



*Infrastructure, environment, facilities*

Mr. Roger W. Briggs, Executive Officer  
California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401-7906

Subject:

Submittal of the Farm Fuel Site Closure Documents  
Former U.S. Disciplinary Barracks, Lompoc, California

Dear Mr. Briggs:

The purpose of this letter is to submit the required documentation to finalize the closure of the Farm Fuel site at the Former U.S. Disciplinary Barracks in Lompoc California. The Central Coast Regional Water Quality Control Board granted the "request for closure" during their meeting in December 2007. As part of the closure process the Army was to prepare:

- This explanatory Cover Letter
- A Case Closure Summary (with document CD attachment), which is the RWQCB's application form to request site closure, and
- A Complex Supplement, which functions as a land use restriction and prohibits groundwater access in the vicinity of the closed site.

All materials to complete the closure process, including supporting information are attached to this submittal letter.

The Farm Fuel site is located 1.5 miles northwest of downtown Lompoc, California, approximately 5 miles to the east of the Pacific Ocean and just north of the Santa Ynez River (Figure 1). The site is to the south of the main prison complex, in the farm operations and maintenance area (Figure 2). It consists mainly of a gravel driveway located between the farm repair shop and the farm equipment shed (Figure 3).

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1050 Marina Way South  
Richmond  
California 94804  
Tel 510.233.3200  
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[www.arcadis-us.com](http://www.arcadis-us.com)

ENVIRONMENT

Date:  
23 February 2009

Contact:  
Michael Dukes

Phone:  
510.233.3200 ext 107

Email:  
[Hoavoscott@arcadis-us.com](mailto:Hoavoscott@arcadis-us.com)

Our ref:  
RC000593.0021.0013

Imagine the result

### **Case Closure Summary**

The attached Case Closure Summary summarizes the responsible parties, release information, site data, treatment and disposal methods, and maximum soil and groundwater concentrations before and after cleanup.

The site was, and is, used for the storage and repair of farm vehicles and equipment. In the past, underground storage tanks (USTs) containing petroleum hydrocarbons were present in this area; however, these USTs, along with contaminated soil, were removed in 1990, and additional contaminated soil was removed in 1994. Groundwater remediation using an in-situ enhanced reductive dechlorination (ERD) system was initiated in December 2002 to clean up the impacted groundwater.

### Contaminant Distribution Information

Delineation and investigation of the vertical distribution of contaminants were performed on three separate events from 2000 to 2003. Findings from these events are contained in the attached CD to this submittal package. The most definitive information comes from data collected in deeper well FF-MW-13, installed to a depth of 65 feet below ground surface adjacent to the historically most impacted well FF-MW-6 at the center of the plume. Since 2002, this deeper well has been sampled ten times with no detections of 1,2-DCA (ARCADIS, *Quarterly Groundwater Monitoring and ERD Update Report – First Quarter 2008*, May 15, 2008).

Maximum concentrations preceding and following remediation efforts are outlined in the Case Closure Summary. The last sampling event (March 2008) following approval for closure showed all volatile organic compound (VOC) contaminants below maximum contaminant levels (MCLs). Future concentrations are not expected to exceed the current readings; therefore, there is no future plume map provided in this summary. The attached plume maps (Figure 5) depict the 1,2-dichloroethane (1,2-DCA) plume concentrations exceeding its MCL of 0.5 microgram per liter (ug/L) in 2002, decreasing plume concentrations in 2005 and 2007, and cumulating with no plume shown as 1,2-DCA concentrations were below MCL in 2008 (Figures 4 and 5).

### **Complex Supplement**

The attached Complex Supplement is intended to serve two purposes. Firstly, it defines an area in which certain land use restrictions will be placed. Secondly, it provides an operational procedure by which the site is periodically monitored, and

establishes access for regulatory inspections should they be needed. Thirdly, it provides that the land use restrictions will be included in communications if the lands become excess to the needs of the federal Bureau of Prisons. In this event the Board will be notified of the actions declaring the land as excess.

#### Geographic Site Location

The site is located at Latitude 34°40'21.00"N, Longitude 120°29'59.00W. This marks the southeast corner of the Groundwater Restriction Zone (Attachment 1). The full footprint of the restricted zone is depicted on the attached Restriction Zone map. Each of the four corners has Latitude and Longitude indicators placed for reference. The map also shows general building features and historic groundwater monitoring well locations that will assist Prison staff in identifying the area in which groundwater restrictions are placed.

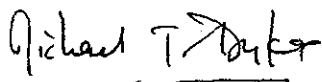
#### **Conclusion**

We trust that the information attached to this letter completes the data package needed to finalize closure of the Farm Fuel site at the Federal Correctional Complex in Lompoc, California. We anticipate that the Board can now issue a No Further Action Letter and that arrangements can be made to remove the groundwater-monitoring network in the near future.

Please contact Michael Dukes at 510.233.3200, or Anthony Nelson, Army BEC at 805.886.2151 if you have any questions or require additional information.

Sincerely,

ARCADIS



Michael T. Dukes  
Project Manager

#### **Closure Package Contents:**

Cover Letter, with

- Figure 1 - Complex Location Map
- Figure 2 - Site Location Map
- Figure 3 - Site Plan and December 2007 Data

- Figure 4 - Site Plan and March 2008 Data
  - Figure 5 - Plume Trend Maps
- Case Closure Summary, with
- List of Reports
  - CD and Directory
- Complex Supplement, with
- Attachment 1 - Restriction Zone Map

Copies:

Mr. David Schwartzbart  
Ms. Sheila Soderberg  
Mr. John Robertson  
California Environmental Protection Agency  
Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401-7906

Mr. James Hamlin  
Santa Barbara County  
Environmental Health Services  
Betteravia Government Center  
2125 S Centerpointe Parkway, Room 333  
Santa Barbara, California 93455-1340

Mr. Matt Mechenes  
United States Army Environmental Center  
Attn: SFIM-AEC-CDS  
5179 Hoadley Road  
Aberdeen Proving Ground, Maryland 21010-5401

Ms. Bridgette Lyles,  
Department of Justice  
Bureau of Prisons  
320 First Street NW  
Washington DC 20534

