Detterman, Mark, Env. Health

From: Drogos, Donna, Env. Health
Sent: Friday, September 03, 2010 10:32 AM
To: Detterman, Mark, Env. Health
Subject: FW: 1397 55th St Emeryville, UST case
Attachments: Chronology of Events_082710.PDF; 1397 55th st ust rpt.PDF; ACHCSA 9-27-06 ltr.PDF; GMX '07_3356_Results of Groundwater Investigation_ June 1.PDF; ACHCSA 1-29-09 ltr.PDF; Jakub ACDEH 4-21-09.PDF; DIR_L_2010-08-16.PDF

-----Original Message-----
From: Mary Rose Cassa [mailto:MCassa@waterboards.ca.gov]
Sent: Friday, September 03, 2010 9:36 AM
To: Drogos, Donna, Env. Health
Subject: Fwd: 1397 55th St Emeryville, UST case

Donna,

In case you didn't get the attachments, here they are.

Mary Rose

>>> "Patterson, Jennifer" <Jennifer.Patterson@amec.com> 9/1/2010 1:26 PM
>>> >>>
Chuck and Mary Rose-
This is a follow up to a conversation that Ravi Arulanantham had with Chuck earlier this week. As was discussed, we would like you to coordinate a meeting with Mark Detterman and Donna Drogos of Alameda County Health Care Services Agency (ACHCSA) to discuss closure of Fuel Leak Case No. RO0000050 located at 1397 55th Street, Emeryville, California. Attached are the following documents:

* Chronology of events/correspondence prepared by AMEC
* July 1997 UST removal report w/o appendices
* Sept 2006 letter from ACHCSA
* June 2007 GW investigation report
* January 2009 letter from ACHCSA
* April 2009 Addendum to GW investigation report
* August 2010 letter from ACHCSA

Please let me know if you would like any of the other correspondence (it appears that not everything has been posted on Geotracker) or would like to discuss the case prior to the meeting. Ravi will let Mark know that you will be contacting him to schedule a meeting at your offices on the afternoon of September 15th, as Ravi and Chuck discussed. We greatly appreciate your assistance on this matter.
Jennifer L. Patterson, PE | Senior Engineer AMEC Geomatrix | 2101 Webster St., 12th Fl. | Oakland, CA 94612
510.663.4167 (direct) | 510.663.4141 (fax) | jennifer.patterson@amec.com<mailto:jennifer.patterson@amec.com>

Please update your address book with my new e-mail address:
jennifer.patterson@amec.com<mailto:jennifer.patterson@amec.com>

P Please consider the environment before printing this e-mail.

Chronology of Events/Correspondence
1397 55th Street
Emeryville, California
Updated 8/26/10

February 14, 1997
One 700-gallon kerosene UST removed from the site. UST was installed in the 1940s and used until the 1950s. Removal and soil sampling overseen by Emeryville Fire Department and Alameda County Health Care Services Agency (ACHCSA), respectively. Details below (Geomatrix, 1997):

- 1200 gallons of water pumped from UST prior to removal
- Four holes observed in UST; no soil staining observed
- Excavation extended to 8.5 feet bgs
- Groundwater entered excavation after sampling (approx. 5 gallons); no product or sheen observed on groundwater
- Two soil samples from beneath the UST analyzed for TPHd, TPHk, BTEX at request of ACHCSA.
- TPHk detected at concentrations of 4400 and 310 mg/kg
- Ethylbenzene and xylenes detected at concentrations up to 5.6 mg/kg
- Excavation backfilled with clean, imported material
- A sidewalk was poured over the UST location as part of the site redevelopment

July 22, 1997
HFH, Ltd. submits report entitled *Underground Storage Tank Removal, Thoroughbred Building, 1397 55th Street, Emeryville, California,* to ACHCSA. Report contains information summarized above.

September 27, 2006
ACHCSA issues letter to HFH requesting a work plan to characterize the extent of soil and groundwater impacts for the kerosene UST be submitted by October 31, 2006.

October 31, 2006
Geomatrix requests an extension of deadline because the letter was delivered to staff that were no longer with the company and the files had been archived. ACHCSA grants extension.

January 19, 2007
ACHCSA issues a letter to HFH notifying then that the work plan is late and requests the work plan be submitted by February 1, 2007.

January 24, 2007
HFH submits work plan prepared by Geomatrix dated July 18, 2007 to ACHCSA. Work plan includes collection of groundwater samples at two locations; one in the footprint of the former UST and one downgradient. Sampling will target first groundwater and a deeper groundwater-bearing zone, if identified. Borings will be advanced using a CPT rig. Groundwater samples will be analyzed for TPHk. No soil samples will be collected, as agreed upon by Geomatrix and ACHCSA in a November 16, 2006 telephone conversation.

January 31, 2007
ACHCSA approves the work plan with comments. ACHCSA requests that two off-site borings be added to better define the extent of soil and groundwater impacts. Also, ACHCSA requests soil be screened with a PID and visually observed during field activities (not possible using a CPT rig) and that soil samples be collected if staining or elevated PID readings are observed; soil samples

are to be analyzed for TPHg, TPHd, BTEX, EDB, EDC, MtBE, TAME, ETBE, DIPE, TBA, and EtOH.
During subsequent discussions, it is agreed that soil will be logged in one boring to observe lithology. ACHCSA requests that a soil sample be collected at the soil/groundwater interface. Groundwater gradient was verified by ACHCSA from other nearby sites and the off-site borings requested by ACHCSA were deemed to be upgradient, and therefore, were not required. It was requested that groundwater samples be analyzed for the TPHg, TPHd, TPHk, BTEX, EDB, EDC, MtBE, TAME, ETBE, DIPE, TBA. EtOH was removed from the analyte list.

May 18, 2007
Geomatrix conducted field sampling activities.

- Borings were advanced at two locations, as agreed upon.
- Groundwater samples were collected from 20 feet and 35 feet bgs from within the former UST footprint.
- A groundwater sample was collected from 30 feet bgs downgradient of the UST; an attempt was made to collect a sample from 16 feet bgs at this location, but groundwater did not enter the boring after 34 hours of waiting.
- No analytes were detected in groundwater samples above laboratory reporting limits.
- Collection of soil samples were inadvertently overlooked. However, groundwater results and observation of soil core do not indicate the presence of affected soil. Soil surrounding the former UST was excavated during UST removal activities and volatile constituents were not present above ESLs in excavation soil samples collected.
- Geomatrix requests that case be considered for no further action status.

June 1, 2007
HFH, Ltd. submits report entitled *Groundwater Investigation, Thoroughbred Building, 1397 55th Street, Emeryville, California,* to ACHCSA. Report contains information summarized above.

January 29, 2009
ACHCSA issues a letter to HFH requesting demonstration that shallow groundwater samples collected are representative of first groundwater. Also, ACHCSA requests citations for groundwater flow direction and depth and would like the report resubmitted with copies of boring logs and permits. The submittal is due March 27, 2009.

April 21, 2009
HFH, Ltd. submits *Results of Groundwater Investigation Addendum* to ACHCSA in response to their January 29 letter. The letter from HFH contains the following additional information:

- First groundwater was encountered at 14 feet; an attempt was made to collect a groundwater sample from 11 to 16 feet in boring GW-02, but due to lithology (lean clay with sand) not enough water entered the boring. Therefore, a sample was collected between 15 and 20 feet in boring GW-01 (located 10 feet away), which is still screened cross the same lean clay with sand unit that was encountered at 14 feet (based on lithology in GW-02). Therefore, this is representative of shallow groundwater.
- No soil samples were collected at the capillary fringe, but lack of impacts to groundwater indicates that soil is not a source to groundwater. Additionally, no odor or staining was observed at boring GW-02. Soil around the UST was excavated and volatile constituents were not present in confirmation samples at concentrations greater than ESLs for vapor intrusion. Concentrations of TPHk, ethylbenzene, and xylenes have likely degraded in the 12 years since the confirmation samples were collected.
- Boring logs and a justification for groundwater flow direction based on nearby sites was presented.

August 16, 2010
ACHCSA issues a letter to HFH requesting a work plan for additional soil and groundwater sampling be submitted by October 15, 2010 to collect soil samples from the source area and

delineate the lateral extent of impacted groundwater. Additionally, the request clarification and documentation of the final disposition of soil that was excavated from around the UST in 1997.

References

Alameda County Health Care Services Agency (ACHCSA), 2006, Letter to HFH, Subject: Fuel Leak Case No. RO0000050, Thoroughbred Building, 1397 55th Street, Emeryville, CA 94608 – Request for Work Plan, September 27.

ACHCSA, 2007, Letter to HFH, Subject: Fuel Leak Case No. RO0000050, Thoroughbred Building, 1397 55th Street, Emeryville, CA 94608, January 19.

