

# TABLE 9-2

## TABLE 6-7

### BACKGROUND GROUNDWATER SAMPLES DSB-04-MWA SIERRA ARMY DEPOT

Compound	Concentration	Concentration	Concentration
	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )
	4/4/90	8/6/90	Average
Arsenic	190	170	180.0
Antimony	ND	ND	ND
Barium	24.4	18.8	21.6
Beryllium	3.54	3.5	3.5
Cadmium	4.07	4.01	4.0
Calcium	220,000	220,000	220,000
Chromium	ND	ND	ND
Cobalt	ND	ND	ND
Copper	20.1	8.09	14.1
Lead	ND	ND	ND
Mercury	ND	ND	ND
Molybdenum	ND	ND	ND
Nickel	ND	ND	ND
Selenium	ND	7.67	7.7
Silver	ND	0.425	0.4
Sodium	2,300,000	2,300,000	2,300,000
Thallium	ND	ND	ND
Zinc	28.7	ND	28.7

ND - Not Detected

# TAL E 9-3

**Table 4.25: Metals Detected in Groundwater, 1998 - 2000**

Site ID	Aluminum (µg/l)	Antimony (µg/l)	Arsenic (µg/l)	Barium (µg/l)	Calcium (mg/l)	Copper (µg/l)	Iron (µg/l)	Magnesium (mg/l)	Manganese (µg/l)	Mercury (µg/l)	Molybdenum (µg/l)	Potassium (mg/l)	Selenium (µg/l)	Sodium (mg/l)	Vanadium (µg/l)
<b>02/05/1998</b>															
UBG-03-MW	---	---	---	0.100	0.0240	---	0.600	0.0110	0.420	---	---	0.00690	---	0.0570	---
UBG-04-MW	---	---	---	0.100	0.0240	---	0.600	0.0110	0.420	---	---	0.00670	---	0.0560	---
UBG-04-MW	---	---	4.20	---	---	---	---	---	---	---	---	---	---	---	---
UBG-05-MW	---	---	---	0.0240	0.0260	---	---	0.00940	---	---	0.0170	0.00690	---	0.0920	---
UBG-05-MW	---	---	9.60	---	---	---	---	---	---	---	---	---	---	---	---
<b>02/06/1998</b>															
UBG-01-MW	---	---	---	0.0160	0.0250	---	---	0.0110	0.0280	---	0.370	0.0400	---	1.80	0.0670
UBG-01-MW	---	2.90	380	---	---	---	---	---	---	---	---	---	23.0	---	---
UBG-02-MW	---	---	53.0	---	---	---	---	---	---	---	---	---	5.10	---	---
UBG-02-MW	0.110	---	---	0.120	0.0410	0.00610	0.140	0.00410	0.250	---	0.0460	0.0160	---	0.330	0.0250
<b>06/22/1999</b>															
UBG-01-MW	---	---	380	15.0	---	---	---	---	25.0	---	380	---	20.0	---	74.0
UBG-01-MW	---	---	---	---	30.0	---	---	13.0	---	---	---	0.0420	---	2.000	---
UBG-02-MW	---	---	---	---	33.0	---	---	3.30	---	---	---	13.0	---	290	---
UBG-02-MW	---	---	57.0	89.0	---	---	---	---	230	---	48.0	---	6.60	---	20.0
UBG-03-MW	---	---	---	---	23.0	---	---	11.0	---	---	---	5.80	---	52.0	---
UBG-03-MW	---	---	---	100	---	---	770	---	400	---	---	---	---	---	---
UBG-04-MW	---	---	---	---	18.0	---	---	4.60	---	---	---	9.10	---	80.0	---
UBG-04-MW	---	---	5.90	48.0	---	---	---	---	15.0	0.250	---	---	---	---	---
<b>04/12/2000</b>															
UBG-05-MW	---	---	8.25	19.2 FJP	---	---	---	---	---	---	---	---	2.46 FJP	---	---

ft.bgs feet below ground surface  
mg/kg milligrams per kilogram

F - Sample filtered before analysis  
J - Indicates an estimated value  
P - Result less than reporting limit, but greater than the instrument detection limit

Source: (Harding ESE, 2001)

# TABLE 9-4

**Table 4.3: Summary of Background Groundwater Samples\***

Compound	DSB-04-MWA				Average (µg/l)
	3/10/92 (µg/l)	5/11/92 (µg/l)	10/26/93 (µg/l)	1/24/94 (µg/l)	
Arsenic	287	257	240	290	268
Antimony	<38	<38	<6.80	<6.10	<6.1
Barium	21.4	14.2	14.4	14.4	16.1
Beryllium	<5	<5	<5	<5	<5
Cadmium	<4.01	<4.01	<4.01	<4.01	<4.01
Calcium	146,000	203,000	183,000	128,000	165,000
Chromium	<6.02	<6.02	<6.02	<6.02	<6.02
Cobalt	NA	NA	<25	<25	<25
Copper	<8.09	<8.09	<8.09	<8.09	<8.09
Lead	<1.26	<1.26	<1.26	<1.26	<1.26
Mercury	<0.243	<0.243	<0.243	<0.243	<0.243
Molybdenum	NA	NA	824	660	742
Nickel	<34.3	<34.3	<34.3	<34.3	<34.3
Selenium	<12	<3	<6	<3	<3
Silver	0.689	0.42	<4.6	<4.6	2.58
Sodium	2,180,000	2,640,000	2,360,000	2,300,000	2,370,000
Thallium	<6.99	<6.99	<6.99	<6.99	<6.99
Vanadium	NA	NA	22.7	36.3	29.5
Zinc	<21.10	<21.10	116	<21.10	44.9

Note: all groundwater samples were filtered prior to analysis.

µg/l    Micrograms per liter  
 NA     Not analyzed for this constituent

\* Average value calculated using reporting limits and detected concentrations.

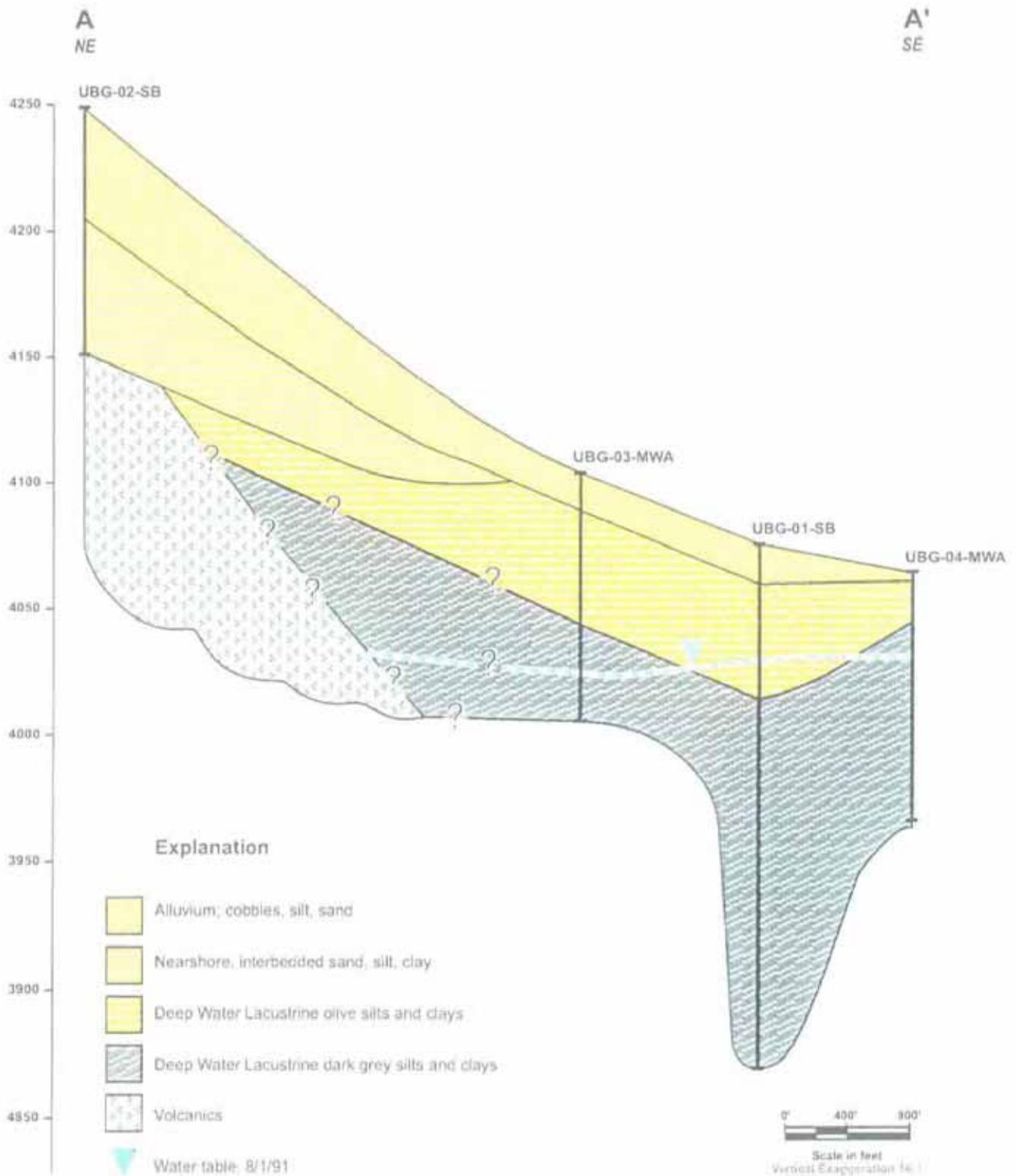


Source: Hardiman et al., 1990  
**FIGURE 9-1**



Prepared for:  
Sierra Army Depot,  
Lassen County, California

Figure 2.4  
Geologic Map  
Honey Lake Valley



Source: JMM, 1992

**FIGURE 9-2**



Prepared for:  
Sierra Army Depot,  
Lassen County, California

Figure 2.7  
Cross Section A-A'  
Upper Burning Ground

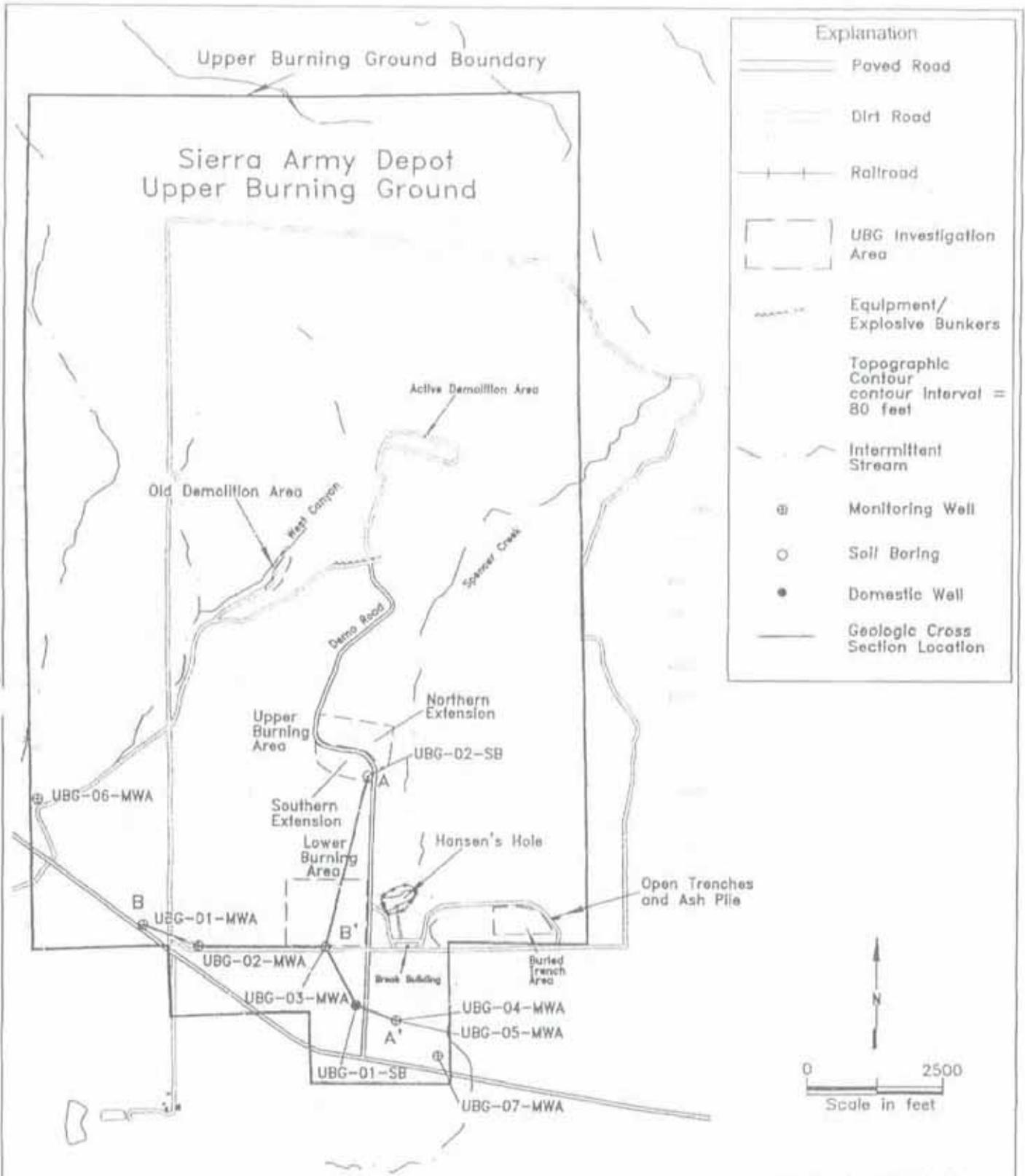


FIGURE 9-3

Source: MACTEC, 2003.