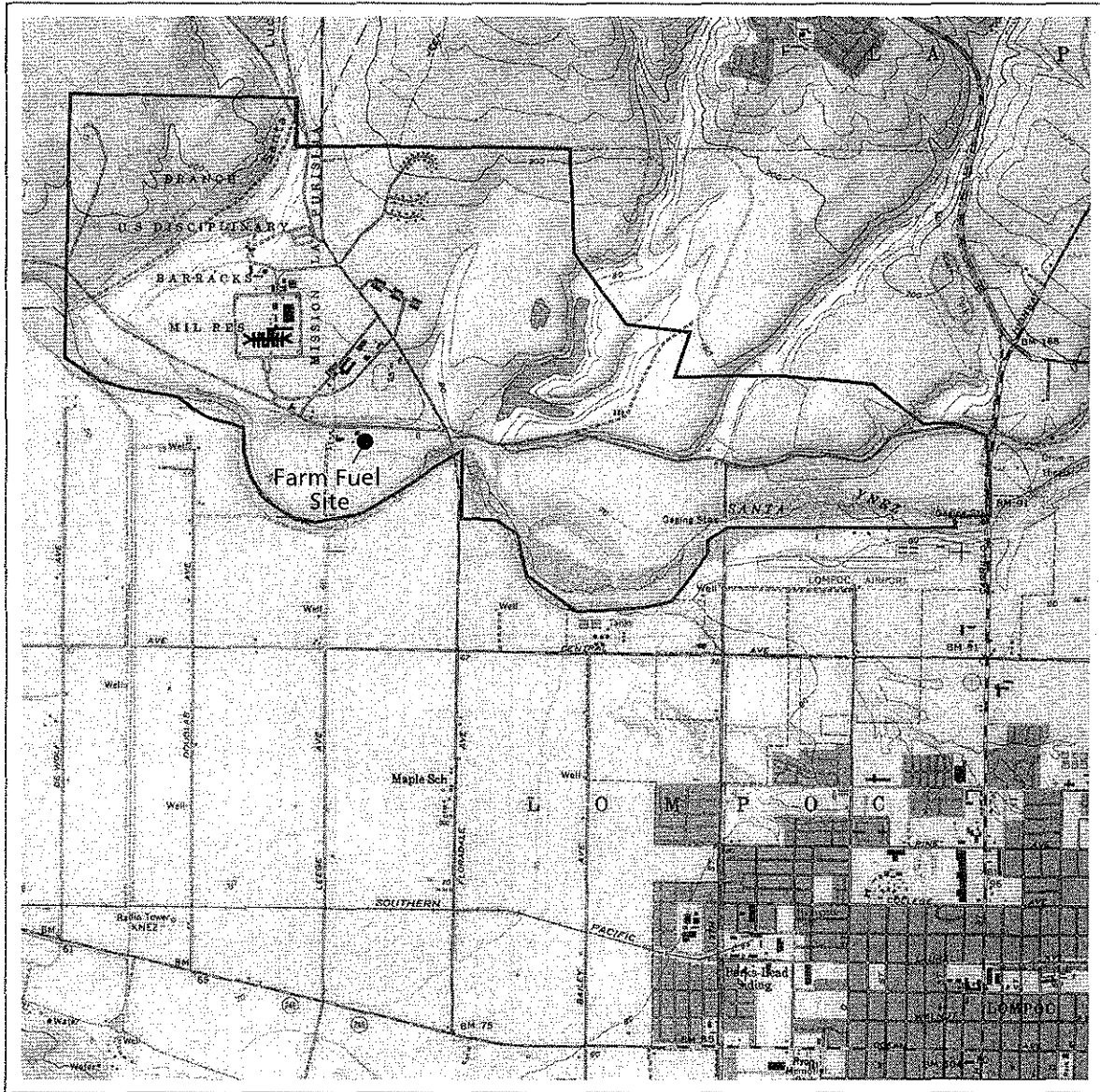
Ms. Susan Knauf  
Louis Berger Group  
412 Mount Kembel Avenue  
Morristown, New Jersey 07960

ARCADIS

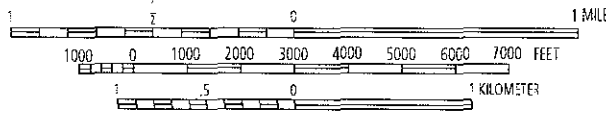
Mr. Roger W. Briggs  
23 February 2009

Mr. William T. Brawner  
US Army BRACD  
Taylor Building  
2530 Crystal Drive, Room 5000  
Arlington, Virginia 22202

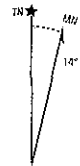
Anthony S. Nelson (Army BEC)  
USACE  
1318 New Mexico Ave., Building 9360  
Vandenberg AFB, California 93437



QUADRANGLE LOCATION



CONTOUR INTERVAL 40 FEET



MAGNETIC DECLINATION ON 02/07/02

Revision 0  
10-30-08

— Approximate Site Boundary  
● Approximate Site Location

Reference: U.S.G.S. 7.5-minute Quadrangle Surf, California, 1974 and Lompoc, California, 1978.

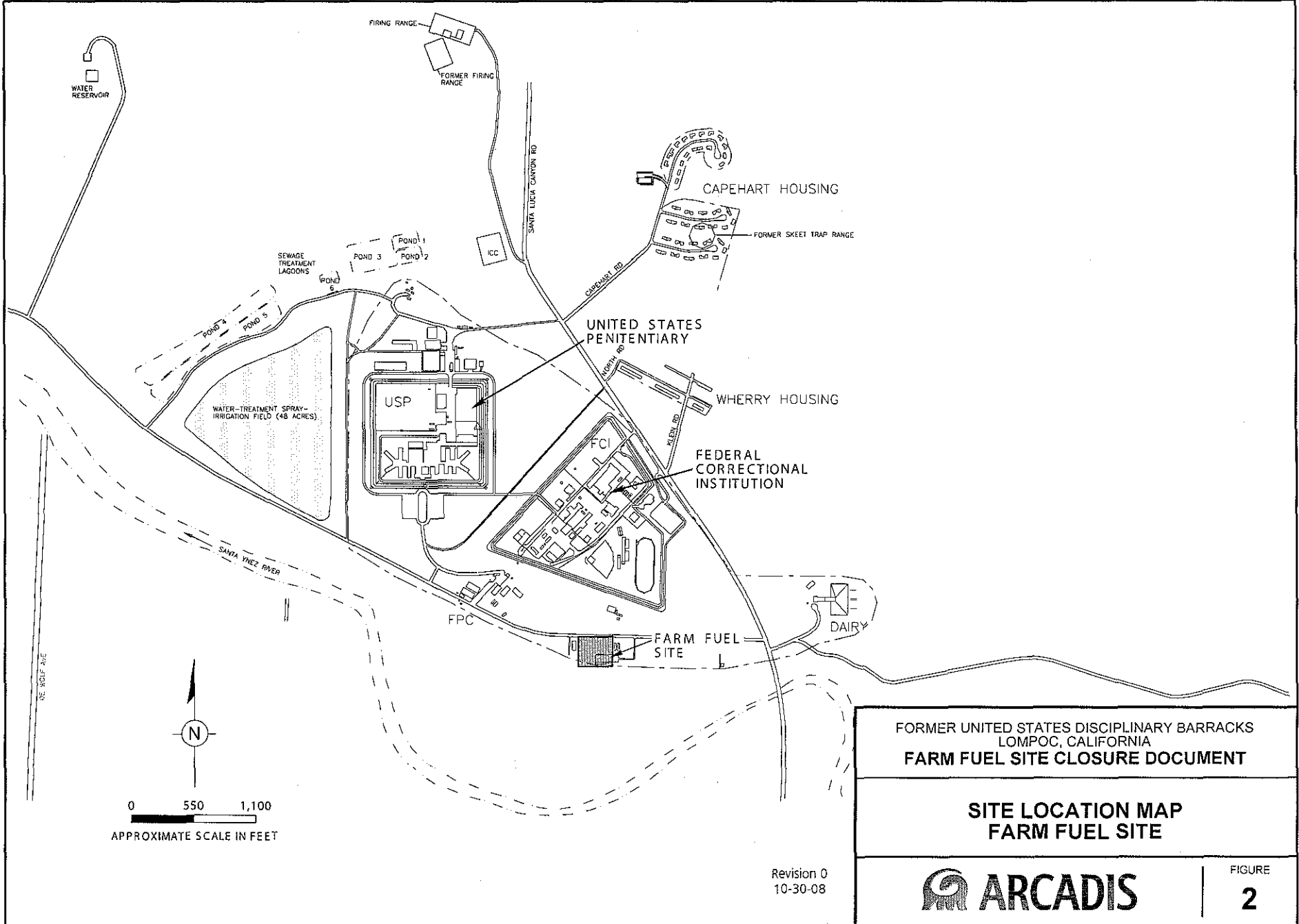
FORMER UNITED STATES DISCIPLINARY BARRACKS  
LOMPOC, CALIFORNIA  
FARM FUEL SITE CLOSURE DOCUMENT

