# Proposed Plan for
# Installation Restoration Site PRFTA-02
# U. S. Army Garrison Camp Parks
# Dublin, California

## *Army Announces Proposed Plan*

The United States Department of the Army (Army) plans to clean up soil contamination that resulted from past activities at the Installation Restoration Program (IRP) site PRFTA-02 at the United States Army Garrison Camp Parks (Camp Parks) in Dublin, California. The Army conducted environmental investigations at the site and evaluated risk to human health and ecological receptors (plants and animals) from site contaminants. This Proposed Plan provides information on the environmental investigations, the potential site risks, the remedial alternatives (options for cleaning up the site) that the Army evaluated, and the Army's selected remedial alternative. This plan also provides the rationale for this selection. The selected alternative is a soil removal action that involves removing contaminated soil and disposing of the soil at an appropriate off-site location.

This document is issued by the United States Department of the Army (Army), the lead agency for site activities, in cooperation with the California Department of Toxic Substances Control (DTSC) and the California Regional Water Quality Control Board (RWQCB), the support agencies. The Army, in consultation with the DTSC and RWQCB, selected a final remedy. However, the Army will consider public input to the Proposed Plan submitted during the 30-day public comment period will incorporate responses to public comments into the Decision Document and the Removal Action Work Plan. Therefore, the public is encouraged to review and comment on this Proposed Plan.

The Army is issuing this Proposed Plan as part of its public participation responsibilities under Section 117 (a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, 42 USC § 9617(a), Section 300.430 (f)(3) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This Proposed Plan summarizes information that can be found in greater detail in the Remedial Investigation/Feasibility Study (RI/FS) Report (USACHPPM, 2010) and other documents contained in the Administrative Record and Information Repository file for this site. The Army encourages the public to review these documents to gain more understanding of the site.

***MARK YOUR CALENDARS***

**PUBLIC COMMENT PERIOD:**
**November 10, 2010 – December 9, 2010**
The Army will accept written comments on the Proposed Plan during the public comment period.

**PUBLIC MEETING:**
**November 18, 2010**
The Army will hold a public meeting to explain the Proposed Plan and all of the remedial alternatives presented in the RI/FS. Oral and written comments will also be accepted at the meeting. The meeting will be held at the City of Dublin, 100 Civic Plaza, Dublin, CA 94568
**For more information, see the Information Repository at the following locations:**

Alameda County – Dublin Library
200 Civic Plaza Drive
Dublin, CA 94568
Phone: (925) 828-1315
Monday 10 a.m. to 8 p.m.
Tuesday, Thursday 10 a.m. to 6. p.m.
Wednesday 12 p.m. to 8 p.m.
Friday Closed
Saturday 10 a.m. to 5 p.m.
Sunday 1 p.m. to 5 p.m.

Contra Costa County – San Ramon Public Library
100 Montgomery Street
San Ramon, CA 94583
Phone: (925) 973-2850
Monday- Thursday 10 a.m. to 8 p.m.
Friday-Saturday 10 a.m. to 5 p.m.
Sunday 1 p.m. to 5 p.m.

## *Site History and Background*

Camp Parks is a U.S. Army facility located in the city of Dublin (Alameda and Contra Costa Counties), California (Figure 1). Camp Parks occupies approximately 2,498 acres and contains numerous buildings and facilities including ranges and training facilities, vehicle repair facilities, supply buildings and warehouses, medical training facilities, medical facilities, fire and police facilities, office and administrative buildings, recreational facilities, a parade ground, a helicopter pad, infrastructure maintenance facilities, barracks, dining facilities, and a museum. Numerous buildings and facilities have been demolished since Camp Parks was originally constructed. Figure 2 shows the current Camp Parks layout.

The PRFTA-02 site (the Site) is located in the southwestern corner of Camp Parks and is bounded by 3rd Street to the North; a drainage ditch to the south; the western Camp Parks boundary, a drainage ditch, and a paved hiking/biking path to the west; and a drainage ditch and other Camp Parks facilities to the east (Figure 2).

The former Building 109 incinerator was previously located on the site. The incinerator burned general Camp Parks refuse during the 1940's and 1950's. The Site currently consists of a grassed field, several groundwater monitoring wells, and the remains of former Building 109 (essentially the concrete foundation) and includes areas of buried ash and waste. Building 109 was demolished in 1994. Past activities at the site resulted in contaminants, primarily lead and dioxins, being deposited in site soil. After completing several investigations dating back to 1994, the Army determined that about 6,000 cubic yards of soil contain lead and dioxins above industrial cleanup levels.

