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SUPERFUND REMOVAL PROCEDURES

GUIDANCE ON THE CONSIDERATION OF ARARS DURING REMOVAL ACTIONS

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

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NOTICE

The policies and procedures set forth here are intended solely as 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 this guidance or act at variance with it, based on an analysis of specific site circumstances. The Agency also reserves the right to change this guidance at any time without public notice.

This document is part of a ten-volume series of guidance documents collectively titled the Superfund Removal Procedures. These stand-alone volumes update and replace OSWER Directive 9360.0-3B, the single-volume Superfund Removal Procedures manual issued in February 1988.

Each volume in the series is dedicated to a particular aspect of the removal process and includes a volume-specific Table of Contents, Reference List, and Key Words Index. The series comprises the following nine procedural volumes:

The Removal Response Decision: Site Discovery to Response Decision

Action Memorandum Guidance

Response Management: Removal Action Start-up to Close-out

Removal Enforcement Guidance for On-Scene Coordinators

Public Participation Guidance for On-Scene Coordinators: Community Relations and the Administrative Record

Removal Response Reporting

Special Circumstances

Guidance on the Consideration of ARARs During Removal Actions

State Participation.

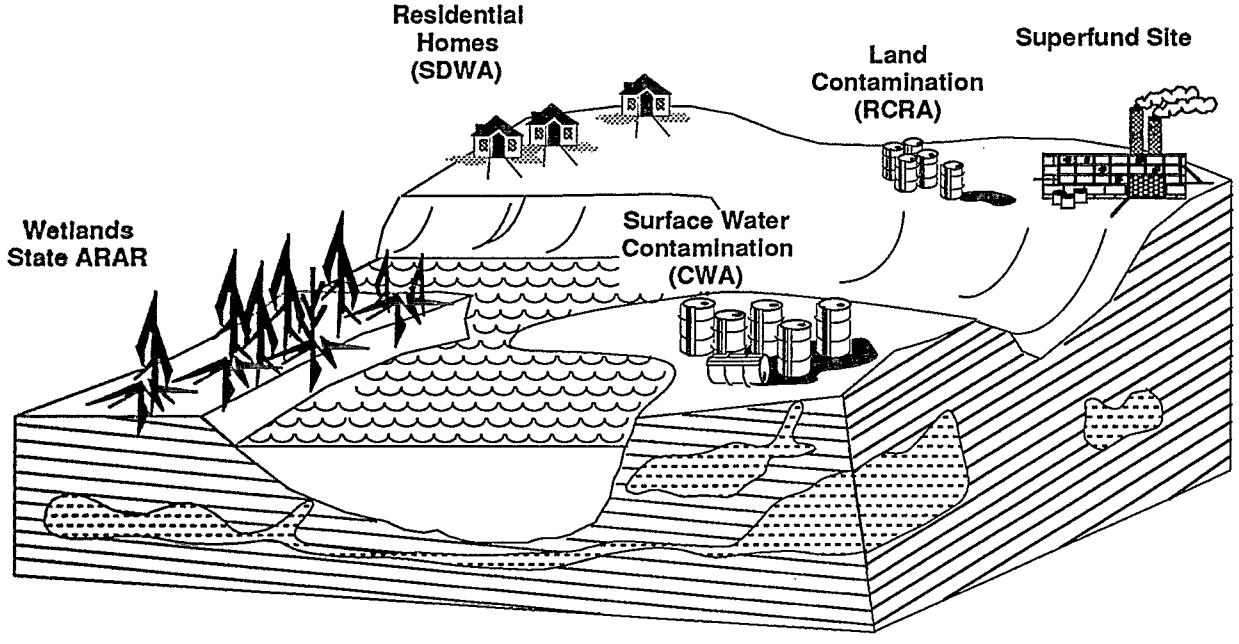
In addition, the series includes an Overview volume, containing a comprehensive Table of Contents, List of Exhibits, Key Word Index, List of Acronyms, and Glossary, for use as a quick reference.

This document provides an overview of the procedures for identifying and evaluating Applicable or Relevant and Appropriate Requirements (ARARs) and when the procedures should be followed in the removal process. It also describes the steps involved in consideration of ARARs during removal actions, such as identifying Federal ARARs; identifying and evaluating State ARARs (including key communications with State officials); determining the extent to which compliance with a requirement is practicable (focusing on the two factors included in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) for determining practicability and on Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, statutory waivers); and documenting ARARs analysis (including information to be included in the Action Memorandum).

"Appendix A. References" provides a comprehensive list of supporting guidance documents that may be consulted for additional information on relevant topics. Bracketed numbers [#] appear throughout the text to indicate specific references in Appendix A which lists additional guidance on particular topics. Consult the reference documents for a more detailed explanation of ARARs' policies and procedures. In addition, an index of the key words used in this document appears in Appendix B.

CERCLA does not require removal actions to comply with ARARs of other environmental statutes. However, the NCP requires on-site CERCLA removal actions to identify and comply with Federal and State ARARs to the extent practicable, considering the urgency of the situation, and the scope of the removal action to be taken.

Regardless of the nature of the removal action, On-Scene Coordinators (OSCs) should strive to comply with those ARARs that are most crucial to the proper stabilization of the site and the protection of public health and the environment. In the event that OSCs determine that compliance with an ARAR is not practicable, however, removal actions must still be conducted in a manner that prevents, minimizes, or mitigates damage to public health, welfare, and the environment.



Consideration of ARARs is an essential part of meeting NCP requirements.

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INTRODUCTION

OSCs should select removal actions that meet the Applicable or Relevant and Appropriate Requirements (ARARs) of Federal and State environmental laws. This guidance presents information, recommendations, and examples to aid OSCs in identifying potential Federal and State ARARs, determining the extent to which compliance with ARARs is practicable, and documenting ARAR evaluations.[1] This guidance also may be used by potentially responsible parties (PRPs) when potential ARARs are being assembled by the PRP. In these cases, the PRP is responsible for requesting the potential Federal and State ARARs from EPA and States respectively. The lead agency will determine the actual ARARs. Further information concerning PRP involvement in removal actions may be obtained from the Removal Enforcement Guidance for On-Scene Coordinators and the removal chapter of the Enforcement Project Management Handbook [4].[2]

In accordance with Section 300.415(i) of the NCP, on-site removal actions conducted under CERCLA are required to attain ARARs to the extent practicable, considering the exigencies of the situation. Off-site removal activities need only comply with all applicable Federal and State laws, unless there is an emergency. According to the CERCLA off-site policy, hazardous substances that are wastes from CERCLA removal actions may be transferred *off-site* only to facilities that: 1) are operating in compliance with applicable Federal law and applicable State requirements; and 2) have no releases of hazardous substances that are uncontrolled and are deemed "relevant." As shown in Exhibit 1, there are on- and off-site ARARs which may or may not be applicable or relevant and appropriate to a particular removal action.