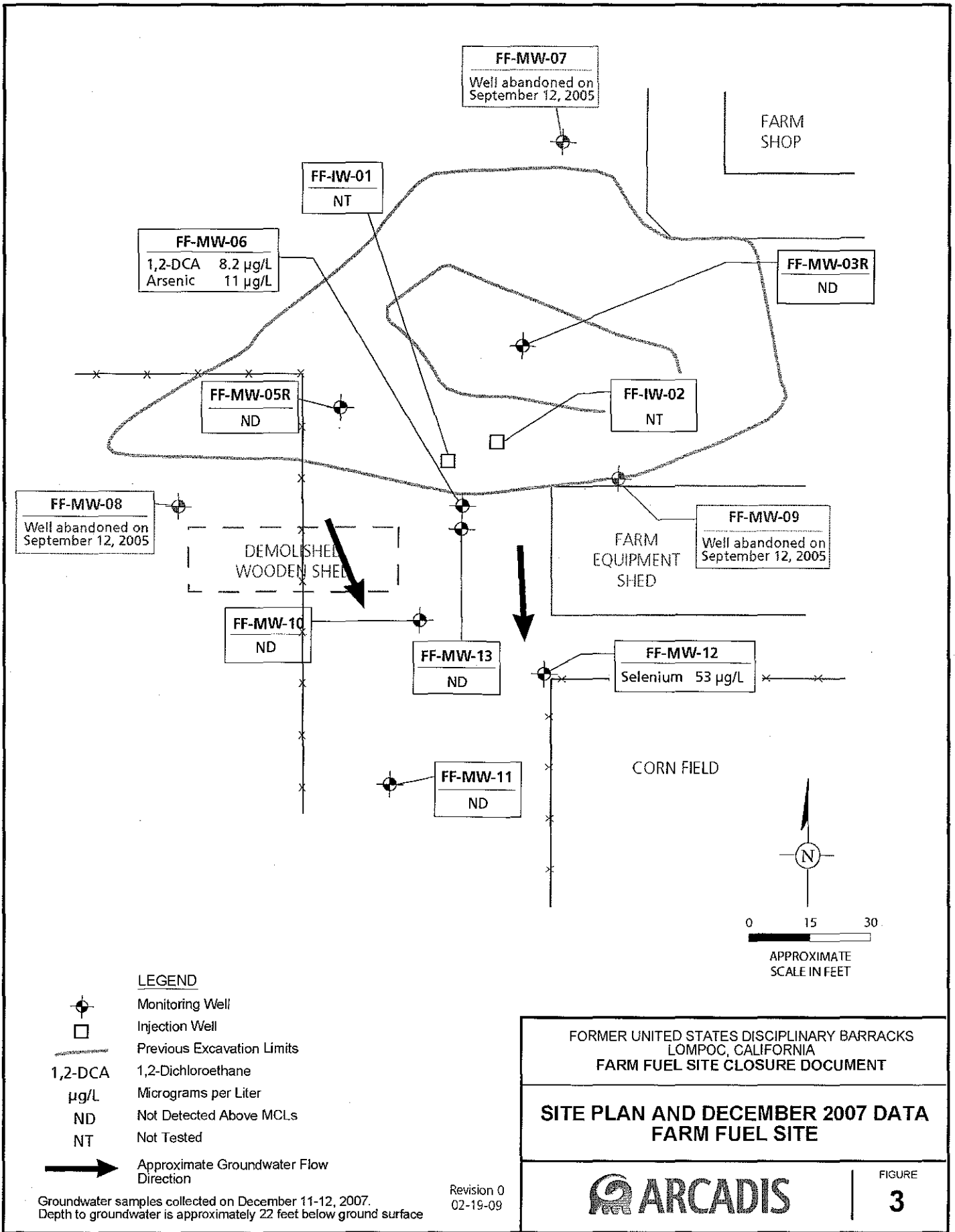
COMPLEX LOCATION MAP  
FARM FUEL SITE







FIGURE  
1

CITY: Richmond DIV: GROUP: Env DB: M: Chiu LD: PIC: Dukles PM: Dukles TM: Vescott G:\Projects-Active\Lompoc\Report\F Closure Summary\F Closure Figures\Figure 1.dwg SAVED: 10-23-08





**LEGEND**

-  Monitoring Well
-  Injection Well
-  Previous Excavation Limits
- 1,2-DCA 1,2-Dichloroethane
- µg/L Micrograms per Liter
- ND Not Detected Above MCLs
- NT Not Tested
-  Approximate Groundwater Flow Direction

Groundwater samples collected on December 11-12, 2007.  
 Depth to groundwater is approximately 22 feet below ground surface

