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Certification Statement

Alameda County Environmental Health

Technical Information Report and Additional Environmental Site Investigation Work Plan

> California Highway Patrol – Oakland 3601 Telegraph Avenue Oakland, California

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Mr. A. K. Jain California Department of General Services RESD/PSB/Seismic & Special Programs

Date



3077 Fite Circle Sacramento, CA 95827-1815 **p**| 916.366.1701 **f**| 916.366.7013 **kleinfelder.com**

May 14, 2008 File: 92451-1

Mr. Jerry Wickham Alameda County Environmental Health Services Environmental Protection 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Subject: Environmental Site Investigation Work Plan California Highway Patrol – Oakland 3601 Telegraph Avenue Oakland, California 94609

Dear Mr. Wickham:

Kleinfelder developed this work plan for environmental site assessment at the California. Highway Patrol (CHP) Facility located at 3601 Telegraph Avenue, Oakland, California. The Work Plan is based on a request from you in a letter dated November 21, 2007. In that letter you requested that a Work Plan for additional site investigation be submitted to you by February 15, 2008. Department of General Services (DGS) requested and was granted an extension until May 15, 2008. A copy of the November 2007 letter, your extension approval (in an email) and responses (Technical Report) are included in Appendix A of the Work Plan. Additionally, information and responses to your Technical Comments in the November 21, 2007 letter are included in the Work Plan.

The objective of the Work Plan is to perform additional soil and groundwater sampling to assess potential impacts to soil and groundwater associated with lead from a shooting range and fuel from a formerly leaking underground storage tank.

If you have any questions or need additional information, please do not hesitate to call us.

Sincerely,

KLEINFELDER WEST, INC.

Pamela A. Wee, D. Env. Project Manager

Sue Gardner, P.G. Project Geologist

cc: Mr. A.K. Jain, State of California, Department of General Services Elizabeth De Paola, California Highway Patrol, Facilities Section Leroy Griffin, Oakland Fire Hazardous Materials Unit Area Commander, California Highway Patrol, Oakland



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May 14, 2008 File No. 92451-1

Mr. A.K. Jain State of California Department of General Services RESD/PSB/Seismic & Special Programs 707 3rd Street, Suite 4-430 West Sacramento, CA 95605

Subject: Environmental Site Investigation Work Plan California Highway Patrol – Oakland 3601 Telegraph Avenue Oakland, California

Dear Mr. Jain:

Kleinfelder is pleased to present this Environmental Site Investigation Work Plan for the above referenced site as requested by Mr. Jerry Wickham of Alameda County Environmental Health Services (ACEH) in a November 21, 2007 letter to Department of General Services (DGS). In that letter ACEH requested that a Work Plan for additional site investigation be submitted to you by February 15, 2008. Department of General Services (DGS) requested and was granted an extension until May 15, 2008. Additionally, ACEH requested that information and responses to Technical Comments posed in the letter be included in this Work Plan. A copy of the letter, extension approval and responses to the Technical Comments are included in Appendix A. This scope of work will focus on assessing the potential presence and extent of impacted soil and groundwater and completing prerequisites for site (case) closure.

The work will be implemented in a phased approach by completing specific tasks intended to address concerns associated with two environmental conditions at the site: lead impact to soil from a former shooting range building, and hydrocarbon impact to soil and groundwater from a formerly leaking underground gasoline storage tank (UST).

This scope of work was developed based on discussions with you and the ACEH request and is a preliminary understanding of your desires. Kleinfelder is committed to providing quality service to its clients, commensurate with their wants, needs and desired level of risk. If a portion of this work plan does not meet the needs of DGS, CHP or ACEH, or if those needs have changed, Kleinfelder will consider appropriate modifications, subject to the standards of care which we adhere as professionals. We appreciate the opportunity to further provide our services to you.

If you have any questions, comments or require additional assistance, please contact us at 916-366-1701.

3077 Fite Circle Sacramento, CA 95827-1815 **p**| 916.366.1701 f 916.366.7013 kleinfelder.com

Respectfully submitted,

KLEINFELDER WEST, INC.

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Pamela A. Wee, D. Env. **Project Manager**

Sue Gardner, P.G.



Project Geologist



ATTACHMENT A

ENVIRONMENTAL SITE INVESTIGATION WORK PLAN CALIFORNIA HIGHWAY PATROL - OAKLAND 3601 TELEGRAPH AVENUE OAKLAND, CALIFORNIA

92451-1 May 14, 2008

INTRODUCTION

This Work Plan presents a scope of work for additional soil and groundwater assessment at the California Highway Patrol (CHP) facility located at 3601 Telegraph Avenue, Oakland, California (Plate 1). The proposed scope of work was developed based on a previous investigation, a November 21, 2007 letter from Alameda County Environmental Health (ACEH) and a January 24, 2008 conversation with Mr. Jerry Wickham at ACEH. A copy of the ACEH letter is included with this work plan (Appendix A). Also included in Appendix A are responses to a request for information from ACEH (Technical Comments section of November 2007 letter).

This scope of work is intended to address concerns associated with two environmental conditions at the site: lead impact to soil from a former shooting range building, and hydrocarbon impact to soil and groundwater from a formerly leaking underground gasoline storage tank (UST).

BACKGROUND

Lead Impacts

A shooting range building was present at the CHP Oakland facility. Following demolition, in June 2006, Mr. Gary Moore (DGS project manager for the demolition) notified the CHP Facilities Section that approximately ten inches of lead-contaminated soil had been removed during demolition activities. According to CSC Engineering, which provided Project Observation Services during the demolition, analytical results for lead in confirmation samples suggested that remaining soils may be impacted by residual lead concentrations. Copies of CSC Engineering's *Closeout Report for Project Observation Services* (September 30, 2006) and the June 2006 DGS memo noting residual lead in soils, are included in Appendix B. Site photographs taken during the demolition activities are presented in Appendix C.

In January 2007, Kleinfelder conducted soil and groundwater sampling using direct push technology (Geoprobe) in the footprint of the demolished shooting range building. Samples were analyzed for total lead and dissolved lead. Total



lead in concentrations ranging from 3.93 milligrams per kilogram (mg/kg) to 562 mg/kg was detected in each of the soil samples submitted for analysis. Dissolved lead was not detected above laboratory reporting limits in the 12 groundwater samples submitted for analysis. In the November 21, 2007 ACEH letter, Technical Comment #1 requested that a Scaled Map showing area of excavation, former building foundation, types of surfaces (asphalt, concrete, bare ground, etc.) and the 2006 soil sampling locations be included with this Work Plan. The features are shown on scaled site diagrams on Plates 2 and 3. Boring locations for the January 2007 samples are also indicated on Plate 2. A summary of the January 2007 analytical results is included in Tables 1 and 2.

Petroleum Hydrocarbon Impacts

A UST at the site was upgraded in March 1997. A soil sample analyzed during upgrade activities was impacted with total petroleum hydrocarbons (TPH) gasoline and xylenes. In January 2007, Kleinfelder conducted sampling of soil and groundwater in the vicinity of the former UST in conjunction with the aforementioned Geoprobe lead sampling investigation. Gasoline and MTBE, a fuel oxygenate, were detected in groundwater samples analyzed during the January 2007 investigation. In one boring (CHP-8), TPH as gasoline was detected at 4,300 micrograms per liter (ug/L). MTBE was detected in six of the seven groundwater samples submitted for analyses at concentrations ranging from 0.56 to 38 ug/L. Plate 2 indicates the locations of the January 2007 borings. A summary of the analytical results is included in Tables 3 and 4.

In March 2007, Kleinfelder issued a report of findings for the January 2007 site investigation of lead and hydrocarbon impacts. At the time of reporting, the Oakland Fire Department was the lead regulator for the site. Presently, the site case has been assumed by ACEH.

SCOPE OF SERVICES

The scope of work will be implemented in a phased approach by completing specific tasks. This work plan presents a scope of work to perform the following two tasks:

- Task 1
 Lead Investigation (Former Shooting Range Building)
- Task 2
 Fuel Hydrocarbons and Oxygenates Investigation (Former UST)

This scope of work will focus on assessing the potential presence and extent of impacted soil and groundwater and completing prerequisites for site (case) closure.



Task 1 – Lead Investigation (Former Shooting Range Building)

Kleinfelder will conduct soil sampling to further assess the horizontal and vertical extent of lead impact in the footprint of the former shooting range building. Kleinfelder will use direct push (Geoprobe) to advance borings at up to ten locations. See Appendix D for the Direct Push Sampling Protocol. During the investigation, Kleinfelder will use a Nitron X-ray Fluorescence (XRF) analyzer (screening tool) to screen surface soil for lead, which will aid in selecting boring locations and samples to submit for laboratory analyses.

Prior to advancing borings, Kleinfelder will conduct a site visit to evaluate rig access and to outline the site with white paint. Kleinfelder and the Geoprobe contractor will contact Underground Service Alert (USA) at least 48 hours prior to conducting field work to notify local utilities of the subsurface assessments. USA provides a partial location service free of charge for major utility lines. Because public utility companies contacted by USA may not mark subsurface structures buried under private property or beneath a building, Kleinfelder will retain the services of a private utility locator to mark subsurface anomalies. Kleinfelder's fee is not adequate to compensate for repair of underground structures that may be damaged while drilling. Kleinfelder will require CHP staff to approve of proposed boring locations prior to advancing borings.

Soil sampling for lead is expected to be conducted over the course of one day using Geoprobe technology and temporary probes to estimate the extent and concentrations of lead impacts. While advancing the probes, an experienced Kleinfelder geologist will oversee the probing, sample the probe holes and log the soils.

In the November 21, 2007 ACEH letter, Technical Comment #2 posed questions regarding other potential areas where lead may have accumulated. To address these concerns, sample locations will be selected from the north side and mid section of the former shooting range building pad, with one sample location to be selected outside the former building's pad for comparison (background) purposes. Geoprobe borings will be advanced to an approximate depth of 5 feet below ground surface (bgs) at locations indicated on Plate 3.

During probing, soil will be screened for lead using XRF equipment. Lead impact in soil can be qualitatively assessed using XRF. While XRF is not intended to produce laboratory quality results, it can be used to assist in sample selection for laboratory analysis, and depth determination for borings.

