Records of Decisions and More at Federal Facilities

FEDERAL FACILITIES ACADEMY WEBINAR
SEPTEMBER 12,2024
FEDERAL FACILITIES RESTORATION AND REUSE OFFICE

The purpose of this course is to discuss how early and interim actions, Explanation of Significant Difference (ESDs), Records of Decisions (ROD) Amendments, and adaptive management can be used at Federal Facility sites listed on the National Priorities List (NPL) in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA

Group Poll:

What types of cleanup decisions have you been involved with as part of the CERCLA process? Could be ROD, ROD Amendment, ESD, Removal Actions…

Although the ROD is a critical milestone in the CERCLA process, there are a number of other types of decision documents that can be used as part of an overall remediation plan.

Course Overview

- CERCLA process at Federal Facility National Priority List (NPL) Sites
- Removal Actions
- Records of Decision (RODs)
- Interim RODs
- Post-ROD Decisions
  - Explanation of Significant Difference (ESD)
  - ROD Amendments
- Five-Year Review impacts on decision documents

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This course will discuss how different decision documents can be used in Federal Facility Superfund cleanups. We will also discuss the impacts five-year reviews can have on remedies at a site.

How can cleanup decisions complement each other?

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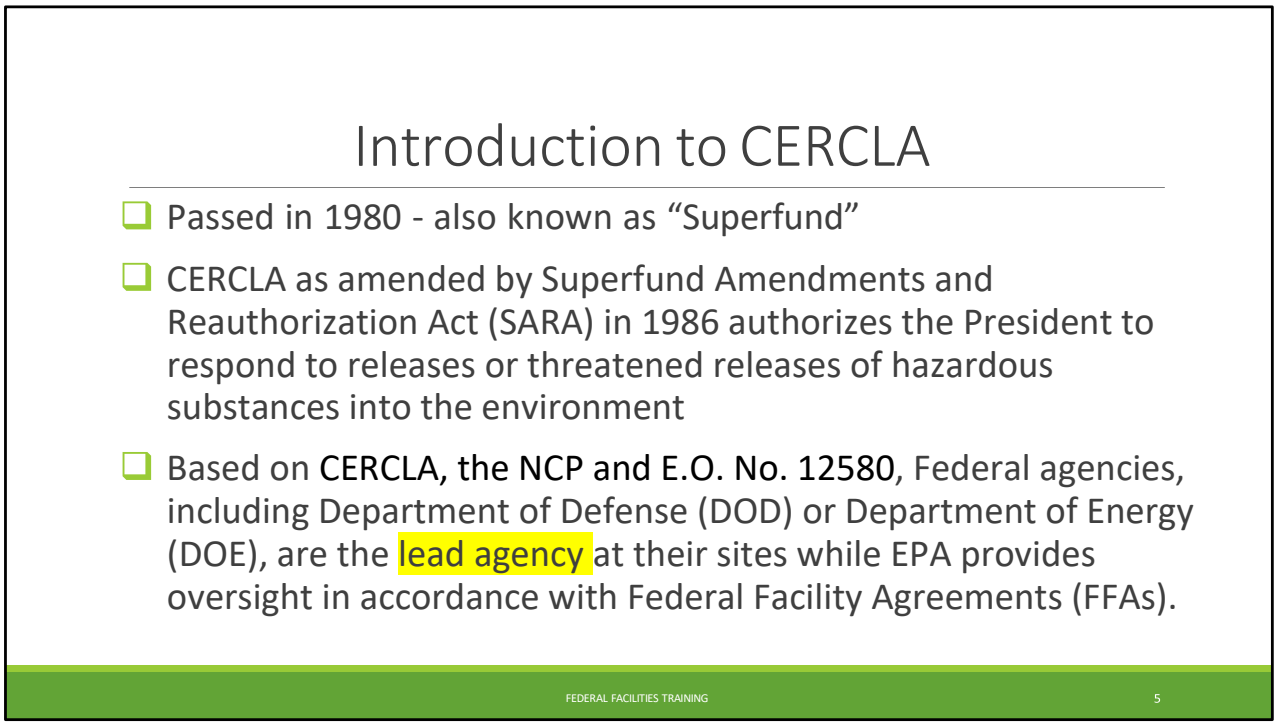
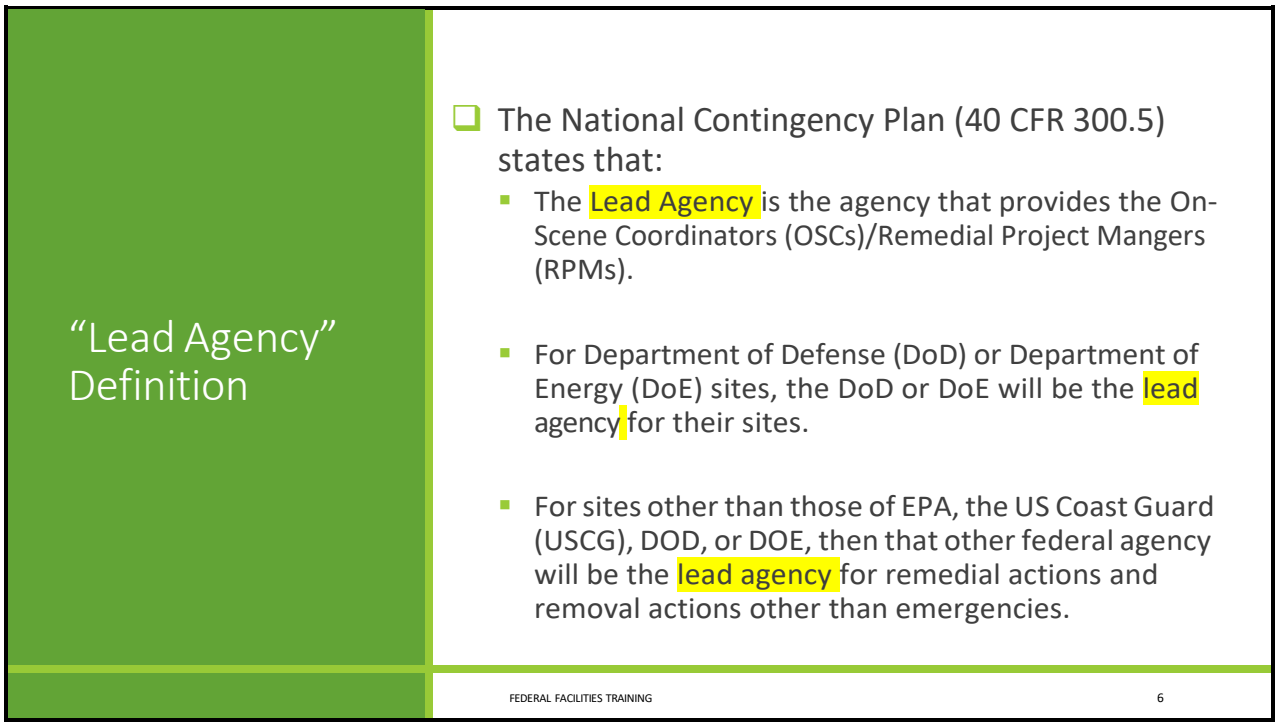
A key question to ask is “how can cleanup decisions complement each other to support the overall remediation goals for a site?” Each cleanup decision can provide a piece of the puzzle in meeting those goals.



CERCLA, also known as Superfund, authorizes the President to respond to releases or threatened releases of hazardous substances into the environment. In 1980, Congress enacted CERCLA and amended it through the Superfund Amendments and Reauthorization Act in 1986.

CERCLA's major emphasis is on the cleanup of inactive hazardous waste sites and the liability for cleanup costs on arrangers and transporters of hazardous substances and on current and former owners of facilities where hazardous substances were disposed.
CERCLA gives the President authority to clean up these sites under requirements generically referred to as "removal" or "remedial" provisions. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) outlines CERCLA's implementing regulations. Agencies must follow the procedures and standards detailed in the NCP when remediating these sites.

EO 12580 delegated presidential authorities under CERCLA to the heads of various Executive Branch agencies under certain circumstances.



The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR 300.5) states the cases where another federal agency besides EPA serve as the lead agency.

- The Lead Agency is the agency that provides the On-Scene Coordinators (OSCs)/Remedial Project Mangers (RPMs) to plan and implement response actions under the NCP.
- In the case of a release of hazardous substance, pollutant or contaminant, where the release is on or where the source of the release is from any facility or vessel under the jurisdiction, custody, or control of Department of Defense (DoD) or Department of Energy (DoE), then DoD or DoE will be the lead agency.
- In the case of a release on or the source of the release is from any facility or vessel under the jurisdiction, custody, or control of a federal agency other than EPA, the US Coast Guard (USCG), DOD, or DOE, then that agency will be the lead agency for remedial actions and removal actions other than emergencies.

A state (or political subdivisions of a state) operating pursuant to a contract or cooperative agreement executed pursuant to section 104(d)(1) of CERCLA, or designated pursuant to a Superfund Memorandum of Agreement (SMOA) entered into pursuant to subpart F of the NCP or other agreements may be the lead agency for a response action.

CERCLA Section 120 and Federal Facilities

- Subject to CERCLA to the same extent as private entities
- Federal agencies shall comply with all guidelines, rules, regulations, and criteria related and shall not adopt guidelines inconsistent with those established by the EPA Administrator
- Individuals and States can bring "citizen suits" if an agency is not following CERCLA at federal facilities
- EPA and the Federal agency jointly select remedies, but EPA is the ultimate selector in the event of a dispute

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CERCLA § 120 discusses CERCLA's applicability to Federally owned or Federally-operated facilities. It states that Federal agencies are subject to CERCLA to the same extent as a private entity. Federal agencies shall comply with all guidelines, rules, regulations, and criteria related to removal and remedial actions and shall not adopt guidelines inconsistent with those established by the EPA Administrator.

In addition to making Federal facilities subject to the same CERCLA mandates that apply to private parties, Section 120 imposes additional requirements on Federal Facilities. CERCLA also contains a waiver of sovereign immunity to permit individuals and States to bring "citizens suits" if an agency is not adhering to a CERCLA mandate. In addition to the waiver of sovereign immunity found in CERCLA 120, the citizen suit provision of CERCLA (Section 310) states that the 120 requirements are subject to citizen suits (CERCLA 310(a)(1)) 2).
120(g) says that the Administrator's authorities cannot be delegated outside of EPA, but it is 120(e)(4)(A) that give the Administrator final say over remedy selection in the first instance.

The lead agency documents the remedy selection decision in a ROD which requires approval by EPA under CERCLA. EPA maintains authority over remedy selection based on CERCLA §120(g) Transfer of EPA's Authority to Federal Agencies which states that except for authorities delegated by the EPA Administrator to an officer or employee of EPA, authorities vested in EPA by § 120 cannot be transferred to other U.S. officials or to any other person.

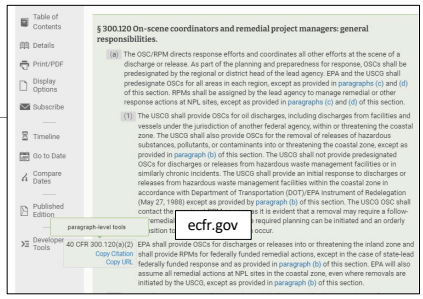
For additional information, please visit the Enforcement and Compliance at Federal Facilities Website https://www.epa.gov/enforcement/enforcement-and-compliance-federal-facilities.

Regulatory Framework – NCP

Acts as the regulatory blueprint for CERCLA

Gives step-by-step processes for conducting removal and remedial actions

Full text of the NCP at:



- https://www.govinfo.gov/app/details/CFR-2022-title40-vol30/CFR-2022-title40-vol30-part300 Updated annually - Current with the published print version of the CFR
- https://www.ecfr.gov/current/title-40/chapter-I/subchapter-J/part-300 (updated daily)

NCP preambles

- Proposed rule (53 FR 51394 (1988)) https://semspub.epa.gov/work/HQ/175676.pdf
- Final rule (55 FR 8666 (1990)) https://semspub.epa.gov/work/11/174999.pdf

The CFR on https://www.govinfo.gov/ is current with the published print version of the CFR. To see more recently updated titles of the CFR, visit the electronic Code of Federal Regulations (e-CFR), a regularly updated, unofficial editorial compilation of CFR material and Federal Register amendments. The eCFR is updated on a daily basis.
Full text of the NCP at:

https://www.govinfo.gov/app/details/CFR-2022- title40-vol30/CFR-2022-title40-vol30-part300 Updated annually - Current with the published print version of the CFR

https://www.ecfr.gov/current/title-40/chapter- I/subchapter-J/part-300 (updated daily)