Definition of ARARs

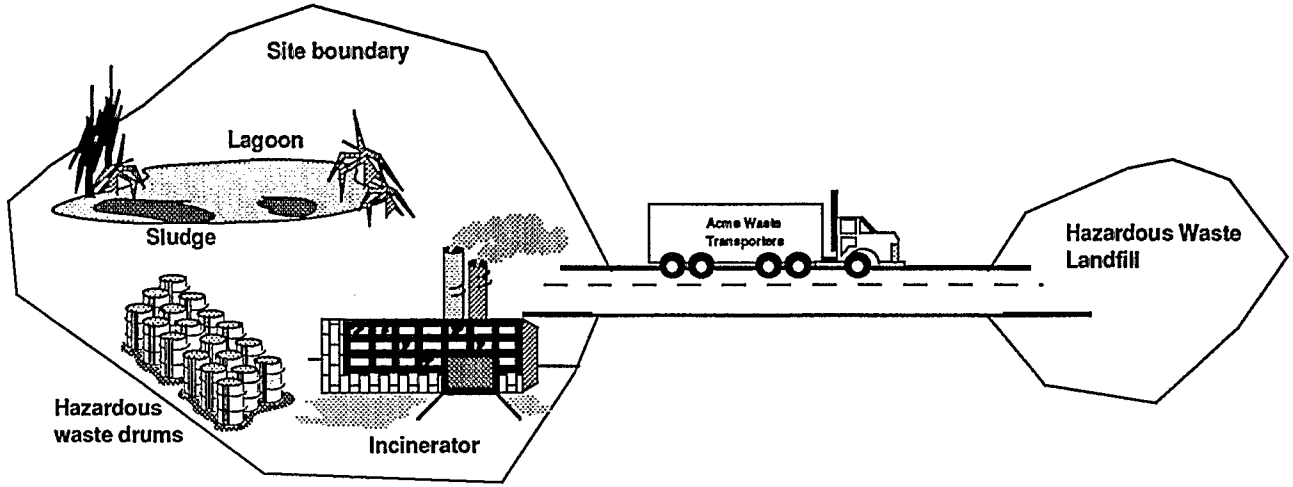
A requirement under other environmental laws may be either "applicable" or "relevant and appropriate" to a removal action, but not both. OSCs should identify ARARs on a site-specific basis by first, determining whether the given requirement is applicable and then, if it is not applicable, determining whether it is relevant and appropriate for on-site activities.

- *Applicable requirements* are cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances found at a CERCLA site.

[1] The term "State ARARs" includes requirements of Indian Tribal laws that are ARARs.

[2] The numbers in brackets refer to Appendix A, which provides complete references for the sources cited in the text.

Exhibit 1
Comparison of On-Site and Off-Site Requirements



	On-Site Compliance	
	Administrative Requirements	Substantive Requirements
Applicable	No	Yes (to the extent practicable)[1]
Relevant and Appropriate	No	Yes (to the extent practicable)[1]

	Off-Site [2] Compliance	
	Administrative Requirements	Substantive Requirements
Applicable	Yes[3]	Yes[3]
Relevant and Appropriate	N/A	N/A

[1] Practicability is based on NCP criteria: urgency of situation and scope of removal action.

[2] Off-Site Policy (OSWER Directive No. 9834.11) and CERCLA section 121(d)(3) apply.

[3] If an emergency appears to make compliance impossible, consult the Office of Regional Counsel.

- *Relevant and appropriate requirements* are cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, or contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site and are well-suited to the particular site.

Only those State standards that are identified by a State in a timely manner and are more stringent than Federal requirements may be applicable or relevant and appropriate (see p. 13).

Types of ARARS

EPA recognizes the following three types of ARARs:[3]

- Chemical-specific ARARs: Health or risk-based numeric values or methodologies that establish the acceptable amount or concentration of a chemical that may be found in or discharged to the ambient environment.

- Location-specific ARARs: Restrictions placed on the concentration of hazardous substances or the conduct of activities solely because they occur in special locations.

- Action-specific ARARs: Technology- or activity-based requirements or limitations on actions involving the management of hazardous wastes.

Other Federal and State advisories, criteria, or guidance may, as appropriate, be considered in formulation in the removal action. Other information To Be Considered (TBC) generally falls within three categories: health effects information with a high degree of credibility; technical information on how to perform or evaluate site investigations or response actions; and policy.

ARAR Attainment

Requirements are ARARs only when they pertain to the specific activities being conducted. The "applicability" determination is legally defined, and affords very little flexibility. The "relevant and appropriate" determination is site-specific, and therefore has much greater flexibility.

> For example, if a site has leaking drums, widespread soil contamination, and significant ground water contamination, the removal action on the site might only involve actions necessary to reduce the near-term threats, such as direct contact and further deterioration of the ground water; thus, the removal action might be limited to the removal of the drums and surface debris and excavation of highly contaminated soil. Accordingly, requirements pertaining to the drums, surface debris, or

[3] Additional discussion of the three types of ARARs is found in the preamble to the 1990 NCP (55 **Federal Register** 8741 (March 8, 1990)), in the preamble to the proposed NCP (53 **Federal Register** 51437 (December 21, 1988)), and the CERCLA Compliance with Other Laws Manual Part I, pp. 1-59 through 1-61, [1].

contaminated soil may be potential ARARs for the specific removal action; however, requirements pertaining to the cleanup of ground water contamination would not be ARARs for that action because the removal action is not intended to address ground water.

Waivers are also available if the requirement is relevant and appropriate but cannot be met for one of the reasons set out in CERCLA section 121(d)(4) (e.g., technically impracticable) (see p.22).

Compliance with Substantive and Administrative Requirements

On-site response actions must comply, to the extent practicable, with substantive requirements, which may be applicable or relevant and appropriate. Off-site response actions must comply with administrative and substantive requirements which may be applicable.

- *Substantive requirements* are those requirements that pertain directly to actions or conditions in the environment. Examples of substantive requirements include quantitative health- or risk-based restrictions upon exposure to types of hazardous substances, technology-based requirements, and restriction upon activities in certain special locations.

- *Administrative requirements* are those mechanisms that facilitate the implementation of the substantive requirements of a statute or regulation. These requirements include documentation, issuance of permits, reporting, and recordkeeping.

IDENTIFICATION OF ARARs IN THE REMOVAL ACTION PROCESS

OSCs will need to identify and attain ARARs to the extent practicable for emergency, time-critical, and non-time-critical removal actions. Exhibits 2, 3, and 4 outline the general procedures that OSCs should follow for these three types of removal actions although the actual timing and thoroughness of the ARARs analysis may vary from removal action to removal action.

Emergency Removal Actions

For emergency removal actions, OSCs should not delay response in order to identify potential ARARs. Once immediate threats to human health and the environment have been averted or obviated, however, OSCs should identify and consider ARARs for actions left to be performed, using the processes detailed in Exhibit 2. For example, if, in a residential neighborhood, there was a release of a hazardous substance that presented an immediate threat to human health and the environment, it would be appropriate to store the substance temporarily in a secured environment away from the residential area before identifying and considering ARARs for future actions. In an emergency, the OSC is not expected to determine, for example, if the hazardous substance is a hazardous waste under the Resource Conservation and Recovery Act (RCRA) and to identify which requirements apply to the management of the waste until after mitigating all immediate threats associated with the incident. However, those determinations should be made before arranging for permanent disposal.