Revision 0  
 02-19-09

FORMER UNITED STATES DISCIPLINARY BARRACKS  
 LOMPOC, CALIFORNIA  
 FARM FUEL SITE CLOSURE DOCUMENT

**SITE PLAN AND DECEMBER 2007 DATA  
 FARM FUEL SITE**

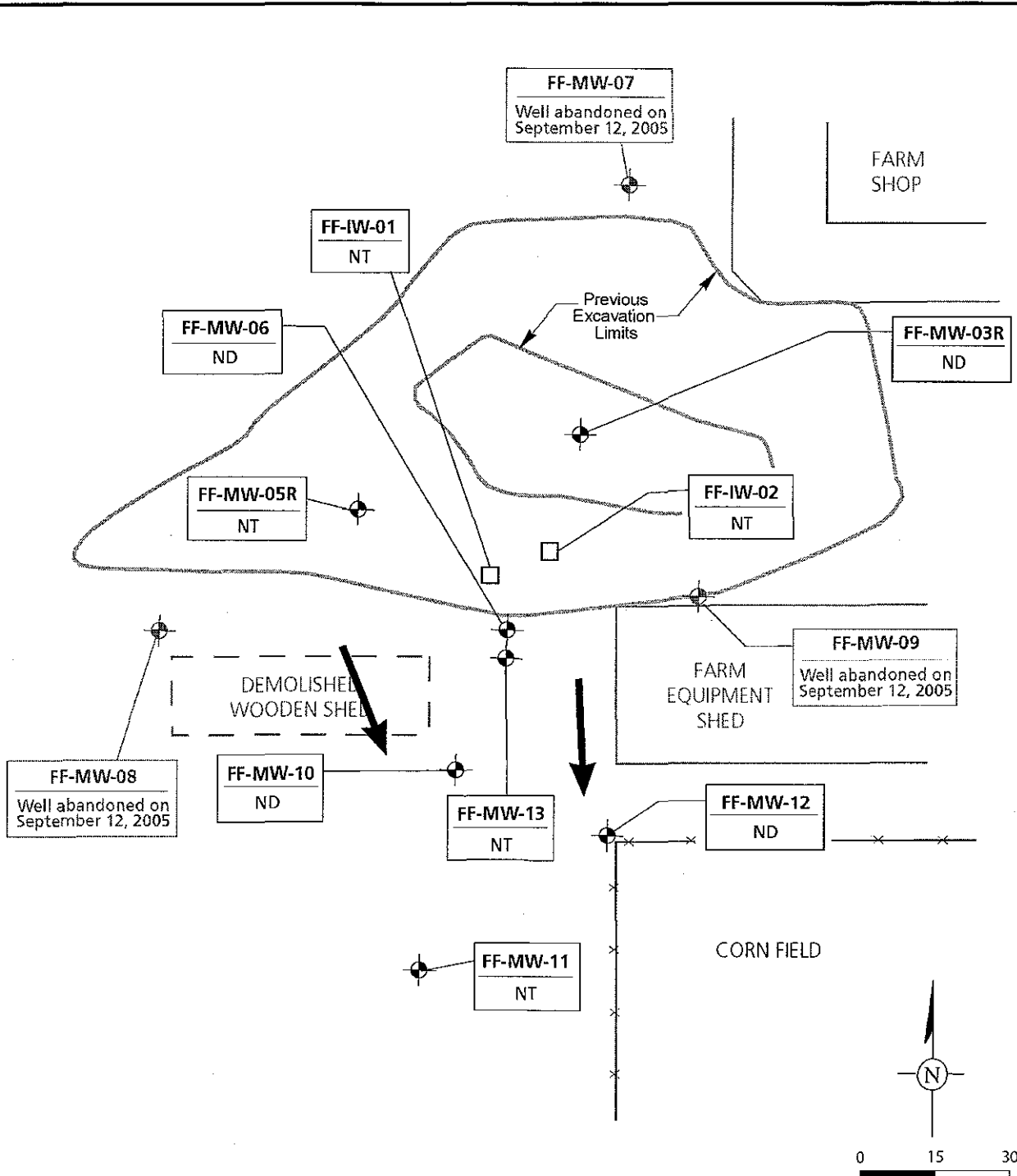


FIGURE

**3**



CITY: Richmond, CA DIV: SQUIP/Env. DR: Chiu, LD-- PIC: D:\env. PM: D:\env. TM: V\sect  
 G:\Projects\Actives\FF Closure Summary\Figure 3.dwg SAVED: 10/22/2008 2:19 PM BY: Chiu, M.

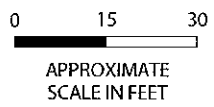


**LEGEND**

- Monitoring Well
- Injection Well
- Previous Excavation Limits
- 1,2-DCA**  
1,2-Dichloroethane
- µg/L**  
Micrograms per Liter
- ND**  
Not Detected Above MCLs
- NT**  
Not Tested
- Approximate Groundwater Flow Direction

Groundwater samples collected on March 26 and 27, 2008.  
 Depth to groundwater is approximately 22 feet below ground surface.