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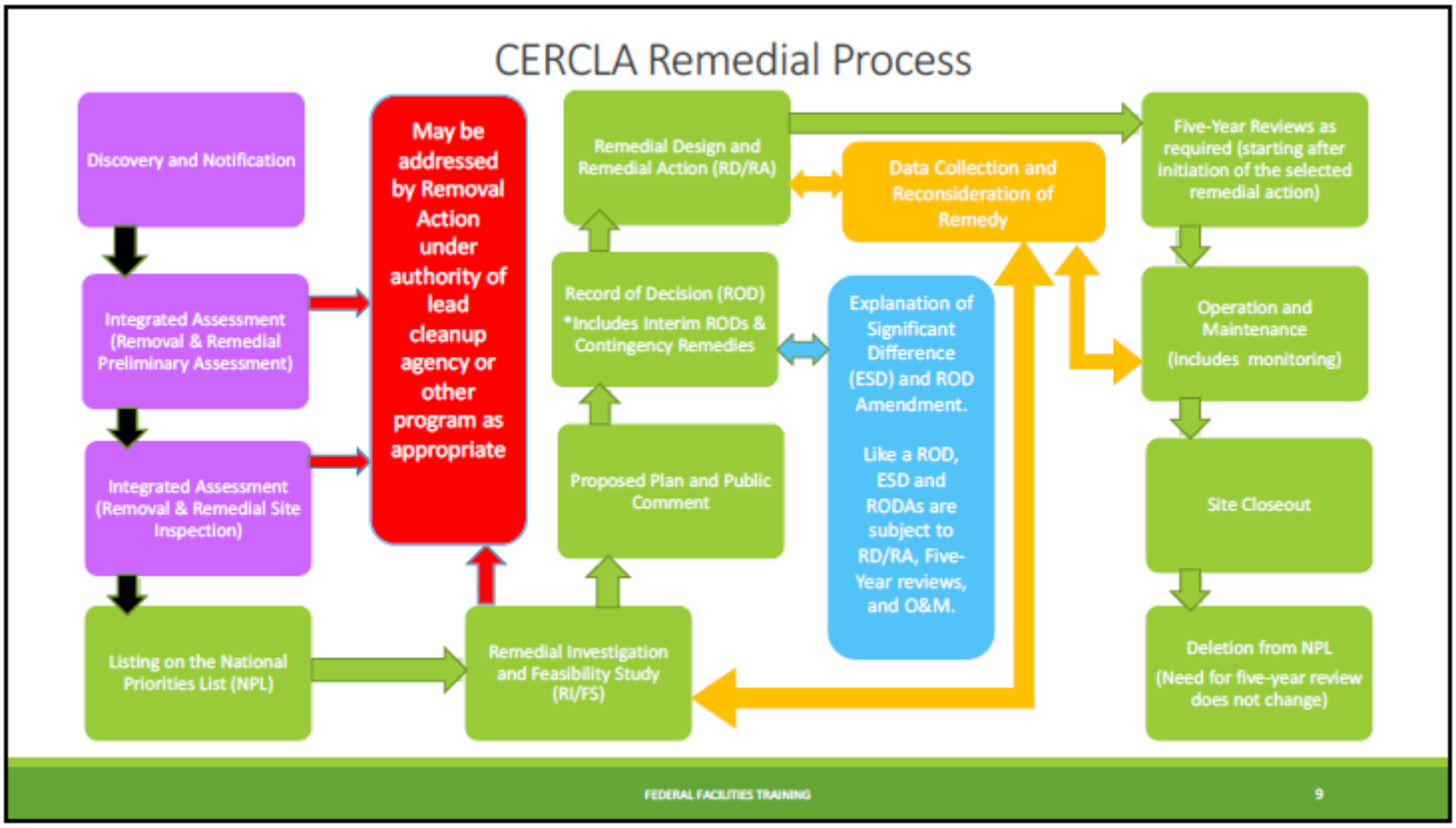

CERCLA remedial actions are intended to provide a permanent solution to contamination that presents an unacceptable risk and should use treatment technologies to the maximum extent practicable. Removal actions and interim remedial actions can be used as part of an overall cleanup strategy for a site; however, interim actions must be followed by a final remedial action.

In this course, we will be focusing on the activities that occur in addition to the ROD and prior to deletion from the National Priorities List (NPL). The NPL is the list of sites of national priority among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories.

Removal Actions

Removal Actions

- Removal actions shall, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the release concerned.
- Often a short-term action designed to address an immediate threat to human health or the environment.
- Removal actions are executed by the lead cleanup agency

A removal action is often a short-term action designed to address an immediate threat to human health or the environment. Removal actions also may be conducted to respond to accidental releases of hazardous substances. In addition, removal actions may address short-term threats that are part of a long-term remedial response. Removal actions shall, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the release concerned. (see 40 CFR 300.415(d))

Removal Actions

- Emergency Response
  - Action is typically required within hours
  - May not have enough time to issue an Action Memo (AM) before taking action
- Time-Critical Removal Action (TCRA)
  - Action is required within 6 months
  - Typically, an approved action memo (AM) is in place before initiating a non-emergency time-critical response
- Non-Time-Critical Removal Action (NTCRA)
  - Planning period of more than 6 months is available
  - Requires an Engineering Evaluation/Cost Analysis (EE/CA), or its equivalent, before AM is signed

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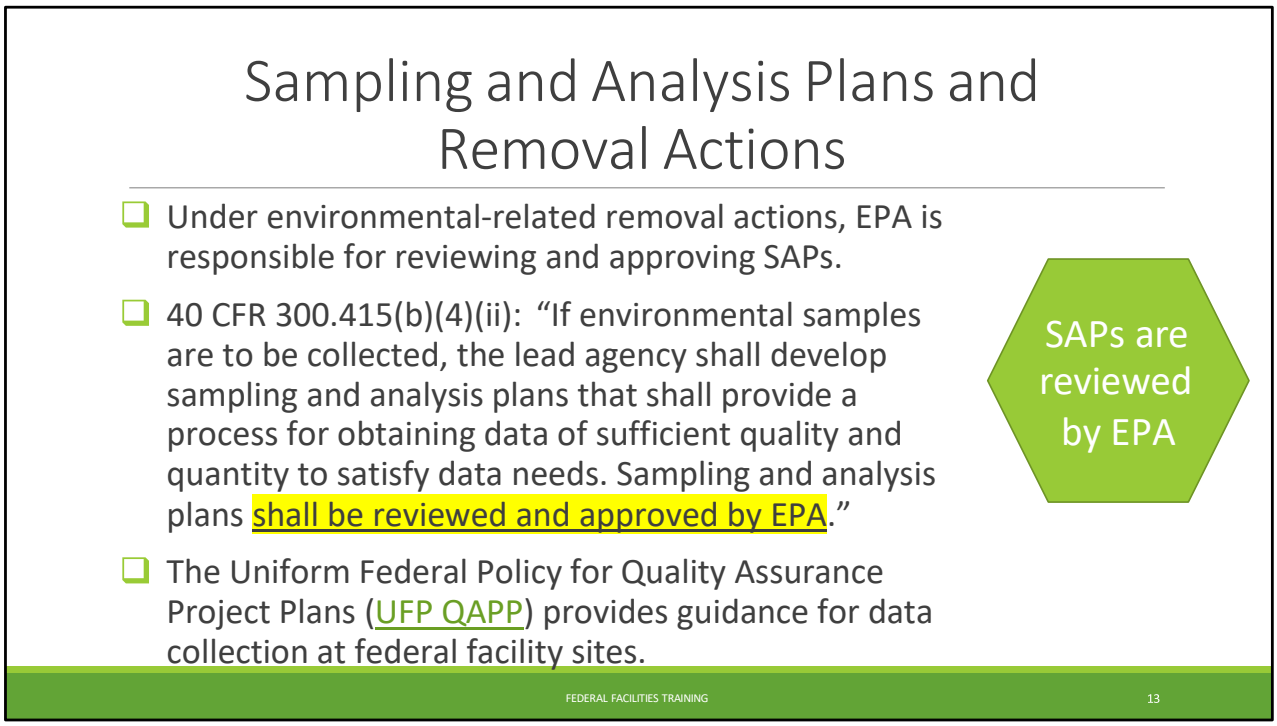
There are three types of removal actions: emergency response; time-critical; and non-time-critical responses.

- ***Emergency removals*** require an immediate response to releases or threatened releases to the environment. Emergency removals are initiated within hours or days of the determination that a removal action is appropriate.
- ***Time-critical removals*** are situations where a removal is appropriate and on-site removal activities must begin within six months.
- ***Non-time-critical removals*** are undertaken when a removal action is appropriate and the situation allows for a planning period of at least six months before on-site activities must begin.

The Action Memo (AM) is the primary removal action document. It should document threats posed and actions taken for an emergency removal action and document threats posed and actions to be taken for a time-critical or non-time-critical removal action.

The NCP states that whenever a planning period of at least six months exists before on-site activities must be initiated, and the lead agency determines, based on a site evaluation, that a removal action is appropriate then the lead agency shall conduct an engineering evaluation/cost analysis (EE/CA) or its equivalent. (NCP 300.415(b)(4)(i)). During an EE/CA data and removal alternatives for implementing a cost-effective removal response are evaluated.



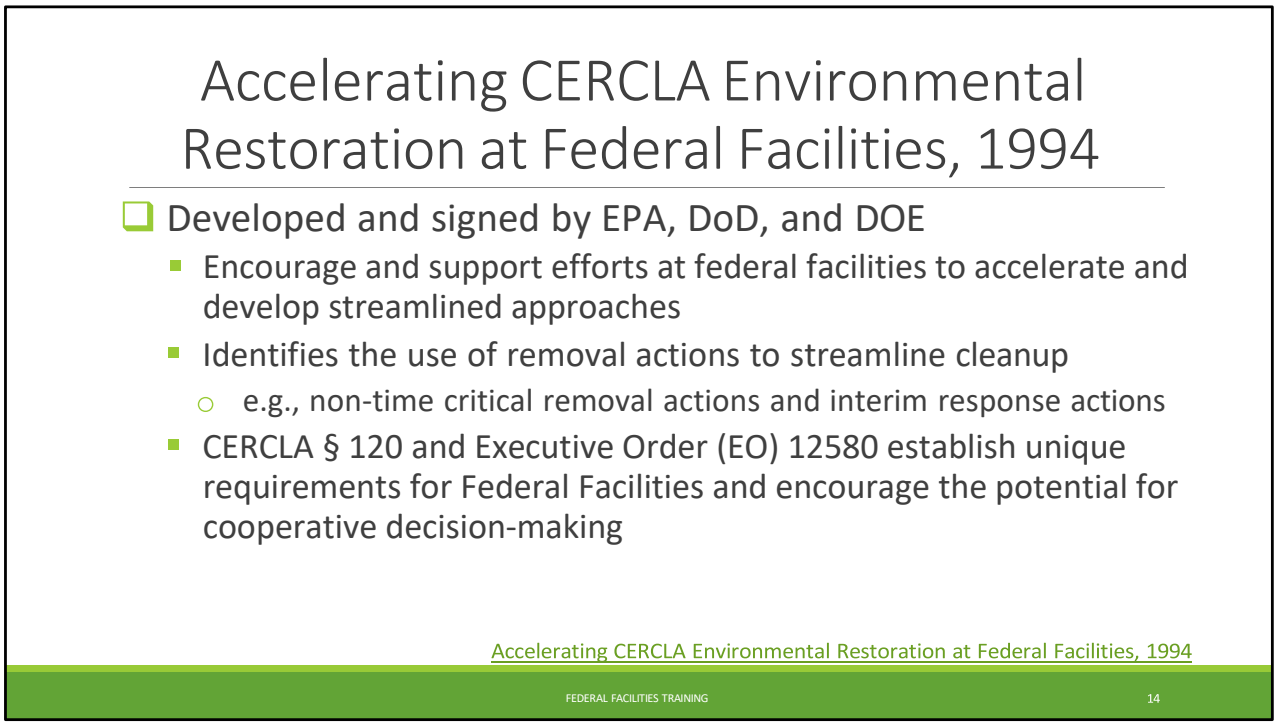
Under environmental-related removal actions, EPA is responsible for reviewing and approving SAPs for environmental media such as soil and groundwater. This authority is not delegated to the lead federal agency. The NCP further states that if environmental samples are to be collected, the lead agency shall develop sampling and analysis plans that shall provide a process of obtaining data of sufficient quality and quantity to satisfy data needs. SAPs shall be reviewed and approved by EPA (NCP 300.415(b)(4)(ii)). This includes SAPs for environmental-related removal actions implemented at federal facilities.

EPA's 2001 guidance Requirements for Quality Assurance Project Plans states that for programs or projects of long duration, such as multi-year monitoring programs or projects using a generic QA Project Plan, the QA Project Plans shall be reviewed at least annually by the EPA Project Manager (or authorized representative). When revisions are necessary, the QA Project Plan must be revised and resubmitted for review and approval. Available at https://www.epa.gov/quality/epa-qar-5-epa-requirements-quality-assurance-project-plans

OSWER DIRECTIVE 9272.0-17 on the Implementation of the Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP) at Federal Facility Hazardous Waste Sites provides guidance for all data collection at federal facility hazardous waste sites. The policy is designed to:

- Assure the integration of quality principles in all Federal facility projects that require environmental data collection and use.
- Streamline document preparation, review and approval by:
  - Encouraging involvement of an appropriate multi-disciplinary project planning team in the development of the QAPP
  - Recommending a consistent content and format
  - Establishing an agreed starting point of minimum QA/QC specifications for environmental data collection conducted under CERCLA.
- Save time and money in project execution by assuring that data of appropriate quality are collected to make the decisions required by the project
- Assure consistency with Directives of other federal organizations.

Available at https://www.epa.gov/sites/production/files/documents/oswer_qapp_directive.pdf



This slide refers to the EPA Guidance titled, Accelerating CERCLA Environmental Restoration at Federal Facilities, 1994. The purpose of this guidance is to encourage and support efforts at federal facilities to accelerate and develop streamlined approaches to the cleanup of hazardous waste. It was signed by EPA, DoD, and DOE in 1994.

Within the guidance, potential areas for streamlining and accelerating the cleanup process which include the use of removal actions to address imminent and substantial endangerment, use of non-time critical removal actions (NTCRAs) and interim response actions are identified. This guidance encourages the use of NTCRAs that will achieve results comparable to a remedial action but can be completed in less time.

CERCLA Section 120 and Executive Order (EO) 12580 establish certain unique requirements with respect to federal facilities and the potential for cooperative decision making between the lead federal agencies, EPA, and the states, in consultation with community groups.

Available at https://www.epa.gov/fedfac/guidance-accelerating-cercla-environmental-restoration-federal-facilities

Removal Action Guidance and Non-Time Critical Removal Actions (NTCRAs)

Removal Action Guidance and NTCRAs

- Once a Federal Facility is listed on the National Priorities List (NPL), sources of contamination should be addressed promptly.
  - Using Removal Actions and/or Interim Remedial Actions, and final remedial actions
- When using removal authorities, Federal Facilities should consult with EPA, states and the public to ensure that the action is consistent with overall cleanup goals.
  - Cleanup should be consistent with the final ROD to delete the site from the NPL

The need to promptly address sources of contamination, without compromising environmental requirements, at all federal facility sites should be addressed by means of a removal, operable unit Records of Decision (RODs), and /or interim remedial actions, once a federal facility is listed on the National Priorities List (NPL).

When using removal authorities delegated under Executive Order (EO) 12580, other lead federal agencies should consult with EPA, states and the public to ensure that the action is consistent with overall facility restoration goals and will result in cleanups consistent with the final ROD to delete the site from the NPL. Some Federal Facility Agreements (FFA) may specify an approval role for EPA on non-time critical removal actions. Refer to the EPA Guidance, Accelerating CERCLA Environmental Restoration at Federal Facilities, 1994 (PDF Page 6).

Evaluating NTCRAs

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- Strong consideration should be given to NTCRAs that will achieve results comparable to a remedial action but completed in less time
  - Selecting a NTCRA requires an evaluation of the alternatives in an engineering evaluation/cost analysis (EE/CA).
  - Alternatives must be provided to the public for a minimum 30-day comment period prior to selection of the action.