Time-Critical Removal Actions

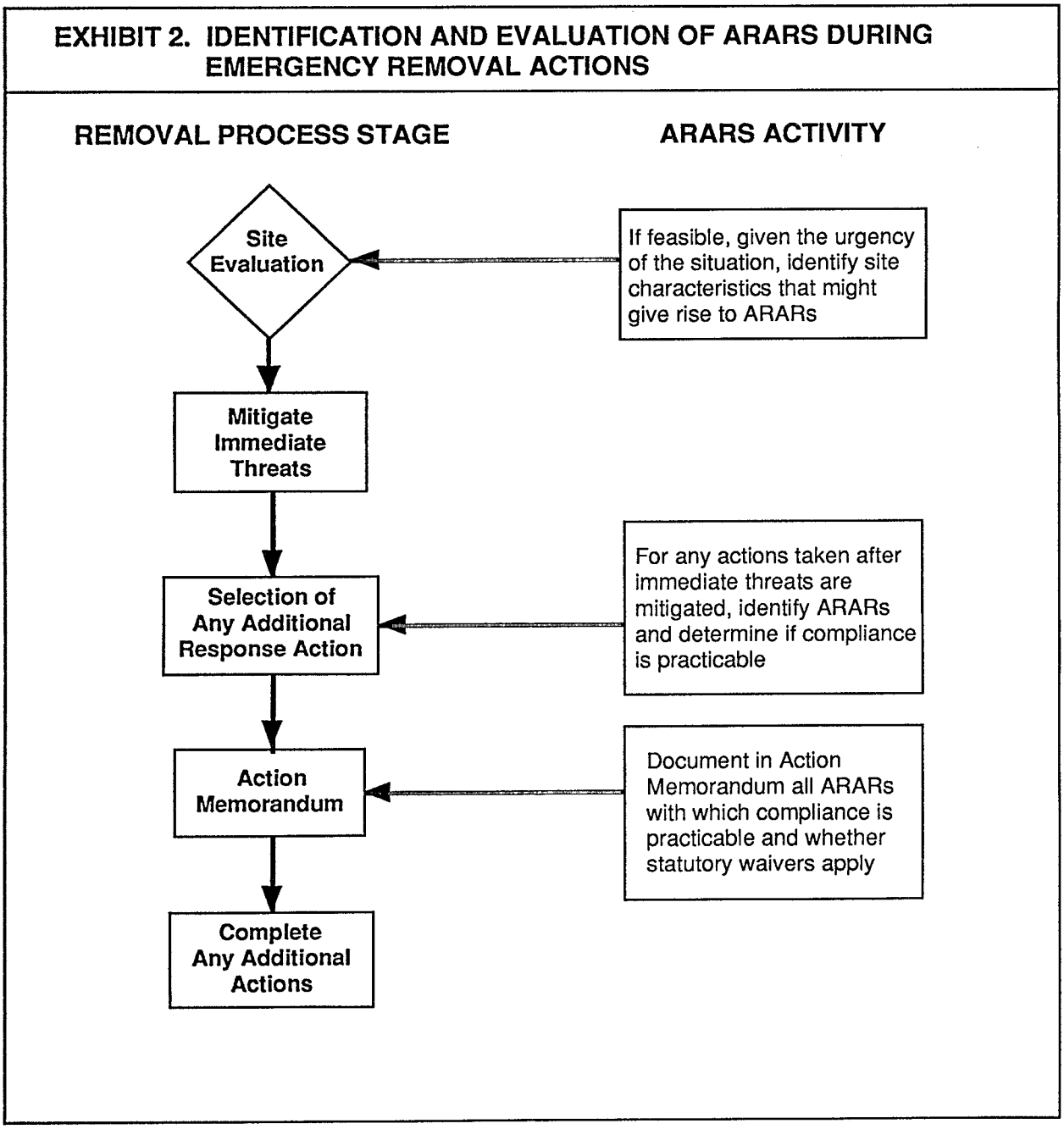
For time-critical removal actions, the urgency of the situation will determine how quickly and thoroughly OSCs identify and analyze potential ARARs. OSCs may identify ARARs at several different stages of the process due to the need for quick response, and may alter the selected response action to comply with newly identified ARARs as the removal action progresses. Exhibit 3 presents the ARARs identification and evaluation process typically followed in a time-critical removal action. In the most urgent time-critical removal actions, OSCs could identify ARARs concurrently with the initiation of site cleanup. In these situations, OSCs should attain and comply with requirements determined to be ARARs to the extent practicable (see discussion on determining when compliance with ARARs is not required, p. 22); identify additional ARARs; and prepare the Action Memorandum after preventing, stabilizing, or mitigating near-term threats.

During most time-critical removal actions, OSCs should identify potential ARARs during the site evaluation phase and assess them in developing possible responses before initiating any response actions. OSCs should document these ARARs in the Action Memorandum. As OSCs modify planned cleanup activities based on public comments or other circumstances, they also should identify and, to the extent practicable, comply with new ARARs for the modified actions (especially action-specific ARARs).

Non-Time-Critical Removal Actions

Following the procedures described in Exhibit 4, if practicable, OSCs should comply with more ARARs for non-time-critical removal actions than for time-critical removal actions. In particular, preparing the Engineering Evaluation and Cost Analysis (EE/CA) should allow

EXHIBIT 2. IDENTIFICATION AND EVALUATION OF ARARS DURING EMERGENCY REMOVAL ACTIONS



OSCs to more fully consider ARARs in the development of response actions. During non-time-critical removal actions, sufficient time should be available for OSCs to ensure that ARARs determinations are based upon a reasonable understanding of site characteristics.

Flexibility in the Timing of ARARs Identification Procedures

The time when ARARs must be identified in the cleanup process may vary from site to site, depending on the urgency of the situation. The NCP requires OSCs to identify ARARs for on-site removal actions when *practicable*. This consideration is crucial and is discussed later in this guidance (see p. 22). OSCs should not delay taking actions to mitigate an immediate threat, stabilize a site, or prevent a release in order to allow time to gather detailed information on site characteristics, draft a written ARARs request to the State, or wait for State agencies to submit a list of ARARs.