Revision 0  
 02-19-09



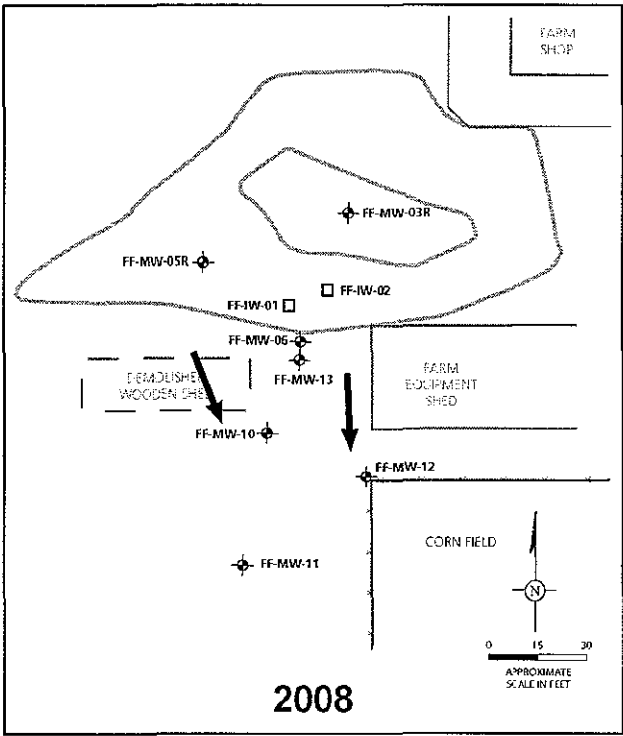
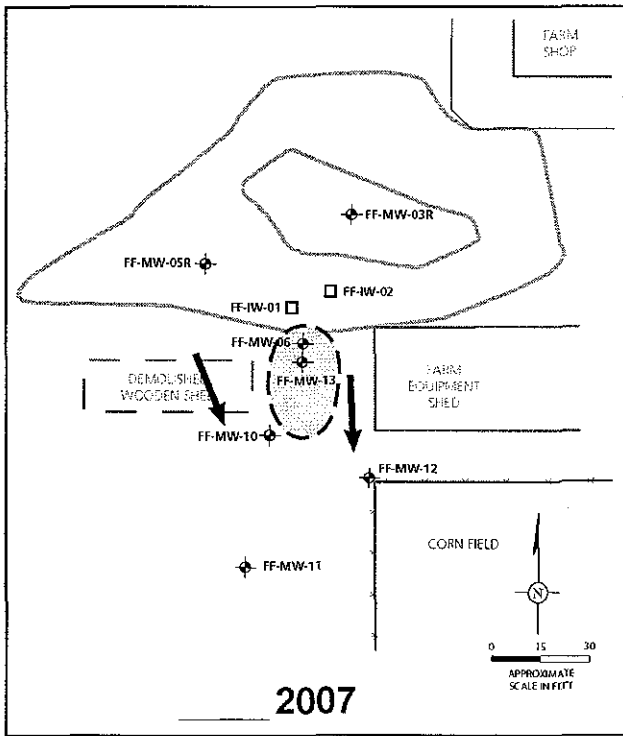
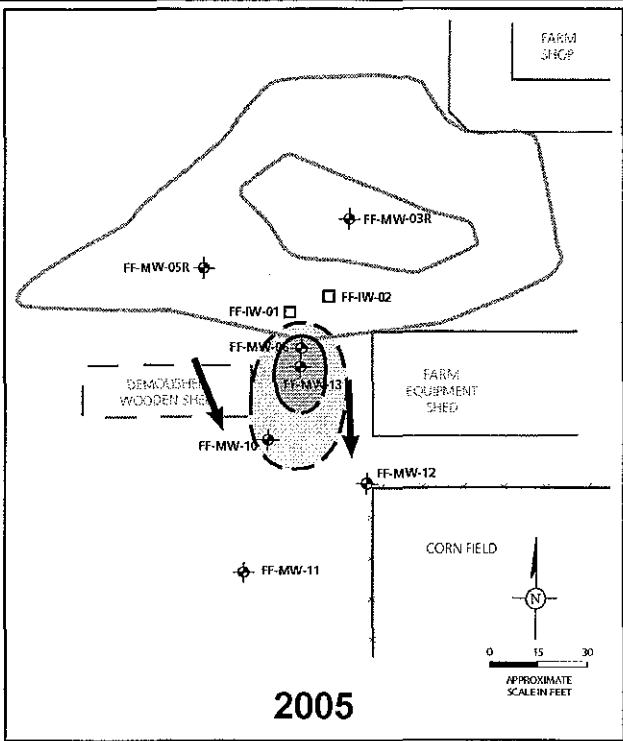
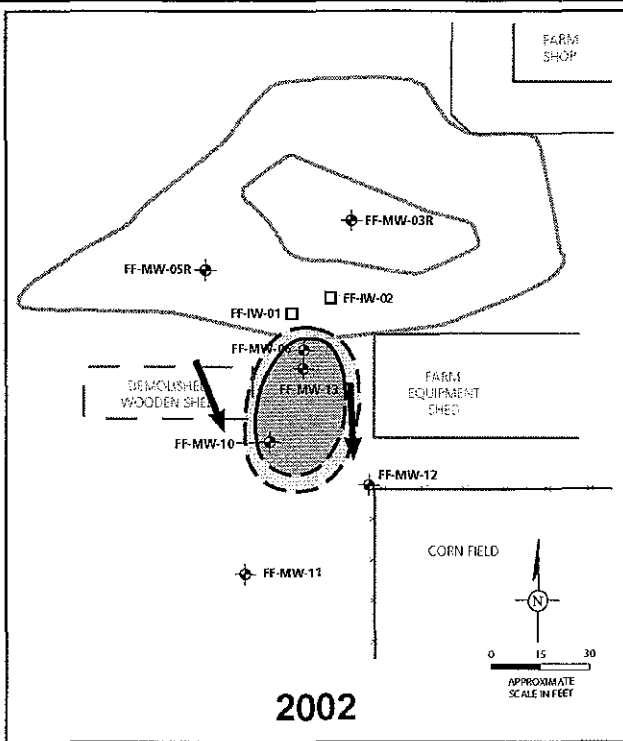
FORMER UNITED STATES DISCIPLINARY BARRACKS  
 LOMPOC, CALIFORNIA  
 FARM FUEL SITE CLOSURE DOCUMENT

**SITE PLAN AND MARCH 2008 DATA**  
**FARM FUEL SITE**



FIGURE  
**4**

CITY:Richmond DIV:GROUP:Env DB: M.Chiu LD: PIC:Dukes PM:Dukes TMV:scott  
 G:\Projects-Active\Compo\Reports\FF Closure Summary\FF Closure Figures\Fig4.dwg  
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**LEGEND**

- Monitoring Well
- Injection Well
- Previous Excavation Limits
- 1,2-DCA
- Approximate Groundwater Flow Direction
- 1,2-DCA greater than 5 µg/L
- 1,2-DCA 0.5 to 5 µg/L

Depth to groundwater is approximately 22 feet below ground surface.

Revision 0  
02-19-09

FORMER UNITED STATES DISCIPLINARY BARRACKS  
 LOMPOC, CALIFORNIA  
 FARM FUEL SITE CLOSURE DOCUMENT

**PLUME TREND MAPS  
 FARM FUEL SITE**

**ARCADIS**

FIGURE  
**5**

**CASE CLOSURE SUMMARY**  
**FARM FUEL SITE, LOMPOC BARRACKS**

**I. Agency Information**

<b>Agency Name:</b> RWQCB - Central Coast Region	<b>Address:</b> 895 Aerovista Place, Suite 101
<b>City/State/Zip:</b> San Luis Obispo, CA 93401-7906	<b>Phone:</b> (805) 542-4643
<b>Responsible Staff person:</b> David Schwartzbart	<b>Title:</b> Engineering Geologist

**II. Case Information**

<b>Site Facility Name:</b> Former Farm Fuel Site		
<b>Site Facility Address:</b> 3901 Klein Blvd, Lompoc, CA 93436		
<b>Responsible Parties</b>	<b>Address</b>	<b>Phone Number</b>
U.S. Army BRAC Division	2530 Crystal Drive, Room 5066E, Arlington, Virginia 22202	703.602.6353
Federal Bureau of Prisons, Facilities Manager, USP Lompoc	3901 Klein Blvd, Lompoc, California 93436	805.735.2771
Site Specialist/Branch Chief, Site Selection and Environmental Review Branch	320 1st St., NW, Rm. 500-5 Washington, D. C. 20534	202.514.6470

**III. Release Information**

<b>Cause of Release:</b> Release from three underground storage tanks (USTs) that were removed in March 1990.
<b>Chemicals of Concern:</b> 1,2-Dichloroethane (1,2-DCA) is a leaded gasoline additive and was the only constituent above California maximum contaminant level (MCL) in 2007. 1,2-DCA was below MCL in 2008. Toluene was detected above its MCL in 2004 in one injection well, but levels went below MCL in 2005. In addition, arsenic, iron, and selenium are detected at concentrations above their respective primary or secondary MCLs (further detailed in Section IX, Number 6).
<b>Actions Taken to Stop Release:</b> The three USTs were removed in March 1990. Up to 3,900 cubic yards of contaminated soil (mainly total petroleum hydrocarbons [TPH]) was excavated and removed in October 1994. Groundwater remediation using an in-situ enhanced reductive dechlorination (ERD) system was initiated in December 2002 and continues to be effective.

**IV. Site Characterization Information**

<b>Site Characterization Complete?</b> Yes	<b>Date Approved by Oversight Agency:</b>	
<b>Monitoring Wells Installed?</b> Yes	<b>Number:</b> 7 active	<b>Proper Screened interval?</b> Yes
<b>Highest GW Depth Below Ground Surface:</b> 30.65 feet (FF-MW-03 in May 1991)	<b>Lowest:</b> 11.67 feet (FF-MW-07 in April 1998)	<b>Flow Direction:</b> Mainly south
<b>Most Sensitive Current GW Use:</b> None		
<b>Are Drinking-Water Wells Affected?</b> No	<b>Aquifer Name:</b> Upper Aquifer of the Santa Ynez River Valley Basin	
<b>Is Surface Water Affected?</b> No	<b>Nearest SW Name:</b> Santa Ynez River	
<b>Off-site Beneficial Use Impacts (addresses/locations):</b> None		

**CASE CLOSURE SUMMARY**  
**FARM FUEL SITE, LOMPOC BARRACKS**

**V. Treatment/Disposal Methods (Attach any additional information)**

Material	Amount (Include Units)	Action (Treatment or Disposal Method)	Date
Free Product	Not Applicable	Not Applicable	Not Applicable
Soil	3,900 cy	Excavation and disposal off-site at McKittrick Waste Treatment Site, a Class II facility in McKittridge, California.	October 1994
Ground Water	15 ft x 30 ft plume (in 2007)	Source removal and treatment of remaining contaminant mass in groundwater using the ERD system.	December 2002 to present
<b>Comments:</b>			

**VI. Maximum Documented Contaminant Concentrations -- Before and After Cleanup**

Compound	Before	Date	Location	After (see Section IX)	Date	Location
<b>Soil, mg/kg</b>						
TPH-Gasoline -see additional comments on Section IX.	7,800	10/1994	EW-6 at 18.5 ft bgs (Depth to water was approximately 24 ft bgs).	ND	11/1994	Additional excavation was performed to 28 ft bgs to remove impacted soil. No additional soil was sampled in this location, except for nearby sample B-8-2 (see Additional Comment Note 2).
Benzene	13	10/1994	EW-6 at 18.5 ft bgs	ND	11/1994	Sample B-8-2 (see Additional Comment Note 2).
Toluene	46	10/1994	EW-6 at 18.5 ft bgs	ND	11/1994	Sample B-8-2 (see Additional Comment Note 2).
Ethylbenzene	110	10/1994	EW-6 at 18.5 ft bgs	ND	11/1994	Sample B-8-2 (see Additional Comment Note 2).
Xylenes	530	10/1994	EW-6 at 18.5 ft bgs	ND	11/1994	Sample B-8-2 (see Additional Comment Note 2).
1,2-DCA	0.85	10/1994	B-8 at 24 ft bgs was collected following UST removal.	ND	11/1994	B-8-2 at 28 ft bgs was collected after additional excavation to removed 1,2-DCA impacted soil in the area.

**CASE CLOSURE SUMMARY**  
**FARM FUEL SITE, LOMPOC BARRACKS**

Water, mg/L						
1,2-DCA	0.310	4/1998	FF-MW-06	<0.0005	3/2008	FF-MW-06
	0.0011	3/2007	FF-MW-06			
	0.0012	6/2007	FF-MW-06			
	0.0055	9/2007	FF-MW-06			
	0.0082	12/2007	FF-MW-06			
<b>Comments:</b> In addition, arsenic, iron, and selenium are detected at concentrations above their respective primary or secondary MCLs (further detailed in Section IX, Number 6).						

**VII. Closure**

<b>Does completed corrective action protect existing beneficial uses per the Basin Plan?</b> Yes, with land use restrictions	
<b>Does completed corrective action protect potential beneficial uses per the Basin Plan?</b> Yes, with land use restrictions	
<b>Does corrective action protect public health for current land use?</b> Yes	
<b>Site Management Requirements:</b> Yes	
<b>Should corrective action be reviewed if land use changes?</b> Yes	
<b>Monitoring Wells Decommissioned?</b> Two wells were decommissioned during excavation activity in 1994 but were reinstalled in 1996 (FF-MW-3R and FF-MW-5R), also some redundant wells (FF-MW-07, FF-MW-08, and FF-MW-09) were removed later in 2005 but main monitoring well network is still intact. Existing wells will be removed upon final closure approval.	<b>Any Retained?:</b> To be determined after closure approval.

<b>List Enforcement Actions Taken:</b> No Enforcement Actions Taken by the Central Coast Water Board
<b>List Enforcement Actions Rescinded:</b> None

**VIII. Local Agency Representative Data**

<b>Agency:</b> Santa Barbara County, Fire Protection Services Division	<b>Address:</b> 195 W. Highway 246 #102
<b>City/State/Zip:</b> Buellton, CA 93427	<b>Phone:</b> (805) 686-8169
<b>Responsible Staff Person:</b> Ms. Kate Sulka	<b>Title:</b> Supervising Environmental Specialist

**CASE CLOSURE SUMMARY**  
**FARM FUEL SITE, LOMPOC BARRACKS**

**IX. Additional Comments**

1) County representative was on-site during UST removal, confirmed by County file review.
2) Eighteen sidewall and fourteen bottom samples were collected from the excavation from 7.18 to 28 feet bgs. Of the 32 soil samples, only one soil sample EW-6 had concentrations above action levels. Additional excavation was performed to 28 ft bgs (to groundwater) in this area to remove impacted soil near EW-6 location. No confirmation soil sampling (due to groundwater influence) was conducted at this location, except for nearby sample B-8-2.
3) Benzene, ethylbenzene, and total xylenes are not detected in groundwater above laboratory detection limits for any of the wells sampled at the Farm Fuel site. Toluene is detected occasionally in well FF-MW-06, but at concentrations two orders of magnitude below the MCL. Toluene was detected above its MCL in 2004 in injection well FF-IW-01, but levels went below MCL in 2005.
4) TPHs are not required to be tested for during the quarterly monitoring events as they were either not detected or detected at low concentrations in groundwater historically.
5) Historic TPH values in groundwater are below 1 mg/L (County cleanup levels). BCT agreed to remove TPH analyses in July 2003 per Change Memorandum to the Final Field Sampling Plan Groundwater Monitoring, Former United States Disciplinary Barracks, Lompoc, California, dated November 1, 2002.
6) Dissolved arsenic, iron, and selenium are detected at concentrations above their respective primary or secondary MCLs. Arsenic was detected above its MCL in well FF-MW-12 in October 2002 (14 ug/L) and in well FF-MW-06 from February 2003 through December 2007 (from <5 ug/L to 74 ug/L). During the monitoring event in December 2007, the average arsenic concentration was 31 ug/L (11 ug/L in one sample and 51 ug/L in another sample). Iron was above its secondary MCL in all of the wells at the site (no primary MCL). Selenium was detected above its MCL in well FF-MW-12 only from October 2002 through December 2007 (from 28 ug/L to 86 ug/L). During the monitoring event in December 2007, selenium was 53 ug/L. Arsenic is believed to be a secondary by-product of reducing conditions and it is localized and temporary in well FF-MW-06. Arsenic is not elevated in downgradient well FF-MW-10. Total iron is elevated throughout the site and considered background (there is no primary MCL for total iron). Selenium is a localized background metal found elevated in well FF-MW-12 only (and reducing condition would reduce this compound).

**X. Regional Board Certification**

<b>Signature of Executive Officer</b>	<b>Date:</b>
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**CASE CLOSURE SUMMARY**  
**FARM FUEL SITE, LOMPOC BARRACKS**

**XI. Additional Information (to be attached to this report)**

**1. Listing of Reports - See Attachment**

Please include of list of all investigative reports, including reports prepared for financial institutions such as Phase I Environmental Assessments, all monitoring data, corrective action alternatives analyses, and other consultant reports. If a report on the list has not been previously submitted to the Regional Board, please submit the report with this form. On or attached to the list must be the following statement, with the dated signature of the responsible party or his agent: "I attest, under penalty of perjury, in accordance with Water Code section 13267, the following documents constitute the complete list of documents pertaining to waste discharged, hydrogeology and other information directly relevant to the characterization and cleanup of the waste discharged at the subject site."

**2. Extent of Soil Contamination – See CD Attachments**

- a) Maps showing the extent of soil degradation by chemicals of concern in excess of guidelines, before and after remediation.
- b) Geologic log of the most highly degraded soil boring or monitoring well showing sample points with a list of contaminant concentrations.
- c) Summary table of all historic soil sampling results.

**3. Extent of Ground Water Contamination – See CD Attachments**

- a) Maps showing the extent of ground water degradation in excess of detection limits for chemicals of concern, before and after remediation.
- b) Geologic logs, including construction, for all wells.
- c) Representative geologic log identifying all aquifers.
- d) Two intersecting cross-sections of the site.
- e) Summary table of all historic ground water analyses and water levels.

## LIST OF REPORTS

### CASE CLOSURE SUMMARY – FARM FUEL SITE, LOMPOC, CA

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The following documents were prepared related to the Farm Fuel site:

- ARCADIS. 2002. *Quarterly Groundwater Monitoring Report, Third Quarter 2002*. November 1.
- ARCADIS. 2002. *Final Field Sampling Plan Groundwater Monitoring, Former United States Disciplinary Barracks, Lompoc, California*. November.
- ARCADIS. 2003. *Change Memorandum No. 1 to the Final Field Sampling Plan Groundwater Monitoring, Former United States Disciplinary Barracks, Lompoc, California*. July 30.
- ARCADIS. 2004. *Final Enhanced Reductive Dechlorination Start-up Report for the Washrack and Farm Fuel Sites*. April 30.
- ARCADIS. 2005. *Documentation of Well Abandonment and Well Construction*. October 31.
- ARCADIS. 2006. *Action Memorandum for the Time Critical Removal Action Under CERCLA for the Washrack and Farm Fuel Sites*. July.
- ARCADIS. 2007. *Evaluation of Remediation Progress and Future Degradation Rates at the Farm Fuel Site, Lompoc, California*. April.
- ARCADIS. 2008. *Quarterly Groundwater Monitoring and ERD Update Report – First Quarter 2008*. May 15. And numerous quarterly groundwater monitoring report from United States Army Corps of Engineers (USACE), ARCADIS and others.
- Radian Corporation. 1996. *Technical Memorandum May 1996 Groundwater Investigation, Farm Fuel Area, U.S. Penitentiary, Lompoc, California*. May.
- Staal, Garder & Dunne, Inc. 1991. *Preliminary Site Assessment, Farm Fuel Area, United States Prison, Lompoc, California*. June.
- USACE. 1992. *Draft Site Assessment Farm Fuel Area, U.S. Penitentiary, Lompoc, California*. October.
- USACE. 2000. *Site Investigation Report Farm Fuel Area, U.S. Penitentiary, Former U.S. Disciplinary Barracks*. March.
- USACE. 2001. *Underground Storage Tank Site, Corrective Action Report, Farm Fuel Area, U.S. Penitentiary, Former U.S. Disciplinary Barracks*. January.
- Weiss Associates. 2000. *December 2000 Hydropunch Groundwater Investigation*.



W.L. Gore & Associates, Inc. 1998. *GORE-SORBBER Screening Survey, Final Report., U.S. Penitentiary (Farm Fuel Area), Lompoc, California.* November.

Woodward-Clyde. 1997. *Environmental Baseline Survey, Report, U.S. Army Base Realignment and Closure 95 Program. Branch U.S. Disciplinary Barracks, California.* June.

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"I attest, under penalty of perjury, in accordance with Water Code section 13267, the following documents constitute the complete list of documents pertaining to waste discharged, hydrogeology and other information directly relevant to the characterization and cleanup of the waste discharged at the subject site."

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Michael T. Dyke

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20 February 2009

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Date

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## CD AND DIRECTORY

### CASE CLOSURE SUMMARY – FARM FUEL SITE, LOMPOC, CA

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The following information and documents are included in the CD for the Farm Fuel site:

#### **Soil Information**

Preliminary Site Assessment (June 1991) – site maps and boring logs

Site Assessment (October 1992) – site maps and boring logs

Site Investigation Report (March 2000) - site maps and boring logs

UST Corrective Action Report (January 2001) – soil data and maps

ERD Startup Report (April 2004) – boring logs

Miscellaneous boring logs and soil data tables

#### **Groundwater Information**

Change Memorandum No. 1 - FINAL FSP GW Monitoring (July 2003)

Figures showing groundwater data during the 1<sup>st</sup> Quarter 2002 and 1<sup>st</sup> Quarter 2008

Information on the vertical delineation of groundwater impacts at Farm Fuel site

Table with Historical Groundwater Levels and Elevations

Table with Historical Organic Data through March 2008

Table with Historical Inorganic Data through March 2008

Table with Historical Geochemistry Data through March 2008



U.S. Department of Justice  
Federal Bureau of Prisons  
Federal Correctional Complex  
Lompoc, California

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# Complex Supplement

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OPI: Facilities Department  
NUMBER: xxxx.xx  
DATE: October 25, 2008  
SUBJECT: Land Use Restrictions

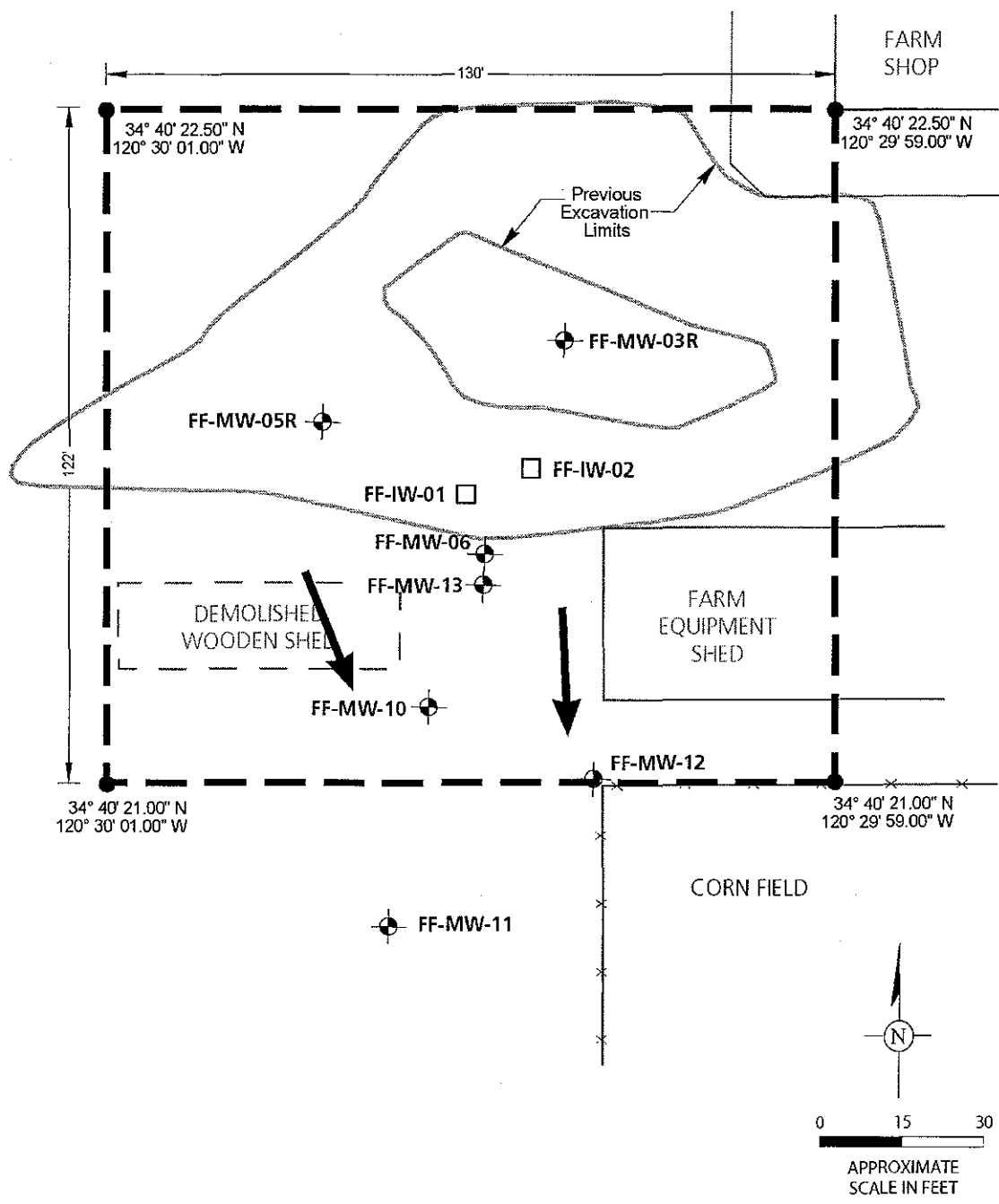
1. **PURPOSE AND SCOPE:** To place permanent land use restrictions over certain areas at FCC Lompoc.
2. **PROGRAM OBJECTIVES:** The United States Army conducted remedial actions at the Farm Fuel facility (Site) in general compliance with the Federal Comprehensive Environmental Response, Compensation, and Liability Act and the state Porter-Cologne Water Quality Control Act. The Central Coast Regional Water Quality Control Board (Water Board) determined, based on currently available information, it is appropriate to require no further action at the site. In certain portions of the Site, groundwater contains elevated levels of constituents, including 1,2-dichloroethane (1,2-DCA), arsenic, iron and selenium, exceeding state and federal drinking water standards. The Water Board has directed that the Site be subject to certain permanent land use restrictions. The program objectives are to place permanent land use restrictions on the property described herein and in the manner described within this Complex Supplement.
3. **DIRECTIVES AFFECTED:**
  - a. Directives Rescinded: None
  - b. Directives Referenced: None
4. **STANDARDS REFERENCED:** None
5. **PROCEDURES:** This Complex Supplement places protective measures over the Farm Fuel Site as defined in the attached real property surveys designated "Attachment 1."

- a. FCC Lompoc shall not allow the placement of wells within the areas defined under "Attachment 1" for purposes of withdrawing groundwater for agricultural, municipal, domestic, or industrial uses.
- b. FCC Lompoc shall not allow or conduct extraction, injection, sampling, incidental disturbance during soil excavation, or any other activity potentially or actually contacting, handling, disturbing, impacting, or involving subject waste constituent plume as shown on "Attachment 1" without prior approval by Water Board. Approval by other agencies might also be necessary prior to commencing such activities.
- c. FCC Lompoc shall maintain and shall not disturb survey markers placed by the United States Army and/or its contractors to define the boundaries of the protected area.
- d. In the event that this land is declared as excess to the needs of the Federal Bureau of Prisons, the Bureau shall include these land use restrictions in any Report of Excess to the General Services Administration.
- e. FCC Lompoc Facilities Department will review the protected areas for compliance at least every three years, and shall report any non-compliance immediately to the Complex Warden as well as the Central Office, Office of General Counsel and Review, Real Estate and Environmental Law Branch, and the Water Board.
- f. FCC Lompoc shall ensure that the Water Board has reasonable access to the areas described in "Attachment 1" for inspection purposes consistent with the reasonable access granted to all other state and Federal environmental enforcement agencies.

6. **OFFICE OF PRIMARY INTEREST:** Facilities Department

/s/  
Linda Sanders  
Complex Warden

CITY: Richmond DIV: GROUP: Env DB: M.Chiu LD: PIC: Duikes PW: Duikes TM: Vescott  
 G:\Projects-Active\Lompoc\Reports\Fuel Closure Summary\Fuel Closure Figures\Attachment1.ai  
 SAVED: 10-23-08



**LEGEND**

- Monitoring Well
- Injection Well
- Previous Excavation Limits
- Groundwater Restriction Zone
- Approximate Groundwater Flow Direction

Depth to groundwater is approximately 22 feet below ground surface.

Revision 0  
 02-24-09

FORMER UNITED STATES DISCIPLINARY BARRACKS  
 LOMPOC, CALIFORNIA  
 FARM FUEL SITE CLOSURE DOCUMENT

**RESTRICTION ZONE MAP  
 FARM FUEL SITE**

**ARCADIS**

ATTACHMENT  
**1**