It is anticipated that two soil samples (one from the surface and one from approximately 3.0 to 3.5 feet bgs) from each of the ten borings will be submitted for initial laboratory analysis. A third sample from each boring (from 4.5 to 5.0 feet) will be retained until initial analytical results are received and reviewed. If further delineation of the impact's vertical extent is necessary in a particular



location, the third sample will be submitted for laboratory analysis. The constituent of concern is lead, therefore, the 20 initial and if necessary, ten follow-up samples will be analyzed as follows:

- Total lead analysis by United States Environmental Protection Agency (EPA) Method 6010.
- Upon receipt of analytical results and based on the findings, Kleinfelder anticipates that up to ten (10) samples will be submitted for Waste Extraction Test (WET) analysis using citrate buffer. Citrate buffer is the method typically used for evaluation of soil disposal options.
- Upon receipt of analytical results and based on the findings, Kleinfelder anticipates that up to five (5) samples will be submitted for Toxicity Characteristic Leaching Procedure (TCLP) analysis.

Concurrently with the lead sampling investigation, Kleinfelder will conduct soil and groundwater sampling at the site for investigation of petroleum hydrocarbon impacts associated with a formerly leaking UST, as described in Task 2 below.

Some samples from the lead investigation may be analyzed for petroleum hydrocarbons based on visual observations, location proximate to the former UST, and field screening. In two of the ten lead sample locations, borings will be advanced to first encountered groundwater (approximately 15-20 feet) or until advancement of drilling equipment is not feasible due to the presence of gravel, cobble, hardpan, heaving sand, bedrock, etc. If the proposed drilling equipment cannot be advanced to the desired sample depth due to lithologic conditions, alternative drilling methods should be evaluated. If possible, two groundwater samples will be collected from the location selected for background evaluation (furthermost northeast probe location) and from the furthermost northwest probing location. These particular locations are proposed due to their distance and direction from the former UST. It is anticipated that information from these two probing locations may be used in evaluating groundwater gradient and direction in the vicinity of the hydrocarbon impact. The two proposed lead and hydrocarbon boring locations are indicated in Plate 3. It is anticipated that up to five soil samples and two groundwater samples will be collected from the vicinity of the former shooting range building during the lead sampling phase of the investigation, and analyzed for hydrocarbons.

Kleinfelder will request that the laboratory prepare electronic data files and deliver them along with their written results. Findings from the lead sampling investigation will be presented in conjunction with results of the petroleum hydrocarbon investigation (Task 2 of this work plan). The boring locations for samples to be analyzed for both lead and hydrocarbons are indicated in Plate 3.

Upon completion of the lead sampling investigation, and following the receipt of analytical results, Kleinfelder will review the results and prepare a Data Report and Lead Impacted Soil Remediation Work Plan. The report will be submitted to



ACEH for review and approval. Kleinfelder will recommend steps necessary to satisfy ACEH requirements with considerations given to time and cost efficiencies. The report/work plan will include recommendations for the removal of lead-impacted soil.

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) maintain electronic data files available for public review for UST sites (an ftp site). Kleinfelder will submit the required electronic data to the Alameda County site.

Task 2 – Fuel Hydrocarbons and Oxygenates Investigation (Former UST)

ACEH recommended (November 2007 letter) that the CHP Oakland fuel hydrocarbon and oxygenate site investigation use "direct push technology to collect soil samples and depth-discrete groundwater samples prior to the installation of groundwater monitoring wells." Kleinfelder will employ the services of a Geoprobe contractor to advance borings and collect soil and groundwater samples in up to eight locations. Kleinfelder's Direct Push Sampling Protocol is presented in Appendix D.

It is anticipated that the Geoprobe investigation will take place in conjunction with the lead sampling investigation as outlined in Task 1 of this Work Plan. Kleinfelder will collect soil and groundwater samples in the vicinity of the former leaking UST. Kleinfelder anticipates that soil and groundwater samples will be collected from eight probing locations in the vicinity of the former (and current) UST over the course of two days. While advancing the probes, an experienced Kleinfelder geologist will oversee the drilling, sample the borings and log the soils. If possible, groundwater samples will be collected at multiple discrete depths and submitted to a certified analytical laboratory for analyses. Analytical results will potentially be used to assist in recommendations for monitoring well locations and design.

The Alameda County Public Works Agency–Water Resources Section requires an approved drilling permit prior to advancing borings through soil and into groundwater. One permit will be required for the lead and hydrocarbon sampling investigations. Kleinfelder will prepare and submit the required application and fees necessary to obtain an approved permit prior to start of field operations.

Data from Kleinfelder's previous (January 2007) site investigation were used to assist in selection of probing locations. Probes will be advanced to evaluate the horizontal and vertical extent of impact. Seven of the eight borings will be advanced to a maximum depth of 25 feet bgs, or refusal. Discrete groundwater sampling was requested by ACEH for the purpose of assessing groundwater at varying depths in varying locations (see cover page of attached ACEH letter). The information obtained from analyses of depth discrete groundwater samples can be used, if necessary, for groundwater monitoring well design and



placement. In accordance with this request, if possible, discrete groundwater samples will be collected at first encountered groundwater and at five foot intervals for an additional two samples per boring. For example: If first groundwater is encountered at 15 feet bgs, then samples will be collected at 15, 20 and 25 feet bgs. At seven of the eight boring locations, this "three sample" protocol will be followed unless the boring is terminated due to refusal or samples can not be collected due to lack of groundwater. To "evaluate" the vertical extent of impact near the source area, one source area boring will be advanced to a maximum depth 35 feet bgs or refusal. Because the formerly leaking UST was replaced with another UST in the same location, this location will be placed outside of the UST excavation and concrete pad with fuel islands. The proposed "source area" location is indicated on Plate 3. This location was selected based on the results of Kleinfelder's January 2007 site investigation. During this investigation, TPH-gas was detected in one groundwater sample (from boring location CHP-8) at a concentration of 4,300 micrograms per liter At this "source area" boring location, groundwater samples will be (uq/L). collected at 15, 20, 25, 30 and 35 feet bgs, if possible. Therefore, a maximum of twenty-six groundwater samples will be collected during the hydrocarbon portion of the sampling investigation [three from each of seven borings (21), plus five from one boring (5) for a total of twenty-six (26)]. (Note: two groundwater samples collected during the lead sampling investigation are additional to the samples mentioned above. Including these samples, a total of 28 groundwater samples will be analyzed for gasoline and related constituents.)

One soil sample from each of the eight boring locations will be selected for analyses. A photoionization detector (PID) will be used to provide a qualitative screening of the borings. The PID measures ionizable compounds in the air in parts per million by volume (ppmv), and typically aids in the selection of samples submitted for laboratory analysis. PID readings will be recorded on field data sheets. Soil sample selection will be based on field screening criteria such as odor, staining and PID readings.

To reduce the potential for cross-contamination between the Geoprobe borings, the Geoprobe and sampling equipment will be cleaned prior to advancing each boring. After completion, the borings will be backfilled to ground surface with cement/bentonite grout, in accordance with permit requirements. If required, Kleinfelder will schedule a grout inspection with ACEH.

The soil and groundwater samples will be analyzed for the following constituents:

- TPH-gasoline (EPA 8260B)
- BTEX (EPA 8260B)
- 5 Oxygenates (EPA 8260B)
- 1,2-DCA and EDB (EPA 8260B)
- Total (soil) or dissolved (groundwater) lead (EPA 6010)



Kleinfelder will request that the laboratory prepare electronic data files and deliver them along with their written results.

Upon completion of the hydrocarbon sampling investigation, and following the receipt of analytical results, Kleinfelder will review the results and prepare a Site Investigation Report based on the findings of the sampling investigation. Scaled maps indicating sample locations and boring logs indicating subsurface soil conditions will be prepared and included with the report. The report will include conclusions and recommendations for additional assessment (i.e. monitoring wells), if warranted. It is anticipated that DGS will construct a new fueling system in the footprint of the former shooting range building following completion of the lead impacted soil investigation, reporting and approved remediation activities. DGS plans to containerize gasoline in an above ground storage tank (AST) installed as part of the new fueling system. DGS will likely request that ACEH allow AST construction and UST removal activities to precede final recommendations for additional assessment and/or installation of groundwater monitoring wells.

The SWRCB UST Program–AB2886 (Electronic Reporting) requires electronic submittal of data associated with UST sites, which includes: reports, work plans, correspondence, monitoring well survey data, analytical results, water level data, and map submittals. Kleinfelder will obtain authorization to submit the data on behalf of the client.

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) maintain electronic data files available for public review for UST sites (an ftp site). Kleinfelder will submit the required electronic data to the Alameda County site.

Anticipated Schedule

Pre-Field Activities ACEH Review of Workplan Permitting and Pre-Field Activities	10 working days 20 working days
Field Activities Geoprobe Field Investigation Laboratory Analyses	3 working days 20 working days
Report of Findings Prepare and Submit Report to ACEH	30 working days

Total anticipated time to conduct field investigation and submit report is estimated to be approximately 83 working days.



LIMITATIONS

Kleinfelder prepared this work plan in accordance with generally accepted standards of care that exist in Northern California at this time. This work plan may be used only by the client and only for the purposes stated, within a reasonable time from its issuance, but in no event later than one (1) year from the date of the report. All information gathered by Kleinfelder is considered confidential and will be released only upon written authorization of the client or as required by law. Non-compliance with any of these requirements by the client or anyone else, unless specifically agreed to in advance by Kleinfelder in writing, will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party and the client agrees to defend, indemnify, and hold harmless Kleinfelder from any claim or liability associated with such unauthorized use or non-compliance.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present. Although risk can never be eliminated, more-detailed and extensive investigations yield more information, which may help understand and manage the level of risk. Since detailed investigation and analysis involves greater expense, our clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface investigations or field tests, may be performed to reduce uncertainties. Acceptance of this work plan will indicate that the client has reviewed the document and determined that it does not need or want a greater level of service than provided.

During the course of the performance of Kleinfelder's services, hazardous materials may be discovered. Kleinfelder will assume no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials. Nothing contained in this report should be construed or interpreted as requiring Kleinfelder to assume the status of an owner, operator, generator, or person who arranges for disposal, transport, storage or treatment of hazardous materials within the meaning of any governmental statute, regulation or order. The client will be solely responsible for notifying all governmental agencies, and the public at large, of the existence, release, treatment or disposal of any hazardous materials observed at the project site, either before or during performance of Kleinfelder's services. The client will be responsible for all arrangements to lawfully store, treat, recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder's services.



