, Batterymarch Park, Quincy, MA 02269, 1985.

18. *Fire Command,* Alan V. Brunacini, National Fire Protection, Batterymarch Park, Quincy, MA 02269, 1985.

19. *Incident Command System,* Fire Protection Publications, Oklahoma State University, Stillwater, OK 74078, 1983.

20. *Site Emergency Response Planning,* Chemical Manufacturers Association, Washington, DC 20037, 1986.

21. *Hazardous Materials Emergency Planning Guide,* NRT-1, Environmental Protection Agency, Washington, DC, March 1987.

22. *Community Teamwork: Working Together to Promote Hazardous Materials Transportation Safety.* U.S. Department of Transportation, Washington, DC, May 1983.

23. *Disaster Planning Guide for Business and Industry,* Federal Emergency Management Agency, Publication No. FEMA 141, August 1987.

(The Office of Management and Budget has approved the information collection requirements in this section under control number 1218-0139)

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Treatability Studies Contractor Work Assignments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

JUL 12 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONS

OSWER Directive # 9380.3-01

MEMORANDUM

SUBJECT: Treatability Studies Contractor Work Assignments

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response

Walter W. Kovalick Jr. for

TO: Superfund Branch Chiefs, Regions I-X

Purpose

The purpose of this memo is to require that all future remedial and removal work assignments involving treatability studies contain a provision requiring the contractor to send a copy of the treatability study to the Agency's Superfund Treatability Data Base which is being developed by the Office of Research and Development (ORD). In addition, you are also directed to send a copy of all treatability studies performed to date and which are readily available, to this central repository.

Background

The Agency has initiated a treatability study program to facilitate the performance of and improve the quality of treatability studies performed in support of the Superfund program. The establishment of a Treatability Data Base is an important part of this program if we are to utilize this information to aid in the selection of remedies and the planning of future treatability studies. A centralized repository for treatability studies is not currently in place and knowledge gained from treatability studies is not efficiently communicated. ORD is developing a repository for the studies to aid us in this area.

This repository will provide information to aid in remedy selections on a site-specific basis, improve future planning for treatability studies, and further our knowledge of technologies on a national basis. It is our intention to minimize Regional resources required to maintain the data base in the future by requiring the contractors to assume responsibility for sending treatability studies to the central repository. The treatability studies collected as a result of this effort will ensure that information available reflects current Superfund experience.

The treatability study information as well as other pertinent technical information, will be available to the Regions and contractors through the Alternative Treatment Technology Information Center (ATTIC) in FY 1990. Please contact Mike Mastracci at FTS 475-8933 (mail code RD-681 at the U.S. EPA HQ).

Implementation

Work assignment managers and project officers for removal and the remedial projects are to include a provision in all future work assignments requiring that copies of treatability studies be sent to the following address:

Attn: Ken Dostle
U.S. Environmental Protection Agency
Superfund Treatability Data Base
ORD/REEL
26 W. Martin Luther King Drive
Cincinnati, Ohio 45268

The work assignment should also require that the treatability study report provided to ORD be a separate and complete document which is a camera-ready master copy. We are also collecting treatability studies retroactively as well. You are directed to send copies of all treatability studies that are readily available to the address identified above.

The Agency is also developing detailed guidance on planning and performing treatability studies with the first of these planned for distribution in early FY-90. Today's memo will be updated in the future to require that contractors comply with these guidances as well. Your assistance with the development and implementation of this program is appreciated. Please contact Robin Anderson at FTS 382-2446 or Scott Maid at FTS 382-4671 if you have question or comments on the application of this requirement to the remedial or removal program respectively.

cc: OHM Coordinators, Regions I-X
ARC Project Officers, Regions I-X
ERCS Project Officers, Region I-X
REM Project Officers (OERR)
Russ Wyer (OERR/HSCD)
Tim Fields (OERR/ERD)
Scott Maid (OERR/ERD)
Robin Anderson (OERR/HSCD)
Mike Mastracci (ORD)
Ken Dostle (ORD)
Betti Van Epp (OERR/OPM)
Joseph Lafornara (OERR/ERT)

Final Guidance on Adminstrative Records for Selecting CERCLA Response Actions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

DEC 3 1990

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE
OSWER Directive # 9833.3A-1

MEMORANDUM

SUBJECT: Final Guidance on Administrative Records for Selecting CERCLA Response Actions

FROM: Don R. Clay
Assistant Administrator

TO: Regional Administrators, Regions I-X

This memorandum transmits to you our "Final Guidance on Administrative Records for Selecting CERCLA Response Actions." This document replaces the "Interim Guidance on Administrative Records for Selection of CERCLA Response Actions," previously issued on March 1, 1989.

The guidance sets forth the policy and procedures governing the compilation and establishment of administrative records for selecting response actions under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). This guidance is also consistent with and expands on Subpart I of the National Oil and Hazardous Substances Pollution Contingency Plan, 55 Fed. Reg. 8859 (March 8, 1990).

This guidance reflects input received from the Regions, Headquarters and the Department of Justice. There have been several drafts of this guidance and comments have been incorporated. I thank you for your assistance.

Attachment

cc: Director, Waste Management Division,
Regions I, IV, V, and VII
Director, Emergency and Remedial Response Division,
Region II
Director, Hazardous Waste Management Division,
Regions III, VI, VIII, and IX
Director, Hazardous Waste Division, Region X
Director, Environmental Services Division,
Regions I, VI, and VII
Regional Counsel, Regions I-X
Administrative Record Coordinators, Regions I-X

FINAL GUIDANCE ON ADMINISTRATIVE RECORDS FOR SELECTING CERCLA RESPONSE ACTIONS

U.S. Environmental Protection Agency
Office of Solid Waste and Emergency Response
Washington, D.C. 20460

TABLE OF CONTENTS

I. INTRODUCTION

A. Purpose and Scope of the Administrative Record

This guidance addresses the establishment of administrative records under Section 113 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA).[1] Section 113(k)(1) of CERCLA requires the establishment of administrative records upon which the President shall base the selection of a response action (see Appendix A for the complete statutory language).

Chapter I of this guidance introduces the purpose and scope of the administrative record. Chapter II reviews procedures for compiling and maintaining the administrative record. Chapter III examines the various types of documents which should be included in the administrative record. Chapter IV discusses how agencies outside EPA are involved in establishing the record. Finally, this guidance includes a glossary of frequently used terms and acronyms as well as several appendices.

Although this guidance is written for use by the United States Environmental Protection Agency (EPA), it can be adapted for use by state and federal agencies required to establish administrative records for the selection of CERCLA response actions. As used in this guidance the term "lead agency" means either EPA, a state or other federal agency, which is responsible for compiling and maintaining the administrative record. As used in this guidance, the term "support agency" means the agency or agencies which furnish necessary data to the lead agency, reviews response data and documents and provides other assistance as requested by the OSC or RPM. This guidance reflects the revisions to the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) published on March 8, 1990, 55 Fed. Reg. 8859 (see Appendices L and M).

The administrative record established under Section 113(k) of CERCLA serves two primary purposes. First, the record contains those documents which form the basis for selection of a response action and under Section 113(j), judicial review of any issue concerning the adequacy of any response action is limited to the record. Second, Section 113(k) requires that the administrative record act as a vehicle for public participation

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[1] 42 U.S.C. §9613. References made to CERCLA throughout this memorandum should be interpreted as meaning "CERCLA, as amended by SARA."

in selecting a response action. This guidance document discusses procedures developed to ensure that the lead agency's administrative records meet these twin purposes.

The administrative record is the body of documents that "forms the basis" for the selection of a particular response at a site. This does not mean that documents which only support a response decision are placed in the administrative record. Documents which are included are relevant documents that were relied upon in selecting the response action, as well as relevant documents that were considered but ultimately rejected (e.g., documents "considered or relied on").

This document uses the phrase "considered or relied on" in discussing which documents should be included in the administrative record to indicate that it is EPA's general policy to be inclusive for placing documents in the administrative record. However, this term does <u>not</u> mean that drafts or internal documents are normally included in the administrative record. Lead or support agency draft or internal memoranda are generally not included in the administrative record, except in specific circumstances (see section III.G. at page 33). Thus, the record will include final documents generated by the lead and support agency, as well as technical and site-specific information. Information or comments submitted by the public or potentially responsible parties (PRPs) during a public comment period (even if the lead agency does not agree with the information or comments) are also included in the administrative record (see section III.D. at page 30).

The following principles should be applied in establishing administrative records:

- The record should be compiled as documents relating to the selection of the response action are generated or received by the lead agency;
- The record should include documents that form the basis for the decision, whether or not they support the response selection; and
- The record should be a contemporaneous explanation of the basis for the selection of a response action.

The effort to establish adequate administrative records encompasses a vast array of people including: Administraive Record Coordinators, Remedial Project Managers (RPMs), On-Scene Coordinators (OSCs), enforcement staff, records management staff, Regional Counsel staff, Community Relations Coordinators (CRCs), other federal agencies, states, CERCLA contractors, and the

public.[2] This guidance will discuss the roles and responsibilities of these people and how they interact with one another.

B. Judicial Review

Section 113(j)(1) of CERCLA provides that judicial review of any issues concerning the adequacy of any response action shall be limited to the administrative record.

Judicial review based on an administrative record provides numerous benefits. Under Section 113(j) of CERCLA and general principles of administrative law, when the trial court reviews the response action selected, the court is limited to reviewing the documents in the administrative record. As a result, facts or arguments related to the response action that challenging parties present for the first time in court will not be considered.

Record review saves time by limiting the scope of trials, thereby saving the lead agency's resources for cleanup rather than litigation. Courts will not allow a party challenging a decision to use discovery, hearings, or additional fact finding to look beyond the lead agency's administrative record, except in very limited circumstances. In particular, courts generally will not permit persons challenging a response decision to depose, examine, or cross-examine EPA, state or other federal agency decisionmakers, staff, or contractors concerning the selection of the response action.

Furthermore, the administrative record may be cited long after officials responsible for the response decisions have moved into different positions or have left the lead or support agency. Judicial review limited to the record saves time involved in locating former employees who may not remember the facts and circumstances underlying decisions made at a much earlier time.

Moreover, in ruling on challenges to the response action decision, the court will apply the highly deferential "arbitrary and capricious" standard of review set forth in Section 113(j)(2) of CERCLA. Under this standard, a court does not substitute its judgment for that of the decisionmaker. The reviewing court does not act as an independent decisionmaker, but rather acts as a reviewing body whose limited task is to check for arbitrary and capricious action. Thus, the court will only overturn the response selection decision if it can be shown on the

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[2] As used hereinafter in this guidance the term "public" includes potentially responsible parties (PRPs).

administrative record, that the decision was arbitrary and capricious or otherwise not in accordance with the law. However, the extent to which EPA benefits from having judicial review limited to the record depends on the quality and completeness of each record.

C. Publi cicipation

Section 113(k)(2) of CERCLA requires that the public have the opportunity to participate in developing the administrative record for response selection. Section 117 of CERCLA also includes provisions for public participation in the remedial action selection process.[3] Both sections reflect a statutory emphasis on public participation. Participation by interested persons will ensure that the lead agency has considered the concerns of the public, including PRPs, during the response selection process. In addition, for purposes of administrative and judicial review, the record will contain documents that reflect the participation of the public and the lead agency's consideration of the public's concerns.

If the lead agency does not provide an opportunity for involvement of interested parties in the development of the administrative record, persons challenging a response action may argue that judicial review should not be limited to the record. The lead agency must, therefore, make the information considered or relied on in selecting a response action available to the public, provide an appropriate opportunity for public comment on this information, place comments and information received from the public in the record, and reflect in the record the lead agency's consideration of this information.

II. PROCEDURES FOR ESTABLISHING THE ADMINISTRATIVE RECORD

A. Administrative Record Coordinator

Each region should have an Administrative Record Coordinator. The Record Coordinator generally has the duty of ensuring that the administrative record files are compiled and maintained according to Subpart I of the NCP and this guidance.[4]

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[3] 42 U.S.C. §9617.

[4] The "administrative record file" should be distinguished from the "administrative record." The administrative record file refers to the documents as they are being compiled. Until a response action decision has been selected, there is no complete administrative record for that decision. Thus, to avoid creating the impression that the record is complete at any time prior to

The Record Coordinator will not be responsible for deciding which documents are included in a record file. Those decisions should be made by the OSC or RPM, with appropriate consultation of ORC staff. The Record Coordinator's duties ordinarily include:

- Developing procedures for creating record files;
- Ensuring that the public is notified that the record files are available for inspection;
- Ensuring that the records are available at or near the site;
- Ensuring that the records are available at the regional office or other central location;
- Coordinating efforts to obtain the necessary documents;
- Indexing the record files;
- Updating the record files and indices on a regular basis (e.g., quarterly);
- Ensuring availability of the record file for copying;
- Ensuring that sampling and testing data, quality control and quality assurance documentation, and chain of custody forms are available for public inspection, possibly at a location other than that of the record files;
- Coordinating with ORC staff on questions of relevance and confidentiality of documents submitted for the record files;
- Arranging for production and presentation of the record to court when necessary for judicial review;
- Maintaining the confidential portion of the record files, if necessary;
- Maintaining the "Compendium of CERCLA Response Selection Guidance Documents";
- Coordinating with states and federal agencies on record files compiled by them; and

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the final selection decision, the set of documents is referred to as the administrative record file rather than the administrative record.

- Notifying appropriate personnel of the timing for review of state and federal record files.

Appendix D contains a model position description for an Administrative Record Coordinator.

The Record Coordinator must work closely with RPMs, OSCs, enforcement staff, records management staff, Regional Counsel staff, community relations staff, and the Department of Justice (DOJ) (for cases in litigation).

If the way the record was compiled and maintained is questioned in litigation, the Record Coordinator may be called upon to prepare an affidavit or testify about those procedures. Therefore, the Record Coordinator should be familiar with the procedures associated with the record, and be qualified to fulfill the responsibilities outlined above.

B. Multiple Response Actions

In general, every decision document (e.g., Record of Decision (ROD) or Action Memorandum) must be supported by an administrative record. Under CERCLA, cleanups are often broken up into distinct response actions. At a given site this may include several removal actions, and/or remedial actions known as operable units. For every removal action or operable unit, a separate administrative record must be compiled.

Information relevant to more than one response decision, such as a site inspection report or a preliminary assessment report may be placed in the record file for an initial response action and incorporated by reference in the indexes of subsequent record files for that site.

C. Compilation

The administrative record file should be compiled as relevant documents on the response action are generated or received. Thus, all documents which are clearly relevant and non-privileged should be placed in the record file, entered into the index, and made available to the public as soon as possible. For example, the remedial investigation/feasibility study (RI/FS) work plan, summaries of quality assured data, the RI/FS released for public comment, the proposed plan, and any public comments received on the RI/FS and proposed plan should be placed in the record file as soon as they are generated or received.

When there are questions whether particular documents should be included in the record file, such documents can be segregated and reviewed at regular intervals (e.g., quarterly). For

example, draft documents or documents subject to claims of privilege should be set aside for review by ORC and other appropriate staff. At critical times, such as prior to the public comment period, the issues regarding these documents should be completely resolved and the documents included in the record file, if appropriate.

The record file should be updated while it is available for public inspection. The additional documents should be placed in the record file and entered in the index. Any updates to the record file should be made to all copies of the record file.

All documents considered or relied on in selecting the response action should be in the record file when a decision document (e.g., a record of decision) is signed. Documents relevant to the response selection but generated or received after the decision document is signed should be placed in a post-decision document file and may be added to the administrative record file in certain circumstances (see section III.N. at page 40).

D. Index

Each administrative record file must be indexed. The index plays a key role in enabling both lead agency staff and members of the public to help locate and retrieve documents included in the record file. In addition, the index can be used for public information purposes or identifying documents located elsewhere, such as those included in the compendium of guidance documents (see Appendix E). The index also serves as an overview of the history of the response action at the site.

The index also provides the lead agency with a degree of control over documents located at or near the site. The creation of an index will prevent persons from altering the record simply by physically adding or removing documents from the record file.

The index should include the following information for each document:

- Document Number;
- Document Date - date on the document;
- Document Title - one or two line identification. Identify the actual document, not a transmittal memo or other less relevant document. Include sufficient information so the document cannot be confused with another (e.g., the title "report" may be insufficient);

- Author - Name and affiliation;
- Recipient - Name and affiliation; and
- Document Location.

The index can be organized either by subject or in chronological order. If documents are customarily grouped together, as with sampling data and chain of custody documents, they may be listed as a group in the index to the administrative record file. Appendix C contains a model index organized by subject. Computer databases have been helpful in generating and updating the index.

The index should be updated when the record file is updated. It is preferable to update the record file when documents are received, or at least quarterly. Such updates should coincide with the periodic updating of the record file and review of material for which there are questions about relevance or privilege (see section II.C. at page 6). The index should also be updated before any public comment period commences. The index should be labeled "draft index" until all relevant documents are placed in the record file. When the decision document is signed, the draft index should be updated and labeled "index."

E. Location

E.1. General

Section 113(k)(1) of CERCLA requires that the administrative record be available to the public "at or near the facility at issue."[5] Duplicates of the record file may be kept at any other location. A copy of the record file must be located at the regional office or other central location. Both copies of the record file should be available for public inspection at reasonable times (e.g., 9-4, Monday-Friday). In the case of an emergency removal, unless requested, the record file needs to be available for public inspection only at the central location (see section II.F.3. at page 14).[6]

The record file located at or near the site should be placed in one of the information repositories which may already exist for community relations purposes. These are typically located in a library, town hall, or other publicly accessible place. If there is no existing information repository, or if the repository

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[5] See 40 C.F.R. §300.805.

[6] 40 C.F.R. §§300.805(a)(5) and (b).

does not have sufficient space for the record file, any other publicly accessible place may be chosen to house the record file.[7] When a Superfund site is located at or near an Indian reservation, the centrally located copy of the record file may be located at the Indian tribal headquarters. The Community Relations Coordinator (CRC) should be consulted on the location of the information repository and record file.

The record file should be transmitted to the local repository in coordination with the CRC. The CRC should make the initial contact to establish the local repository and request housing for the record file. The Record Coordinator should make arrangements for delivering the record file to the local repository.

The record file should include an introductory cover letter addressed to the librarian or repository manager (see Appendix F). In addition, a transmittal acknowledgement form should be included to ensure receipt of the record file (see Appendix G). Finally, an administrative record fact sheet should accompany the record to answer questions from the public (see Appendix H). Updates to the record file should be handled in a similar fashion (see section II.C. at page 6).

In addition to the publicly available record file, if feasible, a master copy of the record file should be kept at the regional office or other central location of the lead agency. To preserve the integrity of the master copy of the record file, it should not be accessible to the public. If not feasible to establish a master copy, the lead agency will need to establish an effective security system for the publicly available record file. The master copy of the record file may be maintained in microform to conserve storage space (see section II.J. at page 21).

E.2. Special Documents

Certain documents which are included in the record file do not have to be maintained at or near the site or, in some cases, at the regional office or other central location, because of the nature of the documents and the burden associated with maintaining such documents in multiple locations. These documents, however, must be incorporated in the record file by reference (e.g., in the index but not physically in the record

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[7] If the site is located at a federal facility which requires security clearance, the administrative record file for that site must be located where security clearance is not required. The public must have free access to the record file.

file), and the index must indicate where the documents are publicly accessible. Where a document is listed in the index but not located at or near the site, the lead agency must, upon request, include the document in the record file at or near the site.[8] This applies to verified sampling data, chain of custody forms, and guidance and policy documents. It does not apply to documents in the confidential file.

Unless requested, the following types of documents do not have to be located in multiple locations:

Verified Sampling Data[9]

Verified sampling data do not have to be located in either administrative record file. The sampling data may be left in its original storage location (e.g., Environmental Services Division (ESD) or contract laboratory). Data summary sheets, however, must be located in the record file. The index must list the data summary sheets, reference the underlying verified sampling data, and indicate where the sampling data can be found.

Chain of Custody Forms[10]

As with verified sampling data, chain of custody forms do not have to be located in either administrative record file. The chain of custody forms may be left in the original storage location. The index must reference the chain of custody forms and indicate their location.

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[8] 40 C.F.R. §300.805(b).

[9] 40 C.F.R. §300.805(a)(1). "Verified sampling data" are data that have undergone the quality assurance and quality control process. "Invalidated sampling data" have been incorrectly gathered or analyzed and will not be part of the record file. "Unvalidated sampling data" are data which has not yet undergone the quality assurance and quality control process. Because it is superseded by verified data, the unvalidated data are not generally part of the record files. However, such data may in some cases be relied on in selecting a response action, such as an emergency removal where there is no time for verification. Unvalidated sampling data which are relied on in selecting a response action should be included in the record file.

[10] 40 C.F.R. §300.805(a)(1).

Confidential and Privileged Documents[11]

When a confidential or privileged document is included in the record file, it should be kept in a confidential portion of the record file. The confidential file should be kept in a locked cabinet at the regional office or other central location. It should not be located at or near the site. The index should identify the title and location of the document, and describe why the lead agency considers it confidential or privileged. Furthermore, the lead agency should summarize or redact the document to make available, to the extent feasible, factual information (especially if such information is not found elsewhere in the record file and is not otherwise available to the public). This summary or redaction should be performed as soon as possible after the determination that a document is privileged or confidential, and inserted in the portion of the record file available to the public and included in the index. See also section III.H. at page 34.

Guidance and Policy Documents[12]

Guidance and policy documents that are not site specific are available in a compendium located in the regional office. ("Compendium of CERCLA Response Selection Guidance Documents," Office of Waste Programs Enforcement, May 1989.) This eliminates the need for reproducing copies of frequently used documents for each site record file. The documents in the compendium need not be physically included in the record file, but the guidance and policy documents considered or relied on in selecting the response action must be listed in the record file index along with their location and availability. See also section III.I. at page 37 and Appendix E.

Technical Literature[13]

Publicly available technical literature that was not generated for the site at issue (e.g., an engineering textbook), does not have to be located in the regional office or other central location or at or near the site. The document must be clearly referenced in the index. However, technical literature not publicly available must be physically included in the record file at the regional office or other central location and at or near the site. See also section III.J. at page 38.

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[11] 40 C.F.R. §300.805(a)(4).

[12] 40 C.F.R. §300.805(a)(2).

[13] 40 C.F.R. §300.805(a)(3).

F. Public Availability

F.1. General

Section 113(k) of CERCLA specifies that the administrative record "shall be available to the public." In satisfying this provision, the lead agency must comply with all relevant public participation procedures outlined in Sections 113(k) and 117 of CERCLA. The NCP (see Appendices L and M) contains additional requirements on public availability (see also "Community Relations in Superfund: A Handbook," October 1988 - OSWER Directive No. 9230.0-3A; "Community Relations During Enforcement Activities," November 3, 1988 - OSWER Directive No. 9836.0-1A).

The availability of the record file will vary depending upon the nature of the response action. Different procedures are outlined below for remedial and removal response actions.

In all cases, the lead agency should publish a notice of availability of the record file when the record file is first made available for public inspection in the vicinity of the site at issue.[14] The notice should explain the purpose of the record file, its location and availability, and how the public may participate in its development.

The notice should be published in a major local newspaper of general circulation. The newspaper notices should be distributed to persons on the community relations mailing list. These notices should also be sent to all known PRPs if they are not already included on the community relations mailing list. As PRPs are discovered, the lead agency should add their names to the community relations mailing list and mail them all the notices sent to the other PRPs. Publication of the notice should be coordinated with the community relations staff. A copy of the notice of availability and list of recipients should be included in the record file. Appendix I contains a model notice of availability.

This public notice may be combined with other notices for the same site, such as a notice of availability of the community relations information repository, if they occur at the same time. In addition to the required newspaper notice, the public can be informed of the availability of the record file through existing mechanisms (e.g., general and special notice letters, Section 104(e) information requests, and the community relations mailing list). In addition, Headquarters will publish notices in the

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[14] See 40 C.F.R. §300.815(a) and §§300.820(a)(1) and (b).

Federal Register. They will be published quarterly and will list sites where remedial activity is planned.

F.2. Remedial Actions

The administrative record file for a remedial action must be available for public inspection when the remedial investigation begins.[15] For example, when the remedial investigation/feasibility study (RI/FS) work plan is approved, the lead agency must place documents relevant to the selection of the remedy generated up to that point in the record file. Documents generally available at that time include the preliminary assessment (PA), the site investigation (SI), the RI work plan, inspection reports, sampling data, and the community relations plan. The lead agency must continue to add documents to the record file periodically after they are generated or received during the RI/FS process.

The record file must be publicly available both at a regional office or other central location and at or near the site (see section II.E. at page 8).[16] In addition, the notice of availability should be sent to persons on the community relations mailing list, including all known PRPs.

With the completion of the RI/FS, the lead agency should undertake the following public participation procedures:

- Prepare a proposed plan which briefly analyzes the remedial alternatives evaluated in the detailed analysis of the RI/FS and proposes a preferred remedial action alternative;
- Make the RI/FS report and proposed plan available in the record files both at a regional office or other central location and at or near the site;
- Publish in a major local newspaper of general circulation a notice of availability and brief analysis of the RI/FS report and proposed plan. The notice should include the dates for submission of public comments;
- Mail the notice or copy of the notice to all PRPs on the community relations mailing list;
- Provide a formal comment period of not less than 30 calendar days for submission of comments on the proposed plan. Upon

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[15] 40 C.F.R. §300.815(a).

[16] 40 C.F.R. §300.805(a).

timely request the lead agency will extend the public comment period by a minimum of 30 additional days.[17] [Note: The lead agency is encouraged to consider and respond to significant comments that were submitted before the public comment period. Considering early comments provides practical benefits both substantively and procedurally. Early comments may provide important information for the selection decision, and early consideration provides the public (and, particularly, PRPs) with additional informal opportunities for participating in the decisionmaking process.];

- Provide the opportunity for a public meeting(s) in the affected area during the public comment period on the RI/FS and proposed plan;

- Keep a transcript of the public meeting(s) on the RI/FS and proposed plan held during the comment period and include a copy of the transcript in the record file;

- Prepare a discussion (to accompany or be part of the decision document) of any significant changes to the proposed plan which occurred after the proposed plan was made available for public comment which are reflected in the ROD;

- Prepare a response to each of the significant comments submitted during the public comment period to accompany the ROD (see section III.D. at page 30); and

- Publish in a major local newspaper of general circulation a notice of the availability of the ROD and make the ROD available to the public before beginning any remedial action, as required under Section 117(b) of CERCLA.

Comments received after signing the ROD should be placed in a post-decision document file and may be added to the record file in certain situations (see section III.N. at page 40).

F.3. Removal Actions

Section 113(k)(2)(A) of CERCLA requires that the EPA establish procedures for the appropriate participation of interested persons in the development of the administrative record for the selection of a removal action. "Appropriate" participation depends on the nature of the removal, as outlined below.

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[17] 40 C.F.R. §300.430(f)(3)(i)(C).

