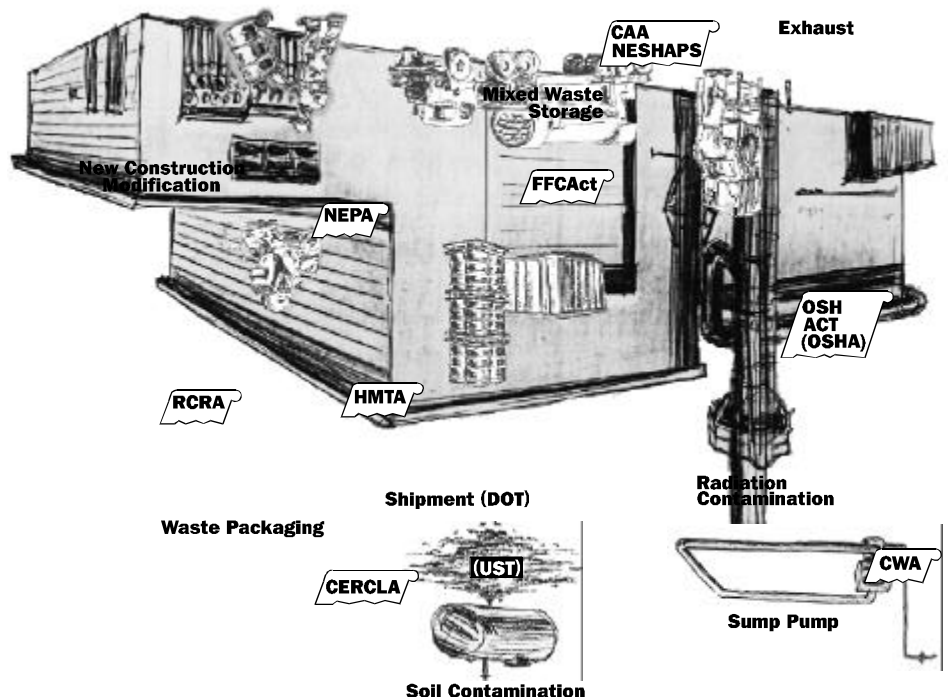





THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA)













TERMINAL OBJECTIVE

Given the Environmental Laws and Regulations Course Manual as a reference, you will be able to:

-  Explain the primary components of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and how they impact the DOE.

ENABLING OBJECTIVES

-  Define a hazardous substance under CERCLA.
-  State the purpose of the National Oil and Hazardous Substances Pollution Contingency Plan.
-  Determine when a hazardous substance release is subject to CERCLA reporting requirements.
-  State the objectives of the National Priorities List and Hazard Ranking System.
-  Explain the difference between *deletion* and *deferral* when referring to site listings on EPA's National Priorities List.
-  Explain the impact of CERCLA on the DOE's hazardous response activities, in the areas of liability, removal actions, and remediation.
-  Describe EPA's policy on the use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites.
-  Explain the difference between removal actions and remedial actions.



OVERVIEW

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), popularly known as “Superfund,” was enacted to address risks to human health and the environment resulting from releases or threatened releases of hazardous substances into the environment. CERCLA is administered by the EPA; however, the States also have certain authority under CERCLA and often direct site activities.

CERCLA resulted in part from the public attention focused on environmental problems such as the “Love Canal” and the “Valley of Drums.” Both of these sites involved large quantities of abandoned hazardous waste and extensive environmental contamination. These sites, as well as others, highlighted the need for a comprehensive authority for direct Federal response to releases of hazardous substances. CERCLA’s passage in 1980 and the significant amendments to CERCLA made in 1986 by the enactment of the Superfund Amendments and Reauthorization Act (SARA) gave the President, through the EPA and other Federal agencies, sweeping authority to respond to uncontrolled environmental releases of hazardous substances.

SCOPE OF CERCLA AUTHORITY

CERCLA provides broad authority for the Federal Government to take “response actions to address a release or substantial threat of release of hazardous substances into the environment.” Certain categories of persons (known as “potentially responsible parties” or PRPs) are “strictly” and “jointly and severally” liable for all costs of response.

To address sites where responsible parties are unknown, unwilling, or unable to pay the costs of response, Congress created a Trust Fund (the “Superfund”), which is administered by the EPA. Costs paid out of the Superfund may later be recovered from any PRP, often through litigation or enforceable administrative orders. The Superfund is financed primarily through a tax on crude oil and 42 commercially used chemicals. The Superfund, originally \$1.6 billion, was increased to \$8.5 billion with the passage of SARA. It is a revolving fund, which means that money recovered from PRPs is placed back into the fund for other CERCLA activities.

PARTIES INVOLVED IN CERCLA

The EPA, Federal agencies, States, Indian Tribes, PRPs, and communities play important roles in the CERCLA process. The EPA has the primary responsibility for managing cleanup and enforcement activities under CERCLA. With respect to releases at Federal facilities, much of CERCLA’s authority has been delegated to Federal agencies. CERCLA requires the EPA to coordinate with States when the Federal Government leads or oversees the site response. In addition, CERCLA authorizes the EPA to allow States and political subdivisions with sufficient technical and management expertise to act as the lead agency and carry out most of the cleanup efforts.



LIABILITY FOR COSTS OF RESPONSE

The following may be classified as a PRP and be subject to CERCLA liability:

- 1 The current owner or operator of property on which hazardous substances have been released or there is a substantial threat of a release.
- 1 A previous owner or operator of property on which hazardous substances have been released or there is a substantial threat of a release when such ownership or operation occurred at the time such substances were disposed of on the property.
- 1 The owner or possessor of hazardous substances who arranged for the transport of such substances off-site to a location where releases have occurred or are threatened.
- 1 A person who accepted hazardous substances for transport to a disposal or treatment facility from which there has been a release or threatened release.

CERCLA is a strict liability statute, which means that PRPs are liable for costs of response without regard to negligence or fault. If more than one PRP is involved, it may be difficult to determine each PRP's contribution to the release. In these situations, the courts have held that any PRP found to be responsible for a release may be held liable for the entire cost of site cleanup, even if the PRP contributed a relatively small amount of hazardous substances to the site. This approach, "joint and several liability," is a tool that was designed to enable the Federal Government to compel PRPs to perform cleanups in a timely manner, without time-consuming legal disputes to resolve what portion of the cleanup cost should be borne by each PRP at a site.

CERCLA AND THE DEPARTMENT OF ENERGY

Section 120 of CERCLA governs Federal facilities' hazardous substance response activities that are subject to CERCLA authority. Section 120(a) provides that all Federal departments, agencies, and instrumentalities are subject to CERCLA requirements, with limited exceptions, in the same manner and to the same extent as nongovernmental entities. In other words, CERCLA guidelines, rules, liability provisions, regulations, and criteria apply to Federal agencies and private entities, with the exception of requirements pertaining to bonding, insurance, and financial responsibility. In addition, Federal facilities are not eligible to receive Superfund-financing to respond to hazardous substance releases. Section 120 also established special requirements and timetables for Federal facilities and required the EPA to establish the Federal Agency Hazardous Waste Compliance Docket (the "Federal Facilities Docket"), which is a listing of certain Federal facilities that manage hazardous waste or may have hazardous substance release problems.



Subject to certain limitations, a Federal facility encompasses all contiguous land owned by a department, agency, or instrumentality of the United States. It includes all individual sites or units on the property, including Government-owned, contractor-operated sites. In contrast, a CERCLA facility is any building, structure, installation, equipment, pipeline, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, or any site or area where hazardous substances have been deposited, stored, disposed of, placed, or otherwise come to be located. Thus, it is possible to have several “CERCLA facilities” within the boundaries of a single “Federal facility.”

DOE Order 5400.4, “Comprehensive Environmental Response, Compensation, and Liability Act Requirements,” (issued October 1989) established DOE CERCLA policies and procedures within the framework established by the National Oil and Hazardous Substances Pollution Contingency Plan [a.k.a., the National Contingency Plan (NCP)], which established the requirements that implement CERCLA. The Order specified the responsibilities and authorities of various DOE offices for CERCLA compliance. In addition, the Order provided that it is DOE policy to respond to releases and potentially imminent releases of hazardous substances from DOE facilities in accordance with the provisions of CERCLA and the NCP, regardless of whether the facility is listed on the National Priorities List (NPL). This order was considered for update in 1993, but was subsequently cancelled under DOE's New Directive System Initiative. However, the requirements stated in the 1989 Order are still DOE's policies with respect to CERCLA.