**Previous Investigations at Site PRFTA-02**

In 1994, the Navy Public Works Center removed a ruptured 2,500-gallon underground storage tank (UST) located on the northwestern side of former Building 109, and conducted a subsurface-soil investigation. However, no remedial action was performed and excavated soils were left for disposal under a future site investigation and closure (Navy Public Work Center, 1994).

Two investigations were conducted at PRFTA-02 in 1994 and 1995. Groundwater monitoring wells were installed and soil and groundwater samples collected. The samples were analyzed for total petroleum hydrocarbon (TPH), volatile organic compounds (VOCs), and metals. Lead was detected in a site ash sample at a concentration exceeding the commercial/industrial Environmental Screening Level (ESL). The ESLs are levels established by the State of California (CRWQCB, 2008) to evaluate risk to human health. Commercial/industrial ESLs were used for the concentration comparison based on use of the Site for industrial purposes. Groundwater was also analyzed for dioxins/furans. Dioxins/furans were not present at concentrations of concern in groundwater.

The three wells that were installed during the UST investigation were sampled quarterly from January 1995 through February 1997. Groundwater samples were analyzed for various petroleum-related parameters and semi-volatile organic compounds (SVOCs). Based on the analytical data, Alameda County Department of Environmental Health (ACDEH) stated no further action was required at the Site with respect to the UST leak.

In 1999, United States Army Center for Health Promotion and Preventive Medicine (USACHPPM) conducted a Site Inspection (SI) at PRFTA-02. The SI consisted of installing three additional groundwater monitoring wells (MW-4, MW-5, and MW-6), and collecting groundwater and subsurface soil samples. Samples were analyzed for metals, VOCs, and SVOCs. Quarterly groundwater monitoring at the Site was conducted from November 2001 to August 2002.

In 2002, USACHPPM conducted a Phase I Environmental Baseline Survey (EBS) for the Dublin Crossing Real Property Exchange (RPX), formerly known as the 187-Acre and 180-Acre RPX, which included the PRFTA-02 site (USACHPPM, 2002). The EBS primarily included document and data review. No soil or

