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NAS WHITING FIELD
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PROPOSED PLAN FOR OPERABLE UNIT 10 (OU 10) SITE 11 NAS WHITING FIELD FL
8/1/2007
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PROPOSED PLAN

August 2007

OU 10 - Site 11, Southeast Open Disposal Area B

The Department of Defense and the Navy have completed the investigation of surface and subsurface soil at Naval Air Station Whiting Field Operable Unit 10 - Site 11, Southeast Open Disposal Area B. The site history and current conditions indicate a response action is necessary, and future land use will be restricted to non-residential activities by Land Use Controls.

In accordance with the National Contingency Plan (NCP) Section 300.430(f) and Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), this document summarizes the Navy's preferred final remedy alternative for OU 10 - Site 11 (Southeast Open Disposal Area B) at NAS Whiting Field..

Comments

The Navy will be accepting written comments (see insert) from 1 August through 30 August 2007. The comment period includes an opportunity to request a public meeting at which the Navy would present more detailed site information. A meeting will be held if there is a request from members of the public before the end of the comment period.

All comments will be considered before a final decision about site cleanup is reached.

What's Inside

Introduction

In accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section 300.430(f) and Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), this Proposed Plan identifies the Preferred Alternative to address contaminated surface and subsurface soils at Operable Unit (OU) 10 - Site 11, Southeast Open Disposal Area B, at Naval Air Station (NAS) Whiting Field (Figure 1).

Groundwater at Site 11 is being addressed separately as part of the NAS Whiting Field base-wide groundwater investigation (Site 40).

This Proposed Plan was developed by the Navy, the lead agency, with approval from the United States Environmental Protection Agency (USEPA), a support agency, and concurrence from Florida Department of Environmental Protection (FDEP), a support agency. The Navy will implement the Preferred Alternative for Site 11 after considering and addressing significant comments from the public.

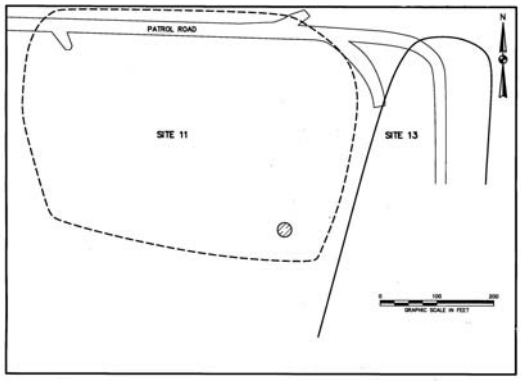


Figure 1 - Site 11 Location Map

The NAS Whiting Field Restoration Advisory Board (RAB) has provided input into the development of the Preferred Alternative.

The final response action will be selected to ensure protection of human health and the environment and will be detailed in a Record of Decision (ROD) for the site. This Proposed Plan will be published as a permanent part of the Administrative Record for NAS Whiting Field.

This Proposed Plan summarizes information found in greater detail in the *Remedial Investigation (RI) Report, Site 11*; the *Feasibility Study (FS) for Surface and Subsurface Soil, Site 11;* the *Feasibility Study Addendum (FSA) for Surface and Subsurface Soil, OU 10 - Site 11, Southeast Open Disposal Area B*; and other site documents. These materials are available for review at the NAS Whiting Field Information Repository, West Florida Regional Library, Milton Branch, 805 Alabama Street, Milton, Florida, 32570; (850) 623-5565.

The public is invited to participate in the remedy selection process by reviewing and commenting on all the alternatives in this Proposed Plan. New information or comments received during the public comment period could result in the selection of a remedial action that differs from the Preferred Alternative.

Site Background

Location: Site 11, Southeast Open Disposal Area B, is located along the eastern boundary of NAS Whiting Field near the South Air Field and is approximately 3 acres in size. The approximate location of the disposal area is shown on Figure 1.

Operational and Waste Disposal History: The site includes an old borrow pit used as an open disposal area from 1943 until approximately 1970. Access to the site was unrestricted during its use. The site received a wide variety of wastes including general refuse, construction debris, tree clippings, furniture, waste solvents, paint, transformer oils, hydraulic fluid, and various other oils. When disposal operations were discontinued in 1970, a final permeable native soil covering was placed over the site, and pine trees were planted.