DOE LIABILITY

The DOE may be subject to CERCLA liability in several different circumstances. As the owner of property on which a release or threatened release has occurred, the DOE is a PRP. In these circumstances, the DOE will be responsible for all of the activities and costs associated with remediating the release of hazardous substances at the DOE site. As a generator of substances transported off-site to another location where a release has occurred, the DOE is a PRP. In some situations where the DOE is a PRP and subject to liability for the costs of ensuring that the release is addressed appropriately, the DOE may look to recover some portion of the costs of cleanup from third parties who are also PRPs. Several scenarios are possible. For example:

- i A hazardous substance is released at a DOE site as a result of DOE activities. The DOE is a PRP and is liable for the costs of and for coordinating activities related to site cleanup.
- i Land presently owned by the DOE contains a release of hazardous substances caused by the previous landowner or some other party. As the current landowner, the DOE is a PRP and thus, liable for cleanup costs. However, the previous owner or other party is also a PRP and may be financially liable for site cleanup.



- i The DOE has arranged for the treatment or disposal of hazardous wastes on land from which a release of hazardous substances has occurred. As the generator of hazardous substances and the party that arranged for their disposal, the DOE is a PRP and is liable for the costs of response at the site. Any other party who arranged for the disposal of hazardous substances at the site, as well as the current and previous owners of the site, are also PRPs and may be liable for costs of response.
- i A hazardous substance is released on land adjacent to a DOE site. Through migration, the release is entering and affecting the DOE site. The DOE will be responsible for cleanup of the release on DOE land, but may compel the PRP to remediate the site or seek to recover costs from the adjacent landowner or another PRP.
- i Defenses to liability are extremely limited and stipulate that the release was caused by an act of God, an act of war, or a third party who was not a PRP employee and who did not have a contractual relationship with the PRP.

STATUTORY AND REGULATORY FRAMEWORK

CERCLA, as amended by SARA in 1986, gives broad authority to the EPA to address the problems of uncontrolled releases of hazardous substances. Federal departments and agencies, including the DOE, have a variety of CERCLA response authorities delegated to them in the NCP and through executive orders. The EPA's authority includes the power to take any response action necessary to protect human health or the environment or order a responsible party to take such action subject to EPA oversight and approval. The EPA can issue administrative orders and negotiate consent orders or other agreements between the EPA and a responsible party to specify the actions, timelines, roles, and responsibilities of each party in the cleanup process. The EPA can initiate court actions to compel compliance with orders, recover EPA-incurred costs, or monitor response actions against parties that are not Federal agencies.

CERCLA RELEASES

CERCLA response authority is triggered by a "release" or a "substantial threat of a release" of hazardous substances into the environment. CERCLA defines "release" as any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of hazardous substances into the environment. The definition of a release includes the abandonment or discarding of barrels, containers, and other closed receptacles containing a hazardous substance, pollutant, or contaminant. CERCLA excludes from the definition of release any "federally permitted release" [Section 101(10)]; releases solely within a workplace; emissions from motor vehicles; and releases of source, by-product, or special nuclear material from a "nuclear incident" [as defined by the



Atomic Energy Act (AEA)] that is subject to financial protection requirements established under Section 170 of the AEA, or releases of such materials from a mill processing site designated under section 102(a)(1) or 302(a) of the Uranium Mill Tailings Radiation Control Act [Section 101(22)].

CERCLA HAZARDOUS SUBSTANCES

CERCLA's definition of a "hazardous substance," as specified in Section 101(14), incorporates several lists of substances regulated under other environmental programs. A CERCLA hazardous substance includes substances defined as "hazardous waste" under the Resource Conservation and Recovery Act (RCRA), as well as substances regulated under the Clean Air Act, Clean Water Act, and Toxic Substances Control Act. In addition, any element, compound, mixture, solution, or substance specifically designated by the EPA Administrator as a "hazardous substance" under Section 102 is subject to CERCLA response authority if released in a quantity exceeding the "reportable quantity" established by the EPA (codified in 40 CFR Part 302). CERCLA's definition of hazardous substance specifically excludes petroleum and natural gas; thus, CERCLA authority may not be used to respond to releases of these substances.

CERCLA also authorizes response actions to address releases of "pollutants or contaminants" that may present an imminent and substantial danger to the public health or welfare" [Section 104(a)]. Pollutants or contaminants include any element, substance, compound, or mixture which, after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, will or may reasonably be anticipated to cause illness, death, or deformation to any organism [Section 101 (33)].

THE NATIONAL CONTINGENCY PLAN

CERCLA is implemented by the National Oil and Hazardous Substances Pollution Contingency Plan, known as the NCP (40 CFR Section 300). The NCP contains a step-by-step process for responding to releases of hazardous substances and oil. Additionally, it defines the roles and responsibilities of the EPA, other Federal agencies, States, private parties, and communities when responding to hazardous substances released into the environment.

Key components of the CERCLA process outlined in the NCP include the following:

- i Site discovery.
- i Reporting.
- i Site assessment.
- i Removal actions.



- i Remedial actions.
- i Enforcement activities.
- i State involvement.
- i Public participation.
- i Natural resource damage assessments.

Site Discovery: Occurs when an individual determines that a hazardous substance(s) release has occurred, a release is suspected, or the threat of a release exists. Once a potential site has been discovered, the responsible Federal agency must determine whether a release or substantial threat of release exists and whether the release poses a threat or potential threat to human health or the environment.

Reporting Requirements: Are triggered as soon as any person in charge of a facility has knowledge of a release of hazardous substances exceeding reportable quantities [other than a federally permitted release as defined in Section 101(10)]. Responsible officials who fail to provide proper notice of a release can be fined and imprisoned for up to 3 years.

Site Assessment: Identifies, evaluates, and ranks hazardous waste sites and identifies affected parties to gain an understanding of the nature of the threat posed by a site and, if warranted, collect accurate data to develop a Hazard Ranking System (HRS) score used to list the site on the NPL.

Removal Actions: Are short-term actions intended to stabilize or cleanup an emergency incident or site that poses an imminent threat to human health or the environment. Examples of removals include restricting access to sites contaminated by a release and removal and disposal of leaking barrels.

Remedial Actions: Are generally longer-term, more costly actions aimed at achieving a permanent remedy. These actions occur at sites that pose a threat to human health and the environment, but are not immediately threatening, and which require comprehensive evaluation to select an appropriate remedy.

Enforcement Activities: Are undertaken to encourage or, if necessary, compel a PRP to clean up a site or to recover from the PRP the costs of cleanup or damages resulting from the release. With respect to enforcement, CERCLA:

- i Authorizes the Federal Government to recover from PRPs the costs incurred in taking response actions.



- i Imposes civil penalties for violations of requirements established by CERCLA, compliance orders, or agreements.
- i Provides criminal sanctions for failure to report releases of hazardous substances or for providing false or misleading information regarding releases.

State Involvement: Is authorized and encouraged by the NCP because State and Federal authorities often overlap. CERCLA authorizes the EPA to allow States with the necessary expertise and resources to act as a lead agency at certain non-Federal facilities. At State-lead sites, the EPA plays a secondary role and functions as the support agency. However, the EPA retains approval authority over all response selection decisions. Where States are not the lead agency, CERCLA provides for State involvement in most phases of enforcement, removal actions, site assessments, and remedial actions. With respect to DOE facilities, State involvement is often formalized through an Interagency Agreement (IAG) between the State, EPA, and DOE, which specifies the State's roles and responsibilities.

Public Participation: Is encouraged because public concern for the environment is high and because cleanup activities often impact communities near the sites. CERCLA provides for the following:

- i Establishes extensive public participation requirements.
- i Authorizes Technical Assistance Grants (TAGs) to allow citizens living near certain CERCLA remedial action sites to hire experts to evaluate the complexities of site situations.
- i Requires the establishment of information repositories and administrative records to document site activity and response action decisions.

Natural Resource Damage Assessment: Is the process through which trustees determine the amount of monetary damages the public should receive as compensation for injury resulting from a release of a hazardous substance or oil spill. When seeking such damages from PRPs, trustees must determine:

- i That one or more of its natural resources have been injured.
- i That the injury is connected to a hazardous substance release or an oil discharge for which the PRP is liable.
- i The extent of the injury.
- i The monetary value of the injury.
- i How to use any sums recovered to restore, replace, or acquire the equivalent of the injured natural resources.



THE RESPONSE ACTION PROCESS

Site assessment is the first phase of the CERCLA response program. This phase identifies, evaluates, and ranks hazardous waste sites and identifies affected parties. The overall goals of site assessments are to gain an understanding of the nature of the threat posed by a site, if warranted; collect accurate data to develop an Hazardous Ranking System score for the site; and, again if warranted, prepare for listing the site on the NPL.

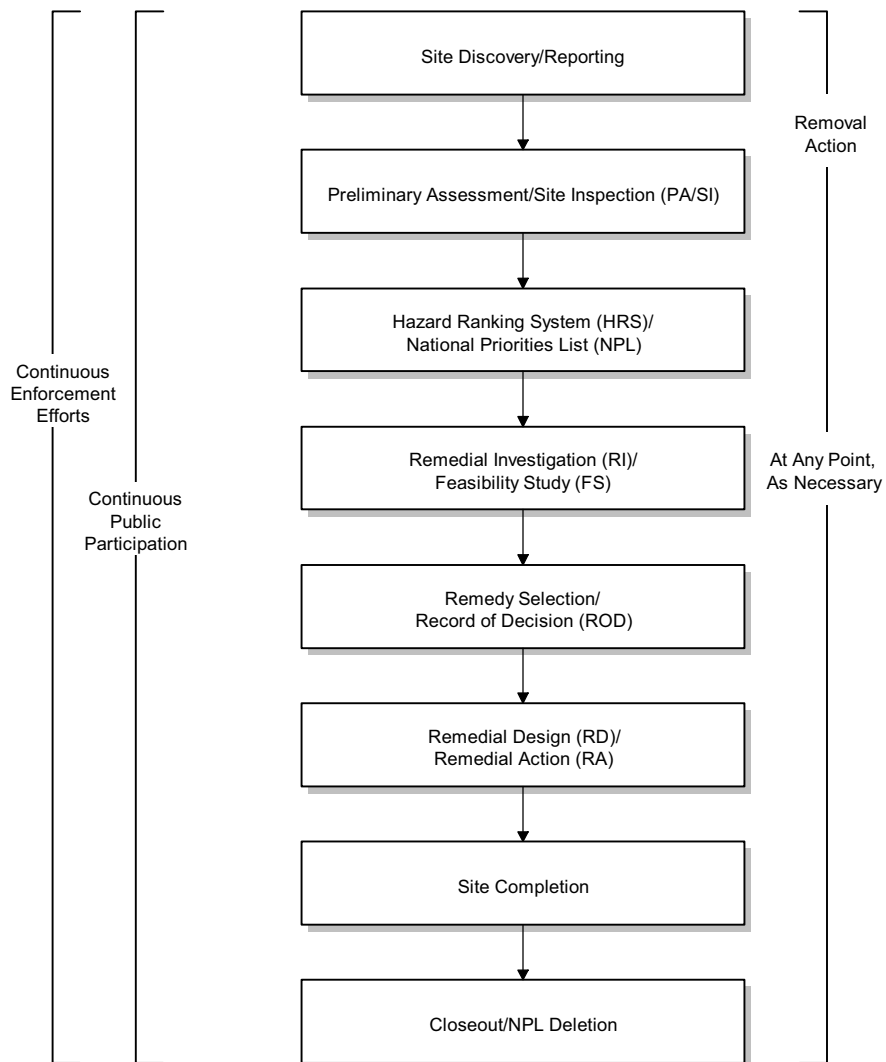
The NCP outlines the steps that the EPA and other agencies must follow when responding to hazardous substance releases. The site evaluation process for responding to hazardous substance releases under the NCP is as follows:

- 1 **Site Discovery/Reporting** - identify places where a hazardous substance release or threat of release may exist.
- 1 **Preliminary Assessment/Site Inspection** - assess the degree of contamination.
- 1 **Removal Action** - if the assessment reveals there is an emergency requiring immediate action, take the immediate “removal” action to remove or stabilize the threat.
- 1 **Hazard Ranking System (HRS) Scoring** - if the assessment reveals remedial action may be required, begin the “remedial” action evaluation process [may result in a listing on the National Priorities List (NPL)].
- 1 **Remedial Investigation/Feasibility Study (RI/FS), Record of Decision (ROD), Remedial Design/Remedial Action (RD/RA)** - if the evaluation indicates that remedial action is necessary, conduct an analysis of the specifics of the contamination (e.g., affected populations) and select, design, and construct the remedy.

The critical steps in the CERCLA response process are illustrated in Figure 2-1.



Figure 2-1
The CERCLA Response Action





SITE DISCOVERY/REPORTING

As soon as any person in charge of a facility has knowledge of a release of hazardous substances exceeding reportable quantities [other than a federally permitted release as defined in CERCLA Section 101(10)], CERCLA requires that such release be reported. Specifically, CERCLA Section 103(b)(3) requires that the person in charge of a facility from which a hazardous substance exceeding reportable quantities has been released must immediately notify the National Response Center (NRC) at 1-800-424-8802. Reportable quantities have been developed for all CERCLA hazardous substances and are listed in 40 CFR Part 302. Any responsible official that fails to provide proper notice of a release can be fined and imprisoned for up to 3 years.

Upon receiving notification, the NRC will in turn notify other appropriate Government authorities. In addition, it may be necessary to satisfy State reporting requirements. The NRC needs the following information to properly characterize the release:

- i Location of release.
- i Type(s) of material(s) released.
- i Estimate of quantity involved.
- i Possible source of release.
- i Date and time of release.
- i Danger to public health and safety and the environment.

The report of the release or potential release is entered into the EPA's Office of Solid Waste and Emergency Response Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database, the Federal Facilities Docket database, and the Emergency Response Notification System database. These databases are used by the EPA to track the progress of potential sites through the CERCLA process.

PRELIMINARY ASSESSMENT

If the PA indicates that a release may pose a potential hazard to human health or the environment, a PA should be conducted. A PA should also be conducted if a site has been placed on the Federal Facilities Docket. The PA determines the size of the site, the types and quantities of substances most likely to



have been released, the local hydrological and meteorological conditions, the population at risk, and the potential environmental impacts. The PA evaluation examines four hazardous substance exposure routes called pathways. The examination of pathways is the basic structure of the HRS.

The PA is designed to distinguish between sites that pose little or no threat to human health and the environment and sites that require further investigation. The PA also identifies sites requiring assessment for possible emergency response actions. The PA entails a thorough review of all available information about the site, which culminates in a report that contains findings and formal recommendations. The PA has four primary goals:

- (1) To determine if further action is required.
- (2) To compile existing information to support development of a HRS score.
- (3) To identify sites that require immediate response.
- (4) To set priorities for site inspections.

The PA is based on available information. This includes, but is not limited to, facility files and records; other Federal, State, and local agency files and records; well logs; geological, topographical, hydrological, and meteorological data; and interviews with Federal, State, DOE, and local personnel. After completion of the PA, a preliminary HRS score for the site is determined. This is accomplished through completion of the PA scoresheet. The scoresheet uses a simplified version of the HRS for calculation purposes.

When the PA is completed, a report must be prepared that describes the probable nature of the release and recommends what, if any, further action is warranted. The PA report should clearly reference the sources of all information.

Following a PA, a Site Evaluation Accomplished (SEA) determination is made if no further steps to list the site on the NPL will be taken. Generally, a SEA determination is made if the PA demonstrates that the site's preliminary HRS score is below 28.50. A SEA decision does not mean that there are not any hazards associated with the site; it only means that the location is not a potential CERCLA NPL site. Sites that receive a SEA determination may still need to be remediated. Although the procedures for remediation of such sites are not mandated by CERCLA or the NCP, the DOE policy established in DOE Order 5400.4 is to respond to releases and potentially imminent releases of hazardous substances from DOE facilities in accordance with the requirements of CERCLA and the NCP. In addition, many States have statutes requiring that sites not addressed by CERCLA, but which do pose a potential hazard, be addressed in accordance with State requirements.



SEA decisions and justifications should be clearly stated in the PA report. SEA decisions can be made at any time during the site assessment process. Additionally, at any time, SEA decisions can be reviewed and overturned if subsequent information indicates that the site might present a risk or potential risk.

SITE INSPECTION

If the PA indicates that a release or suspected release may threaten human health or the environment but does not pose an immediate threat, the NCP specifies that a more extensive study, the Site Inspection (SI), should be performed. The SI builds on and supplements the PA. It identifies sites that require collection of additional data to rank the site's hazard potential, document a HRS score, and, assist in determining if the site requires emergency response, remedial action, or no further action under CERCLA.

Typically, the SI involves a site visit and sample collection to define and further characterize the site's problems. Prior to conducting field sampling, a sampling and analysis plan should be developed. This plan should ensure obtaining data of sufficient quality and quantity. In addition, a quality assurance project plan should be developed, which should describe policy, organization, and functional activities, and the data quality objectives and measures necessary to obtain adequate data for use in site evaluation and scoring.

If initial samples do not provide enough information to prepare an HRS score, an Expanded SI (ESI) may be necessary. The objective of an ESI is to gather the information necessary to enable the preparation of a HRS score. If a site does not pose an immediate threat and does not receive a HRS score above 28.50, the DOE must determine what further actions are warranted and the priority those actions will receive.

After all data generated from the SI are evaluated, the NCP specifies that an SI report be prepared, which includes all supporting documentation. This report includes a description and history of the nature of the hazardous substance and how it has been handled, known contaminants and pathways of migration of contaminants, an identification and description of human and environmental targets, and a recommendation on whether further action is warranted.

