



# U.S. Army Corps of Engineers and Base Realignment and Closure Fact Sheet

## Proposed Plan – Washrack, Wood Dump, Farm Fuel, and Former Army Landfill Sites

Former U.S. Disciplinary Barracks, Lompoc, California September 2024

### INTRODUCTION

The **United States Department of the Army** (Army) is issuing this **Proposed Plan** to present the Preferred Remedial Alternatives that address environmental contamination associated with historical activities at the former **United States Disciplinary Barracks** (USDB), Lompoc, CA. Figure 1 shows the location of the former USDB Facility and the individual sites included in this Proposed Plan.

This Proposed Plan is issued by the Army in compliance with environmental investigation and remediation activities under the **Comprehensive Environmental Response, Compensation, and Liability Act of 1980** (CERCLA; 42 United States Code (U.S.C.) §§9601 et seq.). CERCLA is a law that provides a framework for addressing hazardous waste sites. This Proposed Plan and all other remedial documents present the Army's compliance with CERCLA, the **Defense Environmental Restoration Program** (DERP, 10 U.S.C. §§2701 et seq.), and the **National Oil and Hazardous Substances Pollution Contingency Plan** (NCP, 40 Code of Federal Regulations [CFR] Part 300).

This Proposed Plan documents planned future actions for the Washrack Site, Wood Dump Site, Farm Fuel Area Site, and Former Army Landfill (FAL) Site. Remedies for these sites were implemented as either **Time Critical Removal Actions** (TCRA) or **Non-Time Critical Removal Actions** (NTCRA); however, the sites did not achieve a remediation status of **Unlimited Use/Unrestricted Exposure** (UU/UE). A summary of the Site history, **contaminants of concern** (COCs), remedial alternatives, and proposed final remedies are provided in this Proposed Plan.

This Proposed Plan is shared with the public and stakeholders for review and feedback. The public is encouraged to comment on this Proposed Plan during the public comment period. Oral comments will be received at the public meeting.

### PUBLIC COMMENT PERIOD AND PUBLIC MEETING

The Army invites public comments on the Proposed Plan. The 30-day public comment period begins on September 4, 2024, and ends on October 5, 2024. All written and email comments must be postmarked or received by email no later than 11:59 PM on October 5, 2024.

Attn: Kyle A. Russell  
BRAC Environmental Coordinator  
CALIBRE Systems  
150 West Park Loop, Ste 330  
Huntsville, AL 35806-3073  
Kyle.Russell@calibresys.com

Public Meeting — September 10, 2024,  
6:00–7:00 PM Pacific Standard Time

Join by MS Teams Meeting: Lompoc Proposed Plan  
Meeting Number: 274 153 348 091  
Password: QKwr6H  
Join by Phone: +1 907-519-0235  
Access Code 815376284#

Representatives from the Army, the Central Coast Regional Water Quality Control Board (Central Coast Water Board), and the County of Santa Barbara will participate in the public meeting to explain the Proposed Plan, receive comments, and answer questions. Oral and written comments will be accepted.

Written comments may be: 1) mailed and postmarked no later than October 5, 2024, to the **Base Realignment and Closure** (BRAC) Environmental Coordinator, 150 West Park Loop, Ste 330, Huntsville, AL 35806;  
Or 2) sent via email to Kyle.Russell@calibresys.com and time-stamped by October 5, 2024. A sample comment form is included at the end of this Proposed Plan.

After the public meeting, all comments received will be carefully evaluated. The comments will be summarized along with responses to the comments and provided in the "Responsiveness Summary" section of the **Decision Document** (40 CFR 300.430(f)(3)(i)(A)-(F)). The Army, in consultation with the **Central Coast Regional Water Quality Control Board** (Central Coast Water Board), will make the final selection of the response action for the Site and incorporate it in the Decision Document (40 CFR 300.430(f)(4)(i)). Following the Decision Document, the **Remedial Design Plan** will detail the technical approach and specifications for implementing the remedial alternatives, including developing a **Land Use Control Implementation Plan (LUCIP)** per DERP M 4715.20.

The CERCLA Proposed Plan is an important step in protecting the health and well-being of communities and ecological receptors (plants and animals) potentially affected by hazardous waste sites.