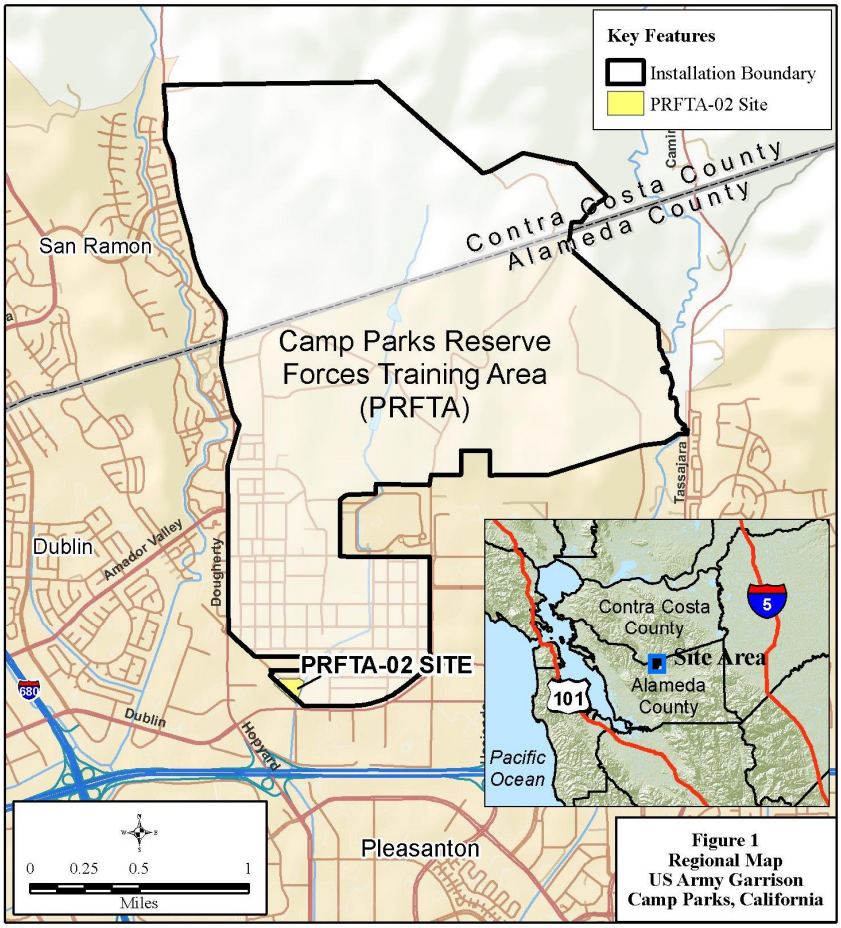


**Figure 1**
**Regional Map**
**US Army Garrison**
**Camp Parks, California**

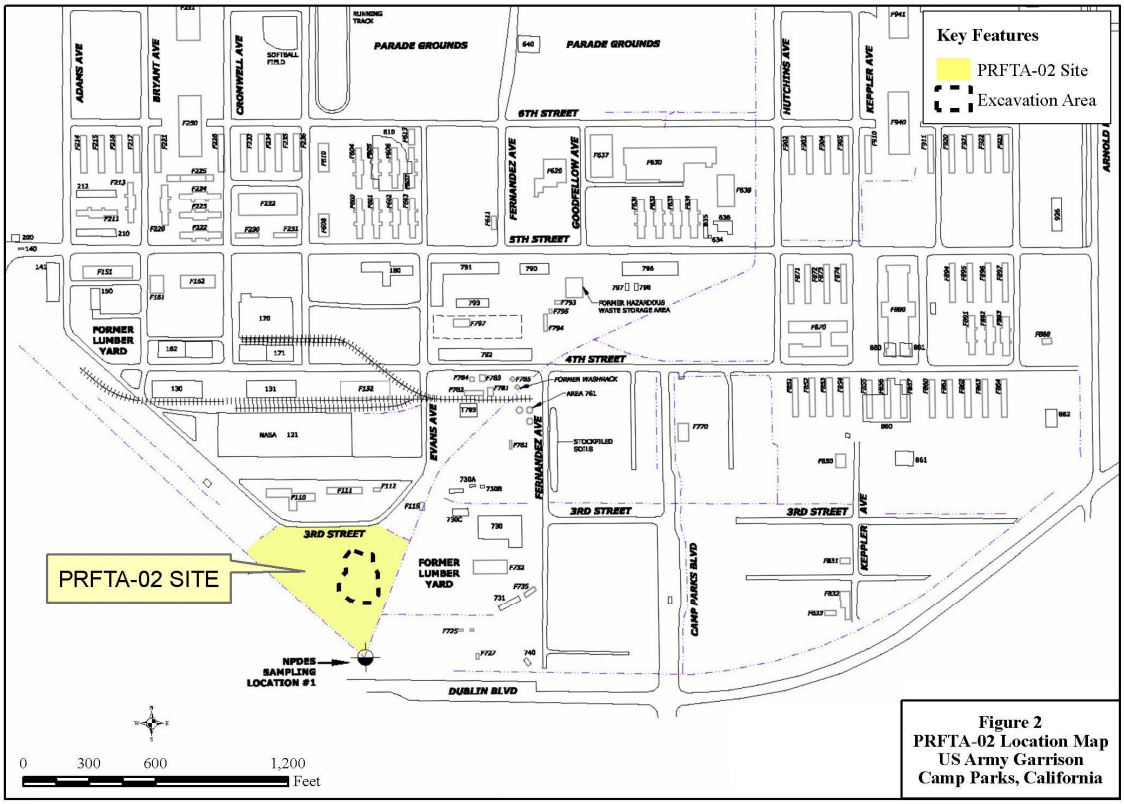


**Figure 2**
**PRFTA-02 Location Map**
**US Army Garrison**
**Camp Parks, California**

groundwater samples were collected. The area was recommended for additional evaluation including ongoing groundwater monitoring and waste material characterization. A Phase II EBS was conducted in 2003 that included surface and subsurface soil sampling and exploratory trenching.

Following the Phase II EBS, an RI was conducted in 2005. The RI included thirty test trenches near anomalies identified in a 2004 magnetometer survey. Subsurface soil samples were collected and analyzed for metals and dioxins/furans. Groundwater samples were analyzed for dioxins/furans. Metal and dioxin/furan concentrations in subsurface soil were detected at concentrations exceeding California commercial/industrial subsurface soil ESLs. Dioxins/furans were not detected in groundwater samples at concentrations above the laboratory method detection limit. Debris and ash were observed in numerous test trenches. The debris in these test trenches consisted of barrack and mess hall waste. The absence of melted glass and ash indicates this waste was not incinerated.

In 2007, USACHPPM identified investigation data gaps and collected additional surface soil and groundwater samples to provide sufficient data for a risk assessment, to assess the presence of other metals in subsurface soil, and to assess whether potential contaminants of concern in groundwater migrated off site. Twenty-four soil borings and three groundwater monitoring wells, two at downgradient limits of the site, were installed. Surface and subsurface soil and groundwater samples were collected and analyzed for metals and dioxins/furans.