Time-critical Removal Actions

A time-critical removal action is a removal action for which, based on the site evaluation, the lead agency determines that a period of less than six months exists before on-site removal activities must be initiated. This category includes emergency removal actions which are described in greater detail below.

The administrative record file for these actions must be available for public inspection no later than 60 days after the initiation of on-site removal activity. Where possible, the record file should be made available earlier. The record file must be available both at the regional office or other central location and at or near the site at issue.

If, however, on-site cleanup activity is initiated within hours of the verification of a release or threat of a release and on-site cleanup activities cease within 30 days (emergency actions), the record file need only be available at the regional office or other central location, unless it is requested that a copy of the record file be placed at or near the site.[18]

For all time-critical removals, a notice of the availability of the record file must be published in a major local newspaper and a copy of the notice included in the record file. This notice should be published no later than 60 days after initiation of on-site removal activity.[19]

A public comment period of not less than 30 days should be held in appropriate situations.[20] In general, a public comment period will be considered appropriate if cleanup activity has not been completed at the time the record file is made available to the public and if public comments might have an impact on future action at the site. If a public comment period is considered appropriate, it should begin at the time the record file is made available for public inspection. Note, however, that even if an action is completed before the record file is available, the record file should be made available to the public. The notice for the public comment period may be combined with the notice of availability of the record file if they occur at the same time. The notice should be mailed to all PRPs on the community

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[18] 40 C.F.R. §300.805(b).

[19] 40 C.F.R. §300.415(m)(2)(i).

[20] 40 C.F.R. §300.415(m)(2)(ii).

relations mailing list. The notice should also be sent to all known PRPs if they are not already on the community relations mailing list.

The lead agency must respond to all significant comments received during the public comment period and place the comments and the responses to them in the record file (see section III.D. at page 30).[21] Whether or not the lead agency holds a public comment period, comments received by the lead agency before the decision document is signed and related to the selection of the removal action must be placed in the record file. For information, including comments, generated or received after the decision document is signed, see section III.N. at page 40.

Non-Time-Critical Removal Actions

A non-time-critical removal action is a removal action for which, based on the site evaluation, the lead agency determines that a planning period of at least six months exists before on-site removal activities must be initiated.

The administrative record file for a non-time-critical removal action must be made available for public inspection when the engineering evaluation/cost analysis (EE/CA) is made available for public comment.[22] The record file must be available at the regional office or other central location and at or near the site. A notice of the availability of the record file must be published in a major local newspaper and a copy of the notice included in the record file. The notice should be published in a major local newspaper of general circulation. In addition, Headquarters will publish these notices in the Federal Register. They will be published quarterly and will list sites where non-time critical removal activity is planned. The newspaper notice should be distributed to persons on the community relations mailing list and placed in the record file. These notices should also be sent to all known PRPs if they are not already on the community relations mailing list. As PRPs are discovered, the lead agency should add their names to the community relations mailing list and mail them all the notices sent to the other PRPs. Publication of the notice should be coordinated with the community relations staff. A copy of the notice of availability should be included in the record file. Appendix I contains a model notice of availability.

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[21] 40 C.F.R. §300.415(m)(2)(iii).

[22] 40 C.F.R. §300.415(m)(4).

A public comment period on the EE/CA of not less than 30 days must be held so that interested persons may submit comments on the response selection for the record file. Upon timely notice, the lead agency will extend the public comment period by a minimum of 15 days.[23] A notice of the public comment period may be combined with the notice of availability of the record file if they occur at the same time. The lead agency must respond to all significant comments received during the public comment period and place the comments and the responses to them in the record file (see section III.D. at page 30).[24]

The lead agency is encouraged to consider and respond to significant comments that were submitted before the public comment period. Considering early comments provides practical benefits both substantively and procedurally. Early comments may provide important information for the selection decision, and early consideration provides the public (and, particularly, PRPs) with additional informal opportunities for participating in the decision making process.

Comments generated or received after the decision document is signed should be kept in a post-decision document file. They may be added to the record file in certain situations (see section III.N. at page 40).

G. Maintaining the Record

Document room procedures should be established to ensure orderly public access to the record files. In establishing public access procedures, the security and integrity of the record files must be maintained at all times.

Each regional office or other central location should have a reading area where visitors are able to review the record files. The record file must be available during reasonable hours (e.g., 9-4, Monday-Friday). The public reading area should include, wherever feasible:

- Administrative record files;
- Guidance Compendium (see section III.I. at page 37);
- Access to a copier; and
- Sign-in book.

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[23] 40 C.F.R. §300.415(m)(4)(iii).

[24] 40 C.F.R. §300.415(m)(4)(iv).

Controlled access to the files is accomplished by use of a visitor sign-in book. Sign-in books help minimize instances in which documents are lost or damaged. They also provide documentation of the lead agency's efforts to provide public access to the record files. Pertinent information recorded in the book should include:

- Date of visit;
- Name;
- Affiliation;
- Address;
- Phone number;
- Site documents viewed; and
- Cost of copied materials (if applicable).

The lead agency may choose not to use sign-in books if the books deter the public from reviewing the record files.

Since documents in the record file should be complete, properly organized and legible, the integrity of the record file must be maintained. If possible, storage and reading areas should be supervised to maintain proper security. Documents should not leave the document room or be left unattended. To the extent feasible, the Administrative Record Coordinator should check the order of the documents after being viewed by the public to be certain all documents have been returned intact. The documents in the record file should be kept secure, either in a locked room or in locked cabinets.

The record file located at or near the site should be handled with similar care. If possible, the record file should be treated as a non-circulating reference; it should not leave the local repository except under supervision. The phone number of a record file contact should be provided to record file users and to the manager of the local repository so that problems can be identified and resolved. This information can be included in an informational fact sheet accompanying the record file (see Appendix H). In addition, the Record Coordinator should plan periodic reviews of the local record files.

Where the site is a fund-lead or PRP-lead, EPA should retain (in addition to the publicly available record file) a master copy of the record file at the regional office or other central

location, if feasible. Where a state or other federal agency is the lead agency at a site, EPA should assure that the state or other federal agency maintains (in addition to the publicly available record file) a master copy of the record file. The record files are permanent records that must be retained.

As to the local repository, the statute and regulations are silent concerning the duration of public availability of the record file. The lead agency's primary concern is public participation in development of the administrative record. Following initiation of the response action, public interest in background information other than the Record of Decision or RI/FS may wane. In any event, the statutory provisions for judicial review and deadlines for filing cost recovery actions provide useful references for keeping the record file publicly available. See Sections 113(g) and (h) of CERCLA.

Where there is ongoing (or possible) litigation, the record file in the regional or other central location should be available at least until the litigation is over.

The record file continues to serve as a historical record of the response selection, even after the statute of limitations for cost recovery action has passed. Where there is considerable public interest, the local repository may wish to keep the record file available for public viewing.

H. Confidential File

In certain situations, documents in the record file may be subject to an applicable privilege (see section III.H. at page 34). To the extent feasible, information relevant to the response selection which is contained in a privileged document should be summarized or redacted as to make the document disclosable and then included in the publicly accessible portion of the record file. The privileged document should be included in a confidential portion of the record file.[25]

The Administrative Record Coordinator should maintain a confidential portion of the record file for privileged documents. These documents should be listed in the index to the entire record file and identified as "privileged." The index should identify the title and location of the privileged document, and describe the basis for the asserted privilege.

The confidential portion of the record file should be stored in locked files at the regional office or other central location

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[25] See 40 C.F.R. §300.810(d).

and should not be located at or near the site. The confidential portion of the record file should be separate from the publicly available record file to protect against inadvertent disclosure. Each privileged document should be stamped "confidential" at the bottom of each page of the document. Where the material is not a written document (such as a computer disk or cassette tape) the jacket should be stamped "confidential." A complete list of all materials contained in the confidential portion of the record file should be maintained by the Record Coordinator. The Record Coordinator should also maintain a log which will include the time, date, document name, and will identify persons checking out and returning materials to the confidential file.

As soon as a new record file is established, a routine access list for the confidential file should be prepared for each record file. When EPA is the lead agency, this routine access list must be approved by the Waste Management Division Director or the Environmental Services Division Director, and ORC. Once approval is given, persons on the list will be able to access the confidential files through the Record Coordinator. No one should have access to the confidential files other than those identified on the routine access list. For state or other federal agency-lead sites, the Regions should take steps to insure that state or other federal agencies develop routine confidential file access list procedures.

This policy and procedure for privileged materials does not supersede any policy and procedures established under the Freedom of Information Act (FOIA), 5 U.S.C. §552, and EPA regulations implementing FOIA at 40 C.F.R. Part 2. Upon receipt of requests for the administrative record file pursuant to FOIA, if the requester is in close proximity to the record file, the lead agency may respond to FOIA requests by telling a requester the location and availability of the record file. Decisions regarding disclosures of materials under FOIA should be coordinated among the various lead agency officials with access to such materials.

I. Copying

Section 117(d) of CERCLA requires that each document developed, received, published, or made available to the public under Section 117 be made available for public inspection and copying at or near the site. Under Section 113(k)(2)(B) of CERCLA, these documents must also be included in the administrative record file. Under these provisions of CERCLA, the lead agency must ensure that documents in the record file are available for copying, but does not bear responsibility for copying the documents themselves. Therefore, it is preferable

that the record file should be located in a facility which contains a copying machine (e.g., a public library).

When the administrative record file is available at a facility at or near the site and copying facilities are available there, the lead agency may encourage the requester to make use of the copying facilities at that location. If copying of the record file located at or near the site is difficult for a requesting party, the lead agency may arrange for copying on behalf of a requester at the regional or other central location. The lead agency may ask that requesters arrange for copying by contractors or commercial copy centers who then bill the requester directly.

The lead agency should follow the FOIA regulations at 40 C.F.R. Part 2, in determining the appropriate charge for copying. Copying fees should be waived for other federal agencies, EPA contractors or grantees, and members of Congress. The EPA currently charges $.20 a page for paper copies as provided in 40 C.F.R. Part 2. Reproduction of photographs, microfilms or magnetic tapes, and computer printouts should be charged at the actual cost to the lead agency.

J. Micrographics

The lead agency may make the administrative record file available to the public in microform.[26] Use of micrographics can significantly reduce the space required to store administrative record files. In addition, micrographics can simplify the tasks of reproducing copies of the record file and transmission of the record files to the local repositories. Any use of micrographics should be conducted in an orderly manner consistent with records management procedures. If using micrographics to maintain the record files, the lead agency must provide a micrographic reader at the regional office or other central location to ensure public access to the record file. If a record file is located at or near the site and micrographics are used, the lead agency must ensure that a micrographic reader at that location is available.

Microform copies of original documents are admissable in court if created in an organized fashion. The Business Records as Evidence Act (28 U.S.C. §1732) specifies that copies of records, which are made "in the regular course of business" and copied by any process which accurately reproduces the original, are "as admissible in evidence as the original itself." See also Federal Rules of Evidence 1003. Since the NCP provides for use of microform, microform copies of administrative record documents

[26] See 40 C.F.R. §300.805(c).

that are produced in the regular course of business are likely to be admissible in court.

The Office of Information Resources Management (OIRM) has granted approval for the use of micrographics in establishing administrative records (see Appendix J). Any use of micrographics should still comply with the remaining provisions of Chapter 6 of the EPA Records Management Manual (7/13/84).

K. Certification

A certification as to the completeness of the administrative record must be performed when the record is filed in court. Appendix K contains a model court certification.

When EPA is the lead agency such certification should be signed by the Regional Administrator's designee, after consultation with ORC. Any certification of the record should be made by program staff and not legal staff. The region may also choose to have the Administrative Record Coordinator certify that the record was compiled and maintained in accordance with applicable agency regulations and guidance. Such certification would attest that the record was compiled in accordance with current agency procedures and would not address the completeness of the record file.

If a state or other federal agency is the lead agency that agency must certify that the record was compiled and maintained in accordance with applicable EPA regulations and guidance. After the state or federal agency provides this certification, the Regional Administrator's designee should certify as to the completeness of the record, as provided in Appendix K.

III. CONTENTS OF THE ADMINISTRATIVE RECORD

A. Remedial Actions

The administrative record for selection of a remedial action should consist of:

- documents which were considered or relied on to select the remedial action; and
- documents which demonstrate the public's opportunity to participate in and comment on the selection of the remedial action.[27]

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[27] See 40 C.F.R. §§300.810 and 300.815.

Below is a list of documents that are usually generated when a remedial response action is selected. These documents should be included in the administrative record file if they are generated and considered or relied on in selecting the remedial response action. Documents that demonstrate the public's opportunity to participate in and comment on selecting the remedial response action should also be included in the record file. Documents not listed below, but meeting the above criteria, should be included.

Factual Information/Data

- Preliminary Assessment (PA) report;
- Site Investigation (SI) report;
- Remedial Investigation/Feasibility Study (RI/FS) work plan;
- Amendments to the final work plan;
- Sampling and Analysis Plan (SAP): consisting of a quality assurance project plan (QAPP) and a field sampling plan;
- Sampling data: verified data during the RI/FS, or any data collected for previous actions such as RCRA or removal actions which are considered or relied on in selecting the remedial action. Unvalidated data should be included only if relied on in the absence of validated data (see note 9 at page 10);
- Chain of custody forms;
- Inspection reports;
- Data summary sheets;
- Technical studies performed for the site (e.g., a ground-water study);
- Risk evaluation/endangerment assessment and underlying documentation (see section III.C. at page 29);
- Fact sheet or summary information regarding remedial action alternatives generated if special notice letters are issued to PRPs at an early stage of the RI/FS (see "Interim Guidance on Notice Letters, Negotiations, and Information Exchange," October 19, 1987 - OSWER Directive No. 9834.1);
- RI/FS (as available for public comment and as final, if different); and

- Data submitted by the public, including PRPs.

Policy and Guidance

- Memoranda on site-specific or issue-specific policy decisions. Examples include memoranda on off-site disposal availability, special coordination needs (e.g., dioxin), applicable or relevant and appropriate requirements (ARARs) (to the extent not in the RI/FS), cost effectiveness and utilization of permanent solutions and alternative treatment technologies;

- Guidance documents (see section III.I. at page 37); and

- Technical literature (see section III.J. at page 38).

Public Participation (Include the documents that show the public was notified of site activity and had an opportunity to participate in and comment on the selection of response action)

- Community relations plan;

- Newspaper articles showing general community awareness;

- Proposed plan;

- Documents sent to persons on the community relations mailing list and associated date when such document was sent;

- Public notices: any public notices concerning response action selection such as notices of availability of information, notices of meetings and notices of opportunities to comment;

- The community relations mailing list (including all known PRPs);[28]

- Documentation of informal public meetings: information generated or received during meetings with the public and

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[28] Individual names and addresses of members of the general public which are on the community relations mailing list should not be included in the public record file. Disclosure of such information may result in a Privacy Act violation (see also section III.H. at page 34) or inhibit the general public from requesting information about the site. The lead agency should then place individual names and addresses in the confidential portion of the record file.

memoranda or notes summarizing significant information submitted during such meetings;

- Public comments: complete text of all written comments submitted (see also section III.D. at page 30);
- Transcripts of formal public meetings: including meetings held during the public comment period on the RI/FS, proposed plan, and any waiver of ARARs under Section 121(d)(4) of CERCLA;
- Responses to significant comments: responses to significant comments received from the public concerning the selection of a remedial action; and
- Responses to comments from the state and other federal agencies.

Enforcement Documents (Include if the document contains information that was considered or relied on in selecting the response selection or shows that the public had an opportunity to participate in and comment on the selection of response action. Do not include enforcement documents solely pertaining to liability)

- Administrative orders;
- Consent decrees;
- Affidavits containing relevant factual information not contained elsewhere in the record file;
- Notice letters to PRPs;
- Responses to notice letters;
- Section 104(e) information request letters and Section 122(e) subpoenas; and
- Responses to Section 104(e) information request letters and Section 122(e) subpoenas.

Other Information

- Index (see section II.D. at page 7);
- Documentation of state involvement: documentation of the request and response on ARARs, Section 121(f)(1)(G) notices and responses, a statement of the state's position on the proposed plan (concurrence, nonconcurrence, or no comment at

the time of publication), opportunity to concur in the selected remedy and be a party to a settlement (see section IV.A. at page 42);

- health assessments, health studies, and public health advisories issued by the Agency for Toxic Substances and Disease Registry (ATSDR)(see section IV.C. at page 45); and

- Natural Resource Trustee notices and responses, findings of fact, final reports and natural resource damage assessments (see section IV.D. at page 45)

Decision Documents

- Record of decision (ROD): remedial action decision document (including responsiveness summary);

- Explanations of significant differences (under Section 117(c)) and underlying information; and

- Amended ROD and underlying information.

The administrative record serves as an overview of the history of the site and should be understandable to the reader. Appendix B provides a model file structure for organizing the record file. Appendix C contains a model index.

B. Removal Actions

The administrative record for selection of a removal action should consist of:

- documents which were considered or relied on to select the removal action; and

- documents which demonstrate the public's opportunity to participate in and comment on the selection of the removal action, when appropriate.[29]

Below is a list of documents that are usually generated when a removal response action is selected. These documents should be included in the administrative record file if they are generated and considered or relied on when selecting the removal action. Documents that demonstrate the public's opportunity to participate in and comment on the removal response action should also be included in the record file. Documents not listed below, but meeting the above criteria, should be included.

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[29] See 40 C.F.R. §§300.810 and 300.820.

Factual Information/Data

- Preliminary assessment (PA) report;
- Site evaluation (SI) report;
- EE/CA (for a non-time-critical removal action);
- Sampling plan;
- Sampling data: verified data obtained for the removal action, or any data collected for previous actions such as RCRA or other response actions which are considered or relied on in selecting the removal action. Unvalidated data should be included only if relied on in the absence of validated data (see note 9 at page 10);
- Chain of custody forms;
- Inspection reports;
- Technical studies performed for the site (e.g., a ground water study);
- Risk evaluation/endangerment assessment and underlying documentation; and
- Data submitted by the public, including PRPs.

Policy and Guidance

- Memoranda on site-specific or issue-specific policy decisions. Examples include memoranda on off-site disposal availability, compliance with other environmental statutes, special coordination needs (e.g., dioxin);
- Guidance documents (see section III.I. at page 37); and
- Technical literature (see section III.J. at page 38).

Public Participation (Include the documents that show the public was notified of site activity and had an opportunity to participate in the response selection.)

- Community relations plan;
- Newspaper articles showing general community awareness;
- Documents sent to persons on the community relations mailing list and associated date when such documents was sent;

- Public notices: any public notices concerning response action selection such as notices of availability of information, notices of meetings, and notices of opportunities to comment;

- The community relations mailing list (including all known PRPs);[30]

- Documentation of public meetings: information generated or submitted during meetings with the public (including PRPs) and memoranda or notes summarizing significant information submitted during such meetings;

- Public comments: complete text of all written comments submitted (see section III.D. at page 30);

- Responses to significant comments: responses to significant comments received from the public concerning the selection of a removal action; and

- Responses to comments from states and other federal agencies.

Enforcement Documents (Include if the document contains information that was considered or relied on in selecting the response selection or shows that the public had an opportunity to participate in and comment on the selection of response action. Do not include enforcement documents solely pertaining to liability)

- Administrative orders;

- Consent decrees;

- Affidavits containing relevant factual information not contained elsewhere in the record file;

- Notice letters to PRPs;

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[30] Individual names and addresses of members of the general public which are on the community relations mailing list should not be included in the public record file. Disclosure of such information may result in a Privacy Act violation (see also section III.H. at page 34) or inhibit the general public from requesting information about the site. The lead agency should then place individual names and addresses in the confidential portion of the record file.

- Responses to notice letters;
- Section 104(e) information request letters and Section 122(e) subpoenas; and
- Responses to Section 104(e) information request letters and Section 122(e) subpoenas.

Other Information

- Index (see section II.D. at page 7);
- Documentation of state involvement (see section IV.A. at page 42);
- ATSDR health assessments, health studies, and public health advisories (see section IV.C. at page 45); and
- Natural Resource Trustee notices and responses, findings of fact, final reports and natural resource damage assessments (see IV.D. at page 45).

Decision Documents

- EE/CA Approval Memorandum;
- Action Memorandum;
- Amended Action Memorandum; and
- Other documents which embody the decision for selection of a removal action.

The administrative record serves as an overview of the history of the site and should be understandable to the reader. Appendix B provides a model file structure for organizing the record file. Appendix C contains a model index.

C. Imminent and Substantial Endangerment

Under Section 106 of CERCLA, the EPA may find the existence of an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance.

Determining the existence of an imminent and substantial endangerment is an important component in selecting the response action. Therefore, all documents considered or relied on in making that determination, including any risk assessment, and its supporting documentation, must be included in the administrative

record file.[31] If there is proper documentation of the determination of an imminent and substantial endangerment in the record file, judicial review of that determination in an action under Section 106 of CERCLA should be limited to the administrative record.

D. Public Comments

The administrative record file should document the public's opportunity to be involved in selecting a response action. This can be accomplished by including in the record file all documents related to the opportunity to participate (e.g., notices and fact sheets), and relevant written comments and information submitted by the public (e.g., reports and data).

Public requests for information (e.g., Freedom of Information Act (FOIA) requests for copies of reports), need not be included in the record file.

The lead agency should request that substantive oral comments (either in person or over the phone) be put in writing by the commenter and submitted to the record file. The commenter should be advised that the obligation to reduce the comment to writing rests with the commenter. The lead agency, however, may reduce it to writing where the lead agency will want to rely on the comment.

The lead agency may respond to comments received prior to a public comment period in various ways, depending on the nature and relevance of a particular comment. The lead agency's consideration of such a comment may be in the form of a written response, or reflected by documented actions taken after receiving the comment, or even by changes in subsequent versions of documents. If the lead agency prepares a written response to a comment, the comment and response should be included in the record file.

The lead agency may notify commenters that comments submitted prior to a formal public comment period must be resubmitted or specifically identified during the public comment period in order to receive formal response by the lead agency. Alternatively, the lead agency may notify a commenter that the lead agency will respond to the comment in a responsiveness summary prepared at a later date. The lead agency, however, has

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[31] See "Guidance on Preparing Superfund Decision Documents: The Proposed Plan, The Record of Decision, Explanation of Significant Differences, ROD Amendment," OSWER Directive No. 9355.3-02, June 1989.

no duty to respond to any comments received before the formal public comment period, or to respond to comments during the public comment period until the close of the public comment period.

The lead agency, however, is encouraged to consider, respond to and include in the record file significant comments that were submitted before the public comment period. Considering early comments provides practical benefits both substantively and procedurally. Early comments may provide important information for the selection decision, and early consideration provides the public (and, particularly, PRP's) with additional informal opportunities for participating in the decision making process.[32]

All comments received by the lead agency during the formal public comment period are to be included in the record file in their original form, or if not feasible, an explanation should be placed in the record file explaining why such comments were not included. Comments received during the formal public comment period must be addressed in the responsiveness summary (included with the ROD in remedial response actions). The responses may be combined by subject or other category in the record file.

Comments which are received after the formal comment period closes and before the decision document is signed should be included in the record file but labeled "late comment." Such comments should be handled as post-decision information (see section III.N. at page 40).

Comments received after the decision document is signed should be placed in a post-decision document file. They may be added to the record file in limited circumstances (see section III.N. at page 40).

E. Enforcement Actions

The same procedures should be used for establishing an administrative record whether or not a response action is selected in the context of an enforcement action. The following additional information, however, may assist the lead agency where there is enforcement activity.

E.1. Negotiation Documents

During negotiations with the lead agency, a potentially responsible party (PRP) may produce documents and claim that they

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[32] See 40 C.F.R. §§300.815(b), 300.825(a)(2) and (b)(2).

constitute confidential business information (CBI) or offers of settlement subject to Rule 408 of the Federal Rules of Evidence.

Generally, those documents are not part of the administrative record for response selection unless they are submitted by PRPs for consideration in selecting a response action and are considered or relied on in selecting the response action. A privileged document which was considered or relied on in selecting the response action should be placed in the confidential portion of the record file. Such a document should be summarized and the summary included in the publicly accessible portion of the record file (see section II.H. at page 19). If the information cannot be summarized in a disclosable manner, the information should be placed in the confidential portion of the record file only and listed in the index to the file.

E.2. PRP-Lead RI/FS

Where a PRP is conducting the RI/FS, the PRP must submit all technical information on selection of the remedial action generated during the RI/FS to the lead agency. Technical information includes work plans, sampling data, reports, and memoranda. The lead agency, and not the PRP, will establish and maintain the administrative record file (see "Interim Guidance on Potentially Responsible Party Participation in Remedial Investigations and Feasibility Studies," May 16, 1988, OSWER Directive No. 9835.1a and "Model Administrative Order on Consent for Remedial Investigation and Feasibility Study," January 30, 1990, OSWER Directive No. 9835.10.)

PRPs may be delegated responsibility for some record file maintenance activities, such as housing the files at or near the site. PRPs cannot, however, be responsible for decisions on what documents comprise the record file, because of, among other things, the potential for a conflict of interest.

E.3. Administrative Orders and Consent Decrees

Final administrative orders and consent decrees issued prior to selection of the response action (e.g., ordering a PRP to conduct the RI/FS), should be included in the administrative record file. Administrative orders or consent decrees issued after the signing of the ROD or the action memorandum should not be included in the record file, unless the consent decree or administrative order meets the criteria for the inclusion of post-decision documents in the record file (see section III.N. at page 40). Drafts of administrative orders and consent decrees should not be included in the record file, unless the drafts contain factual information that was considered or relied on and is not found elsewhere in the record file.

The issues relating to administrative records for administrative orders and de minimis settlements are not addressed by this guidance.

F. Excluded Documents

Certain documents should not be included in the administrative record file because they are irrelevant to the selection of the response action. Documents should be excluded from the record file if they were not considered or relied on in selecting the response action.

Material beyond the scope of the record file should be kept in separate files maintained at the regional office or other central location. These files need not be made publicly available, although many of the documents in the files may be available to the public if requested under FOIA.

Examples of documents that are irrelevant to the decision on selecting a response action may include Hazard Ranking System (HRS) scoring packages, contractor work assignments, cost documentation (as opposed to cost effectiveness information), and National Priorities List (NPL) deletion information. If, however, these documents contain information that is considered or relied on in the response action selection and is not contained elsewhere in the record file, then the documents should be included in the record file.

Information regarding PRP liability is generally not included in the record file for selection of the response action except to the extent such information (typically substance specific) is considered or relied on in selecting the response action. Documents relating to PRP liability, however, should be compiled and maintained in the regional office or other central location so that they are available at the time of notice to PRPs or referral of any litigation.

G. Draft Documents and Internal Memoranda

In general, only final documents should be included in the administrative record file. The record file should not include preliminary documents such as drafts and internal memoranda. Such documents are excluded from the record file because drafts and internal memoranda are often revised or superseded by subsequent drafts and memoranda prior to the selection of the response action. The preliminary documents are, therefore, not considered or relied on in making the response action decision.