ACHCSA, 2007, Letter to HFH, Subject: Fuel Leak Case No. RO0000050, Thoroughbred Building, 1397 55th Street, Emeryville, CA 94608 – Work Plan Approval, January 31.

ACHCSA, 2009, Letter to HFH, Subject: Fuel Leak Case No. RO0000050 and Geotracker Global ID T0600102100, Thoroughbred Building, 1397 55th Street, Emeryville, CA 94608, January 29.

ACHCSA, 2010, Letter to HFH, Subject: Request for Work Plan; Fuel Leak Case No. RO0000050 and Geotracker Global ID T0600102100, Thoroughbred Building, 1397 55th Street, Emeryville, CA 94608, August 16.

AMEC Geomatrix, Inc., 2009, Results of Groundwater Investigation Addendum, Case No. RO0000050, Thoroughbred Building, 1397 55th Street, Emeryville, California, April 21.

Geomatrix Consultants, Inc. (Geomatrix), 1997, Underground Storage Tank Removal, Thoroughbred Building, 1397 55th Street, Emeryville, California, July 22.

Geomatrix, 2006, Request for Extension – Fuel Leak Case No. RO0000050, Thoroughbred Building, 1397 55th Street, Emeryville, California, October 30.

Geomatrix, 2007, Work Plan for Groundwater Investigation, Fuel Leak Case No. RO0000050, Thoroughbred Building, 1397 55th Street, Emeryville, California, January 18.

Geomatrix, 2007, Results of Groundwater Investigation, Fuel Leak Case No. RO0000050, Thoroughbred Building, 1397 55th Street, Emeryville, California, June 1.

HFH, Ltd. (HFH), 1997, Transmittal Letter, Underground Storage Tank Removal, Thoroughbred Building, 1397 – 55th Street, Emeryville, California 94608, July 22.

HFH, 2007, Transmittal Letter, Work Plan for Groundwater Investigation, Fuel Leak Case No. RO0000050, Thoroughbred Building, 1397 55th Street (a.k.a. 1250 – 53rd Street), Emeryville, California, January 24.

HFH, 2007, Transmittal Letter, Results of Groundwater Investigation, Fuel Leak Case No. RO0000050, Thoroughbred Building, 1397 55th Street, Emeryville, California, June 1.

HFH, 2009, Transmittal Letter, Results of Groundwater Investigation Addendum, Case No. RO0000050, U.S.T. Removed February 14, 2007, Thoroughbred Building, 1397 55th Street, Emeryville, California, April 21.

GEOMATRIX

UNDERGROUND STORAGE TANK REMOVAL

Thoroughbred Building
1397 55th Street
Emeryville, California

Prepared for

HFH Limited
1355 Ocean Avenue
Emeryville, California

July 1997
Project No. 3356

Geomatrix Consultants

Andrew Getz
1355 Ocean Avenue
Emeryville, California 94608
telephone: (510) 652-4191
telecopier: (510) 652-9661

July 22, 1997

STID 6080

Re: Underground Storage Tank Removal
Thoroughbred Building
1397 – 55th Street
Emeryville, California 94608

Ms. Susan Hugo
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Dear Ms. Hugo,

Here is the report by Geomatrix about this tank removal.

Please contact me or Jennifer Patterson or Elizabeth Wells at Geomatrix with any questions or requests for additional information.

Thanks,

Andy

Andrew Getz

enclosure

100 Pine Street, 10th Floor
San Francisco, CA 94111
(415) 434-9400 • FAX (415) 434-1365

GEOMATRIX

17 July 1997
Project 3356B

Mr. Andrew Getz
HFH Limited
1355 Ocean Avenue
Emeryville, California 94608

Subject: Underground Storage Tank Removal Report
Thoroughbred Building
1397 55th Street
Emeryville, California

Dear Ms. Hugo:

Geomatrix Consultants, Inc., is pleased to submit the subject report describing underground storage tank removal activities conducted at the subject site in February 1997, including soil sampling and analytical results. Please contact either of the undersigned if you have questions or require any additional information.

Sincerely,

GEOMATRIX CONSULTANTS, INC.

Jennifer L. Patterson
Project Engineer

Elizabeth K. Wells, P.E.
Senior Engineer

JLP/EKW/lo
I:\WPDOCS\3356\3356RPT2.LTR

Enclosure

GEOMATRIX

UNDERGROUND STORAGE TANK REMOVAL

Thoroughbred Building
1397 55th Street
Emeryville, California

Prepared for

HFH Limited
1355 Ocean Avenue
Emeryville, California

July 1997
Project No. 3356

Geomatrix Consultants

GEOMATRIX

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UNDERGROUND STORAGE TANK REMOVAL
THOROUGHBRED BUILDING
1397 55th Street
Emeryville, California

1.0 INTRODUCTION

This report describes underground storage tank (UST) removal activities conducted at the Thoroughbred Building located at 1397 55th Street, Emeryville, California (Figure 1). One 700-gallon kerosene UST was removed by Zaccor Corporation (Zaccor) of Menlo Park, California, a California-licensed contractor. Clearwater Environmental Management, Inc. (Clearwater), of Fremont, California, directed UST removal activities on behalf of HFH, Ltd., of Emeryville, California. Geomatrix Consultants, Inc. (Geomatrix), observed tank removal activities and collected soil samples for chemical analysis. UST removal activities were performed under the supervision of Mr. George Warren of the Emeryville Fire Department. Soil sampling activities were performed under the supervision of Ms. Susan Hugo of the Alameda County Health Care Services Agency (ACHCSA).

Tank removal, soil sampling, and chemical analytical procedures were performed in accordance with applicable guidelines contained in the State of California Leaking Underground Fuel Tank Task Force, October 1989, field manual titled "Leaking Underground Fuel Tank Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure" (LUFT Manual) and in the August 1990 "Tri-Regional Board Staff Recommendations For Preliminary Evaluations and Investigation of Underground Tank Sites" (Tri-Regional). UST removal activities, soil sampling, laboratory analytical results, and recommendations are described below.

2.0 SITE CONDITIONS

The site is located at 1397 55th Street in the City of Emeryville, Alameda County, California. The 700-gallon capacity UST was located in front of the building as shown on Figure 2. According to Mr. Andrew Getz, of HFH, Ltd., the UST was installed in the early 1940s and

contained kerosene. Reportedly, the tank was last used in the late 1950s and has been empty since then.

3.0 UNDERGROUND STORAGE TANK REMOVAL

Prior to UST removal activities, Clearwater obtained the removal permit from the ACHCSA. A copy of the permit issued by the ACHCSA is included in Appendix A. Zaccor performed the excavation, UST removal, and backfilling activities on 14 February 1997. According to Clearwater, approximately 1200 gallons of water were pumped from the tank on 11 February 1997. A Geomatrix field engineer observed removal of the UST and collected excavation and soil stockpile samples for chemical analysis on 14 February 1997. UST removal and sampling activities are discussed in the following sections.

3.1 UST STABILIZATION AND REMOVAL

Soil overlying the UST was removed to access and prepare the UST for removal. The top of the UST was encountered at a depth of approximately 2 feet below ground surface (bgs). Backfill material surrounding the UST consisted primarily of sand. Approximately 10 cubic yards (cy) of unstained soil were removed to access the UST and were stockpiled on plastic sheeting at a location on 53rd Street. Stained soil was not observed in the excavation.

Zaccor inserted approximately 50 pounds of dry ice into the UST to facilitate evacuation of oxygen and potentially explosive organic vapors. Immediately prior to removal of the UST, Clearwater took explosive vapor meter readings through the fill-pipe opening in the top of the UST. The readings indicated that a non-explosive atmosphere (less than 10% oxygen and less than 10% of the lower explosive limit) existed inside the tank. Mr. Warren approved the readings and removal of the UST.

A backhoe was used to lift the UST out of the excavation. The tank was visually examined by the Geomatrix field engineer and Mr. Warren. The UST measured 4 feet in diameter by 7 feet in length, and was constructed of single-walled steel wrapped with a coating of tar. Four holes,

approximately 1/8- to 1/4-inch-diameter, were observed in the side or bottom of the west end of the tank. Four approximately 1/8-inch-diameter holes were observed near the top of the east end of the tank. Two 3/4- to 1-inch-diameter holes were observed near the fill port on the top of the tank. Three holes, approximately 1/4- to 1/2-inch-diameter, were observed on the tank bottom. The tank surface appeared corroded. The final UST excavation was rectangular in shape, with a length and width of approximately 12 and 7 feet, respectively, and a maximum depth of approximately 8.5 feet bgs. After the tank was removed, approximately 4 cy of additional soil was excavated to prepare the bottom for sampling. The four cy were stockpiled separately on plastic sheeting at the same location as the 10 cy stockpile. Upon collection of the samples (see Section 3.2 below), groundwater entered the excavation at a depth of approximately 8.5 feet bgs. Less than 5 gallons of groundwater entered the excavation and no product or sheen was observed on the water.