The precise locations of the disposal areas at Site 11 are unknown; however, the approximate locations of the disposal areas were determined based on a geophysical survey conducted during the RI Phase IIA field investigation.

Investigation Activities

The RI at Site 11 was conducted in phases from 1995 through 1998. Fieldwork included a range of environmental studies to collect the data needed to determine the presence, nature, and extent of contamination. The field activities included the following:

Soil Gas Survey: Conducted to determine the need for surface and subsurface soil sampling. Soil gas samples were collected from 0 to 1.5 feet (ft) below land surface (bls) and various depths below 2 ft bls.

Soil Sampling: Conducted to determine surface and subsurface soil characteristics and contaminant concentrations by laboratory chemical analysis.

Interim Remedial Action: In 1999, a soil excavation to address contamination by carcinogenic polynuclear aromatic hydrocarbons (cPAHs) was conducted

by CH2M Hill Constructors, Inc. (CCI). Soils in the vicinity of sample location 11-SL-04 were excavated from 0 to 2 ft bls at the site.

The RI Report provided an understanding of soil conditions at Site 11. Groundwater conditions at Site 11 will be investigated and evaluated separately in the basewide groundwater investigation (Site 40). After the RI Report was completed in 1999, an FS was conducted to identify the best approach to address the soil contamination at the site.

Since this time, the following site conditions changed:

- Arsenic, originally identified in the FS as a constituent of concern (COC), was determined to be naturally occurring at Site 11. Aluminum, iron, and vanadium were also determined to be naturally occurring at NAS Whiting Field.
- The USEPA changed its screening criteria for evaluation of hazardous waste-related sites.

Based on updated site conditions, an FSA was prepared in 2007.

Site Characteristics

Current Conditions: At this time, Site 11 consists of vacant, unused land (Figure 1). There are currently no buildings at the site, and no permanent surface water bodies exist.

The current findings of environmental conditions at the site are summarized below.

General Site Conditions: Surface and subsurface soil at Site 11 consists of sand and silt with thin layers of clay. The site topography is generally flat.

Soil Conditions: The following constituents were detected in surface soils at maximum concentrations exceeding target levels were retained as constituents of potential concern (COPCs) for surface soil at Site 11:

- Benzo(a)pyrene
- Pesticides (DDT, alpha- and gamma-chlordane, dieldrin, heptachlor, heptachlor epoxide)
- Lead
- TPRH

Benzo(a)pyrene was detected in one sample at a concentration greater than the FDEP Soil Cleanup Target Level (SCTL). 4,4'-DDT, alpha-chlordane, and gamma-chlordane were detected at concentrations exceeding the SCTLs. Dieldrin was also detected at concentrations exceeding the SCTL. The maximum detected TRPH concentration exceeded the SCTL.

The following constituents were detected in subsurface soils at maximum concentrations exceeding the direct contact, target levels and were retained as COPCs for subsurface soil at Site 11:

- Pesticides/PCBs (aldrin and dieldrin)
- PCBs (Aroclor-1254 and Aroclor-1260)
- Cadmium

Aldrin, Aroclor-1254, and Aroclor-1260 were only detected in one sample. Maximum concentrations of Aroclor-125 and Aroclor-1260 exceeded SCTLs. Concentrations of dieldrin also exceeded the SCTL.

Based on the FSA, the estimated area and volume of contaminated soil at Site 11 requiring remedial action is approximately 3 acres and 4,840 cubic yards, respectively.

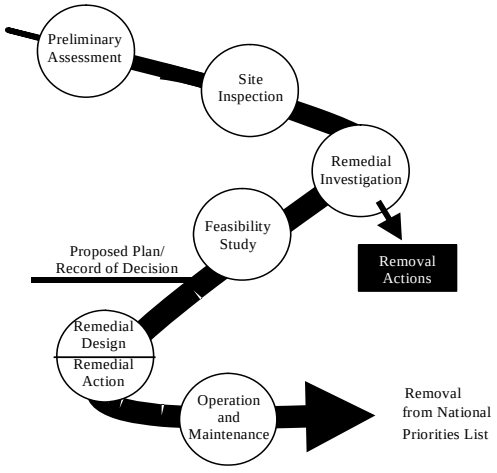
Scope and Role of OU 10–Site 11

Regulatory Framework

NAS Whiting Field was placed on the USEPA National Priorities List (NPL) for environmental study and cleanup in June 1994 based upon evidence of past historical releases into the environment of CERCLA hazardous substances.

Environmental work at OU 10 - Site 11 is part of the ongoing Navy's Installation Restoration Program that includes 27 OUs at NAS Whiting Field. This is a Department of Defense program to investigate and, if necessary, clean up conditions related to suspected past releases of hazardous materials at military facilities.

Environmental investigation and cleanup work at the facility is being conducted in accordance with the requirements of CERCLA; the Department of Defense Environmental Restoration Program (DERP); Executive Order 12580; U.S. EPA issued CERCLA guidances including, where practicable, the NCP; as well as other federal and State environmental and facility siting laws, regulations, guidance, and policies to the extent required by CERCLA. The CERCLA process is typically completed in the following stages:



Summary of Site Risks

The data collected during the RI at Site 11 were used in preparing two risk assessments, the human health risk assessment (HHRA) and the ecological risk assessment (ERA), to determine if soil contamination at the site results in risks to human health or the environment.

In surface soil, Benzo(a)pyrene was detected in one sample at a concentration greater than the USEPA Region IX Preliminary Remediation Goals (PRGs). 4,4'-DDT, alpha-chlordane, and gamma-chlordane were detected at concentrations exceeding the PRGs. Dieldrin was also detected at concentrations exceeding the PRG.

Aldrin, Aroclor-1254, and Aroclor-1260 were only detected in one sample. Maximum concentrations of aldrin and cadmium exceeded PRGs. Concentrations of Aroclor-1254, Aroclor-1260 and dieldrin also exceeded the PRGs.

Following all risk assessment calculations, only two COCs, dieldrin and lead, were identified in surface soil at concentrations greater than FDEP and USEPA target levels for protection of human health and the environment under a residential land use scenario. No COCs were identified in subsurface soil at Site 11.

Current and Future Land Uses: The current and future anticipated land use at Site 11 is non-residential/recreational.

Human Health Risks: The HHRA evaluated the risk associated with cancer-causing (carcinogenic) constituents as well as those constituents associated with non-cancer adverse health effects. Based on the findings of the HHRA, unacceptable carcinogenic risk was identified for hypothetical future residents exposed to surface soil at Site 11. Cancer risk estimates for dieldrin exceeded the State of Florida cancer risk benchmark, but none of the risk estimates exceed the USEPA cancer risk range. The primary risk driver for surface soil was the dieldrin.

For non-cancer-causing constituents, the measure of the likelihood of adverse effects occurring in humans is called the Hazard Index (HI). An HI greater than 1.0 suggests adverse effects are possible. At Site 11, non-cancer risk estimates did not exceed 1.0 for any of the receptors evaluated. Consequently, adverse non-carcinogenic health affects are not anticipated for exposure to surface and subsurface soil under a residential land use scenario.

Ecological Risks: The quantity of the terrestrial habitat at Site 11 is limited. In the early 1990s, Site 11 consisted of overgrown shrubs and planted pine trees approximately 25 to 40 ft in height. Construction debris was present on the ground surface at the site. The site is currently comprised of vacant, unused land. No ecological risks are present in surface or subsurface soil at Site 11.

Conclusion: Based on USEPA baseline risk assessment guidance, remedial action is not generally warranted at sites where cumulative risk does not exceed the $1x10^{-4}$ to $1x10^{-6}$ risk range. However, the guidance also stipulates that risk less than $1x10^{-4}$ may still be considered unacceptable for site-specific reasons. At Site 11, the suspected presence of buried wastes and debris create the significant possibility that an unacceptable risk will occur if these materials are exposed during excavation or if soil erosion occurs. These site uncertainties warrant implementation of a remedy that precludes potential future exposure to such materials.
Considering these factors, it is in the lead agency's (Navy) current judgment that the Preferred Alternative (LUCs) identified in this Proposed Plan is warranted and necessary to protect public health, welfare, or the environment from past or potential releases of hazardous substances at this site.
Implementing LUCs prohibiting residential land use and disturbance of the soil at this site will allow the Navy to properly and effectively manage future land use at the site and minimize threats to human health or the environment.