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Strong consideration should be given to NTCRA removals that will achieve results comparable to a remedial action, but which may be completed in less time. In selecting a NTCRA, the alternative must be evaluated in an engineering evaluation/cost analysis (EE/CA) and provided to the public for no less than 30 day comment period prior to the selection of the action (40 CFR 300.415(b)(4) and (m)(4)).

Refer to EPA Guidance, Accelerating CERCLA Environmental Restoration at Federal Facilities, 1994 (PDF Page 6-7).

Regulatory Agencies and NTCRAs

- EPA and the state should have adequate participation in the development of the proposed removal action
  - Beneficial if EPA and state are involved in removal planning and decision process (including removal action decision and monitoring action progress).
  - EPA/state will determine whether the removal action will be consistent with the final remedy.

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All parties will benefit if the lead federal agency provides EPA and the state with an adequate regulatory role in the removal planning and decision process including consultation on the removal action decision and monitoring progress of the action. Such an approach helps gain regulatory support determinations that the removal action will be consistent with the final remedy. Refer to EPA Guidance, Accelerating CERCLA Environmental Restoration at Federal Facilities, 1994 (PDF Page 6-7).

ARARs and NTCRAs

- Applicable or Relevant and Appropriate Requirements (ARARs) consideration is important in the removal decision process
  - The NCP requires that removal actions, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the release concerned.
  - Should generally be practicable to meet ARARs in NTCRAs, if it becomes an issue, attaining ARARs may be deferred to later remedial actions.

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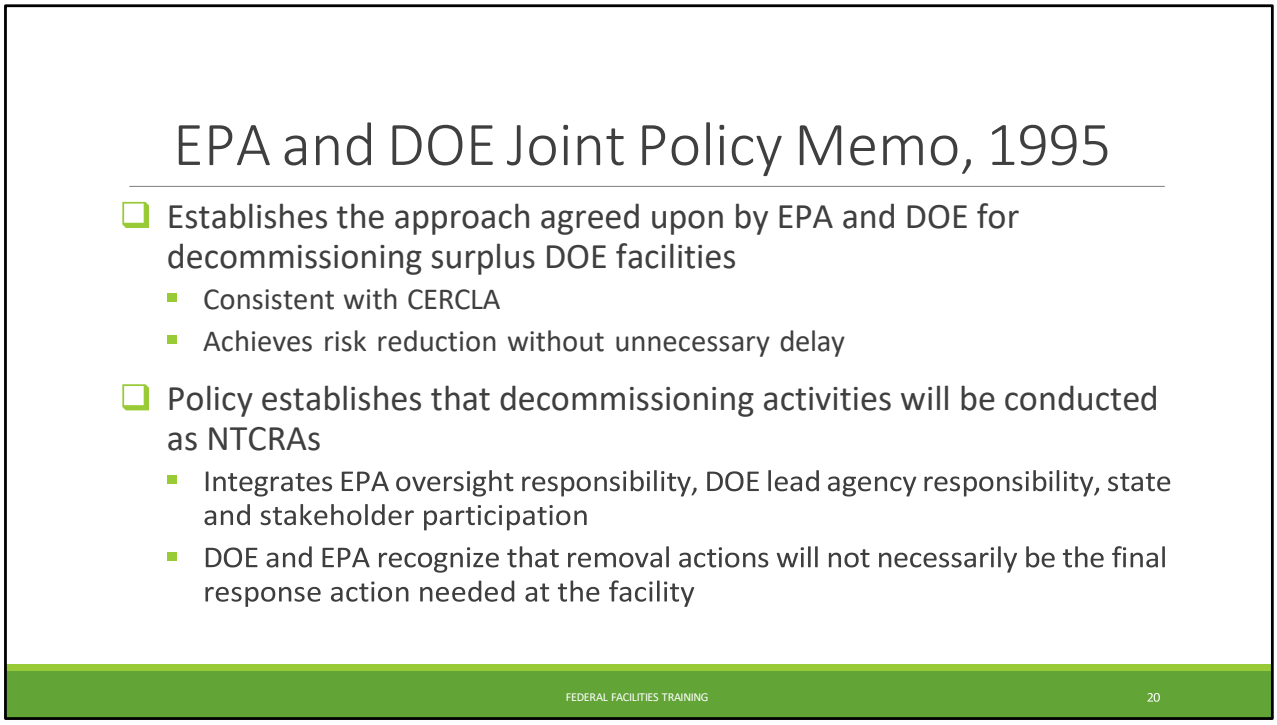
Removal actions shall, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the release concerned. (See 40 CFR 300.415(d)). It is important that removal actions do not negatively impact or impede the ability to implement a future remedial action.

Applicable or Relevant and Appropriate Requirements (ARARs) analysis remains a part of the removal decision process since the National Contingency Plan requires that in removals, ARARs be met to the extent practicable. While it should be generally practicable to meet ARARs in Non-time-critical removal (NTCRA) actions, the issue of attaining ARARs may be deferred to later remedial actions. Refer to EPA Guidance, Accelerating CERCLA Environmental Restoration at Federal Facilities, 1994 (PDF Page 6-7)



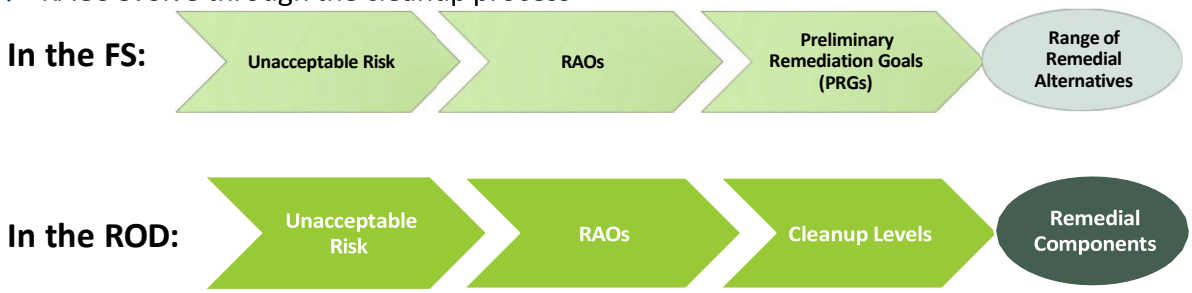
Agencies often work together to accomplish Removal Actions. For example, the EPA and DOE worked together to generate the Policy on Decommissioning Department of Energy Facilities Under CERCLA, 1995, otherwise referred to as the EPA and DOE Joint Policy Memo (1995). This Memo establishes the approach agreed upon by EPA and DOE for decommissioning surplus DOE facilities consistent with CERCLA that also achieves risk reduction without unnecessary delay. For purposes of this Policy, decommissioning includes those activities that take place after a facility has been deactivated and placed in an ongoing surveillance and maintenance program. Decommissioning can include decontamination and dismantlement. Decontamination encompasses the removal or reduction of radioactive or hazardous contamination from facilities. Dismantlement involves the disassembly or demolition, and removal, of any structure, system, or component and the interim or long- term disposal of waste materials in compliance with applicable requirements. Deactivation is the process of placing a facility in a safe and stable condition that is protective of workers, the public, and the environment until decommissioning is completed. As the bridge between operations and decommissioning, deactivation can accomplish operations-like activities such as final process runs, and also decontamination activities aimed at placing the facility in a safe aid stable condition. Refer to the Policy on Decommissioning Department of Energy Facilities Under CERCLA (1995)

Remedial Action Objectives (RAOs)

RAO SLIDES PROVIDED BY OFFICE OF SCIENCE, REMEDIATION, TECHNOLOGY INNOVATION (OSRTI)

Remedial Action Objectives

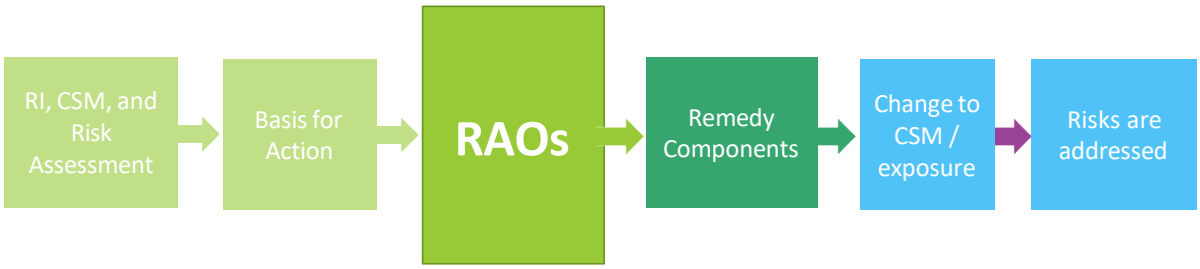
- Link the exposure pathways and receptors to remedy components
- What is EPA going to change to address unacceptable risk?
- RAOs evolve through the cleanup process



Why Are Remedial Action Objectives Important?

RAOs link the exposure pathways and the receptors to the remedial action and to specific remedy components.

RAOs explain what the cleanup will change at the site to address unacceptable risks.



RAO Purpose or "Objective" of Action

"Prevent" / "Protect from"

- Stop, to the extent possible, all unacceptable exposures (with the intention of having zero unacceptable exposures) as defined by cleanup levels and levels of protective residential use
- Can be used for most RAOs
- Can be met by a range of actions from containment to treatment (important for FS)
- Protect …from …. above protective levels

"Restore"

- For impacted groundwater or surface water
- Requires designating beneficial use of groundwater and surface water

"Minimize / Reduce"

- Decrease to a specified level which should be included in the RAO as well (cleanup levels, levels protective of residential use, etc.).

What will the cleanup accomplish?

Process for Establishing Remediation Goals for Media (in FS)

NCP Section 300.430(e)(2)(i)(A) – (G)

A. Determine if there are any ARARs that establish media cleanup levels

B. When ARARs are not available or sufficiently protective because of multiple contaminants, calculate a preliminary remediation goal
   - Methodologies for noncarcinogens and carcinogens differ
   - Describes point of departure for carcinogens and factors for moving from it

C. Consider MCLs and non-zero MCLGs

D. Consider the impact of multiple contaminants

E. Consider Federal Ambient Water Quality Criteria

300.430(e)(2)(i) – Establishing RAOs

300.430(e)(2)(i)(A) – ARARs as remediation goals, if available, and following factors

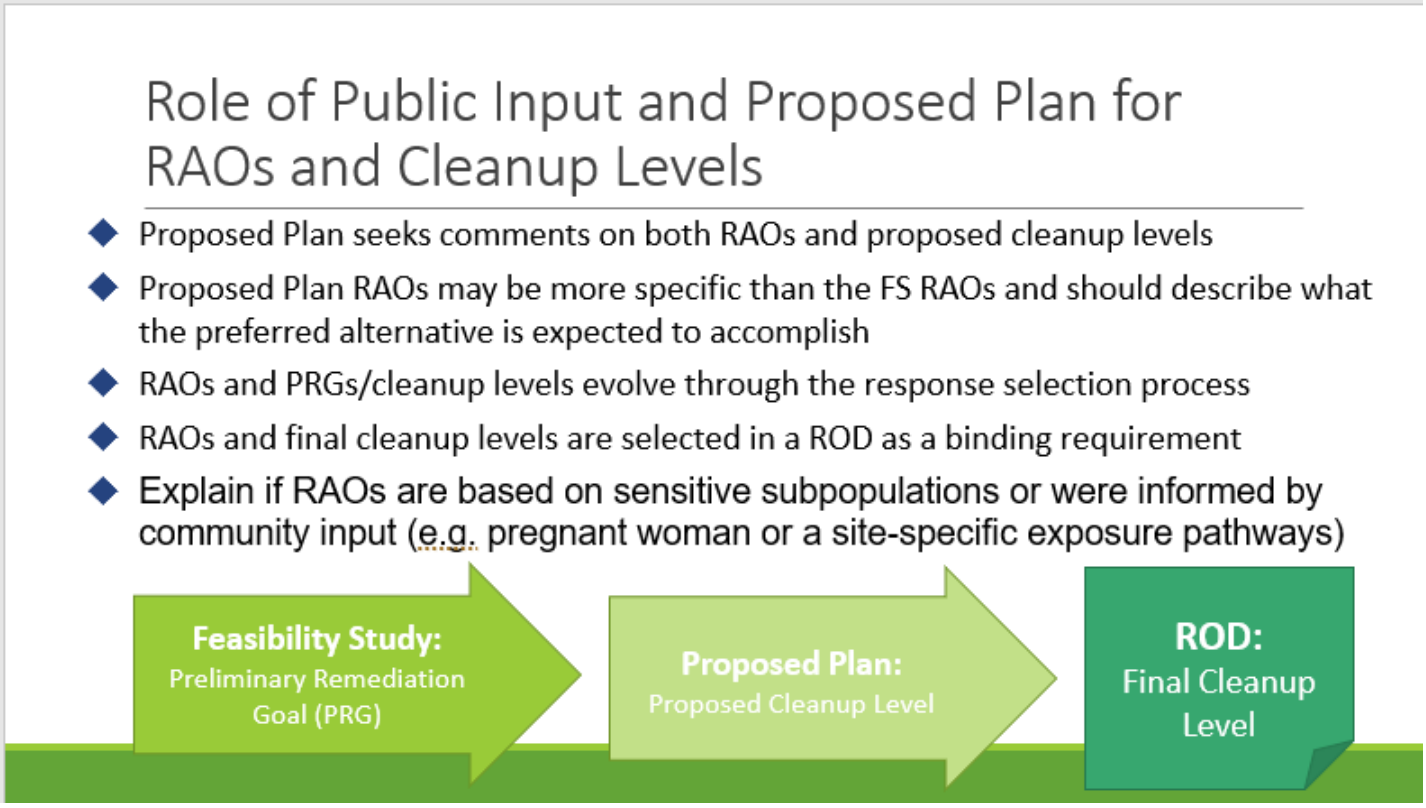
300.430(e)(2)(i)(A)(1) – Noncarcinogens

300.430(e)(2)(i)(A)(2) – Carcinogens 300.430(e)(2)(i)(A)(3) – Technical limitations 300.430(e)(2)(i)(A)(4) – Uncertainty

300.430(e)(2)(i)(A)(5) – Other considerations

300.430(e)(2)(i)(B) – Nonzero MCLGs and MCLs 300.430(e)(2)(i)(C) – MCLGs set at zero and MCLs 300.430(e)(2)(i)(D) – Multiple contaminants

300.430(e)(2)(i)(E) – Water quality criteria 300.430(e)(2)(i)(F) – Alternate Concentration Limit 300.430(e)(2)(i)(G) – Environmental evaluations



PRGs – Developed during the FS. 40 CFR 300.430(e)(2)(i): Initially, preliminary remediation goals are developed based on readily available information, such as chemical-specific ARARs or other reliable information. Preliminary remediation goals should be modified, as necessary, as more information becomes available during the RI/FS. Final remediation goals will be determined when the remedy is selected. Remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed in consideration of ARARs.