Two metals, arsenic and zinc, were detected in soil samples at concentrations exceeding California commercial/industrial soil ESLs. As stated previously, commercial/industrial ESLs were used for the concentration comparison based on use of the Site for industrial purposes. The arsenic is believed to be naturally occurring. Dioxins/furans were found to be present in surface and subsurface soils at concentrations greater than the commercial/industrial ESL. Lead was detected in one groundwater sample at concentrations greater than the California groundwater ESL. Dioxin/furans were present in groundwater at concentrations greater than the current applicable groundwater ESL (the groundwater ESL for a current or potential drinking water resources was referenced).

## *Site Characteristics*

The RI/FS (USACHPPM, 2010) includes detailed discussions on the site geology, hydrogeology, and hydrology. These site characteristics are briefly summarized below.

### Geology

In the vicinity of Camp Parks, rock types are primarily sedimentary. Camp Parks encompasses portions of several geologic formations: Tassajara, Quaternary Alluvium and Colluvium, Green Valley Tassajara, and Alquist-Priolo Earthquake Fault Zone. The Tassajara Formation is composed of mudstone with sandstone. The alluvium and colluvium include clay, silt, sand, and gravel. Soils at Camp Parks primarily belong to the Clear Lake and Diablo Series and are clayey.

### Hydrogeology

The southern section of Camp Parks, where PRFTA-2 is located, is within the Livermore Valley Groundwater Basin. Groundwater is present in multiple units including shallower Quaternary deposits and a deeper bedrock aquifer, in which local municipal supply wells are screened. There is little interaction between groundwater in the shallower deposits and the deeper aquifers.

Based on data from previous investigations, the depth to shallow groundwater within Camp Parks varies from approximately 8 to 30 feet, depending on location and seasonal variations. Water-level data from wells installed at the Site indicate the depth to groundwater varies seasonally from about 8 to 15 feet below ground surface (bgs). Groundwater flow is to the south-southwest.

### Surface Water Hydrology

Camp Parks is within the Arroyo de la Laguna drainage basin of the Alameda Creek Watershed. The watershed encompasses approximately 633 square miles and extends from Altamont Pass

and Livermore north to Mount Diablo, south to Mount Hamilton, and west to the outlet of Alameda Creek at the San Francisco Bay.

Runoff from the Site is conveyed to a grassed swale that extends from north to south along the eastern edge of the Site, then southwest along the southern Site edge, and eventually to the Chabot Canal by overland flow.

**Extent of Contamination**

The RI identified contaminants of potential concern (COPCs) in Site soil and groundwater based upon data from the various environmental investigations. The COPCs in soil include antimony, arsenic, cobalt, copper, lead, mercury, zinc, and dioxins/furans. Arsenic may be due to naturally occurring soil concentrations.

The RI further identified lead and dioxins as the primary COPCs. The average lead concentration at the Site is about 312 milligrams per kilogram (mg/kg), with a maximum concentration of about 10,000 mg/kg. The average dioxin concentration is about 11.2 picograms per gram (pg/g) with a maximum concentration of about 107 pg/g. The RI estimated that about 6,000 cubic yards of soil are contaminated with lead and dioxins above commercial/industrial ESLs and United States Environmental Protection Agency (USEPA) preliminary remediation goals (PRGs).

The RI determined that dioxins were present in groundwater beneath the Site at concentrations greater than the current applicable ESL and are COPCs for groundwater. However, the data indicate there is no risk to human health and the environment from the groundwater pathway and COPCs therein.

## *Scope and Role of the Action*

This Proposed Plan addresses soil contamination at one site, PRFTA-02, at Camp Parks. Activities for this site have been and are currently being performed in accordance with the CERCLA remedial process.

## *Summary of Site Risks*

The Army evaluated risks to human health and ecological receptors (plants and animals) from the site contaminants. The assessment indicated that for future industrial land use, the contamination at PRFTA-02 poses no significant risk to human health or ecological receptors with the exception of future industrial construction workers. These workers may have health risk if they come in contact with contaminated site soil. The risk assessment determined there is no unacceptable risk to human health or ecological receptors related to groundwater; therefore, no remedial action is necessary for groundwater.

*Human Health Risks*

The Army conducted a human health risk assessment in conjunction with the RI. Although the risk assessment evaluated risk related to residential site use, the Army plans to restore the site for future industrial uses. Therefore, this summary discusses the risk assessment results related to future industrial use. The risk assessment results are presented in the RI/FS (USACHPPM, 2010). The risk evaluation indicates risk due to exposures of industrial receptors to soil at the Site are within the USEPA's risk management range of $1 \times 10^{-4}$ to $1 \times 10^{-6}$; however, risks from construction worker exposure at the Site are greater than the $1 \times 10^{-5}$ risk level considered acceptable by California Environmental Protection Agency (CalEPA) for industrial use scenarios at many sites in California. The risk assessment concluded there is no noncarcinogenic risk for future industrial workers at the site; however, there is a potential for noncarcinogenic risk for future industrial construction workers. However, the potential for unacceptable noncarcinogenic risk is unlikely due to the conservative nature of the risk assessment.