Drafts (or portions of them) and internal memoranda should be included, however, in three instances. First, if a draft

document or internal memorandum is the basis for a response decision the draft document or internal memorandum should be placed in the record file. This may occur if the draft contains factual information which was relied on but is not included in a final document, a final document does not exist, or a final document did not exist when the response decision was made.

Second, if a draft document or internal memorandum is circulated by the lead agency to other persons (e.g., the support agency, PRPs or the general public) who then submit comments which the decisionmaker considers or relies on when making a response action decision, relevant portions of the draft document or the memorandum and comments on that document should be included in the record file.

Third, if a draft document or internal memorandum explains or conveys decisions on the procedures for selecting the remedy or the substantive aspects of a proposed or selected remedy (e.g., the scope of a site investigation or the identification of potential ARARs), the document should be placed in the record file, even though the document was signed by a person other than the Regional Administrator and generated long before the decision document was signed.

Examples of internal memoranda and staff notes which should not be included in the record file are documents that express tentative opinions or internal documents that evaluate alternative viewpoints. Recommendations of staff to other staff or management should also not be included in the record file, except for those staff recommendations which ultimately embody a final decision relevant to response selection. Drafts and internal memoranda may also be subject to claims of privilege (see section III.H., below).

H. Privileged Documents

Some documents in the administrative record file may be protected from public disclosure on the basis of an applicable privilege.[33] Any documents which are considered or relied on in a response action selection, but withheld from the public portion of the record file based on privilege, must be placed in a confidential portion of the record file (see section II.H. at page 19).

If a document is excluded from the public portion of the record file based on privilege, the relevant information should, to the extent feasible, be extracted and included in the public

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[33] See 40 C.F.R. §300.810(c).

record file. This can often be accomplished by deleting or redacting the privileged information from the document.

The privileges discussed below may be asserted with respect to documents that are considered or relied on in the selection of a response action. The head of the office responsible for developing the document in question should assert the privilege. In all cases, the official asserting a privilege should consult with ORC.

Public disclosure of a privileged document may result in waiver of the privilege, although the nature and extent of the waiver will depend on the privilege asserted and the circumstances of the disclosure. If the privilege is waived and the document becomes a public document, it must be disclosed to any requester. In light of the potential for waiver, it is important that personnel not release potentially privileged documents to any party without consulting with ORC.

Deliberative Process

The deliberative process privilege applies to pre-decisional, deliberative communications that express opinions, advice, and recommendations of staff to other staff or management. The privilege functions to encourage the honest and free expression of opinion, suggestions and ideas among those formulating policy for government agencies (see "Guidance for Assertion of Deliberative Process Privilege," 10/3/84).

In general, if a document contains factual information forming the basis for the selection of the response action, the factual portion should be included in the record file.

Use of the deliberative process privilege should be balanced with the statutory mandate of including the public in the response action selection process. The privilege should be asserted if disclosure of the document will have an inhibiting effect on frank and open discussion among government staff and decisionmakers. Documents should not be withheld solely because they would reveal flaws in the case or information embarrassing to the government. Specific procedures exist for assertion of the deliberative process privilege, which include consulting with ORC.

Confidential Business Information (CBI)

The EPA must withhold from the public record trade secrets and commercial and financial information that is subject to protection under 40 C.F.R. Part 2. However, Section 104(e)(7) of CERCLA greatly restricts the assertions of confidentiality claims

by PRPs at CERCLA sites. The decisionmaker should attempt to avoid using CBI in making response action decisions and can do so in most cases by using other information instead.[34] Where the decisionmaker must use CBI in making its decision, 40 C.F.R. Part 2 and Section 104(e)(7) of CERCLA will apply and such information should be placed in the confidential portion of the administrative record file.

Attorney Work Product

This exclusion applies to documents prepared in anticipation of possible litigation. The work product privilege covers all documents prepared by an attorney or under an attorney's supervision, including reports prepared by a consultant or program employee. Litigation need not have commenced but it must be reasonably contemplated. These documents generally relate to enforcement or defensibility of a decision and are not considered or relied on in selecting a response action. These documents should not, therefore, be in the administrative record file.

Attorney-Client Communication

The attorney-client privilege applies to confidential communications made in connection with securing or rendering legal advice. The privilege is limited to communications where there was an intention to keep the information confidential.

Personal Privacy

This exemption covers information about individuals in personnel, medical, and similar files, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy. The records must pertain to an individual, and not a business, to be excluded from the public portion of the administrative record file under this exemption. Often, information subject to the protection under the personal privacy privilege can be redacted from the document and the redacted version can be placed in the public portion of the record file.

State Secrets

The lead agency is authorized to exclude from public scrutiny information which, if released, would harm national security or interfere with the government's ability to conduct foreign relations. This privilege could be particularly important where the PRP is a federal agency or a contractor for a federal agency. In the case of a federal facility cleanup, an

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[34] See 40 C.F.R. §300.810(d).

Inter-Agency Agreement should spell out procedures for asserting this privilege.

Confidential Informant

Statements obtained from witnesses who have been granted confidentiality may be privileged.

Information Exempted by Other Statutes

Information specifically exempted from disclosure by a federal statute need not be part of the public record. The statute in question must leave no discretion as to the requirement that matters be withheld from the public, or it must establish particular criteria for withholding or refer to particular types of matters to be withheld.

I. Guidance Documents

Guidance documents, or portions of guidance documents, that are considered or relied on in selecting a response action should be included in the administrative record file for that response action. Any guidance documents generated to address issues that specifically arise at the site for which the record file is being compiled should be physically included in the record file. Certain guidance documents, however, do not have to be kept in the record file. Guidance documents not generated for the particular site for which the record is being compiled may be kept in a compendium of guidance documents maintained at the regional office or other central location.[35]

Each Region should maintain a compendium of guidance documents which are frequently used in selecting response actions. As with an administrative record file, the compendium of guidance documents must be available to the public, but only at the regional office or other central location. The record file located at or near the site should contain an index to the compendium of guidance documents. The Administrative Record Coordinator should maintain and update the compendium of guidance documents. If a guidance document maintained in the compendium is considered or relied on when making a response action decision, the index to the record file must list the document and indicate its location and availability. See also Appendix E.

If a guidance document is listed in a bibliography to a document included in the record file (e.g., listed in the bibliography to the RI/FS), it need not be listed again in the

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[35] See 40 C.F.R. §300.805(a)(2).

index to the record file. In this case, however, the index must state that documents listed as bibliographic sources might not be listed separately in the index.

If a guidance document which is not included in the guidance compendium is considered or relied on in selecting the response action, the document should be physically included in the record file.

J. Technical Literature

Technical literature generated for the site at issue should be physically included in the administrative record file for that site, whether or not it is publicly available.

Similarly, technical literature not specifically generated for the site which is not publicly available should also be included in the site-specific record file. Such documents include technical journals and unpublished documents that are not available through the Library of Congress or not circulated to technical libraries.

Publicly available technical literature not generated for the site, however, need not be located at or near the site or at the regional office or other central location if the documents are referenced in the index to the record file.[36] These documents do not have to be physically included in the record file, unless requested, because they are already available to the public. Copying such documents creates a significant burden to the lead agency and copyright laws may pose additional barriers to such copying. Examples of publicly available technical literature include engineering manuals, groundwater monitoring or hydrogeology textbooks, ATSDR toxicological profiles, and articles from technical journals.

If technical literature is listed in a bibliography to a document included in the record file (e.g., listed in the bibliography to the RI/FS), it need not be listed again in the index to the record file. In this case, however, the index must state that documents listed as bibliographic sources might not be listed separately in the index.

Computer models and technical databases need not be physically included in the record file but should be referenced in the index to the record file and made available upon request. Printouts or other documents produced from the models and databases should be physically included in the record file if

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[36] See 40 C.F.R. §300.805(b)(3).

such documents contain information which was considered or relied on in selecting the response action.

K. Legal Sources

Copies of statutes and regulations cited in documents included in the record file need not be included in the record file if they are readily available to the public. For example, the NCP and other regulations are easily accessible since they are published in the Federal Register and the Code of Federal Regulations (C.F.R.).

Copies of the actual standards (statutes or regulations) comprising federal and state ARARs should be physically included in the record file if they are not easily accessible. Also, other federal and state criteria, advisories, and guidance documents pertinent to the site (e.g., what the EPA refers to as "TBCs," or standards "to be considered"), may not be easily accessible. If such documents are cited in an RI/FS, appendix to the RI/FS, EE/CA, or ROD, those advisories which are not readily available should be included in the record file.

L. NPL Rulemaking Docket Information

Generally, information included in the National Priorities List (NPL) rulemaking docket, such as the Hazard Ranking System (HRS) scoring package and comments received on the listing, need not be included in the record file for selection of a response action. The NPL docket contains information relevant to the decision to list a site, which may be irrelevant to the decision on response action selection.

Documents in the NPL docket which contain sampling data or other factual information which was considered or relied on in selecting a response action should be included in the record file if the information is not available already in the record file. Such information may include early sampling data taken by parties other than the lead agency or its contractors (e.g., a State).

M. RCRA Documents

If an action is taken under CERCLA at a site with a history of Resource Conservation and Recovery Act (RCRA) activity, much of the information relating to those RCRA activities may be considered or relied on in making the CERCLA response action selection. Any relevant RCRA information, particularly information on waste management and RCRA corrective action at the site, should be included in the administrative record file (e.g., RCRA permit applications, inspection reports, RCRA Facility Assessment (RFA), RCRA Facility Investigation (RFI), Corrective

Measures Studies (CMS), or responses to RCRA information requests).

Not all pre-existing RCRA information will be considered or relied on in selecting a CERCLA response action, but information on types of wastes, quantity of wastes, and observations of potential threats gathered during RCRA investigations generally will be considered and thus should be included in the record file.

N. Post-Decision Information

In all cases, documents generated or received after signing the decision document should be kept in a post-decision document file. This file is not part of the administrative record file and should be maintained only at the regional office or other central location.

In general, post-decision documents should not be added to the administrative record file. Since the record file contains the information which was considered or relied on in selecting the response action, documents generated or received after selecting the response action are not relevant to that response decision and should not be included in the record file. Such documents may, however, be relevant to later response selection decisions and, if so, should be included in the record file pursuant to Section 300.825 of the NCP.

Documents kept in the post-decision document file may be added to the record file in the situations described below:

- Where a decision document does not address or reserves a portion of the decision to be made at a later date.[37] For example, a decision document that does not resolve the type of treatment technology. In such cases, the lead agency should continue to add documents to the record file which form the basis for the unaddressed or reserved portion of the decision;

- Where there is a significant change in the selected response action.[38] Changes that result in a significant difference to a basic feature of the selected remedial action (e.g., timing, ARARs), with respect to scope, performance, or cost

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[37] 40 C.F.R. §300.825(a)(1).

[38] 40 C.F.R. §300.825(a)(2). See 40 C.F.R. §300.435(c)(2)(i).

may be addressed in an explanation of significant differences. Section 117(c) of CERCLA states:

> [a]fter adoption of a final remedial action plan - (1) if any remedial action is taken, (2) if any enforcement action under section 106 is taken, or (3) if any settlement or consent decree under section 106 or section 122 is entered into, and if such action, settlement, or decree differs in any significant respects from the final plan, the President or the State shall publish an explanation of the significant differences and the reasons such changes were made.

The record file should include the explanation of significant differences, underlying documentation for the response action changes, any significant comments from the public, and the lead agency responses to any significant comments. A formal public comment period is not required for an explanation of significant differences;

- Where the changes are so significant that they fundamentally alter the very nature or basis of the overall response action. Such changes will require an amended decision document.[39] The Region will decide whether a change to a response action is considered a significant or a fundamental change for purposes of addressing the change (see Chapter 8 of "Interim Final Guidance on Preparing Superfund Decision Documents: The Proposed Plan and Record of Decision," June 1989, OSWER Directive No. 9355.3-02).

  When the decision document is amended, the amended decision document, the underlying documentation, any significant comments from the public, and the lead agency's responses to any significant comments, should be included in the record file. ROD amendments will require a formal public comment period;[40]

- Where comments containing significant information are submitted by interested persons after the close of the public comment period. The lead agency must consider such comments only to the extent that the comments contain significant information not contained elsewhere in the record file which could not have been submitted during the public comment period and which substantially support the

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[39] 40 C.F.R. §300.825(a)(2).

[40] 40 C.F.R. §300.435(c)(2)(ii).

need to significantly alter the response action.[41] Documents meeting this test should be included in the record file, along with the lead agency's responses to the significant comments, whether or not such information results in a change to the selected decision. In this case, the comments and the lead agency responses to such comments, including any supporting documents, should be included in the record file; and

- Where the lead agency holds public comment periods after the selection of the response action.[42] The lead agency may hold additional public comment periods or extend the time for submission of public comment on any issue concerning response selection. Such comment should be limited to the issues for which the lead agency requested additional comment. All comments responsive to the request submitted during such comment periods, along with any public notices of the comment period, transcripts of public meetings, and lead agency responses to the comments, should be placed in the record file.

IV. INVOLVEMENT OF OTHER PARTIES

A. States

A.1. State Involvement in Federal-Lead Sites

The administrative record for a federal-lead site must reflect the state's opportunity to be involved in selecting the response action. The record for a remedial action should include documents that reflect at least the following state participation or the opportunity for state participation:[43]

- Letter to state requesting identification of ARARs and the final response from state identifying ARARs (and certification from the state);

- Comments, or the opportunity to comment, on a proposed finding or decision to select a response action not attaining a level or standard of control at least equivalent to a state ARAR;

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[41] 40 C.F.R. §300.825(c).

[42] 40 C.F.R. §300.825(b).

[43] See also Section 121(f) of CERCLA

- Comments, or the opportunity to comment, on the final draft RI/FS, the proposed plan and EPA responses to the comments;

- Significant post-decision comments by the state and EPA responses to the comments (place in the post-decision document file for possible inclusion in the record file - see section III.N. at page 40).

The administrative record for a removal action should reflect any state participation, especially any state comments and EPA responses to the comments.

The record file should only include final state comments, unless the comments explain or convey decisions on substantive aspects of a proposed or selected remedy (e.g., the scope of a proposed action or the identification of potential ARARs). Any preliminary deliberations between the state and EPA relevant to the response selection need not be part of the record file if superseded by documentation of the state's final position.

The governing body of an Indian tribe should be afforded the same treatment as a state in accordance with Section 126 of CERCLA.

A.2. Federal Involvement in State-Lead Sites

Where a state has been officially designated the lead agency for a CERCLA site, the state must compile and maintain the administrative record for that site in accordance with Section 113(k) of CERCLA and Section 300.800 of the NCP. Since EPA has ultimate responsibility for both the selection of a response action (e.g., EPA signs the ROD) and the record on which that response action is based, EPA must participate in compiling and maintaining the record. In such cases, EPA must assure that the record file forms a complete basis for the selection of the response action.

The state as lead agency must maintain the record file at a state office (e.g., the state's central environmental agency office) and at or near the site. At a minimum, the state as lead agency also must transmit a copy of the index, the RI/FS work plan, the RI/FS released for public comment, the proposed plan, and any public comments received on the RI/FS and the proposed plan to the appropriate EPA Regional office.[44] These documents should be transmitted to EPA as they are generated or received. Transmittal of the index will not suffice. In addition, other documents may be requested by EPA on a case-by-case basis.

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[44] See 40 C.F.R. §300.800(c).

The Superfund Memorandum of Agreement (SMOA), or Cooperative Agreement (CA), must address the administrative record requirements. The following language should be included in the SMOA or CA where the state has been officially designated the lead agency for a CERCLA site:

> The state must compile and maintain the administrative record upon which the selection of the [remedial, removal] action is based. The compilation and maintenance of the record must follow 40 C.F.R. Part 300, Subpart I and EPA guidance on the administrative record. The administrative record must be located at the state [environmental agency] office, and at or near the site. In addition, the state must submit copies of the index, the RI/FS workplan, the RI/FS released for public comment, the proposed plan, and any public comments received on the RI/FS and proposed plan to the EPA Regional office, as they are added to the administrative record file. In addition, the state must submit other documents that are requested by EPA. The state shall comply with Section 113 of CERCLA and any applicable regulations. EPA may require the retention of other documents for cost recovery purposes.

The record file compiled by the state should reflect EPA's participation, comments, concurrence, and disagreements at the same stages as are required for state involvement in a federal-lead site. The state must place in the record file any documents submitted by EPA for inclusion in the record file.

B. Federal Facilities

Federal agencies have the responsibility, pursuant to Executive Order 12580, to establish the administrative record for federal facilities under their jurisdiction, custody, or control where using CERCLA authority for a response action. The record file for a federal facility must include all documents considered or relied on in selecting a response action, including documents submitted by EPA on the selection of the response action. The federal agency must comply with all NCP (see Appendix M) and CERCLA requirements in compiling and maintaining the record, including the minimum public participation requirements in Sections 113 and 117 of CERCLA.[45]

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[45] See 40 C.F.R. §300.800(b).

The federal agency must maintain the record file at or near the site and ensure easy public access to the record file. If, for example, a site is a Department of Defense facility, the record file should be housed in a location which does not require military clearance for access. The federal agency should keep a complete copy of the record file at a location within the federal agency office comparable to an EPA Regional office.

At NPL sites and any other site where EPA is involved in selecting a response action at a federal facility, EPA must participate in compiling and maintaining the record. In such cases, EPA must assure that the record file forms a complete basis for the selection of the response action. At a minimum, the federal agency must transmit a copy of the index, the RI/FS workplan, the RI/FS released for public comment, the proposed plan, and any public comments received on the RI/FS and proposed plan to the appropriate EPA Regional office. These documents should be transmitted to EPA as they are generated. Transmittal of the index will not suffice. In addition, other documents may be requested by EPA on a case-by-case basis. Inter-Agency Agreements (IAGs) should spell out procedures for compiling and maintaining the record.

C. ATSDR

Participation in the selection of a response action by the Agency for Toxic Substance and Disease Registry (ATSDR) should be reflected in the administrative record. The record file must include the initial and subsequent health assessments and any other information EPA solicits and obtains from ATSDR which EPA considers or relies on in its selection of a response action.

Draft versions of the health assessment and other draft documents upon which ATSDR comments should not be included in the record file. If, however, EPA solicits comments from ATSDR on a draft document such as a draft work plan or RI report, and receives formal comments from ATSDR which EPA considers or relies on in selecting a response action, then the document and comments should be included in the record file.

In the event that the ATSDR health assessment and EPA's risk assessment appear inconsistent, a document explaining the difference should be generated and placed in the record file.

D. Natural Resources Trustees

Section 122(j)(1) of CERCLA requires that the EPA give notice to the Natural Resources Trustee of a release or threatened release of any hazardous substance which may have resulted in damages to natural resources. The administrative

record file must include the notice to the Natural Resources Trustee, and any subsequent final communications (e.g., a release or final report). In addition, any factual information provided by the Natural Resources Trustee which is considered or relied on in selecting a response action should be included in the record file.

In the event that the Natural Resources Trustee's damage assessment and EPA's risk assessment appear inconsistent, a document explaining the difference should be generated and placed in the record file.

V. DISCLAIMER

The policies and procedures established in this document are intended solely for the guidance of employees of the U.S. Environmental Protection Agency. They are not intended and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. EPA reserves the right to act at variance with these policies and procedures and to change them at any time without public notice.

VI. FURTHER INFORMATION

For further information concerning this memorandum, please contact Gary Worthman in the Office of Waste Programs Enforcement at FTS (202) 382-5646.

GLOSSARY

Administrative Record: as used in this guidance, the body of documents that were considered or relied on which form the basis for the selection of a response action.

Administrative Record File: as used in this guidance, the ongoing collection of documents which are anticipated to constitute the administrative record when the selection of response action is made.

ARAR: applicable or relevant and appropriate requirements (see Section 121(d) of CERCLA).

ATSDR: Agency for Toxic Substance and Disease Registry.

CA: cooperative agreement (entered into with a state or local government to transfer funds to conduct response activities).

CBI: confidential business information.

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (also known as Superfund).

C.F.R.: Code of Federal Regulations.

CMS: corrective measure study (RCRA corrective action document, equivalent to an FS).

CRC: Community Relations Coordinator.

CRP: community relations plan.

Document: as used in this guidance, includes writings, drawings, graphs, charts, photographs, and data compilation from which information can be obtained. It does not, however, include physical samples.

DOJ: Department of Justice.

EE/CA: engineering evaluation/cost analysis (removal document).

EPA: United States Environmental Protection Agency.

ESD: Environmental Services Division.

Explanation of Significant Differences: post-ROD document described in Section 117(c) of CERCLA.

FOIA: Freedom of Information Act.

FSP: field sampling plan.

HRS: Hazard Ranking System.

IAG: inter-agency agreement (made with a federal agency).

Lead Agency: the agency that provides the OSC or RPM to plan and implement a response action under the NCP.

NCP: National Oil and Hazardous Substances Pollution Contingency Plan, as revised on March 8, 1990 (55 FR 8859).

NPL: National Priorities List.

OE: EPA Office of Enforcement.

OERR: EPA Office of Emergency and Remedial Response.

OIRM: EPA Office of Information Resources Management.

Operable Unit: a discrete action that comprises an incremental step toward comprehensively addressing site problems (see section 300.5 of the NCP).

ORC: EPA Office of Regional Counsel.

OSC: On-Scene Coordinator (project manager for a removal action)

OSWER: EPA Office of Solid Waste and Emergency Response.

OWPE: EPA Office of Waste Programs Enforcement.

PA: preliminary assessment.

PRP: potentially responsible party.

QAPP: quality assurance project plan.

RA: remedial action.

RCRA: the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act.

RD: remedial design.

RI/FS: remedial investigation/feasibility study.

RFA: RCRA facility assessment (RCRA document, equivalent to a PA/SI).

RFI: RCRA facility investigation (RCRA corrective action document, equivalent to an RI).

ROD: Record of Decision (documents the selection of a remedial action).

RPM: remedial project manager (project manager for a remedial action).

SAP: sampling and analysis plan.

SARA: Superfund Amendments and Reauthorization Act of 1986 (see CERCLA above).

Site File: the file containing all site documentation.

SI: site investigation.

SMOA: Superfund memorandum of agreement (made with a state).

Support Agency: the agency that provides the support agency coordinator to furnish necessary data to the lead agency, review response data and documents, and provide other assistance as requested by the lead agency. The support agency may also concur on decision documents.

(j) JUDICIAL REVIEW —

(1) LIMITATION —In any judicial action under this Act, judicial review of any issues concerning the adequacy or any response action taken or ordered by the President shall be limited to the administrative record. Otherwise applicable principles of administrative law shall govern whether any supplemental materials may be considered by the court.

(2) STANDARD.—In considering objections raised in any judicial action under this Act, the court shall uphold the President's decision in selecting the response action unless the objecting party can demonstrate, on the administrative record, that the decision was arbitrary and capricious or otherwise not in accordance with law.

(3) REMEDY.—If the court finds that the selection of the response action was arbitrary and capricious or otherwise not in accordance with law, the court shall award (A) only the response costs or damages that are not inconsistent with the national contingency plan, and (B) such other relief as is consistent with the National Contingency Plan.

(4) PROCEDURAL ERRORS.—In reviewing alleged procedural errors, the court may disallow costs or damages only if the errors were so serious and related to matters of such central relevance to the action that the action would have been significantly changed had such errors not been made.

k. ADMINISTRATIVE RECORD AND PARTICIPATION PROCEDURES.—

(1) ADMINISTRATIVE RECORD.—The President shall establish an administrative record upon which the President shall base the selection of a response action. The administrative record shall be available to the public at or near the facility at issue. The President also may place duplicates of the administrative record at any other location.

(2) PARTICIPATION PROCEDURES.—

(A) REMOVAL ACTION.—The President shall promulgate regulations in accordance with chapter 5 of title 5 of the United States Code establishing procedures for the appropriate participation of interested persons in the development of the administrative record on which the President will base the selection of removal actions and on which judicial review of removal actions will be based.

(B) REMEDIAL ACTION.—The President shall provide for the participation of interested persons, including potentially responsible parties, in the development of the administrative record on which the President will base the selection of remedial actions and on which judicial review of remedial actions will be based. The procedures developed under this subparagraph shall include, at a minimum, each of the following:

(i) Notice to potentially affected persons and the public, which shall be accompanied by a brief analysis of the plan and alternative plans that were considered.

(ii) A reasonable opportunity to comment and provide information regarding the plan.

(iii) An opportunity for a public meeting in the affected area, in accordance with section 117(a)(2) (relating to public participation).

(iv) A response to each of the significant comments, criticisms, and new data submitted in written or oral presentations.

(v) A statement of the basis and purpose of the selected action.

For purposes of this subparagraph, the administrative record shall include all items developed and received under this subparagraph and all items described in the second sentence of section 117(d). The President shall promulgate regulations in accordance with chapter 5 of title 5 of the United States Code to carry out the requirements of this subparagraph.

(C) INTERIM RECORD.—Until such regulations under subparagraphs (A) and (B) are promulgated, the administrative record shall consist of all items developed and received pursuant to current procedures for selection of the response action, including procedures for the participation of interested parties and the public. The development of an administrative record and the selection of response action under this Act shall not include an adjudicatory hearing.

(D) POTENTIALLY RESPONSIBLE PARTIES.—The President shall make reasonable efforts to identify and notify potentially responsible parties as early as possible before selection of a response action. Nothing in this paragraph shall be construed to be a defense to liability.

APPENDIX B

MODEL FILE STRUCTURE

This model file structure may be used to compile an administrative record file for a remedial action, a removal action, or a combination of both remedial and removal actions. If the record documents a remedial action decision, section 2 of the file will contain only those removal action documents which (a) predate the remedial record of decision and (b) are relevant to the selection of the remedial action. If the record documents a removal action decision, sections 3, 4, and 5 of the file will contain only those remedial action documents which (a) predate the removal action memorandum and (b) are relevant to the selection of the removal action.

Justification is unnecessary for file categories without any documents. Those categories should be left out of the index.

A document should be filed in only one category, even if it falls into more than one category. It may be referenced in another category. If necessary, additional subcategories may be developed to accommodate documents not falling in any of the defined subcategories. Avoid adding categories of miscellaneous documents.

The correspondence subcategory can include comments and responses specific to the category. If the comments and responses are general in nature or address more than one category, they may be included in the public participation category.

INDEX (FIRST DOCUMENT)

1.0 SITE IDENTIFICATION
- 1.1 Background - RCRA and other information
- 1.2 Notification/Site Inspection Reports
- 1.3 Preliminary Assessment (PA) Report
- 1.4 Site Investigation (SI) Report
- 1.5 Previous Operable Unit Information

2.0 REMOVAL RESPONSE
- 2.1 Sampling and Analysis Plans
- 2.2 Sampling and Analysis Data/Chain of Custody Forms
- 2.3 EE/CA Approval Memorandum (for non-time-critical re
- 2.4 EE/CA
- 2.5 Action Memorandum
- 2.6 Amendments to Action Memorandum

3.0 REMEDIAL INVESTIGATION (RI)
- 3.1 Sampling and Analysis Plan (SAP)
- 3.2 Sampling and Analysis Data/Chain of Custody Forms
- 3.3 Work Plan
- 3.4 RI Reports

4.0 FEASIBILITY STUDY (FS)
- 4.1 ARAR Determinations
- 4.2 FS Reports
- 4.3 Proposed Plan
- 4.4 Supplements and Revisions to the Proposed Plan

5.0 RECORD OF DECISION (ROD)
- 5.1 ROD
- 5.2 Amendments to ROD
- 5.3 Explanations of Significant Differences

6.0 STATE COORDINATION
- 6.1 Cooperative Agreements/SMOAs

7.0 ENFORCEMENT

- 7.1 Enforcement History
- 7.2 Endangerment Assessments
- 7.3 Administrative Orders
- 7.4 Consent Decrees
- 7.5 Affidavits
- 7.6 Documentation of Technical Discussions with PRPs on Response Actions
- 7.7 Notice Letters and Responses

8.0 HEALTH ASSESSMENTS

- 8.1 ATSDR Health Assessments
- 8.2 Toxicological Profiles

9.0 NATURAL RESOURCE TRUSTEES

- 9.1 Notices Issued
- 9.2 Findings of Fact
- 9.3 Reports

10.0 PUBLIC PARTICIPATION

- 10.1 Comments and Responses
- 10.2 Community Relations Plan
- 10.3 Public Notice(s) (Availability of the Administrative Record File, Availability the Proposed Plan, Public Meetings)
- 10.4 Public Meeting Transcripts
- 10.5 Documentation of Other Public Meetings
- 10.6 Fact Sheets and Press Releases
- 10.7 Responsiveness Summary
- 10.8 Late Comments

11.0 TECHNICAL SOURCES AND GUIDANCE DOCUMENTS

- 11.1 EPA Headquarters Guidance
- 11.2 EPA Regional Guidance
- 11.3 State Guidance

11.4 Technical Sources

APPENDIX C

MODEL INDEX

Attached is an excerpt of the Index of documents included in the Administrative Record for the Love Canal site. The Index lists the documents according to the EPA file structure (category number). The Index includes the following information fields:

DOCUMENT NUMBER....	indicates the first and last page numbers of the document. Both page numbers will be the same for one-page documents. In this particular index, the document number consists of a three letter site code followed by microfilm reel and frame numbers.
TITLE.....	indicates the title or an enhanced description of the document in parentheses.
AUTHOR.....	indicates the author or primary originator and the author's corporate affiliation.
RECIPIENT.....	indicates the addressee or primary recipient and the addressee's corporate affiliation.
DATE.....	indicates document date by month/day/year. / / means no date was available.
TYPE.....	indicates the document type.
CATEGORY.....	indicates the EPA file structure number.

APPENDIX D

MODEL POSITION DESCRIPTION FOR ADMINISTRATIVE RECORD COORDINATOR

INTRODUCTION

The incumbent serves as an Administrative Record Coordinator in one of the Regional offices of the Environmental Protection Agency (EPA). [Each Region may want to add an introduction to Superfund and the Regional office here.] The incumbent is responsible for compiling and maintaining administrative record files for CERCLA (Superfund) response action decisions.

Section 113(k) of CERCLA requires the establishment of an administrative record upon which the selection of a response action is based. Such a record is a compilation of all documents which the Agency considered or relied on in making its response action decision. Judicial review of any issues concerning the adequacy of any response action decision is limited to the administrative record. Public participation in the development of the record is required by law.

Establishment of thorough and complete administrative records is essential to EPA's Superfund program. Administrative records which include public participation and withstand judicial scrutiny allow EPA to meet its goals and objectives.

The incumbent will be responsible for compiling and maintaining administrative records for large numbers of Superfund sites. Each record requires coordination with many people including: Federal staff, state and local officials, private contractors, the general public and potentially responsible parties. Further responsibilities include deliberations over which materials to include in each record and requirements for dealing with privileged materials.

MAJOR DUTIES AND RESPONSIBILITIES

1. The incumbent is responsible for compiling and maintaining all of the administrative records for selection of CERCLA response actions for a Regional office of the EPA. The incumbent must have complete knowledge of all rules and procedures governing development of the administrative record files.

2. Receives and reviews all documents submitted by the Remedial Project Manager (RPM), On-Scene Coordinator (OSC), Office of Regional Counsel (ORC) and other appropriate staff for inclusion in the administrative record files. The incumbent will coordinate with staff responsible for deciding what documents are included in the record and will arrange for adding documents to the record file.

3. Compiles the administrative record file for each CERCLA response action. This includes logging the receipt of each document, maintaining a central master file of documents, redacting information from privileged documents as directed by ORC, maintaining any privileged portions of each record using Agency security measures, arranging for copying of documents in each record and transmitting the documents to appropriate repositories.

4. Coordinates the compilation of the administrative record files with state and federal agencies. This includes receiving records maintained by state and federal agencies and notifying appropriate personnel of these records for their review.

5. Maintains and updates (monthly) an index of each administrative record file in conformance with Agency guidelines.

6. Ensures public access to administrative record files. This includes notifying the public of the availability of the record, making the record available for public inspection, coordinating with personnel at the facility where the record is located, maintaining an adequate copying facility and maintaining a log of persons reviewing documents. The incumbent will have to respond to phone calls and visitors wanting information on and from the record. These functions will be coordinated with the Office of Public Affairs and Superfund Community Relations Coordinators.

7. Maintains the Regional Superfund Central Library of guidance documents and technical references.

CONTROLS OVER WORK

The incumbent works under the general supervision of the [Hazardous Waste Branch Chief]. An administrative record is reviewed and certified for litigation by a person designated by the Regional Administrator.

COMPENDIUM OF CERCLA RESPONSE SELECTION GUIDANCE DOCUMENTS

USERS MANUAL

U. S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF WASTE PROGRAMS ENFORCEMENT

MAY 1989

TABLE OF CONTENTS

LIST OF TABLES

1.0 INTRODUCTION

This manual describes how to use the Compendium of CERCLA Response Selection Guidance Documents (Compendium). Each U.S. Environmental Protection Agency (EPA) Regional Office maintains a compendium of guidance documents frequently used during development and selection of response actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

EPA Headquarters used several sources to develop the initial Compendium. These sources included a pamphlet titled "Selected Technical Guidance for Superfund Projects" (OSWER Directive 9200.7-01); the OSWER Directive System; the Superfund, Resource Conservation and Recovery Act (RCRA), and Enforcement dockets; the Hazardous Waste Collection Database, and any existing regional compendiums. The documents in the Compendium are referenced in administrative records for decisions on selection of response actions.

The administrative record described here is the body of documents that form the basis for selection of a CERCLA response action. Establishment of the administrative record is required by §113(k) of CERCLA. An administrative record is the compilation of documents considered or relied on by EPA in making a decision. Documents that EPA anticipates will be included in the administrative record when the decision on a response action selection is made, are referred to as the "administrative record file." Guidance documents, or portions of guidance documents, that are considered or relied on in selecting a CERCLA response action should be part of an administrative record file.

Certain frequently used guidance documents may be referenced in the index to an administrative record but not physically included in the administrative record file. The reference should indicate the title and location of any documents included in the administrative record but maintained in the Compendium, which is kept at a central regional location. If a guidance document that is not listed in the Compendium is considered or relied on in selecting the response action, the document must be physically included in the administrative record file. The Compendium helps reduce the burden of copying and storing multiple copies of frequently used guidance documents.

Section 2.0 of this manual briefly discusses use of the Compendium by EPA personnel and the public. Section 3.0 discusses the Compendium's file and index structure. Documents in the Compendium are filed in three-ring binders and listed on an index which is generated by and

maintained on a computer database. Procedures for updating the Compendium are presented in Section 4.0.

2.0 OVERVIEW OF COMPENDIUM USE

The Compendium is intended for use by two groups: EPA personnel, during the process of response action selection and administrative record development, and the public, for review of documents referenced in the index to an administrative record.

The user should note that although the term "guidance" is often used in discussing the Compendium, it does not imply that only guidance documents are included. The documents may also be policies, memoranda, clarifications, case studies, manuals, handbooks, reports, and other documents used in the selection of CERCLA response actions.

2.1 USE BY EPA PERSONNEL

EPA personnel use the Compendium primarily to reference frequently used guidance documents that may be maintained in the Compendium rather than physically included in each administrative record file. The index must indicate which documents are physically located in the Compendium and must specify the location and accessibility of the Compendium. The index should also reference only the specific documents in the Compendium that were considered or relied on for the site for which the record is being compiled. The index should not reference the entire Compendium.

2.2 USE BY THE PUBLIC

As with any unrestricted document included in a record, the Compendium documents are accessible for public review. When EPA publishes a notice of availability of an administrative record file, that notice will include the location of the Compendium. The Compendium will be available for public viewing at a central regional establishment (for example, the EPA Regional Office), and onsite or near the site for which the record is being compiled. (See Appendix A for a list of the locations of each regional copy of the Compendium and the names of the Regional Administrative Record Coordinators.)

3.0 STRUCTURE OF THE COMPENDIUM

Currently, the Compendium is organized into 10 categories. An overview of the file structure is presented below as well as a discussion of the index that identifies the documents included in the Compendium. This section also discusses the data elements identified in the index. The data elements provide vital information on the documents included in the Compendium and are contained in a database used to compile the Compendium and generate the index.

3.1 FILE STRUCTURE

The Compendium is structured according to 10 major categories that generally reflect the various components of a response action selection under CERCLA. Table 3-1 lists the current Compendium categories. The documents are further grouped into subcategories that indicate their more specific nature, when applicable. For example, the remedial investigation/feasibility study (RI/FS) section of the Compendium is broken down into more specific subcategories to identify the wide range of RI/FS documents available. When the documents apply to multiple categories, secondary references are provided in the Compendium index.

Each document has been assigned a unique four-digit document number. The bound documents contained in each category are arranged numerically. When a user wants to access a document, he or she will find the document filed according to the assigned number. The four-digit number series assigned to each category are also listed in Table 3-1.

3.2 INDEX STRUCTURE

When an administrative record index refers to a document contained in the Compendium, that document is also identified in the Compendium index. The index, contained as the first document in the Compendium, provides the information necessary to identify and locate the desired documents. (For a copy of the current Compendium index, see Appendix B.)

Because in most cases the user will know the title of the document rather than the number assigned, the index lists the documents under each category in alphabetical order. An alphabetical listing of secondary references follows the primary documents listed under each category.

TABLE 3-1

COMPENDIUM CATEGORIES AND NUMBER SERIES

CATEGORIES	NUMBER SERIES
Index	0000
Pre-Remedial	0001-0999
Removal Action	1000-1999
Remedial Investigation/ Feasibility Study	2000-2999
General	2000-2099
RI Data Quality/Site & Waste Assessment	2100-2199
Land Disposal Facility Technology	2200-2299
Other Technologies	2300-2399
Groundwater Monitoring & Protection	2400-2499
ARARs[1]	3000-3999
Water Quality	4000-4999
Risk Assessment	5000-5999
Cost Analysis	6000-6999
Community Relations	7000-7999
Enforcement	8000-8999
Selected Remedy/Decision Document	9000-9999

[1] Applicable or Relevant and Appropriate Requirements

The Compendium index is maintained on a database using dBASE III Plus software. The database contains numerous data elements that store the information distinguishing and grouping each document into the appropriate categories. The database is currently maintained at EPA Headquarters.

Maintaining the index in a database allows the information to be organized in different ways. For example, should the Region need an index that is sorted entirely in alphabetical order by title, chronologically by document date, numerically by the number assigned each document, etc., EPA Headquarters can generate and forward such an index. The data elements of the Compendium database, as identified on the index, are included in Appendix B.

4.0 UPDATING THE COMPENDIUM

The Compendium is designed to allow for the periodic addition of newly developed policy or guidance documents. Updates to the Compendium are necessary in the following cases: (1) EPA releases relevant new guidance, policy, reports, etc.; (2) regional staff find additional documents that should be included in the Compendium; and (3) existing documents are revised or superseded. EPA Headquarters will continue to monitor the information sources used to develop the initial Compendium for new or revised documents that may qualify for inclusion in the Compendium.

Guidance documents identified for addition to the Compendium will be reviewed and relevant information will be entered into the existing database. After the database is updated, a new index will be generated and sent to each Regional Office. This new index will replace any previous indices. Hard copies of the additional documents will be sent to each region for inclusion in the Compendium. The revised index will indicate the category for each new document.

4.1 REGIONAL INPUT

Participants involved in the response action selection process, as well as Administrative Record Coordinators, may find documents that are frequently included in administrative records but are not referenced in the Compendium. In such cases it may be desirable to include the documents in the Compendium as part of the updating process. However, since the Compendium is designed to be nationally applicable, only documents used frequently in different regions will be included. Any region-specific document should be maintained in separate regional files and not in the Compendium.

4.2 KEEPING THE COMPENDIUM CURRENT

Once a document is included in the Compendium it will remain in the Compendium to maintain the integrity of any record that refers to it. However documents contained in the Compendium may be revised in the future to reflect changes, for example, changes in policy, technology, or law. The most current version of these documents will be added to the Compendium, as appropriate, so that they will be available for the administrative record process.

Although no document included in the Compendium will ever be replaced or removed once an administrative record index refers to it, those documents that are superseded will be flagged and identified on a separate index (superseded index) attached to the Compendium's main index. The superseded index will also identify the corresponding revised version added to the Compendium to indicate the new document that should be used.

Response action selections frequently rely on technical data generated at Superfund sites across the country. Such data is often maintained on national databases. Depending on their use and availability, certain of these databases may be included in the Compendium. For example, the Public Health Risk Evaluation Database (PHRED) is part of the Compendium. PHRED is stored on two floppy diskettes that are regularly updated as additional information becomes available. Whenever updated PHRED diskettes are generated, they will be added to the Compendium. Those diskettes that were previously included will also remain in the Compendium and will be identified on the superseded index.

(APPENDIX A)

REGIONAL COMPENDIUM LOCATIONS AND ADMINISTRATIVE RECORD COORDINATORS

Region	Address	Coordinator/PH * 1. Remedial 2. Removal
I	90 Canal Street Boston, MA 02203	1. Brenda Haslett (617)573-1759 FTS 833-1759
	60 Westview Street * Lexington, MA 02173	2. Pam Bruno (617)860-4309
II	26 Federal Plaza New York, NY 10278	1. Jenny Delcimento (212)264-8676 FTS 264-8676
	Woodbridge Avenue * Raritan Depot - Bldg 10 Edison, NJ 08837	2. Norman Vogelsang (201)321-6657 FTS 340-6657
III	841 Chestnut Street Philadelphia, PA 19107	1. Margaret Leva (215)597-3037 FTS 597-3037
		2. Joan Henry (215)597-2711 FTS 597-2711
IV	345 Courtland Street, N.E. Atlanta, GA 30365	1. Debbie Jourdan (404)347-2930 FTS 257-2930
		2. Same
V	230 South Dearborn Street Chicago, IL 60604	1. Jamie Bell FTS 353-7446
		2. Jan Pfundheller FTS 353-7626
VI	1445 Ross Avenue 12th Floor, Suite 1200 Dallas, TX 75270	1. Karen Witten (214)655-6720 FTS 255-6720
		2. Joann Woods (214)655-2270 FTS 255-2270

* The Compendium was initially distributed to remedial Administrative Record Coordinators only. Copies may be located at this address.

Region	Address	Coordinator/PH * 1. Remedial 2. Removal
VII	726 Minnesota Avenue Kansas City, KS 66101 25 Funston Road * Kansas City, KS 66115	1. Barry Thierer FTS 276-7052 2. Helen Bennett (913)236-3881 FTS 757-3881
VIII	999 18th Street Suite 500 Denver, CO 80202	1. Carole Macy FTS 330-1281 2. Tina Ardemus FTS 330-7039
IX	215 Fremont Street San Francisco, CA 94105	1. Tom Mix FTS 484-1960 Don Briggs FTS 556-6637 2. Holly Hadlock (415)768-1354
X	1200 Sixth Avenue Seattle , WA 98101	1. Lynn Williams (206)442-2121 FTS 399-2121 2. Same

* The Compendium was initially distributed to remedial Administrative Record Coordinators only. Copies may not be located at this address.

(APPENDIX B)

COMPENDIUM OF CERCLA RESPONSE SELECTION GUIDANCE DOCUMENTS

INDEX

TABLE OF CONTENTS

*The range for each number series identified represents the numbers assigned to those documents currently in the Compendium.

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DOCUMENTS IN CERCLA RESPONSE SELECTION GUIDANCE (CERCLA)

Index No	Vol	Title	Date	Authors	Status	Pages	Docs	Attachments	Comments
**		01/05 - General							
2000	3	CASE STUDIES 1-23 REMEDIAL RESPONSE AT HAZARDOUS WASTE SITES	01/01/84	- OSWER/OERR/RPA - OSWER/OERR	Final	830	1		EPA 540/2-84-002
2001	3	EPA GUIDE FOR MINIMIZING THE ADVERSE ENVIRONMENTAL EFFECTS OF CLEANUP OF UNCONTROLLED HAZARDOUS-WASTE SITES	05/01/85	- ENVIRONMENTAL RESEARCH LABORATORY	Final	250	1		EPA/540/2-85-001
2002	3	GUIDANCE FOR CONDUCTING REMEDIAL INVESTIGATIONS AND FEASIBILITY STUDIES UNDER CERCLA	10/01/88	OSWER/OERR	Final	300	1		OSWER Dir. 9355.3-01
2003	3	FINAL OSWER/EPA GUIDANCE	08/30/91	OSWER/EPA	Final	43	2		OSWER Dir. 9355.3-02
2004	4	MEDIA AND REMEDIAL ACTIONS AT UNCONTROLLED HAZARDOUS WASTE SITES (MAR 1-90)	04/01/85	- SQUIRES, S.H. EI AL /ANDERSON/ROBERTS AND EI - OSWER/OERR - ANDRE D C AND ELDRIDGE, JR E O ANDRE	Final	550	0		OSWER Dir. 9355.3-03
2005	4	PUBLIC INVOLVEMENT AND RESPONSE ASSESSMENTS FOR CERCLA ACTIONS	08/01/85	- ANDRE, JR., W.H. AND - SQUIRES, S.H.	Final	9	2		OSWER Directive
2006	4	REMEDIAL RESPONSE AT HAZARDOUS WASTE SITES SUMMARY REPORT	01/01/84	- OSWER/OERR	Final	85	1		EPA 540/2-84-002
2007	4	REVISED PROCEDURES FOR PLANNING OFF-SITE RESPONSE ACTIONS	11/13/87	- FUHRER, J.M AND ER	Final	20	2		OSWER Directive
2008	4	01/05 MEMORANDUMS	07/22/87	- GOMESI, MIC AND ER	Final	11	2	01 01/05 Memorandums	OSWER Dir.
2009	4	01/05 MEMORANDUMS (CLEANUP	04/25/88	- GOMESI, MIC AND ER	Final	16	3	01 01/05 Memorandums (cleanup) 02 Memorandum Implementing Superfund Activities	OSWER Dir.
2010	4	SUPERFUND REMEDIAL-LED REMEDIAL PROJECT MANAGEMENT HANDBOOK	12/01/86	- USEPA	Draft	170	1		OSWER Dir.
2011	5	SUPERFUND REMEDIAL DESIGN AND REMEDIAL ACTION GUIDANCE	06/01/86	- USEPA	Final	900	1		OSWER Dir.
2012	5	SUPERFUND START (RPM) REMEDIAL PROJECT MANAGEMENT HANDBOOK	12/01/86	USEPA	Final	350	1		OSWER Dir.
**		01/05 - 01 Data Quality/Site & Waste Assessment							
2100	5	A COMPENDIUM OF SUPERFUND FIELD OPERATIONS METHODS	12/01/87	USEPA USACE	Final	550	1		OSWER Dir.
2101	6	Data Quality Objectives for Remedial Response Activities Development Process	03/01/87	USEPA FEDERAL FACILITIES LEAD BRANCH	Final	150	1		OSWER Dir.

[illegible]
[illegible] [illegible]

DOC NO	VOL	TITLE	DATE	AUTHORS	STATUS	PAGES	REC TYPE	ATTACHMENTS	[illegible]
2105		A PRACTICAL GUIDE FOR GROUND-WATER SAMPLING	09/01/85	BARCELONA M J ET AL /ILLINOIS SS WATER SURVEY - SCALE 1:R /ERD/EPA	Final	175	1		[illegible]
2106		A STANDARD SAMPLING QUALITY ASSURANCE USER'S GUIDE	07/01/85	- BARCH D S & STARKS T S /ENV CH DEV LAS VEGAS - EMSL LV R /EPA	Final	120	1		[illegible]
2107		A SOIL SAMPLING QUALITY ASSURANCE USER'S GUIDE	05/01/84	- BARCH D S & MASON B J /U OF NEVADA LAS VEGAS - EMSL LV R /EPA	Final	466	1		[illegible]
2108	04	NSI METHODS FOR EVALUATING SOLID WASTE, LABORATORY MANUAL PHYSICAL/CHEMICAL METHODS, THIRD EDITION (VOLUMES IA, IB, IC, AND II)	11/01/86	- OTHER	Final	MANY	1		
2109		A USER'S GUIDE TO THE CONTRACT LABORATORY PROGRAM	12/01/88	- CERI/OLP SAMPLE MANAGEMENT OFFICE	Final	230	1		[illegible]

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** B1/05 - Land Disposal Facility Technology

2200	03	COVERS FOR UNCONTROLLED HAZARDOUS WASTE SITES	09/01/85	- RICHARDSON C C ET AL /U S LIBRARIES HARDCOPY /PAPER	Final	475	1		[illegible]
2201	03	DESIGN CONSTRUCTION, AND EVALUATION OF CLAY LINERS FOR WASTE MANAGEMENT FACILITIES	11/01/88	- CHRISTEN J S ET AL /ASCE - MICROFICHE /MF /MERL	Final	500	1		[illegible]
2202	03	EVALUATING COVER SYSTEMS FOR SOLID AND HAZARDOUS WASTE	09/01/82	- LUTTON R J /U S A CORPS ENGRS - LABORATORY R E /MERL	Final	58	1		[illegible]
2203	03	GUIDANCE MANUAL FOR MINIMIZING POLLUTION FROM WASTE DISPOSAL SITES	09/01/78	ROBSON A E ET AL /A M RUSSON ASSOCIATES INC SANDERS D E /MERL	Final	81	1		[illegible]
2204	03	LAND DISPOSAL RESTRICTIONS	06/11/87	- LOWRIE M L /ASBR HAZARD C /CMPE	Final	21	1	03 SUMMARY OF MAJOR CONSIDERATIONS AND CONCERNS IN EVALUATING LAND DISPOSAL ALTERNATIVES 03 OTHER ATTACHED FILES AND ASSIGNMENT OF	

[illegible]

[illegible]

ITEM NO	Vol	Title	Date	Authors	Status	Pages	Disc	Attachments	Order Source
								[illegible]	
3205	05	[illegible]	09/01/00	[illegible]	Final	350	3		
3206	05	[illegible]	01/01/03	[illegible]	Final	400	3		[illegible]
3207	05	[illegible]	01/01/04	[illegible]	Draft	105	3		[illegible]
3208	05	[illegible]	07/01/02	EPA	Draft	50	3		
3209	05	[illegible]	05/04/05	[illegible]	Final	4	3		[illegible]
3210	05	[illegible]	08/07/00	[illegible]	Final	60	3	[illegible]	[illegible]
3211	05	[illegible]	10/01/00	[illegible]	Final	60	3		[illegible]
3212	05	[illegible]	01/01/04	[illegible]	Final	4	3		[illegible]
3300	05	[illegible]	04/01/05	[illegible]	Final	3	3		[illegible]

--	01/05	[illegible]							
3300	06	[illegible]	09/01/02	[illegible]	Final	40	3		[illegible]

[redacted]

[redacted]

DOC NO	VOL	TITLE	DATE	AUTHORS	STATUS	PAGES	REV	ATTACHMENTS	[redacted]
3101	16	[redacted]	04/01/80	[redacted]	final	321	2		[redacted]
3102	17	[redacted]	09/01/81	[redacted]	final	445	2		[redacted]
3103	17	EPA GUIDE FOR [redacted]		[redacted]	final	120	2		[redacted]
3104	17	EPA GUIDE FOR [redacted]	05/01/86	[redacted]	final	75	2		[redacted]
3105	17	[redacted]	06/01/86	[redacted]	final	10	0		[redacted]
3106	17	[redacted]	01/20/85	[redacted]	final	115	0		[redacted]
3107	18	[redacted]	08/01/83	[redacted]	final	630	1		[redacted]
3108	18	[redacted]	06/01/86	[redacted]	final	615	1		[redacted]
3109	19	[redacted]	10/01/85	[redacted]	final	560	1		[redacted]
3110	20	[redacted]	11/01/85	[redacted]	final	540	1		[redacted]
3111	20	[redacted]	09/01/86	[redacted]	final	150	1		[redacted]
3112	21	[redacted]	04/01/86	[redacted]	final	63	2		[redacted]
3113	21	[redacted]	03/01/86	[redacted]	final	2	1		[redacted]

[illegible]

[illegible]

LNK NO	NO#	Title	Date	Author	Status	Pages	Encl	Attachments	[illegible]
3314	31	[illegible]	06/01/06	[illegible]	Final	35	1	[illegible]	[illegible]
3315	31	[illegible]	11/01/04	[illegible]	Final	150	1		[illegible]
3316	31	[illegible]	08/10/04	[illegible]	Final	105	1		[illegible]
3317	31	[illegible]	01/01/04	[illegible]	Final	150	1		[illegible]
3318	31	[illegible]	09/01/06	[illegible]	Final	105	1		[illegible]
3319	31	[illegible]	09/01/00	[illegible]	Final	150	1		[illegible]
3320	31	[illegible]	07/01/06	[illegible]	Final	35	1		[illegible]

04 01/05 Coastal Water Monitoring & Protection

2400	31	[illegible]	07/01/06	[illegible]	Final	950	1		[illegible]
2401	34	[illegible]	11/10/00	[illegible]	Final	55	1	[illegible]	[illegible]
2402	34	[illegible]	07/31/00	[illegible]	Final	3	1		[illegible]
2403	34	[illegible]	08/01/04	[illegible]	Final	65	1		[illegible]
2404	34	[illegible]	12/01/06	[illegible]	Final	600	1		
2405	34	[illegible]	07/31/00	[illegible]	Final	50	1	[illegible]	[illegible]

-0012A

COMPENDIUM OF CERCLA RESPONSE SELECTION GUIDANCE (CLASSIFIED)

DOC NO	Vol	Title	Date	Authors	Status	Pages	Rec	Attachments	Remarks
2405	26	MODELS FOR GROUND-WATER EVALUATION	00/01/86	ENVIRONS WASTE GROUND-WATER TASK FORCE	Final	200	2		
2406	25	RCRA GROUND-WATER MONITORING TECHNICAL ENFORCEMENT GUIDANCE DOCUMENT(TEGD)	09/01/86	- EPA	Final	220	2		
2408	25	RCRA GROUND-WATER MONITORING TECHNICAL ENFORCEMENT GUIDANCE DOCUMENT, TEGD, INCLUSIVE CLASSIFY	03/01/87	- ILLEGIBLE C A /ENPE	Final	8	1		
**		ABORTS							
2000	25	APPLICABILITY OF RCRA GROUND WATER TECHNICAL REQUIREMENTS RESPECTING LINERS AND LEACHATE COLLECTION SYSTEMS	04/01/85	- SLOVER, J / EPA	Final	3	2		
2001	25	CERCLA COMPLIANCE WITH OTHER ENVIRONMENTAL STATUTES	08/01/85	- FOSTER, J M /EPRI	Final	19	1	1) SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) 2) NATIONAL CONTINGENCY PLAN (NCP)	
2002	25	CERCLA COMPLIANCE WITH OTHER LAWS MANUAL	00/00/88	- CRRR	Draft	245	2		
2003	25	EPA'S IMPLEMENTATION OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986	05/31/87	- BROWN, E M /EPA	Final	0	2		
2004	25	GUIDANCE MANUAL ON THE RCRA REGULATION OF RECYCLED MATERIALS USERS	01/01/86	- BOOZ-ALLEN & HAMILTON INC - CRRR	Final	150	2		
2005	25	INTERIM RCRA/CERCLA GUIDANCE ON MIXED-RADIOACTIVE WASTE AND ON-SITE MANAGEMENT OF WASTE AND TREATMENT RESIDUE	03/27/86	- FOSTER, J M /EPRI	Final	8	2	1) CONGRESSIONAL AMENDMENTS TO RCRA AS 1984	
2009	25	CRITERIA FOR IDENTIFYING AREAS OF VARIABLE HYDROLOGY UNDER RCRA (EARLIER) CORRECTIVE GUIDANCE (Secondary Reference)	07/01/86	- CRRR/ICF	Final	950	2		
2010	24	FINAL RCRA COMPREHENSIVE GROUND-WATER MONITORING EVALUATION (GME) GUIDANCE DOCUMENT (Secondary Reference)	11/19/86	ILLEGIBLE C A /ENPE	Final	55	2	1) RESPONSE TO COMMENTS ON PROPOSED RULES 2) FINAL RULE	
2015	24	OPERATION AND MAINTENANCE INSPECTION GUIDE (RCRA GROUND WATER MONITORING SYSTEMS) (Secondary Reference)	01/30/86	CRRR/ENVIRONMENTAL RESPONSE DIVISION	Final	90	2	1) MEMORANDUM FROM [illegible]	
2017	25	RCRA GROUND-WATER MONITORING TECHNICAL ENFORCEMENT GUIDANCE DOCUMENT(TEGD) (Secondary Reference)	09/01/86	EPA	Final	220	2		
2018	25	RCRA GROUND-WATER MONITORING TECHNICAL ENFORCEMENT GUIDANCE DOCUMENT, TEGD INCLUSIVE CLASSIFY (Secondary Reference)	03/01/87	ILLEGIBLE C A /ENPE	Final	8	1		

[illegible]

[illegible]

List No.	Vol	Title	Date	Author	Status	Pages	Disc	Abstract	[illegible]
2000	15	[illegible] (Secondary Reference)	03/01/83	EPA	Final	50	2		
0004	11	[illegible] (Secondary Reference)	06/30/85	[illegible]	Final	1	2		

** Water Quality

4000	20	[illegible] Part 1. [illegible]	03/01/83	[illegible]	Final	120	2		[illegible]
4004	20	[illegible]	03/01/80	[illegible]	Final	64	2		[illegible]
4003	20	[illegible]	10/05/83	[illegible]	Final	0	2		[illegible]
4001	20	[illegible]	03/01/83	[illegible]	Final	335	2		[illegible]
3301	10	[illegible] (Secondary Reference)	04/01/80	[illegible]	Final	320	2		[illegible]
4005	5	[illegible] (Secondary Reference)	04/10/80	[illegible]	Final	57	2	[illegible]	

** Risk Assessment

5000	17	[illegible]	05/15/86	[illegible]	Draft	50	2		
5004	17	[illegible]	09/17/85	[illegible]	Final	130	2		[illegible]
5003	17	[illegible]	05/14/87	[illegible]	Final	41	1	[illegible]	[illegible]
5001	17	[illegible]	09/14/86	EPA	Final	11	2		

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COMPENDIUM OF CERCLA RESPONSE SELECTION GUIDANCE DOCUMENTS

Doc No	Vol	Title	Date	Authors	Status	Pages	Rec	Attachments	Comments
1004	3	CLASSIFIED FOR EXPOSURE ASSESSMENT [illegible], SEPTEMBER 24, 1986, p 34042)	09/24/86	- EPA	Final	44	3		
1005	3	CLASSIFIED FOR HEALTH ASSESSMENT OF SUSPECT CARCINOGENICAL SUBSTANCES (FEDERAL REGISTER, SEPTEMBER 24, 1986, p. 34035)	09/24/86	- EPA	Final	14	3		
1006	3	CLASSIFIED FOR RADIOACTIVE DATA ASSESSMENT (FEDERAL REGISTER, SEPTEMBER, 24, p 34034)	09/24/86	EPA	Final	8	3		
1007	3	CLASSIFIED FOR THE HEALTH RISK ASSESSMENT OF CHEMICAL MIXTURES (FEDERAL REGISTER, SEPTEMBER 24, 1986, p 34014)	09/24/86	- EPA	Final	11	3		
1008	3	HEALTH EFFECTS ASSESSMENT SUMMARIES (50 CHEMICAL PROFILES) VOL 30 ACETONE, ACROLEIN, ACRYLIC ACID, BARIUM, BROMOBENZENE, CADMIUM, CARBON TETRACHLORIDE, CHLOROBENZENE, CHLOROFORM, CHLOROMETHANE, COPPER COMPOUNDS, CUMENE, DDT, 1,1-DICHLOROETHANE, 1,2-DICHLOROETHANE, VOL 20 1,1-DICHLOROETHYLENE, 1,2-DICHLOROETHYLENE, CIS-1,2-DICHLOROETHYLENE, ETHYLBENZENE CYANIDE COMPOUNDS, HEXACHLOROBENZENE, HEXACHLOROBUTADIENE HEXACHLOROCYCLOPENTADIENE HYDROGEN CYANIDE (AND CYANIDE SALTS), LEAD, LINDANE, MERCURY (AND COMPOUNDS), MERCURY ALKYL ESTERS ACETATE, METHYLENE CHLORIDE, NAPHTHALENE NICKEL PENTACHLOROPHENOL, PHENOL, POLYCHLORINATED VOL 30 POLYCHLORINATED BIPHENYLS (PCBS), POLYCYCLIC AROMATIC HYDROCARBONS (PAHS), PYRENE, SELENIUM (AND COMPOUNDS), SILVER CYANIDE, SILVEX ACID, 2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN 1,1,2 2-TETRACHLOROETHANE, TETRACHLOROETHYLENE, TOLUENE, 1 2 3-TRICHLOROBENZENE, 1 1,1-TRICHLOROETHANE TRICHLOROETHYLENE 2 4 5-TRICHLOROPHENOL 2 4 6-TRICHLOROPHENOL TRIPHENYLTIN CHLORIDE VINYL CHLORIDE, XYLENE, ZINC (AND COMPOUNDS)	09/01/84	OERR/OSWER/ECAO OERR/OSWER	Final	1250	3		
1009	3	INTEGRATED RISK INFORMATION SYSTEM (IRIS) [A COMPUTER BASED HEALTH RISK INFORMATION SYSTEM AVAILABLE THROUGH [illegible] ON ACCESS TO INFO]	-	OHEA	Final	-	3		

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SUPERFUND ON CERCLA REVISED SELECTED (Limited) (LEGACY)

Doc No	Vol	Title	Date	Authors	Status	Pages	Size	Attachments	Comments
2010	3A	GUIDANCE FOR SCOPING RIA ASSESSING RADIO ug "RADIONUC CHEM Dose 3 3 7.8 RAD	01/07/87	DCNAS & AS /EPA	Final	50	2	11 GUIDANCE CONCERNING THE ESTIMATION RISKS ASSOC RADIONUCLIDES IN GUIDANCE 90/00	
2041	3A	PLANNING DEALING WITH EVALUATION DAMAGES UNDER SUPER'S NATURAL AND RECREATIONAL CONCERNING THE CERCLIS PAGE SHEEN AND INCLUDED	09/16/88	CERC/ERICKS GUIDANCE ERICKS	Final	-	2		
2042	3A	ROLE OF HUMAN BEHAVIOR CONSIDERED IN THE REMEDIAL ACTION PROCESS AS PARADIGM ENDAN SHIRE	08/01/87	ABCV & A 61 AS /PACIFIC DEPARTMENT LABORATORY · ANALYSIS OF ACCIDENTS ENVIRONMENTAL ASSESSMENT LAB	Final	200	2		[illegible]
2043	3A	SUPERFUND EXPOSURE ASSESSMENT MANUAL	04/01/88 · CERC		Final	160	1		[illegible]
2044	3A	SUPERFUND PUBLIC HEALTH EVALUATION MANUAL	10/01/86	CERC CERCLA	Final	300	1		[illegible]
2045	3A	STRATEGY PROCEDURE	08/01/85 · EBSI SYSTEMS, INC · PARSIPPANY, N J /EPA		Draft	150	2		[illegible]
4000	3A	INCINERATION ASSESSMENT GUIDANCE (Secondary Reference)	11/12/85	PURDUE U IN /EPA	Final	10	2		[illegible]
**	Final Analysis								
4000	3A	REMEDIAL ACTION CERCLIC PROCEDURES MANUAL	10/01/87	EPA ASSESSMENTS/CERCLA 1984 CERCLA CERCLA/CERCLA	Final	50	1		
4001	3A	REMEDIAL CERCLA AGREEMENT MANUAL	04/01/88 · CERCLA/CERCLA		Final	150	1		[illegible]
4003	6	ENVIRONMENTAL REVIEW REQUIREMENTS FOR REMEDIAL ACTIONS (Secondary Reference)	04/15/87	CERC/ERD	Final	6	2		[illegible]
**	Community Relations								
7000	3A	COMMUNITY RELATIONS IN SUPERFUND A HANDBOOK (Interim Version)	06/01/88	CERC	Final	100	2	11 [illegible] 11/00/00	[illegible]

[illegible]

[illegible]

doc no	vol	title	date	authors	status	pages	size	attachments	[illegible]
**		[illegible]							
0000	32	[illegible] ASSISTANCE GUIDANCE	01/22/85 - FORTIER, J to ADDER	final	11	1			[illegible]
0004	32	[illegible] GUIDANCE ON FINANCIALLY RESPONSIBLE PARTY PARTICIPATION [illegible] ASSESSMENTS AND FEASIBILITY STUDIES	05/16/00 - FORTIER, J to ADDER	final	12	2			[illegible]
**		Selection of Remedy/Decision Documents							
0000	32	[illegible] GUIDANCE ON EXPANDED SELECTION OF REMEDY	01/24/85 - FORTIER, J to ADDER	final	10	1			[illegible]
0001	32	[illegible] DECISIONS NOT ON REMEDY SELECTION	05/24/85 - GILPATRICK, M ADDRESSANCE [illegible] Chief	final	1	1			

DATA ELEMENT DEFINITIONS

The data elements of the Compendium database, as identified on the index are shown below:

DATA ELEMENT	DEFINITION
Doc No	Unique four-digit number assigned to a document included in the Compendium according to category
Vol	Volume number of the binder in which the hard copy of the document is contained.
Title	Title of the document. Secondary Reference is identified following the title when a document relates to more than one category. The document itself is filed under the number series assigned to its primary category.
Date	The date the document was published by or released from the issuing office or entity.
Authors	Author(s) and affiliation(s). Also includes identification of the EPA Project Officer and issuing office, where applicable.
Status	Indicates the status of a document, either draft or final version.
Pages	Total number of printed pages of the document, including any attachments.
Tier	Tier 1 or Tier 2. Tier 1 documents are the core documents of the Compendium as listed in the pamphlet titled "Selected Technical Guidance for Superfund Projects," compiled by OERR. Tier 2 documents are all other documents included in the Compendium.
Attachments	Attachments to a document by complete or abbreviated title.
OSWER/EP[illegible]mber	EPA report or OSWER Directive System numbers, where applicable.

LIST OF ORGANIZATIONAL ABBREVIATIONS AND ACRONYMS IDENTIFIED IN THE INDEX

Organization	Acronym
Agency for Toxic Substances and Disease Registry	ATSDR
Center for Environmental Research Information	CERI
Contract Laboratory Program	CLP
U.S. Corps of Engineers	COE
Exposure Assessment Research Division	EARD
Environmental Criteria and Assessment Office	ECAO
Environmental Monitoring Systems Laboratory	EMSL
Emergency Response Division	ERD
Environmental Research Laboratory	ERL
Hazardous Response Support Division	HRSD
Hazardous Site Control Division	HSCD
Hazardous Site Evaluation Division	HSED
Hazardous Waste Engineering Research Laboratory	HWERL
Municipal Environmental Research Laboratory	MERL
Office of Environmental Engineering and Technology	OEET
Office of Emergency and Remedial Response	OERR
Office of Health Effects Assessment	OHEA
Office of Research and Development	ORD
Office of Solid Waste	OSW
Office of Solid Waste and Emergency Response	OSWER
Office of Waste Programs Enforcement	OWPE
Policy Analysis Staff	PAS
Waterways Experiment Station	WES
Waste Management Division	WMD

APPENDIX F

MODEL TRANSMITTAL COVER LETTER

[Name of Contact]
[Address]

Dear [Name of Contact]:

The U.S. Environmental Protection Agency is required by law to establish administrative records "at or near a facility at issue." This administrative record consists of information upon which the Agency bases its selection of response action for a particular Superfund site.

By providing the public with greater access to these records, it is our hope that they will be better equipped to comment constructively on site activities and to understand the issues relating to the selection of the response action at the site.

We appreciate having the [Name of local repository] as the designated administrative record facility for the [Name of site] Superfund site. The enclosed record files, along with any future documents relating to technical activities at the site should be placed in the [Name of local repository] and be available for public review. The record files should be treated as a non-circulating reference - it should not be removed from your facility.

Also enclosed is a fact sheet to assist you and your staff in answering questions posed by the public concerning administrative records for selection of response actions at Superfund sites. Please feel free to distribute this guide to the public.

To ensure the receipt of the administrative record file, I would appreciate your completion of the attached Document Transmittal Acknowledgment form. Please return this form in the enclosed self-addressed, stamped envelope.

Again, I would like to thank you for your cooperation with the U.S. EPA in serving as a Field Repository. If you have any questions or comments, please contact [Name of EPA contact] at [Phone No.].

Sincerely,

[Name]
Administrative Record Coordinator

APPENDIX G

MODEL DOCUMENT TRANSMITTAL ACKNOWLEDGMENT

From: [Regional Office Address]

To: [Field Repository Address]

I acknowledge that I have received the following documents from the U.S. EPA Region ____ Office, pertaining to [Site Name] Superfund site.

Administrative Record Name - [Site Name]

Administrative Record Document Numbers - _____

Signed _____

Date _____

Please return this form to: [Regional Office Address]

APPENDIX H

FACT SHEET

Administrative Records in Local Repositories

The "administrative record" is the collection of documents which form the basis for the selection of a response action at a Superfund site. Under section 113(k) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act (CERCLA), EPA is required to establish an administrative record for every Superfund response action and to make a copy of the administrative record available at or near the site.

The administrative record file must be reasonably available for public review during normal business hours. The record file should be treated as a non-circulating reference document. This will allow the public greater access to the volumes and also minimize the risk of loss or damage. Individuals may photocopy any documents contained in the record file, according to the photocopying procedures at the local repository.

The documents in the administrative record file may become damaged or lost during use. If this occurs, the local repository manager should contact the EPA Regional Office for replacements. Documents may be added to the record file as the site work progresses. Periodically, EPA may send supplemental volumes and indexes directly to the local repository. These supplements should be placed with the initial record file.

The administrative record file will be maintained at the local repository until further notice. Questions regarding the maintenance of the record file should be directed to the EPA Regional Office.

The Agency welcomes comments at any time on documents contained in the administrative record file. Please send any such comments to [name and address]. The Agency may hold formal public comment periods at certain stages of response process. The public is urged to use these formal review periods to submit their comments.

For further information on the administrative record file, contact [name and phone no. of Administrative Record Coordinator].

APPENDIX I

MODEL NOTICE OF PUBLIC AVAILABILITY

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ANNOUNCES THE AVAILABILITY OF THE
ADMINISTRATIVE RECORD
XYZ SITE, [Locality, State]

The U.S. Environmental Protection Agency (EPA) announces the availability for public review of files comprising the administrative record for the selection of the [remedial, removal] action at the XYZ site, [Locality, State]. EPA seeks to inform the public of the availability of the record file at this repository and to encourage the public to comment on documents as they are placed in the record file.

The administrative record file includes documents which form the basis for the selection of a [remedial, removal] action at this site. Documents now in the record files include [preliminary assessment and site investigation reports, validated sampling data, RI/FS work plan, and the community relations plan]. Other documents will be added to the record files as site work progresses. These additional documents may include, but are not limited to, the RI/FS report, other technical reports, additional validated sampling data, comments and new data submitted by interested persons, and EPA responses to significant comments.

The administrative record file is available for review during normal business hours at:

[Repository Name] [Address and Phone #]	and	U.S.EPA - Region 2 [Address and Phone #]

Additional information is available at the following locations:

Verified sampling data and documentation	-	Contract laboratory, [Address and Phone #]
Guidance documents and technical literature	-	EPA-Region 2 [Address and Phone #]

Written comments on the administrative record should be sent to:

[Name], Office of Public Affairs
U.S. EPA - Region 2
[Address and Phone #]

APPENDIX J

MICROFORM APPROVAL MEMORANDUM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OCT 21 [redacted]

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Microfilming the Administrative Record

FROM: Edward J. Hanley, Director
Office of Information Resources Management

TO: Asa R. Frost, Jr., Director
OSWER Information Management Staff

In accordance with EPA Records Management Manual, Chapter 6, dated 7/13/84, I approve OSWER's request for an administrative record micrographic system for regional hazardous waste management programs.

The feasibility study prepared for OWPE, entitled "Assessment of the Suitability and Costs of Alternatives for the Administrative Record" (June 30, 1988), satisfactorily documents and justifies the need for converting the administrative record to microform. In particular, the requirement under SARA to make the administrative record publicly available at or near each hazardous waste site makes microform a cost-effective storage medium.

Please inform each regional hazardous waste program of my approval of OSWER's request and of the need to comply with the remaining provisions of Chapter 6 of the EPA Records Manual should the region proceed with implementing an administrative record micrographic system.

cc: SIRMOs, Region 1 - X

APPENDIX K

MODEL CERTIFICATION

IN THE [NAME OF COURT]

UNITED STATES OF AMERICA,	:	
	:	
Plaintiff,	:	
	:	
v.	:	
	:	
[NAMES OF DEFENDANTS]	:	
	:	
Defendants,	:	CIVIL ACTION NO. [number]
	:	
v.	:	
	:	
[NAMES OF THIRD PARTY DEFENDANTS]	:	
	:	
Third Party Defendants	:	

CERTIFICATION OF DOCUMENTS
COMPRISING THE ADMINISTRATIVE RECORD

The United States Environmental Protection Agency (EPA) hereby certifies that the attached documents constitute the administrative record for selection of response actions under the Comprehensive Environmental Response Compensation and Liability Act or 1980, as amended, for the [name of site] site in [City or County], [State].

By the United States Environmental Protection Agency:

In witness whereof I have subscribed my name this ____ day of _____, 19___ in _____[city]_____.

_____[signature]_____

_____[typed name]_____

APPENDIX L

PREAMBLE TO SUBPART I OF NCP

Subpart I—Administrative Record for Selection of Response Action

Subpart I of the NCP is entirely new. It implements CERCLA requirements concerning the establishment of an administrative record for selection of a response action. Section 113(k)(1) of CERCLA requires the establishment of "an administrative record upon which the President shall base the selection of a response action." Thus, today's rule requires the establishment of an administrative record that contains documents that form the basis for the selection of a CERCLA response action. In addition, section 113(k)(2) requires the promulgation of regulations establishing procedures for the participation of interested persons in the development of the administrative record.

These regulations regarding the administrative record include procedures for public participation. Because one purpose of the administrative record is to facilitate public involvement, procedures for

[illegible] closely related to the procedures governing public participation. General community relations provisions found in other parts of the proposed NCP are addressed elsewhere in this preamble.

The following sections discuss the major comments received on the proposed subpart I and EPA's responses.

Name. General comments.

Proposed rule. Subpart I details how the administrative record is assembled, maintained and made available to the public.

Response to comments. Comments on the administrative record regulations included the suggestion that the preamble provide a general statement differentiating between the administrative record and the information repository.

EPA agrees that while subpart I includes ample information on the requirements of the administrative record, a brief clarification would help to differentiate the record from the information repository.

The information repository includes a diverse group of documents that relate to a Superfund site and to the Superfund program in general, including documents on site activities, information about the site location, and background program and policy guides. EPA requires an information repository at all remedial action sites and any site where a removal action is likely to extend beyond 120 days. The purpose of the information repository is to allow open and convenient public access to documents explaining the actions taking place at a site.

The administrative record discussed in this subpart, by contrast, is the body of documents that forms the basis of the agency's selection of a particular response at a site, i.e., documents relevant to a response selection that the lead agency relies on, as well as relevant comments and information that the lead agency considers but may reject in the ultimate response selection decision. Thus, the record will include documents the lead and support agency generate, PRP and public comments, and technical and site-specific information. These documents occasionally overlap with those included in the information repository. The administrative record includes such information as site-specific data and comments, guidance documents and technical references used in the selection of the response action. The information repository may include guides to the Superfund process, background information, fact sheets, press releases, maps, and other information to aid public understanding of the response regardless of whether the information has bearing on the eventual response selection at that site.

One commenter felt that there was no mechanism for PRPs to participate in the development of the administrative record. In response, PRPs are given a chance to participate in the development of the administrative record throughout its compilation. EPA will make available information considered in selecting the response action to PRPs and others through the administrative record file. Interested persons may peruse the record file, submit information to be included in the administrative record file, or may comment on its contents during the ensuing public comment period.

Name: Section 300.800(a). Establishment of an administrative record. Section 300.810(a). Contents of the administrative record.

Proposed rule: Section 113(k)(1) of CERCLA states that the "President shall establish an administrative record upon which the President shall base the selection of a response action." EPA used similar language in § 300.800(a) of the proposed rule: "The lead agency shall establish an administrative record that contains the documents that *form the basis* for the selection of a response action." (Emphasis added.) Section 300.810(a) states that the "administrative record file for selection of a response action typically, but not in all cases, will contain the following types of documents: * * *," followed by an enumeration of those documents.

Response to comments: EPA's choice of the phrase "form the basis" in § 300.800(a) drew many comments. The comments expressed concern that the lead agency would have the discretion to include in the administrative record only those documents that support EPA's selected remedy.

These comments appear to be based on a misunderstanding of what the phrase "forms the basis of" means as it was used in the proposed rule. The statute defines the administrative record as the "record upon which the President shall base the selection of a response action." EPA's intent in defining the record as the file that "contains the documents that form the basis for the selection of a response action" was simply to reflect the statutory language. For example, an administrative record will contain the public comments submitted on the proposed action, even if the lead agency rejects the comments, because the lead agency is required to consider these comments and respond to significant comments in making a final decision. Thus, these comments also form the basis of the final response selection decision. EPA intends that the regulatory language defining the administrative record file embody general principles of administrative law concerning what documents are included in an "administrative record" for an agency decision. As a result, contrary to the suggestion of the commenters, the proposed definition of the administrative record does not mean that the record will contain only those documents supporting the selected response action.

A commenter asked that the phrase "but not in all cases" be deleted from § 300.810(a), or specify the cases where documents are excluded from the administrative record. EPA believes it is better not to attempt to list excluded documents in the NCP since EPA cannot possibly anticipate all the types of documents that will be generated for a site or for future sites, and which of these documents should be excluded except as generally described in § 300.810(b). It should be noted, for example, that although a health assessment done by ATSDR would normally be included in the administrative record, it would not be if the assessment was generated by ATSDR after the response is selected.

Others commented that certain documents should always be included in the administrative record. EPA believes that only a small group of documents will always be generated for every type of CERCLA site, since each site is unique. Other documents may or may not be generated or relevant to the selection of a particular response action at a site. EPA understands that a definitive list of required documents would assist parties in trying to assess the completeness of the administrative record, but such a list would not be practical. Different sites require different documents.

A related group of comments asked that the administrative record always include certain documents, including, specifically, "verified sampling data," draft and "predecisional" documents, and technical studies. One comment stated that "invalidated" sampling data and drafts must be part of the administrative record in some situations. Verified sampling data, i.e., data that have gone through the quality assurance and quality control process, will be included in the record when they have been used in the selection of a response action. "Invalidated" data, i.e., data which have been found to be incorrectly gathered, are not used by EPA in selecting the response action and should therefore not be included in the

DATA ELEMENT DEFINITIONS

The data elements of the Compendium database, as identified on the index are shown below

DATA ELEMENT	DEFINITION
Doc No	Unique four-digit number assigned to a document included in the Compendium according to category
Vol	Volume number of the binder in which the hard copy of the document is contained.
Title	Title of the document. Secondary Reference is identified following the title when a document relates to more than one category. The document itself is filed under the number series assigned to its primary category.
Date	The date the document was published by or released from the issuing office or entity.
Authors	Author(s) and affiliation(s). Also includes identification of the EPA Project Officer and issuing office, where applicable.
Status	Indicates the status of a document, either draft or final version.
Pages	Total number of printed pages of the document, including any attachments.
Tier	Tier 1 or Tier 2. Tier 1 documents are the core documents of the Compendium as listed in the pamphlet titled "Selected Technical Guidance for Superfund Projects," compiled by OERR. Tier 2 documents are all other documents included in the Compendium.
Attachments	Attachments to a document by complete or abbreviated title.
OSWER/EP[illegible]ber	EPA report or OSWER Directive System numbers, where applicable.

period of the administrative record regardless of their significance. When the lead agency considers comments submitted after the decision document has been signed, the "significance" of a comment has a bearing on whether it will be included in the administrative record, as specified in § 300.825(c). In addition, while EPA is under no legal obligation to place in the record or consider comments submitted prior to the comment period, EPA will generally, as a matter of policy, consider significant comments submitted prior to the comment period, place them into the record, and respond to them at an appropriate time. However, persons who wish to ensure that the comments they submitted prior to the comment period are included in the record must resubmit such comments during the comment period.