Regulations and professional standards applicable to Kleinfelder's services are continually evolving. Techniques are, by necessity, often new and relatively untried. Different professionals may reasonably adopt different approaches to similar problems. As such, our services are intended to provide the client with a source of professional advice, opinions and recommendations. Our professional opinions and recommendations are based on our limited number of field observations and tests, collected and performed in accordance with the generally accepted engineering practice that exists at the time and may depend on, and be qualified by, information gathered previously by others and provided to Kleinfelder by the client. Consequently, no warranty or guarantee, expressed or implied, is intended or made.

This work plan may be used only by the client and only for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both on site and off site) or other factors may change over time, and additional work may be required with the passage of time.

Plates

- 1 Site Location Map
- 2 Site Diagram
- 3 Proposed Boring Location Map

Tables

- 1 Analytical Results for Total Lead in Soil Samples (2007)
- 2 Analytical Results for Dissolved Lead in Groundwater Samples (2007)
- 3 Site Diagram and Boring Location Map
- 4 Site Diagram and Proposed Boring Location Map

Appendices

- A Alameda County Health Care Services November 21, 2007 letter, Email Approval for Extension, and Response to Technical Comments (Kleinfelder)
- B Closeout Report for Project Observation Services, DGS Memo
- C Site Photographs
- D Kleinfelder Direct Push Sampling Protocol
- E Geotracker and Alameda County ftp Site Submittal Confirmation Sheets

PLATES







TABLES

Boring ID	Sample ID	Sample Depth (feet bgs)	Date Sampled	Total Lead (mg/kg) ESL ^a =150 mg/kg	Soluble Lead (mg/L) by DI WET
	CHP1-1	0-0.5	1/25/2007	7.23	
	CHP1-2	2.5-3.0	1/25/2007	125	0.116
1	CHP1-3	3.5-4.0	1/25/2007	8.16	
	CHP1-4	5.0-5.5	1/25/2007	5.43	
	CHP1-15	15.0-15.5	1/25/2007	5.96	
	CHP2-1	0-0.5	1/25/2007	7.28	
2	CHP2-2	2.5-3.0	1/25/2007	64.2	ND
2	CHP2-3	3.5-4.0	1/25/2007	5.80	
	CHP2-4	5.0-5.5	1/25/2007	5.08	
2	CHP3-1	0-0.5	1/25/2007	6.62	
3	CHP3-2	2.5-3.0	1/25/2007	37.0	
	CHP4-1	0-0.5	1/25/2007	8.47	
4	CHP4-2	2.5-3.0	1/25/2007	562	ND
	CHP4-3	3.5-4.0	1/25/2007	56.6	
	CHP4-4	5.0-5.5	1/25/2007	5.26	
F	CHP5-1	0-0.5	1/25/2007	11.5	
5	CHP5-2	2.5-3.0	1/25/2007	6.31	
6	CHP6-18	17.5-18.0	1/24/2007	4.22	
8	CHP8-18	18.0-18.5	1/24/2007	3.93	
9	CHP9-16	15.5-16.0	1/24/2007	4.29	
10	CHP10-16	15.5-16.0	1/24/2007	3.99	
11	CHP11-10	9.5-10.0	1/24/2007	5.73	
12	CHP12-13	12.0-13.0	1/24/2007	5.95	

Table 1 Analytical Results for Total Lead in Soil Samples California Highway Patrol Facility - Oakland 3601 Telegraph Avenue, Oakland, California

Notes: ^a ESLs are for shallow soils (<3 m bgs) and residential land use where groundwater is not a current or potential source of drinking water

mg/kg: milligrams per killogram (parts per million) mg/L: milligrams per liter (parts per million)

bgs: below ground surface

DI WET: Deionized (DI) water Waste Extraction Test (WET)

ESL: Environmental Screening Level

ND: None detected above laboratory reporting limits

---- : not analyzed for the listed constituent

Highest concentrations of lead are listed in **bold**

Table 2Analytical Results for Dissolved Lead in Groundwater SamplesCalifornia Highway Patrol Facility - Oakland3601 Telegraph Avenue, Oakland, California

Boring ID	Sample ID	Date Sampled	Dissolved Lead (µg/L)
CHP-1	CHP-GW1	1/25/2007	5.0 (ND)
CHP-2	CHP-GW2	1/25/2007	5.0 (ND)
CHP-3	CHP-GW3	1/25/2007	5.0 (ND)
CHP-4	CHP-GW4	1/25/2007	5.0 (ND)
CHP-5	CHP-GW5	1/25/2007	5.0 (ND)
CHP-6	CHP-GW6	1/24/2007	5.0 (ND)
CHP-8	CHP-GW8	1/24/2007	5.0 (ND)
CHP-9	CHP-GW9	1/24/2007	5.0 (ND)
CHP-10	CHP-GW10	1/24/2007	5.0 (ND)
CHP-11	CHP-GW11	1/24/2007	5.0 (ND)
CHP-12	CHP-GW12	1/24/2007	5.0 (ND)

Notes:

µg/L: micrograms per liter (parts per billion)

ND: None detected above indicated (xx) laboratory reporting limit

Table 3 Analytical Results for Petroleum Hydrocarbon Constituents for Soil Samples California Highway Patrol Facility - Oakland

3601 Telegraph Avenue, Oakland, California

Sample Id. Depth.	CHP1-15	CHP6-18	CHP8-18	CHP9-16	CHP10-16	CHP11-10	CHP12-13
Date Sampled	15-15.5 feet bgs	17.5-18 feet bgs	18-18.5 feet bgs	15.5-16 feet bgs	15.5-16 feet bgs	9.5-10 feet bgs	12-13 feet bgs
	1/25/2007	1/24/2007	1/24/2007	1/24/2007	1/24/2007	1/24/2007	1/24/2007
Analyte (mg/kg)							
TPH-GRO	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
Toluene	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
Ethylbenzene	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
Total Xylenes	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
МТВЕ	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
DIPE	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
ETBE	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
ТАМЕ	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
ТВА	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
1,2-DCA	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
EDB	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)

Notes:

bgs: below ground surface mg/kg: milligram per kilogram (parts per million) TPH-GRO: Total petroleum hydrocarbon-gasoline range organics ETBE: Ethyl t-butyl ether 1,2-DCA: 1,2-Dichloroethane MTBE: Methyl Tertiary Butyl Ether EDB: Ethylene Dibromide (1,2-Dibromomethane) TBA: Tert-butyl Alcohol ND: Not detected DIPE: Di-Isopropyl ether TAME: Tert-amyl methyl ether

Table 4 Analytical Results for Petroleum Hydrocarbon Constituents for Groundwater Samples California Highway Patrol Facility - Oakland 3601 Telegraph Avenue, Oakland, California

	Sample ID and Date Sampled						
Analyte (µg/L)	CHP-GW1 1/24/2007	CHP-GW6 1/24/2007	CHP-GW8 1/24/2007	CHP-GW9 1/24/2007	CHP-GW10 1/24/2007	CHP-GW11 1/24/2007	CHP-GW12 1/24/2007
1,2-Dichloroethane	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Benzene	ND(0.50)	ND(0.50)	2.5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Di-Isopropyl ether	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
ETBE	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Ethylbenzene	ND(0.50)	ND(0.50)	2.4	ND(0.50)	2.0	ND(0.50)	ND(0.50)
Ethylene Dibromide (1,2-Dibromomethane)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Methyl Tertiary Butyl Ether	ND(0.50)	15	0.97	1.0	38	7.1	0.56
TAME	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tert-butyl Alcohol	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Toluene	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	2.2	ND(0.50)	ND(0.50)
Total Xylenes	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	7.4	ND(0.50)	ND(0.50)
TPH-GRO (ug/L)	ND(50)	ND(50)	4,300	ND(50)	ND(50)	130	ND(50)

APPENDIX A

ALAMEDA COUNTY HEALTH CARE SERVICES



DAVID J. KEARS, Agency Director

AGENCY

November 21, 2007

ENVIRONMENTAL HEALTH SERVICES ENVIRONMENTAL PROTECTION 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 (510) 567-6700 FAX (510) 337-9335

Mr. Faizi Pourhosseini State of California Department of General Services RESD/PSB/Seismic & Special Programs 707 3rd Street, Suite 4-430 West Sacramento, CA 95605

Subject: Fuel Leak Case No. RO0002950 and Geotracker Global ID T06197636657, CHP Oakland, 3601 Telegraph Avenue, Oakland, CA 94609

Dear Mr. Pourhosseini:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the abovereferenced site, including the report entitled, "Soil and Groundwater Investigation, California Highway Patrol – Oakland, 3601 Telegraph Avenue, Oakland, California, 94609," dated March 26, 2007, prepared on your behalf by Kleinfelder. The report summarizes the results from soil and groundwater sampling activities conducted at the site in January 2007. Soil and groundwater sampling was conducted to help assess the extent of petroleum hydrocarbons released from an underground storage tank (UST) system and lead associated with a demolished gun range building.

A fuel leak was detected during tank upgrade activities on March 19, 1997. A soil sample collected from the site on March 19, 1997 contained 110 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons (TPH) as gasoline and 0.13 mg/kg of total xylenes. Soil and groundwater sampling was conducted in the area of the UST in January 2007. TPH as gasoline was detected in groundwater at concentrations up to 4,300 micrograms per liter (μ g/L). MTBE was detected in groundwater at concentrations up to 38 μ g/L. The horizontal and vertical extent of fuel hydrocarbon and oxygenate contamination has not been defined. Therefore, we request that you submit a Work Plan for further site assessment by February 15, 2008.

We recommend that your investigation incorporate expedited site assessment techniques. Expedited site assessment tools and methods are a scientifically valid and cost-effective approach to fully define the three-dimensional extent of groundwater contamination. Technical protocol for expedited site assessments are provided in the U.S. Environmental Protection Agency's "Expedited Site Assessment tools for Underground Storage Tanks: A Guide for Regulators," (EPA 510-B-97-001), dated March 1997. Therefore, we recommend that you utilize direct push technology to collect soil samples and depth-discrete groundwater samples prior to the installation of groundwater monitoring wells. Sampling locations should be located to assess the extent of soil and groundwater contamination. Other options for additional investigation may be appropriate to define contamination at your site.

Following the demolition of a former gun range building in June 2006, approximately 10 inches of lead-contaminated soil was reportedly removed from the south side of the building. Analytical results from confirmation soil samples indicated that residual soils on the south side of the building contained elevated concentrations of lead following excavation. In January 2007, soil

Mr. Faizi Pourhosseini RO0002950 November 21, 2007 Page 2

samples were collected from several soil borings in the area of the lead removal. Lead was detected in soil at concentrations up to 562 mg/kg. As discussed in the technical comments below, additional information is required to define the next actions required for lead in soil at the site. We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

REQUEST FOR INFORMATION

The only document in ACEH's case files for the subject site is the report entitled, "Soil and Groundwater Investigation, California Highway Patrol – Oakland, 3601 Telegraph Avenue. Oakland, California, 94609," dated March 26, 2007, prepared on your behalf by Kleinfelder. No report on the 2006 removal of lead-impacted soil adjacent to the former shooting range is in ACEH files. Please submit copies of any other reports you have documenting environmental investigation and remediation activities or other work related to the UST system/site with the work plan requested below.

TECHNICAL COMMENTS

- 1. Scaled Map and Former Area of Excavation. The only map showing the area of excavation appears to be a hand drawn sketch dated June 20, 2006 with no scale. Please provide a scaled map showing the area of excavation, former building foundation, types of surfaces (asphalt, concrete, bare ground, etc.), and soil sampling locations. In addition, please identify how the horizontal limits of the excavation were determined. Were all unpaved areas excavated? The January 2007 soil boring locations are shown within the outline of the former shooting range building on an aerial photograph of the site entitled, "Boring Location Map, Plate 2." Please show the January 2007 soil borings on a scaled map with the area of the 2006 excavation. Please present the requested information and a scaled map in the Work Plan requested below.
- 2. Other Potential Areas with Elevated Concentrations of Lead. Please describe the rationale for sampling and excavating only along the south side of the former building. Were there any other potential locations where lead may have accumulated outside the building such as discharges from ventilation systems? Are there any downwind areas that may have been affected? Please present the requested information and/or a proposed scope of work to address these issues in the Work Plan requested below.
- 3. Soil Removal Activities during Demolition. Please indicate whether soil excavation and removal occurred prior to, during, or following demolition of the adjacent building and whether there was a potential for lead-impacted soil to be moved to other areas during demolition and any grading activities. Please describe the type of building foundation for the former shooting range and whether the former building and adjacent areas are now covered by paved surfaces or bare soil. We request documentation regarding the disposal of lead-impacted soil from the 2006 soil excavation. Please present the requested information and/or a proposed scope of work to address these issues in the Work Plan requested below.

Mr. Faizi Pourhosseini RO0002950 November 21, 2007 Page 3

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

• February 15, 2008 – Work Plan

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or

Mr. Faizi Pourhosseini RO0002950 November 21, 2007 Page 4

certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297 Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Susan Gardner, Kleinfelder, 3077 Fite Circle, Sacramento, CA 95827-1815

Leroy Griffin, Oakland Fire Hazardous Materials Unit, 250 Frank Ogawa Plaza, Suite 3341 Oakland, CA 94612

Donna Drogos, ACEH Jerry Wickham, ACEH File

From:	"Wickham, Jerry, Env. Health" <jerry.wickham@acgov.org></jerry.wickham@acgov.org>
То:	"Sue Gardner" <sgardner@kleinfelder.com>, <ajain@dgs.ca.gov></ajain@dgs.ca.gov></sgardner@kleinfelder.com>
Date:	12/4/2007 4:20 PM
Subject:	RE: Fuel Leak Case No. RO0002950
CC: Ms. Gardner.	"Pourhosseini, Faizi" <faizi.pourhosseini@dgs.ca.gov></faizi.pourhosseini@dgs.ca.gov>

We have received your request for a schedule extension for submittal of a site assessment work plan. We do not object to extending the schedule to May 15, 2008; however, we request that the California Department of General Services expedite the project planning and contracting for this project to assure that a work plan is submitted to this agency no later than May 15, 2008. In addition, please keep the Alameda County Environmental Health Department apprised of any plans for tank removal or upgrade. Permitting and oversight of tank removals and upgrades in the City of Oakland is provided by the City of Oakland Fire Department. However, excavation in areas of known contamination should be planned and coordinated with site investigation and cleanup. In particular, tank removal excavations provide an opportunity for overexcavation and confirmation sampling that can be accomplished more cost effectively than soil borings and in-situ remediation in the tank pit area following installation of a new UST system.

Regards, Jerry Wickham Alameda County Environmental Health 1131 Harbor Bay Parkway Alameda, CA 94502-6577 510-567-6791 phone 510-337-9335 fax jerry.wickham@acgov.org

-----Original Message-----From: Sue Gardner [mailto:SGardner@kleinfelder.com] Sent: Monday, December 03, 2007 1:10 PM To: Wickham, Jerry, Env. Health Subject: Fuel Leak Case No. RO0002950

Good Afternoon,

This email is regarding the fuel leak case referenced above (CHP Oakland, 3601 Telegraph Avenue, Oakland, CA).

Mr. Faizi Pourhossenini is no longer the project manager for this case (DGS Project Manager).

The project manager is:

Mr. A.K. Jain State of California Department of General Services RESD/PSB/Seismic & Special Programs 707 3rd Street, Suite 4-430 West Sacramento, CA 95605



APPENDIX A

RESPONSE TO TECHNICAL COMMENTS CALIFORNIA HIGHWAY PATROL - OAKLAND 3601 TELEGRAPH AVENUE OAKLAND, CALIFORNIA

92451-1 May 14, 2008

This response to technical comment by Alameda County Environmental Health Services (November 21, 2007) answers questions regarding impacted soil located at the above referenced California Highway Patrol (CHP) Facility in Oakland, California.

On November 27, 2007, the Department of General Services (DGS) received a letter from Alameda County Environmental Health Services (ACEH) requesting that further information regarding three general aspects of the lead impacted soil excavation and removal activities conducted in May/June 2006 be included in this work plan. A copy of the above referenced letter is included in this Appendix.

The information requested in the letter involved three general areas of concern:

- 1) Scaled Map and Former Area of Excavation
- 2) Other Potential Areas with Elevated Concentrations of Lead
- 3) Soil Removal Activities during Demolition

These areas of concern are addressed below.

1 – Scaled Map and Former Area of Excavation

Request

Provide a Scaled Map including: area of excavation, former building foundation, types of surfaces (asphalt, concrete, bare ground etc) and 2006 soil sampling locations.

Response

Maps presenting the above requested information are presented in Plates 2 and 3 of the workplan. The types of surfaces are indicated on the plates.

Request

Include how the horizontal limits of the excavation were determined (during the soil removal operation). Were all the unpaved areas excavated?



Response

Based on information either provided to or reviewed by Kleinfelder, it is unclear how the horizontal limits of the excavation were determined. Plate C-1 in Appendix C of the workplan are photographs taken during site demolition activities (source: DGS file). The photographs suggest that unpaved areas and some sidewalk were excavated but it is not known if all of the unpaved areas were excavated.

Request

Show the January 2007 soil borings on a scaled map with the area of the 2006 excavation.

Response

The January 2007 soil borings are shown on Plate 2 of the workplan. The 2006 area of excavation is presented in the Closeout Report in Appendix B. The approximate area of excavation is indicated in Plate 2.

2 – Other Potential Areas with Elevated Concentrations of Lead

Request

Describe the rationale for sampling and excavating only along the south side of the former building.

Response

Kleinfelder reviewed site documents from DGS files, regulator correspondence, a June 21, 2006 memo from DGS to CHP (Appendix B) and interviewed CHP Oakland on-site personnel. Additionally, Kleinfelder reviewed photos taken during demolition (obtained from DGS files). Based on this review, it is our understanding that the former shooting range was in use for approximately 30 years. During this period, CHP had been cleaning the range sand pit of lead shot and dumping the shot along the south side of the former building. Based on the photos the building appears to have had a slab-on-grade concrete floor and, presumably, sub-floor soils were not impacted. The photos are included in Appendix C. It appears that the removal contractor assumed impact did not extend beyond the dirt area (ie: under the concrete slab or adjacent asphalt parking lot) along the south side of the former gun range building.



Request

Were there any potential locations where lead may have accumulated outside the building such as discharges from ventilation systems? Are there downwind areas that may have been affected?

Response

Based on information either provided to or reviewed by Kleinfelder, it is not known if potential pathway(s) existed to allow for accumulation of lead outside the building such as discharges from a former ventilation system or utility trenches.

Kleinfelder researched historical wind direction data in the vicinity of Oakland and Alameda. The prevailing wind direction during the fall and winter was generally from the northwest. In the summer, prevailing winds are generally from the west. According to CHP personnel, the lead accumulations were confined to the planter box area located on the south side of the former gun range building. The average moisture content of the planter box area is not known and therefore the potential for soil to be displaced by wind is also unknown. However, if soil was displaced by winds blowing in the general directions of northwest to southeast and/or west to east, then soil would have been displaced onto the facility parking lot areas.

<u>3 – Soil Removal Activities During Demolition</u>

Request

Indicate whether soil excavation and removal occurred prior to, during, or following demolition of the adjacent building and whether there was potential for lead-impacted soil to be moved to other areas during demolition and any grading activities.

Response

Soil excavation and removal was conducted both prior to and after demolition activities. This information was obtained from the June 21, 2006 DGS memo, included in this Appendix. Soil samples were collected on May 18, 2006, excavation activities took place in late May and early June, 2006, and additional soil samples were collected on June 14, 2006. Sample dates and locations (hand drawn sketches) were presented in the above mentioned memo's exhibits. A comparison of site photographs (presented in Appendix C) taken during demolition activities with those taken in May 2008, suggest that soil was graded evenly over the old building footprint. Therefore, there may be some potential for lead-impacted soil to have been moved during grading activities. Additional sampling locations are proposed to address this concern.



Request

Describe the type of building foundation for the former shooting range and whether the former building and adjacent areas are now covered by paved surfaces or bare soil.

Response

Based on an examination of photos taken during site demolition work (Appendix C), the building appears to have been concrete slab-on-grade with a concrete perimeter footing. Presently, the former building pad is unpaved with dirt and weeds covering the surface.

Request

Documentation for the disposal of lead impacted soil from the 2006 soil excavation.

Response

Clearance Certificates and Hazardous Waste Manifests from the CSC September 30, 2006 <u>Closeout Report for Project Observation Services, Hazmat Abatement and Demolition of the Former Shooting Range, Department of California Highway Patrol, 36012 Telegraph Avenue, Oakland, California 94609 are included in Appendix B of this workplan.</u>

Electronic Submittal of Reports

Appropriate reports have been submitted to Geotracker and Alameda County's ftp site. Confirmation sheets are included in Appendix E of this workplan.