Human receptors were evaluated for exposure to groundwater through ingestion and dermal contact. The risk assessment concluded there is no unacceptable risk to human receptors for the groundwater pathway.

*Ecological Risks*

The Army also conducted an ecological risk assessment. For the ecological receptor evaluation, the estimated risks indicate the potential for adverse risk to individual western burrowing owls at the site is unlikely. For all

other wildlife, no suitable habitat was found on or adjacent to the site. Therefore there is no unacceptable risk to ecological receptors at the Site (USACHPPM, 2010).

There are no ecological receptors in the groundwater pathway; therefore an ecological risk assessment for groundwater was not performed.

It is the Army's current judgment that the Preferred Alternative identified in this Proposed Plan, or one of the other remedial alternatives considered in this Proposed Plan, is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

## *Remedial Action Objectives*

The Army intends to restore the Site to the point that the Site is compatible with previous use as established by the onset of Army ownership (commercial/industrial). The Remedial Action Objectives (RAOs) include:

Restoring the site for future industrial use and reducing risk to human health and the environment by removing soil to reduce the COPC concentrations in soil to below industrial remedial goals. The industrial remedial goals are protective of a future industrial construction worker.[1]

The proposed site-specific remedial goal for lead is 800 mg/kg and the proposed remedial goal for dioxins is 19 pg/g.

## *Summary of Remedial Alternatives*

The FS identified and screened potential remedial action alternatives. Potential remedial alternatives were analyzed in a two-stage process. Those alternatives passing the first screening were further evaluated in the second screening, which included cost analyses. The remedial alternatives evaluated in the second screening included 1) No Action, 2) No Action Plus, 3) Engineered Cap with Institutional Controls and Monitoring, and 4) Excavation, Backfill, and Disposal with Short-term Monitoring. The FS described the remedial alternatives in detail. The alternatives are summarized below. The estimated costs are based on future commercial/industrial site use.

**Alternative 1 No Action**

Although ineffective in removing potential hazards associated with COPCs, the "No Action" alternative serves as a baseline case to which all other response actions are compared, as required by CERCLA. Under the "No Action" option, no remedial activities would be conducted and there would be no long-term monitoring, institutional controls, or engineering controls.

*Estimated Capital Cost: $0*
*Estimated Annual O&M Costs: $0*

**Alternative 2 No Action Plus**

This alternative involves no active Site remediation; however, institutional controls, engineering controls, and groundwater monitoring would be implemented. Institutional controls would preclude residential land use and eliminate the exposure of residential receptors to contaminants. Engineering controls (additional fencing or other physical barriers) would inhibit the interaction of potential receptors with contaminated soil at the site.

*Estimated Capital Cost: $14,500*
*Estimated Annual O&M Cost: $35,000*

**Alternative 3 Engineered Cap with Institutional Controls and Monitoring**

For the engineered cap alternative, contaminated soil would remain in place, but would be covered by a geotextile cap. The cap would isolate contaminants from the surrounding environment and potential human or ecological receptors, stabilize the underlying soil, and limit the potential for contaminant transport. The cap would be sloped to allow effective surface drainage. After placement and compaction, the topsoil above the cap would be seeded with a mixture of native grasses.

[1] CalEPA and USEPA do not have risk-based concentrations for construction workers. Therefore, the proposed soil removal action will address the construction worker receptor by removing soil containing contaminants above industrial remedial goals. The industrial remedial goals are generally protective of a construction worker.

Institutional controls would include land use restrictions, recreational use restrictions, and/or operational restrictions. Land use restrictions would specifically restrict digging in the covered area and/or construction that could affect the stability and effectiveness of the remedy.

Monitoring would include both construction monitoring and long-term monitoring to ensure continued integrity and effectiveness.

*Estimated Capital Cost: $76,500*
*Estimated Annual O&M Cost: $38,000*

**Alternative 4 Excavation, Backfill, and Disposal with Short-term Monitoring**

Under this alternative, soil containing COPCs at concentrations greater than remediation goals would be excavated for disposal. Excavated material would be trucked to an appropriate off-site waste disposal facility. Lead and dioxin were chosen as representative of site COPCs. The estimated soil volume where lead and dioxin concentrations are greater than industrial remedial goals is about 6,000 cubic yards. The proposed excavation depth would vary, with a maximum depth of about 17 feet. The excavation would be backfilled with clean soil and the soil would be seeded with native grasses for erosion resistance. Engineering controls would be implemented to avoid injury to humans or damage to ecological resources. Land use restrictions would preclude use of the site for residential purposes.