EXHIBIT 3. IDENTIFICATION AND EVALUATION OF ARARS DURING TIME-CRITICAL REMOVAL ACTIONS

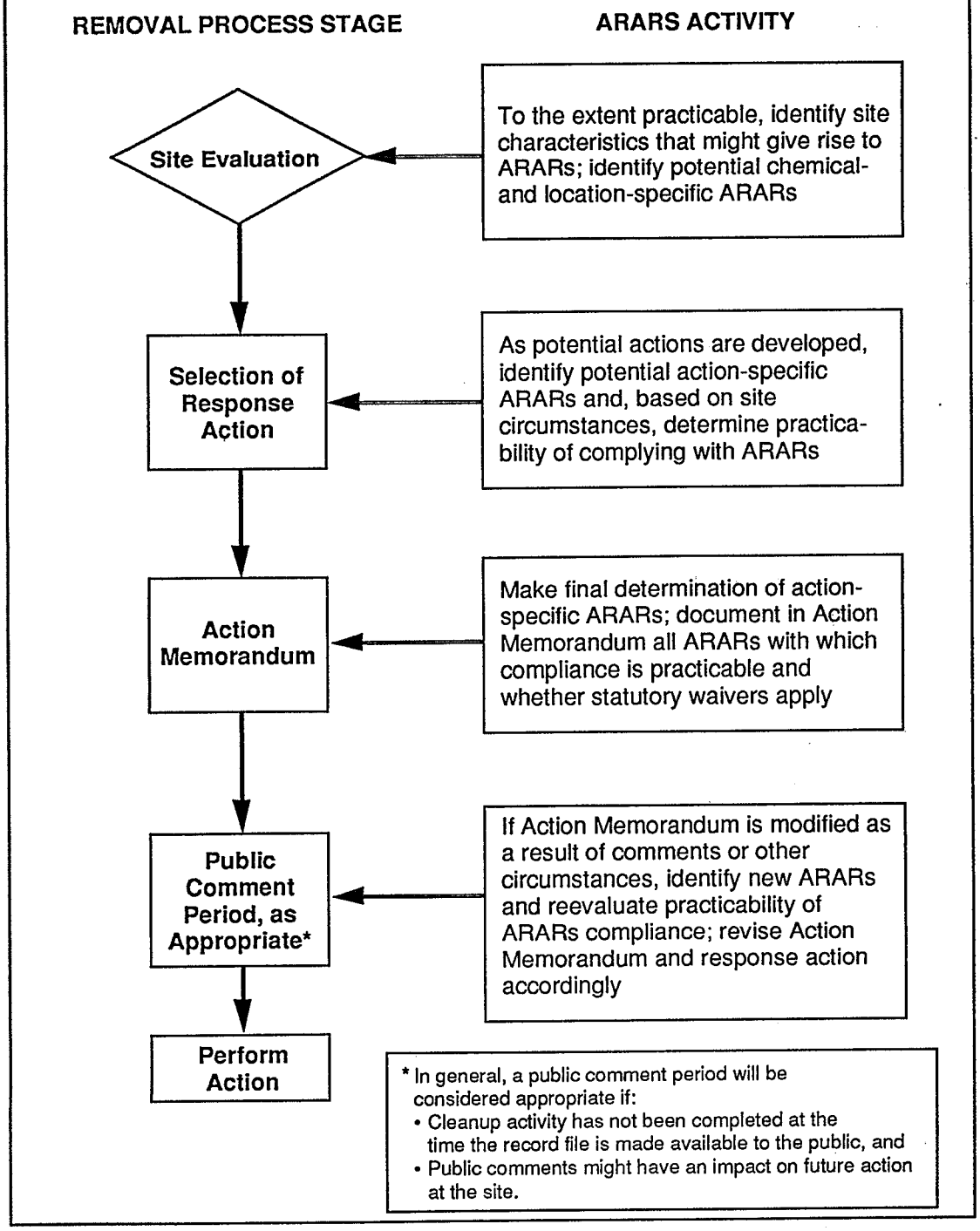
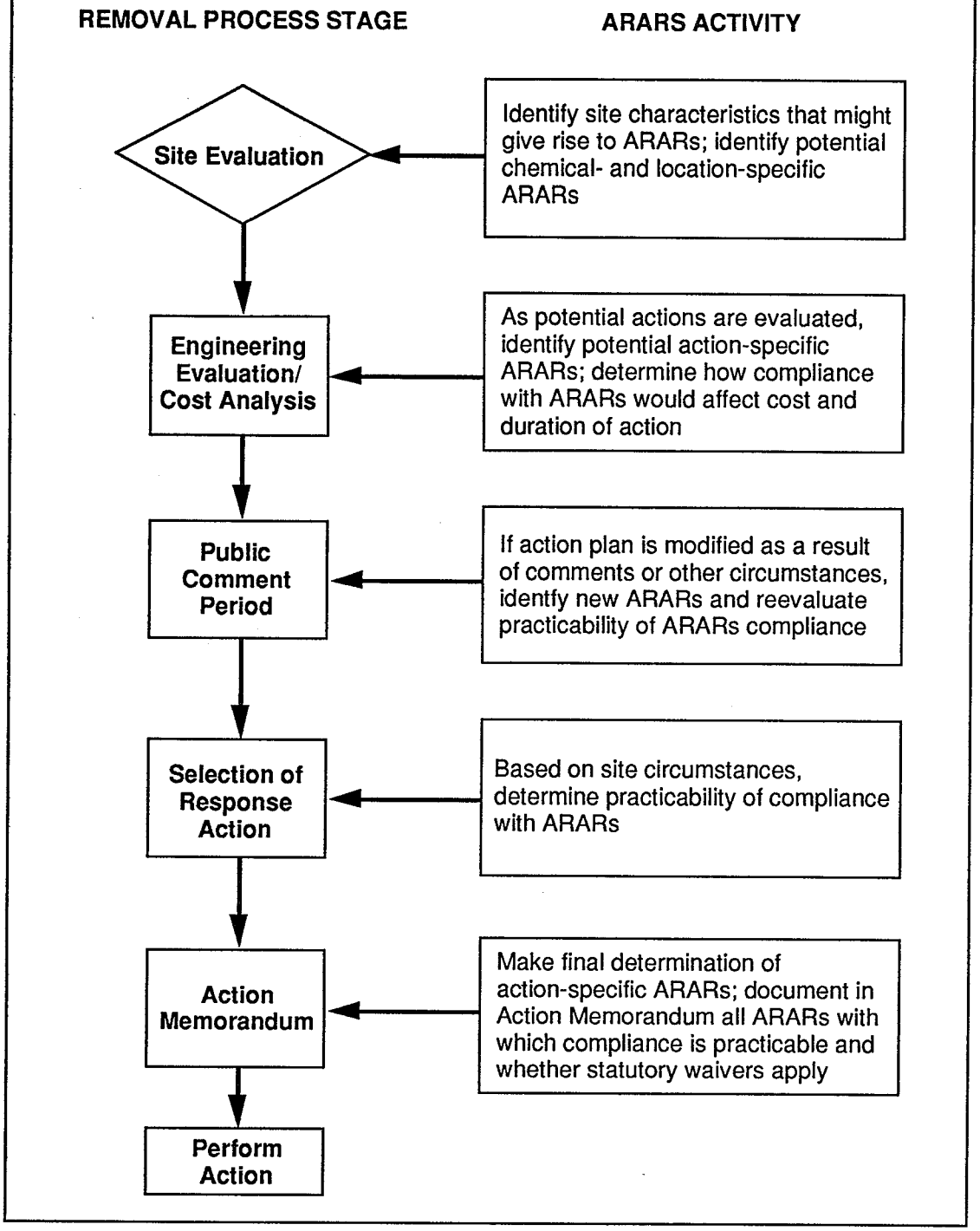


EXHIBIT 4. IDENTIFICATION AND EVALUATION OF ARARS DURING NON-TIME-CRITICAL REMOVAL ACTIONS



IDENTIFICATION OF POTENTIAL FEDERAL ARARs

Within the limitations discussed above, it is the responsibility of the OSC to identify potential Federal ARARs and to determine which ones are actually ARARs for a given removal action, based on both knowledge of Federal environmental requirements and on the use of the following aids:

- The CERCLA Compliance with Other Laws Manual: In particular, the OSC should consult Exhibits 1-1, 1-2, 1-3, and 1-9 of the manual. These exhibits lists potential chemical-, location-, and action-specific ARARs under major Federal environmental statutes [1]. (The manual is available from the Oil and Hazardous Materials (OHM) Coordinator.)

- Regional Superfund ARARs Coordinators: The OSC should contact designated ARARs experts who are responsible for giving assistance to OSCs and Remedial Project Managers on ARARs issues. OSCs also can contact experts from the Regional Air, Waste, or Water Management Divisions to gather additional information on those areas.

- National Environmental Regulation Hotlines: OSCs can get additional information on the requirements of various Federal statutes from several national hotlines listed in Exhibit 5, as well as from the Emergency Response Cleanup Services and Technical Assistance Team contractors.

If OSCs need more assistance to identify ARARs for removal actions, or to determine their practicability once identified, they should consult with the appropriate Regional Coordinator in the Emergency Response Division (ERD) at EPA Headquarters. Other useful sources of information are the Office of Regional Counsel/Office of General Counsel and the Policy and Analysis Staff of the Office of Emergency and Remedial Response (OERR).