### PROPOSED PLAN AND OTHER SITE DOCUMENTS

For electronic versions of the Proposed Plan and other relevant site-specific documents contained in the **Administrative Record (AR)** (40 CFR 300.800), please contact [Kyle.Russell@calibresys.com](mailto:Kyle.Russell@calibresys.com). Hard copies are also available at the Lompoc Public Library located at 501 E North Ave, Lompoc, CA 93436. The California State Water Board also maintains a document repository: <https://geotracker.waterboards.ca.gov/>

### LOCATION

The USDB Facility is approximately 50 miles northwest of Santa Barbara, CA, and about 5 miles from the Pacific Ocean (Figure 1).

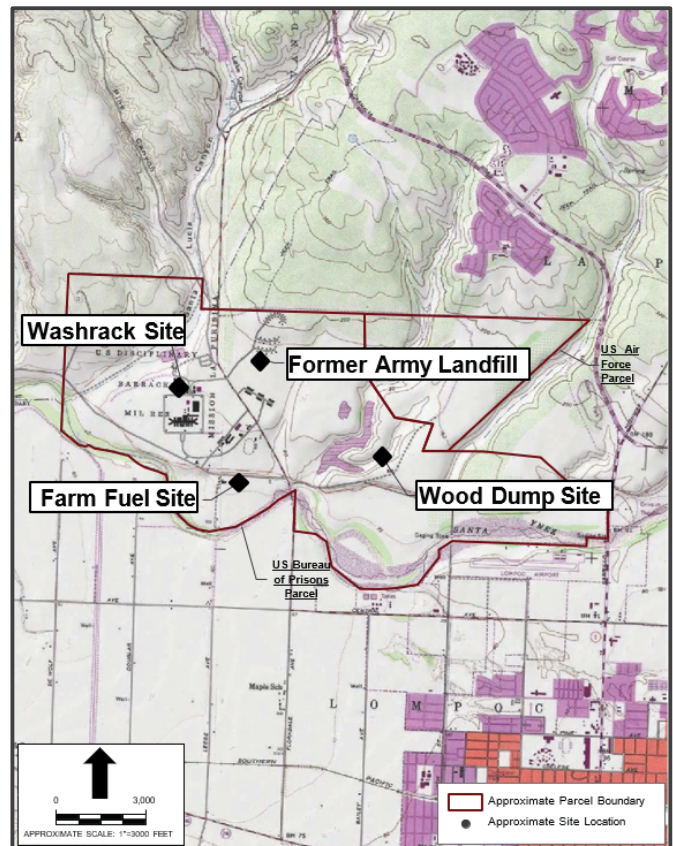


Figure 1. USDB Facility Location Map

The current landowners are the U.S. **Bureau of Prisons (BOP)** and the U.S. Air Force. The Washrack Site is immediately adjacent to the fence line of the high-security penitentiary. The Wood Dump Site, located in the southeast portion of the Facility boundary, is a former wood products disposal site. The Farm Fuel Site is located south of the Federal Correctional Institution. The Former Army Landfill is located south of the Capehart Housing Complex.

## HISTORY

### Washrack Site

From the 1940s to the 1990s, the Washrack Site was used for cleaning and servicing USDB and BOP vehicles (Figure 2). Chlorinated solvents were used as cleaning and degreasing agents.



Figure 2. Washrack Site

A chlorinated solvent-contaminated groundwater plume was identified between the warehouse and the penitentiary's fence line. A TCRA was initiated in 2002 to treat the contaminant plume to minimize security and health risks associated with prolonged cleanup activities. The TCRA treated groundwater by injecting a biodegradable organic carbon source into it. This creates an anaerobic (absence of free oxygen) subsurface environment capable of degrading the **volatile organic compounds (VOCs)**, primarily **tetrachloroethene (PCE)** and **trichloroethene (TCE)**. This process is also referred to as **enhanced reductive dechlorination (ERD)**. The TCRA required long-term groundwater monitoring to document the success of the ERD over time. The ERD program, implemented from 2002 through 2008, effectively reduced contaminant concentrations. However, groundwater monitoring data show that contaminants still exist at

concentrations above the federal and California Maximum Contaminant Levels (MCLs). Because COC concentrations are above the MCLs, **land use controls (LUCs)** for the Washrack Site are required and documented in the 2008 Federal Corrections Complex (FCC) Lompoc Complex Supplement letter, referred to as the "Complex Supplement." Formal adoption of the LUCs will be included in a forthcoming Decision Document.

In 2009, a **Post Site Mitigation Monitoring (PMM)** Plan for the Washrack Site was enacted to monitor reductions in groundwater contaminants and confirm that the VOC plume remained stable (not expanding or migrating) following the discontinuation of the ERD program. The current monitoring program follows specifications outlined in the PMM Plan, 2010 Change Memorandum, and the 2021 Quality Assurance Project Plan/Work Plan.

While the area of groundwater contaminated by VOCs is stable (not expanding), a Groundwater Sampling Optimization Plan was developed in 2022 to evaluate the current monitoring program data and provide recommendations for optimizing the program to meet site closure. The Groundwater Sampling Optimization Plan recommended another injection event (ERD).

### Wood Dump Site



Figure 3: Overview of the Wood Dump Site looking toward the east

Figure 3 is a photograph of the current condition of the Wood Dump Site. The Wood Dump was created by infilling a southwest-flowing 60- to 70-foot-deep drainage with wood products and other wastes between 1967 and 1978. In 2004, Site mitigation was

performed as an NTCRA. It included culvert rehabilitation, an engineered soil cover (cap), an erosion/drainage control berm to stabilize the cap, and enhanced drainage infrastructure under the landfill. After completion of the mitigation actions, a **Post Site Mitigation Maintenance and Monitoring Plan** for the Wood Dump Site was developed to address groundwater, landfill gas, and stormwater monitoring; soil cover inspections and repairs; vegetation and surface water controls; site security features; and the reporting requirements.

### **Farm Fuel Site**

The Farm Fuel Site contained three underground storage tanks (USTs) installed in the 1950s and used to store unleaded gasoline, regular gasoline, and waste oil. The USTs were removed in 1990, with subsequent site investigations and a soil removal action performed over the next decade. Post-removal action results identified one VOC in groundwater (**1,2-dichloroethane** [DCA]) as the only Site COC. A TCRA that included ERD was performed at the Farm Fuel Site in conjunction with the TCRA for the nearby Washrack Site. The TCRA decision and ERD approach were documented in a 2006 Action Memorandum, and the Central Coast Water Board approved the closure of the Farm Fuel Site in 2009 under state regulations. The 2009 Closure Documents served as a form of LUC for the Site because minor waste concentrations remain in groundwater. Additionally, LUCs are outlined in the Complex Supplement for the FCC Lompoc property. Generally speaking, CERCLA contains an exemption for Petroleum, Oil and other Lubricants (POL) and remediation is conducted under state regulations. However, the DERP Manual requires all such remedial responses to substantially comply with the NCP, including the public participation requirements. A formal adoption of LUCs under the state regulations will be forthcoming but the site is included in this Proposed Plan to provide notice and an opportunity for public comment on the selection of LUCs at the Farm Fuel Site.

### **Former Army Landfill (FAL) Site**

The U.S. Army constructed and used the FAL as a sanitary landfill from the early 1940s to the late 1950s when the Capehart housing was constructed.

Site investigations were performed from 1998 to 1999. A 2000 site investigation included a geophysical survey, soil gas survey, soil sampling, and groundwater sampling. The Site Investigation Report concluded that chemical concentrations (primarily arsenic in soil) were less than risk-based screening levels for future construction workers (the most likely to be impacted in the future).

The FAL received a **No Further Action (NFA)** designation in 2000. A condition of the NFA stated that the site would be reviewed periodically to ensure conditions have not changed. During a 2004 periodic inspection, rodent burrowing activity was observed, which resulted in buried waste material being brought to the surface. The BRAC Cleanup Team members agreed that conditions present when the NFA determination was issued should be restored and a maintenance plan should be developed and implemented. This prompted the expansion of the ongoing maintenance and monitoring program that was formalized in the 2006 Technical Memorandum on Restoration of Site Conditions.

### **CURRENT AND FUTURE LAND USE**

The BOP controls land use at the sites, and the sites are expected to remain under the FCC's control, with limited public access. Adjacent land uses are primarily agricultural, undeveloped, or light industrial.

### **NATURE AND EXTENT OF CONTAMINATION**

The primary COCs at the Washrack Site are in groundwater and include chlorinated solvents such as PCE, TCE, and its daughter product, **cis-1,2-dichloroethene** (cis-1,2-DCE). Groundwater at the Site is about 80 feet below the ground surface. The contaminant plume is approximately 200 feet long and extends northwest toward the onsite warehouse.