Final rule: Section 300.800(a) is promulgated as proposed.

Name: Section 300.800(b). Administrative record for federal facilities.

Proposed rule: Section 300.800(b) states that the lead agency for a federal facility, whether EPA, the U.S. Coast Guard, or any other federal agency, shall compile and maintain an administrative record for that facility. When federal agencies other than EPA are the lead at a federal facility site, they must furnish EPA with copies of the record index, in addition to other specified documents included in the record. The preamble to the proposed NCP discussion of § 300.800(b) (53 FR 51464) states that EPA will establish procedures for interested parties to participate in the administrative record development, and that EPA may furnish documents which the federal agency is required to place in the record.

Response to comments: One comment stated that EPA should be the custodian for administrative records for federal facilities, especially where the federal facility is a PRP, to avoid any conflict of interest in questions of liability or litigation. Another comment stated that the requirements in § 300.800(b) of the proposed rule would be burdensome to federal agencies in compiling and maintaining the record.

Executive Order 12580 grants federal agencies the authority to "establish the administrative record for selection of response actions for federal facilities under their jurisdiction, custody or control." To avoid the potential for conflicts of interest by federal agencies who are PRPs and in charge of compiling and maintaining the record, EPA retains record by supplementing the record and by requiring an accounting of what is in the record through a report of the indexed contents. EPA believes that these requirements represent sufficient Agency oversight to avoid potential conflicts of interest at federal facilities while ensuring that federal lead agencies remain responsible for compiling and maintaining their own administrative record.

EPA is making a minor editorial change in § 300.800(b)(1) to reflect that the federal agency compiles and maintains an administrative record *for* a facility, and not *at* a facility, since § 300.800(a) already provides that the record will be located at or near that facility.

Final rule: EPA is promulgating the rule as proposed, except for the following minor editorial change in the first sentence of § 300.800(b)(1): "If a federal agency other than EPA is the lead agency for a federal facility, the federal agency shall compile and maintain the administrative record for the selection of the response action for that facility in accordance with this subpart."

Name: Section 300.800(c). Administrative record for state-lead sites.

Proposed rule: Section 113(k) of CERCLA states that the President "shall establish an administrative record upon which the President shall base the selection of a response action." Section 300.800(c), entitled "Administrative record for state-lead sites," requires that states compile administrative records, for state-lead sites in accordance with the NCP.

Response to comments: Several commenters believe that the new administrative record procedures place an onerous burden on the state, and request that state requirements such as Open Records Acts should be allowed as a substitute for compliance with subpart I. Another commenter recommended that states be allowed to determine whether a complete administrative record is needed at or near the site when a site is state-lead. Where a response is taken under CERCLA at a state-lead site, EPA is ultimately responsible for the selection of a response action. Therefore, under section 113(k), EPA must establish an administrative record for the CERCLA response action at the site, and must, at a minimum, comply with subpart I. There may be many different ways of compiling administrative records and involving the public in the development of a lead agency's record. A lead agency may provide additional public involvement opportunities at a site in response to whether or not states should maintain a complete administrative record at or near the site. EPA believes that states must have such a record in order to meet CERCLA section 113(k) requirements.

EPA has included a minor editorial change in § 300.800(c) to reflect that a state compiles and maintains an administrative record for rather than at a given site.

Final rule: EPA is promulgating § 300.800(c) as proposed, except for a minor editorial change in the first sentence as follows: "If a state is the lead agency for a site, the state shall compile and maintain the administrative record for the selection of the response action *for* that site in accordance with this subpart."

Name: Sections 300.800(d) and 300.800(e). Applicability.

Proposed rule: Section 300.800(d) states that the provisions of subpart I apply to all remedial actions where the remedial investigation began after the promulgation of these rules, and for all removals where the action memorandum is signed after the promulgation of these rules. Section 300.800(d) also proposes that "[T]his subpart applies to all response actions taken under section 104 of CERCLA or sought, secured, or ordered administratively or judicially under section 106 of CERCLA." Section 300.800(e) states that the lead agency will apply subpart I to all response actions not included in § 300.800(d) "to the extent practicable."

Response to comments: One commenter argued that the applicable provisions of subpart I should be amended to require agencies to comply with the subpart for all sites where the remedy selection decision was made more than 60 days after proposal of the revised NCP for comment. Another comment stated that § 300.800(e) be revised to state that lead agencies must comply with subpart I in any future actions they take, and that all lead agency actions must comply with subpart I "to the maximum extent practicable."

In response, EPA will adhere as closely as possible to subpart I for sites where the remedial investigation began before these regulations are promulgated. EPA will not, however, require that these sites comply with requirements which, because of the

...be adhered to. For example, under the final rule the administrative record file must be available at the beginning of the remedial investigation phase. If these regulations are promulgated when a site is in the middle of the remedial investigation process, and the administrative record is not yet available, the lead agency cannot at this point comply with these regulations. Additionally, EPA believes that adding language to proposed NCP § 300.800(e) to state that lead agencies will comply with provisions of subpart I in any future action after promulgation of the new rule is unnecessary and redundant compliance will be legally required, and applicability to all future response actions is implicit in the rule. Likewise, insertion of the word "maximum" before the phrase "extent practicable" is unnecessary since it would give additional emphasis but would not substantively change the requirement or the meaning of the rule.

One comment agreed with EPA's interpretation that subpart I applies to all response actions "sought, secured or ordered administratively or judicially," but others disagreed. Several stated that the term "judicially" should be deleted from § 300.800(d) because they argue that response actions ordered judicially would receive *de novo* adjudication, instead of administrative record review. CERCLA section 113(j)(1) states: "In any judicial action under this Act, judicial review of any issues concerning the adequacy of any response action taken or ordered by the President shall be limited to the administrative record." Commenters contend that this section does not apply to injunctive actions under CERCLA section 106 because these are not actions "taken or ordered by the President." To the contrary, the selection of a response action is a "response action taken * * * by the President." Accordingly, section 113(j)(1) requires that judicial review of the response action selected by the agency is "limited to the administrative record." Further, section 113(j)(2) stipulates that, "In any judicial action under this chapter"—whether for injunctive relief, enforcement of an administrative order or recovery of response costs or damages—a party objecting to "the President's decision in selecting the response action" must demonstrate, "on the administrative record, that the decision was arbitrary or capricious or otherwise not in accordance with law."

EPA received several comments objecting to EPA's determination that judicial review of an endangerment ...as a matter of administrative and constitutional law a finding of imminent and substantial endangerment is not an issue concerning "the adequacy of the response action," as stated in CERCLA section 113(j), and therefore must receive *de novo* review by a court. A second comment requested that EPA state in the regulation that review of EPA's expenditures in the implementation of a remedy is *de novo*.

An assessment of endangerment at a site is a factor highly relevant to the selection of a response action, and is in fact part of the remedial investigation (RI) process central to the decision to select a response action. Therefore, the determination of endangerment (which will generally be included in the decision document) will be included in the administrative record for selection of a response action and should be reviewed as part of that record. (EPA notes that the term "endangerment assessment" document has been superseded by the term "risk assessment" document, and while assessments of endangerment at a site are still conducted during the RI, it is the "risk assessment" document that becomes part of the record.) In response to the comment that Agency expenditures on a response action should receive *de novo* review, EPA notes that this issue was not raised in the proposed NCP, and is therefore not addressed in the final rule.

Final rule: EPA is promulgating the rule as proposed.

Name: Section 300.805. Location of the administrative record file.

Proposed rule: Section 113(k)(1) of CERCLA states that "the administrative record shall be available to the public at or near the facility at issue. The President also may place duplicates of the administrative record at any other location." Section 300.805 of the proposed NCP provides five exemptions for information which need not be placed at or near the facility at issue: Sampling and testing data, guidance documents, publicly available technical literature, documents in the confidential portion of the file, and emergency removal actions lasting less than 30 days.

Response to comments: One commenter supported limiting the amount of information which must be located at or near the site, but many commenters stated that every document contributing to decision-making, including confidential documents which are part of the record, should be located at or near the site and agency ...asserted ... active publ... are contrar... comment st... administrat... places, at a ... near the sit... statutory re... record only ... issue." One ... acknowled... headquarte... keep the ac... Superfund ... Indian rese... requested t... regulatory l... records can ... other recor... and have th... paper recor...

Requiring ... documents ... both unnec... very costly. ... often kept a ... space is lim... accommod... for large, co... the data are ... which is loc... addition, re... technical lit... require cop... additional e... Superfund ... experience ... people view ... file at or ne... of the same ... documents ... file.

However ... specify that ... review a do... but not ava... near the site ... confidential, ... inclusion in the ... individual will ... Freedom of Inf... order to have t... available for r... site. EPA belie... documents ... request mer... CERCLA st... be "availat... addition, th... agencies fr... information ... waiting for ... encourage ... information ... practical, a... information ...

... on demand of the information is central to the response selection decision.

The confidential portion of the file need not be located at or near the site, and will not be available upon request either at the site or at the central location, since the information is not available for public review.

EPA believes that requiring that the record be located in two places is necessary to ensure both adequate public access to the record files and better lead-agency control over the record documents. The statutory requirement in CERCLA section 113(k)(1) states that the President may also place duplicates of the administrative record at any other location. This section clearly provides authority to maintain a second administrative record at a central location. Section 300.805 of the proposed NCP (53 FR 51513) reflects EPA's decision to make this statutory option a regulatory requirement. A centrally located record may offer easier access to interested parties located far from the response site.

EPA agrees with the commenter that housing the centrally located copy of the record at Indian tribal headquarters may be appropriate when a Superfund site is located at or near an Indian reservation. In the 1986 amendments to CERCLA, Indian tribes are accorded status equivalent to states, and can be designated lead agencies for response actions, in which case they would also be required to compile and maintain the administrative record at or near the site.

Finally, as EPA stated in the preamble to the proposed NCP, maintaining the administrative record on microfiche is already recognized as a legally valid and effective practice: "EPA may make the administrative record available to the public in microform. EPA may microform-copy documents that form the basis for the selection of a CERCLA response action in the regular course of business" (53 FR 51466). EPA agrees that this should be specified in the rule and has added § 300.805(e) accordingly, providing that the lead agency may make the record available in microform.

Final rule: Section 300.805 is modified as follows:

1. Section 300.805(b) is added to the rule as follows: "Where documents are placed in the central location but not in the file located at or near the site, such documents shall be added to the file located at or near the site upon request, except for documents included in paragraph (a)(4) of this section."

... rule as follows: The lead agency may make the administrative record file available to the public in microform."

3. The section has been renumbered accordingly.

Name: Sections 300.810(a)–(d). Documents not included in the administrative record file.

Proposed rule. Section 300.810(b) discusses which documents may be excluded from the administrative record. Section (c) discusses privileged information that is not included in the administrative record. Section 300.810(d) discusses confidential information that is placed in the confidential portion of the administrative record.

Response to comments: One commenter argued that § 300.810 should specifically include an exemption for classified documents related to national security. While the NCP currently does not address the potential conflict between national security concerns and the requirement to establish a publicly accessible administrative record, it is not clear that such an exemption could be adequately specified by rule or that an exemption would appropriately resolve this conflict. Section 121(j) provides a national security waiver by Presidential order of any requirements under CERCLA, which can be invoked in certain circumstances. Under this provision, protection of national security interests requires case-by-case review under section 121(j) and not a blanket exemption in the NCP. Nothing in the NCP limits the availability of this waiver.

Another comment received by EPA stated that the treatment of privileged and confidential documents in the records is unfair, because it denies access to documents that may be critical to the selection of a remedy. EPA has provided for a confidential portion of the administrative record where documents containing, for example, trade secrets of companies that have developed patented cleanup technologies being considered as a response-selection alternative can be kept confidential. To maintain a fair balance between the need for confidentiality and the public's right of review of the record, the lead agency must summarize or redact a document containing confidential information to make available to the greatest extent possible critical, factual information relevant to the selection of a response action in the nonconfidential portion of the record.

A final comment proposed that an index to the privileged documents should be included in the ... administrative record. EPA agrees believing that an index will let interested parties know in general terms what documents are included in the record without compromising the confidential nature of the information contained in those documents.

Finally, EPA is adding a sentence to § 300.810(a)(6) to clarify that the index can include a reference to a group of documents, if documents are customarily grouped. This will simplify EPA's task without compromising the integrity of the record.

Final rule. 1. EPA is promulgating §§ 300.810(b), (c) and (d) as proposed with a minor editorial change to clarify the first sentence of § 300.810(d).

2. The following language is added to § 300.810(a)(6) to provide for listing grouped documents in the administrative record file index: "If documents are customarily grouped together, as with sampling data chain of custody documents, they may be listed as a group in the index to the administrative record file."

Name: Section 300.815. Administrative record file for a remedial action.

Proposed rule: The term "administrative record file" is used throughout the proposed NCP. Section 300.815(a) proposes that the administrative record file be made available for public inspection at the beginning of the remedial investigation phase.

Response to comments: EPA received several comments objecting to the concept of an administrative record file. They objected because there is no statutory authority for establishing a file, and because they were concerned that the lead agency could edit the file, specifically by deleting public and PRP comments and information that do not support the response action ultimately chosen by EPA, and that these comments and information would not remain a part of the final administrative record.

The statute requires the President to establish an administrative record. Under subpart I of the NCP, the administrative record file is the mechanism for compiling, and will contain, the administrative record required by section 113(k). One reason EPA adopted the concept of an administrative record file is that EPA felt that it may be confusing or misleading to refer to an ongoing compilation of documents as an "administrative record" until the compilation is complete. Until the response action has been selected, there

[illegible] decision [illegible]s to avoid creating the impression that the record is complete at any time prior to the final selection decision. The set of documents is referred to as the administrative record file rather than the administrative record.

However this does not mean, as the comments appear to suggest, that the lead agency may edit the administrative record file in a manner that removes comments and technical data simply because they are not supportive of the final selection decision. Any comments and technical information placed in the record file for a proposed response action and relevant to the selection of that response action, whether in support of, or in opposition to, the selected response action, become part of the administrative record for the final response selection decision. Such materials will remain in the administrative record file, and will become part of the final administrative record. However, EPA believes that as a matter of law documents that are erroneously placed in the administrative record file (e.g., documents that have no relevance to the response selection or that pertain to an entirely different site) would not necessarily become part of the final administrative record.

EPA received additional comments stating that the administrative record file should be available before the beginning of the remedial investigation phase. These comments suggested that the file be available: When a site is entered into the CERCLIS data base; when the HRS score is calculated; when proposed for inclusion on the NPL; after the preliminary assessment report; and after the remedial site investigation.

EPA believes that the point at which a site is entered into the CERCLIS data base is too early to put any information which would be relevant to a selection of a response action into a record file because at this point there has been no site evaluation and therefore little factual information about the site upon which to base a response decision. Interested parties can already find any information on a site that would be included at the point of the HRS scoring and placement on the NPL in the NPL docket, which is publicly available. The preliminary assessment and remedial investigation stages of a response are premature for making the administrative record available; at these points there is little information relevant to response selection on which to comment or to review. Once the RI/FS work plan is approved, and the RI/FS study begins—including such activities as project [illegible] and analysis of alternatives—there is a coherent body of site-specific information with relevance to the response selection upon which to comment. EPA believes that the beginning of the RI/FS phase is the point in the process when it makes sense to start a publicly available record of information relevant to the response selection.

One comment suggested that interested persons would have no chance to comment on the formation of the RI/FS work plan. The comment suggested that the record file should be available before the RI/FS work plan is approved, e.g., with a draft work plan or statement of work. EPA disagrees. Approved work plans are often amended. An interested person may comment on the scope or formation of the work plan, and such comments can be taken into account by the lead agency and incorporated into a final or amended work plan. Such comments must be considered if submitted during the comment period on the proposed action.

Final rule: EPA is promulgating § 300.815(a) as proposed.

Name: Section 300.815, Administrative record file for a remedial action. Section 300.820(a), Administrative record file for a removal action.

Proposed rule: Subpart I requires that the administrative record for a remedial action be available for public review when the remedial investigation begins. Thereafter, relevant documents are placed in the record as generated or received. The proposed regulations also require that the lead agency publish a newspaper notice announcing the availability of the record files, and a second notice announcing that the proposed plan has been issued. A public comment period of at least 30 days is required on the proposed plan. Section 300.820(a) outlines the steps for the availability of the record and public comment for a non-time-critical removal action. EPA solicited comments on a proposal currently under consideration to require quarterly or semi-annual notification of record availability and the initiation of public comment in the Federal Register.

Response to comments: Some commenters suggested that the use of the Federal Register to announce the availability of the administrative record is too costly or of little or no benefit. Several commenters requested clarification on how and when the lead agency should respond to comments. Another stated that lead agencies should be encouraged—though not [illegible] before the formal [illegible] begins.

EPA chose not to require [illegible] availability of the administrative record in the Federal Register in this rulemaking because it is still unclear whether the benefits of this additional notice outweigh its costs. EPA may decide in the future to require this additional notice if it determines that such notice would improve notification.

EPA agrees with commenters that clarification is needed as to when the lead agency should respond to comments. We also agree that the lead agency should be encouraged to respond to comments submitted before the public comment period. EPA generally will consider any timely comments containing significant information even if they are not received during the formal comment period, and encourages other lead agencies to do so. EPA will strive to respond to comments it receives as early as possible, and to encourage other lead agencies to follow suit. However, any lead agency is required to consider and respond to only those comments submitted during a formal comment period. Any other comments are considered at the lead agency's discretion. EPA has revised the language of these sections to reflect the policy on consideration of public comments submitted prior to public comment periods.

One comment recommended that the regulations should provide how long the administrative record must be available, and suggested EPA coordinate efforts with the National Archives about retaining the record as a historical record. Another felt that materials were not always placed into the record in a timely manner, and that the record was not always available to the working public during evenings and weekends or accompanied by a copying machine. Similarly, one commenter felt that documents should be placed in the record when they are generated or in a prescribed timeframe of two weeks. Another asked that free copies of key documents be included in the record.

EPA believes that the length of time a record must be available at or near the site will be dependent on site-specific considerations such as ongoing activity, pending litigation and community interest. EPA also believes that difficulties sometimes encountered by the working public require resolution on a site-by-site basis and do not merit a change in the proposed NCP language. Special provisions may have to be made by the records coordinator, with the aid of other site team members, including

regional site manager to ensure that the record location chosen is convenient to the public and that copying facilities are made available. Using public libraries to house the record should promote better availability of the record during non-working hours and on weekends. In response to mandating deadlines for lead agencies to place documents into the administrative record file, Agency guidance already directs record compilers to place documents into the record file as soon as they are received. Agency policy additionally prescribes a suggested timeframe for placing documents in the record file. EPA believes that mandatory deadlines in the NCP would do little to increase the rate at which records are already compiled. The decision to place free copies of key documents in the record at or near the site will be a site-specific decision based on the level of community interest in these documents. Those who wish to make copies of key documents or any document contained in the administrative record file should already have access to copying facilities.

EPA received a comment requesting that it publish a joint notice of availability of the administrative record with a notice of availability of Technical Assistance Grants. Another comment stated that the removal site evaluation and engineering evaluation/cost analysis (EE/CA) must be included in the record for a non-time-critical removal action.

Publishing notice of the availability of the record in tandem with announcements of the availability of Technical Assistance Grants (TAGs) is a good idea where TAGs are available for a removal action. The TAGs, however, are generally designed to support citizen involvement in technical issues for sites undergoing remedial actions. The one-year, $2 million limitations on removals and the limited number of alternatives usually reviewed make further expense on a technical advisor less beneficial than it might be for a long-term remedial action. As for placing the removal site evaluation and EE/CA in the administrative record, EPA agrees that generally such documents would be part of the administrative record for the removal action.

Finally, EPA is making a minor change to the language of § 300.820(a)(4). EPA is substituting the term "decision document" in place of action memorandum to allow for situations where the agency's decision document

action memorandum.

Final rule: 1. The second sentences of §§ 300.815(b), 300.820(a)(2) and 300.820(b)(2) are revised to reflect the new language on responding to comments as follows: "The lead agency is encouraged to consider and respond, as appropriate, to significant comments that were submitted prior to the public comment period."

2. In § 300.820(a)(4), the term "decision document" is substituted for "action memorandum."

3. The remainder of § 300.820(a) is promulgated as proposed.

Name: Section 300.820(b), Administrative record file for a removal action—time-critical and emergency.

Proposed rule: Section 300.820(b) outlines steps for public participation and administrative record availability for time-critical and emergency removal responses (53 FR 51316): "Documents included in the administrative record file shall be made available for public inspection no later than 60 days after initiation of on-site removal activity," at which point notification of the availability of the record must be published. The lead agency then, as appropriate, will provide a public comment period of not less than 30 days on the selection of the response action.

Response to comments: Several comments suggested that public comment requirements under § 300.820(b) were unnecessary and burdensome, especially the requirement to publish a notice of the availability of the record. One comment argued that requiring public notification of both record availability and of a site's inclusion on the NPL was unnecessary and duplicative. Another comment stated that the requirements for public notification and public comment are not appropriate for all time-critical removal actions, and recommended that the administrative record be available for review only for those time-critical removal actions that do require public notice and comment. A related comment stated that the requirement to publish a notice of availability of the administrative record for all time-critical removal actions be eliminated in favor of making the record available but not requiring an advertisement or comment period, since some time-critical removal actions are completed before a public comment period could be held. Others asked that the public comment period become mandatory, or at least mandatory for removal activities not already completed at the time the record is made available. Another comment requested that the record become

initiation of on-site removal activity—because the current 60-day period prevented the consideration of any pre-work comments. A second comment supported the 60-day period. Finally, a commenter argued that it made little sense to make the record available after 60 days for an emergency response because the on-scene coordinator (OSC) report containing most of the response information isn't required to be completed until one year following the response action.

In general, the public participation requirements under § 300.820(b) are designed to preserve both the flexibility and discretion required by the lead agency in time-critical removal action situations as well as EPA's commitment to encouraging public participation and to keeping an affected community well-informed. EPA believes the notification and comment periods required in § 300.820(b) provide for both Agency flexibility and meaningful public involvement. The regulatory language stating that "The lead agency shall, as appropriate, provide a public comment period of not less than 30 days" provides the lead agency needed flexibility when the emergency nature of circumstances makes holding a comment period infeasible.

While EPA believes that it is necessary to announce the availability of the administrative record for time-critical and emergency removal actions as well as non-time-critical actions, EPA believes that requiring establishment of the administrative record and publishing a notice of its availability 30 days after initiating a removal action in all cases, instead of "no later than 60 days after initiating a removal action," as proposed, would be somewhat premature. It has been EPA's experience that it often takes 60 days to stabilize a site (i.e., those activities that help to reduce, retard or prevent the spread of a hazardous substance release and help to eliminate an immediate threat). EPA believes that the overriding task of emergency response teams during this critical period must be the undertaking of necessary stabilization, rather than administrative duties. Compiling and advertising the record before a site has become stabilized would divert emergency response teams from devoting their full attention to a response. EPA believes that such administrative procedures are better left for after site stabilization.

Public notice requirements for announcing the availability of the administrative record and for a site's inclusion on the NPL are not duplicative.

...ement decisions. Removal actions do not always take place at sites on the NPL, therefore, the notice requirements are obviously not duplicative for these removal actions. For remedial sites that are on the NPL, the administrative record need not be established for some time after listing on the NPL, so publishing a notice of the availability of the record would be essential to make the affected public cognizant of site progress and their opportunity for review of documents included in the record.

Lastly, the procedures specified in § 300.820(b) are applicable to an emergency removal that starts and finishes within 60 days. However, as provided in § 300.820(b)(2), a comment period is held only where the lead agency deems it appropriate. But because the administrative record is an avenue for public information as well as for public comment, EPA also believes that even if the action is completed before the record file is made available, it is still appropriate to make the record available to the public. There is also no inherent contradiction in the OSC report being available one year after completion of the response action while the administrative record becomes available 60 days after initiation of on-site activities. Since the OSC report is a summary of the site events and is not a document which is considered in the selection of response action, it is not generally included in the administrative record.

Final rule: EPA is promulgating § 300.820(b) as proposed, except that:

1. The second sentence of § 300.820(b)(2) is revised on responding to public comments as described above.
2. Section 300.820(b)(3) is revised consistent with § 300.820(a)(4); the term "action memorandum" is changed to "decision document."

Name: Section 300.825. Record requirements after decision document is signed.

Proposed rule: Section 300.825 describes situations where documents may be added to the administrative record after the decision document is signed. Documents may be added to a record in the following circumstances: When the document addresses a portion of the decision which the decision document does not address or reserves for later; when the response action changes and an explanation of significant differences or an amended decision document is issued; when the agency holds additional public comment periods after the decision is signed; and when the agency receives comments ...tion already in the record elsewhere, or the record which could not have been submitted during the public comment period which substantially support the need to significantly alter the response action (53 FR 51518). In addition, subpart E of the proposed NCP discusses ROD amendments and Explanations of Significant Differences. Explanations of Significant Differences may be used for significant changes which do not fundamentally change the remedy, and do not require public comment. ROD amendments must be used for fundamental changes, and require a public comment period.

Response to comments: One commenter asked that subpart I reflect the factors consistently applied by courts when determining whether the record should be supplemented, including such criteria as Agency reliance on factors not included in the record, an incomplete record, and strong evidence that EPA engaged in improper behavior or acted in bad faith. A related comment stated that since general principles of administrative law apply to administrative record restrictions and supplementing the record, language limiting supplementing the record should be deleted from the NCP. EPA believes that including specific tenets of administrative law governing supplementing of the record in the NCP itself is unnecessary. These tenets apply to record review of response actions whether or not they are included in the NCP. The requirements of § 300.825(c) do not supplant principles on supplementing administrative records.

Another comment recommended that EPA permit the record to be supplemented with any issue contested by a PRP, while granting an objective third party the ability to accept or reject record supplements. EPA already requires that any documents concerning remedy selection submitted by PRPs within the public comment period be included in the record. All significant evidence submitted after the decision document is complete is already included in the record, so long as it meets the requirements of § 300.825(c), is not included elsewhere in the record, could not have been submitted during the public comment period, and supports the need to significantly alter the response action. EPA believes these criteria are reasonable and do not require the use of a third-party arbitrator.

One comment stated that all PRP submissions must be placed in the record in order to protect a party's due-process right to be heard. EPA disagrees that all PRP submissions to the lead ...ntent of the plan ...ights. The process provided ...les—including the notice of availability of the proposed plan and the administrative record for review, the availability of all documents underlying the response selection decision for review throughout the decision-making process, the opportunity to comment on the proposed plan and all documents in the administrative record file, the requirement that the lead agency consider and respond to all significant PRP comments raised during the comment period, the notice of significant changes to the response selection, and the opportunity to submit, and requirement that the lead agency consider, any new significant information that may substantially support the need to significantly alter the response selection even after the selection decision—is sufficient to satisfy due process. Moreover, the opportunity provided for PRP and public involvement in response selection exceeds the minimum public participation requirements set forth by the statute. Placing a reasonable limit on the length of time in which comments must be submitted, and providing for case-by-case acceptance of late comments through § 300.825(c), does not infringe upon procedural rights of PRPs.

One commenter asked that the permissive "may" in § 300.825(e) be changed so there is no lead-agency discretion over whether to add to the administrative record documents submitted after the remedy selection, and stated that additional public comment periods as outlined in § 300.825(b) should not be only at EPA's option. A related comment stated that the multiple qualifiers in § 300.825(c), including the phrases "substantially support the need" and "significantly alter the response action" (53 FR 51518), grant EPA overly broad discretionary powers over what documents may be added to the record. The commenter suggests deleting the word "substantially," as well as stating that all comments, even those disregarded by EPA, should be included in the record for the purpose of judicial review. EPA disagrees that the word "may" in either § 300.825(a) or § 300.825(b) is too permissive. Section 300.825(b) of the proposal was simply intended to clarify the lead agency's implicit authority to hold additional public comment periods, in addition to those required under subpart E for ROD amendments, whenever the lead agency decides it would be appropriate. Because these additional comment periods are not

...permissive language simply reflects the lead agency's discretion with respect to these additional public involvement opportunities. Similarly, lead-agency discretion to add to the administrative record documents submitted after a decision document has been signed provides the lead agency the option to go beyond the minimum requirements for public participation outlined in the statute. In response to requests to delete the qualifiers in § 300.825(c), this language is intentionally designed to define carefully the circumstances in which EPA must consider comments submitted after the response action has been selected. This standard recognizes CERCLA's mandate to proceed expeditiously to implement selected response actions, but also recognizes that there will be certain instances in which significant new information warrants reconsideration of the selected response action. Section 300.825(c) is intended to provide a reasonable limit on what comments EPA must review or consider after a decision has been made.

Several commenters requested that PRPs not identified until after the close of the public comment period should be allowed an opportunity to comment on the record within 60 days of EPA's notification of potential liability. EPA makes significant efforts to involve PRPs as early in the process as possible. When PRPs are identified late in the process, they may provide EPA with comments at that time. EPA will consider comments which are submitted after the decision document is signed in accordance with the criteria of § 300.825(c). This is true no matter when the PRP is identified in the process. EPA believes that the current rule is sufficient for granting these late-identified PRPs the opportunity for submitting late comments for the record.

One commenter stated that new information that confirms or substantiates prior public comment should be made part of the record, even after a ROD is signed. EPA is not required by statute or regulation to consider these comments, although a lead agency may, and frequently does, consider post-ROD comments it considers to be significant—in which case both the comment and the lead agency's response are part of the record.

Finally, EPA is making a minor change to § 300.825(b) on additional public comment periods to clarify that, in addition to comments and responses to comments, documents supporting the request for an additional comment period, and any decision documents would be placed in the administrative ...ference in the proposal. A clarification is necessary to ensure consistency.

Final rule. EPA is promulgating § 300.825 as proposed except for an addition to the last sentence of section (b) as follows: "All additional comments submitted during such comment periods that are responsive to the request, and any response to these comments, along with documents supporting the request and any final decision with respect to the issue, shall be placed in the administrative record file."

Subpart J—Use of Dispersants and Other Chemicals

The following sections discuss comments received on subpart J and EPA's responses.

Name: Sections 300.900–300.920. General.

Existing rule: Section 300.81 described the purpose and applicability of existing subpart H (now subpart J), and § 300.82 defines the key terms used in the regulation. Section 300.83 provides that EPA shall maintain a schedule of dispersants and other chemical or biological products that may be authorized for use on oil discharges called the "NCP Product Schedule."

Section 300.84 sets forth the procedures by which an OSC may authorize the use of products listed on the NCP Product Schedule. The section provides that an OSC, with concurrence of the EPA representative to the RRT and the concurrence of the state(s) with jurisdiction over the navigable waters (as defined by the CWA) polluted by the oil discharge, may authorize the use of dispersants, surface collecting agents, and biological additives listed on the NCP Product Schedule.

This section also provides that if the OSC determines that the use of a dispersant, surface collecting agent, or biological additive is necessary to prevent or substantially reduce a hazard to human life, and there is insufficient time to obtain the needed concurrences, the OSC may unilaterally authorize the use of any product, including a product not on the NCP Product Schedule. In such instances, the OSC must inform the EPA RRT representative and the affected states of the use of a product as soon as possible and must obtain their concurrence for the continued use of the product once the threat to human life has subsided. This provision eliminates delays in potentially life-threatening situations, such as spills of highly flammable petroleum products in harbors or near inhabited areas. Although they will not be listed on the Schedule, this section also provides for ...agents on a case-by-case basis. The use of sinking agents is prohibited.

Section 300.84 explicitly encourages advance planning for the use of dispersants and other chemicals. The OSC is authorized to approve the use of dispersants and other chemicals without the concurrence of the EPA representative to the RRT and the affected states if these parties have previously approved a plan identifying the products that may be used and the particular circumstances under which their use is preauthorized.

Section 300.85 details the data that must be submitted before a dispersant, surface collecting agent, or biological additive may be placed on the NCP Product Schedule. Section 300.86 describes the procedures for placing a product on the Product Schedule and also sets forth requirements designed to avoid possible misrepresentation or misinterpretation of the meaning of the placement of a product on the Schedule, including the wording of a disclaimer to be used in product advertisements or technical literature referring to placement on the Product Schedule.

Appendix C details the methods and types of apparatus to be used in carrying out the revised standard dispersant effectiveness and aquatic toxicity tests. Appendix C also sets forth the format required for summary presentation of product test data.

Proposed rule: Proposed subpart J is very similar to subpart H and contains only minor revisions. Section numbers and references to other sections and subparts have been changed where appropriate. Technical changes and minor wording changes to improve clarity have also been made.

Definitions formerly presented in subpart H have been moved to subpart A, and a new definition has been added for miscellaneous oil spill control agents. Accordingly, a list of data requirements for miscellaneous spill control agents is proposed to be added to § 300.915. The definition for navigable waters is as defined in 40 CFR 110.1.

Section 300.910, which addressed "Authorization of use," was modified slightly in the proposed regulation to emphasize the importance of obtaining concurrence for the use of dispersants and other chemicals from the appropriate state representatives to the Regional Response Team (RRT) and the DOC/DOI natural resource trustees "as appropriate."

Response to comments:—1. *Involvement of DOC/DOI trustees.* Many commenters opposed the inclusion of the DOC/DOI trustees in

SUBPART I OF NCP

Subpart I—Administrative Record for Selection of Response Action

§ 300.800 Establishment of an administrative record.

(a) *General requirement.* The lead agency shall establish an administrative record that contains the documents that form the basis for the selection of a response action. The lead agency shall compile and maintain the administrative record in accordance with this subpart.

(b) *Administrative records for federal facilities.* (1) If a federal agency other than EPA is the lead agency for a federal facility, the federal agency shall compile and maintain the administrative record for the selection of the response action for that facility in accordance with this subpart. EPA may furnish documents which the federal agency shall place in the administrative record file to ensure that the administrative record includes all documents that form the basis for the selection of the response action.

(2) EPA or the U.S. Coast Guard shall compile and maintain the administrative record when it is the lead agency for a federal facility.

(3) If EPA is involved in the selection of the response action at a federal facility on the NPL, the federal agency acting as the lead agency shall provide EPA with a copy of the index of documents included in the administrative record file, the RI/FS workplan, the RI/FS released for public comment, the proposed plan, any public comments received on the RI/FS and proposed plan, and any other documents EPA may request on a case-by-case basis.

(c) *Administrative record for state-lead sites.* If a state is the lead agency for a site, the state shall compile and maintain the administrative record for the selection of the response action for that site in accordance with this subpart. EPA may require the state to place additional documents in the administrative record file to ensure that the administrative record includes all documents which form the basis for the selection of the response action. The state shall provide EPA with a copy of the index of documents included in the administrative record file, the RI/FS workplan, the RI/FS released for public comment, the proposed plan, any public comments received on the RI/FS and proposed plan, and any other documents EPA may request on a case-by-case basis.

(d) *Applicability.* This subpart applies to all response actions taken under section 106 of CERCLA or sought, secured, or ordered administratively or judicially under section 106 of CERCLA, as follows:

(1) Remedial actions where the remedial investigation commenced after the promulgation of these regulations; and

(2) Removal actions where the action memorandum is signed after the promulgation of these regulations.

(e) For those response actions not included in paragraph (d) of this section, the lead agency shall comply with this subpart to the extent practicable.

§ 300.805 Location of the administrative record file.

(a) The lead agency shall establish a docket at an office of the lead agency or other central location at which documents included in the administrative record file shall be located and a copy of the documents included in the administrative record file shall also be made available for public inspection at or near the site at issue, except as provided below:

(1) Sampling and testing data, quality control and quality assurance documentation, and chain of custody forms, need not be located at or near the site at issue or at the central location, provided that the index to the administrative record file indicates the location and availability of this information.

3. Publicly available technical literature not generated for the site at issue, such as engineering textbooks, articles from technical journals, and toxicological profiles, need not be located at or near the site at issue or at the central location, provided that the literature is listed in the index to the administrative record file or the literature is cited in a document in the record.

(4) Documents included in the confidential portion of the administrative record file shall be located only in the central location.

(5) The administrative record for a removal action where the release or threat of release requires that on-site removal activities be initiated within hours of the lead agency's determination that a removal is appropriate and on-site removal activities cease within 30 days of initiation, need be available for public inspection only at the central location.

(b) Where documents are placed in the central location but not in the file located at or near the site, such documents shall be added to the file located at or near the site upon request, except for documents included in paragraph (a)(4) of this section.

(c) The lead agency may make the administrative record file available to the public in microform.

§ 300.810 Contents of the administrative record file.

(a) *Contents.* The administrative record file for selection of a response action typically, but not in all cases, will contain the following types of documents:

(1) Documents containing factual information, data and analysis of the factual information, and data that may form a basis for the selection of a response action. Such documents may include verified sampling data, quality control and quality assurance documentation, chain of custody forms, site inspection reports, preliminary assessment and site evaluation reports, ATSDR health assessments, documents supporting the lead agency's determination of imminent and substantial endangerment, public health evaluations, and technical and [illegible] evaluations. In addition, for [illegible] cases, such documents may [illegible] roved workplans for the [illegible] Such documents may include guidance on conducting remedial investigations and feasibility studies, guidance on determining applicable or relevant and appropriate requirements, guidance on risk/exposure assessments, engineering handbooks, articles from technical journals, memoranda on the application of a specific regulation to a site, and memoranda on off-site disposal capacity;

(3) Documents received, published, or made available to the public under § 300.815 for remedial actions, or § 300.820 for removal actions. Such documents may include notice of availability of the administrative record file, community relations plan, proposed plan for remedial action, notices of public comment periods, public comments and information received by the lead agency, and responses to significant comments;

(4) Decision documents. Such documents may include action memoranda and records of decision;

(5) Enforcement orders. Such documents may include administrative orders and consent decrees; and

(6) An index of the documents included in the administrative record file. If documents are customarily grouped together, as with sampling data chain of custody documents, they may be listed as a group in the index to the administrative record file.

(b) *Documents not included in the administrative record file.* The lead agency is not required to include documents in the administrative record file which do not form a basis for the selection of the response action. Such documents include but are not limited to draft documents, internal memoranda, and day-to-day notes of staff unless such documents contain information that forms the basis of selection of the response action and the information is not included in any other document in the administrative record file.

(c) *Privileged documents.* Privileged documents shall not be included in the record file except as provided in paragraph (d) of this section or where such privilege is waived. Privileged documents include but are not limited to documents subject to the attorney-client, attorney work product, deliberative process, or other applicable privilege.

(d) *Confidential file.* If information which forms the basis for the selection [illegible] shall be placed in the public [illegible] portion of the administrative record file. The confidential or privileged document itself shall be placed in the confidential portion of the administrative record file. If information, such as confidential business information, cannot be summarized in a disclosable manner the information shall be placed only in the confidential portion of the administrative record file. All documents contained in the confidential portion of the administrative record file shall be listed in the index to the file.

§ 300.815 Administrative record file for a remedial action.

(a) The administrative record file for the selection of a remedial action shall be made available for public inspection at the commencement of the remedial investigation phase. At such time, the lead agency shall publish in a major local newspaper of general circulation a notice of the availability of the administrative record file.

(b) The lead agency shall provide a public comment period as specified in § 300.430(f)(3) so that interested persons may submit comments on the selection of the remedial action for inclusion in the administrative record file. The lead agency is encouraged to consider and respond as appropriate to significant comments that were submitted prior to the public comment period. A written response to significant comments submitted during the public comment period shall be included in the administrative record file.

(c) The lead agency shall comply with the public participation procedures required in § 300.430(f)(3) and shall document such compliance in the administrative record.

(d) Documents generated or received after the record of decision is signed shall be added to the administrative record file only as provided in § 300.825.

§ 300.820 Administrative record file for a removal action.

(a) If, based on the site evaluation, the lead agency determines that a removal action is appropriate and that a planning period of at least six months exists before on-site removal activities must be initiated:

(1) The administrative record file shall be made available for public inspection when the engineering evaluation/cost

analysis (EE/CA) is made available for public comment. At such time, the lead agency shall publish in a major local newspaper of general circulation a notice of the availability of the administrative record file.

(2) The lead agency shall provide a public comment period as specified in § 300.415 so that interested persons may submit comments on the selection of the removal action for inclusion in the administrative record file. The lead agency is encouraged to consider and respond, as appropriate, to significant comments that were submitted prior to the public comment period. A written response to significant comments submitted during the public comment period shall be included in the administrative record file.

(3) The lead agency shall comply with the public participation procedures of § 300.415(m) and shall document compliance with § 300.415(m)(3)(i) through (iii) in the administrative record file.

(4) Documents generated or received after the decision document is signed shall be added to the administrative record file only as provided in § 300.825.

(b) For all removal actions not included in paragraph (a) of this section:

(1) Documents included in the administrative record file shall be made available for public inspection no later than 60 days after initiation of on-site removal activity. At such time, the lead agency shall publish in a major local newspaper of general circulation a notice of availability of the administrative record file.

(2) The lead agency shall, as appropriate, provide a public comment period of not less than 30 days beginning at the time the administrative record file is made available to the public. The lead agency is encouraged to consider and respond, as appropriate, to significant comments that were submitted prior to the public comment period. A written response to significant comments submitted during the public comment period shall be included in the administrative record file.

(3) Documents generated or received after the decision document is signed shall be added to the administrative record file only as provided in § 300.825.

§ 300.825 Record requirements after the decision document is signed.

(a) The lead agency may add documents to the administrative record file after the decision document selecting the response action has been signed if:

(1) The documents concern a portion of a response action decision that the decision document does not address or reserves to be decided at a later date; or

(2) An explanation of significant differences required by § 300.435(c), or an amended decision document is issued, in which case, the explanation of significant differences or amended decision document and all documents that form the basis for the decision to modify the response action shall be added to the administrative record file.

(b) The lead agency may hold additional public comment periods or extend the time for the submission of public comment after a decision document has been signed on any issues concerning selection of the response action. Such comment shall be limited to the issues for which the lead agency has requested additional comment. All additional comments submitted during such comment periods that are responsive to the request, and any response to these comments, along with documents supporting the request and any final decision with respect to the issue, shall be placed in the administrative record file.

(c) The lead agency is required to consider comments submitted by interested persons after the close of the public comment period only to the extent that the comments contain significant information not contained elsewhere in the administrative record file which could not have been submitted during the public comment period and which substantially support the need to significantly alter the response action. All such comments and any responses thereto shall be placed in the administrative record file.

Subpart J—Use of Dispersants and Other Chemicals

§ 300.900 General.

(a) Section 311(c)(2)(G) of the Clean Water Act requires that EPA prepare a schedule of dispersants and other chemicals, if any, that may be used in carrying out the NCP. This subpart makes provisions for such a schedule.

(b) This subpart applies to the navigable waters of the United States and adjoining shorelines, the waters of the contiguous zone, and the high seas beyond the contiguous zone in connection with activities under the Outer Continental Shelf Lands Act, activities under the Deepwater Port Act of 1974, or activities that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States, including resources under the Magnuson Fishery Conservation and Management Act of 1976.

(c) This subpart applies to the use of any chemical agents or other additives, as defined in subpart A of this part, that may be used to remove or control oil discharges.

§ 300.905 NCP Product Schedule.

(a) *Oil Discharges.* (1) EPA shall maintain a schedule of dispersants and other chemical or biological products that may be authorized for use on oil discharges in accordance with the procedures set forth in § 300.910. This schedule, called the NCP Product Schedule, may be obtained from the Emergency Response Division (OS-210) U.S. Environmental Protection Agency, Washington, DC 20460. The telephone number is 1-202-382-2190.

(2) Products may be added to the NCP Product Schedule by the process specified in § 300.920.

(b) *Hazardous Substance Releases.* [Reserved].

§ 300.910 Authorization of use.

(a) The OSC, with the concurrence of the EPA representative to the RRT and, as appropriate, the concurrence of the RRT representatives from the states with jurisdiction over the navigable waters threatened by the release or discharge, and in consultation with the DOC and DOI natural resource trustees, when practicable, may authorize the use of dispersants, surface collecting agents, biological additives, or miscellaneous oil spill control agents on the oil discharge, provided that the dispersants, surface collecting agents, biological additives, or miscellaneous oil spill control agents are listed on the NCP Product Schedule.

(b) The OSC, with the concurrence of the EPA representative to the RRT and, as appropriate, the concurrence of the RRT representatives from the states with jurisdiction over the navigable waters threatened by the release or discharge, and in consultation with the DOC and DOI natural resource trustees, when practicable, may authorize the use of burning agents on a case-by-case basis.

(c) The OSC may authorize the use of any dispersant, surface collecting agent, other chemical agent, burning agent, biological additive, or miscellaneous oil spill control agent, including products not listed on the NCP Product Schedule, without obtaining the concurrence of the EPA representative to the RRT, the RRT representatives from the states with jurisdiction over the navigable waters threatened by the release or discharge, when, in the judgment of the OSC, the use of the product is necessary to prevent or substantially reduce a hazard to human life. The OSC is to inform the

Furthering the Use of Innovative Treatment Technologies in OSWER Programs

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 10 1991

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OSWER Directive 9380.0-17

MEMORANDUM

SUBJECT: Furthering the Use of Innovative Treatment Technologies in OSWER Programs

FROM: Don R. Clay
Assistant Administrator

TO: Director, Waste Management Division,
Regions I, IV, V, VII, and VIII
Director, Environmental Services Division,
Regions I, VI, and VII
Director, Emergency and Remedial Response Division,
Region II
Director, Hazardous Waste Management Division,
Regions III, VI and IX
Director, Hazardous Waste Division, Region X
Director, Water Management Division, Regions IV and X

I want to exercise further leadership in the use of innovative technologies--by creating additional incentives for affected groups such as potentially responsible parties, facility owners/operators, consulting engineers, technology vendors and the public and by using tools currently at our disposal. EPA and responsible parties or facility owners/operators, should be exploring and promoting more effective and less costly technologies to solve the considerable problems we face. Consulting engineers and new technology vendors are essential partners in this process as well.

While I believe our clean-up partners can and will promote the implementation of innovative technology, we need to inject a sense of responsible urgency to prevent the expenditure of dollars in pursuing less effective or more costly remedies. We have made some important progress to date, and now is the time to broaden our efforts and expand into additional program areas. Furthermore, we have a responsibility to provide technological leadership to the other major environmental clean-up programs society will be pursuing beyond those administered by OSWER. This leadership will not only improve the quality and efficiency of cleanups, but will also help make U.S. firms leaders in the international marketplace for waste treatment and site remediation.

Each of the affected groups sees some risk tied to an effort to "push on the envelope" of technology application. However, these risks are directly related to potential benefits -- both short-term at a particular site and long-term benefits which will accrue from knowledge gained by our experiences. Only if some of us are willing to work constructively with our uncertainty is there reason to expect significant progress toward more applications of technologies that are truly innovative.

I understand innovation requires a sense of creativity and may be accompanied by false starts, second attempts, intensively re-engineered solutions, and (despite best efforts) some equipment failures. I recognize that while most will agree with the need for new and better approaches, the inherent risks associated with early technology use serve as very serious impediments. The extensive review and criticism of our programs from both outside and inside the Agency may have tended to make us averse to unnecessary risks. It should be recognized that however well-designed and carefully planned our efforts may be, they may not meet contract specifications on many first attempts and may need refinement before routine application can be expected. Indeed, information gained from a first-time application that fails to perform as designed may be viewed as a form of success.

In addition, this definition of innovation needs to be recognized by EPA regional and headquarters managers. Remedial Project Managers (RPMs) and On-Scene Coordinators (OSCs) must have support from their managers if an innovative technology does not work as expected. The program should recognize and assume the risks inherent in using new technologies. The challenges these projects present will usually require great efforts from our most competent and experienced RPMs and OSCs. They should view these challenges as career opportunities rather than as career risks.

Innovative treatment technologies should be routinely considered as an option in engineering studies where treatment is appropriate. They should not be eliminated from consideration solely because of uncertainties in their performance and cost. These technologies may be found to be cost-effective, despite the fact the their costs are greater than conventional options, after consideration of potential benefits which could include increased protection, superior performance, and greater community acceptance. In addition, future sites will benefit by information gained from the field experience.

The attached directive is designed to increase field applications of innovative technologies for cleaning up contaminated sites. It also encourages expanded application of existing OSWER policies and emphasizes the value of existing support activities in this area. It is intended to sharpen the focus and level of attention by EPA staff and managers on their mission to provide technological leadership by implementing existing authorities under the Superfund, Resource Conservation and Recovery Act (RCRA), Underground Storage Tank (UST), and Oil

Pollution Act programs. Furthermore, this guidance is intended to integrate the continual search for improved remedies with the use of new technologies and to make this objective a permanent feature of EPA's clean-up programs. It is intended to create an atmosphere which recognizes that reasonable risk-taking, which is protective of human health and the environment, is necessary to achieve this end.

The statement consists of seven major initiatives. The first four initiatives concern the Superfund program. The first one addresses some impediments to the full-scale use of new equipment and encourages expedited funding of remedial design and construction projects. This initiative also provides contract flexibility in the start-up phase of selected remedial and removal actions to assist vendors in establishing a pattern of reliable operation in order to satisfy contract performance standards. The second initiative is intended to ensure that innovative alternatives are thoroughly evaluated for PRP-lead sites that are early in the planning process. This provision encourages EPA regions to fund treatability studies and engineering analyses for promising treatment technologies that might otherwise be considered unproven by the PRPs and too early in the development process. The third initiative provides a capability to rapidly evaluate the efficacy of a PRP-proposed innovative remedy that is offered in addition to the primary one approved in the Record of Decision (ROD). This provision entails direct technical support to evaluate innovative remedies, while moving the remediation process forward. The fourth initiative seeks to utilize the potential of the removal program for expanding our experience with the field application of new technologies. The directive clarifies OSWER's position that the removal program is an important and viable means for furthering the use of these treatment alternatives.

Another provision in the guidance is designed to encourage studies on the potential use of new technologies for RCRA corrective action. Regions should consider promoting the pilot testing of promising innovative technologies at a limited number of sites. In the past, land ban considerations have sometimes discouraged owners/operators or regions from pursuing such approaches. This guidance encourages the use of soil and debris treatability variances, where necessary, to allow innovative technology studies to proceed. This authority was recently delegated to the regions.

The sixth initiative recognizes unique opportunities presented by Federal facilities. We are exploring the potential use of these facilities for developing and applying new technologies, and regional offices are encouraged to work with Federal facility managers to further this objective.

The final provision encourages expanded use of the Federal Technology Transfer Act as an opportunity for joint technology assessments with industry. PRPs and owners/operators may sign cooperative agreements with EPA for services to support innovative

technology treatability or pilot studies. This procedure offers the prospect of non-adversarial engagement, outside the regulatory context, to allow the development of third-party data on remediation technologies.

I know there is a tension created by the desire to promote new technology developments within existing management tracking systems and program commitments and goals. I recognize that these goals may also be statutory in origin. Issues are certain to arise concerning the selection and use of new treatment technologies because of the rapid pace of development in this area. These issues cannot be resolved by this guidance and must be addressed through common sense and judgement on a case-by-case basis. There may be circumstances where program goals and commitments must be adjusted in order to achieve better clean-up solutions.

Although not specifically discussed in the attached guidance, EPA is also strongly committed to using innovative technologies in cleaning up oil spills under the Oil Pollution Act. We have embarked on an aggressive research program with other Federal agencies and the private sector to examine clean-up technologies and remediation techniques. We anticipate this work will lead to new and improved technologies in this area as well.

This directive is a call for your attention to exploring and exploiting opportunities for using innovative remediation technologies. It reflects my personal commitment and belief that we must invest the necessary resources and take the risks now to develop the technologies necessary to fulfill the long-term needs of our hazardous waste clean-up programs.

OSWER Directive
9380.0-17

GUIDANCE FOR INCREASING THE APPLICATION OF INNOVATIVE TREATMENT TECHNOLOGIES FOR CONTAMINATED SOIL AND GROUND WATER

INTRODUCTION

The Office of Solid Waste and Emergency Response (OSWER) is seeking to further the use of innovative treatment technologies in order to (1) better pursue its statutory and regulatory mandates to promote treatment to the maximum extent practicable, (2) speed the availability of performance data regarding newly developed treatment technologies to many constituencies facing mandates to clean contaminated sites, (3) broaden the inventory of accepted treatment-based solutions, and (4) increase the likelihood that remediation costs can be lowered in the near term through the demonstration of a larger number of engineering options to solve site remediation problems.

Both SARA and HSWA give us the framework to consider treatment as an essential element in our clean-up decisionmaking. Our record of accomplishment since SARA in selecting treatment technologies for Superfund remedial and removal projects is very good. However, our experience in implementing remedies is limited, and we face a large future obligation to cleanup sites in the RCRA and UST programs. For example, the large number of cleanups expected under the RCRA corrective action program may encompass up to 4,000 facilities and 64,000 waste management units.

Section 121(b) of CERCLA requires EPA to select remedies that "utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable" and to prefer remedial actions in which treatment "permanently and significantly reduces the volume, toxicity, or mobility of hazardous substances, pollutants, and contaminants as a principal element." This objective of permanent treatment-based remedies should be applied to RCRA and UST cleanups, within their respective legislative contexts. To achieve this goal, EPA must encourage new or innovative treatment technologies that are capable of treating contaminated soils/sludges and ground water more effectively, less expensively, and in a manner more acceptable to the public than existing conventional methods.