APPENDIX B



Closeout Report for Project Observation Services

HAZMAT ABATEMENT AND DEMOLITION OF THE FORMER SHOOTING RANGE

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL 3601 TELEGRAPH AVENUE OAKLAND, CALIFORNIA 94609

WO #: 121087

Prepared for

State of California

Department of General Services Real Estate Services Division Project Services Branch Design Services Section 707 Third Street, Suite 4-105 Sacramento, California 95605

CSC Project No. 2001151

Wes Charle, CSST # 06-4051

Tim Kirk, CAC #02-3121 Regional Manager

September 30, 2006

275 Rose Avenue, Suite 206 - Pleasanton, CA 94566 tel 925-931-0100 fax 925-931-0108 csceng.com

Closeout Report for Project Observation Services

Project Title: Hazmat Abatement and Demolition of the Former Shooting Range Property Location: Department of California Highway Patrol 3601 Telegraph Avenue, Oakland, CA 94609 Work Order No.: 121087

CSC Project No.: 2001151

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Appendices

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Appendix 3	Field Reports, Daily Submittals, and Laboratory Data
Appendix 4	Clearance Certificates and Hazardous Waste Manifests
Appendix 5	Contractor's Pre-Job Submittals



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www.csceng.com

Closeout Report for Project Observation Services Project Title: Hazmat Abatement and Demolition of the Former Shooting Range Property Location: Department of California Highway Patrol 3601 Telegraph Avenue, Oakland, CA 94609 Work Order No.: 121087

CSC Project No.: 2001151

1.0 PROJECT TITLE PAGE

Hazmat Abatement and Demolition of the Former Shooting Range **Project Title:** Department of California Highway Patrol **Client Agency:** 3601 Telegraph Avenue Location: Oakland, California 94609 121087 Work Order: Mr. Gary Moore, Senior Architect **Project Director:** State of California Department of General Services Real Estate Services Division Project Services Branch **Design Services Section** 707 Third Street, Suite 4-105 Sacramento, California 95605 Telephone Number: (916) 375-4245 Facsimile Number: (916) 375-4196 Email: gary.moore@dgs.ca.gov **CSC Project Number:** 2001151 Pleasanton Office CSC Office: 275 Rose Avenue, Suite 206 Pleasanton, CA 94566 Tim Kirk, CAC #02-3121 CSC Project Manager: Telephone Number: (925) 931-0100 Facsimile Number: (925) 931-0108 Email: timk@csceng.com **CSC Site Monitors:** Wes Chase, Cal/OSHA-CSST #06-4051 Chris Fogliatti, Cal/OSHA-CSST #06-4051, DHS LRC I/M #15270 Mike Eberle Cal/OSHA-CSST #00-2804

Project Dates:

Start Date: 10 February 2006 End Date: 28 June 2006



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2.0 INTRODUCTION

This report presents a record of observation services provided by Clark Seif Clark, Inc. (CSC) in support of the project entitled Hazmat Abatement and Demolition of the Former Shooting Range (Work Order No. 121087). The project involved the abatement of hazardous materials prior to the planned demolition of the California Highway Patrol's former shooting range building located at 3601 Telegraph Avenue, Oakland, California, referred to hereunder as the subject property. This work was performed for the Department of General Services (DGS) on behalf of the Department of California Highway Patrol.

CSC's observation services were provided under contract described in DGS Contract Number 3064224, Registration No. 176008034671, Work Order 121087, and Task Order Nos. 18 and 22. As described in these Task Orders, CSC's scope of work was to provide observation, monitoring, and compliance review of documentation and submittals as per Section 01120-Project Procedures, Section 01330-Submittals, Section 01421-Asbestos and Lead Abatement Observation, Section 13280-Asbestos Abatement, Section 13289-Fluorescent Light System Removal, and 13290-Lead Abatement of the State-approved Project Manual dated October 11, 2005.

The hazardous materials scheduled for abatement included asbestos-containing material (ACM) and lead-containing materials (LCM) including lead-based paints or coatings (LBP) and lead-containing paints or coatings (LCP). The ACM was in the form of pipe insulation and skim coat in the exterior stucco siding. The LCM was in the form of paint found on interior building components and as lead-contaminated soil located along the south elevation of the former shooting range building. <u>NOTE:</u> Although, during the course of abatement activities, lead-contaminated soil was discovered at a greater depth than expected, it was not removed during the course of this project.

The project's demolition contractor subcontracted with a hazmat abatement Contractor, Leehigh Valley Industries (LVI), to handle the ACM and LCM in accordance with the State-approved specifications and drawings and applicable local, state, and federal regulations. The hazmat abatement project began on February 14, 2006 and ended on June 28, 2006.



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3.0 CONSULTANT'S SCOPE OF WORK

CSC's scope of work included the following:

- Review abatement Contractor's pre-job submittals;
- Attend the pre-construction meeting;
- Provide full-time technician oversight and project monitoring;
- Inspect and approve containment and work area setup (this includes daily inspections during asbestos and lead-related construction activities);
- Review abatement Contractor's daily submittals;
- Provide daily air monitoring;
- Provide daily visual inspections for Contractor compliance;
- Provide clearance inspection and sampling; and
- Provide a project closeout narrative report.

CSC's project manager was Mr. Tim Kirk, Cal/OSHA-CAC #02-3121. Onsite technicians were: Mr. Chris Fogliatti, Cal/OSHA-CSST #06-4051, DHS LCR-I/A/M #15270; Mr. Wes Chase, Cal/OSHA-CSST #06-4051; and Mr. Mike Eberle Cal/OSHA-CSST #00-2804. Additional technical support was provided by Mr. Larry Tipton, CIH, CSP.



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4.0 SUBMITTAL REVIEW AND PRE-CONSTRUCTION MEETING ATTENDANCE

CSC reviewed the pre-job submittals from the selected abatement Contractor. The submittals were compared to the submittal requirements set forth in the technical specifications for this project.

The pre-construction conference included the following:

- Review of project personnel;
- Facility access and parking;
- Utilities and use of the building/facility;
- Review Contractor's work plan and location of containment areas, work areas, and decontamination units and other items pertaining to the execution of the work;
- Emergency response procedures;
- Other special considerations and requirements including specialized training requirements for the selected abatement Contractor;
- Facility access and off-limit areas;
- · Facility rules and regulations;
- System shutdown coordination and notification;
- Temporary facilities; and
- Construction waste management.



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CSC Project No.: 2001151

5.0 ABATEMENT CONTRACTOR'S SCOPE OF WORK

The Contractor's site preparations began on February 14, 2006. The Contractor conducted the abatement of all ACM and LCM found in and immediately adjacent to the subject property. The ACM included thermal system insulation (TSI) found inside the building and the skim coat on the exterior stucco siding. The LCM included loose and peeling LBP; lead-contaminated firing range sand, firing range burlap baffels, and other furnishings, fixtures, and finishes planned for disposal; and lead-contaminated soil (approximately 240-square-feet of the upper 4- to 6-inches) located at the south side of the shooting range. The Contractor's scope of work may be generally described as follows:

- Isolation of the building using 10-mil polyethylene. Establish a regulated work area for exterior work;
- Establish an air-pressure differential between the inside and outside of the work areas using dioctyl phthalate (DOP)-tested and approved air filtration devices (AFD) equipped with high-efficiency particulate air (HEPA) filters;
- Construction of a three-stage worker and equipment decontamination unit with a functional shower;
- Proper stabilization, clean up, and disposal of all LBP on each floor of the building;
- Removal and proper disposal of lead-contaminated soil from specified locations down to a prescribed depth;
- · Removal, clean up, and proper disposal of all ACM TSI using wet methods;
- Removal, clean up and proper disposal of all ACM skim coat on the exterior stucco found above grade and, later, below grade;
- Clean up of any incidental LCM and ACM; and
- Tear down of containment after successfully passing clearance testing.



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6.0 ABATEMENT PROJECT DESCRIPTION

6.01 Work Area Preparation

The interior work area scheduled for asbestos and lead work was prepared by establishing an airpressure differential by first erecting scaffolding around the entire perimeter of the shooting range structure, then enclosing the framework with 10-mil shrink-wrapping poly. After the Contractor installed a three-stage personnel decontamination unit, an air-pressure differential was established between the abatement work areas and the outdoors with the use of HEPA-equipped air filtration devices (AFDs). AFDs were installed in sufficient number to exchange the total air volume in the work area a minimum of four (4) times an hour in accordance with EPA recommendations. Each of the AFDs was vented to the exterior of the building via flexible exhaust ducting. All of the AFDs and HEPA vacuums were onsite DOP-tested and certified by an independent 3rd party.

CSC performed visual inspections of the containment following work area preparations and prior to beginning the abatement process. The inspections were performed to evaluate the integrity of the work area barriers and the proper performance of the air-pressure differential system. CSC's inspections indicated all perimeter and critical barriers were in place and the differential air-pressure systems were operating properly. CSC's observation of work area preparations can be found in the Field Reports presented in Appendix 3.

6.02 Handling of ACM

All ACM encountered on this project was considered friable and removed using wet methods and appropriate engineering controls. The ACM was rewetted while beginning double-bagged into 6-mil waste bags. Each bag was labeled with the Generator Number and as friable, regulated asbestos-containing material waste. The generated waste was then transported and disposed of at an offsite landfill approved by the State of California to receive asbestos-containing waste. CSC did not observe the transportation or the final disposition of the waste materials. CSC's observation of handling of ACM can be found in the Field Reports presented in Appendix 3.

6.03 Handling of LCM

All areas surrounding the building structure were pre-cleaned of LCM debris (e.g., paint chips), which was then placed in appropriate LCM waste containers. After establishing the regulated work areas, all loosely adhered LCM found on building components scheduled for demolition was removed using wet-scraping methods and then placed in appropriate LCM waste containers. Opting to apply the strictest waste stream path, the Contractor placed all generated LCM waste in leak-proof barrels, which was transported to and disposed of at an offsite landfill approved by the State of California to receive LCM waste. The removal of lead-contaminated soil was conducted in accordance with the Resource Conservation Recovery Act (RCRA). CSC did not observe the transportation or the final disposition of the waste materials. CSC's observation of handling of LCM can be found in the Field Reports presented in Appendix 3.



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7.0 AIR MONITORING AND CLEARANCE TESTING

CSC conducted air monitoring at the subject property before and during the abatement activities to determine and evaluate the following:

- Airborne asbestos and lead concentrations during abatement activities;
- The effectiveness of the work area barriers and engineering controls in preventing the migration of airborne asbestos and lead dust to areas outside of the work area; and
- The work practices of the Contractor as they relate to the potential generation of airborne of lead dust and/or asbestos fibers in the work areas.

7.01 Area Air Monitoring

Area air sampling for asbestos and lead was conducted within the work areas, adjacent the work areas, and outdoors along the perimeter of the subject property. Area air monitoring results combined with visual observations of work practices were used to evaluate 1) the Contractor's ability to control asbestos and lead air concentrations inside the work area and, thus, selection of worker respiratory protection, and 2) the Contractor's ability to prevent the migration of asbestos fibers and/or lead dust to unprotected areas. Where necessary, care was taken to correct the Contractor's work practices and/or deficiencies in engineering controls.

Asbestos area air monitoring samples were collected and analyzed in accordance with the National Institute for Occupational Safety and Health (NIOSH) Method 7400, which incorporates the Phase Contrast Microscopy (PCM) analytical method. Lead area air monitoring samples were collected and analyzed in accordance with the NIOSH Method 7082, which incorporates the Flame Atomic Absorption Spectroscopy (FAAS) analytical method.

Analysis of the area air monitoring samples indicated that all sample results were within acceptable limits both inside and outside of the work areas. These results indicate that the Contractor was successful in controlling asbestos fibers and/or lead dust migration to areas outside of the work area, and in controlling asbestos and lead air concentrations inside the work areas. Laboratory Reports and Chain-of-Custody Forms are presented in Appendix 3.

7.02 Clearance Testing Results

Following ACM removal and work area decontamination, CSC (accompanied by the Contractor's foreman) performed a visual inspection of each work area to verify complete removal of all visible ACM, dust, or debris. The Contractor then encapsulated the interior and exterior work area surfaces to "lock down" any remaining microscopic fibers. After allowing the encapsulant to completely dry, CSC conducted, per the specifications, a final PCM air clearance test in each of the work areas. Per the project specifications, if the PCM clearance samples failed to pass the clearance criteria of 0.01 f/cc, CSC would require a re-cleaning of the failed work area. Based on the results of the visual inspection and interpretation of the PCM clearance test results, each of the work areas was adequately addressed and met the clearance criteria. Clearance Certificates are presented in Appendix 4.



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Following LCM stabilization, removal, and/or decontamination activities, CSC (accompanied by the Contractor's foreman) performed a visual inspection of each work area to verify completion of work. Per the project specifications, if the visual inspection revealed the presence of loosely adhered LBP/LCP or LCM dust or debris, CSC would require a re-cleaning of the failed work area. Based on the results of the visual inspection, each of the work areas was adequately addressed and met the clearance criteria. Clearance Certificates are presented in Appendix 4.

Following lead-contaminated soil removal, CSC (accompanied by the Contractor's foreman) performed a visual inspection of each work area to verify completion of work. Per the project specifications, if the visual inspection revealed inadequate removal of soil along the south perimeter of the former shooting range, CSC would require additional removal until the proper quantity and location of soil was removed. Based on the results of the visual inspection, the work area was adequately addressed and met the clearance criteria. **NOTE:** Following completion of the specified work and the removal of an additional 6-inches of soil along the south perimeter of the former shooting range, the soluble total lead concentration (STLC) as determined using EPA Method 7420 (CWET) indicated that the soil still contained elevated soluble lead levels. This additional deposit of lead-contaminated soil was investigated further, but was not removed during the course of this project. (For more information see the *Soil Remediation Letter* presented in Appendix 4.



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8.0 CONTRACTOR COMPLIANCE

To monitor the Contractor's compliance with the technical specifications and applicable regulations, CSC evaluated the Contractor's performance in each of the following areas:

- Preparation and assembly of required submittals,
- Work area isolation,
- Asbestos and lead removal work methods,
- Worker protection/decontamination, and
- Waste handling and disposal.

8.01 Contractor Submittals

CSC reviewed the pre-job submittals received from the selected abatement Contractor. The submittal included, but was not limited to MSDS; worker's training, medical, and respiratory fit test certifications; Contractor's current CSLB license and DOSH registration; regulatory agency notifications; and written work plan. The submittals were compared to the requirements set forth in the technical specifications of this project and were found to be in compliance. The Contractor's Pre-Job Submittals are presented in Appendix 5.

8.02 Isolation of Work Area

Isolation of the work area was established by erecting a containment barrier consisting of 10-mil shrink-wrap around the entire building and then establishing an air pressure differential. The air pressure differential was established by ventilating a sufficient number HEPA-equipped air filtration devices (AFDs) to the outside of the building/containment. This air pressure differential served to prevent the migration of asbestos fibers or lead dust to the outside the work area. Additional AFDs were strategically placed inside of the work area to reduce airborne concentrations of asbestos fiber and/or lead dust. Finally, a regulated area was established by placing DOSH-compliant warning and danger signs at all entrances to the work area.

CSC inspected the containment work area for breaches and, if any were found, the breaches were immediately repaired. CSC's observations and measurements indicated that a sufficient negative air pressure differential was established and maintained throughout the duration of hazardous material abatement.

8.03 Asbestos and Lead Removal Work Methods

CSC monitored Contractor's work methods by observing work practices, work area housekeeping, and equipment/material use. Contractor's removal methods included wetting the building materials containing asbestos or LBP/LCM with amended water. The material was then removed using various hand tools. The materials were continually wetted during the removal process to minimize airborne dust/fiber concentrations. The removal of lead-contaminated soil along the south side of the shooting range was conducted in accordance to the Resource Conservation Recovery Act (RCRA).



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8.04 Worker Protection/Decontamination

The Contractor's workers donned personal protective equipment (PPE) including half-face, negative-pressure, air-purifying respirators outfitted with HEPA/P-100 filters, goggles, and disposable full body coveralls and gloves prior to each entry into the regulated work area. CSC's observations indicated that workers wore proper PPE continuously while inside the work areas. When required, the workers used the onsite decontamination unit to properly decontaminate their person, equipment, and PPE before exiting the work areas.

8.05 Waste Handling and Disposal

Friable ACM were placed in 6-mil waste bags with the proper EPA Generator Number sticker applied and then placed into a poly-lined lockable disposal bin for transportation as regulated ACM waste. CSC did not observe the transportation of the asbestos waste, nor the burial and/or treatment of the waste at the disposal site.

CSC observed waste profile sampling performed by the Contractor. CSC observed all paint chips, bullet trap sand, poly-tarps, and discarded PPE and filters placed into several metal leak-tight drums. Each drum was labeled as "Category III Concentrated Lead Waste." CSC did not observe the transportation of the lead waste, nor the burial and/or treatment of the waste at the disposal site.

Sergeant Dane Lobb of the California Highway Patrol was the Generator's representative and authorized signor of all hazardous waste manifests. The Hazardous Waste Manifests are presented in Appendix 4.



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9.0 CONCLUSIONS

Based on CSC's review of submitted documents, site observations, and interpretation of laboratory data, we conclude that the hazardous material abatement was completed per the Specifications and Drawings provide by the State of California.



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10.0 LIMITATIONS

CSC's field observations, measurements, and research reported herein are considered sufficient in detail and scope to form a reasonable basis for site monitoring during this project. The assessment and conclusions presented herein are based upon the subjective evaluation of limited data. They may not represent all conditions at the subject property as they reflect the information gathered from specific locations. The findings and conclusions contained herein have been promulgated in accordance with generally accepted industrial hygiene methodology and only for the subject property described in this report. No warranties are implied or expressed.

Use By Third Parties

This report was prepared pursuant to the contract CSC has with DGS (Client) and their clients. That contractual relationship included an exchange of information about the subject property that was unique and between CSC and its Client and serves as the basis upon which this report was prepared. Because of the importance of the communication between CSC and its Client, reliance or any use of this report by anyone other than DGS, for whom it was prepared, is prohibited and therefore not foreseeable to CSC.

Reliance on or use of this report by any such third party without explicit authorization shall not make said third party a beneficiary to CSC's contract with DGS. Any such unauthorized reliance on or use of this report, including any of its information, conclusions, or recommendations, will be at third party's risk. For the same reasons, no warranties or representations, expressed or implied, in this report are made to any such third party.

Unidentifiable Conditions

This closeout report has been developed to provide the Client with information regarding apparent conditions relating to the subject property. Although CSC believes that the findings and conclusions provided in this report are reasonable, the assessment is necessarily limited to the conditions observed and to the information available at the time of the work. Due to the nature of the work, there is a possibility that there may exist conditions which could not be identified within the scope of the assessment or which were not apparent at the time of our site work. The assessment is also limited to information available from the Client at the time it was conducted. It is also possible that the testing methods employed at the time of the report may later be superseded by other methods. CSC does not accept responsibility for changes in the state-of-the-art.

CSC does not guarantee that all contaminated areas at the subject property were recognized during our evaluation. This report is limited only to the samples taken and locations sampled. Additional sampling may be required to further identify other pollutants or other asbestos/lead-affected areas at the subject property.

We have employed state-of-the-art practices to perform this analysis of risk and identification, but this evaluation is severely limited in scope to the areas listed above and per the Client's request. No demolition or product review was performed in attempts to reveal material compositions. Our services consist of professional opinions and recommendations made in accordance with



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generally accepted engineering principles and practices, and are designed to provide an analytical tool to assist the Client. CSC or those representing CSC bear no responsibility for the actual condition of the structure or safety of the subject property pertaining to asbestos/lead contamination regardless of the actions taken by the Client.

Thank you for the opportunity to provide our Observation Services to the California Department of General Services, Real Estate Services Division. Should you have any questions regarding this report, please call Tim Kirk at 925-931-0100.

Respectfully Submitted, CSC, Inc.