Based on the nature of the contamination, current land use conditions, and expected future use of the Site, no ecological receptors (protected plants and animals) are identified at the Washrack Site. A 2001 human health risk assessment concluded that workers in the warehouse could potentially be exposed to COCs through inhalation of vapor migrating from the groundwater to the indoor air. After implementing the ERD, which reduced COC concentrations, a revised risk evaluation was

completed in 2006 that showed groundwater contaminants no longer pose an unacceptable risk to humans from inhaling indoor air. However, the COCs in groundwater still slightly exceed the MCLs.

At the Wood Dump Site, there are no COCs in ambient air, soil, sediment, or groundwater. Site investigations and monitoring data indicate that the Wood Dump mitigation activities were successful in preventing exposure to buried waste, and there is no unacceptable risk to human health or the environment. However, the Site would not support UU/UE because buried waste remains in place.

At the Farm Fuel Area Site, groundwater is approximately 22 feet below the ground surface and contains elevated levels of constituents, including 1,2-DCA, arsenic, iron, and selenium, above state and federal drinking water standards. The LUCs and restrictions around the Farm Fuel Area are outlined in the 2008 FCC Supplement.

The FAL Site encompasses about 2 acres and contains waste buried at a depth of approximately 7.5 feet below ground surface. The 2000 Site Investigation Report determined the excess risk at the Site for residential receptors is almost entirely attributable to the arsenic and lead concentrations in one subsurface sample at 5 feet below ground surface; no risk screening criteria were exceeded for the construction worker/industrial use scenario.

## **SUMMARY OF REMEDIAL ALTERNATIVES<sup>1</sup>**

At the Washrack Site and Wood Dump Site, remedial alternatives (the potential options for the Remedial Design Plan) and the selected Preferred Remedial Alternative (TCRA and/or NTCRA) were evaluated and summarized in the 2006 Action Memoranda. However, the TCRA and NTCRA did not achieve a remediation status of UU/UE. As a result, residual groundwater contamination at the Washrack Site and buried waste at the Wood Dump require the final remedies to be selected. The 2006 remedial alternatives, an additional remedial alternative for the Wood Dump Site, and the final Preferred Remedial Alternatives are summarized in the following sections.

Additionally, the adoption of the LUCs for the closed Farm Fuel Site and the FAL Site are presented under the preferred final remedial alternative section of this Proposed Plan.

### **Washrack Site**

#### Remedial Alternative 1 – No Action

Remedial Alternative 1 assumes no action would be taken related to the Washrack Site. CERCLA requires the No Action Remedial Alternative as a baseline for comparison with other remedial alternatives.

*Approximate Cost: \$0*

#### Remedial Alternative 2 – Groundwater Extraction and Treatment

This remedial alternative involves installing an extraction and treatment system to capture and treat the contaminant plume and minimize migration. Hydrogeology and the amount of VOCs absorbed in the soil would greatly affect its effectiveness in reducing contaminant concentrations to near or less than MCLs. Installation and operation of the extraction and treatment system could lead to increased security risks near prison boundaries and inmates.

*Approximate Cost: Not Previously Evaluated*

#### Remedial Alternative 3 – Enhanced Reductive Dechlorination (Previously Implemented Remedial Alternative)

Remedial Alternative 3 has already been implemented at the Site through the TCRA and has successfully reduced COC concentrations to levels near MCLs. The TCRA was implemented with minimal security risks compared to Remedial Alternative 2 due to minimized time and frequency of contact with prison inmates. This remedial alternative was easy to implement and more cost-effective than the groundwater extraction and treatment remedial alternative.

*Approximate Cost: \$1.5 Million*

### **Wood Dump Site**

#### Remedial Alternative 1—No Action

Remedial Alternative 1 assumes no action related to

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<sup>1</sup> 2006 Action Memoranda costs adjusted for inflation.

the Wood Dump Site would be taken. CERCLA requires the No Action Remedial Alternative as a baseline for comparison with other remedial alternatives.

*Approximate Cost: \$0*

#### Remedial Alternative 2 – Excavation

This remedial alternative includes excavating and removing all waste material from the Wood Dump Site. The excavated material would be transferred and disposed of at a permitted waste disposal facility. The Site would then be graded to match the surrounding topography and re-vegetated. This alternative would achieve site closure.

*Approximate Cost: \$10.5 Million*

#### Remedial Alternative 3 – Soil Cover and Drainage System Improvements (Previously Implemented Remedial Alternative)

Mitigation actions associated with Remedial Alternative 3 have been implemented through the NTCRA to address solid waste concerns and complete site restoration at the Wood Dump. Mitigation involved supplementing the existing landfill cover with an engineered soil cap, installing surface water controls, and maintaining and monitoring the Site for long-term protectiveness.

*Approximate Cost: \$700,000*

#### New Remedial Alternative 4 – Long-term Monitoring via Mitigation and Monitoring Plan

This remedial alternative includes long-term monitoring following the Post Site Mitigation Maintenance and Monitoring Plan, as amended in May 2014, LUCs (Institutional Controls and Engineering Controls), and Five-Year Reviews to ensure the protectiveness of the soil cap remains intact and prevents exposure to buried waste.

*Approximate Cost: \$250,000*

### **PREFERRED FINAL REMEDIAL ALTERNATIVE**

Selection of the Preferred Remedial Alternatives is based on the **Remedial Action Objectives** (RAOs), which define the overarching goals of a cleanup and provide a basis for evaluating if further actions are required. The 2006 Action Memorandum for the Wood Dump and Farm Fuel Site TCRA identified the

RAOs as, to the extent practical, reducing COC concentrations to meet the MCLs found in the federal Safe Drinking Water Act and the California Porter-Cologne Act.

The RAO for the Wood Dump Site is to mitigate the potential risk of future impacts on the buried waste that could potentially lead to a release into the environment. At the Former Army Landfill, the RAOs are to prevent unacceptable risk to human health and the environment. In addition to RAOs, remedial and mitigation actions completed to date, as well as the most recent investigations and risk assessment results, were considered in determining the Preferred Remedial Alternative.

#### **Washrack Site**

Based on the results of the 2006 screening-level risk assessment of residual contaminants after the ERD treatments (Remedial Alternative 3), chemicals in groundwater no longer pose an unacceptable risk to human health via the inhalation pathway. However, the RAO of reducing COC concentrations to meet the MCLs has not been achieved. The preferred final remedial alternative is to re-implement Remedial Alternative 3, involving additional ERD injections and monitored natural attenuation with long-term monitoring (LTM). The estimated cost for additional injections is approximately \$2M. However, the ERD injections are expected to reduce COC concentrations in groundwater to levels below the MCLs in a timely and cost-effective manner. Groundwater LTM is necessary to confirm that the remedy is functioning as intended and the RAOs are met.

Modifying the current PMM Plan to incorporate the recommendations presented in the Groundwater Sampling Optimization Plan may decrease or eliminate the LTM requirement in the future. These tasks are discussed in the *Groundwater Sampling Optimization Plan, Washrack Site, Environmental Long-Term Monitoring and Inspection, Former U.S. Disciplinary Barracks, Lompoc, California, June 2022*. Until the Site achieves UU/UE, LUCs and Five-Year Reviews will be needed.

#### **Wood Dump Site**

The NTCRA and the Post Site Mitigation Maintenance and Monitoring Plan implementation addressed the

potential contaminant exposure pathways at the Wood Dump Site, and there are no current risks associated with the buried debris. The updated Preferred Remedial Alternative (Remedial Alternative 4) for the Wood Dump Site is long-term monitoring following the Post-Site Mitigation and Monitoring Plan, as amended in May 2014, and adoption of LUCs.

#### **Farm Fuel Site**

The Farm Fuel Site is designated as closed with LUCs and restrictions outlined in the 2008 Complex Supplement. The Site is included in this Proposed Plan to provide an opportunity for public comment on the selection of LUCs at the Farm Fuel Site.

#### **Former Army Landfill Site**

Currently, the FAL is designated as NFA with waste containment by soil capping. The preferred final remedial alternative under CERCLA is to memorialize the post-NFA Mitigation and Monitoring Plan outlined in the 2006 Technical Memorandum on Restoration of Site Conditions and LUCs to restrict residential land use of the area.

#### **ADMINISTRATIVE RECORDS**

The Army keeps Site project information and reference materials for the public to read in a local repository. The Proposed Plan and other documents related to the Washrack and Wood Dump sites can be viewed in the Administrative Record at the Lompoc Public Library:

#### **Lompoc Library**

501 E North Avenue

Lompoc, CA 93436

(805) 875-8775

Hours: M–Th 10:00 AM–7:00 PM

Friday & Sat: 1:00 PM – 5:00 PM

Sun: Closed

Documents are available online via the California State Water Board Geotracker Database:

#### **Washrack Site**

[https://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=DOD100154800](https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=DOD100154800)

#### **Wood Dump Site**

[https://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=DOD100154600](https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=DOD100154600)

#### **PUBLIC INVOLVEMENT OPPORTUNITIES**

The Army provides information on the remedial alternatives for the sites in this plan to the public through public meetings, the Administrative Record, and announcements published in the local newspapers.

With support from the Central Coast Water Board, the County of Santa Barbara, and the BOP, the Army encourages the public to gain an understanding of the sites and the remedial activities conducted and proposed.

The local community is encouraged to review and comment on this Proposed Plan and the Preferred Remedial Alternative. Comments from the public will help decide what future action to take. Members of the public may communicate verbally or in writing during the online public meeting held on September 10, 2024, from 6:00 to 7:00 PM Pacific Standard Time (details on page 1 of this Proposed Plan).

Representatives from the Army, Central Coast Water Board, and County of Santa Barbara will be available to explain the Proposed Plan, hear concerns, and answer questions. Oral and written comments will be accepted.

#### **FUTURE ACTIVITIES**

After the 30-day public comment period has ended, the Army will review all comments received and make a final determination. Anyone who submitted a comment on the Proposed Plan will receive an Army "Response to Comments" document. This document records all comments submitted during the public comment period and the Army's response to those comments. Similar comments may be grouped together. The Response to Comments will also be available for review at the locations listed under Administrative Records.

The Decision Document—the official declaration of the selected remedy to be implemented at the sites—will include a Responsiveness Summary addressing significant comments.

For questions about the public meeting or to submit a comment in writing at any time during the 30-day public comment period from September 4, 2024, to October 5, 2024, contact the following:

Kyle A. Russell  
BRAC Environmental Coordinator  
CALIBRE Systems  
150 West Park Loop, Ste 330  
Huntsville Al 35806-3073  
Kyle.Russell@calibresys.com

Comments must be received by 11:59 PM Pacific Standard Time on October 5, 2024. Written comments may be submitted via mail or email.

**For the hearing impaired, please contact:**

Kyle A. Russell  
BRAC Environmental Coordinator  
CALIBRE Systems  
150 West Park Loop, Ste 330  
Huntsville, Al 35806-3073  
Kyle.Russell@calibresys.com

**Para obtener información en español, comuníquese con:**

Kyle A. Russell  
BRAC Environmental Coordinator  
CALIBRE Systems  
150 West Park Loop, Ste 330  
Huntsville, Al 35806-3073  
Kyle.Russell@calibresys.com

**ACRONYMS**

AR	Administrative Record
Army	U.S. Department of the Army
BCT	BRAC Cleanup Team
BOP	U.S. Bureau of Prisons
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
DCE	Dichloroethene
COC	Contaminant of Concern
DCA	Dichloroethane
DERP	Defense Environmental Restoration Program
ERD	Enhanced reductive dechlorination
FAL	Former Army Landfill Site
FCC	Federal Correctional Complex
LTM	Long-term monitoring
LUC	Land use controls
LUCIP	Land Use Control Implementation Plan
MCL	Maximum Contaminant Level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	No Further Action
NTCRA	Non-Time Critical Removal Actions
PCE	Tetrachloroethene
PMM	Post Site Mitigation Monitoring
POL	Petroleum, Oil, and other Lubricants
PP	Proposed Plan
RAO	Remedial Action Objective
RDP	Remedial Design Plan
Central Coast Water Board	Central Coast Regional Water Quality Control Board
TCE	Trichloroethene
TCRA	Time Critical Removal Action
USACE	United States Army Corps of Engineers
USDB	United States Disciplinary Barracks
UST	Underground storage tank
UU/UE	Unlimited Use/Unrestricted Exposure
VOC	Volatile organic compound



**COMMENT FORM – PUBLIC COMMENTS INVITED**

The Army encourages the public to comment on the remedial alternatives described in this Proposed Plan. Comments may be provided in writing or verbally. Written comments may be written using the comment form below (if additional space is needed, a separate sheet of paper may be used) and submitted to:

Attn: Kyle A. Russell  
BRAC Environmental Coordinator  
CALIBRE Systems  
150 West Park Loop, Ste 330  
Huntsville, Al 35806-3073  
Kyle.Russell@calibresys.com

Please complete the following information and mail it to the address above or copy it into an email to Mr. Russell.

Name \_\_\_\_\_

Address 1 \_\_\_\_\_

Address 2 \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

Check One (optional)

- I support the Army's Preferred Alternative
- I do not support the Army's Preferred Alternative.

**ADDITIONAL COMMENTS:**