Innovative treatment technologies are newly developed technologies whose lack of sufficient full-scale application blocks routine consideration for site remediation. They may be new technologies, or may be available and in use for various industrial applications other than hazardous waste remediation. As such, innovative technologies are not part of standard engineering

practice or the competitive market process where available alternatives are routinely presented to the government and private sector. In functional terms, we define as "innovative" those treatment technologies for source control other than incineration and solidification/stabilization and pumping with conventional treatment for ground water. Innovative technologies inherently require extra effort to gather information and analyze options and extra engineering and financial risk in adapting them for specific site applications. In addition, there is extra uncertainty for people developing such solutions who work in organizations focused on performance outcomes with high levels of certainty and known costs.

Existing directives and guidance contain a number of references that encourage the consideration of innovative technologies. Policy for the Superfund program was originally outlined in a February 21, 1989 memorandum on "Advancing the Use of Treatment Technologies for Superfund Remedies." This memorandum reaffirmed the use of treatment technologies and summarized guidance documents and activities that supported the use of innovative technologies. It cited the need to search for new technologies that can improve performance and reduce cost. The importance of innovative technologies was further emphasized in the Superfund Management Review (90-Day Study) which primarily contained recommendations concerning technical support and research. More recently, the National Contingency Plan expects that treatment will be used for highly toxic and highly mobile waste and encourages the consideration of innovative methods.

As a result of SARA and this guidance, the selection of innovative technologies in the remedial program has increased dramatically. For the last three fiscal years, almost half of the selected treatment technologies for source control have been innovative. However, few full-scale innovative remedies have actually been implemented. As a result, we are not benefiting from actual clean-up experience or developing the equipment necessary to fulfill long-term program needs. This directive seeks to preserve our momentum with the selection of these technologies, to expedite their use in remedial actions,to expand the application of new technologies to other OSWER programs, and to realize the potential for development and technology application at Federal facilities.

This directive sets forth several initiatives and new procedures that will help provide incentives for broader use of innovative technology. Some of these initiatives are directed toward potential responsible parties and owners/operators, since they will be assuming a larger share of the remedial projects in the future. Other new initiatives are intended to remove impediments to the first-time use of new equipment. The directive also encourages wider application of available resources and tools. In addition, Attachment A highlights some important ongoing program efforts that deserve mentioning.

STATEMENT OF INTENT

Innovative treatment technologies are to be routinely considered as an option in feasibility studies for remedial sites and engineering evaluations for removals in the Superfund program, where treatment is appropriate commensurate with the National Contingency Plan (NCP) expectations. In addition, innovative treatment-based remedies should be pursued to the extent practicable for cleanup of RCRA and UST units that pose significant health and environmental threats similar to those at Superfund sites. EPA should exercise leadership with state UST programs to encourage similar approaches for underground tanks. Innovative technologies considered in the remedy selection process for Superfund, RCRA, and UST should not be eliminated solely on the grounds that an absence of full-scale experience or treatability study data makes their operational performance and cost less certain than other forms of remediation.

When assessing innovative technologies, it is important to fully account for their benefits. Despite the fact that their costs may be greater than conventional options, innovative technologies may be found to be cost-effective, after accounting for such factors as increased protection, superior performance, and greater community acceptance. In addition, experience gained from the application of these solutions will help realize their potential benefits at other sites with similar contaminants.

NEW INITIATIVES

This directive prescribes six new initiatives affecting Superfund and RCRA programs to encourage and further enable the field application of innovative technologies and their evaluation for potential further use. It also affirms the use of a relatively little-used opportunity for joint EPA work with PRPs and owners/operators to evaluate new technologies.

1. Superfund Innovative Technology Start-Up Initiative.

Designed for Fund-lead projects, this initiative consists of two efforts to assist the early application of new technology. First, we need to encourage the expedited funding of remedial design and construction projects that involve innovative treatment technologies. *OERR will be revising its Remedial Action funding priority-setting procedures to give more consideration to innovative technologies.* Earlier funding of these projects will help achieve the technology development goals of the Superfund program and will provide EPA with significant data to support future Records of Decisions (RODs).

Second, *this initiative provides contract flexibility in the start-up phase of selected remedial and removal actions to assist vendors in establishing a pattern of reliable operation that satisfies performance standards.* This is intended to address some of the impediments to the use of new full-scale equipment; it will support initial start-up and shake-down costs and modifications necessary to effectively evaluate whether the selected technology can perform to specifications prior to beginning actual remediation. In the remedial program, the Corps of Engineers (COE) will provide separate contract provisions that will aid in the commencement of operations of a unit process or integrated set of processes and will be available only for some proportion of the whole site remedy (e.g., processing the first 1,000 cu. yds. of a 30,000 cu. yd. site). Funds are <u>not</u> targeted at making the technology work at any cost, but to aid in clearly establishing the likely performance adequacy of the technology prior to the onset of the contracted clean-up effort. Contracting strategies are being considered to compensate vendors, regardless of whether they successfully achieve performance limits. Further implementation guidance for the remedial and removal programs will be issued later this year.

2. Dual Track RI/FS Initiative (Superfund)

This initiative is designed for PRP-lead sites that are early in the planning process where there is an opportunity to conduct engineering evaluations of remedies through the RI/FS process. This initiative is intended to ensure that innovative technologies are thoroughly evaluated and that needed treatability studies are conducted for potential remedies. This provision should help encourage EPA to take risks (when faced with reluctant PRPs) that it would not otherwise take by encouraging a comprehensive evaluation of technologies. *EPA regions may fund additional treatability studies and engineering analyses for promising treatment technologies that would otherwise be considered unproven and too early in the development process.* The purpose of this initiative is to encourage treatability studies to ensure that alternative remedies that the government believes may have merit are thoroughly evaluated and considered in the ROD. Data from EPA treatability studies and the evaluation of additional innovative technologies have intrinsic value to the Agency. Therefore, even if, in a particular case, there may be some doubt as to EPA's ability to cost recover for these additional studies (although, in general, the Agency would expect such costs to be subject to cost recovery), these studies should be pursued based on their value to the overall program.

3. Tandem ROD Evaluation Initiative (Superfund)

As in the previous initiative, this provision is primarily designed for PRP-lead sites, although it may also be applicable for some Fund-financed situations. *This program will provide a capability to rapidly evaluate the efficacy of a PRP-proposed innovative remedy that is offered in tandem with the primary one approved in the ROD.* Both of the remedies would be part of the proposed plan. Typically, such an alternate solution would be approved on a contingent basis in the ROD based on acceptable treatability studies, but it would need further development and pilot testing during the design period for the primary technology. Tandem RODs (or contingent RODS based on formal evaluation) are a decision vehicle designed to move the process of cleanup toward expeditious closure, while leaving room for PRPs with a decided interest in innovative technologies to pursue additional pilot tests to demonstrate an alternate approach that is both innovative and potentially cost-effective. This program is based on direct technical support for regional project management teams to help resolve technical issues posed by alternate approaches; it is designed to lift the burden from the regional project manager of bearing the risks of evaluating and trying something "new."

Technical support will be provided for focused evaluation of the PRP work so as to support expedient regional decisions about the acceptability of the alternate technology. The work will be carried out with and through the appropriate OSWER/ORD Technical Support Centers or the SITE demonstration program and will be conducted as a mini-evaluation of the proposed alternative so that the data will be available for future applications. When considering whether to proceed with a tandem ROD, regions should first consult with ORD concerning the scope of effort required for the evaluation.

In the case in which the secondary innovative technology is chosen for implementation (after the completion of pilot testing) but significant delays to the original schedule have occurred, the region may consider the engineering problems of making the full-scale unit operational in assessing stipulated penalties. That is, in limited cases, stipulated penalties should not be imposed if the delays are the unavoidable result of being innovative.

4. Removal Program Initiative (Superfund)

The removal program represents an important and viable means for expediting the field application of innovative technologies. The relatively small volumes frequently requiring response and streamlined contracting procedures provide an opportunity to complete clean-up projects and

provide documentation on lessons learned relatively quickly. Smaller waste volumes at some sites may also allow the use of pilot-scale technologies under some circumstances.

Although there have been more innovative projects actually constructed through the removal program than the remedial program, its potential has not been fully realized. This is because time constraints often favor excavation and off-site disposal or treatment and also because of the absence of clear legislated goals regarding the use of new technology. This subject was one of the issues addressed in a 1988 audit report by the Inspector General of Region IV removal sites. The report has had the undesirable effect of discouraging OSCs from using these technologies.

This directive is meant to clarify EPA's position on this issue. *It is OSWER policy to further the use of innovative technologies through the removal program.* This includes all actions, including time-critical actions, where feasible. These projects are expected to fulfill an important role in adding to our knowledge base on promising new technologies. Further guidance will be included in an upcoming document, "Administrative Guidance for Removal Program Use of Alternatives to Land Disposal" (OSWER Directive 9380.2-1), which provides guidelines promoting the use of alternatives to land disposal.

5. RCRA Corrective Action and Closure Innovative Technology Initiative

We are currently engaged in efforts to develop best demonstrated available technology (BDAT) treatment standards for contaminated soil and debris at CERCLA and RCRA corrective action and closure sites. These sites present unique treatment problems that were not generally considered in developing the current BDAT standards, which were based on data from the treatment of industrial process wastes. There is general agreement that wide scale use of incineration is not appropriate for soil and debris, and there is a need to explore alternative approaches. The current schedule is to promulgate a rule for debris in May 1992 and soil in April 1993. Prior to publication of these final rules, a site-specific treatability variance process (40 CFR 268.44 (h)) is available for contaminated soil and debris to establish an alternative standard for specified waste at individual sites. The variance process, along with applicable guidance treatment levels, is described in Superfund LDR Guide #6A (OSWER Directive: 9347.3-06FS, July 1989), and is intended to be used as an interim approach until final standards are established.

This initiative encourages the regions to use treatability variances at corrective action and closure sites

to conduct treatability or technology demonstration studies to gain additional information on the use of innovative treatment for contaminated soil and debris. The regions should select appropriate pilot-scale projects with cooperative owners/operators that can provide data on the capability of technologies and the treatability of different wastes. The information from this work should help to expedite corrective action and closures after the final BDAT rule is published for soils. It is also possible that early data from this effort could be available for consideration in the final rule.

Projects should be carefully selected to maximize the utility of data and likelihood of success. Regional corrective action staff and regional Superfund staff should communicate regarding the history of use of treatability variances in the Superfund program to identify site factors that require consideration when selecting an appropriate site.

Authority for issuing site-specific variances for contaminated soil and debris has recently been delegated to the regions (Decision Memorandum: "Delegation of Authority to Grant Treatability Variances," from Charles L. Grizzle to the Administrator, April 12, 1991). The facility and EPA, in collaboration with the state, can implement variances for on-site demonstrations through two mechanisms: temporary authorization under the Permit Modification Rule, or 3008(h) orders for interim-status facilities.

6. Demonstration Projects at Federal Facilities (Superfund, RCRA, and UST)

Federal facilities offer unique opportunities for both developing and applying innovative approaches to hazardous waste remediation. Desirable attributes include their often sizable areas and isolated locations, controlled access, numerous contamination problems, and increasingly active environmental restoration programs.

EPA headquarters is exploring the use of Federal facilities for both site-specific technology demonstrations and as test locations for evaluation of more widely applicable technologies. Equally important is the establishment of mechanisms to ensure timely sharing of information. *Regions are encouraged to suggest innovative approaches and to be receptive to proposals for innovation from Federal facility managers, e.g., by building timing and performance flexibility into compliance agreements in acknowledgment of current uncertainties associated with innovation.*

The Office of Federal Facilities Enforcement (OFFE) will work with the regions to identify locations for sponsoring potential test and evaluation activities. With assistance

from the Technology Innovation Office, OFFE will develop necessary policies and guidance to ensure that support for innovation is congruent with other program and environmental objectives.

7. Joint Technology Assessment Opportunities with Industry under the Federal Technology Transfer Act

During the clean-up planning and implementation process, PRPs or owners/operators should be reminded of the opportunity to engage EPA in evaluation studies and other arrangements at their expense to determine whether innovative technology concepts would be operative in the situation they are facing or other similar situations. Under the Federal Technology Transfer Act (FTTA) of 1986 and Executive Order 12591, cooperative agreements related to research, development, and technology transfer can be expeditiously executed (i.e., in less than 60 days) between industry and government. In this case, such arrangements would allow the PRP to reimburse EPA for facilities, support services, and staff time spent in joint evaluation of early technology treatability or pilot studies. As projects progress into the later planning stages, careful judgement needs to be exercised to avoid new work that will result in unproductive delay, while remaining sensitive to important new technology developments.

Since this program is conducted in the research and development arena, it offers the prospects of non-adversarial engagement, outside the regulatory context, to allow the joint development of credible data about remediation technologies. This opportunity should be especially advantageous to (1) PRPs and owners/operators capable of early planning for technology options at a few sites and desirous of early EPA input, as well as (2) PRPs and owners/operators faced with a number of similar waste sites in the future-- under Superfund, RCRA Corrective Action, and the UST program--who want to develop more uniform, cost-effective technology proposals for such sites. Basic information about the FTTA is described further in Attachment B.

IMPLEMENTATION

The first six initiatives involve field testing new technologies that may benefit by technical assistance from the Office of Research and Development (ORD). ORD represents an objective third party that can be easily accessed through the existing OSWER/ORD support structure. This structure consists of five laboratories, which constitute the Technical Support Centers (both for Superfund and newly established for RCRA), the Superfund Technical Assistance Response Team (START) program, the Bioremediation Field Initiative, and the Superfund Innovative

Technology Evaluation (SITE) program. Several of these programs are discussed later in this memorandum, and Regional offices are encouraged to use them. OSWER has asked ORD to give priority to requests for technical assistance under this directive, and we will use our existing priority-setting systems to accommodate needs articulated pursuant to this directive.

BROADER APPLICATION OF AVAILABLE RESOURCES AND TOOLS

In addition to these new initiatives, the application of other important existing policies and efforts should be broadened.

o Furthering Innovative Remediation at Leaking UST Sites

State and local UST programs have identified 100,000 confirmed leaks, and this number may triple in the next several years. The majority of sites currently undergoing corrective action are being remediated through pumping and treating ground water and excavation and off-site disposal of contaminated soil. The national UST program has established corrective action streamlining as one of its top priorities. The program's strategy includes promoting the use of improved technologies that will produce better and faster cleanups at lower cost than traditional methods.

The UST/LUST program has worked closely with the Office of Research and Development and private companies to foster the development of innovative site assessment and cleanup technologies, such as field measurement techniques, soil vapor surveying, vacuum-enhanced free-product recovery, active and passive bioremediation, and vacuum extraction. These technologies now must be moved from demonstrations to routine use in the field. *Regional offices should increase their efforts to make state and local managers and staff, as well as cleanup consultants and contractors, more familiar with these non-traditional but proven technologies. Headquarters will continue fostering the development of even newer tools and techniques and should increase its support of regional efforts to achieve broader use of improved technologies.*

o Further Enabling State Innovative Technology Leadership

First, *the CERCLA core funding program provides an opportunity to assist states in establishing innovative technology advocates.* Core program cooperative agreements help support state response programs to ensure involvement in CERCLA implementation activities. This may be a vehicle for promoting new technologies where the state and region agree it is appropriate. This approach is currently being utilized with success in Minnesota. The advocates can serve an important role of promoting the development and use of

innovative technologies in the state CERCLA programs, with obvious spinoff benefits for their RCRA and UST programs. Some states have shown a strong interest in new technologies, and we should do everything possible to support their efforts and encourage initiatives at the state level.

Second, last year's RCRA Implementation Study highlighted the opportunity to empower a few states interested in furthering technology development. *Regions should be open and encouraging of state applications for authority for RCRA R&D permitting, permit modification, treatability exclusion, and Subpart X permitting.* States not authorized for RD&D permitting may consider a cooperative effort with the region for issuing these permits. The RD&D activities could involve treatability studies for a site or activities to help develop and commercialize a technology. This package of authorities will allow new technology developers and users to flourish in selected states.

In addition to the Federal Facilities Initiative above, states may want to work directly with Federal facilities in developing pilot sites for innovative technology. These activities do not have to be limited to final remedies, but may also include treatability tests, site stabilization, and demonstrations. Federal facilities under both CERCLA and RCRA authority may be particularly well suited for integrating clean-up activities with innovative treatment technologies.

- Model RI/FS Work Plan and PRP Notice Letter Demand for Innovative Options

  Some regions have issued special notices containing a Statement of Work and administrative order language requiring the responsible party to evaluate the use of innovative technologies at a particular site. This procedure should receive broader use at Superfund sites where alternatives for remediation are being considered for analysis in the RI/FS and where prerequisite treatability studies are required. This requirement in the special or general notice letters will help facilitate the development and use of innovative treatment technologies by the private sector. Specific language for this approach could be developed from OWPE's guidance document titled "Model Statement of Work for RI/FSs conducted by PRPs" (OSWER Directive 9835.8).

- Advocacy and Funding of Treatability Studies

  Superfund program policy (Directive 9380.3-02FS, Treatability Studies Under CERCLA: An Overview, December 1989) requires that treatability studies should be conducted to generate data needed to support the implementation of treatment technologies. For sites where an innovative

technology is being considered, these studies will help provide performance information that should assist in the engineering evaluations. Funds are budgeted annually in the SCAP based on expected need for conducting treatability studies. Data and reports from these studies should be forwarded to Glen Shaul at ORD's Risk Reduction Engineering Lab. The appropriate protocol and format for these reports can be found in the "Guide for Conducting Treatability Studies Under CERCLA" (EPA/540/2-89/058). Information contained in these reports will be available through the Alternative Treatment Technology Information Center (ATTIC).

Every effort should be made to conduct or, as appropriate, to evaluate the PRP's treatability study. In planning for this activity, oversight funding should be requested through the SCAP budget process. Oversight of PRP-lead treatability studies may be funded through the enforcement budget. In situations where PRPs recommend use of innovative treatment technologies at a site, but where treatability study data are insufficient, EPA policy allows the Agency to fund and conduct technology-specific treatability studies. The costs associated with the conduct of these treatability studies are recoverable under Section 107 of CERCLA.

o Tracking and Expediting SITE Demonstrations

A recent Inspector General audit of the SITE program focused on delays in matching Superfund sites with technologies. This has contributed to overall delays in completing demonstration projects and technology assessments. In response, *OSWER is encouraging greater participation in the SITE program* and will begin tracking regional site nominations as a reporting measure in STARS (see "Implementation of an OSWER Recommendation from the Office of Inspector General Audit Report on the Superfund Innovative Technology Evaluation (SITE) Program"--memorandum dated January 2, 1991). OSWER will support the designation of additional regional FTE for support of SITE program demonstrations and recognizes the potential for time delays in RI/FSs at sites with demonstration projects. ORD management has also agreed that SITE demonstration projects must be more responsive to regional needs for treatability data.

Recently, ORD completed an internal management review of the SITE program. The purpose of the review was to evaluate the program's impact on Superfund remediation activities and to identify any changes needed to improve the program. Several changes already adopted are directed at making the program a more integral component of regional office Superfund site activities. *The SITE program will make the design of technology evaluations sufficiently flexible to meet the*

regional offices' needs for treatability studies before remedy selection is made. SITE demonstration data will be presented to the RPM or OSC on a fast turnaround basis so that the data are available to be factored into the remedy selection decision. The SITE program will take advantage of ongoing remediation activities as a source of technology evaluations and technology transfer where possible. In addition, the program will use sites that are being evaluated under the START program and projects that are identified pursuant to this directive, as potential test locations for SITE evaluations.

ATTACHMENT A
Existing Program Efforts to Further Innovative Technologies

OSWER has several other ongoing efforts directed toward furthering the application of innovative alternatives through the acquisition and efficient use of data, reduction of technical uncertainties, and elimination of contracting impediments. These programs represent important resources that should continue to be used. The first two resources, that are of interest to the UST, RCRA, and Superfund Programs, concern the collection and use of data:

o Technical Support and Information Management

Readily accessible information on innovative technologies is a major priority of the Superfund program. This objective is being met through the utilization of on-line computer systems, direct expert technical assistance, and support for field activities to evaluate the performance of a given technology. Currently, EPA maintains several computer databases that may be accessed for information on treatment technologies. These databases include the Alternative Treatment Technology Information Center (ATTIC), the OSWER Bulletin Board (CLU-IN), the ROD Database, the Hazardous Waste Collection Database, and the Computerized On-line Information System (COLIS). These systems include information on the application of innovative technologies and may be used to aid networking among OSCs and RPMs. Due to the general shortage of cost and performance data on new technologies, use of these databases is important to provide the most current information available.

Technical assistance is available to Superfund and RCRA staff through ORD's Technical Support Centers and the Environmental Response Branch, OERR. Part of this effort involves networking among project managers through the engineering and ground water forums. In addition, as part of an initiative to provide direct technical support to OSCs and RPMs, the Superfund Technical Assistance Response Team(START) has been established to help evaluate the potential use of technologies. Currently, technical experts from EPA's Office of Research and Development are providing long-term consultation and support at 35 sites with complex treatment technologies issues. In addition, ORD is assisting the Superfund program in developing protocols for conducting treatability studies, so technologies can be evaluated using standardized parameters. ORD is also providing a staff person in each Regional office to serve as a liaison with their engineers and scientists.

- **Bioremediation Field Initiative**

  Begun in the 4th quarter of FY 90, this program is intended to provide more real-time information on the field application of biotechnology for treating hazardous waste. Currently, over 131 CERCLA, RCRA, and UST sites have been identified as considering, planning, or operating full-scale biotreatment systems. The major focus of this initiative is to furnish direct support in evaluating full-scale cleanup operations and technical assistance for conducting treatability and pilot-scale studies. Several sites have already been selected for participation in the program. Performance, cost, and reliability information generated from these bioremediation studies will be used to further develop a treatability study database that will be made available to regional staff.

- **Procurements for Innovative Technologies**

  Over the past several months, OSWER has been working with the Procurement and Contracts Management Division (PCMD) to address particular issues associated with the procurement of innovative technologies. As these issues are resolved, regions are encouraged to use the new provisions to the extent possible. The first issue concerns the *contracting for treatability studies*. Under the Federal Acquisition Regulations (FAR), firms are restricted from performing both the design and construction of a project. *EPA has determined that this prohibition applies only to the prime contractor responsible for the overall design, and not to subcontractors performing treatability studies*. The EPA Acquisition Regulations are being amended to clarify this point and to allow possible exceptions for contractors to work on both design and construction on a case-by-case basis.

  A second issue concerns *constraints on contractors working for both EPA and later working for a potentially responsible party (PRP) at the same site*. This constraint was originally imposed on contractors to avoid conflicts of interest. Innovative technology is a special exception within these general guidelines. Rather than automatically assuming a contractor should first be precluded from working for a PRP after working for EPA, it is EPA's intent and commitment to first permit contractors and/or subcontractors performing evaluations of innovative technologies for the Agency to later work for the PRPs in as many instances as possible. Only in rare instances would EPA envision not permitting such work to be performed for the PRP. EPA and PRPs often work together in the spirit of cooperation and site work may be divided accordingly. *The Agency has therefore determined not to preclude PRPs from using EPA contractors to perform such work as treatability studies*. In addition, we want to ensure that

vendors who perform treatability studies for EPA may also remain eligible to support PRP-lead design or construction work. This position is reflected in the final conflict of interest provisions for Superfund contracts which are currently being prepared and were initially published in the Federal Register as a proposed rule.

ATTACHMENT B

United States Environmental Protection Agency | Office of Research and Development Washington, DC 20460 | EPA/600/9-90/050 November 1990

Opportunities for Cooperative R&D with EPA: The Federal Technology Transfer Act

Both the U.S. Environmental Protection Agency (EPA) and private industry seek new, cost-effective technologies to prevent and control pollution. In the past, however, legal and institutional barriers have prevented government and industry from collaborating in developing and marketing these technologies. Also, the efforts of many companies to develop new technologies have been stymied by a lack of resources, such as scientific experts in particular fields or highly specialized equipment. The Federal Technology Transfer Act of 1986 (FTTA) removes some of these barriers to the development of commercial pollution control technologies.

The FTTA makes possible cooperative research and development agreements (CRDAs) between federal laboratories, industry, and academic institutions. CRDAs set forth the terms of government/industry collaboration to develop and commercialize new technologies. According to the Act, these agreements will foster the technological and industrial innovation that is "central to the economic, environmental, and social well-being of citizens of the United States."

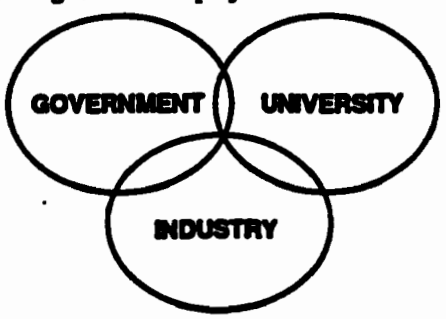
What Can Industry Gain from Signing a CRDA with EPA?

Access to High-Quality Science

EPA's 12 research laboratories employ over 600 scientists and engineers. Many of these laboratories combine world-class expertise with state-of-the-art equipment and fully permitted testing facilities. Certain types of environmental research, such as development of innovative technologies for treating hazardous wastes, require the collaboration of experts in many different fields. This type of interaction is easily adapted at EPA laboratories, because they are inter-disciplinary in nature.

Expanded Communication Channels Between Government and the Private Sector

CRDAs build working relationships between the government and the private sector. All parties benefit from the different perspectives that government and private sector scientists bring to an R&D project.



Exclusive Agreements for Developing New Technologies

Until recently, industry had little incentive to cooperate with federal laboratories because any technologies developed during joint research remained in the public domain for all to use. Now, under some CRDAs, companies are given exclusive rights to market and commercialize new technologies that result from the collaboration.

Licensing and Research Agreements: How Do They Work?

The procedure for setting up a cooperative R&D or licensing agreement under the FTTA is designed to encourage collaboration between industry and EPA laboratories. For industry, the key advantage of the process is the speed and ease with which the agreements can be negotiated and signed. CRDAs are not subject to federal contracting or grant requirements. In addition, each laboratory director has the authority to establish CRDAs for that particular lab, and this decentralization of the decision-making process reduces the administrative procedures involved.

Another important advantage is that CRDAs are flexible enough to fit the goals of many different sizes and types of companies. For example, under the FTTA, a company can support applied research at an EPA laboratory while reserving first rights to involvement in any technology that results. Or, if the scientific mechanism that makes a company's product work is unknown, the company can cooperate with an EPA laboratory to identify this mechanism. A company can also share space and equipment with EPA in a combined effort to develop an innovative technology.

Interested?

Several companies already have CRDAs with EPA, including Exxon, Shell Oil, Ford Motor Company, Dow-Corning, Hewlett-Packard, and CH_2M Hill, as well as several small businesses.

For further information about this program please write to:

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