**CROSS SECTION LOCATIONS  
UPPER BURNING GROUND**  
Sierra Army Depot  
Herlong, California

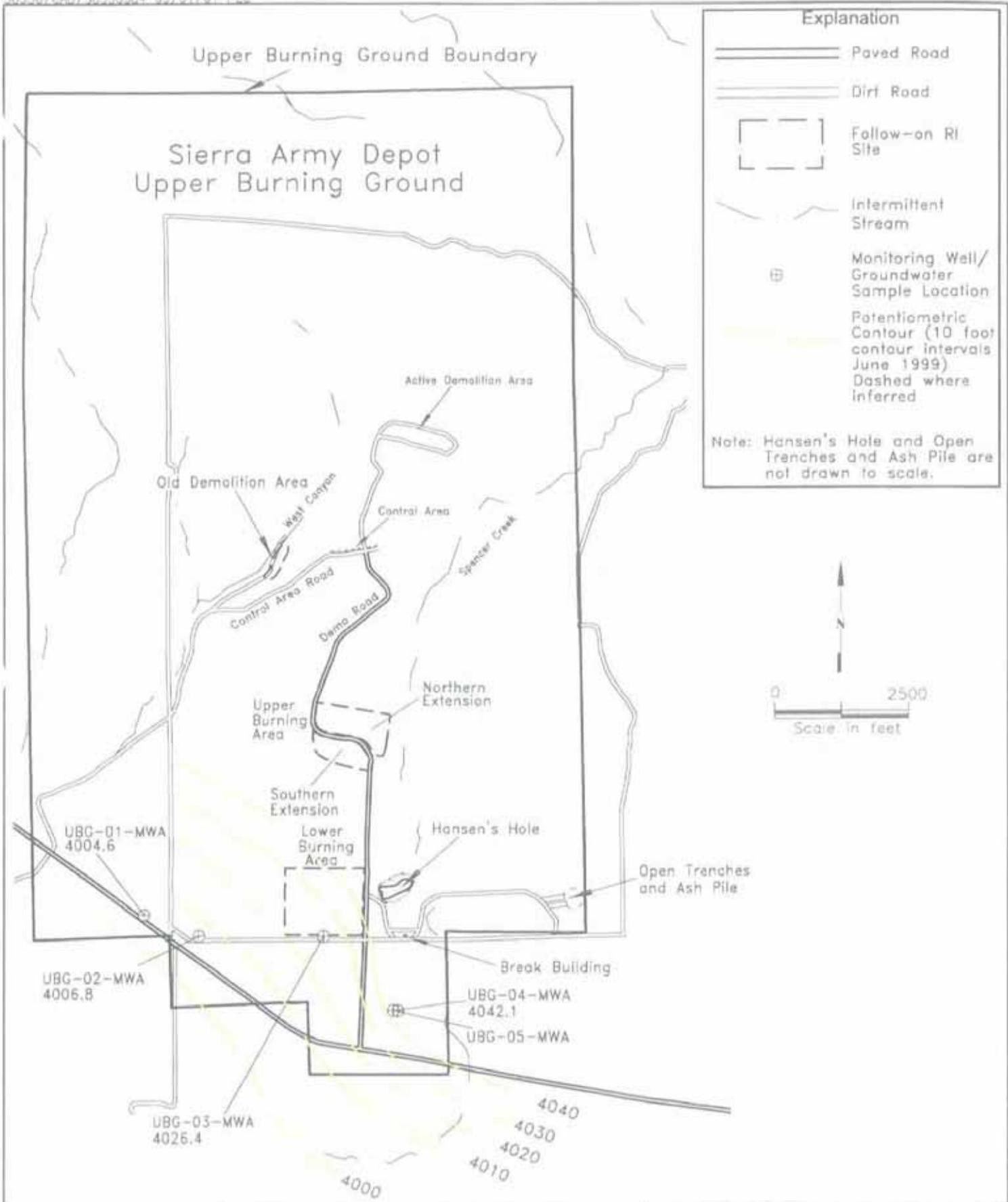
RC000654.0001

FIGURE

2.1

Source: ARCADIS, 2004





Prepared for:  
Sierra Army Depot,  
Lassen County, California

Figure 4.12 **FIGURE 9-5**  
Follow-on RI Potentiometric  
Surface Map  
June, 1999



## **10.0 SPRING SAMPLING – 22 CCR 66265.112(B)(4)**

This section provides a conceptual site model for spring waters. No Sampling program is proposed for springs because all springs are located beyond the boundaries of the RCRA OB and OD units. Any investigations of releases beyond the boundaries of the RCRA units are being conducted under the Munitions Response Program (MRP) under the authority of this Closure Plan.

### **10.1 CONCEPTUAL SITE MODEL**

Springs are groundwater which is discharged to the surface. Section 9.1.1 discusses the conceptual site model for groundwater and the circumstances under which groundwater underlying the OB Unit could be contaminated. Section 9.2.1 discusses the conceptual site model for groundwater and the circumstances under which groundwater underlying the OD Unit could be contaminated.

In order for the springs to be contaminated, a complete transport pathway would have to exist. Surface soils underlying the OB or OD Unit would have to be contaminated. Contaminants from surface waters would have to infiltrate into subsurface soils. This contamination would then have to have infiltrated into the saturated zone. The contaminants would have to dissolve in the groundwater. The contaminated groundwater would have to travel to the springs. If any of these conditions do not exist, the transport pathway is incomplete and spring waters cannot be contaminated.

## 11.0 ANALYTICAL PROGRAM

Individual samples are listed in Sections 7.0, 8.0, and 9.0 including QC samples. Description of the external QC sample types is provided in this section. The analytical methods, target analytes, and practical quantitation limits (PQLs) are summarized in Table 11-1.

The sample containers and applicable holding times are summarized in Table 11-2. No chemical preservative will be used for soil or sediment samples. All samples will be kept at 4 degrees Celsius (°C). Soil and sediment samples will be analyzed in their native conditions except that samples will be sieved to remove metallic pieces and then homogenized in the laboratory by stirring or shaking before splitting the sample for analysis. A split of each reserved soil or sediment sample will be dried in accordance with ASTM procedure D2216-71 to estimate the moisture content. The percent moisture content will be calculated using the following equation:

$$\text{Percent Moisture} = \frac{\text{sample wet weight} - \text{sample dry weight}}{\text{sample wet weight}} \times 100$$

Final soil and sediment analytical results will be reported on a dry weight basis. Soil and sediment samples will be extracted using solvents that have their purity verified by the laboratory on a regular basis. Dilutions of soil and sediment extract will be performed using the same solvents used during extraction.

### 11.1 QUALITY CONTROL SAMPLES

Internal (laboratory) and external (field) QC samples will be used to monitor and quantify performance of analytical methods and field procedures. Internal QC samples are introduced into the sample stream by the analytical laboratory to monitor laboratory-induced contamination and analytical performance. Internal QC samples include the analysis of method blanks, laboratory control samples (LCS), laboratory duplicates, and surrogates.

External QC samples are collected in the field and submitted for analysis with the investigative samples. These samples are used to assess the effects of the field-sampling program on data quality including impact due to sample collection activities, shipping, and analytical performance. One duplicate sample will be collected for approximately every 10 investigative samples; matrix spike/matrix spike duplicates (MS/MSD) and rinse or field blanks will be collected at a rate of 1 for approximately every 20 investigative samples. External QC check samples will include the following:

- Duplicate samples
  - Collocated samples - Collocated samples are independent samples collected so they are equally representative of the parameter(s) of interest at a given point in space and time. When collected, processed, and analyzed by the same organization, these samples provide intralaboratory precision information for the entire measurement system, including sample acquisition, homogeneity, handling, shipping, storage, preparation, and analysis. They can also be used to estimate the overall precision of a data collection activity.
  - Replicate samples - Replicate samples are samples that were divided into two or more portions at some step in the measurement process. Each portion is then carried through the remaining steps in the measurement process. A sample may be replicated in the field or at different points in the analytical process. For field-replicated samples, precision information would be gained on homogeneity (to a lesser extent than for collocated samples), handling, shipping, storage, preparation, and analysis. For analytical replicates, precision information would be gained on preparation and analysis.
- Rinse blanks
  - Rinse blanks are defined as samples collected by rinsing analyte-free deionized water through sample collection equipment after decontamination and placing the collected water in the appropriate sample containers for analysis. These samples will be used to evaluate the adequacy of field decontamination procedures.
- Matrix spikes/matrix spike duplicates
  - MS/MSD samples are created in the laboratory by adding known concentrations of target analytes into a prepared portion of a sample immediately before extraction or analysis. MS/MSD samples provide information on matrix effects encountered during extraction, digestion, and analysis (e.g., suppression or enhancement of instrument signal levels). MS samples are principally used to evaluate accuracy, but when used together with an MSD sample, they also yield information on analytical precision. The MS and MSD samples will be designated prior to sample collection, and the field personnel will collect extra sample volume for the MS and MSD samples.

## 11.2 DATA VALIDATION

A quality control review on 100 percent of the analytical data will be conducted. In addition, a full validation on 20 percent of the analytical data will also be conducted. The validation will be conducted in accordance with the EPA functional guidelines for organic and inorganic data review (EPA, Oct.1999a; Oct. 2004b). The quality control review and full validation will be conducted by a third party. The full data packages, as received from the laboratory, will be included in the Final closure Report in a CD. All laboratory data, including the non-detect results for the complete range of constituents analyzed by each analytical method will be included.

Investigative sample results will be qualified based on method criteria, functional guideline criteria, and professional judgment. The quality control review will include review of the following items for conformance with these criteria:

- Data package completeness
- Holding times (includes review of the chain-of-custody forms, extraction holding times, and analysis holding times)
- Surrogate percent recoveries
- LCS or blank spike/blank spike duplicate percent recoveries and relative percent differences (RPDs)
- MS/MSD percent recoveries and RPDs
- Method blank results
- Field, trip, and rinse blank results

Detailed data reviews include the above criteria and the following review components:

- Initial and continuing calibration relative response factors (RRFs)
- Initial calibration percent relative standard deviation (%RSDs) and continuing calibration percent difference (%Ds)
- Other method-specific performance results. For example: gas chromatography/mass spectrometry (GC/MS) tune, internal standard areas and retention times

TABLE 11-1

TARGET ANALYTES AND CORRESPONDING REPORTING LIMITS  
 SIERRA ARMY DEPOT  
 HERLONG, CALIFORNIA  
 PAGE 1 OF 3

Method and Parameters	Estimated Quantitation Limit	Estimated Quantitation Limit
	Soil (µg/kg) <sup>(1)</sup>	Water (mg/L) <sup>(1)</sup>
<b>Metals - EPA Method 6010B</b>		
Aluminum	5,000	0.5
Antimony	500	0.005
Arsenic	500	0.005
Barium	2,000	0.02
Beryllium	300	0.003
Cadmium	100	0.001
Calcium	10,000	0.1
Chromium	500	0.005
Cobalt	7,000	0.07
Copper	6,000	0.06
Iron	7,000	0.07
Lead	500	0.005
Magnesium	30,000	0.3
Manganese	2,000	0.02
Mercury (7000 series method)	100	0.0002
Molybdenum	8,000	0.01
Nickel	15,000	0.15
Potassium	50,000	5.0
Selenium	500	0.005
Silver	7,000	0.07
Sodium	30,000	0.3
Thallium	100	0.001
Vanadium	400	0.004
Zinc	2,000	0.02
<b>Explosives - EPA Method 8330</b>		
2-Am-DNT	300	0.005
4-Am-DNT	300	0.005
1,3-DNB	300	0.005
2,4-DNT	300	0.005
2,6-DNT	300	0.005
HMX	300	0.005
Nitrobenzene	300	0.005
2-Nitrotoluene	300	0.005
3-Nitrotoluene	300	0.005

TABLE 11-1

**TARGET ANALYTES AND CORRESPONDING REPORTING LIMITS  
SIERRA ARMY DEPOT  
HERLONG, CALIFORNIA  
PAGE 2 OF 3**

Method and Parameters	Estimated Quantitation Limit	Estimated Quantitation Limit
	Soil ( $\mu\text{g}/\text{kg}$ ) <sup>(1)</sup>	Water ( $\text{mg}/\text{L}$ ) <sup>(1)</sup>
4-Nitrotoluene	300	0.005
RDX	300	0.005
Tetryl	700	0.04
1,3,5-TNB	300	0.005
2,4,6-TNT	300	0.005
<b>Dioxins/Furans - EPA Method 8290</b>		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.1 (ng/kg)	5 (pg/L)
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.1 (ng/kg)	5 (pg/L)
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.1 (ng/kg)	5 (pg/L)
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.1 (ng/kg)	5 (pg/L)
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.1 (ng/kg)	5 (pg/L)
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HPCDD)	0.1 (ng/kg)	5 (pg/L)
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	0.2 (ng/kg)	10 (pg/L)
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.1 (ng/kg)	5 (pg/L)
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.1 (ng/kg)	5 (pg/L)
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.1 (ng/kg)	5 (pg/L)
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.1 (ng/kg)	5 (pg/L)
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.1 (ng/kg)	5 (pg/L)
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.1 (ng/kg)	5 (pg/L)

TABLE 11-1

TARGET ANALYTES AND CORRESPONDING REPORTING LIMITS  
 SIERRA ARMY DEPOT  
 HERLONG, CALIFORNIA  
 PAGE 3 OF 3

Method and Parameters	Estimated Quantitation Limit	Estimated Quantitation Limit
	Soil (µg/kg) <sup>(1)</sup>	Water (mg/L) <sup>(1)</sup>
2,3,4,6,7,8- Hexachlorodibenzofuran (HxCDF)	0.1 (ng/kg)	5 (pg/L)
1,2,3,6,7,8- Heptachlorodibenzofuran (HpCDF)	0.1 (ng/kg)	5 (pg/L)
1,2,3,4,7,8,9- Heptachlorodibenzofuran (HpCDF)	0.1 (ng/kg)	5 (pg/L)
1,2,3,4,6,7,8,9- Octachlorodibenzofuran (OCDF)	0.2 (ng/kg)	10 (pg/L)
<b>Ions - EPA Method 6850</b>		
Perchlorate	1	0.0002
<b>Asbestos - U.S. EPA Region I Soil Screening Protocol<sup>(3)</sup></b>		
<b>Asbestos</b>	2,000	NA

µg/kg micrograms per kilogram  
 EPA U.S. Environmental Protection Agency  
 mg/L milligrams per liter

- 1 Estimated quantitation limits are estimates and are dependent on sample matrices. The laboratory will report actual quantitation limits obtained.
- 2 Confirmation analysis of positive hits.
- 3 Appendix C contains a copy of the Protocol.

TABLE 11-2

**SAMPLE CONTAINERS, PRESERVATION, AND HOLDING TIMES FOR SURFACE SOIL, SEDIMENT, AND  
AQUEOUS QUALITY CONTROL SAMPLE ANALYSES  
SIERRA ARMY DEPOT  
HERLONG, CALIFORNIA**

Method Number <sup>(1)</sup>	Parameters	Matrix	Holding time (from sample date)	Containers <sup>(2)</sup>	Preservative	Minimum Sample Size (g)
6010A/7000	Metals by ICP/GFAA	Soil or sediment	Analysis - 6 months	One 8-oz glass jar	Store at 4°C	500
		Aqueous	Analysis - 6 months	500 ml polyethylene	ph <2 HNO <sub>3</sub>	500
8330	Explosives	Soil or sediment	Extraction - 14 days Analysis - 40 days	One 8-oz glass jar	Store at 4°C	500
		Aqueous	Extraction - 7 days Analysis - 14 days	2 - 1 liter amber glass	Store at 4°C	2,000
8290	PCDF/PCDD	Soil or Sediment	Extraction - 30 days Analysis - 45 days	One 8-oz glass jar	Store at 4°C	500
		Aqueous	Extraction - 30 days Analysis - 45 days	2 - 1 liter amber glass	Store at 4°C	2,000
6850	Perchlorate	Soil or Sediment	Analysis - 28 days	One 8-oz glass jar	Store at 4°C	500
		Aqueous	Analysis - 28 days	500 ml polyethylene	Store at 4°C	500

g Grams  
GFAA Graphite furnace atomic adsorption  
ICP Inductively coupled plasma  
°C Degree Celsius  
ml Milliliters  
oz Ounce

- 1 U.S. Environmental Protection Agency (EPA) approved methods.  
2 Volume may vary depending on the methods used by the analytical laboratory and laboratory requirements. The laboratory should be consulted prior to sampling.

## **12.0 MEDIA CLEANUP STANDARDS – 22 CR 66265.111(B)**

SIAD intends to conduct a risk-based closure for the OB/OD Units. In order to determine removal and cleanup levels, the following steps must be completed:

- Collect and analyze media samples to determine whether significant contamination is present
- Identify which environmental media are contaminated
- Determine the nature and extent of contamination
- Conduct HHRA and ERA
- Determine which media require corrective action to address excess risk
- Establish media cleanup standards (MCSs) to establish criteria for media presenting excess risk

Section 2.0 describes the general approach for conducting the risk assessment. Sections 7, 8, 9, and 10 describe the general approach for the phased field program that is necessary to collect the data required to conduct the risk assessment.

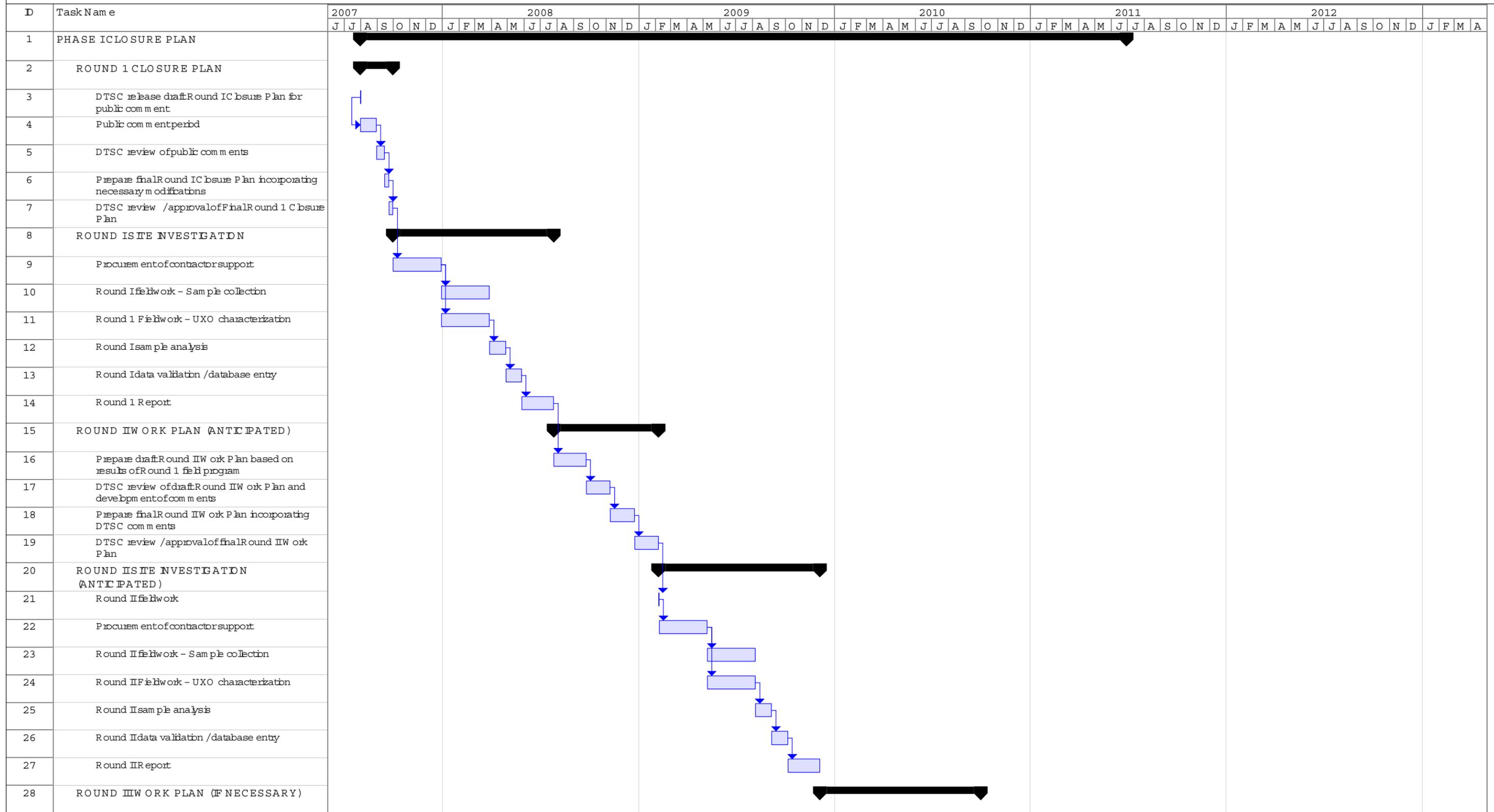
Risk-based MSCs will be developed once the field program and the risk assessments have been completed. At that time, the nature and extent of contamination and the environmental media requiring cleanup will be identified. A corrective measure study (CMS) will be developed and will be submitted to the DTSC for review and approval. The CMS will contain MCS.

This section will be further detailed as part of Phase II Closure Plan.

## 13.0 CLOSURE SCHEDULE

Figure 13-1 contains the anticipated schedule for the Phase I and Phase II Closure Plan activities.

**FIGURE 13-1**  
**CLOSURE SCHEDULE**  
 OPEN BURNING / OPEN DETONATION UNIT  
 SIERRA ARMY DEPOT, HERLONG CALIFORNIA





## **14.0 CLOSURE CERTIFICATION REPORT – 22 CCR 66265.115**

Within 60 days of completion of closure of and OB/OD treatment unit (or subunit), SIAD will submit to the California EPA, by registered mail, a certification that the unit has been closed in accordance with the approved closure plan. The certification will be signed by the Installation Commanding Officer and an independent qualified Professional Engineer, registered in the State of California. Documentation supporting the independent qualified registered Professional Engineer's certification shall be furnished to the California EPA upon request.

## **15.0 POST-CLOSURE PLAN – 22 CCR 66265.118**

In the event that post-closure activities are required, SIAD will develop and submit to California EPA a detailed closure and post-closure plan. The content of the post-closure plan will depend on the nature of the contamination that remains in place and the types of protective measures that are utilized. The following subjects will be addressed.

### **15.1 INSPECTION PLAN**

Inspections will be conducted during the post-closure care period to protect public health, safety, and the environment. The frequency of inspections will be based on the nature of contamination remaining and the types of corrective measures that are in place. The inspections will be conducted on a frequency that is based on the potential rate of deterioration of the protective measures and the potential harm that could result if the protective measures malfunction.

The various inspection findings and actions will be documented in the facility post-closure inspection logbook.

### **15.2 POST-CLOSURE MONITORING PLAN**

In the event that post-closure activities are required, SIAD will develop a post-closure monitoring plan. The types of post-closure monitoring will depend on the nature of the remaining contamination and the types of protective measures that have been installed. Post closure monitoring will be carried out as described in the Post-Closure Monitoring Plan. Monitoring equipment (if any) will be inspected.

### **15.3 POST-CLOSURE MAINTENANCE PLAN**

Deficiencies noted during inspections will be corrected to maintain the integrity of the closed unit. Telephone numbers for emergency notification and maintenance will be posted at the closed unit. Records of inspections and maintenance activities will be maintained by SIAD's Environmental Management Division.

## **16.0 LAND USE CONTROLS – 22 CCR 66265.118**

SIAD will develop a land use control (LUC) plan for any portions of the OB/OD Units that cannot be clean closed. The contents of the LUC plan will be based on the nature of contamination that remains in place.

The LUC plan will be part of the post-closure plan that is discussed in Section 15.

**17.0 CLOSURE COST ESTIMATE, FINANCIAL ASSURANCE, AND LIABILITY  
REQUIREMENTS – 22 CCR 66265.140(C)**

22 CCR 66264 Article 8 contains financial requirements for interim status hazardous waste facilities. These financial requirements include cost estimates for closure, financial assurance mechanisms for closure, cost estimates for post-closure care, financial assurance for post-closure care, and liability requirements. 22 CCR 66265.140[c] exempts the federal government from the requirements of Article 8. SIAD is owned by the federal government. Therefore, the financial requirements are not applicable to the SIAD OB/OD Units and are not addressed in this closure plan.

## 18.0 AMENDMENT OF CLOSURE PLAN – 22 CCR 66265.112

SIAD will maintain this Closure Plan to ensure that it is current and accounts for anticipated closure activities. This Closure Plan will be amended when any of the following events or contingencies occur:

- Phase I investigations are complete and sufficient information is available to prepare the Phase II Closure Plan.
- A determination is made that a post-closure plan is required.
- The expected reasons that warrant closure of the OB/OD Units changes.
- New information is obtained that significantly changes the underlying assumptions or procedures outlined in this Closure Plan.
- Unexpected events occur during closure that requires significant modification of this Closure Plan.

Certain events and/or contingencies are anticipated in this Closure Plan and do not warrant formal amendment of this plan. For example, the need to extend the anticipated schedule of some closure activities by a few days (provided the overall time scheduled for closure is not exceeded). Such events and contingencies will be brought to the attention of the California EPA; however, formal amendment of the Closure Plan will not be requested.

Whenever events or contingencies requiring formal amendment of this Closure Plan occur, a written request for a closure plan modification will be submitted to the California EPA. Such requests will be signed by the person responsible for SIAD oversight and sent by certified mail. Any requests for amendment will describe in detail the necessary Closure Plan changes.

**APPENDIX A**

**SIAD/DTSC CORRESPONDENCE  
REGARDING RCRA UNIT  
BOUNDARY DESIGNATIONS**



## Department of Toxic Substances Control



Alan C. Lloyd, Ph.D.  
Agency Secretary  
Cal/EPA

8800 Cal Center Drive  
Sacramento, California 95826-3200



Arnold Schwarzenegger  
Governor

February 16, 2005

Colonel Paul R. Plemmons  
Commanding Officer  
Department of the Army  
Sierra Army Depot  
Herlong, CA 96113

OB/OD UNIT BOUNDARIES DESIGNATION REQUEST, SIERRA ARMY DEPOT,  
HERLONG, CALIFORNIA, EPA ID No. CA 5210020843

Dear Colonel Plemmons:

This letter is in response to Sierra Army Depot's (SIAD) request, dated November 24, 2004, for concurrence on the designation of Resource Conservation and Recovery Act (RCRA) unit boundaries for the closure of their open burning (OB) / open detonation (OD) units.

The Department of Toxic Substances Control (DTSC) would agree to the OB/OD unit boundaries as proposed in SIAD's November 2004 letter on the following conditions:

1. SIAD must fully delineate the unit boundaries in the revised closure plan by using the Global Positioning System (GPS) coordinates;
2. SIAD must include in the revised closure plan a scaled map(s) of sufficient size to clearly show the OB/OD units;
3. Any contamination found outside of the OB/OD unit boundaries that has resulted from or emanated from the operation of the OB/OD units will be subject to the corrective action process required of the OB/OD units, instead of being addressed under the Federal Facility Site Remediation Agreement; and
4. If it is necessary for SIAD to utilize the OB/OD units for emergency treatment purposes, any resulting contamination in or outside the unit boundaries will be subject to the corrective action process required of the OB/OD units, instead of being addressed under the Federal Facility Site Remediation Agreement.

The foregoing conditions are necessary to ensure compliance with the applicable closure and corrective action requirements for the OB/OD units.

Colonel Paul R. Plemmons  
February 16, 2005  
Page 2

Please confirm in writing within 60 days of the date of this letter that SIAD is in agreement with DTSC regarding the foregoing conditions.

If you have any questions, please contact me at (916) 255-3572, or Ms. Lorraine Larsen-Hallock, the DTSC Project Manager, at (916) 255-3578.

Sincerely,

**Original Signed by:**

James M. Pappas, P.E., Chief  
Northern California Permitting and Corrective Action Branch

cc: Ms. Susan Holliday  
Compliance Cleanup Program Manager  
Sierra Army Depot  
Attn: AMSTA-SI-GM-BS  
Building 75 (Holiday)  
Herlong, CA 96113

Ms. Lisa Huston  
Sierra Army Depot  
Attn: AMSTA-SI-GM-BS  
Building 75 (Huston)  
Herlong, CA 96113

Ms. Kristine Escarda  
Public Participation Branch  
Office of External Affairs  
Department of Toxic Substances Control  
8800 Cal Center Drive  
Sacramento, CA 95826

Ms. Lorraine Larsen-Hallock  
Senior Hazardous Substances Engineer  
Northern California Permitting and Corrective Action Branch  
Department of Toxic Substances Control  
8800 Cal Center Drive  
Sacramento, CA 95826



DEPARTMENT OF THE ARMY  
SIERRA ARMY DEPOT  
HERLONG, CALIFORNIA 96113

REPLY TO  
ATTENTION OF:

April 11, 2005

Compliance Cleanup Program Office

Mr. James M. Pappas  
P.E. Chief  
Department of Toxic Substances Control  
8800 Cal Center Drive  
Sacramento, CA 95826-3200

Re: OB/OD Unit Boundaries Designation Request, Sierra Army Depot, Herlong, California  
EPA ID No. CA5210020843

Dear Mr. Pappas:

This letter is in response to your February 16, 2005 letter regarding Sierra Army Depot's designation of Resource Conservation and Recovery Act (RCRA) unit boundaries for the closure of SIAD's open burning (OB)/open detonation (OD) units as stated in our November 24, 2004 letter.

Please be advised that Sierra Army Depot concurs with the four conditions set forth by the California Department of Toxic Substances Control (DTSC) as follows:

- a. SIAD will fully delineate the unit boundaries in the revised closure plan by using the Global Positioning (GPS) Coordinates.
- b. SIAD will include in the revised closure plan a scaled map(s) of sufficient size to clearly show the OB/OD units.
- c. Any contamination found outside of the OB/OD unit boundaries that has resulted from or emanated from the operation of the OB/OD units will be subject to the corrective action process required of the OB/OD units. Any such contamination will not be addressed under the Federal Facility Site Remediation Agreement (FFSRA) dated May 30, 1991.
- d. If it is necessary for SIAD to utilize the OB/OD units for emergency treatment purposes, any resulting contamination in or outside the OB/OD unit boundaries will be subject to the corrective action process required of the OB/OD units. Any such contamination will not be addressed under the FFSRA dated May 30, 1991.

- 2 -

Therefore, based on SIAD's agreement with the conditions set forth by DTSC above, it is our understanding that DTSC agrees to the OB/OD unit boundaries as proposed in SIAD's November 24, 2004 letter.

If you have any questions or require additional information, please contact Mr. Dave Holsey, Environmental Office at (530) 827-4381.

Sincerely,

**Original Signed by:**

✓ Paul R. Plemmons  
Colonel, U.S. Army  
Commanding



## DEPARTMENT OF THE ARMY

SIERRA ARMY DEPOT  
HERLONG, CALIFORNIA 96113

November 24, 2004

REPLY TO  
ATTENTION OF

Environmental Restoration  
Program

Mr. James Pappas  
California Department of Toxic Substances Control  
8800 Cal Center Drive  
Sacramento, California 95826

Dear Mr. Pappas:

Sierra Army Depot (SIAD) requests Department of Toxic Substances Control (DTSC) concurrence on the designation of Resource Conservation and Recovery Act unit boundaries for the closure of their open burning/open detonation operation. SIAD is providing clarification and justification to support our boundary decision as requested.

The proposed boundary designations and the units defined in SIAD Part B application submittals are similar; the closure plan draft submittal will identify the exact boundaries whereas the historical designations have not been precise. The Part A and B Permit Application for Munitions/Explosives Storage and Open Burning/Open Detonation Treatment Facilities dated November 1997, contained several figures showing the boundaries of the open burning (OB) and open detonation (OD) units. The OB and OD units are located within the Demolition Grounds. Enclosures 1 and 2 are Figures B-10 and B-12 of the Part A and B application showing the boundaries of the OB and OD units within the Demolition Grounds. The Part A and B Permit Application also contains figures, copied from a 1992 field investigation report (Montgomery, Inc. July 1992), which show the locations and relative size of the OB and OD Units. Enclosures 3 through 6 are Figures E-11, E-12, E-15, and E-16 all include depictions of the locations of the OB and OD Areas. Specifically, these figures show a clear distinction between the fenced area, which comprises the Upper Burning Grounds, and the OB and OD units (or areas) that are shown to be within the Upper Burning Grounds. These figures were developed in early 1990s. The information regarding the location and relative dimensions of the OB and OD Units came from the initial Part A and B Permit Application, which was submitted during November 1988. Because of scale issues the sizes of the OB and OD Units can only be approximated from these figures. There is no significant difference between the OB and OD Unit waste management unit boundaries as shown in the Part B Permit applications, historical information from the RFIs dating back to 1991/1992, and the Closure Plan.

There are significant impacts to funding any remediation efforts at the OB/OD units. Current Army policy for clean-up of RCRA units defines the responsibility for clean-up to the installation. As these operations were in place in the 1940s and 1950s, no funding sources have been identified. Areas outside the RCRA units meet the Army's definition of ranges and would be cleaned up under the Military Munitions Response Program. Monies for this program will come from a level above the installation and will be more readily available than funding obtained by the installation.

There are both legal and regulatory authorities for determining boundaries as proposed by Sierra Army Depot. California hazardous waste regulations contain definitions which are directly applicable to sizing the units. 22 CCR 66260.10 defines a hazardous waste management unit as a contiguous area of land on or in which hazardous waste is placed, or the larger area in which there is significant likelihood of mixing hazardous waste constituents. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, a waste transfer area, an incinerator, a tank and its associated piping and underlying containment system and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed. Section 66265.95 defines the point of compliance for determining where the ground water protection standard applies and at which monitoring must be conducted. Additionally, Section 66265.95 contains the following discussion of monitoring points and the point of compliance:

(a) For each regulated unit, the owner or operator shall specify in the water quality sampling and analysis plan the point of compliance at which the groundwater protection standard of Section 66265.92 applies and at which monitoring must be conducted. The point of compliance is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated unit. For each regulated unit, the owner or operator shall specify monitoring points at the point of compliance and additional monitoring points at locations determined pursuant to Section 66265.97 at which the water quality protection standard under section 66265.92 applies and at which monitoring shall be conducted.

(b) The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit.

(1) The waste management area includes horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit.

(2) If the facility contains contiguous regulated units and monitoring along a shared boundary would impair the integrity of a containment or structural feature of any of the units, the waste management area may be described by an imaginary line along the outer boundary of the contiguous regulated units if the water quality monitoring program for each unit will enable the earliest possible detection of a release from that regulated unit. This provision only applies to contiguous regulated units that have operated or have received all permits necessary for construction and operation before the July 1, 1991.

The following definitions provide the basis for defining Sierra's Open Burning and Open Detonation Units under RCRA:

**Open Detonation Area**

Hazardous waste treatment took place within 14 pits. These would be considered contiguous regulated units. Therefore, consistent with 66265.95 (b) (2) the waste management area may be described by an imaginary line along the outer boundary of the contiguous regulated units (pits). The OD RCRA unit (hazardous waste management unit) is described by a line starting at the back (back wall) of Pit No. 1 and proceeding along the back of pits 2, 3, 4, 5, 6, 7, 8, 9, and 10. From the back of Pit 10, the line proceeds along the fronts of pits 11, 12, 13 and 14. From the front of pit 14 the line proceeds to the front of pit 6 and then proceeds to the fronts of pits 5, 4, 3, 2, and 1. At Pit 1, the line proceeds along the side of the pit to the starting point at the back of the pit.

**Open Burning In Pans**

Hazardous waste treatment took place on the ground and later in open burn pans in the same general area. The locations are known. Therefore, consistent with 66265.95 (b)(2), the OB RCRA unit (hazardous waste management unit) is described by a line long the outer edges of the locations where the open burning took place.

The Closure Plan will identify the areas, which are RCRA hazardous waste management units (HWMUs) and which are subject to RCRA closure requirements. The closure plan will also identify the areas outside of the HWMUs, where releases from the HWMUs may have occurred and which are subject to RCRA corrective action requirements. Investigations described in the Phase I Closure Plan will address both the HWMUs and releases from the HWMUs.

Sierra Army Depot provides the following examples of consistency with other OB/OD facilities: The California definitions for Hazardous Waste Management Unit and Point-of-Compliance are consistent with regulations promulgated by US EPA and states throughout the country. The proposed designations of the RCRA Units are consistent with application of these definitions to other OB/OD facilities nationwide.

#### **Naval SWC Crane**

The NSWC Crane Ammunition Burning Grounds contains an OB unit, which consists of several treatment facilities. This OB Unit is an active RCRA-permitted OB treatment unit. The point-of-compliance for attainment for groundwater monitoring is described by an imaginary line along the outer edge of the various OB treatment facilities. This location comprises only a small part of the Ammunition Burning Grounds. Because of historical practices, contamination in groundwater is migrating beyond the point of compliance. In the case of NSWC Crane all remedial actions at all locations are being handled under RCRA Corrective Action rather than CERCLA. A corrective measures study (CMS) is currently being prepared to address these releases beyond the boundary of the RCRA-permitted Unit.

#### **Fort McCoy**

The Fort McCoy OD unit was located within an active artillery impact range. Treatment took place within one pit. In this case the crater was considered to be the RCRA hazardous waste management unit. The open detonation pit has been closed. Cleanup of any releases beyond the RCRA unit will be addressed in the future whenever the impact range is closed.

There is no firm time frame for the removal of all stored munitions. Most of the shrapnel and debris on the demolition grounds was created prior to the units regulated operation under interim status. Although, the most logical choice of location for future emergency detonations would be the open detonation area; the goal of open detonation is to fully consume the munitions without leaving visible residue, no further kick-out is expected from possible future emergency detonations.

Future use of this area will be further defined in the closure plan. The property will remain under control of the Army and portions which have been determined to be clear could be utilized for military training.