Proposed Cleanup Levels – Presented in the Proposed Plan for public comment.

Final Cleanup Levels – Formally set in ROD. 40 CFR 300.430(f)(5)(iii) indicates that the ROD must:

- Indicate the remediation goals (i.e., cleanup levels) that the remedy is expected to achieve. Remediation goals shall establish acceptable exposure levels that are protective of human health and the environment.

Risk Assessment Guidance for Superfund (RAGS), Volume 1. Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals), December 1991 further states:

- Final cleanup levels establish acceptable contaminant-specific exposure levels that are protective of human health and the environment. They are not formally determined until the site remedy is ready to be selected and are established in the ROD. In the ROD, it is preferable to use the term “remediation level” or “cleanup level” rather than “remediation goal” in order to make clear that the Selected Remedy establishes binding requirements.

RAGS Part B provides guidance on using EPA toxicity values/exposure information to derive PRGs.

Remedial Action Objectives: Soil Example

Purpose of action	Prevent potential unacceptable risk
Contaminants	BaP TEQ, TCDD TEQ, naphthalene and PCP
Media of interest	surface soils (up to 1 foot below ground surface)
Exposure pathway	incidental ingestion of, dermal contact with, and/or inhalation
Receptors	future child and adult residents
Cleanup level	residential cleanup levels

Prevent potential unacceptable risk to future child and adult residents from long-term exposure through incidental ingestion of, dermal contact with, and/or inhalation of surface soils (up to 1 foot below ground surface) with contaminant concentrations above the residential cleanup levels for BaP TEQ, TCDD TEQ, naphthalene and PCP.

RAOs: Groundwater Restoration Example

Purpose of action	Restore
Contaminants	COC
Media of interest	groundwater
Exposure pathway	drinking water
Receptors	drinking water (people using drinking water is implied)
Cleanup level	MCLs or health-based cleanup goals in the absence of an MCL

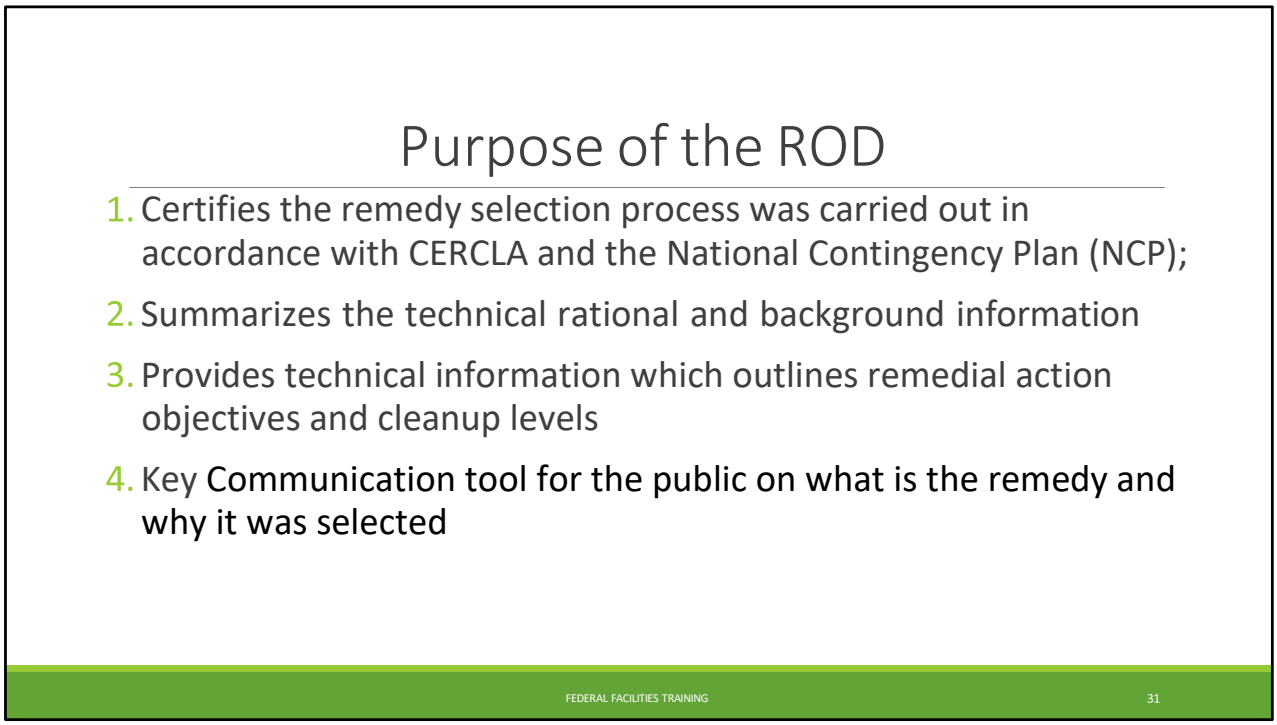
Restore groundwater to its beneficial use as a potential drinking water source by reducing groundwater COC concentrations to meeting federal and state drinking water standards (i.e., MCLs or health-based cleanup goals in the absence of a MCL for a particular COC).

RAOs: Source Control (Containment) Example

Purpose of action	Prevent migration
Contaminants	COCs
Media of interest	DNAPL and residual contamination in OU3 source areas
Exposure pathway	migration to
Receptors	groundwater outside containment
Cleanup level	maintaining an inward water gradient 10 months of the year

Prevent COCs in OU3 source areas (containing DNAPL and residual contamination) from migrating to the groundwater outside of OU3 source areas by maintaining (on average) a lower elevation water table inside the OU3 source area than outside.

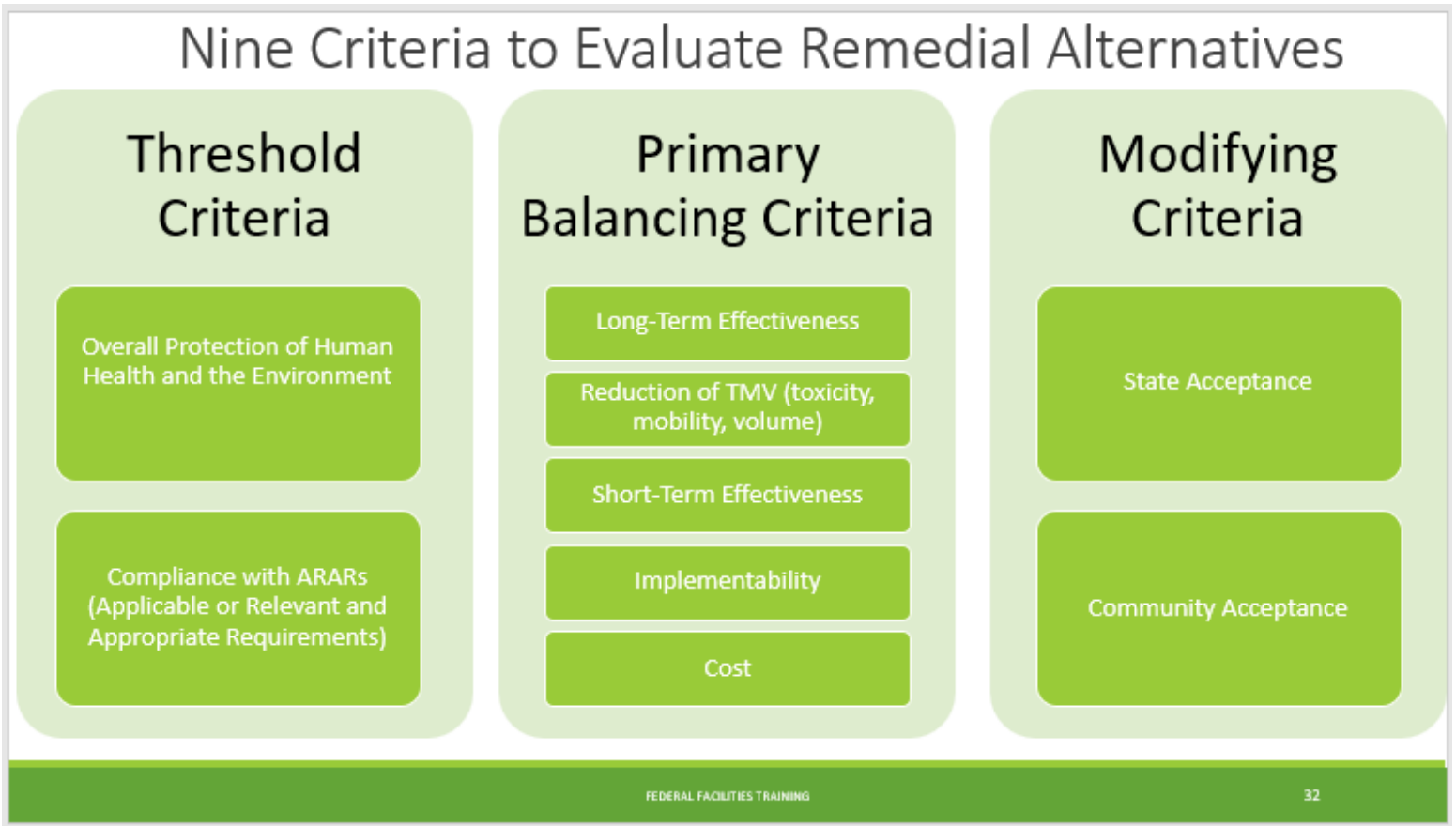
Records of Decision (RODs)



Section 6.1.1 of the ROD guidance states that the ROD documents the selected remedial action for a site or operable unit. It is prepared by the lead agency in consultations with the support agency. The ROD serves as:

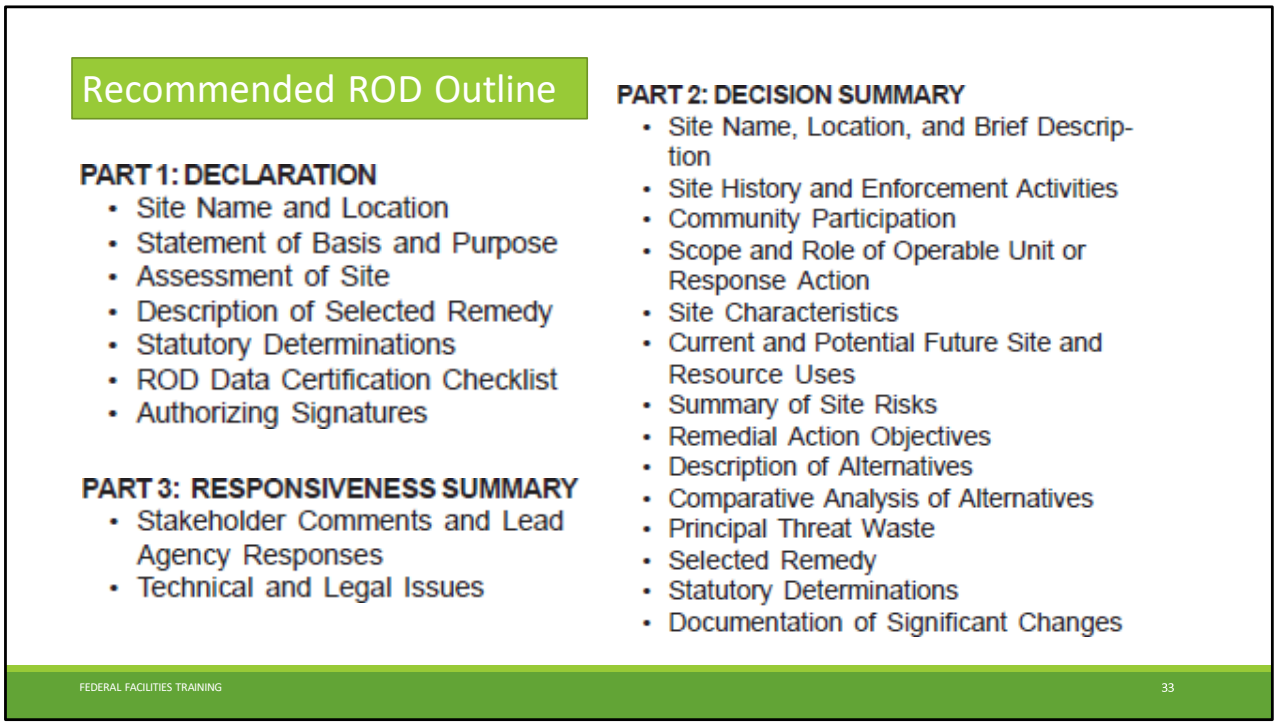
1. Legal document that certifies the remedy selection process was carried out in accordance with CERCLA and , to the extent practicable, the National Contingency Plan (NCP)
2. Substantive summary of the technical rational and background information contained in the Administrative Record file
3. Technical document that provides information necessary for determining the conceptual engineering components, and which outlines the remedial action objectives and cleanup levels for the Selected Remedy
4. Key Communication tool for the public that explains the contamination problems the remedy seeks to address and the rationale for its selection

Refer to: A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents, July 1999 (Section 6)



The nine criteria fall into three groups: threshold criteria, primary balancing criteria, and modifying criteria. A description of the purposes of the three groups follows:

- ***Threshold criteria***, which are requirements that each alternative must meet in order to be eligible for selection.
- ***Primary balancing criteria,*** which are used to weigh major trade-offs among alternatives.
- ***Modifying criteria,*** which may be considered to the extent that information is available during the FS, but can by fully considered only after public comment is received on the Proposed Plan. In the final balancing of trade-offs between alternatives upon which the final remedy selection is based, modifying criteria are of equal importance to the balancing criteria.



The NCP directs the lead agency to produce a ROD documenting all facts, analyses of facts, and site-specific policy determinations considered in the course of selecting a remedial action, and how the nine remedy selection criteria were used to select the remedy (NCP 300.430(f)(5)(i)).