Written By

Wes Chase, CSST Cal/OSHA-CSST #06-4051

Reviewed By,

Tim Kirk, CAC Cal/OSHA-Certified Asbestos Consultant #02-3121 Regional Manager

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Copies 1 thru 5

Mr. Gary Moore, Senior Architect State of California Department of General Services Real Estate Services Division Project Services Branch Design Services Section 707 Third Street, Suite 4-105 Sacramento, California 95605

Copy 6:

CSC Project File 2001151



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Chemical Waste Management, Inc. EC Kettlemen Hills Facility 35211 Oid Skytine Rd. PO Box 471, Kettleman City, CA 19239 (599) 368-9711 Generator's Waste Profile Sheet	0King #
Character as a first the first the first provide the first of the first of the first the	Seies #
Service Agreement on Re? Yes X No Classification: Class I X Class II Delty Cover Non Haz TSDF Requested Kettleman Hills Technology requested Landfill	
Check here if this is a recertification Check here if a Carolificate of Destruction or Disposal is required	
SENERAL INFORMATION	
1. GENERATOR NAME California Highway Patrol/Cakland Generator USEPA ID: CAL000021	300
2. Site Location:	Energy
Oakland, CA 94609 P.O. Box 256	
1 Technical Contact/Phone Laio - LVI Environmental (510) 357-5350 West Sacramento CA 536 West Sacramento CA 536 World Environmental & Energy Inc. Deformation Deformation Deformation	1
Fax Number: (916) 371-5857 Fax Number: 916/371-3684	
ROOPED TIES AND COMPOSITION	
5 A. Process Generating Waste: Renovation	
B. Is the weste from a CERCLA or state mandated cleanup? Yes No X Location Name:	
C is walk weaks a result of a clean in action and resides for reduced CA BOF Tar? Yes NO Y	
6. Waste Name: RCRA Sand contaminated with Lead	
7 A ts.this a USEPA hazardous waste (40 CFR Part 261)? Yes X No	
B. If D001, D002, D003, D004-D043 do any underlying hazardous constituents (UHC's) apply? Yes X No (If yes, stitch UHK) form)
C. If using atternative LDR treatment standards for soll (40CFR 268.49), do any UHC's apply? Yes No X (If yee, attach UHK	C form)
D. Does this waste contain debris (List size and type in chemical composition)? Yes X No	
E. Identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U): D008	
State Waste Codes: 181/352	·
F. Does this waste contain any Class I or Class II caone depleting substances? Yes (List in chemical composition) No	X
8. Physical state (3 70°F: A. Solid X Liquid Both Gas B. Single Layer X Nuttiever C. Free Bauld range	1 to 0
8 A. of Rance 4 to 10 or Not Applicable B. Strong Odor describe C. Color	
10 1 junit Elect Print < 73* 73-99* 100-138* 140-199* 140-199* 1 > 201* NA	······································
11. CHEMICAL COMPOSITION: List ALL constituents (including halogenated organics and UHC's) present in any concentration and forward available	
anelysis.	
Constituents Range Units Constituents Range	Unita
Sand 59-100	· · · · · · · · · · · · · · · · · · ·
<u> </u>	
<u> </u>	
TOTAL COMPOSITION MUST EQUAL OR EXCEED 100%	
12. OTHER: PCB's: I yes, concentration (ary weight)ppm, PCB's regulated by 40 CPR 761Pyrophone	
Water Reactive Shock Sensitive Oxidizer Carcinogen Infectious Other	
13. If Benzene, concentration ppm. is the waste subject to the Benzene Waste Operation NESHAP? Yes No X	Unknown
14. Is the waste subject to RCRA Subpart CC controls? Yes X No Volatile organic concentration, if known	ppnw.
ita ni une messo se subjecti u une ten nu pert anni messo une messo se subjective, chere land supply analytical results.	
	• • •
	ner
17. SHIPPING FREQUENCY: Units 2 Per. Month Qt. X Year One Time Other	
IO. DEPENDENT OF A CONTRACTOR OF A CONTRACT	
19. A. Sample (attack chain of custody) Sample source (down (school mond tenk wer into)	
Date Sampled; Company: Company:	
B Generator's Agent Supervision Sampling	e Insta (dinne)
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DENERGY LINK & GERT I FRANK I KIT	
defined in 4D CFR 251 - Appendix 1 or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator function of the generator function of the generator of the ge	as been
sources. I sources over a sense and any more any more any more any more or property or provided by the generator and by a broker, the underlighed signs as a spen of the generator and additional information as a thead data	umonzaci umigadi to
to responsibly necessary	1
/ in the Manis Liver Solicant MHD :	S la Donia
Sonature Printed for hearth name and title	Date
LIMAN OR STRAM ORDER BUILDING	an a
if the waste profile is approved, Chemical Waste Management, inc. has the appropriate permits and will accept the waste pursuant to our agreement.	
CWM Form 6000-DI replaces the following forms: CWM-51, CWM 8000, CWM 50-4-2, CWM 50-8, CWM 6000C, and CWM Form 6000-D. WM101	
AND RUC DOM	

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# LAND DISPOSAL NOTIFICATION AND CERTIFICATION FORM (PHASE IV)

P . . .

,	Generator Name: California Highway Patrol/Oakland	Ī	Manifest Document Number:
	Profile Number: EC7431		State Manifest Number:

1. Is this wasts a non-vesterwater or wasterwater? (See 40 CFR 258.2) Check ONE: [] Non-wasterwater [] Wasterwater -2. Identify ALL USEPA-karandour-wast: nodes that apply to this waste shipmost, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste endo has no subcategory. Spent solvent it tradment standards are listed on the following page. If F039, multi-source latching applies, these constituents must be listed and attached by a generator. If D001-D043 requires treatment of the abaracteristic and meet 258.48 standards, then the underlying intradous constituent(a) present in the waste must be listed and attached.

1	3. US EPA HAZARDOUS	4. SUECATEGORY ENTER THE SUBCATEGORY (If not applicable, simply check NONE)	DESCRIPTION	5. HOW MUST THE WASTE BE MANAGED? ENTER
REF#	WASTE CODE(s)	DESCRIPTION		LETTER FROM HELOW
	Dons	RO Hererdown Hugh Salid 2200 days a	NONE	
1.	10000	NA3077		
2.:				·····
3.				
4.	· ·			· · · · · · · · · · · · · · · · · · ·
Toid	mainy F039 or D001-D043, unit	returns herentary constitutent(a) and the Person of the second		
provid L('no l To lis	ded (CWM-2004) and check he URCs are present in the waster t additional UREPA waster code	The substrategeoice (4), use the supplemental sheet provided (	CWM-2005-D) and (	ann" Bock dere 🗍
peropriate peropriate finition line finition line for H For	certification as provided belo ted below. Where these regular RICTED WASTE REQUIRES wants must be prosted to the app lasardous Detaris: "This human RICTED WASTE TREATED ' 100 under penalty of law that I doe of the transment process u antion, I believe that the treatme o without importanted be dilation fination removed by Phase IV.) O FAITH ANALYTICAL CER UP under penalty of law that I at this curification. Based on to a constituents have been treat wents despite baving used best attain, including the possibility ARACTERIZED WASTE REC IP under penalty of law that J strist. This de-characterizes that there are significant penal ICTED WASTE SUBJECT TO use is subject to a estional cap	^{24.} (States authorized by EPA to manage the LDR program ary additions differ, your contribution will be deemed to refer to TREATMENT isouble treatment standards set forth in 40 CER 268.40, where debris is subject to the alternative preatment standards of CO PERFORMANCE STANDAEDS have personally examined and an familiar with the treatment sed to support this certification. Based on my inquiry of the met process has been operated and maintained property so as it including the possibility of first and imprisonment." EIFICATION FOR INCINERATED ORGANICS have personally examined and an familiar with the treatment is properly accounted and and familiar with the treatment is properly decommend and an familiar with the treatment is properly of these individuals immediately responsible for object and by combustion in units as specified in 268.42 Table 1. 1 an aware of fine and imprisonment." URRES TREATION FOR UNDERITYING STALARDOUGH is waste containe underlying hazardous constituents that requirement waste containe underlying hazardous constituents that require waste containes a secondaries contained the possibility of a VARLANCE	may have regulatory of those state citations '40 CFR 268.45" technology and open rese individuals interes to comply with the trans- inclusion of a spent have been unable to a that there are signly CONSTITUENTS to of 40 CFR 268.40 ire further parameter of first and imprisons ion. Enter the effort	instruct of the seament technology and instruct of the seament technology and database responsible for obtaining this statent of the treatment process used to on, i believe that the non-wastewater argunic floant pencilies for submitting a fairs of the treatment standards. I an next ''''' to date of prohibition in column (1)
	zardon: Debriz: "This hazard	ens dubris is subject to the alternative treasment timelants of		te date of promotion in comme (5).
For Ha RESIR	DCIED WASTE CAN BELAN By under penalty of law I nervo	ID DISPOSED WITHOUT FURTHER TREATMENT.	W CFR Part 268;45.	
ABOVA For Ha RESTR "I certif submitte und imp WASTE This was	ICTED WASTE CAN BELAN (y under punchy of law I perso this correlation shat the was de la struc, accurate and comple risonness." IS NOT CURRENTLY SUBJ NOT CURRENTLY SUBJ NO is a newly identified waste t	ID DISPOSED WITHOUT FURTHER TREATMENT, wally have accounted and an familiar with the water through a to complete with the treatment standards specified in 40 CPJ its. I am aware that there are significant penalties for submit ECT TO PART 263 RESTRICTIONS and is not currently subject to say 40 CFR Part 262 restrictions.	WCFR Part 268;45.° malyris and testing o R Part 268 Subpart Ing 4 Julio contificat	r through knowledge of the warte to D. I believe that the information I for, including the possibility of fine

# LAND DISPOSAL NOTIFICATION AND CERTIFICATION FORM (PHASE IV)

Generator Name: California Highway Patrol/Oakland	Manifest Document Number:
Profile Number: EC7430	State Manifest Number.

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: 🗌 Non-wastewater 🛄 Wastewater

2. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the wants code has no subcategory. Spent solverst treatment standards are listed on the following page. If F039, multi-source leaching applies, those constituents must be listed and attached by a generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

	3. US EPA HAZARDOUS	4. SUBCATEGORY ENTER THE SUBCATEGORY D (If not applicable, simply cbeck NONE)	5. HOW MUST THE WASTE BE MANAGED? ENTER LETTER FROM BELOW	
REF #	WASTE CODE(s)	DESCRIPTION	NONE	
1.	D008	RQ Hazardous Waste Solid, NOS (Lead), 9, NA3077		
2.			·	
3.	· · · ·			
4.				
To id provi If no	entify F039 or D601-D643, un ded (CWM-2004) and check h UHCs are present in the waste	deriving hazardous constituent(s), use the "F039/Underlying Hazar ere: [] upon its initial generation check here: []	rdous Constituent	Form"

To list additional USEPA waste code(s) and subcategories(s), use the supplemental sheet provided (CWM-2005-D) and check here:

HOW MUST THE WASTE BE MANAGED? in columns (5) above, enter the letter (A. Bl. B3, B4, C. D. or E) below that describes how the waste must be managed to comply with the land disposal. Regulations (40 CFR 268.7). Please understand that if you enter the letter (B1, B3, B4 or D), you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR. citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state distions instead of the 40 CFR distions). RESTRICTED WASTE REQUIRES TREATMENT

This waste must be treated to the applicable treatment standards set forth in 40 CFR 268.40.