The proposed unit boundaries are consistent with DTSC RCRA regulatory definitions and historical definitions of the sizes of the OB and OD Units. Any contamination resulting from OB/OD operations that is found outside the boundaries would be considered releases from the RCRA Units and subject to RCRA corrective action. Corrective action can be addressed under the CERCLA program in the same manner as other solid waste management units (SWMUs), which are also subject to RCRA corrective action, but are being addressed under the CERCLA program .

The Closure Plan will identify the areas, which are RCRA hazardous waste management units (HWMUs) and which are subject to RCRA closure requirements. The Plan will also identify the areas outside of the HWMUs, where releases from the HWMUs may have occurred and which are subject to RCRA corrective action requirements. Investigations described in the Phase I Closure Plan will address both the HWMUs and releases from the HWMUs. Please provide your acceptance of this planned approach.

If you have any questions or require additional information, please contact Ms. Susan Holliday at (530) 827-4135, email: [susan.holliday@sierra.army.mil](mailto:susan.holliday@sierra.army.mil) or Ms. Lisa Huston at (530) 827-4205, email: [lisa.huston@sierra.army.mil](mailto:lisa.huston@sierra.army.mil) .

Sincerely,

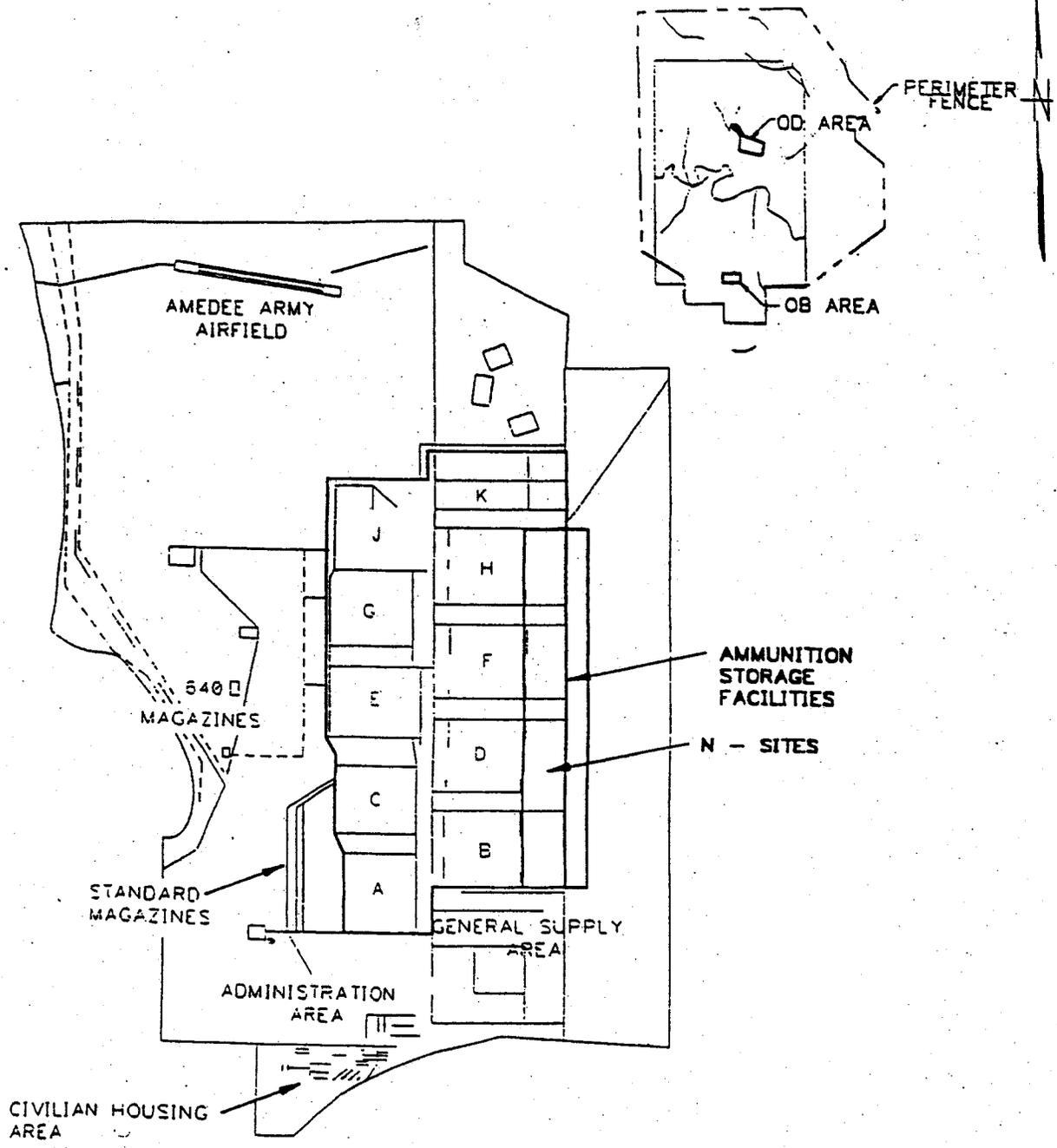
**Original Signed by:**

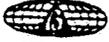
Paul R. Plemmons  
Colonel, US Army  
Commanding

Copy Furnished w/Enclosures:

DTSC, Ms. Lorraine Larsen-Hallock

ACAD:K:\CARD\7KH6\7K86CM81.DWG 10/13/97 MI



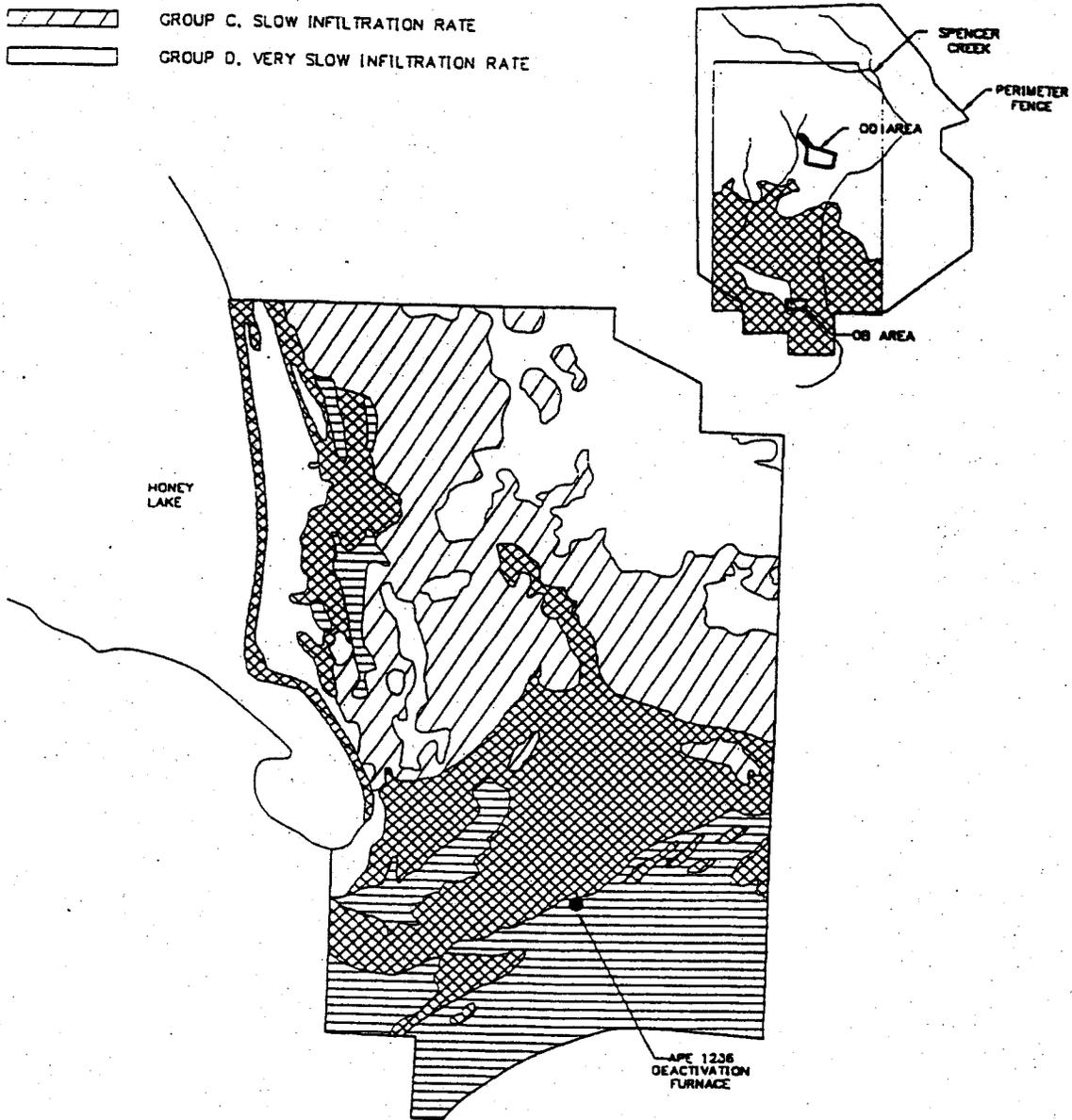
DRAWN BY TAD	DATE 8/97	 <b>Brown &amp; Root Environmental</b>	CONTRACT NO.	OWNER NO.
CHECKED BY	DATE		APPROVED BY	DATE
COST/SCHED-AREA		LOCATION OF AMMUNITION STORAGE FACILITIES SIERRA ARMY DEPOT HERLONG, CA	APPROVED BY	DATE
SCALE			DRAWING NO. <b>FIGURE B-10</b>	REV. 0
NOT TO SCALE				

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ACAD: 94121301.DWG.DWG 08/05/97 IAD

**LEGEND**

- INSTALLATION BOUNDARY
- ===== GROUP A. HIGH INFILTRATION RATE
- XXXXXX GROUP B. MODERATE INFILTRATION RATE
- ////// GROUP C. SLOW INFILTRATION RATE
- GROUP D. VERY SLOW INFILTRATION RATE



DRAWN BY MF	DATE 7/7/97	 <b>Brown &amp; Root Environmental</b>	CONTRACT NO. 5A34	OWNER NO.
CHECKED BY	DATE		APPROVED BY	DATE
COST/SCHED-AREA		<b>SIAD RELATIVE SOIL INFILTRATION RATES</b> <b>SIERRA ARMY DEPOT</b> <b>HERLONG, CA</b>		
SCALE AS NOTED		APPROVED BY	DATE	
			DRAWING NO. <b>FIGURE B-12</b>	REV. 0

FORM CADD NO. SOUTH\_AV.DWG - REV 0 - 02/07/97

1047 0104710471748510410491 DWG 10/14/94

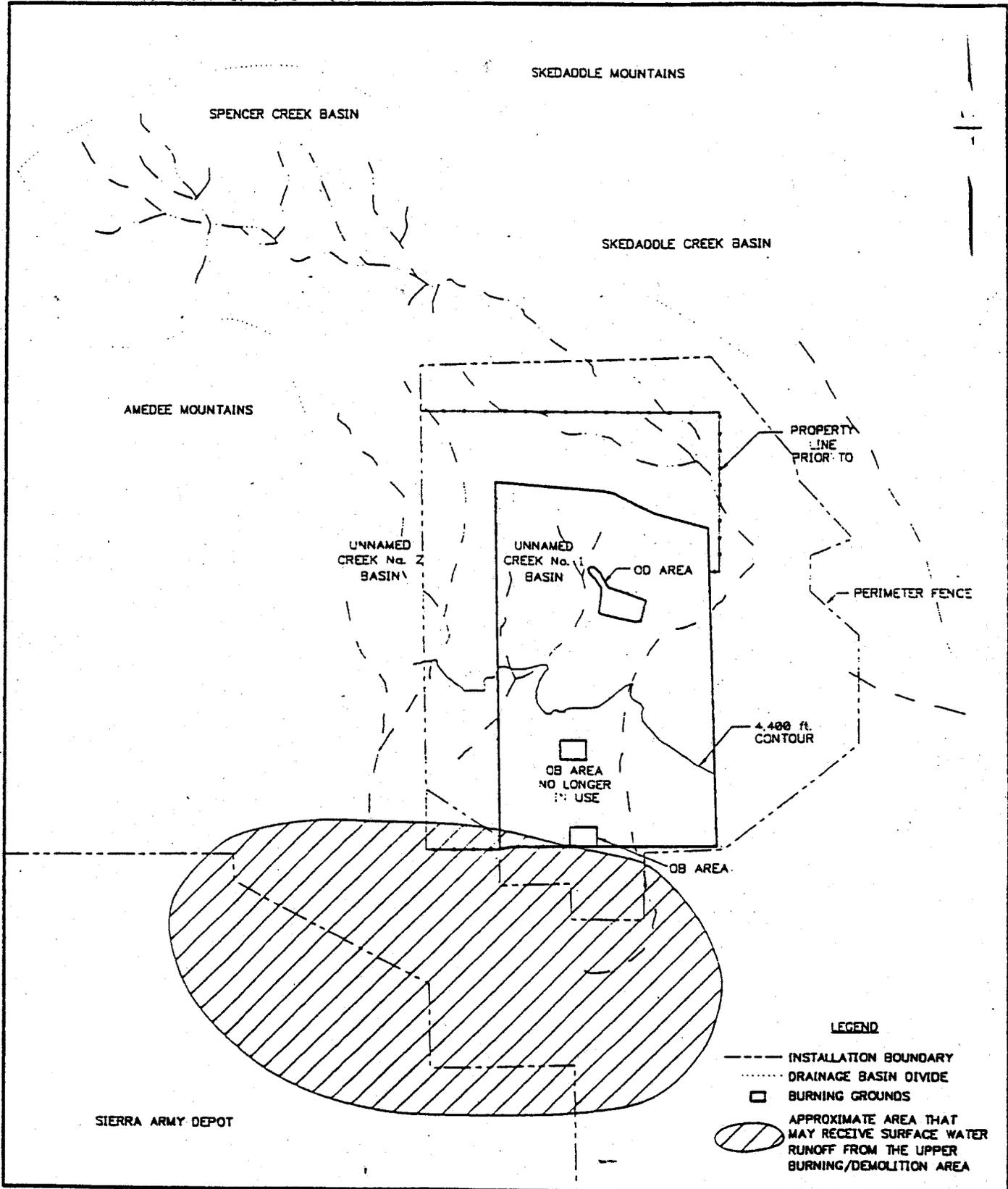
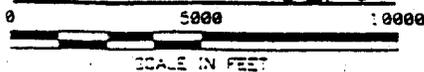


Figure E-11

**HYDROLOGIC MAP**  
**SIERRA ARMY DEPOT**



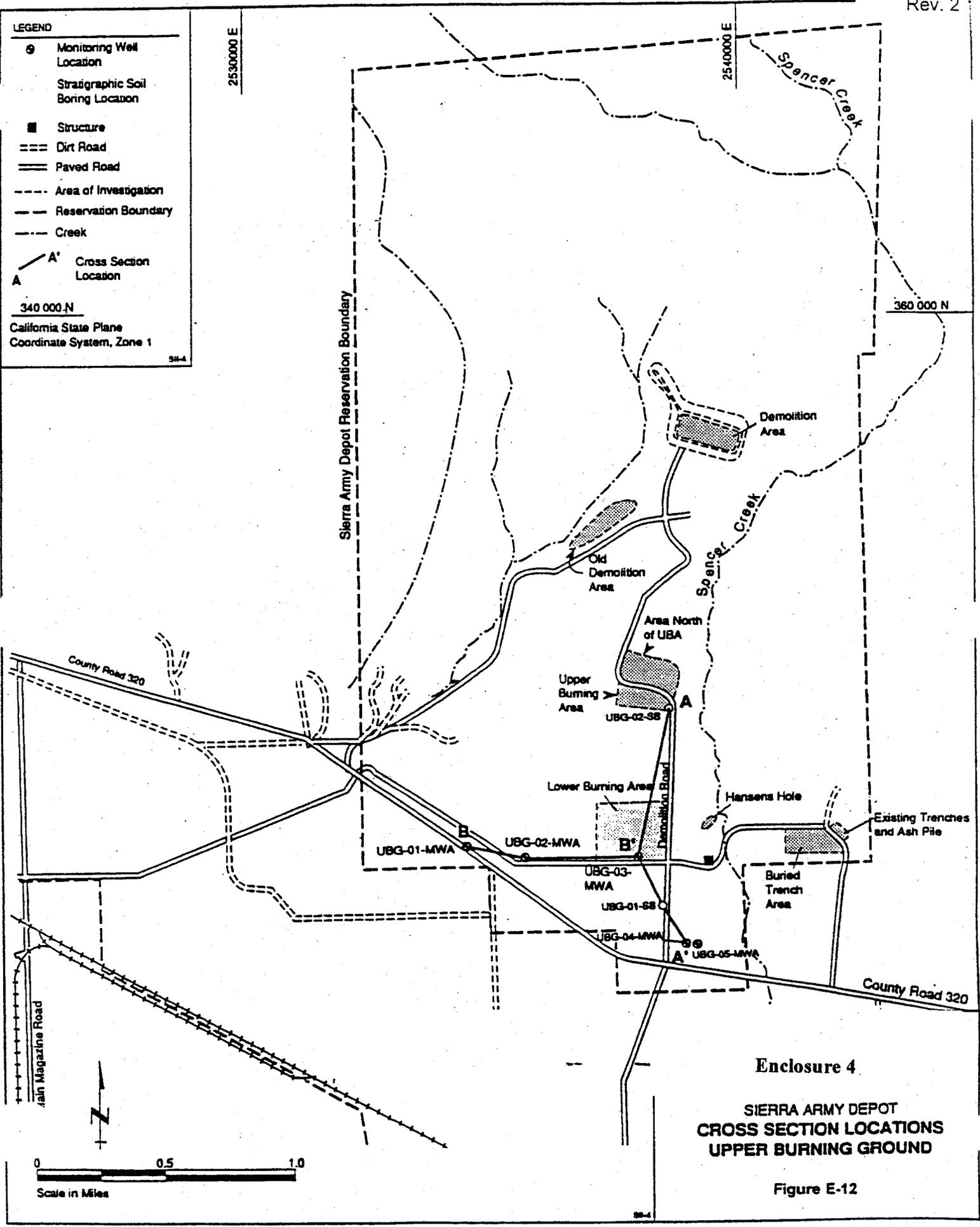
INSTALLATION TITLE  
**Enclosure 3**

**LEGEND**

- ⊙ Monitoring Well Location
- Stratigraphic Soil Boring Location
- Structure
- === Dirt Road
- ==== Paved Road
- Area of Investigation
- - - - - Reservation Boundary
- - - - - Creek
- A' / A Cross Section Location

340 000 N  
California State Plane  
Coordinate System, Zone 1

58-4



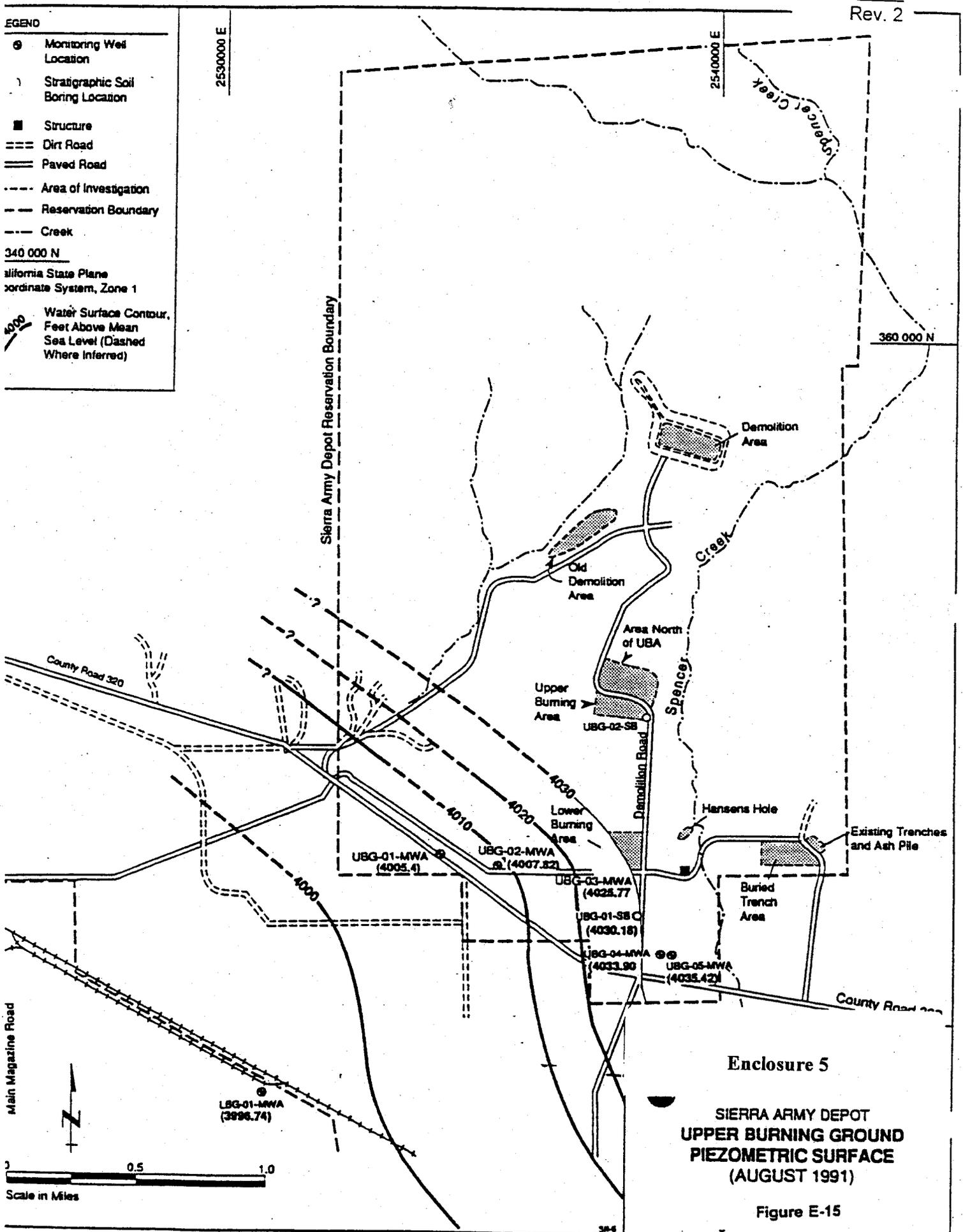
**Enclosure 4**  
**SIERRA ARMY DEPOT**  
**CROSS SECTION LOCATIONS**  
**UPPER BURNING GROUND**  
**Figure E-12**

**LEGEND**

- ⊙ Monitoring Well Location
- Stratigraphic Soil Boring Location
- Structure
- Dirt Road
- == Paved Road
- - - - Area of Investigation
- - - - Reservation Boundary
- - - - Creek

340 000 N  
California State Plane  
Coordinate System, Zone 1

Water Surface Contour,  
Feet Above Mean  
Sea Level (Dashed  
Where Inferred)



**Enclosure 5**

**SIERRA ARMY DEPOT  
UPPER BURNING GROUND  
PIEZOMETRIC SURFACE  
(AUGUST 1991)**

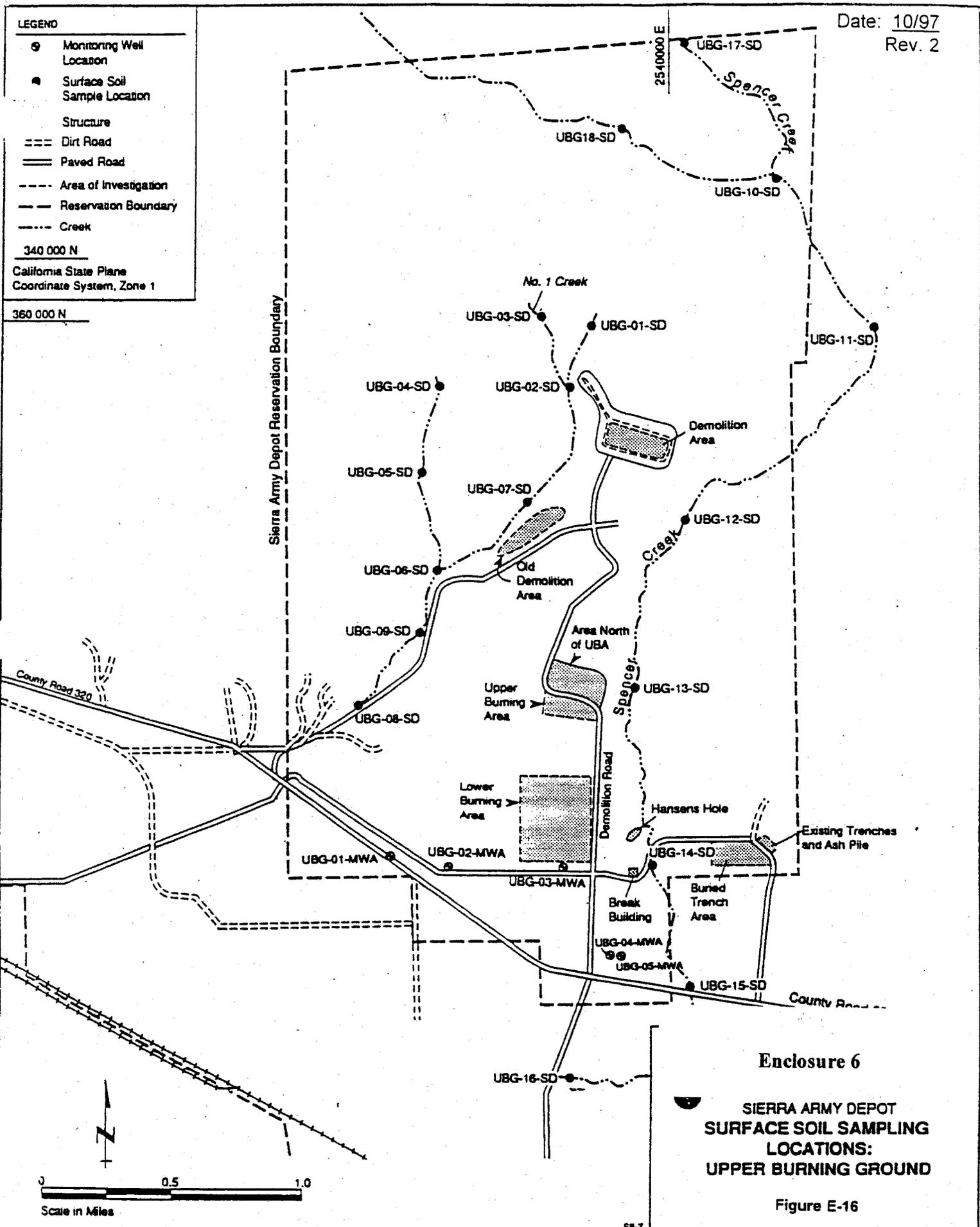
Figure E-15

**LEGEND**

- ⊙ Monitoring Well Location
- Surface Soil Sample Location
- Structure
- === Dirt Road
- ==== Paved Road
- - - - Area of Investigation
- - - - Reservation Boundary
- - - - Creek

340 000 N  
California State Plane  
Coordinate System, Zone 1

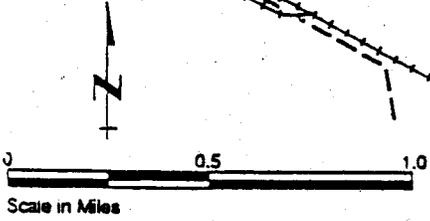
360 000 N



**Enclosure 6**

**SIERRA ARMY DEPOT  
SURFACE SOIL SAMPLING  
LOCATIONS:  
UPPER BURNING GROUND**

Figure E-16



SI-7

**APPENDIX B**

**2006/2007 STORMWATER REPORT**



REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
SIERRA ARMY DEPOT  
HERLONG, CALIFORNIA 96113

July 2, 2007

Environmental  
Management Division

Mr. Jason Churchill  
Lahontan Regional Water Board  
2501 Lake Tahoe Blvd.  
South Lake Tahoe, CA 96150

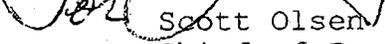
Dear Mr. Churchill,

Enclosed for your review is Sierra Army Depot's  
2006/2007 Annual Report for Storm Water Discharge  
Associated with Industrial Activities. Also included are  
storm event Visual Observation Reports.

If you have any questions or comments, please feel  
free to contact John Garland at (530) 827-4564.

Sincerely,

Original Signed by:

 Scott Olsen  
Chief of Environmental

---

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD  
2006-2007 ANNUAL REPORT  
FOR STORM WATER DISCHARGES ASSOCIATED  
WITH INDUSTRIAL ACTIVITIES

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Reporting Period July 1, 2006 through June 30, 2007

An Annual Report is required to be submitted to your local Regional Water Quality Control Board (Regional Board) by July 1 of each year. This document must be certified and signed, under penalty of perjury, by the appropriate official of your company. Many of the Annual Report questions require an explanation. Please provide explanations on a separate sheet as an attachment. Retain a copy of the completed Annual Report for your records.

Please circle or highlight any information contained in Items A, B, and C below that is new or revised so we can update our records. Please remember that a Notice of Termination and new Notice of Intent are required whenever a facility operation is relocated or changes ownership.

If you have any questions, please contact your Regional Board Industrial Storm Water Permit Contact. The names, telephone numbers, and e-mail addresses of the Regional Board contacts, as well as the Regional Board Offices addresses are indicated below.

**REGIONAL BOARD INFORMATION:**

Lahontan Region - SLT  
2501 Lake Tahoe Blvd.  
South Lake Tahoe, CA 96150

Contact: Jason Churchill  
Tel: (530) 542-5598  
Email: jchurchill@rb6s.swrcb.ca.gov

**GENERAL INFORMATION**

**A. Facility Information:**

US Army Sierra Depot  
X Streets A25 And A 26  
Herlong, CA 96113  
WDID No: 6A18I015231

Facility Contact: Garland John  
Email:  
Phone: 530-827-4564

SIC Code(s):

4226 Special Warehousing and Storage, NEC

**B. Facility Operator Information:**

US Army  
Sierra Army Depot  
Herlong, CA 96113

Operator Contact: Paul Fulkerson  
Email:  
Phone: 530-827-4524

**C. Facility Billing Information:**

US Army  
Sierra Army Depot  
Herlong, CA 96113

Billing Contact: Paul Fulkerson  
Email:  
Phone: 530-827-4524

---



4. For each storm event sampled, did you collect and analyze a sample from each of the facility's storm water discharge locations?  YES, go to Item E.6  NO

5. Was sample collection or analysis reduced in accordance with Section B.7.d of the General Permit?  YES  NO, attach explanation

If "YES", attach documentation supporting your determination that two or more drainage areas are substantially identical.

Date facility's drainage areas were last evaluated \_\_\_\_\_

6. Were all samples collected during the first hour of discharge?  YES  NO, attach explanation

7. Was all storm water sampling preceded by three (3) working days without a storm water discharge?  YES  NO, attach explanation

8. Were there any discharges of stormwater that had been temporarily stored or contained? (such as from a pond)  YES  NO, go to Item E.10

9. Did you collect and analyze samples of temporarily stored or contained storm water discharges from two storm events? (or one storm event if you checked item D.2.i or iii. above)  YES  NO, attach explanation

10. Section B.5. of the General Permit requires you to analyze storm water samples for pH, Total Suspended Solids (TSS), Specific Conductance (SC), Total Organic Carbon (TOC) or Oil and Grease (O&G), other pollutants likely to be present in storm water discharges in significant quantities, and analytical parameters listed in Table D of the General Permit.

a. Does Table D contain any additional parameters related to your facility's SIC code(s)?  YES  NO, Go to Item E.11

b. Did you analyze all storm water samples for the applicable parameters listed in Table D?  YES  NO

c. If you did not analyze all storm water samples for the applicable Table D parameters, check one of the following reasons:

\_\_\_\_\_ In prior sampling years, the parameter(s) have not been detected in significant quantities from two consecutive sampling events. **Attach explanation**

\_\_\_\_\_ The parameter(s) is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation. **Attach explanation**

\_\_\_\_\_ Other. **Attach explanation**

11. For each storm event sampled, attach a copy of the laboratory analytical reports and report the sampling and analysis results using Form 1 or its equivalent. The following must be provided for each sample collected:

- Date and time of sample collection
- Name and title of sampler.
- Parameters tested.
- Name of analytical testing laboratory.
- Discharge location identification.
- Testing results.
- Test methods used.
- Test detection limits.
- Date of testing.
- Copies of the laboratory analytical results.

## F. QUARTERLY VISUAL OBSERVATIONS

### 1. **Authorized Non-Storm Water Discharges**

Section B.3.b of the General Permit requires quarterly visual observations of all authorized non-storm water discharges and their sources.

- a. Do authorized non-storm water discharges occur at your facility?

YES  NO Go to Item F.2

- b. Indicate whether you visually observed all authorized non-storm water discharges and their sources during the quarters when they were discharged. **Attach an explanation for any "NO" answers.** Indicate "N/A" for quarters without any authorized non-storm water discharges.

July-September  YES  NO  N/A      October-December  YES  NO  N/A

January-March  YES  NO  N/A      April-June  YES  NO  N/A

- c. Use **Form 2** to report quarterly visual observations of authorized non-storm water discharges or provide the following information.

- i. name of each authorized non-storm water discharge
- ii. date and time of observation
- iii. source and location of each authorized non-storm water discharge
- iv. characteristics of the discharge at its source and impacted drainage area/discharge location
- v. name, title, and signature of observer
- vi. **any new or revised BMPs necessary to reduce or prevent pollutants in authorized non-storm water discharges.** Provide new or revised BMP implementation date.

### 2. **Unauthorized Non-Storm Water Discharges**

Section B.3.a of the General Permit requires quarterly visual observations of all drainage areas to detect the presence of unauthorized non-storm water discharges and their sources.

- a. Indicate whether you visually observed all drainage areas to detect the presence of unauthorized non-storm water discharges and their sources. **Attach an explanation for any "NO" answers.**

July-September  YES  NO      October-December  YES  NO

January-March  YES  NO      April-June  YES  NO

- b. Based upon the quarterly visual observations, were any unauthorized non-storm water discharges detected?

YES  NO Go to item F.2.d

- c. Have each of the unauthorized non-storm water discharges been eliminated or permitted?

YES  NO **Attach explanation**

- d. Use **Form 3** to report quarterly unauthorized non-storm water discharge visual observations or provide the following information.

- i. name of each unauthorized non-storm water discharge.
- ii. date and time of observation.
- iii. source and location of each unauthorized non-storm water discharge.
- iv. characteristics of the discharge at its source and impacted drainage area/discharge location.
- v. name, title, and signature of observer.
- vi. **any corrective actions necessary to eliminate the source of each unauthorized non-storm water discharge and to clean impacted drainage areas.** Provide date unauthorized non-storm water discharge(s) was eliminated or scheduled to be eliminated.

G. MONTHLY WET SEASON VISUAL OBSERVATIONS

Section B.4.a of the General Permit requires you to conduct monthly visual observations of storm water discharges at all storm water discharge locations during the wet season. These observations shall occur during the first hour of discharge or, in the case of temporarily stored or contained storm water, at the time of discharge.

- 1. Indicate below whether monthly visual observations of storm water discharges occurred at all discharge locations. Attach an explanation for any "NO" answers. Include in this explanation whether any eligible storm events occurred during scheduled facility operating hours that did not result in a storm water discharge, and provide the date, time, name and title of the person who observed that there was no storm water discharge.

Table with 2 columns of months (October-January and February-May) and 2 columns of YES/NO checkboxes. YES boxes are checked for all months.

- 2. Report monthly wet season visual observations using Form 4 or provide the following information.
a. date, time, and location of observation
b. name and title of observer
c. characteristics of the discharge (i.e., odor, color, etc.) and source of any pollutants observed.
d. any new or revised BMPs necessary to reduce or prevent pollutants in storm water discharges. Provide new or revised BMP implementation date.

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION (ACSCE)

H. ACSCE CHECKLIST

Section A.9 of the General Permit requires the facility operator to conduct one ACSCE in each reporting period (July 1-June 30). Evaluations must be conducted within 8-16 months of each other. The SWPPP and monitoring program shall be revised and implemented, as necessary, within 90 days of the evaluation. The checklist below includes the minimum steps necessary to complete a ACSCE. Indicate whether you have performed each step below. Attach an explanation for any "NO" answers.

- 1. Have you inspected all potential pollutant sources and industrial activities areas? [X] YES [ ] NO
The following areas should be inspected:
- areas where spills and leaks have occurred during the last year.
- outdoor wash and rinse areas.
- process/manufacturing areas.
- loading, unloading, and transfer areas.
- waste storage/disposal areas.
- dust/particulate generating areas.
- erosion areas.
- building repair, remodeling, and construction
- material storage areas
- vehicle/equipment storage areas
- truck parking and access areas
- rooftop equipment areas
- vehicle fueling/maintenance areas
- non-storm water discharge generating areas

2. Have you reviewed your SWPPP to assure that its BMPs address existing potential pollutant sources and industrial activities areas? [X] YES [ ] NO

3. Have you inspected the entire facility to verify that the SWPPP's site map, is up-to-date? The following site map items should be verified: [X] YES [ ] NO
- facility boundaries
- outline of all storm water drainage areas
- areas impacted by run-on
- storm water discharges locations
- storm water collection and conveyance system
- structural control measures such as catch basins, berms, containment areas, oil/water separators, etc.

4. Have you reviewed all General Permit compliance records generated since the last annual evaluation?  YES  NO

The following records should be reviewed:

- quarterly authorized non-storm water discharge visual observations
- monthly storm water discharge visual observation
- records of spills/leaks and associated clean-up/response activities
- quarterly unauthorized non-storm water discharge visual observations
- Sampling and Analysis records
- preventative maintenance inspection and maintenance records

5. Have you reviewed the major elements of the SWPPP to assure compliance with the General Permit?  YES  NO

The following SWPPP items should be reviewed:

- pollution prevention team
- list of significant materials
- description of potential pollutant sources
- assessment of potential pollutant sources
- identification and description of the BMPs to be implemented for each potential pollutant source

6. Have you reviewed your SWPPP to assure that a) the BMPs are adequate in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges, and b) the BMPs are being implemented?  YES  NO

The following BMP categories should be reviewed:

- good housekeeping practices
- spill response
- employee training
- erosion control
- quality assurance
- preventative maintenance
- material handling and storage practices
- waste handling/storage
- structural BMPs

7. Has all material handling equipment and equipment needed to implement the SWPPP been inspected?  YES  NO

**I. ACSCE EVALUATION REPORT**

The facility operator is required to provide an evaluation report that includes:

- identification of personnel performing the evaluation
- the date(s) of the evaluation
- necessary SWPPP revisions
- schedule for implementing SWPPP revisions
- any incidents of non-compliance and the corrective actions taken.