3.2 SOIL SAMPLING

The Geomatrix field engineer collected three soil samples from the bottom of the excavation as directed by Ms. Hugo. Samples EX-1 and EX-2 were collected at approximately 8 and 8.5 feet bgs beneath the west end of the former UST, respectively. Sample EX-3 was collected at approximately 8 feet bgs beneath the east end of the former UST (Figure 2). At the request of Ms. Hugo, EX-2 and EX-3 were analyzed. In addition, Geomatrix collected one two-point composite soil sample (SP-1a,b) from the approximately 10 cy of material removed above the former UST and one two-point composite soil sample (SP-2a,b) from the approximately 4 cy of material removed from the bottom of the excavation.

All soil samples were collected in clean 4-inch-long, 2-inch-diameter brass tubes. The ends of the tubes were sealed with Teflon sheets, plastic end-caps, and secured with duct tape. The soil samples were labeled and stored in an ice-cooled chest until delivery under Geomatrix chain-of-custody procedures to Chromalab Environmental Services of Pleasanton, California, a California-certified analytical laboratory.

3.3 RINSEATE AND UST DISPOSAL

Clearwater, a state-licensed liquid waste transporter, transported the water to Alviso Independent Oil, a state-licensed transportation, storage, and disposal facility in Alviso, California, for disposal. A copy of the Uniform Hazardous Waste Manifest is included in Appendix B.

The UST was transported by Erickson, Inc., to their facility in Richmond, California. Erickson cleaned the tank and recycled it as scrap metal. Copies of the Uniform Hazardous Waste Manifest and certificate of destruction are included in Appendix B.

4.0 ANALYTICAL METHODS AND RESULTS

Soil samples EX-2, EX-3, SP-1a,b, and SP-2a,b were analyzed according to LUFT Manual and Tri-Regional guidelines for total petroleum (extractable) hydrocarbons quantified as diesel (TPHd) and as kerosene (TPHk) using modified U.S. Environmental Protection Agency (EPA) Method 8015 and benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8020. Soil sample EX-1 was not analyzed per Ms. Susan Hugo. Analytical results are summarized in Table 1. A copy of the laboratory analytical report and chain-of-custody records are included in Appendix C.

TPHk was reported in excavation samples EX-2 and EX-3 at concentrations of 4400 and 310 milligrams per kilogram (mg/kg), respectively. TPHd, benzene, and toluene were not detected in either excavation sample above the laboratory reporting limits. Ethylbenzene and xylenes were detected in EX-2 and EX-3 at concentrations up to 5.6 mg/kg.

TPHk and BTEX were not detected in sample SP-1a,b at concentrations above laboratory reporting limits. TPHd was reported at a concentration of 6.9 mg/kg in sample SP-1a,b; however, the laboratory noted that this detection does not match their diesel standard. TPHk was reported at a concentration of 690 mg/kg in the composite stockpile sample SP-2a,b. TPHd and benzene were not detected in sample SP-2a,b at concentrations above laboratory

reporting limits. Toluene, ethylbenzene, and xylenes were detected in stockpile sample SP-2a,b at concentrations up to 0.094 mg/kg.

5.0 EXCAVATION BACKFILLING

Zaccor backfilled the UST excavation on 14 February 1997 with approximately 20 cy of sand imported from Tidewater Sand and Gravel of Oakland, California. The backfill was compacted with a vibratory plate attached to the backhoe. After the excavation was backfilled, a concrete sidewalk was poured over the UST area.

6.0 SUMMARY

A summary of the UST removal activities is presented below.

- One 700-gallon kerosene UST was removed at the Thoroughbred Building in Emeryville, California, on 14 February 1997. The tank was removed in accordance with Alameda County guidelines and under the supervision of Mr. George Warren of the Emeryville Fire Department. After the tank was removed, it was visually examined and numerous small holes were observed. The tank was transported to Erickson, Inc., for destruction and recycling as scrap metal.

- Approximately 10 cy of unstained soil was removed from around the UST to access the UST for removal. Four additional cy were removed from the excavation bottom prior to sample collection. No staining was observed on the excavation sidewalls or bottom.

- Less than 5 gallons of groundwater was encountered in the UST excavation at a depth of 8.5 feet bgs and no sheen or product was observed on the groundwater.

- Three soil samples were collected from the bottom of the UST excavation, one of which was not analyzed, as directed by Ms. Susan Hugo of the ACHCSA. TPHk was detected at concentrations of 4400 and 310 mg/kg in the excavation samples analyzed. Ethylbenzene and xylenes were detected at concentrations up to 5.6 mg/kg. TPHd, benzene, and toluene were not detected in either of the soil samples.

- A composite sample was collected from the 10 cy of soil removed from around the UST. TPHd was reported at a concentration of 6.9 mg/kg; however, the laboratory indicated that this did not match their diesel standard. TPHk and BTEX were not detected in the composite sample.

- A composite sample collected from the 4 cy of soil removed from beneath the UST contained TPHk at 690 mg/kg and toluene, ethylbenzene, and xylenes up to 0.094 mg/kg. TPHd and benzene were not detected in this sample at concentrations above laboratory reporting limits.

- Approximately 20 cy of imported sand were used to backfill the excavation.

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS[1]

Thoroughbred Building
1397 55th Street
Emeryville, California

Sample I.D.	Sample Depth (feet bgs[2])	TPH[3] as Diesel	TPH[3] as Kerosene	Benzene	Toluene	Ethylbenzene	Xylenes
EX-2	8.5	<40	4400	<0.73	<0.73	3.7	1.7
EX-3	8.0	<40	310	<1.5	<1.5	5.6	3.1
SP-1a,b[4]	---	8.9[5]	<2.0	<0.005	<0.005	<0.005	<0.005
SP-2a,b[4]	---	<2.0	690	<0.005	0.0075	0.020	0.094

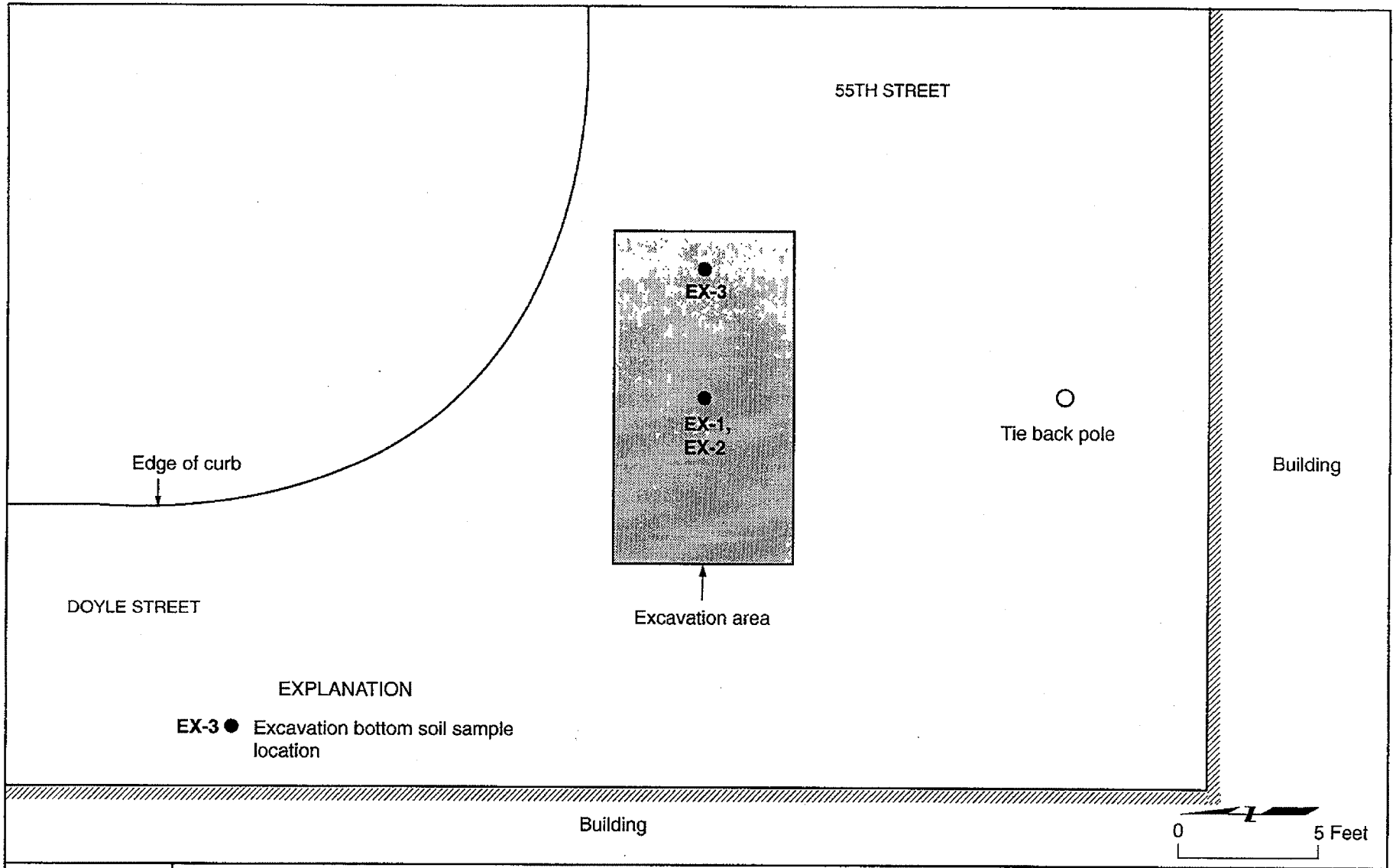
Notes:

1. Soil samples collected by Geomatrix Consultants, Inc., on 14 February 1997 during underground storage tank removal activities. Sampling locations are shown on Figure 2.
2. bgs = below ground surface.
3. TPH = total petroleum hydrocarbons.
4. Two-point composite soil stockpile sample.
5. Laboratory note states, "Hydrocarbon reported is in the early diesel range and does not match our diesel standard."