- ***The Declaration*** functions as an abstract and data certification sheet for the key information in the ROD and is the formal authorizing signature page for the ROD.

- ***The Decision Summary*** provides an overview of the site characteristics, alternatives evaluated, and the analysis of those options. It also identifies the Selected Remedy and explains how the remedy fulfills statutory and regulatory requirements.

- ***The Responsiveness Summary*** serves the dual purposes of: (1) presenting stakeholder concerns about the site and preferences regarding the remedial alternatives; and (2) explaining how those concerns were addressed and the preferences were factored into the remedy selection process.

This information is taken from Highlight 6-1 of the 1999 ROD Guidance.

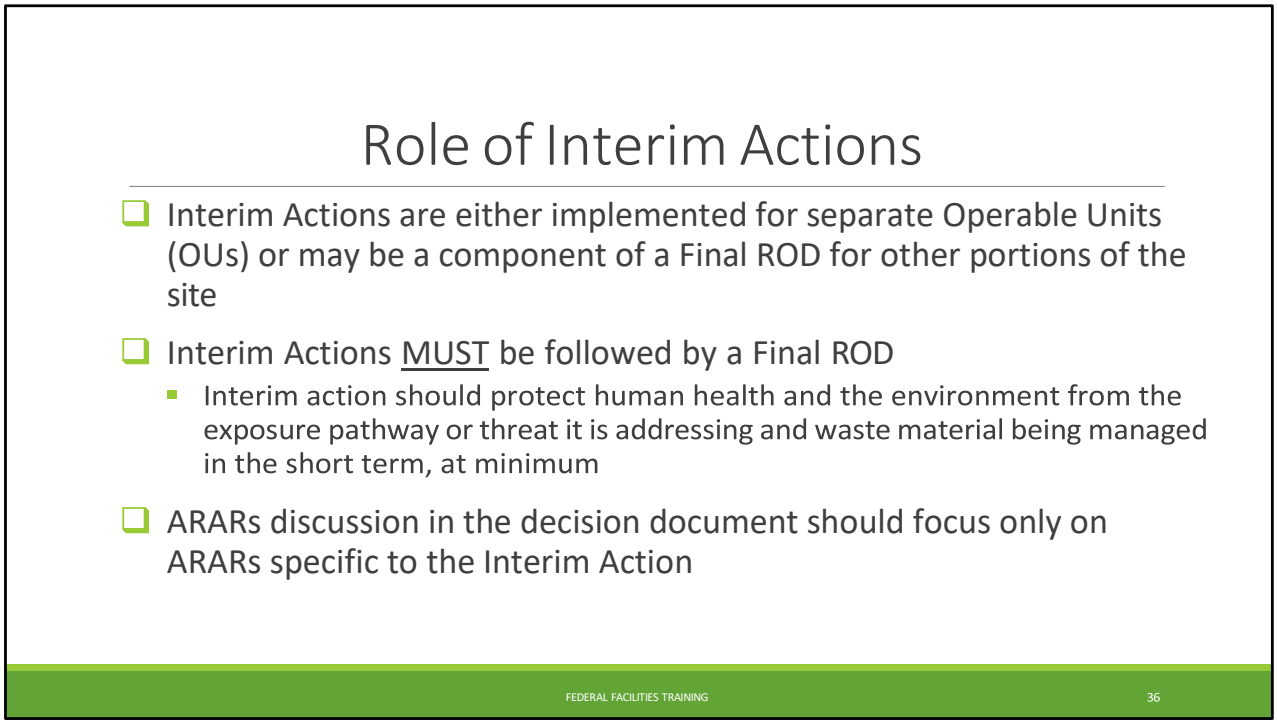
Interim Actions

Determining Need for Interim Action

- Interim Action ROD is decided during scoping or other points during the RI/FS
  - Lead agency may determine that an interim remedial action is appropriate
  - Limited in scope, only addresses areas/media that will be addressed by a final site/operable unit ROD
- Reasons for taking an interim action include needing to:
  - Take quick action to protect human health and the environment from an imminent threat
  - Institute temporary measures to stabilize the site and/or prevent further migration of contaminants or further environmental degradation

During scoping, or at other points in the Remedial Investigation/Feasibility Study (RI/FS), the lead agency may determine that an interim remedial action is appropriate. An interim action is limited in scope and only addresses areas/media that will also be addressed by a final site/operable unit ROD. The model FFA allows that other FFA parties (EPA and the State) to find that an interim remedial action is necessary, and the determination be subject to dispute resolution. It is important to be familiar with your site's FFA when implementing interim actions.

Additional information regarding Interim Actions can be found in: A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents (EPA, 1999), Section 8.



Interim actions are either implemented for separate operable units (OUs) or may be a component of a final ROD for other portions of the site. In either case, an interim action must be followed by a final ROD.

The interim action should protect human health and the environment from the exposure pathway or threat it is addressing and the waste material being managed at least in the short term (until a final ROD is implemented).

The Applicable or Relevant and Appropriate Requirements discussion in the decision document should focus only on those ARARs specific to the interim action (e.g., residuals management during implementation). An interim action waiver may be appropriate where a requirement that is an ARAR cannot be met as part of the interim remedy, but will be attained (unless use of a waiver is justified) by the final site remedy.

Refer to: A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents (EPA, 1999), Section 8.2.

Interim Actions Examples

Installing extraction wells to restrict migration of a contaminated groundwater plume with the intention of remediating the aquifer later

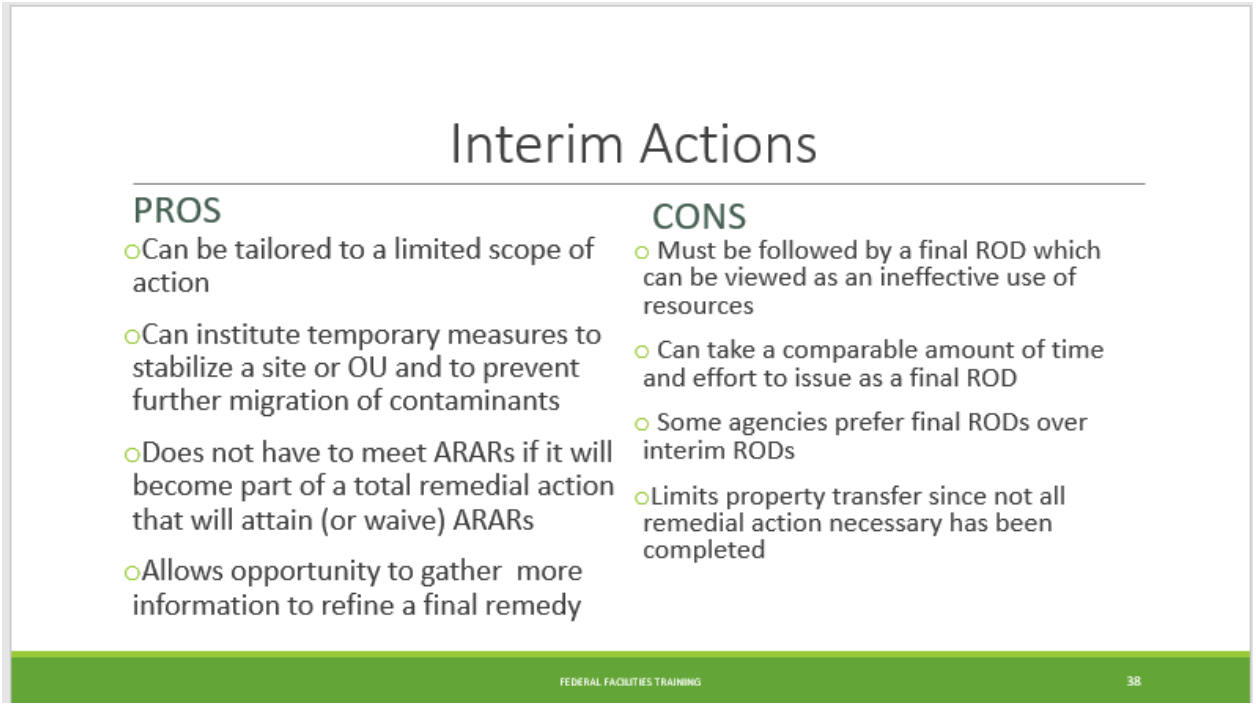
Providing a temporary alternate source of drinking water with the intention of later remediating the aquifer

Constructing a temporary cap to control or reduce exposures until subsequent action is taken.

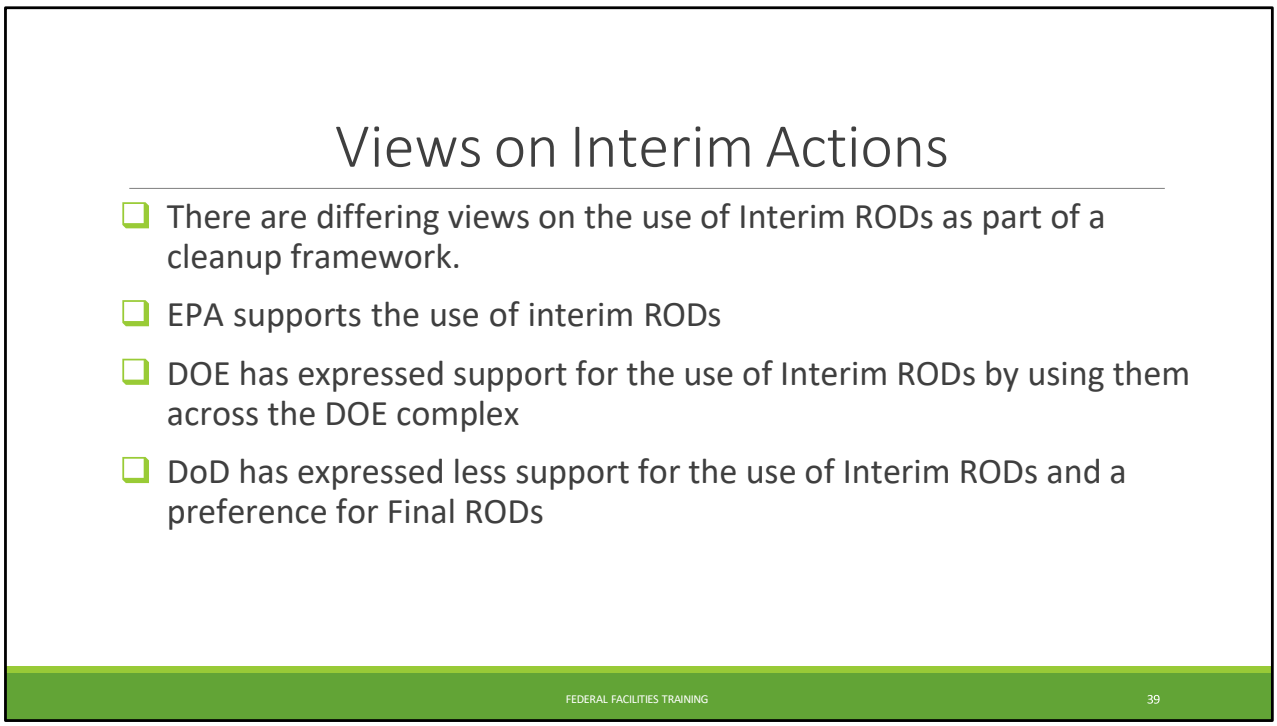
FEDERAL FACILITIES TRAINING 37

These examples are taken from Highlight 8-3 of A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents (EPA, 1999).

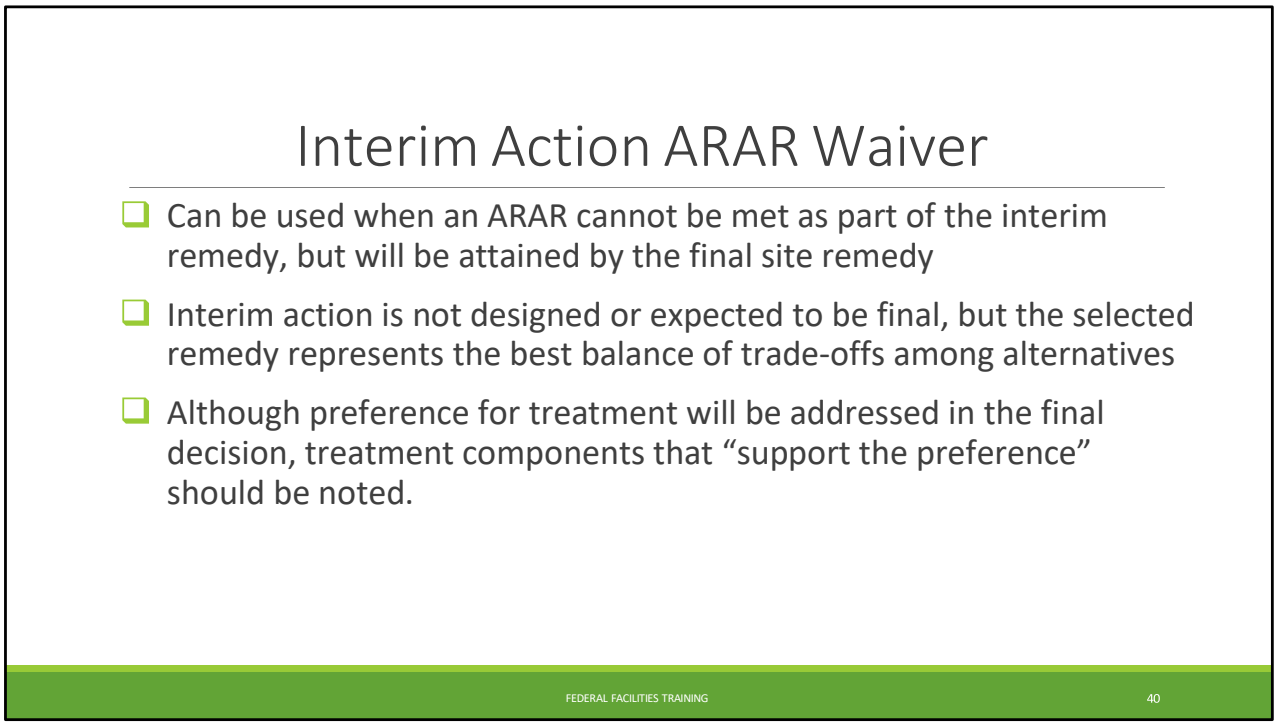
- Installing and operating extraction wells in an aquifer to restrict migration of a contaminated ground-water plume with the intention of later installing additional wells (or taking other action) to address the contamination in a final action.
- Providing a temporary alternate source of drinking water with the intention of later, in a subsequent action, remediating the source of contamination and/or the aquifer.
- Constructing a temporary cap to control or reduce exposures until subsequent action is taken.
- Relocating contaminated material from one area of a site (e.g., residential yards) to another area of the site for temporary storage until a decision on how best to manage site wastes is made.



Although the requirement to follow up an interim action with a final ROD is identified as a "con", keep in mind that a "No Further Action" ROD may be appropriate if there is no remaining risk requiring additional remedial action. This type of ROD may take less time and effort to issue.



There are differing views on the use of interim RODs as part of a cleanup framework. It is important that the lead cleanup agency and oversight regulatory agencies work together to identify the overarching cleanup plan for a site and how the variety of cleanup decision documents available will be used.



An interim action waiver may be appropriate where a requirement that is an ARAR cannot be met as part of the interim remedy, but will be attained (unless use of one of the five waivers is justified) by the final site remedy (CERCLA §121(d)(4)(A) and NCP §300.430(f) (1)(ii)(C)(1)).

When writing the Interim ROD, the discussion under "utilization of permanent solutions and treatment to the maximum extent practicable" should indicate that the interim action is not designed or expected to be final, but that the selected remedy represents the best balance of trade-offs among alternatives with respect to pertinent criteria, given the limited scope of the action.

In the Interim ROD, the discussion under the "preference for treatment section" should note that the preference will be addressed in the final decision document for the site or final operable unit, although treatment components "that support the preference" should be noted.

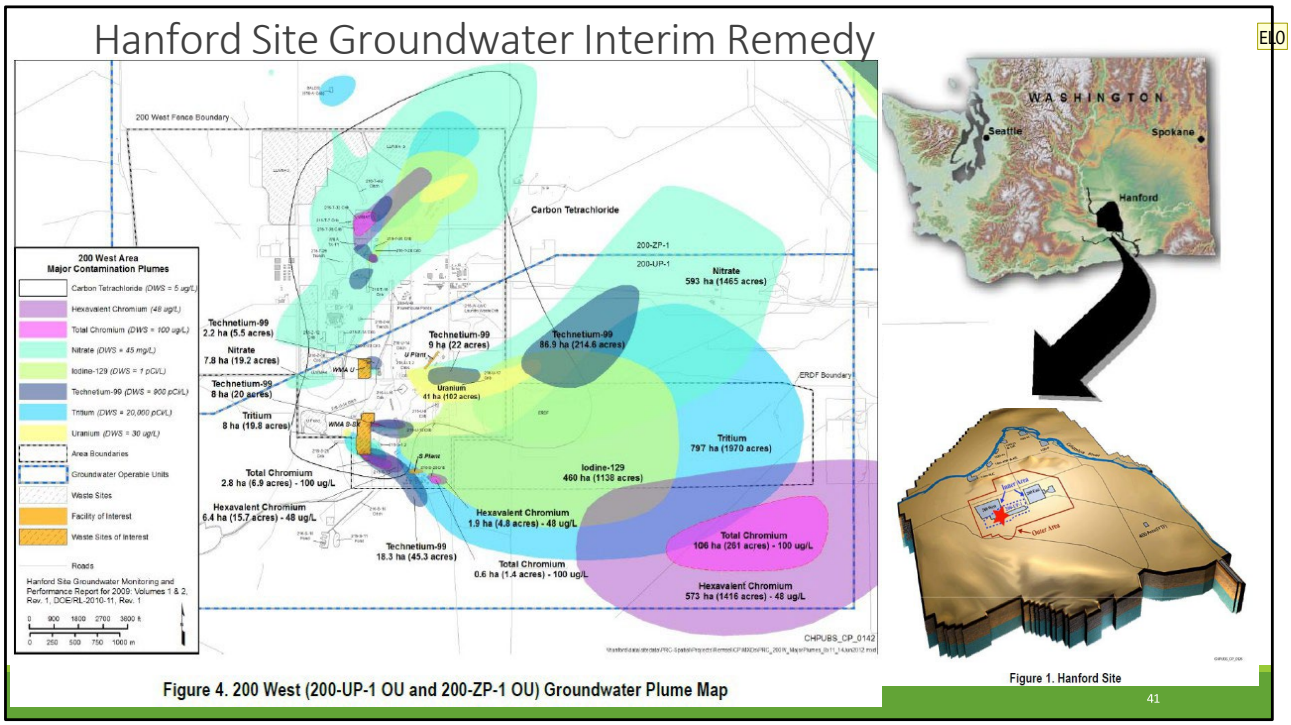


Figure 4. 200 West (200-UP-1 OU and 200-ZP-1 OU) Groundwater Plume Map

Figure 1. Hanford Site

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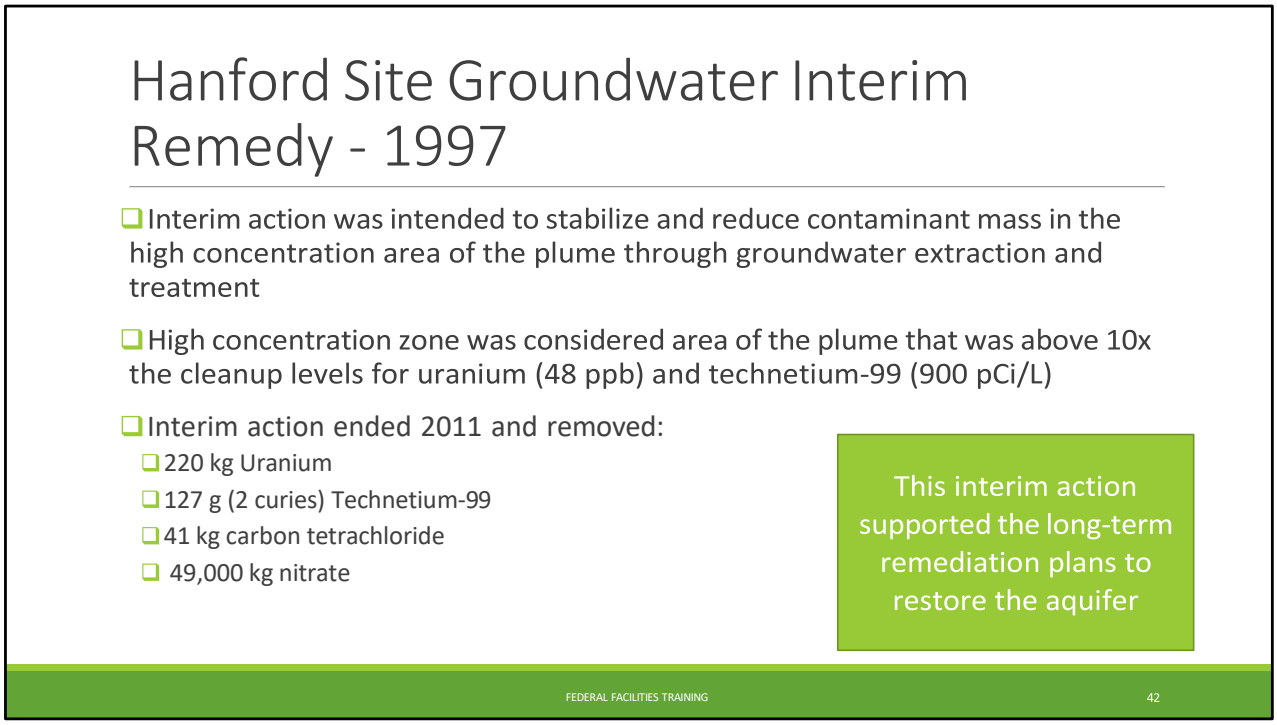
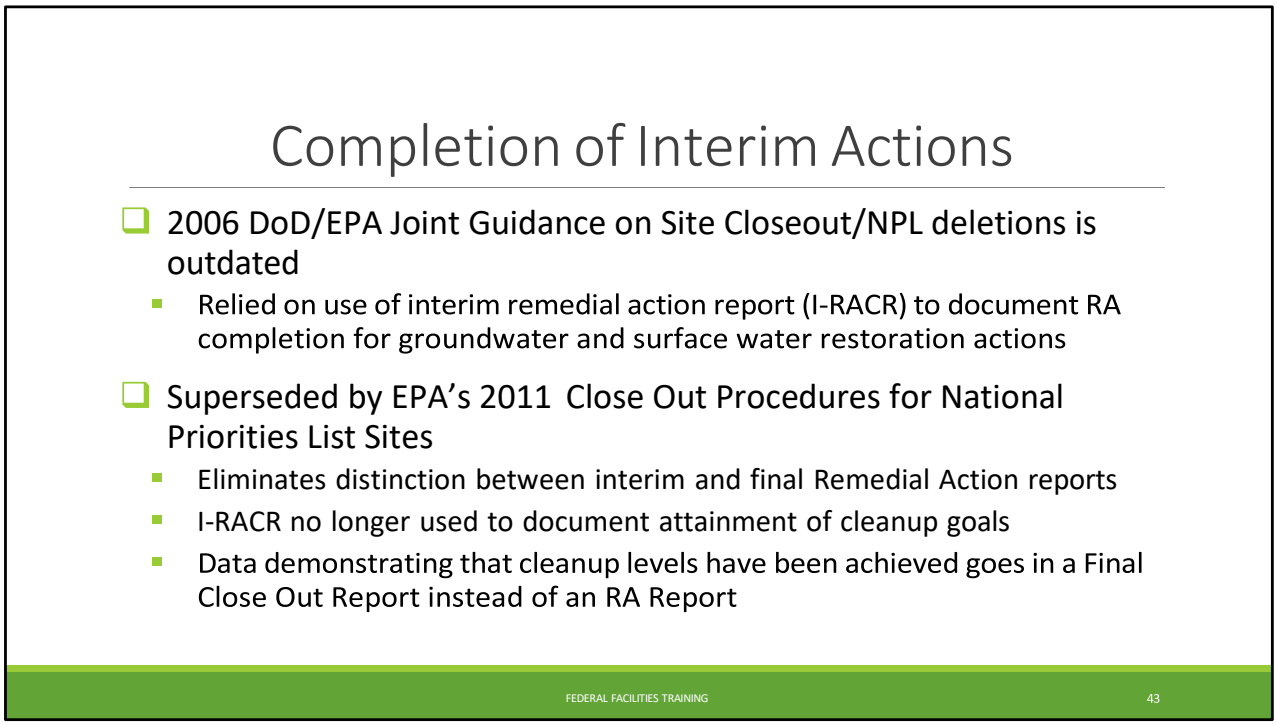
In 1942, during World War II, the Hanford Site was selected by the leaders of the Manhattan Project as the site for building the first production-scale nuclear reactors to produce plutonium for nuclear weapons. The Site manufactured nuclear materials for the nation's defense from 1943 through 1988. Forty-five years of production activities in the center of the Site, known as the Central Plateau, produced large-scale contamination of the groundwater. In 1989, EPA placed the 100, 200, 300, and 1100 Areas of the Hanford Site on the NPL. Also in 1989, DOE, EPA, and Ecology entered into the Tri-Party Agreement (Ecology et al., 1989), which governs cleanup of the Hanford Site. Since that time, the Hanford Site's mission has focused on environmental cleanup.

The 200-UP-1 OU is made up of contaminated groundwater beneath the southern portion of the 200 West Area. The 200-UP-1 OU is located about 8 km (5 mi) south of the Columbia River and 11 km (7 mi) from the nearest site boundary. The contamination consists mainly of plumes of carbon tetrachloride, uranium, nitrate, chromium (total and hexavalent), I- 129, Tc-99, and tritium. From the 1940s through the early 1990s, liquid wastes from materials used and produced at the Hanford Site were disposed to the ground through cribs, ditches, ponds, and trenches. Some of these waste disposal sites overlie the groundwater in the 200-UP-1 OU.

These figures are taken from the 2010 Proposed Plan for Remediation of the 200-UP-1 Groundwater Operable Unit which summarizes the 1997 Interim action.



An interim ROD for a 200-UP-1 OU Interim Remedial Action was issued in 1997 to remediate high concentrations (10 times the DWS) of uranium and Tc-99 in groundwater using pump-and-treat technology. This remediation system extracted groundwater down gradient from the disposal sites in the U Plant area where uranium and Tc-99 had contaminated the groundwater. Extracted groundwater was treated at the Effluent Treatment Facility to remove the contaminants and the treated water injected back to the aquifer. The system was shut down in the spring of 2011 after successfully achieving its interim remedial action objectives. A total of 886 million liters (234 million gallons) of groundwater was pumped removing 220 kg of uranium and 127 g (2 Curies) of Tc-99 from the aquifer, along with 41 kg (90 lb) of carbon tetrachloride and 49,000 kg (108,026 lb) of nitrate.



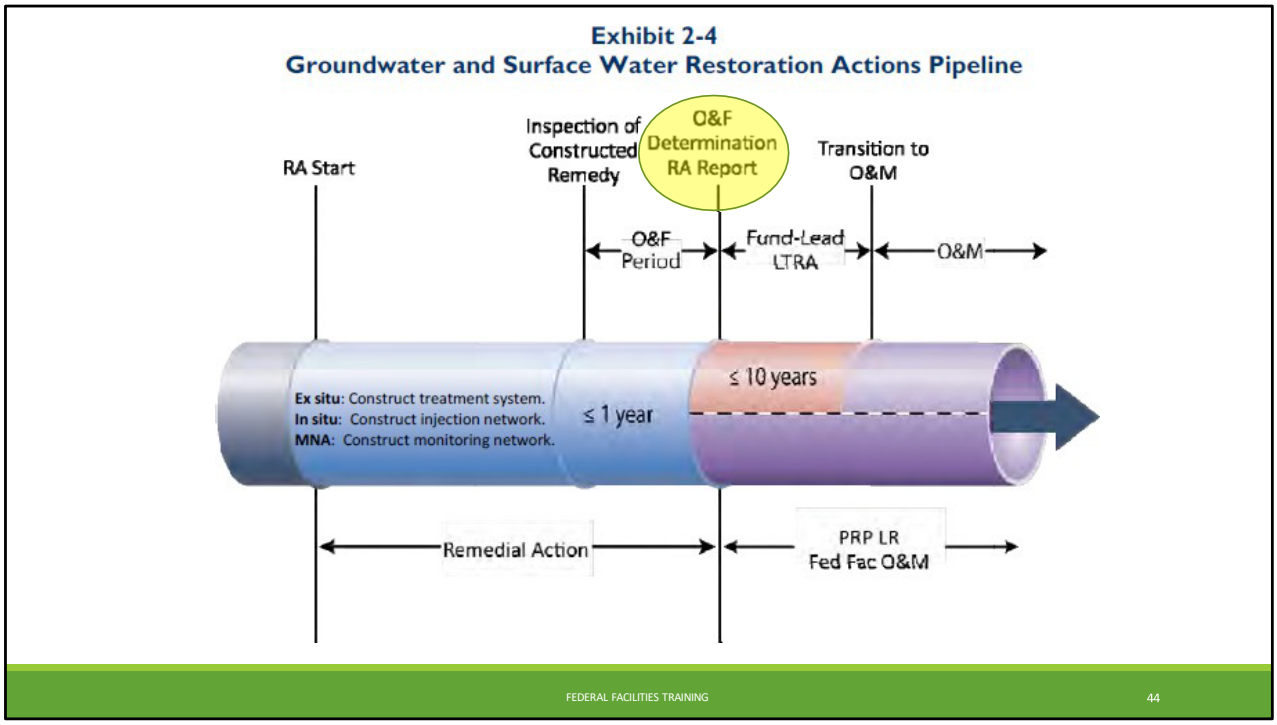
In 2006, DoD and EPA issued Joint Guidance on Streamlined Site Closeout and NPL Deletion Process For DoD Facilities. The joint guidance focused on streamlining and restructuring a key site closeout document, the Remedial Action Completion Report (RACR), that is used to demonstrate remedial action completion. It identified use of an Interim RACR to demonstrate the remedy for an OU has been constructed and is in place and operating successfully.

The 2011 EPA Close Out Procedures for National Priorities List Sites states that previous guidance distinguished between Interim and Final RA Reports, where Interim RA Reports were used to document RA completion for groundwater and surface water restoration actions (a Final RA Report would then be issued when cleanup levels were achieved).
Current guidance eliminates this distinction, now referring to all reports simply as "RA Reports". Rather than producing a Final RA Report, monitoring data demonstrating that cleanup levels have been achieved may be referenced in the Final Close Out Report.

Site project teams should discuss what documentation would be appropriate for documenting the achievements of interim actions so that there is a record available when a site is ready to pursue site close out.

The 2011 EPA document is available at https://www.epa.gov/superfund/close-out-procedures-national-priorities-list-superfund-sites

The 2006 document is available at https://www.denix.osd.mil/derp/denix-files/sites/26/2016/03/05_DOD-EPA-Joint-Guidance-Signed_RACR_Guidance.pdf



Note that for a restoration remedy, the RA Report is typically written when the remedy has been constructed and is operating as intended, but prior to achieving the remedial action objectives specified in the ROD. Exhibit 2-4 graphically depicts groundwater and surface water restoration actions.
Taken from the 2011 EPA Close Out Procedures for National Priorities List Sites Guidance.

Keep in mind that at Federal Facilities, States do not have a cost-sharing requirement for O&M.

Changing the Remedy Post-ROD

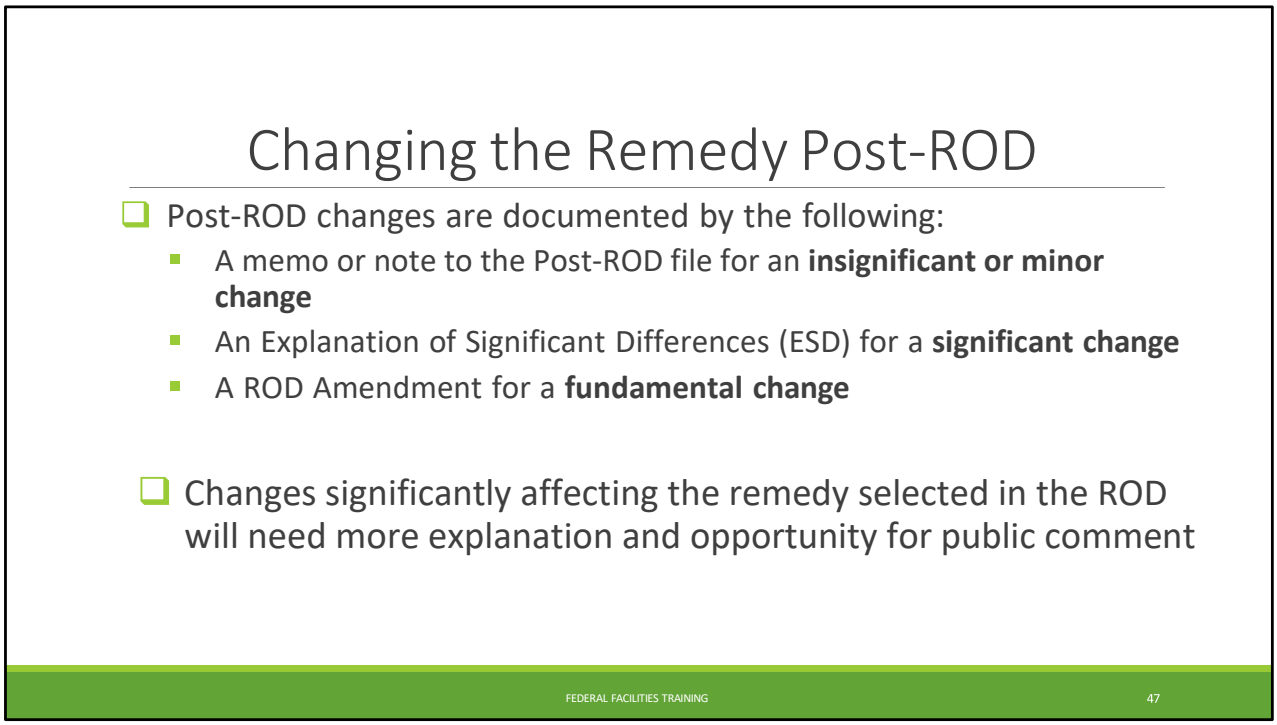
Determination of the Type of Post-ROD Change

- Scope
  - Does the change alter the scope of the remedy?
- Performance
  - Would the change alter the performance of the remedy?
- Cost
  - Are there significant changes in costs from estimates in the ROD?

The lead agency's or EPA's determination of whether a post-ROD change to the selected remedy is minor, significant, or fundamental is a site-specific determination and must consider scope, performance, and cost as set out in NCP §300.435(c)(2).

Based on this evaluation, and depending on the extent or scope of modification being considered, the lead agency must make a determination as to the type of change (nonsignificant or minor, significant, or fundamental change).

Changing the Remedy Post-ROD (Section 7.2 of ROD Guidance, 1999)



The type of documentation required for a post-ROD change depends on the nature of the change. Changes that significantly or fundamentally affect the remedy selected in the ROD will require more explanation and opportunity for public comment than those that do not.

- **Nonsignificant/minor changes** usually arise during design and construction, but will not have a significant impact on scope, performance, or cost of the remedy.

- **Significant changes** generally involve a change to a component of a remedy that not fundamentally alter the overall cleanup approach.

Fundamental changes involve an appreciable change(s) in the scope, performance and/or cost or may be a number of significant changes that together have the effect of a fundamental change. EPA has opined generally in the preamble to the 1992 preamble that "Once a ROD is signed and a remedy chosen, EPA will not reopen that decision unless the new or modified requirement calls into question the protectiveness of the selected remedy. More information in Changing the Remedy Post-ROD (Section 7 of ROD Guidance, 1999).

Explanation of Significant Differences (ESD)

Explanation of Significant Differences

- Changes significantly affecting the remedy selected in the ROD are issued in an ESD
- An ESD must:
  - Describe to the public why a significant change is needed and the nature of the change(s)
  - Summarize the information that led to making the changes
  - Affirm that the revised remedy complies with the National Contingency Plan (NCP) and the statutory requirements of CERCLA

When documenting significant changes made to a remedy, the lead agency must comply with CERCLA 117(c) and 300.435(c)(2)(i) and 300.825(a)(2). An ESD must describe to the public the nature of the significant changes, summarize the information that led to making the changes, and affirm that the revised remedy complies with the NCP and the statutory requirements of CERCLA.

Additional information regarding ESDs can be found in Section 7.3.2 of the ROD Guidance, 1999.

Explanation of Significant Differences

- Generally, a new nine-criteria analysis is not required.
- A side-by-side comparison of the original and proposed remedy components is suggested to clearly display the significant differences.
- Must be made available to the public by:
  - Publishing a notice of availability and a brief description of the ESD in a major local newspaper and
  - Placing it in the Administrative Record file and information repository

Generally, a new nine-criteria analysis is not required. A side-by-side comparison of the original and proposed remedy components is suggested to clearly display the significant differences. The ESD must continue to be protective and meet ARARs. Keep in mind that while not required, the site team can choose to conduct community involvement activities such as issuing a fact sheet, hosting a public meeting or open house, or a webinar.
Additional activities should be considered where there are high level of interest from the public.

The lead agency must publish a notice of availability and a brief description of the ESD in a major local newspaper of general circulation (NCP 300.435(c)(2)(i)(B)). The ESD must be made available to the public by placing it in the Administrative Record file and information repository (NCP 300.435(c)(2)(i)(A) and 399.825(a)(2)). Additional information regarding ESDs can be found in Section 7.3.2 of the ROD Guidance, 1999.

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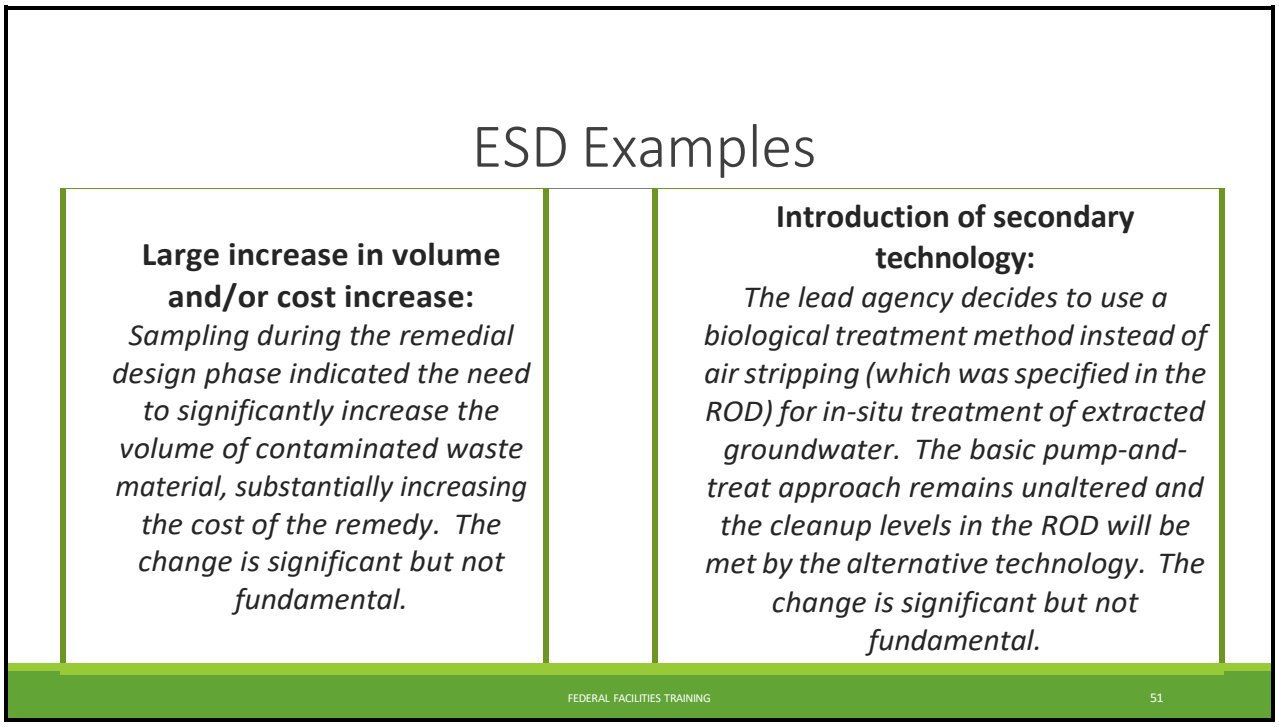
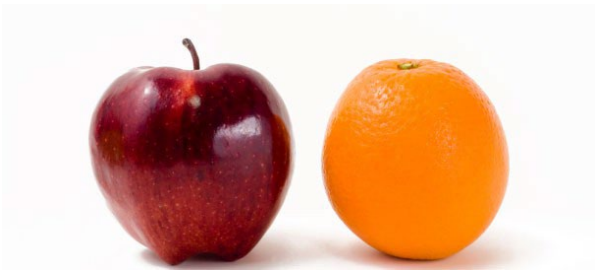


Additional information regarding ESDs can be found in Section 7.3.2 of the ROD Guidance, 1999. Examples of when an ESD is appropriate include:

When there is a large increase in volume and cost: Sampling during the remedial design phase indicated the need to significantly increase the volume of contaminated waste material, substantially increasing the cost of the remedy.

When secondary technology is introduced to enhance the remedy: The lead agency decides to use a biological treatment method instead of air stripping (which was specified in the ROD) for ex-site treatment of extracted groundwater. The basic pump-and-treat approach remains unaltered and the cleanup levels in the ROD will be met by the alternate technology. The change is significant, but not fundamental.

ROD Amendments



Fundamental change means the basic features of the remedy are being changed

ROD Amendments

- When a fundamental change is made to the remedy selected in a ROD with respect to scope, performance, or cost
- For the portion of the ROD being amended, a new nine criteria analysis, including a new ARARs analysis, will be necessary (NCP 300.430(f)(1)(ii)(B)(2))

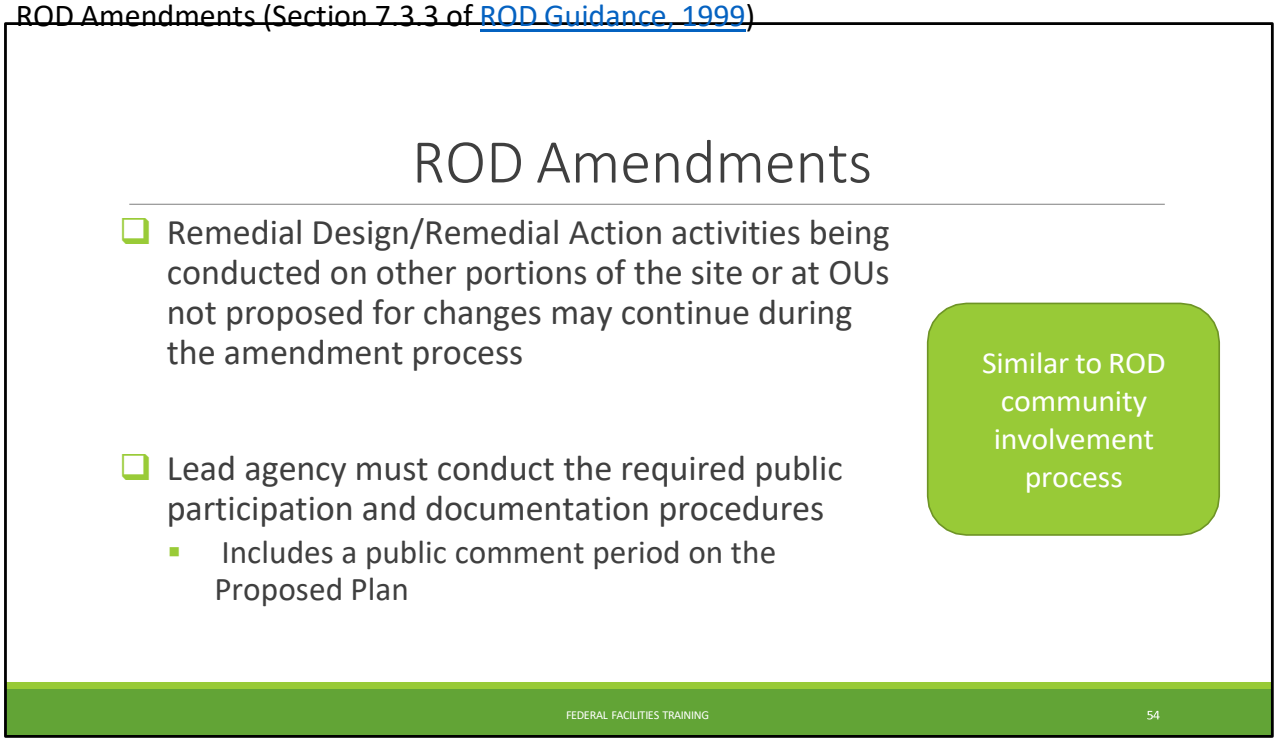
When a fundamental change is made to the basic features of the remedy selected in a ROD with respect to scope, performance, or cost, the lead agency is required to develop and document the change consistent with the ROD process (NCP 300.435(c)(2)(ii)(A) through (H)).

This entails issuance of a revised Proposed Plan that highlights the proposed changes. An amended ROD follows the Proposed Plan. A side-by-side comparison of the original and proposed remedy components is suggested to clearly display the differences. The focus of the

amendment should be to document the rationale for the amendment and provide assurances that the proposed remedy satisfies the statutory requirements.

NCP 300.430(f)(1)(ii)(B)(2) states that "Components of the remedy not described in the ROD must attain (or waive) requirements that are identified as applicable or relevant and appropriate at the time the amendment to the ROD or the explanation of significant difference describing the component is signed."

ROD Amendments (Section 7.3.3 of ROD Guidance, 1999)



Remedial Design/Remedial Action activities being conducted on other portions of the site or at OUs not proposed for changes may continue during the amendment process.

When fundamental changes are proposed to the ROD, the lead agency must conduct the public participation and documentation procedures specific in NCP 300.435(c)(2)(ii) and 300.825(a)(2) which includes a public comment period on the Proposed Plan. Given the changes proposed are fundamentally different from the original remedy, the public has the opportunity to provide comments on these changes that were not considered in the original ROD. ROD Amendments (Section 7.3.3 of ROD Guidance, 1999)

ROD Amendment Examples

A change in primary treatment method:

The in-situ soil washing selected in the ROD proves to be infeasible to implement after testing during remedial design. A decision is made to fundamentally change the remedy to excavate and thermally treat the waste

Remedy change from containment to treatment with cost increase:

During a five-year review for a small industrial site, tests indicate that the containment remedy will not be protective and now a more active response approach (e.g., treatment) is necessary. A new remedy must be selected that will meet protectiveness requirements, resulting in unanticipated costs for the site.

FEDERAL FACILITIES TRAINING 55

Examples of fundamental changes to the ROD are provided in ROD Amendments (Section 7.3.3 of ROD Guidance, 1999)

Apply Your Understanding

Three types of Post-Record of Decision (ROD) documentation changes exist. Which one of these is a fundamental change in the ROD and requires a ROD Amendment?

A. A new technology enhancing the selected remedy was brought to the lead agency and now they want to use it.

B. The selected remedy is not removing a contaminant efficiently enough and the lead agency has decided to pursue an alternative remedy.

C. The cleanup level noted in the ROD is no longer protective enough and needs to be changed.

FEDERAL FACILITIES TRAINING 56

Five-Year Reviews, Impacts on Remedies, and NPL Site Deletion

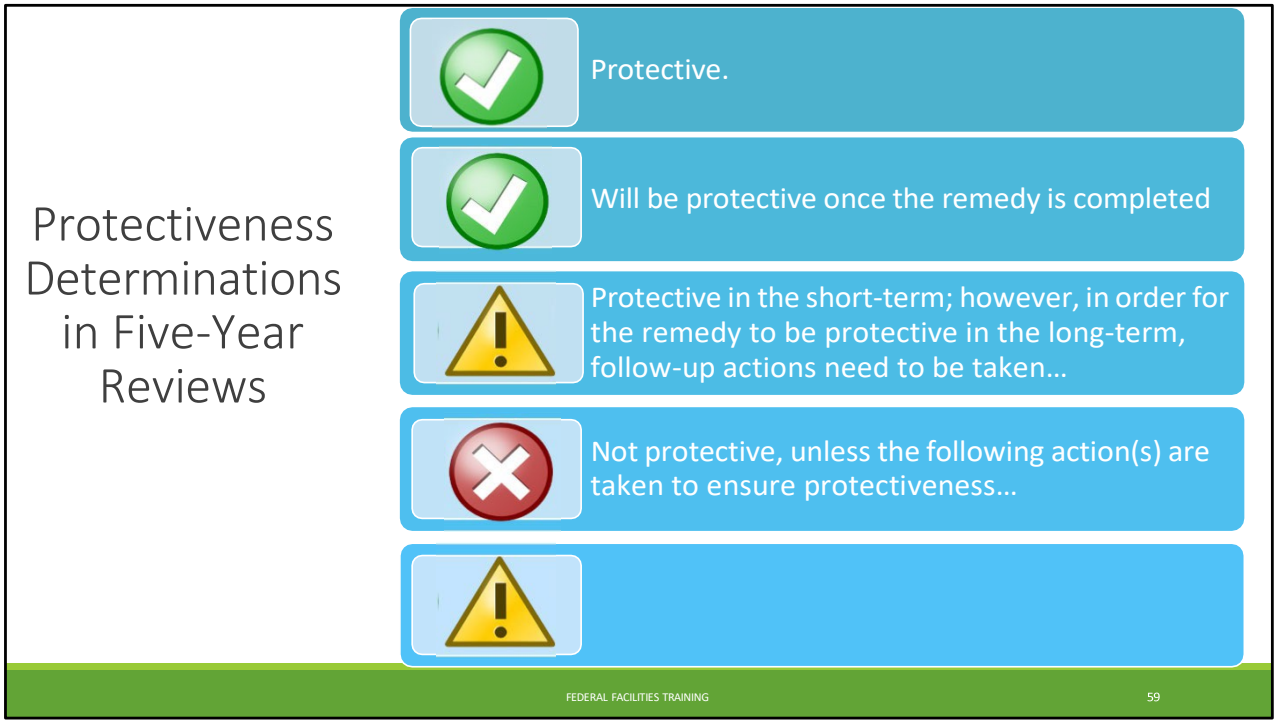
Five-Year Reviews

Federal Facility Five-Year Review Training is available!

- Consistent with EO 12580, other Federal Agencies are responsible for ensuring that Five-Year Reviews (FYRs) are conducted at sites where required or appropriate.
- For Federal Facility sites, the Lead Agency conducts the review, prepares the reports, and submits the report to EPA for review and comment.
  - EPA will either concur with the protectiveness determination or provide independent findings.
- The Lead Agency is responsible for ensuring that the recommendations and follow-up actions in the report are completed.

CERCLA §121(c) states the following: "If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews."

Consistent with Executive Order 12580, other federal agencies are responsible for ensuring that five-year reviews are conducted at sites where required or appropriate. For federal facility sites, the lead agency conducts the review, prepares the reports, and submits the report to EPA for review and comment. The lead agency is responsible for ensuring that the recommendations and follow-up actions in the report are completed. Additional information can be seen at: Five-Year Reviews and the Selected Remedy (https://www.epa.gov/superfund/superfund-five-year-reviews)

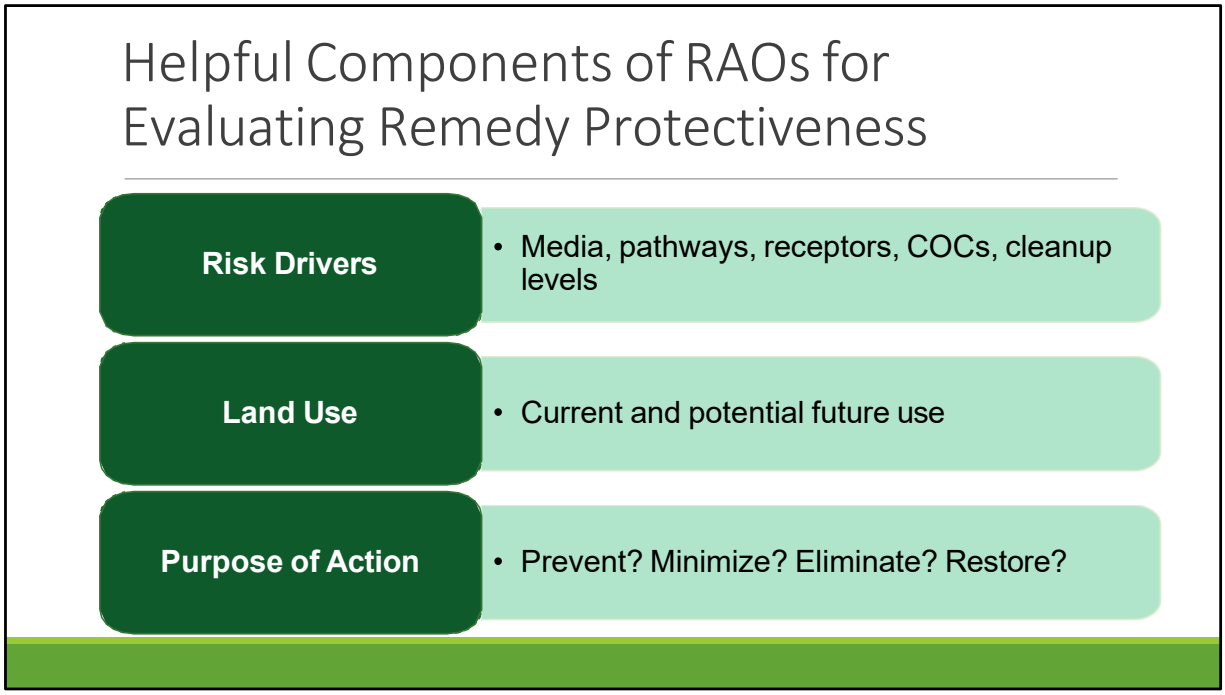


A five-year review should determine whether the remedy at a site is or upon completion will be protective of human health and the environment. Follow up actions should be identified for any recommendations that ensure protectiveness.

Five-year Review address the following technical questions:

- Is the remedy functioning as intended by the decision documents?
- Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy still valid?
- Has any other information come to light that could call into question the protectiveness of the remedy?

A Content Checklist for Five-Year Review Reports and a Five-Year Review Site Inspection Checklist exist to guide the information that should be gathered. The checklists can be found in the 2001 Five Year Review Guidance https://semspub.epa.gov/work/HQ/128607.pdf.



Remedies Considered Not Protective

- An immediate threat is present (e.g., exposure pathways that could result in unacceptable risks are not being controlled);
- Migration of contaminants is uncontrolled and poses an unacceptable risk to human health or the environment;
- Potential or actual exposure is clearly present or there is evidence of exposure (e.g., institutional controls are not in place or not enforced and exposure is occurring); or
- The remedy cannot meet a new cleanup level and the previous cleanup level is outside of the risk range.

FEDERAL FACILITIES TRAINING 61

Follow Up Actions Based on FYR

- If the remedy is not protective based on the FYR, then recommendations to address protectiveness should be identified
- If the FYR determines the remedy is not performing as designed, changes to the selected remedy may be needed through an ESD or ROD Amendment

FEDERAL FACILITIES TRAINING 62

For Federal facilities only, EPA considers Five-Year Review reports to be stand-alone primary documents or part of another related primary document that should have an enforceable schedule within the framework of the FFA. Where EPA enters into an FFA, the agreement should include all site-specific Five-Year Review requirements, such as provisions for reviews, public participation, and addressing or resolving issues. Consistent with CERCLA §120(g), FFAs cannot re-delegate EPA's final authority over whether the five-year reviews adequately address the protectiveness of remedies. If the remedy is not protective, then it may be necessary to make changes to the selected remedy, likely through an ESD or ROD Amendment.

NCP Criteria for NPL Site Deletion

- No further response is appropriate;
- Documentation of clean-up actions and decision-making at site is complete
- Institutional Controls are in place
- Operation and Maintenance (O&M) is not considered a response by the NCP

All RAOs must be achieved before a site can be deleted from the NPL

Apply Your Understanding

True or False? The remedy still protective

Site A is preparing for its second 5YR. The ROD was issued in 2005. EL0

However, the cleanup level for the primary contaminant of concern (COC) became more stringent in 2012 and based on the new cleanup level, the existing COC concentration exceeds the cleanup level.

Because the remedy is still performing as designed and the RAOs were met and therefore the institutional controls are no longer in place, the other federal agency concludes that the remedy is still protective.