Monitoring would include both construction monitoring and short-term groundwater monitoring. Short-term groundwater monitoring would be conducted to confirm that the soil removal caused did not cause negative impacts to groundwater.

*Estimated Capital Cost: $1,495,450*
*Estimated Annual O&M Cost: $35,000*

| **Evaluation Criteria for Superfund Remedial Alternatives** |
|---|
| **THRESHOLD CRITERIA** |
| **Overall Protectiveness 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. |
| **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. |
| **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. |
| **Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment** evaluates an alternative's use of treatment to reduce the harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present. |
| **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. |
| **Implementability** considers the technical and administrative feasibility of implementing the alternative, including factors such as the relative availability of goods and services. |
| **Cost** includes estimated capital and annual operations and maintenance costs, as well as present worth cost. Cost estimates are expected to be accurate within a range of +50 to -30 percent. |
| **MODIFYING CRITERIA** |
| **Army as the Lead Agency and EPA and/or State as the Support Agency(ies) Acceptance** considers whether the EPA and/or State agrees with the Army's analyses and recommendations, as described in the RI/FS and Proposed Plan. |
| **Community Acceptance** considers whether the local community agrees with Army's analyses and preferred alternative. Comments received on the Proposed Plan are an important indicator of community acceptance. |

## *Evaluation of Alternatives*

Nine criteria are used to evaluate the different remedial alternatives individually and against each other in order to select a remedy. This section of the Proposed Plan discusses the relative performance of each alternative against the nine criteria, noting how it compares to the other remedial alternatives under consideration.

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 be fully considered only after public comment is received on the Proposed Plan.

The preferred alternative was selected based on the ability to provide the best balance of trade-offs with respect to the criteria.

The nine evaluation criteria are discussed below. The "Detailed Analysis of Alternatives" can be found in the FS.

**1. Overall Protection of Human Health and the Environment**

Alternative 1, No Action, would not be protective of human health and the environment under current conditions.

Alternative 2, No Action Plus, would inhibit the interaction of potential receptors with contaminated soil through the use of engineering controls.

Alternative 3 Engineered Cap with Institutional Controls and Monitoring, would be protective by isolating contaminants from the surrounding environment and potential human or ecological receptors.

Alternative 4, Excavation, Backfill and Disposal with Short-Term Monitoring, removes the contamination and would be the most protective of human health and the environment. This alternative is also referred to as the soil removal action.

**2. Compliance With ARARs**

Applicable or relevant and appropriate requirements (ARARs) are the Federal and State environmental cleanup standards and other substantive requirements that a selected remedy will meet. The RI/FS (USACHPPM, 2010) identified ARARs. In addition, the Army identified proposed industrial remedial goals, based upon DTSC and USEPA screening levels, which are chemical-specific goals.

Alternative 1 and 2 would not comply with ARARs. Alternative 3 would comply with action and location specific ARARs but not chemical specific ARARs as soil exceeding cleanup levels would be left in place at the Site. Alternative 4 would meet chemical, location and action specific ARARs and would meet the proposed chemical-specific industrial remediation goals. Soil would be removed and disposed of at an appropriate off site facility.

**3. Long-Term Effectiveness and Permanence**

Alternative 1 does not provide long-term effectiveness because untreated contamination would remain in soil and the potential risk of exposure would continue to exist.

Alterative 2 provides some long-term effectiveness by offering a level of protection in restricting access to contaminated soil. Institutional Controls and Engineering Controls would reduce or eliminate future human receptor exposure to contaminants.

Alternative 3 would provide long-term effectiveness because contaminated soils would be immobilized and prevent contact with future receptors. The engineered cap would not prevent leaching of contaminants to groundwater because some contaminant sources may be present below the seasonal groundwater table.

Alternative 4 would provide long-term effectiveness because it involves removal of contaminated soil that poses a potential unacceptable risk to human health.

**4. Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment**

In Alternative 1 and Alternative 2, the contaminated soil would not be treated to reduce toxicity, mobility, and volume of contaminants.

Alternative 3 would not reduce the toxicity and volume of contaminants in soil but may reduce the contaminant mobility.

Alternative 4 does not reduce the toxicity and volume of contaminated soil because the soil would be disposed of at an off-site landfill. However, the soil would be managed in a lined and monitored facility and would eliminate the potential for exposure by human and ecological receptors at the Site and reduce contaminant mobility.

**5. Short-term Effectiveness**

Alternative 1 would have the least short-term impacts to the community, workers, or the environment because it does not involve construction or remediation.

Alternative 2 would have minimal short-term impacts to the community or workers during construction of fencing or barriers at the Site.

Alternative 3 would have short-term impacts to the community and workers during cap construction. Measures would be used to minimize impacts to the remedy, humans, and the environment and to avoid potential redistribution of contaminated soil or waste material. Procedures would be employed to minimize direct impacts to Site wildlife.

Alternative 4 would also have short-term impacts on the community and workers during removal activities. Appropriate engineering and access controls would be in place to prohibit anyone other than essential workers from entering the work zone or being exposed to potential hazards. Appropriate health and safety precautions would be taken to protect site workers against potential exposure to contamination. Direct impacts to wildlife at the Site would be minimized.

**6. Implementability**

Alternative 1 is most easily implemented because it does not involve any action.

Alternative 2 is also easily implemented and requires the construction and periodic maintenance of a fence and the administrative activities required to maintain institutional controls.

Alternative 3 is administratively and technically feasible. Overall implementation time would likely be significant, including the need for post-construction monitoring. The ability to maintain institutional controls, particularly when the Site changes ownership and proposed reuse is achieved, may pose an implementation challenge. Specialized engineering and site work are required to properly design and construct a cap. Deploying the geomembrane system would require special expertise and specialized equipment and covering the geomembrane and liner with soil could require low-impact equipment.

Alternative 4 is administratively and technically feasible. Excavating 17 feet of soil can be achieved with readily available earth moving equipment. Transport of the excavated media to an appropriate off-site disposal facility, approximately 178 miles away, is also feasible. Clean backfill for the excavation is readily available on site that would be hauled and end-dumped into the excavation and graded. Equipment and labor are readily available to implement the removal and disposal action.

**7. Cost**

Alternative 1, No Action, would have no associated capital costs. However, there are indirect, undetermined costs associated with adjacent property devaluation and restrictions to Site development.

Alternative 2, including institutional and engineering controls, would be comparatively lower in cost than other alternatives. Potential costs include those associated with initial activities to set up institutional controls, such as the cost of developing a new site registry for the State to track all institutional controls. Other costs associated with this alternative are minor annual costs, such as monitoring, site inspections and yearly tracking that would comprise the bulk of the site-specific costs over time.

Alternative 3 costs associated with the engineered capping technology would likely be lower than the other active technology considered at this Site but higher than Alternatives 1 and 2.

Alternative 4 costs are the highest and include labor for excavation and removal, equipment rental and maintenance, material transport, clean fill, and waste disposal at a permitted off-site facility (including *ex situ* treatment of the excavated soil containing lead). Additional costs may include soil characterization and treatment to meet landfill requirements. The costs associated with short-term monitoring to evaluate and show no negative impacts to groundwater would likely be low.

**8. State/Support Agency Acceptance**

Alternative 4 is the preferred alternative for the Site. The DTSC and RWQCB concur with the Army and the selection of this preferred alternative.

**9. Community Acceptance**

Community acceptance of the proposed remedy will be evaluated after the public comment period.

## *Summary of Preferred Alternative*

The Army, as lead agency under CERCLA, selected Alternative 4, Excavation, Backfill, and Disposal with Short-term Monitoring as the PRFTA-02 final remedy. The Army believes this remedy will meet RAOs.

Under this alternative, surface and subsurface soil containing COPCs at concentrations greater than industrial remediation goals will be excavated for disposal. Excavation will be conducted using standard earth moving equipment and removed material will be hauled from the Site by trucks to an appropriate off-site waste disposal facility. After removal, the excavated area will be backfilled with clean soil.

Alternative 4 Excavation, Backfill and Disposal with Short-term Monitoring provides the most effective remedial measure for protecting human health and the environment. This alternative is the most costly but requires fewer institutional and engineering controls and allows the site to be restored for future industrial uses.

Based on information currently available, the Army believes the preferred alternative meets the threshold criteria and provides the best balance of tradeoffs among the other alternatives with respect to the balancing and modifying criteria. The Army expects the preferred alternative to satisfy the following statutory requirements of CERCLA §121(b): (1) be protective of human health and the environment; (2) comply with ARARs; (3) be cost-effective; (4) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and (5) satisfy the preference for treatment as a principal element.

## *Next Steps*

The preferred alternative may be modified or changed by the Army in response to public comment or significant new information. The Army will prepare a Responsiveness Summary to document comments received for this Proposed Plan, responses to those comments, and any changes in the preferred alternative. The Army's final commitments regarding the implementation of the preferred alternative will be documented in the Record of Decision.

The remedy could result in COPCs remaining onsite after the remedial action above levels that allow for unlimited use and unrestricted exposure (i.e., residential use). If necessary, land use controls will be established that will limit future site use to industrial purposes.

## *Community Participation*

The Army provides information on the PRFTA-02 site to the public through public meetings, the Information Repository, and announcements published in the local newspapers. The Army, with support from DTSC and RWQCB, encourages the public to gain more understanding of the Site and the remedial activities to be conducted at the Site.

The dates for the public comment period, the date, location, and time of the public meeting, and the location of the Information Repository files, are provided on the front page of this Proposed Plan.

The documents referenced in this Proposed Plan are available in the Information Repository.

## *For further information on PRFTA-02, please contact:*

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U. S. Army Garrison Camp Parks
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# *Glossary of Terms*

Specialized terms used in this Proposed Plan are defined below:

| | |
|---|---|
| Administrative Record/Information Repository | A record of documents and correspondence for the Installation Restoration Program under CERCLA and the public location for the records. |
| ARARs | Applicable or relevant and appropriate requirements – the Federal and State environmental cleanup standards and other substantive requirements that a selected remedy will meet. These requirements may vary among sites and alternatives. |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act – the Federal act that establishes federal authority for emergency response and cleanup of hazardous substances that have been spilled, improperly disposed, or released into the environment |
| COPC | Contaminant of potential concern – a contaminant selected for further evaluation in a human health or ecological risk assessment because it may threaten human health or the environment. COPCs are first identified as potential site contaminants – a chemical present at elevated concentrations attributable to site activities. |
| DTSC | California Department of Toxic Substances Control |
| ESL | Environmental Screening Level, criteria established by the State of California to evaluate risk to human health. |
| Human health and the environment | A term associated with the evaluation of risk at a remediation site considering risk to human health and risk to the environment, which generally includes plants, animals, and natural resources. |
| IRP | Installation Restoration Program |
| NCP | National Oil and Hazardous Substances Pollution Contingency Plan (also called the National Contingency Plan) – The outline of procedures, organization, and responsibility for responding to spills and releases of hazardous substances and oil into the environment. |
| PRFTA | Parks Reserve Forces Training Area |
| PRG | Preliminary Remediation Goal – EPA Region 9 previously developed these risk-based preliminary remediation goals, which were used for comparisons in the Site 7 risk assessment. The goals have since been combined with EPA Region 3 and 6 risk-based screening levels into Regional Screening Levels for Chemical Contaminants at Superfund Sites. |
| RAOs | Remedial Action Objectives – the stated objectives for actions at the site. |
| RI/FS | Remedial Investigation/Feasibility Study |
| RWQCB | California Regional Water Quality Control Board |
| USAG | United States Army Garrison |
| USEPA | United States Environmental Protection Agency |

## *Acronyms used in this Proposed Plan*

| | |
|---|---|
| 2,3,7,8-TCDD | 2,3,7,8-tetrachlorodibenzo-p-dioxin |
| ACDEH | Alameda County Department of Environmental Health |
| ARAR | Applicable or Relevant and Appropriate Requirements |
| bgs | below ground surface |
| CalEPA | California Environmental Protection Agency |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| COPC | Contaminant of Potential Concern |
| DTSC | California Department of Toxic Substances Control |
| EBS | Environmental Baseline Survey |
| ESL | Environmental Screening Level |
| ft | feet |
| HIs | Hazard Indices |
| IRP | Installation Restoration Program |
| MW | Monitoring Wells |
| PRFTA | Parks Reserve Forces Training Area |
| RI/FS | Remedial Investigation/Feasibility Study |
| SI | Site Inspection |
| SVOC | Semi-volatile organic compound |
| TPH | Total Petroleum Hydrocarbon |
| USACHPPM | United States Army Center for Health Promotion and Preventive Medicine |
| USGS | United States Geological Survey |
| UST | Underground Storage Tank |
| VOC | Volatile Organic Compounds |

## *References*

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**USE THIS SPACE TO WRITE YOUR COMMENTS**

Your input on the Proposed Plan for PRFTA-02 at U. S. Army Garrison Camp Parks in Dublin, CA is important to the Army. Comments provided by the public are valuable in helping the Army select a final cleanup remedy for the site.

You may use the space below to write your comments, then fold and mail. Comments must be postmarked by December 9, 2010. If you have questions about the comment period, please contact Danilo Gannod by fax at (925) 875-4298 or by email at danilo.gannod@conus.army.mil. You may also submit your comments to the Army at the following address: danilo.gannod@conus.army.mil

Name: _____

Address: _____

City: _____

State: _____ Zip: _____

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