Base map from *The Thomas Guide, 1995 Alameda/Contra Costa Counties.* Reproduced with permission granted by THOMAS BROS. MAPS®. This map is copyrighted by THOMAS BROS. MAPS®. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission. All rights reserved.

GEOMATRIX	SITE LOCATION MAP Thoroughbred Building 1397 55th Street Emeryville, California	Figure 1 Project No. 3356B

3356B 003



GEOMATRIX

SITE PLAN
Thoroughbred Building
1397 55th Street
Emerivylle, California

Figure
2

Project No.
3356B

3356B.004

.MEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

September 27, 2006

Mr. Andrew Getz
HFH LTD.
8844 Sepulveda Boulevard
Los Angeles, CA 90045-810

Subject: Fuel Leak Case No. RO0000050, Thoroughbred Building, 1397 55th Street, Emeryville, CA 94608 – Request for Work Plan

Dear Mr. Getz:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above referenced site, including the report entitled, "Underground Storage Tank Removal Report," dated July 1997, prepared on your behalf by Geomatrix, Inc. The report summarizes results from the removal of one approximately 1000-gallon underground storage tank (UST). Elevated concentrations of total petroleum hydrocarbons as kerosene (TPHk) at up to 4,400 mg/kg were detected in soil samples collected from the UST excavation. Therefore, in the interest of moving your case through the regulatory process, ACEH request that you characterize the extent of the release in order to assess whether a significant impact has occurred to soil or groundwater at the site.

Please submit a work plan detailing your proposal to define the extent of possible soil and groundwater contamination **by October 31, 2006**. This report is being requested pursuant to the Regional Water Quality Control Board's authority under Section 13267 of the California Water Code. We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Steven Plunkett), according to the following schedule:

- **October 31, 2006** – Work Plan for Site Assessment

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

Effective **January 31, 2006**, 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).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at steven.plunkett@acgov.org

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 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.

LANDOWNER NOTIFICATION REQUIREMENTS

Pursuant to California Health & Safety Code Section 25297.15, the active or primary responsible party for a fuel leak case must inform all current property owners of the site of cleanup actions or requests for closure. Furthermore, ACEH may not consider any cleanup proposals or requests for case closure without assurance that this notification requirement has been met. Additionally, the active or primary responsible party is required to forward to ACEH a complete mailing list of all record fee title holders to the site. If you have not already submitted a list of record fee title owners in response to the Notice of Responsibilty we require that you submit a complete mailing

list of all record fee title owners of the site by **October 31, 2006,** which states, at a minimum, the following:

> *A. In accordance with section 25297.15(a) of Chapter 6.7 of the Health & Safety Code, I, (name of primary responsible party), certify that the following is a complete list of current record fee title owners and their mailing addresses for the above site:*
>
> *- OR -*
>
> *B. In accordance with section 25297.15(a) of Chapter 6.7 of the Health & Safety Code, I, (name of primary responsible party), certify that I am the sole landowner for the above site.*
>
> *(Note: Complete item A if there are multiple site landowners. If you are the sole site landowner, skip item A and complete item B.)*

In the future, for you to meet these requirements when submitting cleanup proposals or requests for case closure, ACEH requires that you:

> 1. Notify all current record owners of fee title to the site of any cleanup proposals or requests for case closure;
> 2. Submit a letter to ACEH which certifies that the notification requirement in 25297.15(a) of the Health and Safety Code has been met;
> 3. Forward to ACEH a copy of your complete mailing list of all record fee title holders to the site; and
> 4. Update your mailing list of all record fee title holders, and repeat the process outlined above prior to submittal of any additional *Corrective Action Plan* or your *Request for Case Closure.*
>
> Your written certification to ACEH (Item 2 above) must state, at a minimum, the following:
>
> > *A. In accordance with Section 25297.15(a) of the Health & Safety Code, I, (name of primary responsible party), certify that I have notified all responsible landowners of the enclosed proposed action. (Check space for applicable proposed action(s)):*
> > *___ cleanup proposal (Corrective Action Plan)*
> > *___ request for case closure*
> > *___ local agency intention to make a determination that no further action is required*
> > *___ local agency intention to issue a closure letter*
> >
> > *- OR -*
> >
> > *B. In accordance with section 25297.15(a) of Chapter 6.7 of the Health & Safety Code, I, (name of primary responsible party), certify that I am the sole landowner for the above site.*

(Note: Complete item A if there are multiple site landowners. If you are the sole site landowner, skip item A and complete item B.)

UNDERGROUND STORAGE TANK CLEANUP FUND

Please be aware that you may be eligible for reimbursement of the costs of investigation from the California Underground Storage Tank Cleanup Fund (Fund). In some cases, a deductible amount may apply. If you believe you meet the eligibility requirements, I strongly encourage you to call the Fund for an application.

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) 383-1767.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Elizabeth Wells
Geomatrix Consultants Inc.
2101 Webster Street, 12th Floor
Oakland, Ca 94612-3066

Donna Drogos, ACEH
Steven Plunkett, ACEH
File

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

January 29, 2009

Andrew Getz
HFH Ltd.
6450 Hollis Street
Emeryville, CA 94608

Subject: Fuel Leak Case No. RO0000050 and Geotracker Global ID T0600102100, Thoroughbred Building, 1397 55th Street, Emeryville, CA 94608

Dear Mr. Getz:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the site including the most recently submitted *Results of Groundwater Investigation* dated June 1, 2007 prepared by Geomatrix. The groundwater results indicated that no contamination was detected at depths of 20 feet and 35 feet below ground surface in GW-01 and at 30 ft bgs in GW-02. However, additional information is needed to assess residual contamination at the depth of the bottom of the tank pit and in the first water encountered.

ACEH requests that you address the technical comments below and send us a Soil and Water Investigation (SWI) Addendum by the date requested below.

TECHNICAL COMMENTS

1. **Delineation of Groundwater and Soil Contamination.** As stated above, the results from your groundwater samples indicate that the contamination is not present at 20 or 35 feet bgs. However, no groundwater or soil samples were obtained from the capillary fringe, from the invert depth of the removed UST or the first encountered water at 14 feet below ground surface, leaving shallow depths uncharacterized. Groundwater was first observed in 1997 at a depth of 8.5 feet bgs, your work plan states that nearby sites have encountered groundwater at five feet bgs and your investigation report indicates that first encountered water was at 14 feet bgs. ACEH is concerned that the samples that were collected at 20 feet by a Hydropunch sampler may have missed the shallow water bearing zone and capillary fringe. Please demonstrate that the shallow groundwater samples that were obtained are representative of the first groundwater zone at the site. Also, no background data was referenced for groundwater direction. Please cite your references for the groundwater flow direction and depth of water that you used to determine the location of your downgradient borings.

2. **Incomplete Report Submittal.** The report states that no odor or staining was observed while logging GW-2 and that the Hydropunch casings were advanced to specific depths,

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 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) 639-1287 or send me an electronic mail message at barbara.jakub@acgov.org.

Sincerely,

Barbara J. Jakub

Barbara J. Jakub, P.G.
Hazardous Materials Specialist

Enclosures: ACEH Electronic Report Upload (ftp) Instructions

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	ISSUE DATE: July 5, 2005
	REVISION DATE: December 16, 2005
	PREVIOUS REVISIONS: October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

Effective **January 31, 2006**, 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.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection.** (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload.** (e.g., Subject: RO1234 Report Upload)

HFH Ltd.