HAZARD RANKING SYSTEM (HRS)

Based on the PA/SI, an HRS score is developed to calculate the relative risks to public health and the environment posed by the site and the site's eligibility for the NPL. The HRS is a numerically based scoring system that assigns each site a score ranging from 0 to 100. Sites proposed for the NPL must score 28.5 or higher. The HRS evaluates the population at risk; the potential for drinking water



contamination, direct human exposure, and ecosystem impacts; damages that may affect the human food chain; and health risks due to contamination of surface water, ground water, soil, and ambient air. The HRS examines the following four pathways of exposure:

- (1) Groundwater migration.
- (2) Surface water migration.
- (3) Soil exposure.
- (4) Air migration.

NATIONAL PRIORITIES LIST

Sites with HRS scores of 28.5 or higher are considered for the NPL. These sites represent the Nation's priority hazardous substance release sites and are eligible for Superfund-financed remedial action (40 CFR Section 300.425). However, the Trust Fund cannot be used at facilities owned by agencies or instrumentalities of the Federal Government, except to provide alternative drinking water supplies in situations where another PRP has contributed to the release at the site.

In addition to scoring 28.5 or above on the HRS, there are two additional ways sites become eligible for the NPL:

- (1) Each State may designate one site to be its highest priority.
- (2) The Agency for Toxic Substances and Disease Registry (ATSDR) issues a health advisory, the EPA determines the site poses a significant threat to public health, and the EPA anticipates it will be more cost effective to use remedial authority rather than removal authority.

Sites are added to the NPL through a three-stage rulemaking process:

- 1 **Stage 1: Proposed Rule**—EPA Headquarters reviews the HRS packages and publishes the proposed rule, which contains recommended additions to the NPL, in the Federal Register.
- 1 **Stage 2: Public Comment Period**—The public can comment in writing, typically for 60 days, about the proposed additions. The EPA responds in writing to all comments received and makes the responses available in the Superfund docket at EPA Headquarters and appropriate Regional Offices.



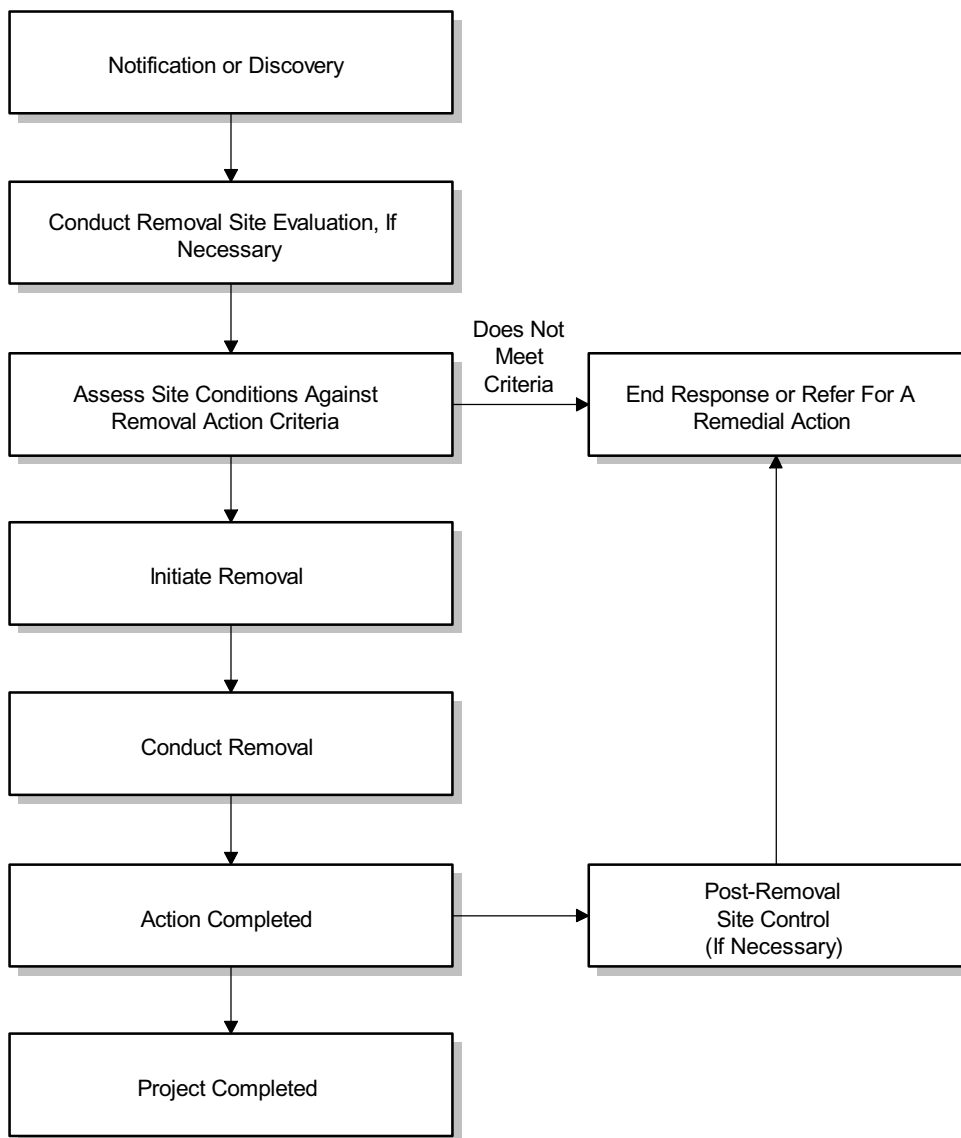
- 1 **Stage 3: Final Rule**—The EPA publishes the final rule, containing a list of new NPL sites, in the Federal Register.

REMOVAL ACTIONS

Removal actions are generally short-term responses taken to abate or mitigate imminent substantial threats to human health and the environment related to releases of hazardous substances. The need for removal actions could be triggered, for example, by the burning, leaking, or exploding of hazardous substances, or hazardous occurrences that must be cleaned up in the immediate future. Typical removal actions are often in response to an incident related to facility operations; illegal, unauthorized dumping of hazardous substances; or transportation-related accidents involving the release or potential release of hazardous substances. Typical removal activities include removing leaking drums, restricting public access at sites of unauthorized dumping, and excavating highly contaminated soils. Removal actions may be conducted at any time after site discovery, even when a site is also subject to ongoing remedial action. Figure 2-2 outlines the removal process established by the NCP.



**Figure 2-2
The Removal Process**





CERCLA removal actions fall into three categories:

- (1) **Emergency Removal Actions:** Taken in response to releases that require action within hours of the determination that a removal is appropriate. An emergency removal action may be required where hazardous substance concentrations are at or near areas of high human activity (i.e., residential or recreational locations) or where a fire or explosion has occurred. Typical emergency removals may require the installation of fences, warning signs, or other security or site control measures; the use of chemicals to retard the spread of the release or mitigate its effects; the removal of drums, barrels, tanks, or other containers to reduce the likelihood of spills, leaks, and exposure to humans, animals, or the food chain; and the provision of alternative water supplies to reduce the likelihood of exposure to contaminated water.
- (2) **Time Critical Removal Actions:** Generally initiated within 6 months and typically involve dangerous concentrations of acutely toxic substances, the threat of rapid and/or wide off-site migration, and the likelihood or acute threat of fire or explosion at the site. The excavation or removal of highly contaminated soils, and containment, treatment, disposal, or incineration of hazardous materials is often required.
- (3) **Non-time Critical Removal Actions:** Taken when a planning period of more than 6 months is available before on-site activities must begin. Sites that fall in this category are typically secure, near no major population centers, and contain stable storage containers. Examples of non-time critical removals include the removal of stable drums discovered during a remedial action; the excavation of low-level radioactive materials from property with restricted access; the installation of drainage controls (runoff or run-on diversions) to reduce migration of hazardous substances; the stabilization of berms, dikes, or impoundments; and the capping of contaminated soils or sludges to reduce migration.

CRITERIA FOR CONDUCTING A REMOVAL ACTION

Following discovery and notification of a release, a removal site evaluation may be conducted, as appropriate, to determine if a removal action should be initiated. A removal site evaluation is appropriate if additional site data are needed to determine whether the site poses a risk to health, welfare, or the environment. Conversely, a removal site evaluation is not necessary when existing site data demonstrates that a risk exists, which warrants a removal or remedial action.

In the event a removal site evaluation is appropriate, Section 300.410(c)(1) of the NCP specifies that the first phase of the evaluation should be based on readily available information, such as information obtained from site discovery and initial observation of the site, including the following:



- i Identification of the source and nature of release.
- i Evaluation of the threat to public health.
- i Evaluation of the magnitude of any threat.
- i Determination of whether a non-Federal party is undertaking a proper response.

If additional information is needed, a removal site evaluation may include perimeter or off-site inspection as well as on-site inspection.

The NCP specifies that the appropriateness of a CERCLA removal action should be determined based on information obtained before or developed by the removal site evaluation; any additional information developed by a removal site evaluation, if conducted; and an assessment of current site conditions. When there exists a threat to health, welfare, or the environment, the NCP authorizes a CERCLA removal action. Determining whether a threat exists, which warrants a removal action, should be based upon a consideration of the following factors specified in the NCP (40 CFR Section 300.415):

- i Actual or potential exposure to nearby human populations, animals, or the food chain.
- i Actual or potential contamination of drinking water supplies or sensitive ecosystems.
- i Hazardous substances, pollutants, or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release.
- i High levels of hazardous substances, pollutants, or contaminants in soils largely near the surface that may migrate.
- i Weather conditions that may cause substances to migrate or be released.
- i Threat of fire or explosion.
- i Availability of other appropriate Federal and State response mechanisms to respond to the release.
- i Other situations or factors that may pose threats to public health, welfare, or the environment.



REMEDIAL ACTIONS

Remedial actions are generally long-term actions, taken after any immediate threat is addressed by a removal action, to eliminate or substantially reduce threats to human health and the environment posed by a release or threatened release. In general, a remedial action is a long, complex process that may take millions of dollars and several years to complete. Remedial actions are designed to provide permanent solutions to hazardous substance releases. Remedial action sites often have multimedia contamination involving a combination of soil, surface water, and ground water contamination. Sites, which may encompass acres or square miles, must often be broken down into smaller components called “operable units.” The cleanup needs of operable units may differ and are often treated independently.

All remedial actions conducted in accordance with the NCP must comply with the following requirements [NCP Sections 300.430(e) and (f)]:

- i Protect human health and the environment.
- i Comply with applicable or relevant and appropriate requirements (ARARs).
- i Utilize permanent solutions and alternative treatment technologies to the maximum extent possible.
- i Be cost effective.
- i Provide for State and community participation.

CERCLA authorizes the EPA to enter into site-specific agreements with other Federal agencies to specify responsibilities, milestones, and requirements for the conduct of remedial activity. The agency that plans, carries out, and/or finances the cleanup is known as the lead agency. The DOE is usually the lead agency for CERCLA remedial action sites at DOE installations.

The remedial action process is made up of the following six phases:

- (1) Remedial Investigation (RI).
- (2) Feasibility Study (FS).
- (3) Selection of Remedy/Record of Decision (ROD).
- (4) Remedial Design (RD).

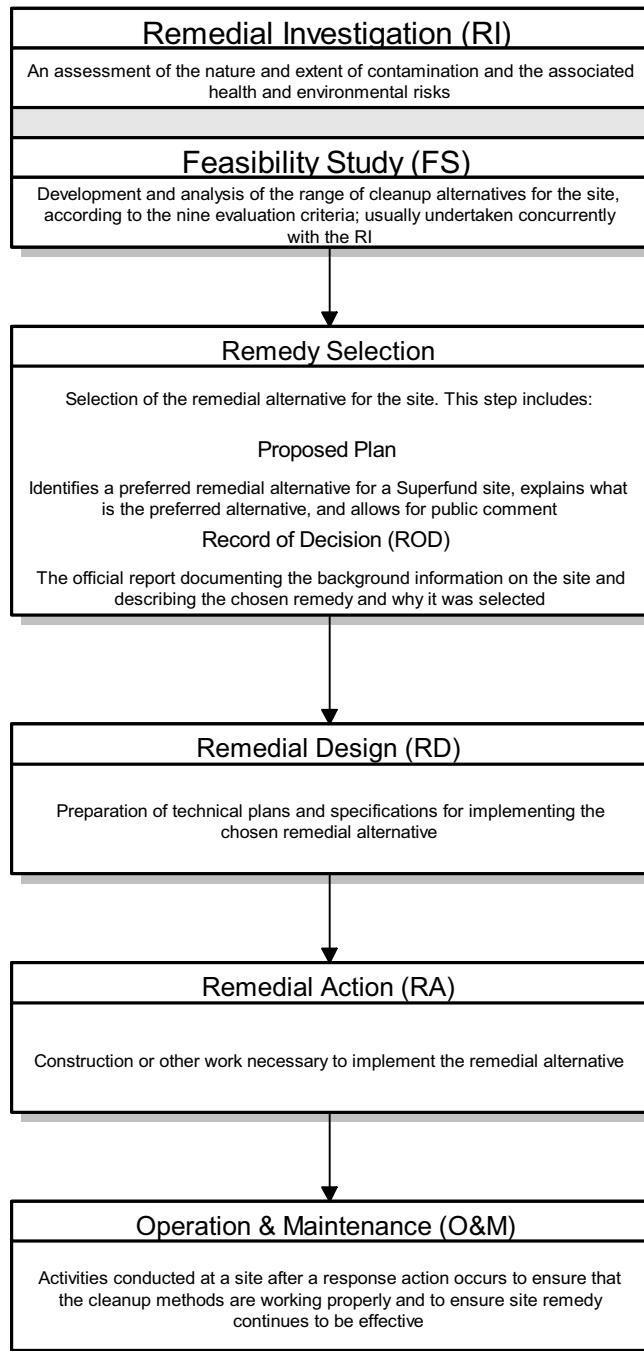


- (5) Remedial Action (RA).
- (6) Operation and Maintenance (O&M).

Each of these six phases is outlined in Figure 2-3.



**Figure 2-3
The Remedial Process**





REMEDIAL INVESTIGATION

During the remedial investigation/feasibility study (RI/FS) phases of the remedial action, site conditions are studied, problems identified, and cleanup alternatives evaluated. The RI/FS process may take 2 years or more to complete. Specifically, an RI, which involves a comprehensive examination of site characteristics, determines the nature and extent of contamination and focuses on gathering information necessary to develop and evaluate remedial alternatives. The primary objective of an FS is to ensure that appropriate remedial alternatives are developed and evaluated. The FS compares the advantages and disadvantages of each remedial alternative. Possible remedial alternatives include removing hazardous substances from the site, safely containing the waste at the site, or destroying the waste at the site.

If a site is placed on the NPL, an RI must be performed to further assess the site's condition. For Federal facilities, the RI must be commenced within six months of the NPL (in accordance with CERCLA Section 120). The RI is a more detailed investigation than the SI and involves the comprehensive examination of site characteristics. Information gathered during the RI will be used to develop and evaluate cleanup alternatives.

The RI consists of three phases. The initial *planning phase* is a project scoping phase, which identifies the type and sequence of site activities. Completion of this phase should result in four plans:

- (1) **Workplan:** Documents the decisions made and describes the steps required to conduct the RI and FS.
- (2) **Sampling and Analysis Plan (SAP):** Specifies how sample collection activities are to be conducted in accordance with technically accepted protocols.
- (3) **Health and Safety Plan (HASP):** Identifies potentially hazardous operations and prescribes protective measures for on-site workers, the surrounding community, and the environment.
- (4) **Community Relations Plan (CRP):** Documents community concerns at a site, identifies the community relations objectives, and specifies how the objectives will be met.

The second phase of the RI, *site characterization*, builds on the planning phase and includes implementation of the project plans. Typical activities include conducting field investigations to define a site's physical characteristics; analyzing samples to support remedy selection, cost recovery, or other legal actions; defining the nature and extent of the threat; conducting a baseline risk assessment; evaluating additional data needs; and identifying ARARs.



Identification of ARARs, which are substantive cleanup standards established by other environmental laws, is fundamental to cleaning up CERCLA sites. ARARs are determined on a site-by-site basis and may include any standard, requirement, criterion, or limitation under any Federal or State environmental law that has been identified by the State.

Treatability studies, the third and final phase of the RI, provide data to support remedy selection and implementation. Treatability studies are performed when a technology being considered cannot be evaluated adequately on the basis of available information. For example, new treatment technologies, such as phytoremediation, which uses plants to assist in remediation, do not have a proven track record and must be tested to ensure they are appropriate for the contamination at a particular site. If a technology has performance and cost data, bench-scale tests are usually sufficient. At the close of this phase, a report detailing the technology's effectiveness, implementability, environmental impacts, and costs should be prepared and incorporated into the RI report.

FEASIBILITY STUDY

The FS compares the advantages and disadvantages of each remedial action alternative. It is generally performed concurrently with the RI. However, data collected during the RI may influence the remedial action alternatives analyzed in the FS.

The first phase of the FS entails further developing and refining general response actions into specific remedial action alternatives. These alternatives, including a no-action alternative, must undergo a detailed analysis to identify the most effective option for the site.

Remedial action alternatives are evaluated based on nine criteria. The first two are referred to as **threshold criteria** because they are the minimum requirements any alternative must meet to be selected as a remedy. These threshold criteria are:

- (1) Overall protection of human health and the environment.
- (2) Compliance with ARARs.

The second set of five criteria are **balancing criteria**. These criteria are used to evaluate trade-offs between alternatives so that the best option for a particular site will be chosen. These criteria are:

- (3) Long-term effectiveness and permanence.
- (4) Reduction of toxicity, mobility, or volume through treatment.
- (5) Short-term effectiveness.



(6) Implementability.

(7) Cost.

The last two criteria are:

(8) State acceptance.

(9) Community acceptance.

These are called *modifying criteria* because new information or comments from the State or surrounding community may change the preferred remedial action alternative or cause another alternative to be considered.

REMEDY SELECTION

The preferred remedy is selected from the list of alternatives identified during the RI/FS and presented to the public for comment in a Proposed Plan. Once comments have been evaluated, a final remedy is selected and documented in the Record of Decision (ROD).

The ROD, which is a public document, contains a rationale for the remedy selected and establishes performance standards or goals for the site. It also provides a plan for site design and remediation.

In the first step of the remedy selection process, the lead agency identifies the alternative that provides the best balance of trade-offs in light of the nine remedy selection criteria. The lead agency presents this preferred alternative for public comment in a document called the Proposed Plan.

The Proposed Plan should briefly describe the remedial alternatives analyzed, identify the preferred alternative, summarize the information relied upon to select the preferred alternative, and solicit public comment. To solicit public comment, a notice and brief analysis of the Proposed Plan are published in a major local newspaper of general circulation. The Proposed Plan is also made available at an information repository near the site. The public is given 30 days (which may be extended to 60 days upon timely request) to comment on the Proposed Plan and hold a public meeting. The NCP requires a verbatim transcript of public meetings to document public concerns and comments.

Following receipt of public comments on the Proposed Plan, the lead agency prepares a Responsiveness Summary, which contains all questions and comments raised by the public as well as the agency's responses. If the agency significantly changes the selected remedy as a result of comments, it must publish a revised Proposed Plan explaining the differences before completing the ROD.



The ROD documents the final remedial action selected for the site, provides a rationale for the selected remedy, and establishes performance goals and standards. In addition, the ROD provides a plan for remedy design and remediation.

In addition, the ROD should explain whether the remedy has changed since the Proposed Plan.

REMEDIAL DESIGN/REMEDIAL ACTION

The recommended cleanup is designed and undertaken during the remedial design/remedial action (RD/RA) stage. The design stage can take up to one year or longer. The time for completing the remedy varies according to the complexity of the site and remedy.

Once the remedy has been selected and approved, the RD stage follows. This is an engineering and permitting phase during which technical drawings and specifications are developed for the selected remedy. This phase consists of the following five steps:

- (1) Develop the RD project plan, select an Architectural/Engineering (A/E) firm, and prepare the Statement of Work (SOW).
- (2) Develop, review, and approve the RD and ensure that it is consistent with the ROD.
- (3) Obtain necessary permits, approvals, and site access (on-site CERCLA activities do not require permits).
- (4) Conduct community relations activities and develop the CRP.
- (5) Develop cost estimates for construction of the remedy.

Following completion and final approval of the RD package, actual implementation of the remedial action begins. The implementation phase requires the lead agency to conduct the following:

- i Procure a cleanup contractor to implement the remedial design and prepare the SOW.
- i Implement, monitor, and oversee cleanup activities and ensure that the remedy is constructed properly and in conformance with RD plans.
- i Complete a pre-final inspection, final inspection, and closeout report.



OPERATION AND MAINTENANCE

Site completion occurs when the remedy meets its designated environmental, technical, legal, and institutional requirements. However, once the construction is complete, the technical process necessary to remediate the site may continue for years. Thus, continuing site O&M activities are performed to maintain and monitor the effectiveness of the remedy and to ensure that no threat to human health or the environment arises.

In the last stage of the remedial process, the site transitions to the O&M stage. O&M activities are those measures required to maintain the effectiveness of response actions and may include ground water and air monitoring and maintenance of security measures. Generally, the lead agency will assume responsibility for O&M activities.

CLOSEOUT

To close out a site, all waste must be properly disposed of, all equipment decontaminated and demobilized, and all temporarily relocated citizens returned to their homes. A closeout report documenting that O&M activities will be performed must be prepared.

NPL DELETION/DEFERRAL

In 1995 and 1997, EPA issued new policies concerning the listing of properties on and deletion of listed sites from the NPL. An important change to DOE allows for the deletion of portions of NPL sites. Formerly, an entire site had to be cleaned up before it could be deleted from the NPL.

EPA's new definitions are:

Deletion: Act of removing a site or a parcel on a site from the NPL because cleanup is complete or because another cleanup authority can be used to remediate the site or parcel, making further CERCLA action unnecessary.

Deferral: Decision not to list or continue listing a site on the NPL, even if the site is otherwise eligible, and to allow other statutory authority to replace CERCLA response authority for handling remediation at the site.



NPL DEFERRAL/DELETION POLICY FOR FEDERAL FACILITIES

An amendment to CERCLA § 120(d) in the National Defense Authorization Act 1997 (Section 330), gave EPA the discretion to consider non-CERCLA cleanup authorities when making a listing determination for Federal facilities. Previously EPA did not consider whether a Federal facility was subject of the Resource Conservation and Recovery Act (RCRA) or another cleanup authority, such as the Toxic Substances Control Act (TSCA), when making a decision on the facility's eligibility for the NPL.

On November 24, 1997, EPA published an interim final policy entitled, "The National Priorities List for Uncontrolled Hazardous Waste Sites: Listing and Deletion Policy for Federal Facilities." This policy would allow Federal sites not yet on the NPL to be deferred from listing if currently being addressed under another statutory regime, and would permit the deletion of sites already on the NPL if these sites were to be addressed under another cleanup authority. The policy was designed to free CERCLA oversight resources and avoid possible duplication of effort.

EPA's interim final policy provides that a Federal facility should satisfy the following three criteria to be eligible for deferral:

- i The CERCLA site is currently being addressed by RCRA Subtitle C corrective action authorities under an existing enforceable order or permit containing corrective action provisions
- i The response under RCRA is progressing adequately
- i The state and community support deferral of the NPL listing.

NPL PARTIAL DELETION POLICY

On November 1, 1995, EPA announced a change in the Agency's NPL deletion policy (60 FR 55466). This change allowed for the deletion of discrete parcels on NPL facilities from the list if these parcels could meet the criteria for entire site deletion, as provided in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR Part 300). Previously, EPA had interpreted an NPL "site" to include the entire facility, thus prohibiting deletion of any part of a facility until all contaminated parcels had been remediated or no further CERCLA response action was deemed appropriate.

EPA recognized that while total cleanup of an entire installation may take many years, many parcels at a facility may have been cleaned up earlier or may never have been contaminated and are available for productive use. The partial deletion policy is designed to promote more rapid redevelopment of NPL properties and to communicate the completion of successful partial cleanups to interested purchasers.



EPA may delete portions of facilities from the NPL when no further response is required (i.e., response actions have been implemented, cleanup levels achieved, and the release of hazardous substances no longer poses a significant threat to public health and welfare or the environment) (40 CFR §300.245(e)). A portion of a site may be a defined geographic unit of the facility, such as groundwater, depending on the nature or extent of the release. If there should be a significant release from an entire site or a portion of the site that has been deleted from the NPL, the site or portion of the site may be restored to the NPL without going through the listing process.

If a site wishes to have a portion of a facility deleted from the NPL, it must petition EPA to do so. As part of EPA's Deletion Process, EPA is required to publish a Notice of Intent to Delete (NOID) and request public comment on the proposed deletion. On April 30, 1996, EPA provided guidance on its partial deletion policy (OERR Directive 9320.2-11) and established the information required to complete a NOID. The first successful partial deletion NOID was published in the April 11, 1996, Federal Register (61 FR 16068). This NOID serves as an example of the information required to petition EPA for a partial deletion and of the form to be followed. Hanford's 1100 area is an example of a successful partial deletion from the NPL.

NATURAL RESOURCE DAMAGE TRUSTEES

CERCLA Section 107(f)(2)(A) directs the President to designate Federal officials “who shall act on the behalf of the public as trustees for natural resources.” Certain Federal agencies, including the DOE, have been given natural resource “trustee” responsibilities.

Trustees are authorized to recover damages the public suffered as a result of a hazardous substance release or an oil spill on public lands. The recovery must be used to restore natural resources to their prior condition, rehabilitate the resource, or acquire the equivalent of the injured resource. The natural resource damage assessment (NRDA) process is the means by which trustees determine the amount of monetary damages the public should receive as compensation for injury to natural resources.

CERCLA REQUIREMENTS

CERCLA Section 120, added by SARA, addresses Federal facilities. CERCLA Section 120 provides that Federal departments, agencies, and instrumentalities are subject to the requirements of CERCLA. A major exception is that Federal facilities are not permitted to use Trust Fund monies to conduct cleanups. Pertinent guidelines, rules, regulations, and criteria apply to Federal facilities in the same manner and to the same extent as other facilities, with the exception of requirements pertaining to bonding, insurance, and financial responsibility.



The EPA's Federal Facilities Enforcement Office (FFEO) has responsibility for ensuring that Federal facilities comply with CERCLA. The primary goals of the OFFE are to assist EPA regions in reaching and implementing CERCLA cleanup agreements at Federal facility NPL sites and to ensure compliance with hazardous substance laws in a nationally consistent manner. For most removal and remedial activities at Federal facility sites, the appropriate Federal agency assumes the lead agency role for conducting or contracting out and overseeing all CERCLA activities.

CERCLA Section 120 establishes certain reporting requirements and timetables for Federal facilities. Section 120(c) requires the EPA to establish a Federal Agency Hazardous Waste Compliance Docket, which lists Federal facilities who have reported they are managing hazardous substances or releases of hazardous substances. The Docket identifies all Federal facilities to be evaluated for possible NPL listing, provides the location of the sites, as well as the responsible Federal agency and information that identifies how far along sites are in the site evaluation process. Once a Federal facility is placed on the Docket, CERCLA Section 120(d) requires that a PA and, if necessary, an SI must be conducted within 18 months.

If a Federal facility is listed on the NPL, CERCLA Section 120(e) requires the agency responsible for the site to begin an RI/FS, in consultation with the State and EPA, within six months of its listing. Additionally, cleanup must begin at the Federal facility no later than 15 months after RI/FS completion. The RI/FS is complete once the ROD is signed.

INTERAGENCY AGREEMENT

If a remedial action is necessary, Section 120(e) requires the Federal facility to enter into an IAG with the EPA within 180 days of the EPA's review of the RI/FS. This agreement provides the technical, legal, and management framework under which response at the Federal facility is conducted. The EPA policy is to have the State play an active role as partner and signatory to the IAG.

IAGs are enforceable by the parties to the agreement and by citizens and States using CERCLA Section 310's citizen suit provision. In addition, CERCLA Sections 122(l) and 109 authorize civil penalties for any failure or refusal to comply with the IAG.

TRANSFER OF FEDERAL PROPERTY

CERCLA Section 120(h) establishes certain requirements affecting the sale or transfer of real property by Federal agencies. Any contract for the sale or other transfer of such property on which a hazardous substance was stored for more than one year, or known to have been disposed of or released, must include certain information. Specifically, each contract and deed of sale must identify the type and



quantity of hazardous substances and the time at which such substances were stored, disposed of, or released on the property. In addition, the deed of sale must warrant that all necessary remedial action has been taken and indicate if any additional remedial action will be performed by the Federal agency.

Section 120(h) also requires that Federal agencies identify any real property on which Federal operations will be terminated and the property transferred, and on which hazardous substances or petroleum products were not stored for more than one year (or were known to have been disposed of or released). Such “uncontaminated property” must be identified on the basis of an extensive review of available records, a visual inspection of adjacent property, if permitted, and interviews with current or former employees.

EXECUTIVE ORDER 12580

Executive Order 12580, signed on January 23, 1987, addresses delegation of duties and powers assigned to the President under CERCLA. The Executive Order affects Federal facilities in several ways. First, it requires the NCP to provide for National and Regional Response Teams, which are composed of representatives from various Federal agencies, and to plan and coordinate preparedness and response actions. Second, the Order delegates to the EPA and various agency and department heads the functions of the President with respect to releases and responses to releases of hazardous substances. Third, it provides dispute resolution procedures if agreements concerning the selection of a remedial action cannot be reached.

In brief, Section 120 and Executive Order 12580 delegate CERCLA Section 104 response authority to Federal agencies, including the DOE, for releases on or originating from their facilities. This means that Federal agencies have the authority to conduct investigations and most response actions. Such response authority must be exercised in accordance with Section 120. In addition, because many States have programs that authorize State action in response to releases of hazardous substances, response actions must often be coordinated with both the State and the EPA.

EPA ENFORCEMENT AUTHORITY

CERCLA provides the EPA with the authority and tools necessary to respond directly or to compel PRPs to respond to releases or threatened releases of hazardous substances. Additionally, CERCLA imposes strict liability for response costs—no negligence or fault need be shown. When more than one PRP is involved and the harm is indivisible, joint and several liability, meaning one party can be held responsible for all of the harm, is imposed.



The EPA has been granted broad enforcement authority under CERCLA, such as:

- i Section 104 allows the EPA to require PRPs to provide information relevant to a release or threatened release, to enter a facility or property to investigate a release or threatened release, and to inspect and take samples from such properties.
- i Section 106 allows the EPA to unilaterally order site cleanups in cases of imminent and substantial endangerment.
- i Sections 107 and 113 authorize the EPA to initiate cost recovery actions in Federal court.

CERCLA Section 120 establishes the framework and contains several specific requirements applicable to EPA enforcement against other Federal agencies. EPA enforcement against Federal facilities differs from enforcement against private entities primarily in that agencies of the Federal Government may not sue one another in a court of law. Instead, other mechanisms exist by which the EPA may take enforcement action against Federal facilities.

The CERCLA Section 120 IAG is the primary mechanism used by the EPA for establishing the roles and responsibilities of the EPA, the State if appropriate, and the other Federal agency, with regard to conducting, supervising, and monitoring remedial actions. The EPA may negotiate the terms of the IAG with the Federal agency, any amendment to the IAG, or any subsequent compliance order, which may be necessary to ensure that remedial action responsibilities are satisfied. In the event that a dispute between the parties cannot be resolved, the EPA generally retains authority to require whatever action it deems appropriate. Generally, IAGs include provisions that specify the following:

- i Responsibilities and deadlines for completing required activities.
- i The parties' review and approval authority for particular activities and decisions.
- i Agreed-upon penalties for any failure to meet deadlines or comply with other requirements.

When the DOE is responsible for a remedial action, it may be required to enter into an IAG (sometimes referred to as a Federal Facility Compliance Agreement, Federal Facility Agreement, or Tri-Party Agreement) with the EPA and the applicable State(s), that specifies requirements concerning site assessments, the remedy selected, schedules for compliance, and reporting and recordkeeping requirements.

Section 109 of CERCLA provides the EPA with authority to assess civil penalties for a number of violations. In particular, with respect to Federal facilities, the EPA may assess an administrative penalty of up to \$25,000 for any violation of a CERCLA requirement, administrative order, consent decree, or



IAG. For ongoing violations, a penalty of up to \$25,000 may be assessed for each day the violation continues. In the event of a second or subsequent violation, the amount of the penalty may increase to \$75,000 per day.

Any violation of the Section 103 notice requirements may subject the responsible Federal employee to criminal sanctions, including imprisonment. In addition, criminal sanctions under Section 3008 of RCRA may be imposed against any Federal employee who knowingly treats, stores, or disposes of a RCRA hazardous waste without a RCRA permit. A release of hazardous substances without proper subsequent notice may constitute treatment, storage, or disposal of a hazardous waste. Department of Justice representation is not available to Federal employees charged with criminal violations.

CITIZEN SUITS

In addition to EPA enforcement powers, CERCLA Section 310 authorizes citizens to bring judicial action to enforce requirements established under CERCLA. Such citizen suits may be brought against Federal agencies that are alleged to be in violation of any standard, regulation, requirement, or order in effect under CERCLA. Violation of any provision of an agreement between the EPA and another Federal agency may also be subject to citizen suit.

The Federal court in which a citizen suit is filed has jurisdiction to enforce compliance with any standard, regulation, requirement, or order that has been violated. The court may order any action that may be necessary to correct the violation and impose civil penalties similar to the EPA's administrative penalties. The court may also award the costs of litigation, including attorney fees, to the prevailing party in a citizen suit.

COMMUNITY RELATIONS/PUBLIC PARTICIPATION

CERCLA Section 117 and the NCP require comprehensive community relations activities. The CERCLA program recognizes the public's rights and interests in hazardous substance cleanups and makes significant attempts to include communities in the decision making process. Furthermore, public participation provides an opportunity for all interested parties to become informed and involved, which facilitates influencing the development and implementation of response actions.

Community relations activities are conducted on a site-specific basis: Activities to be better tailored to meet the needs of specific communities. These activities are designed to encourage communication with affected citizens and enhance public participation in the decision making process.



The NCP requires the lead agency to conduct interviews with local officials, community residents, and other interested parties prior to commencing field work for the remedial investigation. The lead agency must prepare a formal, site-specific CRP based on information obtained from community interviews. These interviews specify community relations activities to be undertaken during remedial activity. In addition, at least one local information repository must be established to provide information of interest to concerned parties.

After preparation of the Proposed Plan, which outlines the preferred remedy proposed for selection, the lead agency must complete the following:

- 1 Publish a notice of availability and brief analysis of the Proposed Plan in a major local newspaper.
- 1 Make the Proposed Plan and any supporting analysis or information available to interested parties.
- 1 Provide an opportunity to submit comments on the Proposed Plan.
- 1 Provide an opportunity for a public meeting during the public comment period.
- 1 Keep a transcript of any public meeting held and make such transcript available to the public.

Prepare a written summary of all significant comments and relevant new information submitted during the public comment period.

When planning community relations activities under CERCLA, the public participation requirements of the National Environmental Policy Act (NEPA) should be kept in mind. The NEPA process requires agencies to employ “scoping” to identify the range of actions, alternatives, and impacts that should be analyzed in an environmental impact statement (EIS). Interested parties are invited to participate in the scoping process. In general, agencies must make diligent efforts to involve the public in preparing and implementing NEPA procedures. Agencies must provide public notice of and hold NEPA-related hearings and public meetings and provide notice of the availability of environmental documents. Public participation activities, under both CERCLA and NEPA, are conducted on a site-by-site basis. It is possible, with proper planning, to conduct activities that will satisfy both statutes. DOE Order 5400.4 specifies that, when remedial actions trigger NEPA requirements, it is the policy of the DOE to integrate the procedural and documentation requirements of CERCLA and NEPA, wherever practical.



CERCLA'S RELATIONSHIP TO OTHER LEGISLATION

Many laws have been enacted to protect the environment from the threat of hazardous substances. An understanding of these laws is necessary to appreciate how CERCLA fits into the Nation's environmental protection program. Each environmental statute has its own particular focus, whether to control the level of pollutants introduced into a single environmental medium, or to address a specific area of concern, such as pesticides or waste management. The most prominent statutes are set forth below. States may also have significant parallel or independent statutes that are not set forth below but should be considered.

RESOURCE CONSERVATION AND RECOVERY ACT

The Resource Conservation and Recovery Act of 1976 (RCRA), an amendment to the Solid Waste Disposal Act, 42 U.S.C. Section 6901 *et. seq.*, addresses the safe management of hazardous and nonhazardous municipal and industrial waste generated nationwide. RCRA established the following three distinct, yet interrelated, regulatory programs:

- (1) **The Solid Waste Management Program:** Sets national standards for the management of solid waste.
- (2) **The Hazardous Waste Management Program:** Sets national standards for hazardous waste management, provides for oversight of State implementation of RCRA, and includes corrective action authorities to address releases to the environment.
- (3) **The Underground Storage Tank Program:** Protects groundwater from leaking underground storage tanks.

RCRA and CERCLA are fundamentally different in that:

- 1 RCRA regulates the management of wastes from the moment of generation until final disposal (from "cradle to grave"), and provides "corrective action" authority for investigating and cleaning up contamination at or from RCRA Subtitle C facilities (treatment, storage, and disposal facilities). RCRA is primarily considered a regulatory statute.
- 1 CERCLA authorizes cleanup actions whenever a hazardous substance has been released or is threatened to be released. CERCLA addresses the problems of hazardous substance releases encountered at inactive or abandoned sites or problems resulting from spills that require emergency response. CERCLA is considered a remedial statute.



Although there are significant differences between RCRA and CERCLA, cleanups performed under these statutes may be similar. RCRA corrective actions and CERCLA response actions have parallel, but not identical procedures. The main difference lies in their focus: RCRA focuses on waste management and corrective action, while CERCLA focuses on cleanup activities.

CERCLA is most impacted by RCRA Subtitle C, the “Hazardous Waste Management Program.” RCRA regulations governing the management of hazardous waste affect many CERCLA response decisions, including which off-site disposal facility to use or which regulatory requirements to consider in implementing on-site response actions.

RCRA regulations may affect CERCLA remedy selection. For example, CERCLA requires that any remedy in which hazardous substances will remain on-site must attain ARARs (those substantive requirements, standards, criteria, or limitations under Federal or more stringent State environmental laws determined to be applicable or relevant and appropriate). Requirements under RCRA may be determined to be ARARs at some CERCLA sites. This means that whenever a remedial action involves the generation of hazardous waste that will remain on-site, the action must meet RCRA’s standards for treatment, storage, or disposal of such waste.

NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. Section 4321 *et. seq.*, created a formal, legal process for integrating environmental values into Federal decisionmaking and provided an umbrella under which compliance with several environmental laws could be integrated. NEPA’s broad goals are to preserve the environment and to incorporate environmental factors into Federal decisionmaking. The goals are accomplished in part by the requirement that Federal agencies prepare EISs for all “major Federal actions significantly affecting the quality of the human environment.” All agencies of the Federal Government are required to comply with the provisions of NEPA.

Some of the activities performed pursuant to CERCLA (e.g., removal and remedial actions) may be considered “major Federal actions” and thus, may be subject to the requirements of NEPA. There are at least two areas where the requirements of NEPA and CERCLA potentially overlap:

- (1) Project scoping/public participation.
- (2) Document preparation.

Because the requirements under both statutes are similar, opportunities for integration do exist.



If a decision to conduct a CERCLA action triggers NEPA, notification must be provided to affected States and Indian Tribes, and, if appropriate, State and Federal Natural Resource Trustees. The formal NEPA scoping process begins with publication of a Notice of Intent (NOI) in the Federal Register to prepare an EIS. Additional scoping activities required by NEPA regulations include the following:

- l Providing public notice of NEPA-related hearings, public meetings, and the availability of environmental documents.
- l Holding public hearings or meetings as appropriate.
- l Soliciting appropriate information from the public.
- l Making EISs and underlying documents available to the public.

DOE Order 5400.4 specified that, when remedial actions trigger NEPA requirements, it is the policy of the DOE to integrate the procedural and documentation requirements of CERCLA and NEPA, wherever practical. It is clear that the scoping efforts under CERCLA and NEPA are similar and that integration of the two is often possible. This concept was formalized in the Secretarial Policy on NEPA, issued in June 1994, which stated that DOE CERCLA documents will incorporate NEPA values, and establishes the opportunity, after consultation with stakeholders, to integrate the NEPA and CERCLA processes for specific proposed actions.

MONITORED NATURAL ATTENUATION DIRECTIVE

On December 8, 1997, EPA issued an Interim Final Directive (9200.4-17) on the Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites.

This Directive clarified the U.S. Environmental Protection Agency's (EPA) policy regarding the use of Monitored Natural Attenuation for the remediation of contaminated soil and groundwater at sites regulated under CERCLA and RCRA.

The Directive was issued to promote consistency in how monitored natural attenuation remedies are proposed, evaluated, and approved. As a policy document, it does not provide technical guidance on evaluating Monitored Natural Attenuation remedies.

Although the Directive provides guidance to EPA staff, to the public, and to the regulated community on how EPA intends to exercise its discretion in implementing national policy on the use of Monitored Natural Attenuation, it does not substitute for EPA's statutes or regulations, nor is it a regulation itself and, thus it does not impose legally-binding requirements on EPA, States, or the regulated community, and may not apply to a particular situation based upon the circumstances.



The Directive stated that “EPA remains fully committed to its goals of protecting human health and the environment, remediating contaminated soils and groundwater, and protecting uncontaminated groundwaters and other environmental resources at all sites being remediated under its programs. EPA does not consider monitored natural attenuation be be a “presumptive” or “default” remedy—it is merely one option that should be evaluated with other applicable remedies. EPA advocates using the most appropriate technology for a given site. EPA does not view monitored natural attenuation to be a “no action” or “walk-away” approach, but rather considers it to be an alternative means of achieving remediation objectives that may be appropriate for a limited set of site circumstances where its use meets the applicable statutory and regulatory requirements. As there is often a variety of methods available for achieving a given site's remediaton objectives, monitored natural attenuation may be evaluated and compared to other viable remediation methods (including innovative technologies) during the study phases leading to the selection of a remedy.”

“Monitored natural attenuation should be used very cautiously as the sole remedy at contaminated sites. Furthermore, the availability of monitored natural attenuation as a potential remediation tool does not imply any lessening of EPA's longstanding commitment to pollution prevention. Waste minimization, pollution prevention programs, and minimal technical requirements to prevent and detect releases remain fundamental parts of EPA waste management and remediation programs.”

The Directive also recognized the uncertainties associated with the potential effectiveness of monitored natural attenuation to meet remedial objectives that are protective of human health and the environment, and noted “**source control and performance monitoring are fundamental components of any monitored natural attenuation remedy**” (emphasis is EPA's).