Use Form 5 to report the results of your evaluation or develop an equivalent form.

**J. ACSCE CERTIFICATION**

The facility operator is required to certify compliance with the Industrial Activities Storm Water General Permit. To certify compliance, both the SWPPP and Monitoring Program must be up to date and be fully implemented.

- Based upon your ACSCE, do you certify compliance with the Industrial Activities Storm Water General Permit?  YES  NO

If you answered "NO" attach an explanation to the ACSCE Evaluation Report why you are not in compliance with the Industrial Activities Storm Water General Permit.

**ATTACHMENT SUMMARY**

Answer the questions below to help you determine what should be attached to this annual report. Answer NA (Not Applicable) to questions 2-4 if you are not required to provide those attachments.

- 1. Have you attached Forms 1,2,3,4, and 5 or their equivalent?  YES (Mandatory)
- 2. If you conducted sampling and analysis, have you attached the laboratory analytical reports?  YES  NO  NA
- 3. If you checked box II, III, IV, or V in item D.2 of this Annual Report, have you attached the first page of the appropriate certifications?  YES  NO  NA
- 4. Have you attached an explanation for each "NO" answer in items E.1, E.2, E.5-E.7, E.9, E.10.c, F.1.b, F.2.a, F.2.c, G.1, H.1-H.7, or J?  YES  NO  NA

**ANNUAL REPORT CERTIFICATION**

I am duly authorized to sign reports required by the INDUSTRIAL ACTIVITIES STORM WATER GENERAL PERMIT (see Standard Provision C.9) and I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those person directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: John Farland *97*

Signature: \_\_\_\_\_ Date: 6/28/07

Title: Environmental Protection Specialist

2006 - 2007  
**ANNUAL REPORT**  
**FORM 4-MONTHLY VISUAL OBSERVATIONS OF**  
**STORM WATER DISCHARGES**

SIDE A

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.
- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

	#1	#2	#3	#4	
<b>Observation Date: October ____ 2005</b> Observers Name: _____ Title: _____ Signature: _____	Dra				
	Ob:			<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	
	Tim We (if)			<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	
				NO <input type="checkbox"/>	
<b>Observation Date: November ____ 2005</b> Observers Name: _____ Title: _____ Signature: _____	Dra	<b>ANNUAL STORM WATER REPORT</b> <b>VISUAL OBSERVATIONS</b>  Please see attached Visual Inspection Reports. All visual inspection where performed by John Garland: Storm Water NPDES Program Manager.			
	Ob:			<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	
	Tim We (if)			<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	
				NO <input type="checkbox"/>	
<b>Observation Date: December ____ 2005</b> Observers Name: _____ Title: _____ Signature: _____	Dra				
	Ob:			<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	
	Tim We (if)			<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	
				NO <input type="checkbox"/>	
<b>Observation Date: January ____ 2006</b> Observers Name: _____ Title: _____ Signature: _____	Dra	#1	#2	#3	#4
	Ob:				
	Tim We (if)				
	Observation Time	<input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	<input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	<input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	<input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	<input type="checkbox"/> A.M. <input type="checkbox"/> P.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
	Drainage Location Description				
	Observation Time	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	<input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	<input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	<input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	<input type="checkbox"/> A.M. <input type="checkbox"/> P.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>

# ANNUAL REPORT

2006-2007

SIDE B

## FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION  <i>EXAMPLE:</i> Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS  Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS  <i>EXAMPLE:</i> Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
_____  <input type="checkbox"/> AM <input type="checkbox"/> PM				
_____  <input type="checkbox"/> AM <input type="checkbox"/> PM		<p>ANNUAL STORM WATER REPORT VISUAL OBSERVATIONS</p> <p>Please see attached Visual Inspection Reports. All visual inspection where performed by John Garland: Storm Water NPDES Program Manager.</p>		
_____  <input type="checkbox"/> AM <input type="checkbox"/> PM				
_____  <input type="checkbox"/> AM <input type="checkbox"/> PM				
_____  <input type="checkbox"/> AM <input type="checkbox"/> PM				

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ANNUAL REPORT

FORM 1-SAMPLING & ANALYSIS RESULTS

SIDE B

SECOND STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): John Garland TITLE: Environmental Specialist SIGNATURE: \_\_\_\_\_

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event																	
			BASIC PARAMETERS					OTHER PARAMETERS												
			pH	TSS	SC	O&G	TOC													
	_____ <input type="checkbox"/> AM <input type="checkbox"/> PM	_____ <input type="checkbox"/> AM <input type="checkbox"/> PM																		
	_____ <input type="checkbox"/> AM <input type="checkbox"/> PM	_____ <input type="checkbox"/> AM <input type="checkbox"/> PM																		
	_____ <input type="checkbox"/> AM <input type="checkbox"/> PM	_____ <input type="checkbox"/> AM <input type="checkbox"/> PM																		
	_____ <input type="checkbox"/> AM <input type="checkbox"/> PM	_____ <input type="checkbox"/> AM <input type="checkbox"/> PM																		
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l													
TEST METHOD DETECTION LIMIT:																				
TEST METHOD USED:																				
ANALYZED BY (SELF/LAB):																				

TSS - Total Suspended Solids

SC - Specific Conductance

O&G - Oil & Grease

TOC - Total Organic Carbon

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ANNUAL REPORT

SIDE A

FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED  
NON-STORM WATER DISCHARGES (NSWDs)

- Quarterly dry weather visual observations are required of each authorized NSWD.
- Observe each authorized NSWD source, impacted drainage area, and discharge location.
- Authorized NSWDs must meet the conditions provided in Section D (pages 5-6), of the General Permit.
- Make additional copies of this form as necessary.

<p>QUARTER: <b>JULY-SEPT.</b></p> <p>DATE: <u>7/24/06</u></p>	<p>Observers Name: <u>John Garland</u></p> <p>Title: <u>Environmental Specialist</u></p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If YES, complete reverse side of this form.</p>
<p>QUARTER: <b>OCT.-DEC.</b></p> <p>DATE: <u>10/4/06</u></p>	<p>Observers Name: <u>John Garland</u></p> <p>Title: <u>Environmental Specialist</u></p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If YES, complete reverse side of this form.</p>
<p>QUARTER: <b>JAN.-MARCH</b></p> <p>DATE: _____</p>	<p>Observers Name: _____</p> <p>Title: _____</p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>If YES, complete reverse side of this form.</p>
<p>QUARTER: <b>APRIL-JUNE</b></p> <p>DATE: <u>5/9/07</u></p>	<p>Observers Name: <u>John Garland</u></p> <p>Title: <u>Environmental Specialist</u></p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If YES, complete reverse side of this form.</p>

2006-2007 ANNUAL REPORT

FORM 1-SAMPLING & ANALYSIS RESULTS

SIDE A

FIRST STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): John Garland

TITLE: Environmental Specialist

SIGNATURE: \_\_\_\_\_

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event										
			BASIC PARAMETERS					OTHER PARAMETERS					
			pH	TSS	SC	O&G	TOC						
	<input type="checkbox"/> AM <input type="checkbox"/> PM	<input type="checkbox"/> AM <input type="checkbox"/> PM											
	<input type="checkbox"/> AM <input type="checkbox"/> PM	<input type="checkbox"/> AM <input type="checkbox"/> PM											
	<input type="checkbox"/> AM <input type="checkbox"/> PM	<input type="checkbox"/> AM <input type="checkbox"/> PM											
	<input type="checkbox"/> AM <input type="checkbox"/> PM	<input type="checkbox"/> AM <input type="checkbox"/> PM											
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l						
TEST METHOD DETECTION LIMIT:													
TEST METHOD USED:													
ANALYZED BY (SELF/LAB):													

TSS - Total Suspended Solids

SC - Specific Conductance

O&G - Oil & Grease

TOC - Total Organic Carbon

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FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED  
NON-STORM WATER DISCHARGES (NSWDs)

SIDE B

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD  <u>EXAMPLE:</u> Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD  <u>EXAMPLE:</u> Air conditioner condensate	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
7/24/06  1400 <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	System pressure test Fire Hydrant "C" Street		Color - Dark Water Containing Manganese		Flushed system until water supply cleared
5/9/07  1230 <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	Fire Hydrant Mission Areas		Color - Dark Water Containing Manganese		Flushed system until water supply cleared
10/4/06  1000 <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	Fire Hydrant Cantonment Area		Color Dark Water Containing Manganese		Flushed system until water supply cleared
_____  _____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
_____  _____ <input type="checkbox"/> AM <input type="checkbox"/> PM					

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ANNUAL REPORT

FORM 3 QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED  
NON-STORM WATER DISCHARGES (NSWDs)

SIDE B

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF UNAUTHORIZED NSWD  <i>EXAMPLE:</i> Vehicle Wash Water	SOURCE AND LOCATION OF UNAUTHORIZED NSWD  <i>EXAMPLE:</i> NW Corner of Parking Lot	DESCRIBE UNAUTHORIZED NSWD CHARACTERISTICS Indicate whether unauthorized NSWD is clear, cloudy, discolored, causing stains; contains floating objects or an oil sheen, has odors, etc.		DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS. PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
			AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	
<u>8/10/06</u>  1300 <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	Function Test "Pump" Water Supply	Bladder	Clear	Clear	Replaced Test Water Supply Bladder
<u>10/11/06</u>  1000 <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	N/A	N/A	N/A	N/A	N/A
<u>3/28/07</u>  0930 <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	N/A	N/A	N/A	N/A	N/A
<u>5/22/07</u>  1500 <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	N/A	N/A	N/A	N/A	N/A

2006-2007

ANNUAL REPORT

FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF

SIDE A

STORM WATER DISCHARGES

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.

- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

<b>Observation Date: February ____ 2007</b> Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.			
	Time Discharge Began	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.			
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>			
<b>Observation Date: March ____ 2007</b> Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.			
	Time Discharge Began	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.			
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>			
<b>Observation Date: April ____ 2007</b> Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.			
	Time Discharge Began	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.			
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>			
<b>Observation Date: May ____ 2007</b> Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.			
	Time Discharge Began	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.			
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>			

2006-2007  
ANNUAL REPORT

SIDE B

FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF  
STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION  EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS  Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS  EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
<hr/> <input type="checkbox"/> AM <input type="checkbox"/> PM				
<hr/> <input type="checkbox"/> AM <input type="checkbox"/> PM				
<hr/> <input type="checkbox"/> AM <input type="checkbox"/> PM				
<hr/> <input type="checkbox"/> AM <input type="checkbox"/> PM				
<hr/> <input type="checkbox"/> AM <input type="checkbox"/> PM				



**Laboratory Report**  
**Report ID: 73854**

**Sierra  
 Environmental  
 Monitoring, Inc.**

Sierra Army Depot  
 Attn: John Garland  
 Building 75  
 Herlong, CA 96113

**Date:** 2/21/2006  
**Client:** SAD-001  
**Taken by:** J. Garland  
**PO #:**

***Analysis Report***

**Sample ID:** S200602-0369      **Customer Sample ID:** SW-1 - Spencer Creek-DUP      **Date Sampled:** 2/7/2006      **Time Sampled:** 9:35 AM      **Date Received:** 2/7/2006

Parameter	Method	Result	Units	MCL	Analyst	Date Analyzed	Data Flag
COD	EPA 410.4	<20	mg/L		Pacheco	2/10/2006	
Conductivity	SM 2510 B	210	µmhos/cm		Pacheco	2/7/2006	
Iron - ICP-OES	EPA 200.7	<0.05	mg/L	0.3 mg/L	Keller	2/8/2006	
Lead - ICP-MS	EPA 200.8	<0.001	mg/L	0.015 mg/L	Li	2/14/2006	
Nitrate-N - Ion Chromatography	EPA 300.0	<0.05	mg/L N	10 mg/L as N	Henderson	2/7/2006	
Nitrite-N - Ion Chromatography	EPA 300.0	<0.05	mg/L N	1 mg/L as N	Henderson	2/7/2006	
pH	SM 4500 H+B	8.14	pH Units	6.5 to 8.5	Pacheco	2/8/2006	
pH - Temperature	SM 4500 H+B	20.6	°C		Pacheco	2/8/2006	
Phosphorus - Total	EPA 365.3	0.21	mg/L		Kobza	2/16/2006	
Suspended Solids	SM 2540 D	<5	mg/L		Pacheco	2/9/2006	
Total Organic Carbon	Subcontract	See Report				2/20/2006	
Zinc - ICP-MS	EPA 200.8	0.008	mg/L	5 mg/L	Li	2/14/2006	

**SAMPLE WATER AS TESTED \_\_\_\_\_ DID \_\_\_\_\_ DID NOT MEET DRINKING WATER STANDARDS.**

***Data Flag Legend:***

John Kobza, Ph.D.  
 Laboratory Director

Page 3 of 4

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 Reno, NV 89502-2348  
 Phone (775) 857-2400  
 FAX (775) 857-2404  
 sem@sem-analytical.com

John C. Seher  
 Special Consultant  
 Quality Assurance Manager