April 21, 2009

Ms. Barbara Jakub
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: **Results of Groundwater Investigation Addendum**
Case No. RO0000050
U.S.T. removed February 14, 1997
Thoroughbred Building
1397 55th Street
Emeryville, California

Dear Ms. Jakub,

This letter transmits the Results of the Groundwater Investigation Addendum prepared by AMEC Geomatrix, Inc., on behalf of HFH, Ltd. for the property located at 1397 55th Street in Emeryville, California. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document are true and correct to the best of my knowledge.

Very truly yours,
HFH, Ltd.

Andrew Getz
general partner

6450 Hollis Street, Emeryville, California 94608 ~ (510) 652-4191 ~ fax: (510) 652-9661
8818 South Sepulveda Boulevard, Los Angeles, California 90045 ~ (310) 568-8585 ~ fax: (310) 568-0358

HFH Ltd.

June 1, 2007

Mr. Steven Plunkett
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Results of Groundwater Investigation
Fuel Leak Case No. RO0000050
Thoroughbred Building
1397 55th Street
Emeryville, California

Dear Mr. Plunkett,

This letter transmits the Results of Groundwater Investigation prepared by Geomatrix Consultants, Inc., on behalf of HFH, Ltd. for the property located at 1397 55th Street in Emeryville, California. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document are true and correct to the best of my knowledge.

Sincerely,
HFH, Ltd.

Andrew Getz

6450 Hollis Street, Emeryville, California 94608 ~ (510) 652-4191 ~ fax: (510) 652-9661
8818 South Sepulveda Boulevard, Los Angeles, California 90045 ~ (310) 568-8585 ~ fax: (310) 568-0358

Geomatrix

June 1, 2007
Project No. 3356.000

Mr. Steven Plunkett
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Results of Groundwater Investigation
Fuel Leak Case No. RO0000050
Thoroughbred Building
1397 55th Street
Emeryville, California

Dear Mr. Plunkett:

This letter presents the results of the recent groundwater sampling conducted by Geomatrix Consultants, Inc. (Geomatrix), at 1397 55th Street in Emeryville, California (the site). This work was conducted in accordance with the Work Plan for Groundwater Investigation, submitted to Alameda County Environmental Health on January 18, 2007, and discussions between Geomatrix and ACEH regarding sampling methodologies and locations.

BACKGROUND

The former underground storage tank (UST) was installed in the early 1940s and contained kerosene. Reportedly, the tank was last used in the late 1950s and was empty until its removal in 1997. During tank removal, multiple holes were observed on all sides of the tank. Under the direction of ACEH personnel, three soil samples were collected from beneath the former UST. At the request of ACEH, only two samples (EX-2 and EX-3) were analyzed. Total petroleum hydrocarbons quantified as kerosene (TPHk) was reported in excavation samples EX-2 and EX-3 at concentrations of 4,400 and 310 milligrams per kilogram (mg/kg), respectively. Ethylbenzene and xylenes were detected in EX-2 and EX-3 at concentrations up to 5.6 mg/kg. Total petroleum hydrocarbons quantified as diesel (TPHd), benzene, and toluene were not detected in either excavation sample above the laboratory reporting limits. After the soil samples were collected, groundwater entered the excavation at a depth of approximately 8.5 feet below ground surface (bgs). Less than 5 gallons of groundwater entered the excavation and no product or sheen was observed on the water. The former UST excavation was subsequently backfilled with approximately 20 cubic yards of sand. The sand was compacted and a concrete sidewalk was poured over the former UST area.

GROUNDWATER INVESTIGATION

Prior to initiating subsurface investigation activities, Geomatrix marked boring locations, obtained necessary permits, and prepared a site-specific health and safety plan. Geomatrix notified Underground Service Alert 48 hours prior to drilling and contracted with a private utility locator to clear individual boring locations prior to drilling.

On May 18, 2007, one soil boring and two Hydropunch borings were advanced within the vicinity of the former UST at the corner of 55th Street and Doyle Street (Figure 1). Borings were advanced by a licensed drilling contractor using a hydraulic direct-push drilling rig equipped with a dual-tube continuous sampling system, or with a Hydropunch groundwater sampling system. The soil boring located downgradient of the former UST (GW-02) was advanced to 30 feet bgs. Soil was logged by a Geomatrix field geologist in accordance with the ASTM International Standard D2488 and the Uniform Soil Classification System. Odors, discoloration, staining, and sheens were noted, if observed.

A temporary well point was then placed in borehole GW-02 and the drive casing was retracted approximately 5 feet to expose the well screen. The temporary well point consisted of ¾-inch-diameter Schedule 40 polyvinyl chloride (PVC) casing with 5 feet of factory-slotted well screen. Grab groundwater sample (GW-02-30) was collected from between 25 and 30 feet bgs from this boring. In an attempt to collect a shallow grab groundwater sample from the first observed depth of groundwater (approximately 14 feet bgs), a companion Hydropunch boring was advanced to 16 feet bgs, and retracted approximately 5 feet to expose the screen. Over the course of 4 hours, an attempt was made to collect a grab groundwater sample; however, a sufficient volume of water did not enter the boring.

In the location of the former UST, Hydropunch boring GW-01 was advanced to approximately 20 feet bgs, the casing was retracted 5 feet to expose the screen, and grab groundwater sample GW-01-20 was collected. The Hydropunch tooling was removed from the hole, a sacrificial, stainless-steel tip was placed on the end of the tooling, and the Hydropunch was advanced to approximately 35 feet bgs. As before, the casing was retracted 5 feet to expose the screen and grab groundwater sample GW-01-35 was collected. A blind, duplicate sample was collected at the same time as the grab groundwater sample (GW-01-35) from boring GW-01 from 35 feet bgs. The duplicate sample was labeled as GW-11-35.

The grab groundwater samples were collected using new, disposable bailers. Grab groundwater samples were decanted into laboratory-supplied containers, labeled, placed in an ice-chilled cooler, and transported to Curtis and Tompkins, a California Department of Health-certified laboratory, in accordance with Geomatrix chain-of-custody protocols.

RESULTS

Geomatrix personnel described the site lithology based on the soil core generated during drilling of soil boring GW-02. Concrete was encountered from ground surface to approximately 0.5 feet bgs. Below the concrete, fine-grained soils consisting of lean clay and sandy lean clay were interbedded with coarse-grained soils consisting of clayey sand and clayey sand with gravel. No odors, discoloration, staining, or sheens were observed while logging the soil core. Groundwater was first encountered in the boring at approximately 14 feet bgs.

Each sample was analyzed for the following constituents:

- total petroleum hydrocarbons quantified as gasoline (TPHg), TPHd, and TPHk;
- benzene, toluene, ethylbenzene, and xylenes (BTEX);
- methyl tert-butyl ether (MTBE), tert-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), and tert-amyl ether (TAME); and
- 1,2-dichloroethane, and 1,2-dibromoethane.

No analytes were detected above the laboratory's reporting limit in all grab groundwater samples. Analytical results are summarized in Table 1. The laboratory analytical report is included as Attachment 1.

DEVIATIONS FROM AGREED-UPON WORK SCOPE

During discussions regarding the Work Plan, ACEH requested that a soil sample be collected at the soil/groundwater interface from each boring. Collection of soil samples was inadvertently overlooked during groundwater sampling activities. However, groundwater analytical results indicate that soil impacts, if present, do not present a source of constituents to groundwater. Additionally, no odor or staining were observed during logging of soil boring GW-02. Soil around the UST was excavated during removal and volatile constituents were not present in confirmation samples at concentrations above the Regional Water Quality Control Board's environmental screening levels (ESLs) for vapor intrusion. Therefore, residual petroleum hydrocarbons, if present, in soil do not pose a risk to human health and we request that the collection of soil samples not be required.

CONCLUSIONS

Based on the laboratory analytical results and field observation, the shallow and deeper groundwater in the vicinity of the former UST does not appear to be impacted. Surface conditions at the site are such that there is no possibility of human contact with soil or groundwater (i.e. paved street, sidewalk, and building). Additionally, residual petroleum hydrocarbons in soil, if present, do not pose a risk to human health. Therefore, we request this case be considered for no further action status.