EXHIBIT 5. INFORMATION SOURCES FOR IDENTIFICATION AND ANALYSIS OF POTENTIAL FEDERAL ARARS

INFORMATION SOURCE	TELEPHONE NUMBER
National Hotlines	
Agency for Toxic Substances and Disease Registry Hotline	(404) 488-4100
RCRA/Superfund Hotline	(703) 920-9810 (Virginia) (800) 424-9346 (outside Virginia) (800) 553-7672 (Toll-free TDD) (703) 486-3323 (Local TDD)
Safe Drinking Water Act Hotline	(800) 426-4791 (National)
Toxic Substances Control Act Hotline	(202) 554-1404
Other Resources	
Air/Superfund Coordinators in each Regional Office	
Clean Air Act issues, OAQPS	(919) 541-5642
National Institute for Occupational Safety and Health	(513) 841-4422
National Pesticides Telecommunications Network	(800) 858-7378
OERR Policy and Analysis Staff ARARs Section Chief	(202) 260-2200
OSWER Clu-In (an on-line information service)	(301) 589-8366
Superfund ARARs Coordinators in each Regional Office	

EXHIBIT 5(2). INFORMATION SOURCES FOR IDENTIFICATION AND ANALYSIS OF POTENTIAL FEDERAL ARARS

INFORMATION SOURCE		TELEPHONE NUMBER
Technical Assistance Team (TAT) Contractors (as of 7/91)		
Zone 1	(Eastern) - Roy F. Weston, Inc.	(215) 524-1925
Zone 2	(Western) - Ecology and Environment, Inc.	(703) 522-6065
In addition, TAT contractors can be reached by telephone in all 10 Regions		
Emergency Response Cleanup Services (ERCS) Contractors (as of 7/91)		
Zone 1	(Regions 1-3) - OH Materials	(800) 327-2853
Zone 2	(Region 4) - OH Materials	(800) 327-9954
Zone 3	(Region 5) - PEI Associates	(800) 372-3727
Zone 4A	(Regions 6-9) - Riedel Environmental	(800) 334-0004
Zone 4B	(Region 10) - Thorne Environmental, Inc.	(206) 525-9168

IDENTIFICATION OF POTENTIAL STATE ARARs

Overview of State ARARs

EPA's policy regarding the attainment of State ARARs for removal actions is the same as its policy concerning compliance with Federal ARARs: removal actions should comply with State ARARs to the extent practicable. In order for State requirements to be potential ARARs, they must be:

(1) Promulgated (i.e., of general applicability and legally enforceable),

(2) More stringent than Federal requirements,

(3) Identified in a timely manner.

To facilitate the identification process, the OSC must, to the extent practicable, inform the State that EPA is considering a removal action, provide information about the site, and request that the State identify potential ARARs for that action. Only those potential ARARs identified by the State in a timely manner need to be considered. Exhibit 6 summarizes this consultation process.

OSC Notification of the State

Oral Notification

As soon as EPA begins to consider taking a removal action or after an emergency removal action begins, the OSC should orally inform the State about the action. At the time of this notification, the OSC also should request that the State identify potential State ARARs for that removal action, characterizing the level of urgency of the removal action and the length of time in which ARARs will need to be identified if the OSC is to consider them in performing the action.

Written Notification

The OSC should, as soon as practicable, follow up the initial notification with a written request to the State to identify potential ARARs. Exhibit 7 contains a suggested form letter for OSCs to use in making this written request. OSCs should request that States send ARARs information in written form using Attachments 1-3 in a timely manner.

Providing Site Information to the State

When notifying the State of a potential removal action, OSCs should provide as much information as possible about the site. Detailed knowledge of site characteristics greatly facilitates ARARs identification. If the OSC does not describe the location of the site, the kind of wastes at the site, the threat(s) affecting this removal action, and the possible activities that might occur during the removal action, the State may not be able to produce an accurate

EXHIBIT 6. PROCEDURES FOR IDENTIFYING STATE ARARS

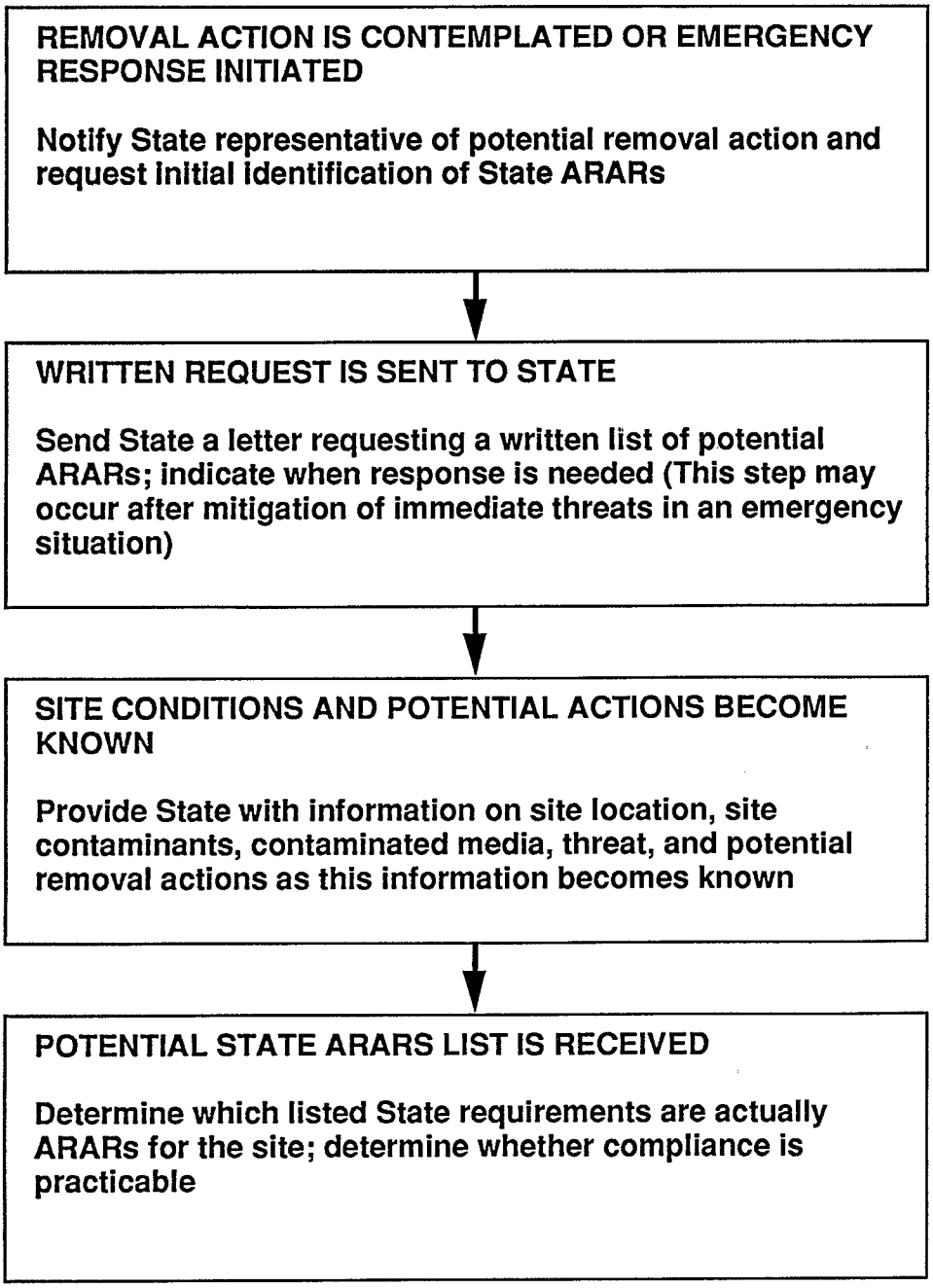


EXHIBIT 7. SUGGESTED FORM LETTER TO USE WHEN REQUESTING A STATE TO IDENTIFY POTENTIAL STATE ARARS

Dear [State Official]:

As the State has been informed, the Superfund removal program of the Environmental Protection Agency (EPA) is contemplating a removal action at the [site name] located in [site location]. To perform this action, EPA will attempt to comply to the extent practicable with all Applicable or Relevant and Appropriate Requirements (ARARs) of State environmental and facility siting laws. This letter is a follow-up to our earlier request that the State notify the EPA On-Scene Coordinator (OSC) of any State statutes or regulations that the State believes are potential ARARs for the removal site, **and contains information on site conditions and proposed actions to assist you in identifying ARARs**. The OSC for this site is [OSC name].

We request that an appropriate State official identify potential State ARARs in the attachments provided. These attachments are divided into three sections addressing the following categories: chemical-, location-, and action-specific requirements. Chemical-specific requirements are health-, technology-, or risk-based numeric values that establish the acceptable amount or concentration of a chemical that may be found in, or discharged to, the ambient environment. Location-specific requirements are restrictions placed on the concentration of hazardous substances or the conduct of activities solely because they occur in special locations. For example, the requirement that hazardous waste storage facilities located within 100-year flood plains must be designed, constructed, operated, and maintained to avoid washout is considered a location-specific requirement. Action-specific requirements are technology- or activity-based requirements or limitations on actions taken with respect to hazardous waste.

[Example -- Site Description: There are an estimated 200 drums on the surface and an additional 100 drums buried at the site of an abandoned chemical recycling facility. Sampling of the surface drums has identified various solvents including xylene, hexane, methylene chloride, and toluene. Approximately 250 homes are located within 1/4 mile of the site, all of which rely on well water for drinking water purposes. Run-off from the site enters a culvert which drains into a nearby tributary of Green Creek. The site poses threats of exposure by direct contact (a deteriorating wooden fence separates the site from adjacent properties), inhalation, and drinking water contamination. Proposed actions include reconstruction of the fence surrounding the site, stabilization and overpacking of drums (following excavation of buried drums), and transportation of the drums to RCRA-approved recycling and disposal facilities.]

Please respond in a timely manner (within 7 days if possible) so that the requirements may be considered for the removal action. Exact references or citation to the statutes and regulations, or copies of pertinent provisions of these State requirements, will greatly facilitate our ability to evaluate these requirements as ARARs for the site. Also, please call the OSC at [OSC's telephone number], if additional information on the site is needed for the purpose of completing the attachments.

EXHIBIT 7(2). SUGGESTED FORM LETTER TO USE WHEN REQUESTING

The OSC will examine these requirements in order to determine whether they are applicable or relevant and appropriate to the site. The Superfund removal program is required to comply with ARARs to the extent practicable, considering the exigencies of the situation. It is important to clarify, however, that some requirements identified by the State may be determined not to be ARARs or may be determined to be impracticable to meet or may qualify for a waiver.

(Signed)
Branch Chief (or designee)

Attachments

ATTACHMENT 1. CHEMICAL-SPECIFIC REQUIREMENTS

Chemical	Maximum Concentration Allowed	Medium	Reason why Requirement is an ARAR	Regulatory Citation

(to be filled out by State Official)

ATTACHMENT 2. LOCATION-SPECIFIC REQUIREMENTS

Location Subject to Requirement	Requirement	Reason why Requirement is an ARAR	Regulatory Citation

(to be filled out by State official)

ATTACHMENT 3. ACTION-SPECIFIC REQUIREMENTS

Action Subject to Requirement	Requirement	Reason why Requirement is an ARAR	Regulatory Citation

(to be filled out by a State official)

or useful list of potential ARARs for the site. Under these conditions, the State may only be able to produce either a generic list of environmental requirements that will be too lengthy and general to be useful, or a narrow list of requirements that might not cover all aspects of a site.

Information that OSCs should be prepared to provide to State personnel is detailed in Exhibit 8. This list includes data on the location of the site, wastes discovered on site, contaminated media/threat(s) (using NCP removal criteria), and potential removal actions. The more clearly and succinctly the OSC presents this information, the easier it will be for State personnel to provide an accurate list of potential ARARs in a timely manner. If the OSC does not have time to produce a written summary of site conditions for the State, he or she should send whatever pertinent information is available on the site.

If more information about site characteristics relevant to ARARs determination is gathered, the OSC should relay this information to the State representative. For example, if sampling or site records reveal that soil at a site contains a RCRA listed waste, the OSC should communicate this to the State representative so that all potential ARARs can be identified before actions to remove or treat the soil begin.

State Responsibility

NCP section 300.400(g) stipulates that once the OSC provides information on the site and requests that the State identify ARARs, it is the State's responsibility to identify in a *timely manner* all State requirements that are potential ARARs for the removal action. If the State does not provide a complete or clear list of requirements or does not respond in a timely manner, *it is not the OSC's responsibility to search for State ARARs.* The removal program is a dynamic program designed to prevent, stabilize, and/or mitigate environmental and human health threats quickly, and the OSC need not: 1) expend resources examining volumes of State regulations; or 2) delay the start or completion of a removal action because the State has not identified its ARARs.

Evaluation of Potential State ARARs

Once the State has identified environmental requirements that may be ARARs, it is the OSC's responsibility to determine which State requirements actually are ARARs by using the procedures outlined in NCP sections 300.400(g) and 300.415(i), as well as those in the CERCLA Compliance with Other Laws Manual [1]. The subsequent determination regarding which ARARs can be practicably met should be made using the factors detailed in this guidance. *The OSC is not bound to comply with all requirements identified by the State; this should be made clear in communications with State officials.*

If there are any questions concerning identification of ARARs or the practicability of complying with an ARAR, State officials should consult with the staff and management of EPA Regional offices to promptly address them. Although OSCs shall coordinate with States, OSCs make the final determination of ARARs for all Fund-financed and EPA-ordered removal actions.

EXHIBIT 8. LIST OF INFORMATION THAT STATE OFFICIALS MAY REQUEST IN IDENTIFYING ARARS

1. General description of site.
2. Specific location of site.
3. Known wastes or hazardous substances on site (including concentrations, if available).
4. Site's proximity to the following settings:
   - an aquifer used as a public or private water supply
   - a floodplain
   - wetlands
   - streams or rivers
   - a critical habitat of endangered or threatened species
   - a designated coastal zone or other specified preserve
   - a wildlife refuge, public park or recreation area, public forest, or public monument
   - a salt dome formation, underground mine, or cave
   - a historic site or cultural resource, whether or not owned or controlled by a Federal Agency.
5. Media contaminated by the site and potential exposure pathways/threat (using NCP removal criteria).
6. Potential actions at the site (e.g., discharge of treatment effluent to a surface water body, off-site disposal of hazardous waste, incineration).

DETERMINING WHEN COMPLIANCE WITH ARARs IS NOT REQUIRED

In general, compliance with most Federal and State ARARs will be practicable during removal actions. As noted in the NCP, however, in some situations, identifying and/or complying with ARARs will not be practicable during a removal action, or the criteria for a waiver of the ARAR will be satisfied. Under such circumstances, compliance with the ARAR is not required.

In determining whether compliance with ARARs is practicable, OSCs must consider the urgency or degree of threat posed by the site and the appropriate scope of response. Full compliance with ARARs will most often be practicable at National Priorities List (NPL) sites where an exemption to the statutory time and dollar limits is available based on the "consistency" exemption, e.g., remedial action is expected to be taken at the site [2].

NCP Factors for Determining Impracticability

The NCP identifies two factors that should be considered in determining whether identifying and complying with ARARs is practicable:

(1) The urgency of the situation, and

(2) The scope of the removal action to be taken.

Urgency of the Situation

During most removal actions, sufficient time exists for OSCs to identify ARARs and plan response actions that comply with them. For example, in most cases, OSCs can acquire drums, tanks, and overpacks, and construct storage facilities that meet basic RCRA storage requirements before RCRA hazardous waste is removed from leaky tanks or soil is excavated and stored.

In cases where the degree of threat warrants a truly immediate response, full identification or compliance with ARARs could cause OSCs to delay a response, compromising the protection of public health and the environment. In such urgent cases, compliance with ARARs would not be practicable. Examples of situations in which identifying and complying with ARARs may not be practicable because of the urgency of the situation are provided below.

Case I: When an imminent threat to public health and the environment requires immediate action before the OSC can request and obtain potential State ARARs.

Example: If a spill of a hazardous waste occurs on a site in the vicinity of a residential area, it would not be practicable for OSCs to request and obtain potential State ARARs (such as the siting requirements for a storage facility) before the waste is transported to another area safely

away the residential zone. (It still may be practicable, however, to identify and comply with State ARARs for any subsequent removal activity addressing less immediate threats to be taken at the site.)

Case II: When damage or threats to public health and the environment require EPA to take immediate action precluding compliance with known Federal ARARs.

Example: If leaking drums on a site pose the danger of fire or explosion, waste should be stabilized and stored immediately in available tanks or containers, even if these tanks or containers do not have the secondary containment systems required by RCRA.

Scope of the Removal Action

Actions required by ARARs often will be within the scope of the designed removal action. For example, when a removal action calls for treatment of aqueous material from an on-site sludge pit and discharge of the treatment effluent to an on-site stream, compliance with substantive National Pollutant Discharge Elimination System (NPDES) discharge limits would be within the scope of the designed action and, therefore, would be practicable. Similarly, when a removal action calls for the on-site incineration of waste, compliance with incinerator operation and performance standards under RCRA and/or the Toxic Substances Control Act (TSCA) are necessary and likely to be practicable. However, in some cases, compliance with ARARs is outside the scope of the removal action because the ARAR requires a degree of cleanup that would be inappropriate or inconsistent with the limited scope and purpose of the removal action, e.g., site stabilization and mitigation of near-term threats.

"Scope of the removal action" is not limited to technical issues but also relates to limitations on duration and funding. During most removal actions, compliance with ARARs should not result in expenditures of funds and time that exceed CERCLA statutory limits for removal actions. In fact, since removal actions generally focus on minimizing and mitigating potential harm (although in some cases they may be used to totally eliminate a threat), most removal actions do not approach the statutory limits. For example, the purchase or rental of storage tanks with secondary containment systems in compliance with RCRA requirements is not likely to raise the cost of a removal action above $2 million. In some cases, however, the cost and duration of cleaning up a site in compliance with ARARs will exceed these limits. In these cases, exemption criteria must be met and the exemption must be invoked to proceed with the action as a removal, or a determination should be made that compliance with the ARAR is not practicable.[4]

EPA will select the appropriate response, even where an extensive removal action is warranted, whether the site is Fund-lead or PRP-based. If the site is Fund-lead, an exemption must first be approved in order to proceed with the action. EPA expects that the time and dollar limitations generaly will not result in PRPs performing a more extensive removal

[4] See also related discussion in the preamble to the NCP (55 **Federal Register** 8695-96).

action than EPA itself would conduct. That is, EPA's selection of a removal action, including which ARARs will be attained, will generally not differ depending on who will be conducting the removal action.

Situations in which it may not be practicable to comply with an ARAR because it would be outside the scope of the removal action include the following:

Case I: When compliance involves a degree of cleanup that would be inconsistent with the purpose of the removal action.

Example: If a removal action is undertaken for the limited purpose of stabilizing volatile waste in a lagoon at a site, it would be outside the scope of the removal action to meet RCRA closure requirements for the lagoon and other units at the site.

Case II: When compliance with ARARs would result in EPA performing a removal action with a duration of longer than one year and no statutory exemption applies.

Example: A non-NPL site contains large quantities of contaminated soil subject to a State toxic waste disposal regulation requiring incineration of the soil prior to permanent disposal. The level of soil contamination does not warrant an emergency (or consistency) exemption from the one-year statutory limit. If the limited capacity of available incinerators would result in the incineration process taking over two years, and other treatment technologies are available that achieve an acceptable level of performance, compliance with the State requirement may not be practicable.

CERCLA Statutory Waivers from Compliance with ARARs

Even if compliance with an ARAR is determined to be practicable based on consideration of the two factors listed previously (i.e., urgency of the situation and scope of the removal action), waivers may still apply to the removal action. CERCLA section 121(d)(4) provides that under certain circumstances, an otherwise applicable or relevant and appropriate requirement may be waived during on-site CERCLA remedial actions. NCP section 300.415(i) extends these waivers to removal actions as well. The application of these statutory waivers to a removal action is described briefly below.

- *Interim Measures*: Compliance with an ARAR is not necessary when the removal action does not involve final cleanup of a site and the final cleanup will attain the ARAR. For example, complying with the RCRA land disposal restriction storage prohibition at a non-NPL site may be inappropriate if the waste is drummed and overpacked, and future site actions will involve treatment of the waste that will comply with all land disposal restrictions.

- *Compliance will Result in Greater Risk to Human Health and the Environment*: A removal action does not have to comply with ARARs when compliance would present a greater threat (or provide less protection) to human health and

the environment than taking an action that would not attain ARARs. For example, complying with the RCRA requirement for permeability of caps may be inappropriate if it may result in a dangerous buildup of gases under the cap at a site. Therefore requirements with this ARAR would not be necessary at this site.

- *Technical Impracticability:* Compliance with ARARs is not necessary when it would be technically impractical or infeasible from an engineering perspective, such as when a State surface water discharge standard requires treatment of some wastewater contaminants to below non-detectable levels.

- *Equivalent Standard of Performance*: Compliance with an ARAR is not necessary if the removal action would achieve a standard of performance that is equivalent to that required by the ARAR. For example, a State toxic substances clean-up law that requires the use of a particular technology to treat contaminated soil could be waived if a removal action uses another treatment technology that would provide an equivalent degree of treatment. However, a technology-based standard may not be replaced by a risk-based analysis.[5]

- *Inconsistent Application*: An otherwise applicable or relevant and appropriate State requirement is not an ARAR and need not be attained when that requirement has not been applied consistently to hazardous waste sites or facilities throughout the State (CERCLA as well as non-CERCLA sites). For example, at a battery recycling site, EPA waived a State requirement for leachate testing and management of lead-contaminated waste when EPA determined that the State was not enforcing the same requirement at State cleanup sites.

- *Fund Balancing*: Fund balancing *is not* a requirement of the removal program. However, when complying with an ARAR requires an expenditure that jeopardizes the Fund's ability to address other sites, the ARAR can be waived. The Fund-balancing waiver should be considered, but not necessarily invoked, only for unusual, very costly cases. The NCP preamble states that the Fund-balancing waiver should be routinely considered when the cost of attaining the ARAR for a single action would be four times the current average cost of a remedial operable unit.[6] Given the statutory limits on removal actions, this waiver will apply rarely at removal sites. It is more likely that compliance with an excessively expensive ARAR for a removal action would be determined to be beyond the limited scope of the action, and, therefore, compliance is not required.

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[5] The preamble to the 1990 NCP (55 **Federal Register** 8748) discusses related topics in more detail.

[6] 55 **Federal Register** 8750 (March 8, 1990).

DOCUMENTING ARAR EVALUATIONS

Purpose of ARARs Documentation

To ensure that ARARs have been identified and considered to the extent practicable during a removal action, it is important to document all procedures associated with identifying and evaluating ARARs. Sufficient documentation of ARARs identification procedures and ARARs evaluations is essential to:

- Assure the public and State and local agencies that ARARs were complied with to the extent practicable, and that the remedy is protective of human health and the environment.
- Make the public aware, through the administrative record, of all ARARs determinations and confirm to the public that all ARARs were met to the extent practicable.
- Provide justification, for the purposes of cost recovery from PRPs, for actions taken at the site.

Documenting ARARs in the Action Memorandum

The OSC should document the identification and evaluation of ARARs in the Action Memorandum, the key document supporting the selection of a removal action. Generally, it will not be necessary to document requirements determined not to be ARARs (unless the determination is expected to be controversial). However, the OSC should document, if only briefly, the conclusion that compliance with identified ARARs is determined to be impracticable, based on the two factors for determining practicability: the urgency of the situation and the scope of the removal action. The Action Memorandum should contain the following information concerning ARARs:

- A list of Federal ARARs identified for the site that are deemed practicable, if any.
- An explanation, if necessary, that Federal ARARs were not considered before removal activities were undertaken during emergency situations.
- A brief description of efforts made to identify State ARARs that includes an indication of whether there was time to assess identified State ARARs.
- A list of State ARARs determined to be practicable, if any.
- A list of Federal and State standards determined to be ARARS, but for which compliance was determined to be impracticable.

The OSC should provide this information in the "Proposed Actions and Estimated Costs" section of the Action Memorandum under the heading "ARARs." See the Action Memorandum Guidance for more detail on where the OSC should provide ARARs information in the Action Memorandum.

If the OSC prepares a new Action Memorandum to document a significant change in the scope of removal work or to request an exemption from statutory funding or time limits, then the ARARs information noted above also should be presented in the revised Action Memorandum. An example ARARs discussion for the Action Memorandum is presented in Exhibit 9. In addition, the "Effectiveness of Removal Actions Taken" section of the final OSC report should refer to the ARARs information previously listed in the Action Memorandum.

EXHIBIT 9. EXAMPLE ARARS DOCUMENTATION FOR ACTION MEMORANDUM

The Action Memorandum is the most appropriate place to document ARARs determinations. In particular, this memorandum should document procedures used to identify ARARs and detail which Federal and State requirements were determined to be practicable. It should briefly explain by referring to the two factors for determining practicability (i.e., urgency of the situation, and scope of the removal action) why compliance with certain Federal and/or State ARARs was determined not to be practicable. The OSC should provide this information in the "Proposed Actions and Estimated Costs" section of the Action Memorandum under the heading "ARARs." More information is provided in the "Action Memorandum Guidance."

Compliance with Applicable or Relevant and Appropriate Requirements—Example Discussion

Potential Federal ARARs for the removal action at the Pleasant Harbor Oil Recycling Company site in Any State, U.S.A. were identified with the help of Region 11 representatives of the Office of Solid Waste, the Office of Water, the Office of Air Quality Planning and Standards, and the Office of Toxic Substances. The OSC communicated with these offices on February 12, 15, 16, and 17, 199x, respectively. Based on these communications, the following were identified as practicable Federal ARARs for the site:

- RCRA Subtitle C (40 CFR 264 Subpart J) requirements for storage of a RCRA hazardous waste (KO52 - Petroleum refining industry tank bottoms) in a tank with secondary containment
- TSCA requirements for storage of PCBs
- TSCA requirements to incinerate PCB-contaminated waste at a TSCA-permitted incinerator
- Clean Water Act section 404 requirements for dredging a Federally designated wetland.

The following administrative and substantive requirements were determined to be applicable to off-site actions:

- RCRA and DOT requirements for transportation of a hazardous waste (manifest requirements, storage, and labeling of waste).

The following was identified as a requirement to be considered (TBC) for the site:

- TSCA PCB Spill Policy requirements for cleanup of PCB-contaminated soil in a residential area

EXHIBIT 9(2). EXAMPLE ARARS DOCUMENTATION FOR ACTION MEMORANDUM

The OSC informed Any State Department of Environmental Resources (ADER) officials on February 7, 199x, that the performance of a CERCLA-funded removal action was being contemplated and requested them to identify potential State ARARs for the site. The OSC, through discussions with the Office of Water, determined that the State has been delegated the NPDES authorities. On February 8, 199x, the OSC followed-up this request in a letter to the ADER. On February 17, 199x, the OSC received a list of potential ARARs from the ADER. The following State ARAR was determined to be practicable for the site:

- AnyState surface water direct discharge effluent limitations for wastewater treatment effluent contaminated with lead, zinc, and arsenic.

The ARAR identified above was considered in the selection of a response action. The selected response action includes: excavation of all soil contaminated by PCBs at a level above 10 ppm in area 1 and transportation of contaminated soil to a TSCA-permitted incinerator; removal of drummed electroplating waste from area 2 and disposal in a RCRA-permitted landfill meeting RCRA minimum technology requirements; treatment and discharge of on-site lagoon liquids into the XYZ stream, which is considered part of the site; and dredging of an on-site wetland to remove PCB-contaminated sediments (above 10 ppm) in accordance with U.S. Army Corps of Engineers regulations. This action complies with the ARAR identified above. Compliance with AnyState antidegradation requirements and AnyState ground water clean-up standards was determined to be impracticable because these requirements were outside the scope of the removal action.

APPENDIX A. REFERENCES [7]

Guidance

[1] OSWER Dir. 9234.1-01 and 9234.1-02, CERCLA Compliance with Other Laws Manual: Parts I and II (August 1988 and August 1989 respectively)

[2] OSWER Dir. 9360.12A, "Guidance on Implementation of the Revised Statutory Limits on Removal Actions" (June 12, 1989)

[3] OSWER Dir. 9834.11, "Revised Procedures for Implementing Off-site Response Actions" (November 13, 1987)

[4] OSWER Dir. 9837.2A, Enforcement Project Management Handbook (January 1991)

Statutes and Regulations

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, 42 USC Sections 9601-9675

The National Oil and Hazardous Substances Pollution Contingency Plan, 55 Federal Register 8666-8865 (March 8, 1990)

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[7] Bracketed numbers appear throughout the text and correspond to the references listed in this appendix. These references may be consulted for additional information on ARARs.

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