For Hazardons Debris: "This hazardons debris is subject to the alternative treatment standards of 40 CFR 268.45"

B.I RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in 40 CFR. 268,40 without impermissible dilution including the possibility of fine and imprisonment.

B.2 (Certification removed by Phase IV.)

B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS

"I certify under penalty of law that I have personally economized and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the non-wanewater organic constituents have been treated by combustion in units as specified in 268.42 Table I. I have been unable to detect the non-wastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a faise certification, including the possibility of fine and imprisonment.

DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS **B**4

"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or. 268.49, to remove the hazardous characteristic. This de-characterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." RESTRICTED WASTE SUBJECT TO A VARIANCE

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column (5) above.

For Hererdons Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT. D.

"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CPR Part 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E

This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby centify that all information sub-	mitted in this and all associated documents is complete and accurate, to the best of my kno	wiedge and information	<b>P</b> ;
Signature ( ) on Bl	THE SERGEANT	Date 3/	1,1200
	1990 Chemical Waste Management, Inc08/99- Form CWM-2005-C	· · · ·	
		· · ·	

		Generator's US EPA ID No.	Manifest Document N	No. 2. Page 1	information in the shaded a
T	WASTE MANIFEST			7 2 1of	Is not required by rederal to
	3. GOACTIF NAME AND MAILY PATR 3601 TELEGRAPH AVE DAKLAND, CA 34603	<u>CH</u>		Art Stille (Wirffler) Waterne Bill Realigner and the Stall	011/07/04 24450
	4. Generator's Phone ( )			<u>, terset</u>	
	Aurisali n Engli terrini s concerno				
	7. Transporter 2 Company Name	8: US EPA ID Numbe	<u>생 역 의 기 다 전</u> 과	States and the second states	
				and a second	
	9. Designoted Facility Nome and Site Address	10. US EPA ID Numb	er i i i i i i i i i i i i i i i i i i i	Contraction of the state	The second s
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## **CSC BUILDING SKETCH & PLOTTING WORKSHEET**



275 Rose Avenue, Suite 206 • Pleasanton, CA 94566 • Phone 925 931-0100 • Fax 925 931-0108





## MEMORANDUM

Date:

114:41

JUL KO ZKKO

June 21, 2006

بر، الشنائيين مقام المار Project #: 121087

To: Nels Eklund California Department of Highway Patrol 860 Stillwater Road West Sacramento, California 95605

From: Department of General Services – Real Estate Services Division Professional Services Branch – Design Services Section 707 Third Street, Suite 4-105, West Sacramento, CA 95605-2811

Subject:

т. 1 ж. HAZARDOUS MATERIALS ABATEMENT CALIFORNIA DEPARTMENT OF HIGHWAY PATROL OAKLAND CHP SHOOTING RANGE

This project has run into a growing problem with respect to lead-contaminated soil.

As background, the scope of work was to abate the asbestos/lead-containing materials, remove the lead dust (shooting range bi-product) and demolish the building. Included in the work was the removal of 4" of lead-contaminated soil in a planter on the south side of the building. The building was abated and demolished successfully and 4" of lead-contaminated soil were removed.

CSC, the State's hazmat consultant, took tests of the remaining soil on the south side, and one of the samples tested three times higher than the allowable threshold (see attached sketch, "Exhibit A"). At the time these tests were taken, Administrative Sergeant Dane Lobb stated to CSC that he was aware that for the last 30 years, CHP had been cleaning the shooting range sand pit of lead shot and dumping it along the south side of the building. A decision was made to remove another 6" of soil and retest. I received a call this moming from CSC stating that all samples tested are above the 5 ppm threshold (see attached sketch "Exhibit B"). CSC said that as the lead leached into the soil, it probably "plumed." At this point, we have no idea as to the extent of the contamination.

At present, the project does not have enough funds to deal with this additional contamination. After discussing this issue with CSC; Bob Sleppy, Chief, Environmental Services Section, Professional Services Branch; and Joel McRonald, Chief, Seismic and Special Programs, it has been decided that the best course of action at this time is to have the contractor finish out his contract and bring this project to a close.

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June 21, 2006

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CHP will need to address this issue, as a separate project. Also, CHP may have a legal requirement to report this issue to the appropriate agency.

If you have any questions, please give me a call at (916) 375-4245.

Gary A. Moore, Architect Project Manager

Attachments

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cc: Thomas Nichols, Supervising Architect, Design Services Section, RESD Robert Sleppy, Chief, Environmental Services Section, RESD Joel McRonald, Chief, Seismic and Special Programs, RESD

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# EXHIBIT A

CSC BUILDING SKETCH & PLOTTING WORKSHEET



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# CXHIDIT D

**CSC BUILDING SKETCH & PLOTTING WORKSHEET** 



TOTAL P.05

**APPENDIX C** 



Photo 1: Overview of E and W old piping, slab foundation.



Photo 2: Overview during demolition.

KLEINF	ELDER	SITE PHOTOGRAPHS					
3077 Fite Circle Sacramento, Ca 95827 916-366-1701 www.Kleinfelder.com		CALIFORNIA HIGHWAY PATROL - OAKLAND 3601 TELEGRAPH AVENUE OAKLAND, CALIFORNIA					
Graphic By: D. Anderson	5/9/08	Project Number: 92451-1	File Name: 92451fto3.fh11				



Photo 3: Fuel island, UST, May, 2008.



Photo 4: Old building pad, post-demolition.

KLEINF	ELDER	SITE PHOTOGRAPHS		
3077 Fite Circle Sacramento, Ca 95827 916-366-1701 www.Kleinfelder.com		CALIFORNIA HIGHWAY PATROL - OAKLAND 3601 TELEGRAPH AVENUE OAKLAND, CALIFORNIA		Plate C-2
Graphic By: D. Anderson	5/9/08	Project Number: 92451-1	File Name: 92451fto2.fh11	



Photo 5: Fuel island, May, 2008.



Photo 6: Old building pad, May, 2008.

KLEINF	ELDER	SITE PHOTOGRAPHS		
3077 Fite Circle Sacramento, Ca 95827 916-366-1701 www.Kleinfelder.com		CALIFORNIA HIGHWAY PATROL - OAKLAND 3601 TELEGRAPH AVENUE OAKLAND, CALIFORNIA		Plate C-3
Graphic By: D. Anderson	5/9/08	Project Number: 92451-1	File Name: 92451fto1.fh11	

yright Kleinfelder 2008

## APPENDIX D



### APPENDIX D

### **KLEINFELDER DIRECT PUSH SAMPLING PROTOCOL**

### D-1 FIELD PREPARATION

Before performing work in the field, environmental staff will review the scope of work, prepare a health and safety plan, coordinate the work to be done with their supervisor, assemble the necessary sample containers, and check, calibrate and clean equipment to be used in the field. Underground Service Alert (USA) also is contacted prior to work with the boring locations and the scheduled date of drilling, or a utility locating firm can be employed to check the boring locations if requested by the client. A private utility location service will be contracted to clear boring locations prior to penetrating the sub-surface.

### D-2 DRILLING AND SUBSURFACE SOIL SAMPLING

### D-2.1 Direct Push Procedures

Probes will be driven and sampled by a subcontractor to Kleinfelder. An attempt to penetrate the asphaltic concrete at each location will be made. If such penetration is not possible, coring will be performed at an additional cost agreed upon by the client prior to commencement. Samples will be collected in accordance with the scope of work.

### D-2.2 Qualitative Field Screening

An organic vapor detector, such as a Photovac TIP, using a photo-ionization detector (PID) or a Foxboro flame-ionization detector (FID), is used to provide a qualitative screening of each soil sample collected from the borings. The organic vapor detector measures ionizable compounds in the air in parts per million by volume (ppmv). Field calibration is performed using a calibrated span gas. Ambient air is used to set the instrument to zero. The soil contained in the cone of the sampler is exposed and screened with the organic vapor detector. The vapor reading is noted as the field screening result.

### D-2.3 Collection of Direct Push Soil and Groundwater Samples

The probes will be driven approximately 15 feet below grade to first encountered groundwater. Soil samples will be obtained by driving a 5 foot long 3.25 inch diameter steel rod with plastic liners. While the rod is pushed, soil will be contained in the liners. The lined rod will be removed from the hole and the plastic liners removed. The liners will then be cut into desired sample interval(s) and sealed with Teflon and plastic caps.



Groundwater samples will be collected from the probe hole using a decontaminated bailer, a ball-check valve or a peristaltic pump with new tubing, depending on field conditions.

### D-2.4 Preparation of Samples

Each sample will be individually labeled. The label includes Kleinfelder's name, job number, the date and time the sample was collected, the employee number of the individual who performed the sampling, and a unique five-digit sample identification number.

### D-2.5 Sample Handling

After labeling, the sample is immediately stored in an iced cooler for transport to Kleinfelder's office sample control or to the analytical laboratory. A Kleinfelder chain-of-custody form accompanies the cooler. The chain-of-custody form includes Kleinfelder's name, address and telephone number, the employee number of the individual who performed the sampling, the sample numbers, the date and time the samples were collected, the number of containers each sample occupies, and the analyses for which the samples are being submitted, if any. The chain-of-custody form is signed by each person who handles the samples, including all Kleinfelder employees and the receiving employee of office sample control or the analytical laboratory when the samples are delivered.

### D-2.6 Decontamination of Equipment

To reduce the potential for cross-contamination, probe pipe and associated equipment are steam cleaned prior to advancing each boring. In addition, sampling equipment is cleaned with a non-phosphate wash and rinsed with distilled water prior to collecting each soil sample.

### D-2.7 Soil Cutting Disposal

It is not anticipated that soil cuttings will be generated requiring disposal during the direct push investigation.

### D-2.8 Boring Closure

Upon completion of probe sampling, the borings will be closed by backfilling the borings with a neat cement grout, or bentonite powder.
## **APPENDIX E**

## **Electronic Submittal Information**

Main Menu | View/Add Facilities | Upload EDD | Check EDD

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CONTACT SITE ADMINISTRATOR.

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