Please feel free to call either of the undersigned if you have any comments or questions.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

Paisha Jorgensen, PG #7806
Project Geologist

Jennifer L. Patterson, PE #59161
Senior Engineer

PBJ/JP/kg

Enclosure: Table 1 – Grab Groundwater Sample Analytical Results
Figure 1 – Grab Groundwater Sampling Locations
Attachment 1 – Analytical Laboratory Report

Table

TABLE 1

GRAB GROUNDWATER SAMPLE ANALYTICAL RESULTS[1]

Thoroughbred Building
1397 55th Street
Emeryville, California

Concentrations reported in microgram per liter (µg/l)

SAMPLE ID	DATE	TPHd	TPHk	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB
GW-01-20	5/18/2007	<56	<56	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50
GW-01-35	5/18/2007	<50/<50[2]	<50/<50	<50/<50	<0.50/<0.50	<0.50/<0.50	<0.50/<0.50	<0.50/<0.50	<0.50/<0.50	<10/<10	<0.50/<0.50	<0.50/<0.50	<0.50/<0.50	<0.50/<0.50	<0.50/<0.50
GW-02-30	5/18/2007	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:

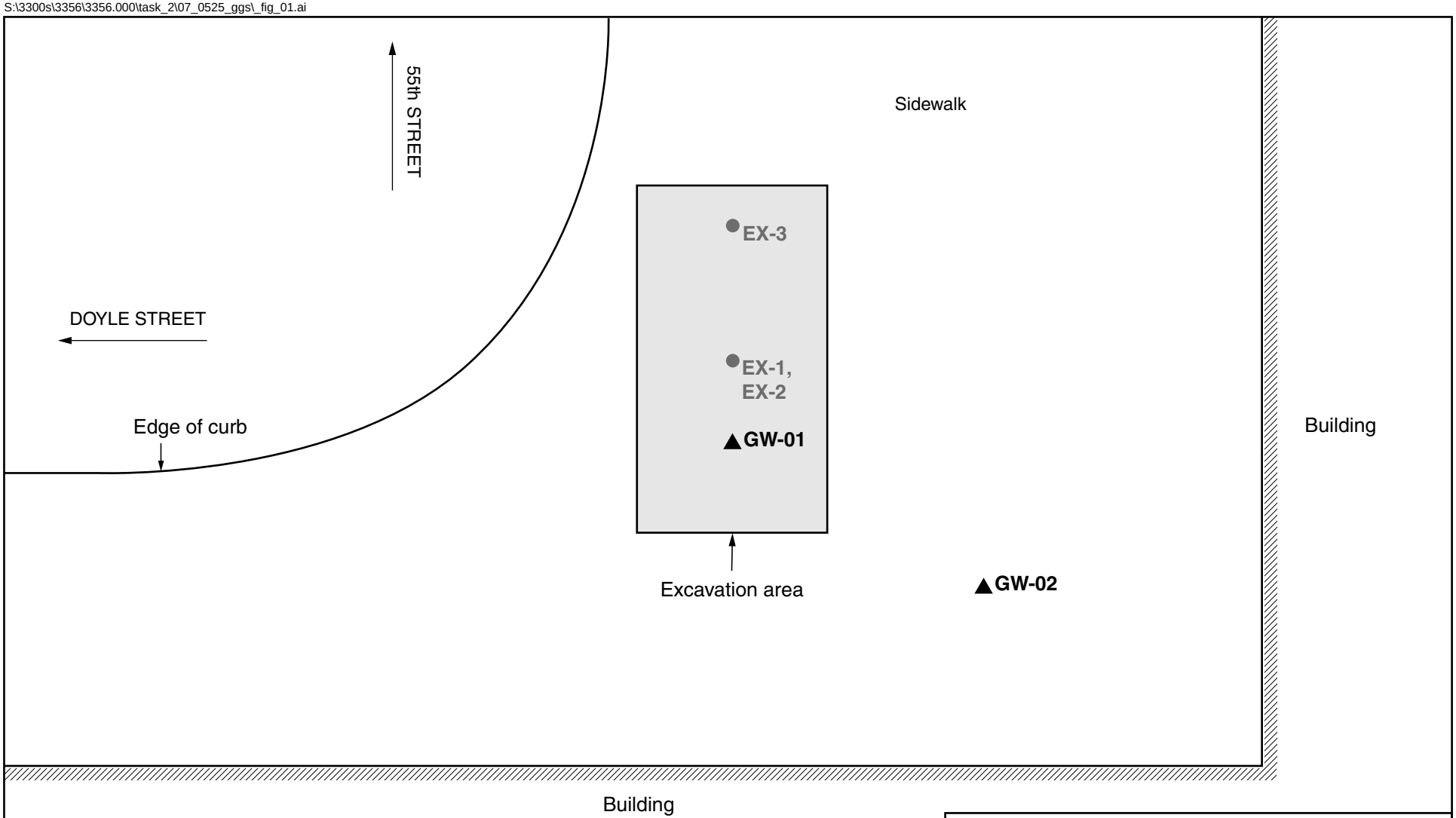
1. Grab groundwater samples were collected by Geomatrix Consultants, Inc., of Oakland, California, and analyzed by Curtis & Tompkins, of Berkeley, California for TPHd and TPHk using EPA Method 8015B following silica gel prepartation; and TPHg, benzene, toluene, ethylbenzene, total xylenes, MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA, and EDB using EPA Method 8260B.
2. / = Indicates blind duplicate sample collected from boring. Blind duplicate sample results are shown with the grab groundwater sample results.
3. < = Analyte not detected above laboratory reporting limit.

Abbreviations:

TPHd = total petroleum hydrocarbons quantified as diesel
TPHk = total petroleum hydrocarbons quantified as kerosene
TPHg = total petroleum hydrocarbons quantified as gasoline
1,2-DCA = 1,2-dichloroethane
DIPE = di-isopropyl ether
EDB = 1,2-dibromoethane
ETBE = ethyl tert-butyl ether
MTBE = methyl tert-butyl ether
TAME = tert-amyl methyl ether
TBA = tert-butyl alcohol

Figure

S:\3300s\3356\3356.000\task_2\07_0525_ggs_fig_01.ai



EXPLANATION

GW-01 ▲ Grab groundwater sample location

EX-3 ● Excavation bottom soil sample location, 1997

0 5 Feet

GRAB GROUNDWATER SAMPLING LOCATIONS
Thoroughbred Building
1397 55th Street
Emeryville, California

By: PBJ	Date: 6/1/07	Project No. 3356.000
Geomatrix		Figure 1

Geomatrix

Attachment A
Analytical Laboratory Report

194900

CHAIN-OF-CUSTODY RECORD

OAK 11326

DATE: 5/18/07 PAGE 1 OF 1

PROJECT NAME: Thoroughbred Building

PROJECT NUMBER: 3356.000

RESULTS TO: Raisha Jorgensen

TURNAROUND TIME: ~~Standard~~ 3-Day

SAMPLE SHIPMENT METHOD: Drop off

LABORATORY NAME: Curtis & Tompkins

LABORATORY ADDRESS:

LABORATORY CONTACT: Robert Butler

LABORATORY PHONE NUMBER: 510-486-0900

CLIENT INFORMATION: HFH, Ltd.

REPORTING REQUIREMENTS:

GEOTRACKER REQUIRED YES (NO)

SITE SPECIFIC GLOBAL ID NO.

SAMPLERS (SIGNATURE): [signature]

	DATE	TIME	SAMPLE NUMBER	TPH diesel/kerosene by 8015M	MSTV H+1,2-DCA +EDB by 8260	TPH gas/BTEX by 8260	~~TTLC 10~~ RCRA 8 metals	Silica gel cleanup	CONTAINER TYPE AND SIZE	Soil (S), Water (W), Vapor (V), or Other (O)	Filtered	Preservative Type	Cooled	MS/MSD	No. of Containers	ADDITIONAL COMMENTS
-1	5/18/07	1200	+DW-1	X		X	X	X	6" stainless sleeve	S	-	pp	Y	-	1	
-2	↓	1240	GW-02-30	X	~~X~~ NA			X	1L Amber ~~40ml VOA~~	W	-	~~HCL~~	Y	Y	2	MS/MSD
-2		1240	GW-02-30		X				40 ml VOA	W	-	HCL	Y	Y	6	MS/MSD
-3		1510	GW-01-20	X				X	1L Amber	W	-	-	Y	-	1	
-3		1510	GW-01-20		X				40 ml VOA	W	-	HCL	Y	-	3	
-4		1600	GW-01-35	X				X	1L Amber	W	-	-	Y	-	1	
-4		1600	GW-01-35		X				40 ml VOA	W	-	HCL	Y	-	3	
-5		1630	GW-11-35	X				X	1L Amber	W	-	-	Y	-	1	
-5		1630	GW-11-35		X				40 ml VOA	W	-	HCL	Y	-	3	
-6			Trip Blank						40 ml VOA						2	HOLD

TOTAL NUMBER OF CONTAINERS: 23

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
SIGNATURE: [signature] PRINTED NAME: Raisha Jorgensen COMPANY: Geomatrix	5/18/07	1715	SIGNATURE: [signature] PRINTED NAME: COMPANY:	5/18/07	5:15
SIGNATURE: PRINTED NAME: COMPANY:			SIGNATURE: PRINTED NAME: COMPANY:		
SIGNATURE: PRINTED NAME: COMPANY:			SIGNATURE: PRINTED NAME: COMPANY:		

SAMPLING COMMENTS:

2101 Webster Street, 12th Floor
Oakland, California 94612-3066
Tel 510.663.4100 Fax 510.663.4141

Geomatrix

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 194900 Date Received: 5/18/07 Number of Coolers: 1
Client: Geomatrix Project: Thoroughbred Building