Remedial Action Objectives

The FSA identified the following Remedial Action Objectives (RAOs) to describe what cleanup is expected to accomplish at Site 11:

RAO 1: To preclude unacceptable human health carcinogenic risks associated with incidental ingestion, inhalation, or dermal contact with surface soil contaminated with dieldrin.

RAO 2: To preclude unacceptable human health non-carcinogenic risks associated with incidental ingestion, inhalation, or dermal contact with surface soil contaminated with lead.

Cleanup goals (CGs) are determined based on Applicable or Relevant and Appropriate Requirements (ARARs) and TBC criteria, COCs, and exposure pathways. The CGs for Site 11 soils were formulated based on the following criteria: FDEP SCTLs for residential exposure (FDEP, 2005), and USEPA Region IX PRGs (USEPA, 2002). The CGs are listed below.

- Dieldrin – 0.03 mg/kg (USEPA Region IX)
- Lead – 400 mg/kg (FDEP SCTL)

Summary of Remedial Alternatives

The Remedial Action Alternatives evaluated in the FSA for soil contamination at Site 11 include no further action (NFA), land use controls (LUCs) as a limited action alternative, and a soil cover with LUCs as a containment alternative. The Preferred Alternative is Alternative S11-2: LUCs.

Alternative S11-1: No Further Action

The NCP requires that a no-action alternative be considered as part of the evaluation of alternatives. In an FS, the no-action or NFA alternative is typically considered to serve as a baseline consideration or to

address sites not requiring any active remediation. The NFA alternative for Site 11 assumes that no remedial action would occur and establishes a basis for comparison with the other alternatives. No remedial action, treatment, LUCs, or monitoring of conditions would be implemented under the NFA alternative. Therefore this alternative would not meet the RAOs because contaminants at concentrations greater than the residential and commercial/industrial SCTLs would be left on site.

There is no cost for the NFA alternative.

Alternative S11-2: Land Use Controls

Alternative S11-2 addresses the principal threats through the implementation of LUCs for surface soil. The LUCs would ensure that access to soil at the site will be restricted. The LUCs for Site 11 would limit exposure to soil contamination through the use of warning signs, fencing, or other containment barriers and would ensure appropriate future land use

Prohibited uses of the site would include, but are not limited to, residential housing, elementary and secondary schools, child care facilities, playgrounds, and adult convalescent or nursing home facilities. This option would require annual inspections to confirm compliance with the LUC agreement. The alternative would not provide any additional effectiveness, but would provide long-term effectiveness by restricting future use and access.

The estimated cost of the implementation of the LUC alternative is $24,608. The long-term cost including the cost for 5-year reviews, as a 30-year Net Present Worth (NPW) cost is $102,954 to within +/-30%.

Alternative S11-3: Soil Cover and LUCs

Alternative S11-3 provides containment of all surface soils containing COCs exceeding CGs. The soil cover would be constructed over the entire site and includes all former disposal areas. The soil cover would consist of clean fill placed and compacted to a minimum thickness of 18 inches, and then 6 inches of topsoil would be placed on top of the clean fill for a total cover thickness of 24 inches.

Post-closure monitoring and maintenance of the installed soil cover would be implemented. This program would include visual inspections and maintenance of the cover.

Because the RI did not identify constituents that posed a significant threat to human health or the environment, only limited action (i.e. LUCs) and containment (i.e. soil cover) alternatives were considered in the original FS. More aggressive treatment alternatives were eliminated in the screening process, mainly due to cost.

The estimated cost for the implementation of the soil cover as a 30-year NPW cost is $348,368 to within +/-30%.

Evaluation of Alternatives

Nine criteria were used to evaluate the remediation alternatives individually and against each other and provide rationale for the selection of the Preferred Alternative.

For Site 11, the relative performance of each alternative against the nine criteria has been evaluated and is summarized below.

The evaluation criteria fall into three groups (Threshold, Primary Balancing, and Modifying) as shown below.

Threshold Criteria:

Overall Protection of Human Health and the Environment – Determines whether an alternative eliminates, reduces, or controls threats to public health and the environment through institutional controls, engineering controls, or treatment.

Alternative S11-1 would not be protective of human health and the environment because contaminants would remain in soil at concentrations excess of its PRGs and SCTLs.

Alternative S11-2 would allow contaminant concentrations to remain in soil and to possibly continue to migrate from contaminated areas, but it would provide protection by restricting access to the site through site restrictions and warning signs. Alternative 2 would not be protective to all ecological receptors.

Alternative S11-3 would be more protective than Alternative 2 because it would eliminate the potential for exposure to contaminants. The soil cover would eliminate direct contact with contaminated soil and prevent the potential movement of contaminants by erosion.

Compliance with ARARs – Evaluates whether the alternative meets federal and state environmental statutes, regulations, and other requirements that pertain to the site, or whether a waiver is justified.

Chemical-Specific: Alternative S11-1 would not comply with chemical-specific ARARs because unacceptable levels of contaminants would remain in soil. Alternatives S11-2 and S11-3 would also not comply with chemical-specific ARARs.

Action-Specific: Alternative S11-1 was not evaluated for action-specific requirements because no action is recommended for that alternative. Alternatives S11-2 and S11-3 will comply with action-specific requirements.

Location-Specific: There are no location-specific ARARs identified for Site 11.

Primary Balancing Criteria:

Long-Term Effectiveness and Permanence – Considers the ability of an alternative to maintain protection of human health and the environment over time.

Alternative S11-1 would not have long-term effectiveness or permanence.

Alternative S11-2 would provide some long-term effectiveness and permanence because LUCs would reduce exposure to contaminated soil.

Alternative S11-3 would be more effective and permanent than Alternative 2. The soil cover would be more effective

and permanent than LUCs in preventing direct contact with contaminants and preventing the erosion of contaminants. Inspection, maintenance, and repair of the cover would need to be conducted to ensure its continued integrity and effectiveness.

Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment – Evaluates an alternative's use of treatment to reduce harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present.

Alternatives S11-1 and S11-2 would not achieve any reduction of toxicity, mobility, or volume of contaminated soil because there is no treatment.

Alternative S11-3 would not achieve any reduction of toxicity or volume of contaminated soil but would significantly reduce mobility because contaminated soil would be contained under the soil cover.

Short-Term Effectiveness – Considers the length of time needed to implement an alternative and the risks the alternative poses to workers, residents, and the environment during implementation.

Alternative S11-1 would not provide any short term effectiveness or risks because there is no action.

Alternative S11-2 would result in a slight possibility of exposing site workers to contamination during long-term monitoring activities (site inspections). However, the risk of exposure would be effectively controlled through compliance with proper site-specific health and safety procedures. Alternative 2 would not adversely impact the surrounding community or environment.

Alternative S11-3 would result in the possibility of exposing construction workers to contamination during remedial activities. However, the risk of exposure would be effectively controlled by the implementation of engineering controls (e.g., dust suppression) and compliance with applicable OSHA regulations and proper site-specific health and safety procedures.

Implementability – Considers the technical and administrative feasibility of implementing the alternative, including factors such as the relative availability of goods and services.

Alternative S11-1 was not evaluated under this criteria because there is no action to implement.

Alternative S11-2 would be very simple because it would only require implementation of LUCs.

Alternative S11-3 would be somewhat more difficult than that of Alternative 2. In addition to LUCs, this alternative would require the construction of the soil cover. However, these activities would be technically implementable.

Cost – Includes estimated capital and annual operational and maintentance (O&M) costs, as well as NPW cost. NPW cost is the total cost of an alternative over time in terms of today's dollar value. Cost estimates are expected to be accurate within a range of +50 percent to -30 percent.

The table below provides a breakdown of the NPW worth costs for the three alternatives at Site 11:

Alternative	Capital	Total
S11-1	$0	$0
S11-2	$24,608	$102,954
S11-3	$348,368	$348,368

Modifying Criteria:

State/Support Agency Acceptance – Considers whether the state agrees with the Navy's analyses and recommendations, as described in the **RI** and **FS** and this Proposed Plan.

The FDEP concurs with the Preferred Alternative (LUCs) at Site 11.

Community Acceptance – Following the public comment period, this criterion considers whether the local community agrees with the Navy's analyses and Preferred Alternative.

Comments received on the Proposed Plan are an important indicator of community acceptance.

This criteria will be evaluated following completion of the public comment period. Modifications will be made if necessary.

Preferred Alternative

The following alternative has been selected as the Preferred Alternative for soil at Site 11.

The USEPA and FDEP concur with the recommended alternative. However, the Navy, in consultation with the USEPA and FDEP, will not select a final alternative until public comments have been considered.

Soil Alternative S11-2: LUCs **-** The Preferred Alternative for Site 11 is LUCs for surface and subsurface soils. LUCs will be implemented at the site restricting future use of the site to non-residential activities and prohibit soil removal from the site.

This alternative consists of the Navy implementing LUCs in the form ICs at the site. Warning signs would be posted along the boundaries of the Site. The location, size and wording to be used on those signs would be agreed upon by the Navy, USEPA, and FDEP prior to their posting.

Institutional controls (ICs) in the form of a non-residential use prohibition and restrictions on activities which would disturb the Site's soil cover or posted signage without prior regulatory notice and concurrence would also be implemented to ensure appropriate future land use. Prohibited uses of the site include, but are not limited to, residential housing, elementary and secondary schools, child care facilities, playgrounds, and adult convalescent or nursing home facilities.

Because this remedy will result in hazardous substances, pollutants, or contaminants remaining on site at levels greater than residential health-based levels, a statutory review will be conducted every 5 years after initiation of the remedy to ensure the remedy continues to be protective of human health and the environment.

Based on the information currently available, the Navy believes the Preferred Alternative will satisfy the following statutory requirements of CERCLA Section 121(b): (1) adequately protect human health and the environment; (2) comply with all federal and state requirements (including ARARs); (3) be cost effective; and (4) meet the RAOs.

Comments

For your convenience, a public comment form is included with this Proposed Plan. Written comments and requests for more information or a public meeting must be postmarked by 30 August 2007.

Community Participation

Community acceptance of the Preferred Alternative is the next step. After the Proposed Plan is approved, the ROD will be signed by the Navy and USEPA with concurrence by FDEP. This document will establish the LUCs for surface and subsurface soil decision at Site 11. No other soil cleanup measures at Site 11 will be proposed after approval of the selected remedial alternative.

The Navy has established an active outreach program to ensure community involvement in environmental activities at Site 11 and throughout NAS Whiting Field.

The Navy will be accepting written comments on the proposed Site 11 remedial action from 1 August to 30 August 2007. Public participation in the selection is encouraged. Comments can be submitted using the enclosed form. Comments will be summarized and responses provided in the Responsiveness Summary section of the ROD.

The comment period includes an opportunity to request a public meeting at which the Navy would present the RI and FS Reports and Proposed Plan, answer questions, and receive comments in writing from the public. A public meeting will be held if one is requested by members of the public before the end of the comment period.

Site 11 Proposed Plan
(LUCs for Surface and Subsurface Soil)
+
Public Comment
→
Record of Decision

The NAS Whiting Field RAB is another method used by the Navy to promote public involvement in the base environmental cleanup program. For example, the RAB has been invited to participate in developing the Proposed Alternative by reviewing associated documents, offering suggestions, and expressing their concerns about the proposed remedial actions. The RAB meets regularly at convenient times and locations to discuss Installation Restoration Program status and provide community input into the cleanup process. RAB meetings are open to the public and are advertised in local news media.

Technical Presentation at a RAB meeting

A community mailing list is also maintained to distribute updates about the environmental program directly to interested members of the community.

If you need additional information, would like to comment on the Preferred Alternative, or would like to request a public meeting, please fill out the attached public comment form and mail to the address below or contact:

Mr. Ronald Joyner
Public Works Department
NAS Whiting Field
7151 USS WASP Street
Milton, Florida 32570-6159
(850) 623-7181 (Ext. 40)

Glossary of Terms

Administrative Record: The complete body of documents pertaining to the investigation and restoration of an environmental site. The body of documents is kept at a location where it can be accessed by the public.

Applicable or Relevant and Appropriate Requirements (ARARs): The federal, state, and local environmental rules, regulations, and criteria that must be met by the selected cleanup action under CERCLA.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A Federal law enacted in 1980 and amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986. CERCLA, administered by the USEPA and commonly known as Superfund, outlines a process to evaluate hazardous waste conditions that may pose a threat to human health or the environment.

Constituents of concern (COCs): Chemical constituents detected at levels and/or in a location where it could have an adverse effect on human health and the environment.

Constituents of potential concern (COPCs): Chemicals or constituents detected at levels and/or location that was determined during the RI to possibly have the potential for adverse effects on human health and the environment.

Feasibility Study (FS): An engineering report identifying and evaluating the most appropriate approaches for addressing contamination at a site.

Hazard Index (HI): The measure of the likelihood of adverse effects occurring to humans from non-cancer-causing chemicals.

Human health risk assessment (HHRA): An evaluation of future potential for adverse human health effects from exposure to site contaminants.

Information Repository: A public file containing technical reports, reference documents, and other materials relevant to the site cleanup.

National Priorities List (NPL): The USEPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term cleanup under Superfund.

Polychlorinated biphenyl (PCBs): PCBs are a group of organic chemicals that can cause a number of different harmful effects. There are no known natural sources of PCBs in the environment. PCBs are either oily liquids or solids and colorless to light yellow. Because they do not burn easily and are good insulating materials, PCBs are used widely as coolants and lubricants in transformers, capacitors, and other electrical equipment.

Polynuclear aromatic hydrocarbons (PAHs): High molecular weight, moderately toxic chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco. PAHs are also found in coal tar, crude oil, creosote, and roofing tar.

Proposed Plan: A public participation document detailing the proposed response action at a site.

Preliminary Remediation Goals (PRGs): PRGs establish acceptable exposure levels protective of human health and the environment, based on regulatory requirements, USEPA acceptable risk levels, and assumptions regarding ultimate land uses, as well as contaminant pathways.

Public Comment Period: A legally required opportunity for the community to provide written and oral comments on a proposed environmental action at a hazardous waste site.

Record of Decision (ROD): A public document explaining selected cleanup alternatives at a site; it is based on information and technical analysis, and on consideration of public comments and concerns. The ROD is issued and signed by the Navy and the USEPA at the completion of a Remedial Investigation and Feasibility Study and after community acceptance of the Proposed Plan.

Remedial Action Objective (RAO): A cleanup objective agreed upon by the Navy and U.S. EPA, in consultation with FDEP. One or more RAOs are typically formulated for each environmental site.

Remedial Investigation (RI): An in-depth study to determine the nature and extent of contamination.

Response action: A federally authorized action to respond to environmental contamination. There are two types: removal action taken over the short-term to respond quickly to a more immediate threat, and remedial action involving long-term activities for a more permanent cleanup solution.

Responsiveness Summary: A section of the ROD summarizing the public comments received during the Proposed Plan public comment period and the responses to those comments.

Restoration Advisory Board (RAB): An advisory group composed of regulatory agency representatives, site personnel, and community volunteers who provide input and promote public involvement in cleanup activities.

Soil Cleanup Target Levels (SCTLs): Target concentration levels established by FDEP (Chapter 62-770, F.A.C.) and determined to be protective of human health and the environment.

To Be Considered (TBC): TBC guidance criteria are federal and State non-promulgated advisories that are not legally binding and do not have the status of ARARs. However, if there are no specific ARARs for a chemical or site condition, or if ARARs are not deemed sufficiently protective, then advisory criteria should be used to ensure the protection of human health and the environment.

Total recoverable petroleum hydrocarbons (TRPH): A measurement of petroleum contamination in soil and groundwater as defined by the State of Florida environmental regulations. This method measures the amount of petroleum compounds that have 8 to 40 atoms.