A. Preliminary Examination Phase
Date Opened: 5/18/07 By (print): Patrick P (sign)

1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES (NO)
   If YES, enter carrier name and airbill number: _____
2. Were custody seals on outside of cooler? ..... YES (NO)
   How many and where? _____ Seal date: _____ Seal name: _____
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO N/A
4. Were custody papers dry and intact when received? ..... (YES) NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (YES) NO
6. Did you sign the custody papers in the appropriate place? ..... (YES) NO
7. Was project identifiable from custody papers? ..... (YES) NO
   If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be 2-6 degrees C. ..... YES (NO)
   Type of ice: Wet Temperature: 7.1°

B. Login Phase
Date Logged In: 5/18/07 By (print): Patrick P (sign)

1. Describe type of packing in cooler: zip lock bags
2. Did all bottles arrive unbroken? ..... (YES) NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ..... (YES) NO
4. Did bottle labels agree with custody papers? ..... (YES) NO
5. Were appropriate containers used for the tests indicated? ..... (YES) NO
6. Were correct preservatives added to samples? ..... (YES) NO
7. Was sufficient amount of sample sent for tests indicated? ..... (YES) NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... (YES) NO
9. Was the client contacted concerning this sample delivery? ..... YES NO
   If YES, give details below.
   Who was called? _____ By whom? _____ Date: _____

Additional Comments:

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD		
Field ID:	IDW-1	Batch#:	125440
Matrix:	Soil	Sampled:	05/18/07
Basis:	as received	Received:	05/18/07
Diln Fac:	1.000	Analyzed:	05/21/07

Type: SAMPLE Lab ID: 194900-001

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	0.98	mg/Kg	EPA 8015B
Benzene	ND	4.9	ug/Kg	EPA 8021B
Toluene	ND	4.9	ug/Kg	EPA 8021B
Ethylbenzene	ND	4.9	ug/Kg	EPA 8021B
m,p-Xylenes	ND	4.9	ug/Kg	EPA 8021B
o-Xylene	ND	4.9	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	97	70-132	EPA 8015B
Bromofluorobenzene (FID)	95	66-138	EPA 8015B
Trifluorotoluene (PID)	97	63-142	EPA 8021B
Bromofluorobenzene (PID)	95	70-129	EPA 8021B

Type: BLANK Lab ID: QC388796

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	0.20	mg/Kg	EPA 8015B
Benzene	ND	1.0	ug/Kg	EPA 8021B
Toluene	ND	1.0	ug/Kg	EPA 8021B
Ethylbenzene	ND	1.0	ug/Kg	EPA 8021B
m,p-Xylenes	ND	1.0	ug/Kg	EPA 8021B
o-Xylene	ND	1.0	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	98	70-132	EPA 8015B
Bromofluorobenzene (FID)	98	66-138	EPA 8015B
Trifluorotoluene (PID)	98	63-142	EPA 8021B
Bromofluorobenzene (PID)	98	70-129	EPA 8021B

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Basis:	as received
Lab ID:	QC388797	Diln Fac:	1.000
Matrix:	Soil	Batch#:	125440
Units:	mg/Kg	Analyzed:	05/21/07

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	9.976	100	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	109	70-132
Bromofluorobenzene (FID)	116	66-138

Curtis & Tompkins, Ltd.

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	194868-022	Batch#:	125440
Matrix:	Soil	Sampled:	05/16/07
Units:	mg/Kg	Received:	05/17/07
Basis:	as received	Analyzed:	05/21/07

Type: MS Lab ID: QC388798

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.02647	2.198	1.371	61	36-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	70-132
Bromofluorobenzene (FID)	106	66-138

Type: MSD Lab ID: QC388799

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1.923	1.126	57	36-120	6	29

Surrogate	%REC	Limits
Trifluorotoluene (FID)	120	70-132
Bromofluorobenzene (FID)	122	66-138

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8021B
Type:	LCS	Basis:	as received
Lab ID:	QC388808	Diln Fac:	1.000
Matrix:	Soil	Batch#:	125440
Units:	ug/Kg	Analyzed:	05/21/07

Analyte	Spiked	Result	%REC	Limits
Benzene	100.0	91.56	92	80-120
Toluene	100.0	92.19	92	80-120
Ethylbenzene	100.0	94.85	95	80-120
m,p-Xylenes	100.0	95.01	95	80-120
o-Xylene	100.0	95.62	96	80-120

Surrogate	%REC	Limits
Trifluorotoluene (PID)	95	63-142
Bromofluorobenzene (PID)	95	70-129

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	05/18/07
Units:	ug/L	Received:	05/18/07
Diln Fac:	1.000	Prepared:	05/19/07
Batch#:	125405		

Field ID: GW-02-30 Analyzed: 05/22/07
Type: SAMPLE Cleanup Method: EPA 3630C
Lab ID: 194900-002

Analyte	Result	RL
Kerosene C10-C16	ND	50
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	111	61-134

Field ID: GW-01-20 Analyzed: 05/22/07
Type: SAMPLE Cleanup Method: EPA 3630C
Lab ID: 194900-003

Analyte	Result	RL
Kerosene C10-C16	ND	56
Diesel C10-C24	ND	56

Surrogate	%REC	Limits
Hexacosane	103	61-134

Field ID: GW-01-35 Analyzed: 05/23/07
Type: SAMPLE Cleanup Method: EPA 3630C
Lab ID: 194900-004

Analyte	Result	RL
Kerosene C10-C16	ND	50
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	94	61-134

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	05/18/07
Units:	ug/L	Received:	05/18/07
Diln Fac:	1.000	Prepared:	05/19/07
Batch#:	125405		

Field ID:	GW-11-35	Analyzed:	05/23/07
Type:	SAMPLE	Cleanup Method:	EPA 3630C
Lab ID:	194900-005		

Analyte	Result	RL
Kerosene C10-C16	ND	50
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	96	61-134

Type:	BLANK	Analyzed:	05/22/07
Lab ID:	QC388657	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	ND	50
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	104	61-134

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC388658	Batch#:	125405
Matrix:	Water	Prepared:	05/19/07
Units:	ug/L	Analyzed:	05/22/07

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,828	73	58-130

Surrogate	%REC	Limits
Hexacosane	87	61-134

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	GW-02-30	Batch#:	125405
MSS Lab ID:	194900-002	Sampled:	05/18/07
Matrix:	Water	Received:	05/18/07
Units:	ug/L	Prepared:	05/19/07
Diln Fac:	1.000	Analyzed:	05/22/07

Type: MS Cleanup Method: EPA 3630C
Lab ID: QC388659

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	33.24	2,500	2,080	82	57-134

Surrogate	%REC	Limits
Hexacosane	104	61-134

Type: MSD Cleanup Method: EPA 3630C
Lab ID: QC388660

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,068	81	57-134	1	32

Surrogate	%REC	Limits
Hexacosane	102	61-134

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	IDW-1	Batch#:	125401
Matrix:	Soil	Sampled:	05/18/07
Units:	mg/Kg	Received:	05/18/07
Basis:	as received	Prepared:	05/19/07
Diln Fac:	1.000	Analyzed:	05/21/07

Type: SAMPLE Cleanup Method: EPA 3630C
Lab ID: 194900-001

Analyte	Result	RL
Kerosene C10-C16	ND	1.0
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
Hexacosane	87	40-127

Type: BLANK Cleanup Method: EPA 3630C
Lab ID: QC388643

Analyte	Result	RL
Kerosene C10-C16	ND	1.0
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
Hexacosane	89	40-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC388644	Batch#:	125401
Matrix:	Soil	Prepared:	05/19/07
Units:	mg/Kg	Analyzed:	05/21/07
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.59	41.06	83	58-127

Surrogate	%REC	Limits
Hexacosane	79	40-127

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	125401
MSS Lab ID:	194793-002	Sampled:	04/19/07
Matrix:	Soil	Received:	05/14/07
Units:	mg/Kg	Prepared:	05/19/07
Basis:	as received	Analyzed:	05/21/07
Diln Fac:	1.000		

Type: MS Lab ID: QC388645

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	6.138	49.77	38.38	65	29-147

Surrogate	%REC	Limits
Hexacosane	61	40-127

Type: MSD Lab ID: QC388646

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.62	52.70	94	29-147	32	46

Surrogate	%REC	Limits
Hexacosane	76	40-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	GW-02-30	Batch#:	125418
Lab ID:	194900-002	Sampled:	05/18/07
Matrix:	Water	Received:	05/18/07
Units:	ug/L	Analyzed:	05/21/07
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-123
1,2-Dichloroethane-d4	94	79-134
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	GW-01-20	Batch#:	125418
Lab ID:	194900-003	Sampled:	05/18/07
Matrix:	Water	Received:	05/18/07
Units:	ug/L	Analyzed:	05/21/07
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-123
1,2-Dichloroethane-d4	92	79-134
Toluene-d8	99	80-120
Bromofluorobenzene	99	80-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	GW-01-35	Batch#:	125418
Lab ID:	194900-004	Sampled:	05/18/07
Matrix:	Water	Received:	05/18/07
Units:	ug/L	Analyzed:	05/21/07
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-123
1,2-Dichloroethane-d4	93	79-134
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	GW-11-35	Batch#:	125418
Lab ID:	194900-005	Sampled:	05/18/07
Matrix:	Water	Received:	05/18/07
Units:	ug/L	Analyzed:	05/21/07
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-123
1,2-Dichloroethane-d4	94	79-134
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC388704	Batch#:	125418
Matrix:	Water	Analyzed:	05/21/07
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-123
1,2-Dichloroethane-d4	92	79-134
Toluene-d8	99	80-120
Bromofluorobenzene	99	80-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	125418
Units:	ug/L	Analyzed:	05/21/07
Diln Fac:	1.000		

Type: BS Lab ID: QC388705

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	129.5	104	68-132
Isopropyl Ether (DIPE)	25.00	26.89	108	65-120
Ethyl tert-Butyl Ether (ETBE)	25.00	27.01	108	75-124
Methyl tert-Amyl Ether (TAME)	25.00	26.52	106	77-120
MTBE	25.00	25.07	100	71-120
1,2-Dichloroethane	25.00	22.80	91	79-121
Benzene	25.00	26.00	104	80-120
Toluene	25.00	26.49	106	80-120
1,2-Dibromoethane	25.00	24.59	98	80-120
Ethylbenzene	25.00	27.91	112	80-124
m,p-Xylenes	50.00	56.42	113	80-127
o-Xylene	25.00	26.89	108	80-124

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-123
1,2-Dichloroethane-d4	92	79-134
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-122

Type: BSD Lab ID: QC388706

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	138.3	111	68-132	7	20
Isopropyl Ether (DIPE)	25.00	26.57	106	65-120	1	20
Ethyl tert-Butyl Ether (ETBE)	25.00	26.44	106	75-124	2	20
Methyl tert-Amyl Ether (TAME)	25.00	24.77	99	77-120	7	20
MTBE	25.00	25.39	102	71-120	1	20
1,2-Dichloroethane	25.00	23.68	95	79-121	4	20
Benzene	25.00	26.26	105	80-120	1	20
Toluene	25.00	26.40	106	80-120	0	20
1,2-Dibromoethane	25.00	25.19	101	80-120	2	20
Ethylbenzene	25.00	27.40	110	80-124	2	20
m,p-Xylenes	50.00	56.66	113	80-127	0	20
o-Xylene	25.00	26.89	108	80-124	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-123
1,2-Dichloroethane-d4	93	79-134
Toluene-d8	99	80-120
Bromofluorobenzene	99	80-122

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC388707	Batch#:	125418
Matrix:	Water	Analyzed:	05/21/07
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	1,889	94	80-121

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-123
1,2-Dichloroethane-d4	93	79-134
Toluene-d8	99	80-120
Bromofluorobenzene	96	80-122

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	GW-02-30	Batch#:	125418
MSS Lab ID:	194900-002	Sampled:	05/18/07
Matrix:	Water	Received:	05/18/07
Units:	ug/L	Analyzed:	05/21/07
Diln Fac:	1.000		

Type: MS Lab ID: QC388739

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	7.548	2,000	1,976	98	70-131

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-123
1,2-Dichloroethane-d4	93	79-134
Toluene-d8	99	80-120
Bromofluorobenzene	95	80-122

Type: MSD Lab ID: QC388740

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,924	96	70-131	3	30

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-123
1,2-Dichloroethane-d4	91	79-134
Toluene-d8	99	80-120
Bromofluorobenzene	94	80-122

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

RCRA Metals

Lab #:	194900	Project#:	STANDARD
Client:	Geomatrix Consultants	Location:	Thoroughbred Building
Field ID:	IDW-1	Diln Fac:	1.000
Lab ID:	194900-001	Sampled:	05/18/07
Matrix:	Soil	Received:	05/18/07
Units:	mg/Kg	Prepared:	05/22/07
Basis:	as received		

Analyte	Result	RL	Batch#	Analyzed	Prep	Analysis
Arsenic	9.5	0.25	125496	05/23/07	EPA 3050B	EPA 6010B
Barium	110	0.25	125496	05/23/07	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	125496	05/23/07	EPA 3050B	EPA 6010B
Chromium	33	0.25	125496	05/23/07	EPA 3050B	EPA 6010B
Lead	7.1	0.15	125496	05/23/07	EPA 3050B	EPA 6010B
Mercury	0.050	0.020	125499	05/22/07	METHOD	EPA 7471A
Selenium	ND	0.50	125496	05/23/07	EPA 3050B	EPA 6010B
Silver	ND	0.25	125496	05/23/07	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

RCRA Metals

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 3050B
Project#:	STANDARD	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC389030	Batch#:	125496
Matrix:	Soil	Prepared:	05/22/07
Units:	mg/Kg	Analyzed:	05/23/07
Basis:	as received		

Analyte	Result	RL
Arsenic	ND	0.25
Barium	ND	0.25
Cadmium	ND	0.25
Chromium	ND	0.25
Lead	ND	0.15
Selenium	ND	0.50
Silver	ND	0.25

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

RCRA Metals

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 3050B
Project#:	STANDARD	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	125496
Units:	mg/Kg	Prepared:	05/22/07
Basis:	as received	Analyzed:	05/23/07
Diln Fac:	1.000		

Type: BS Lab ID: QC389031

Analyte	Spiked	Result	%REC	Limits
Arsenic	50.00	49.55	99	80-120
Barium	100.0	98.86	99	80-120
Cadmium	10.00	10.33	103	80-120
Chromium	100.0	100.3	100	80-120
Lead	100.0	98.26	98	80-120
Selenium	50.00	49.84	100	80-120
Silver	10.00	9.490	95	80-120

Type: BSD Lab ID: QC389032

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Arsenic	50.00	49.98	100	80-120	1	20
Barium	100.0	98.68	99	80-120	0	20
Cadmium	10.00	10.16	102	80-120	2	20
Chromium	100.0	98.11	98	80-120	2	20
Lead	100.0	97.72	98	80-120	1	20
Selenium	50.00	50.24	100	80-120	1	20
Silver	10.00	9.433	94	80-120	1	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

RCRA Metals

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	EPA 3050B
Project#:	STANDARD	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	125496
MSS Lab ID:	194908-018	Sampled:	05/18/07
Matrix:	Soil	Received:	05/18/07
Units:	mg/Kg	Prepared:	05/22/07
Basis:	as received	Analyzed:	05/23/07
Diln Fac:	1.000		

Type: MS Lab ID: QC389033

Analyte	MSS Result	Spiked	Result	%REC	Limits
Arsenic	12.58	48.54	52.11	81	72-120
Barium	42.38	97.09	126.1	86	49-138
Cadmium	0.3716	9.709	8.883	88	72-120
Chromium	52.53	97.09	141.7	92	63-122
Lead	50.66	97.09	122.1	74	55-122
Selenium	0.5954	48.54	42.35	86	73-120
Silver	0.3807	9.709	9.051	89	53-120

Type: MSD Lab ID: QC389034

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Arsenic	46.30	55.24	92	72-120	10	20
Barium	92.59	130.7	95	49-138	7	23
Cadmium	9.259	8.576	89	72-120	1	20
Chromium	92.59	134.2	88	63-122	2	20
Lead	92.59	132.9	89	55-122	12	26
Selenium	46.30	40.86	87	73-120	1	20
Silver	9.259	8.574	88	53-120	1	22

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

RCRA Metals

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 7471A
Analyte:	Mercury	Basis:	as received
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC389049	Batch#:	125499
Matrix:	Soil	Prepared:	05/22/07
Units:	mg/Kg	Analyzed:	05/22/07

Result	RL
ND	0.020

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

RCRA Metals

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Matrix:	Soil	Batch#:	125499
Units:	mg/Kg	Prepared:	05/22/07
Basis:	as received	Analyzed:	05/22/07

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC389050	0.5000	0.5440	109	80-120		
BSD	QC389051	0.5000	0.5210	104	80-120	4	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

RCRA Metals

Lab #:	194900	Location:	Thoroughbred Building
Client:	Geomatrix Consultants	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	125499
MSS Lab ID:	194864-001	Sampled:	05/16/07
Matrix:	Miscell.	Received:	05/17/07
Units:	mg/Kg	Prepared:	05/22/07
Basis:	as received	Analyzed:	05/22/07

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC389053	0.6298	0.4902	0.7284	20 *	67-143		
MSD	QC389054		0.4808	0.7606	27 *	67-143	5	23

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference