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November 8, 2005
File No. 54504/002

Mr. Hernan Gomez
Fire Prevention Bureau
Oakland Fire Department
250 Frank H. Ogawa Plaza, Ste. 3341
Oakland, CA 94612-2032

**Subject: Transmittal of Underground Storage Tank Removal Report
700 Independent Road, Oakland, California**

Dear Mr. Gomez:

The attached letter report, prepared by Kleinfelder for Equity Office Properties, documents the removal of one approximately 1,100-gallon underground storage tank and subsequent backfilling in August and September, 2005 at 700 Independent Road, in Oakland, California. The attached document summarizes tank removal activities, analytical results of confirmation soil samples, and recommendations for further action.

According to analytical results of confirmation soil samples collected from the excavation, soil near the south end is impacted with petroleum hydrocarbons, including TPH-g and TPH-d, at concentrations exceeding Regional Water Quality Control Board Environmental Screening Levels. During tank removal activities, stained soil was observed surrounding the tank.

Please do not hesitate to contact me at (510) 628-9000 if you should have any questions regarding these documents.

Sincerely,

KLEINFELDER, INC

Charles Almestad, P.G., C.HG.
Senior Client Manager

Enclosure

cc: Frank Frankini

November 1, 2005
File No. 54504/002

Mr. Frank Frankini
Equity Office Properties
Two North Riverside Plaza, Suite 2100
Chicago, IL 60606

**SUBJECT: Underground Storage Tank Removal Report
700 Independent Road, Oakland, California**

Dear Mr. Frankini:

Kleinfelder Inc. (Kleinfelder) is pleased to submit this letter report documenting underground storage tank (UST) removal activities completed in August and September, 2005 at 700 Independent Road in Oakland, California. Activities were conducted in accordance with Kleinfelder's *Proposal for Underground Storage Tank Removal, 700 Independent Road, Oakland, California* (June 8, 2005).

Equity Office Properties (EOP) retained Kleinfelder to remove one approximately 1,100-gallon UST from the subject property. Tank removal, confirmation sampling, backfilling, and compaction activities were completed on August 17, September 15, and September 16, 2005. Golden Gate Tank Removal, Inc. (GGTR) performed tank removal activities under Kleinfelder's direction. A representative from the Oakland Fire Department (OFD), Hernan Gomez, was present during UST removal activities, and soil confirmation samples were collected by Kleinfelder under his guidance.

SITE DESCRIPTION

The site is located at 700 Independent Road in Oakland, approximately 1,000 feet north of the McAfee Stadium. The site is currently occupied by a one-story warehouse building and parking lot, and is situated in an industrial/commercial area of southwest Oakland.

PREVIOUS ENVIRONMENTAL INVESTIGATIONS

A Phase I environmental site assessment and limited soil and groundwater investigation were conducted by Golder Associates (Golder) in 2004. Petroleum hydrocarbon impacts were discovered in soil and groundwater samples collected from near the loading dock on the property. Soil and groundwater samples collected from boring B8 (shown on Plate 3), located approximately 14 feet northwest of the UST excavation described in this report, were found to contain petroleum hydrocarbons and aromatic compounds in concentrations exceeding Regional Water Quality Control Board, San

Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs). Analytical results for soil and groundwater samples collected by Golder from boring B8, along with respective ESLs, are presented in Table 1.

In addition, Golder observed what was believed to be a UST fill port in this general vicinity.

SITE RECONNAISSANCE / GEOPHYSICAL SURVEY

On March 16, 2005, Kleinfelder and a utility subcontractor, Norcal Geophysical (Norcal), visited the site and performed a geophysical survey of the site, particularly in the region of the suspected fill-port observed by Golder, and the impacted soil samples they collected and analyzed.

Using a combination of field observations, hand-held metal-detection, ground penetrating radar, and electromagnetic line locating methods, Norcal concluded that a UST existed below the observed fill-port. The depth of the bottom of the UST was determined to be approximately 7.5 feet below the lip of the fill-port, and the top of the UST was estimated to be at a 3.5-foot depth from the fill-port lip. The UST's size was estimated to be approximately four feet wide, 14 feet long, and 1,300-gallons in capacity. The UST was believed to contain approximately 400 gallons of product suspected to be gasoline.

In addition, a visual and geophysical survey of associated piping was conducted by Kleinfelder and Norcal. The product lines appeared to run beneath the building between the UST and a former dispenser location that was observed above grade on the west side of the building. Also, vent lines from the UST extended from the UST in the same trench as the product lines but departed from the trench alignment and extended up the side of the main building, penetrating the roof.

Norcal's Geophysical Survey report is included as Appendix A.

FIELD PREPARATION ACTIVITIES

Prior to beginning the invasive field work, Kleinfelder's tank removal subcontractor, Golden Gate Tank Removal (GGTR), obtained permits and approvals from the appropriate regulatory agencies including the Bay Area Air Quality Control Board (BAAQCB), State of California division of Occupational Safety and Health (OSHA), Oakland Department of Public Works (DPW), the Oakland Department of Parking and Traffic, the Oakland Fire Department Bureau of Fire Prevention, and the Oakland Police Department. Permits are on file at the GGTR office.

In addition, GGTR notified Underground Storage Alert (USA) regarding the tank removal. Utility operators were informed of the impending work and located their respective utilities at the property. No utilities were located in the areas of proposed boring locations.

A site specific Health and Safety Plan was prepared by GGTR, which was kept on-site during field activities. A copy of the Health and Safety Plan was submitted to the Oakland Fire Department Bureau of Fire Prevention.

UST REMOVAL

One fuel underground storage tank and associated piping were removed on August 17, 2005 from the subject site. The tank was removed by GGTR and disposed of at Ecology Control Industries of Richmond, California. A representative from the Oakland Fire Department (OFD), Hernan Gomez, was present during UST removal activities. Figures 2 and 3 show the general layout of the site.

Surface asphalt and soil was removed by GGTR using an excavator, until the tank was exposed. Soil was stockpiled on-site on top of visqueen plastic sheeting. The top of the tank was located approximately 3.5 feet below ground surface (ft bgs), and the tank's approximate dimensions were four feet in diameter, 12 feet in length, and approximately 1,100-gallons in capacity. The tank was observed to be rusty and stained, and had many holes. The soil surrounding the tank was visibly stained and had a hydrocarbon odor.

To reduce the possibility of explosion, the oxygen content of the tank was reduced prior to its removal from the excavation by displacing the combustible vapors. GGTR accomplished this by inserting approximately 33 pounds of solid carbon dioxide (dry ice) into the tank, as required by the OFD. After inserting dry ice into the tank, the oxygen levels were measured by Mr. Gomez, who concluded levels were safe before tank removal proceeded.

GGTR lifted the tank out of the excavation by wrapping a chain around its perimeter and attaching it to the excavator (Photo 3). GGTR then placed the tank on a flatbed truck licensed for transporting hazardous waste (Photo 4), and the tank was subsequently transported to Ecology Control Industries in Richmond, California for disposal.

Exposed vent lines and fill pipes associated with the tank were removed by GGTR. The final dimensions of the excavation were approximately 14 feet in length, 7 feet in width, and 8 feet deep. The estimated volume of soil excavated was approximately 24 cubic yards.

CONFIRMATION SOIL SAMPLING

At Mr. Gomez's direction, Kleinfelder collected four soil samples following the UST removal, locations of which are shown on Plate 3. Sample S1 was collected from the south end of the former tank location, and sample S2 was collected from the north end of the former tank location. Samples from the UST excavation were collected from approximate depths of 8 ft bgs. From ground surface to an approximate depth of four feet bgs, soils in the excavation consisted of sandy materials. Below four feet bgs, clays were observed surrounding the tank.

An additional sample was collected from the fuel dispenser (photo 2, Plate 4) and was identified as "Dispenser." This sample was collected from an area immediately adjacent to the foundation of the former dispenser, at an approximate depth of eight inches bgs.

Kleinfelder also collected one four-point composite sample of the stockpiled soil that had been excavated in order to characterize the soil for backfilling and/or disposal.

Soil samples were collected in new six-inch stainless steel soil sample sleeves, and Teflon sheets and plastic caps were placed on each end. Each sample was labeled and recorded onto the chain-of-custody form, placed into a cooler with ice, and delivered to the laboratory on the same day for chemical analysis. Chain-of-custody records are included in Appendix B.

Groundwater was not encountered in the excavation during a half-hour period following tank removal. However, groundwater at the site has been reported by others at an approximate depth of 8 ft bgs.

Following sampling, the 24 cubic yards of excavated soil was placed on visqueen plastic back into the excavation to support the sidewalls of the excavation pending analytical results. For security, the top of the excavation was covered with 1-1/8-inch boards of plywood, and the work area was enclosed with construction hazard tape.

SAMPLE ANALYTICAL RESULTS

Two samples collected from the excavation, one sample collected from the former dispenser, and one four-point composite stockpile sample were analyzed for Total Petroleum Hydrocarbons as diesel (TPH-d) and Total Petroleum Hydrocarbons as gasoline (TPH-g) by EPA method 8015B, benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl-tert-butyl-ether (MTBE) by EPA method 8260B, and Leaking Underground Fuel Tank (LUFT) metals by EPA method 6010B.

Sample analytical results were compared to RWQCB ESLs, as presented in the following summary. Chemical analytical data is presented in Table 1, and laboratory analytical reports are included in Appendix B.

EXCAVATION SAMPLES

Soil samples from the excavation, S1 and S2, were found to contain TPH-d at respective concentrations of 5,090 and 9.46 milligrams per kilogram (mg/kg). The TPH-d concentration found in sample S1 exceeds the ESL of 500 mg/kg. TPH-g was detected in samples S1 and S2 at respective concentrations of 877 and 236 mg/kg. The concentration detected in the sample S1 exceeds the ESL of 400 mg/kg.

Aromatic hydrocarbons were detected in samples S1 and S2, including ethylbenzene (3.8 and 2.8 mg/kg, respectively) and xylenes (<0.010 and 2.9 mg/kg, respectively). The xylenes concentration detected in sample S2 exceeds the ESL of 1.5 mg/kg.

Four of five LUFT metals were detected in both excavation samples. Chromium was detected at concentrations of 28 and 46 mg/kg, and lead was detected at concentrations of 6.2 and 7.0 mg/kg. Nickel was detected in these samples at concentrations of 21 and 44 mg/kg, and zinc was detected at concentrations of 31 and 38 mg/kg. Cadmium was not detected in excavation samples. Concentrations of LUFT metals in excavation samples do not exceed ESLs.

DISPENSER SAMPLE

The sample collected from the former dispenser location was found to contain 246 mg/kg TPH-d and 0.185 mg/kg TPH-g. Aromatic hydrocarbons were not detected in the Dispenser sample. LUFT metals detected included chromium (23 mg/kg), lead (15 mg/kg), nickel (28 mg/kg), and zinc (67 mg/kg). ESLs were not exceeded for any chemicals in this sample.

STOCKPILE SAMPLE

A four-point composite soil sample collected from the stockpile of soil removed from above the UST was found to contain 236 mg/kg TPH-d and 0.104 mg/kg TPH-g. Xylenes were detected in this sample at a concentration of 0.018 mg/kg. Detected LUFT metals included chromium (57 mg/kg), lead (19 mg/kg), nickel (26 mg/kg), and zinc (54 mg/kg).

Because chemical concentrations detected in the composite stockpile sample did not exceed their respective ESLs, it was concluded that the soil was sufficiently clean to be used as backfill for the tank excavation.

BACKFILLING AND COMPACTION

On September 15 and 16, 2005, Kleinfelder and GGTR returned to the site to backfill and compact the excavation. All soils which had been temporarily placed inside the excavation pending analytical results were removed, along with the plywood and visqueen plastic sheeting. The imported soil was then placed into the bottom of the excavation up to an approximate depth of 5 ft bgs, and compacted by GGTR. Original soil taken from the excavation was then backfilled from 5 ft bgs to the surface in 8 to 10-inch lifts. On September 16, 2005, GGTR resurfaced the sidewalk with asphalt.

WASTE GENERATION AND DISPOSAL

The 1,100-gallon UST, along with associated piping and debris, were hauled off-site by GGTR on August 17, 2005 and transported to Ecology Control Industries in Richmond, California for disposal. Waste manifests are included in Appendix C.

The volume of liquid waste, including residual fuel contents of the UST and contaminated water generated during UST rinsing, amounted to 900 gallons. Liquid waste was transported by Clearwater Environmental to Alviso Independent Oil in Alviso, California for disposal.

CONCLUSIONS

One approximately 1,100-gallon UST was removed from the subject property on August 17, 2005, and the excavation was backfilled on September 15 and 16, 2005. Confirmation soil samples collected from the excavation indicated that soil near the south end is impacted with petroleum hydrocarbons, including TPH-g and TPH-d, at concentrations exceeding ESLs. During tank removal activities, stained soil was observed surrounding the tank. Historical soil and groundwater samples collected by others, from a boring located approximately 14 feet northwest of the former UST location, contained petroleum hydrocarbons and aromatic compounds at concentrations exceeding ESLs.

The source of chemical impacts to soil (the UST and associated piping) has been removed from the site. By removing the source of chemical impacts from the site, the potential for migration of petroleum hydrocarbon and aromatic compounds to surrounding soils or groundwater has been significantly reduced.

RECOMMENDATIONS

The sample from the south end of the UST excavation (sample S1) exhibited the highest concentrations of petroleum hydrocarbons in confirmation samples. Over-excavation of this area to remove impacted soil was considered by Kleinfelder. However, the impacted soil, which was observed and sampled during UST removal activities, is located approximately five feet north of the block building on site. Given its close proximity to the building foundation over-excavation was deemed impractical without removal of the building.

Kleinfelder recommends further subsurface investigation at the site, including the advancement of soil borings in areas surrounding the former UST for the collection and analysis of soil and groundwater samples for analysis to better characterize subsurface conditions. After delineating the extent of subsurface impacts and evaluating the groundwater gradient on the site, installation of monitoring wells followed by a groundwater monitoring program may be appropriate to assess potential natural attenuation.

LIMITATIONS

This report 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 year from the date of the report. Land use, site conditions (both on- and off-site) or other factors may change over time, and additional work may be required. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. 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 client agrees to defend, indemnify, and hold harmless

Kleinfelder from any claim or liability associated with such unauthorized use or non-compliance.

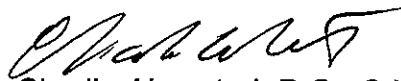
Please do not hesitate to contact the undersigned if you have any questions or comments regarding this summary report.

Sincerely,

KLEINFELDER, INC.



Emily Harris
Staff Geologist

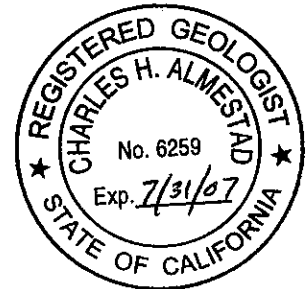


Charlie Almestad, P.G., C.H.G.
Senior Client Manager

Attachments:

Plates

- Plate 1 Site Vicinity Map
- Plate 2 Site Plan: Overall
- Plate 3 Site Plan : Detail
- Plate 4 Site Reconnaissance and UST Removal Photographs
- Plate 5 UST Removal Photographs



Tables

- Table 1 Chemical Data for Soil and Groundwater

Appendices

- Appendix A Norcal Geophysical Survey Report
- Appendix B Chemical Analytical Reports / Chain of Custody Records
- Appendix C Waste Manifests

TABLE

Table 1
 Chemical Analytical Data for Soil and Ground Water Samples
 700 Independent Road
 Oakland, California

	Soil Sample Location				Soil Boring B8 (Golder Associates, 8/04)				Soil ESL
	South End of Tank (S1)	North End of Tank (S2)	Dispenser	Stockpile Four-Point Composite	Soil	Soil	Soil	Ground water (mg/L)	
Depth (feet)	8	8	1	---	5	10	15		
Petroleum Hydrocarbons									
TPHg	877	236	0.185	0.104	51 a,m	210 a,m	190 a,m	54 a	400
TPHd	5090	9.46	246	236	5.9 d	25 d,b	25 d,b	7.4 d	500
Aromatic Compounds									
Benzene	<0.010	<0.010	<0.010	<0.010	0.52	1.6	1.2	9.8	0.38
Ethylbenzene	3.8	2.8	<0.010	<0.010	0.057	1.6	1.1	1.5	32
Toluene	<0.010	<0.010	<0.010	<0.010	0.028	<0.200	<0.050	0.93	9.3
Xylenes	<0.010	2.9	<0.010	0.018	0.098	1.6	1	3.1	11
MTBE	<0.010	<0.010	<0.010	<0.010	<0.020	<0.200	<0.050	<0.100	5.6
Metals									
Cadmium	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	7.4
Chromium	28	46	23	57	NA	NA	NA	NA	58
Lead	7.0	6.2	15	19	NA	NA	NA	NA	750
Nickel	21	44	28	26	NA	NA	NA	NA	150
Zinc	31	38	67	54	NA	NA	NA	NA	600
Other Volatile Organics									
n-Butyl benzene	NA	NA	NA	NA	0.16	0.4	0.29	<0.100	
Isopropylbenzene	NA	NA	NA	NA	0.12	<0.200	0.98	<0.100	
1,2,4 Trimethylbenzene	NA	NA	NA	NA	<0.020	2.7	2.1	0.93	
sec-Butyl benzene	NA	NA	NA	NA	0.046	<0.200	<0.050	<0.100	
4-Isopropyl toluene	NA	NA	NA	NA	<0.020	<0.200	0.071	<0.100	
Naphthalene	NA	NA	NA	NA	0.052	0.65	0.63	0.19	1.5
n Propyl benzene	NA	NA	NA	NA	0.46	0.5	0.33	0.12	
1,3,5 Trimethylbenzene	NA	NA	NA	NA	0.039	0.75	0.54	0.3	

Notes:

Samples "S1," "S2," "Dispenser," and "Stockpile Four-Point Composite" collected by Kleinfelder on August 17, 2005

Sample "B8" collected by Golder on August 17, 2004

All soil sample results in mg/kg, ground water sample in mg/L.

TPHg = total petroleum hydrocarbons as gasoline

TPHd = total petroleum hydrocarbons as diesel

MTBE = methyl tert butyl ether

ESL (Environmental Screening Level) for non drinking water, industrial site, soil < 10 feet

NA = not analyzed

a - unmodified or weakly modified gasoline is significant

b - diesel range compounds are significant, no recognizable pattern

d - gasoline range compounds are significant

m - no recognizable pattern

Chemicals detected in concentrations above screening levels are **inbold**.

PLATES



SITE



2000 0 2000
APPROXIMATE SCALE (feet)

REFERENCE:
www.mapquest.com, 2005

ATTACHED XREFS: XRef: TB_A--port
 ATTACHED IMAGES: Images: VIC-MAP.jpg

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KLEINFELDER
 1970 Broadway, Suite 710
 Oakland, CA 94612-2212
 TEL: (510) 628-9000 FAX: (510) 628-9009

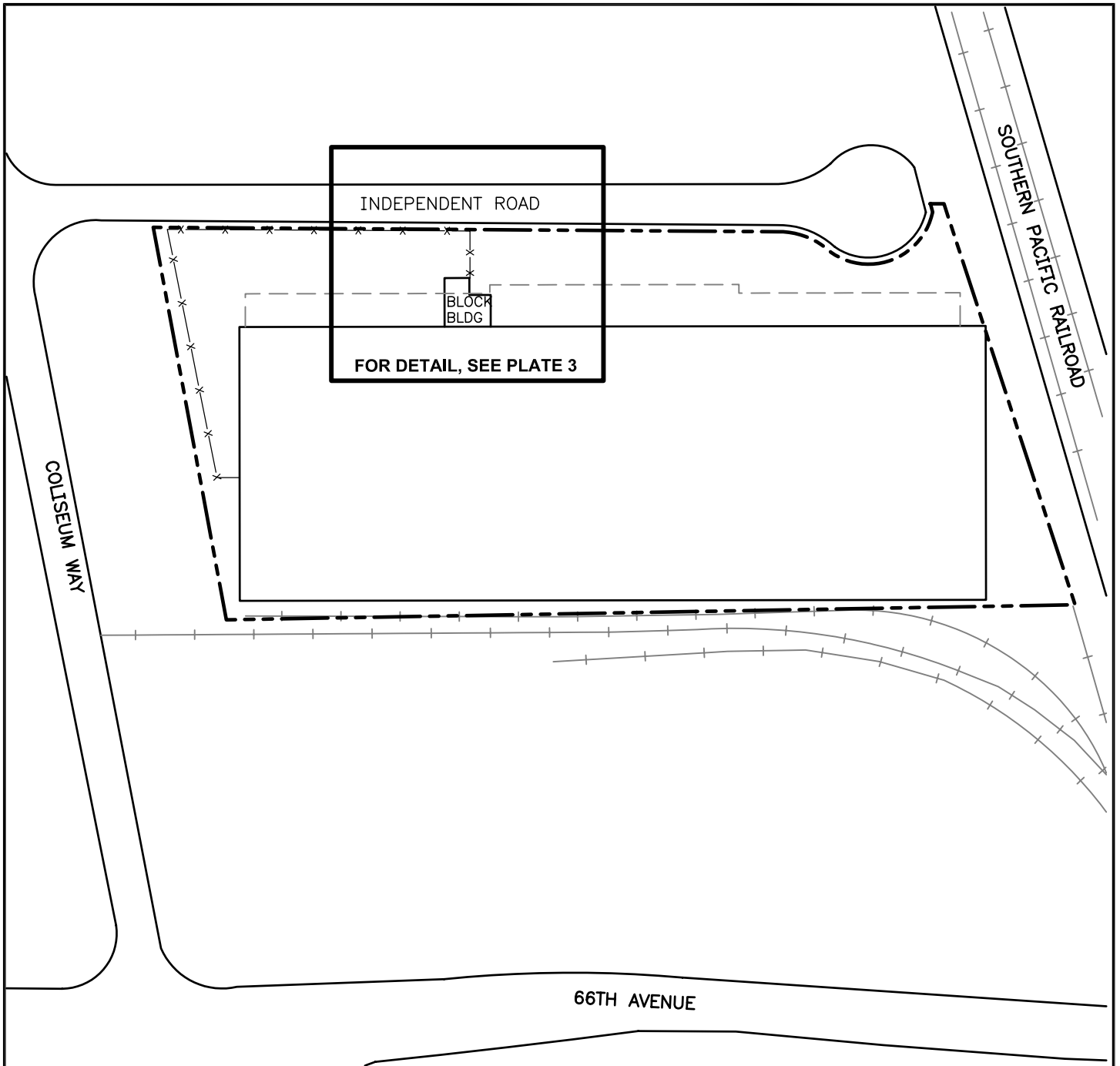
SITE VICINITY MAP

700 INDEPENDENT ROAD
 OAKLAND, CALIFORNIA
 PROJECT NO. 54504-EAA

PLATE

1

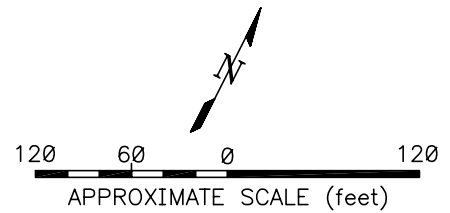
DRAFTED BY: L. Sue	CHECKED BY: E. Harris
DATE: 10/12/05	REVISION DATE: 00-00-02



LEGEND

- — — — — PROPERTY BOUNDARY
- * — * — * — FENCE LINE
- — — — — LIMITS OF BUILDING OVERHANG

NOTE: Locations are approximate.



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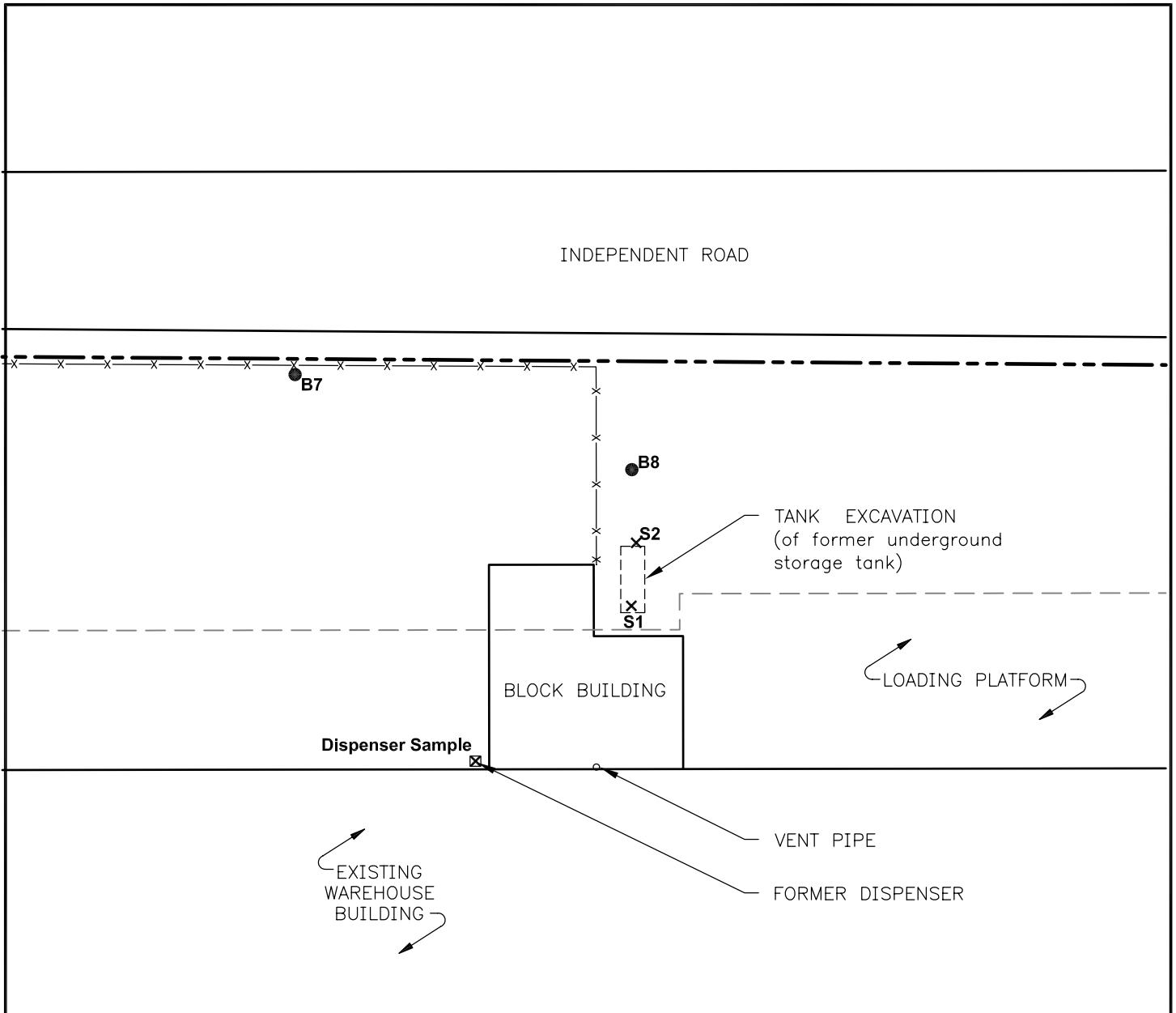
SITE PLAN: OVERALL

700 INDEPENDENT ROAD
 OAKLAND, CALIFORNIA
 PROJECT NO. 54504-EAA

PLATE

2

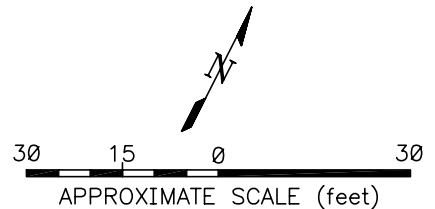
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 ATTACHED IMAGES: Images: AERIAL.jpg



LEGEND

- PROPERTY BOUNDARY
- x-x-x FENCE LINE
- LIMITS OF BUILDING OVERHANG
- x CONFIRMATION SAMPLE (collected by Kleinfelder, 17 August 2005)
- SOIL BORING (by Golder Associates, 17 August 2004)

NOTE: Locations are approximate.



ATTACHED XREFS: XRef: TB_A-port
ATTACHED IMAGES: Images: AERIAL.jpg

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Oakland, CA 94612-2212
TEL: (510) 628-9000 FAX: (510) 628-9009

SITE PLAN: DETAIL

700 INDEPENDENT ROAD
OAKLAND, CALIFORNIA
PROJECT NO. 54504-EAA

PLATE

3

DRAFTED BY: L. Sue CHECKED BY: E. Harris
DATE: 10/14/05 REVISION DATE:



PHOTO 1. March 16, 2005, Geophysical survey estimation of spray paint UST location and boring location B8 (by Golder Associates, August 2004)



PHOTO 2. Concrete dispenser foundation located west of the block building. The sample identified as "Dispenser" was collected adjacent to the foundation.



PHOTO 3. Tank is shown as it is being lifted out of pit by excavator.



PHOTO 4. Tank is shown being loaded onto the truck bed.

ATTACHED XREFS: XRef: TB_A-port
 ATTACHED IMAGES: PHOTO-01.JPG Images: PHOTO-01.JPG Images: PHOTO-02.JPG Images: PHOTO-02.JPG Images: PHOTO-03.JPG Images: PHOTO-03.JPG Images: PHOTO-04.JPG Images: PHOTO-04.JPG Images: PHOTO-05.JPG Images: PHOTO-05.JPG Images: PHOTO-06.JPG Images: PHOTO-06.JPG Images: PHOTO-07.JPG Images: PHOTO-07.JPG Images: PHOTO-08.JPG

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DRAFTED BY: L. Sue
 DATE: 10/17/05

CHECKED BY: E. Harris
 REVISION DATE:

**SITE RECONNAISSANCE AND UST
 REMOVAL PHOTOGRAPHS:
 MARCH 16 AND AUGUST 17, 2005**

700 INDEPENDENT ROAD
 OAKLAND, CALIFORNIA
 PROJECT NO. 54504-EAA

PLATE

4



PHOTO 5. Tank is secured onto truck bed prior to its transport to Ecology Control Industries in Richmond, California.



PHOTO 6. On August 17, 2005, the UST excavation was temporarily filled with clean backfill soil, which was separated from potentially impacted soil using Visqueen plastic sheeting. The excavation was backfilled and compacted on September 15 and 16, 2005.

ATTACHED XREFS: XRef: TB_A-port
 ATTACHED IMAGES: PHOTOS: PHOTO-01.JPG Images: PHOTO-01.JPG Images: PHOTO-02.JPG Images: PHOTO-03.JPG Images: PHOTO-04.JPG Images: PHOTO-05.JPG Images: PHOTO-06.JPG Images: PHOTO-07.JPG Images: PHOTO-08.JPG

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**UST REMOVAL PHOTOGRAPHS:
 AUGUST 17, 2005**

700 INDEPENDENT ROAD
 OAKLAND, CALIFORNIA
 PROJECT NO. 54504-EAA

PLATE

5

DRAFTED BY: L. Sue	CHECKED BY: E. Harris
DATE: 10/17/05	REVISION DATE:

APPENDIX A



March 22, 2005

Charlie Almestad
Kleinfelder, Inc.
1970 Broadway
Suite 710
Oakland, CA 94612

NORCAL Project No. 05-177.126

Subject : Geophysical Survey
700 Independent Road
Oakland, California

Dear Mr. Almestad,

The purpose of this letter is to document the geophysical investigation conducted by NORCAL Geophysical Consultants, Inc. at the subject property on March 16, 2005. The survey area, as delineated by Kleinfelder, was located on the northern side of the Eagle Bag facility and consisted of an approximately 50-by-50-foot area encompassing the westernmost portion of the loading dock and employee kitchen / break room. Based on the existence of a suspected fill-port and the results of prior soil samples, an underground storage tank (UST) is suspected to be located in this portion of the facility. A summary of our field activities and findings regarding this suspected UST are presented below.

The investigation was conducted by NORCAL Geophysicist David Bissiri using a combination of field observations, hand-held metal-detection (MD), ground penetrating radar (GPR), and electromagnetic line locating (EMLL) methods. Descriptions of these methods, the equipment used and their limitations are provided in Appendix A. The first task undertaken by NORCAL was to open the suspected fill port lid. The presence of a fill cap typical of those associated with a UST fill port was noted. The suspected fill port was then opened and what appeared to be a vertical fill pipe was observed. Furthermore, it was noted that a large void space existed between the lower end of the suspected fill pipe and what appeared to be of the top of some suspected product below. Based on this evidence, we concluded that a UST did exist at this location. Using a weighted fiberglass measuring tape inserted into the fill port, the depth to the bottom of the UST was determined to be approximately 7.5 feet below the lip of the fill-port. The bottom of the fill-pipe was determined to be approximately 3.5 feet below the fill-port lip. This suggests that if the UST is a standard size, then its diameter is most likely to be approximately 4 feet.

The MD method was used in an effort to determine the UST's approximate orientation and length. We determined that the UST axis is roughly perpendicular to the loading dock and has an approximate length of 14 feet. The GPR method was then used to further refine the MD findings. The GPR data corroborated the tank's orientation and length. The GPR also indicated that the fill port is located at, or near, the tank's western end (i.e. the end closest to the face of the loading dock).



Kleinfelder, Inc.
March 22, 2005
Page 2

Following this, the EMLL was used in an attempt to delineate the alignments of piping associated with the UST. We concluded that an apparent product line extends approximately 30 feet in a southwesterly direction from the fill-port area to an apparent concrete dispenser foundation located on the west side of the employees kitchen / break room. The exact horizontal alignment of the suspected vent line could not be delineated. However, it was determined that the vertical portion of the vent consists of a steel pipe strapped to the main warehouse wall south of the UST and extends through the roof overhang. The apparent outline of the UST and the alignment of the product line were marked on the ground with white spray paint and red spray chalk. The vent pipe strapped to the warehouse was marked with red spray chalk a few feet below the roof line.

As instructed, NORCAL's documentation of our findings was limited to marking the outline of the UST and associated lines with paint/chalk and preparing this report. No other documentation was requested.

STANDARD CARE and WARRANTY

The scope of NORCAL's services for this project consisted of using geophysical methods to assess the area of investigation for buried metal objects. The accuracy of our findings is subject to specific site conditions and limitations inherent to the techniques used. The services were performed in a manner consistent with the standard of care ordinarily exercised by members of the profession currently employing similar methods. No warranty, with respect to the services or products delivered under this agreement, expressed or implied, is made by NORCAL.

We appreciate having the opportunity to provide you with this information.

Respectfully,

NORCAL Geophysical Consultants, Inc.

A handwritten signature in black ink, appearing to read "David Bissiri".

David Bissiri
Geophysicist GP - 1009

DJB/KGB/tt

Enclosure: Appendix A - Geophysical Instrumentation, Methods, and Data Interpretation



Appendix A

Geophysical Methodology, Instrumentation, Data Analysis, and Limitations



Electromagnetic Line Location (EMLL)

EMLL Methodology

This method uses radio signals that are emitted by conductive utility lines to trace out their alignments. Under certain conditions, metallic utility conduits and pipelines can act as radio antennas. Energized utilities like electric, telephone, and grounded water lines often carry electrical currents. Radio signals are radiated from the lines as a result of these currents. These types of signals are referred to as "passive signals" since only a receiver tuned to the appropriate frequency is required to trace them. Other utilities like natural gas lines, drain lines, cathodic protection lines, etc. are not normally energized and thus require a radio signal placed on them in order to be traced. These types of signals are referred to as "active signals" and are placed on the lines by a radio transmitter, either by induction or by directly connecting a lead to them.

Whether the radio signal is passive or active, the surface trace of a line is determined the same way. A specialized radio receiver is carried along a series of traverses and the strength of the emitted signal noted. In most cases, the line is located below the point where the signal is strongest. After a series of traverses have been completed and the position of strongest signal strength has been determined, the alignment of the utility becomes apparent.

EMLL Instrument

The EMLL instrument used for this investigation was a Radio Detection RD 4000. This instrument consists of a specialized radio receiver and a separate transmitter. The receiver is a multi-frequency, multiple antenna device that is capable of determining the relative strength and direction of signals broadcast from buried pipes and cables. The receiver generates both a meter reading (unitless) and an audible response when near an energized line. It does not provide any recordable output. The receiver is usually capable of tracing a line buried to a depth of about ten feet. The transmitter is a multi-frequency device with variable power output. In most cases, the highest power setting is sufficient to trace out a line for several hundred feet.

EMLL Limitations

The EMLL works by detecting radio signals. In many cases, the sources of these signals are from isolated known subsurface utility lines. In some cases however, other signals may be present. These other signals may be emitted by overhead electric and telephone lines, grounded water lines, and commercial radio towers. These other signals may distort or completely mask the primary signal of interest. In other cases, the primary signal may actually "jump" from one underground conductor to another, leading to erroneous results. Finally, traceable currents can only be detected as long as there is electrical continuity. Metal conduits having insulating joints and non-metallic utilities cannot be traced with EMLL.



Metal Detection (MD)

MD Methodology

This method uses the principle of electromagnetic induction to detect shallowly buried metal objects such as USTs, metal utility conduits, rebar in concrete, manhole covers, and various metallic debris. This is done by carrying a hand-held radio transmitter-receiver unit above the ground and continuously scanning the surface. A primary coil broadcasts a radio signal from a transmitter which induces secondary electrical currents in metal objects. These secondary currents in turn produce a magnetic field which is detected by the receiver.

Instrumentation

The MD instrument that we typically use for shallow subsurface investigations is a Fisher TW-6 pipe and cable locator. This instrument is expressly designed to detect metallic pipes, cables, USTs, manhole covers, and other large, shallowly buried metallic objects. The instrument operates by generating both a meter reading (unitless) and an audible response when near a metal object. The peak instrument response usually occurs when the unit is directly over the object. The TW-6 does not provide a recordable data output that can be used for later computer processing. Results are generally limited to marking the interpreted outlines of detected objects in the field and mapping their locations.

Limitations

In general, the response of the MD instrument is roughly proportional to the horizontal surface area of near surface buried objects (typically in the upper three or four feet). This relationship can be used to advantage in discriminating between metal debris, reinforced concrete pads, and pipelines. However, in the presence of above ground metal objects such as fences, walls, parked cars, and metal debris, this is no longer valid. In some instances, the presence of such objects can make it very difficult to determine whether the instrument responses are associated with below ground targets or above ground cultural features. When multiple sources are present it may not be possible to identify individual targets. Also, relatively large objects that have a limited horizontal cross-section such as well casing and fence posts are sometimes difficult to detect.



Ground Penetrating Radar (GPR)

GPR Methodology

Ground penetrating radar is a method that provides a continuous, high resolution graphical cross-section of the shallow subsurface. The method entails repeatedly radiating an electromagnetic pulse into the ground from an antenna as it is moved along a traverse. Reflected signals are received by an antenna (often the same one used to generate the signal) and sent to a control unit for processing. The control unit then converts the varying amplitude of reflected radar signals as a function of time into a cross-sectional image showing signal amplitude as a function of depth.

GPR is particularly sensitive to variations of two electrical properties. One property is conductivity (the ability of a material to conduct a charge when a field is applied) and the other is permittivity (the ability of a material to hold a charge when a field is applied). These two properties determine how far a signal can propagate. They also determine the strength of reflected signals that can be generated at material boundaries. Most soil and earthen-like materials such as concrete are electrically resistive and have a relatively low permittivity. As a result, they are relatively transparent to electromagnetic energy. This means that only a portion of the radar signal incident upon them is reflected back to the surface. On the other hand, when the signal encounters an object composed of a material that has the opposite electrical properties, especially one with a high permittivity (such as metal) much of the incident energy is reflected.

Instrumentation

We typically perform GPR surveys using a Geophysical Survey Systems, Inc. SIR-2000 Subsurface Interface Radar System equipped with a 500 megahertz (MHz) transducer. This unit is comprised of a combined control/data recording console that is connected by a telemetry cable to the antenna. This system is often chosen for investigating environmental sites since it usually provides both the resolution and depth penetration needed for characterizing the upper three to four feet of the subsurface.

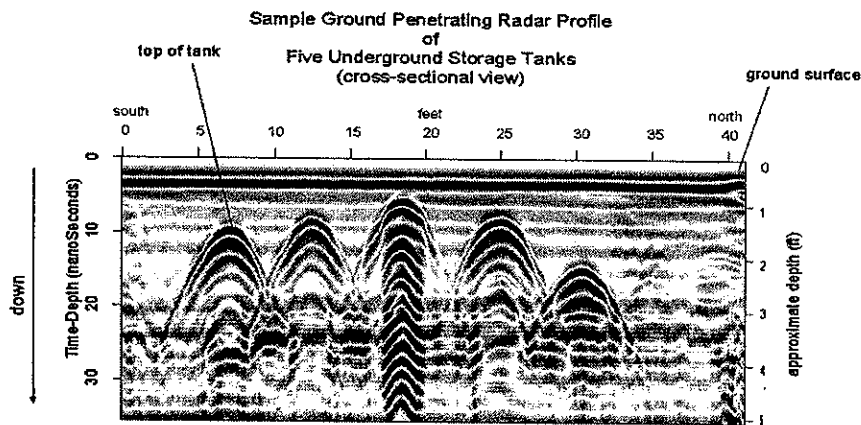
Data Interpretation

The interpretation of GPR data involves examining the graphical records for reflections from buried objects. GPR records display changes in reflected signal strength and arrival time with changes in horizontal position. Strong signals appear dark and weak reflections appear light. Reflections that arrive earlier in time are placed in the upper portions of the record and reflections that arrive later are placed lower, towards the bottom of the records. Horizontal position is across the top of the record.

In areas with relatively uniform conditions, with no buried objects producing reflections, the records typically appear as a series of alternating dark and light horizontal bands. In areas where there are

subsurface objects producing reflections, the horizontal banding is disrupted. Discrete objects typically produce reflections having the appearance of inverted “U”s, forming what are known as “hyperbolic reflections”. Metallic objects often produce markedly strong reflections, in many cases forming multiple reflections appearing as a series of inverted U’s cascading down the record. Non-metallic objects can produce similar reflections, but the multiples are typically much weaker.

A sample profile from a different site with five adjacent steel USTs is presented below:



An object’s burial depth may also be estimated from GPR profiles. As mentioned above, GPR measures signal amplitude as a function of time. However, the translation of the radar signal’s travel time (technically known as time-depth) to an actual distance (true depth) is not always a simple one. Strictly speaking, in order to translate from time-depth to true depth the signal velocity within each time interval must be known. Since this is not routinely determined in the field, estimated velocities are often used for determining the approximate depth to a reflector. The empirical values for GPR signal propagation velocities within commonly encountered soils are obtained from published tables.

Limitations

The ability to detect subsurface targets is dependent on specific site conditions. These conditions include depth of burial, the size or diameter of the target, the condition of the specific target in question, the type of backfill material associated with the target, and the surface conditions over the target. Typically, the depth of detection will be reduced as the clay and/or moisture content in the subsurface increases. As a result, depths of detection (using a 500 Mhz antenna) typically range from as deep as six feet to as little as a few inches.

APPENDIX B



TORRENT LABORATORY, INC.

483 Sinclair Frontage Rd. • Milpitas, CA 95035 • Ph: (408) 263-5258 • Fax: (408) 263-8293

www.torrentlab.com email: analysis@torrentlab.com

August 18, 2005

Charlie Almested
KLEINFELDER
1970 BROADWAY STE 710
OAKLAND, CA 94612

TEL: (510) 628-9000

FAX (510) 628-9009

RE: 54504

Order No.: 0508101

Dear Charlie Almested:

Torrent Laboratory, Inc. received 8 samples on 8/17/2005 for the analyses presented in the following report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc, is certified by the State of California, ELAP #1991. If you have any questions regarding these tests results, please feel free to contact the Project Management Team at (408)263-5258;ext: 204.

Sincerely,


Laboratory Director


Date



TORRENT LABORATORY, INC.

483 Sinclair Frontage Rd. • Milpitas, CA 95035 • Ph: (408) 263-5258 • Fax: (408) 263-8293

www.torrentlab.com email: analysis@torrentlab.com

Torrent Laboratory, Inc.

Date: 19-Aug-05

CLIENT: KLEINFELDER
Project: 54504
Lab Order: 0508101

CASE NARRATIVE

Analytical Comments for METHOD TPH_GAS_S_8015B, SAMPLE 0508101-008A: Low surrogate recovery, due to possible matrix effects.

Analytical Comments for METHOD TPH_DSL_S_8015B, SAMPLE 0508101-001A,-002A,-007A,-008A:Note: Sample chromatogram does not resemble typical diesel pattern. Hydrocarbons within diesel range quantitated as diesel. For Sample 001A:Surrogates diluted out.

Analytical Comment for TPH_GAS_S_8015B, Note:The % recovery in the MS for Gasoline is outside of laboratory control limits but within % RPD limits and % recovery limits for the LCS/LCSD. No corrective action is required.

Note: Completed Report with Results for Luft 5 metals reported on 08/19/05.

Revision 1



TORRENT LABORATORY, INC.

483 Sinclair Frontage Road • Milpitas, CA • Phone: (408) 263-5258 • Fax: (408) 263-8293

Visit us at www.torrentlab.com email: analysis@torrentlab.com

Report prepared for: Charlie Almeded
KLEINFELDER

Date Received: 8/17/2005

Date Reported: 8/19/2005

Client Sample ID:	South (S1)	Lab Sample ID:	0508101-001
Sample Location:	Independent Road (54504)	Date Prepared:	8/17/2005
Sample Matrix:	SOIL		
Date/Time Sampled	8/17/2005 11:00:00 AM		

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Cadmium	SW6010B	8/19/2005	0.5	1	0.50	ND	mg/Kg	1601
Chromium	SW6010B	8/19/2005	0.5	1	0.50	28	mg/Kg	1601
Lead	SW6010B	8/19/2005	0.368	1	0.37	7.0	mg/Kg	1601
Nickel	SW6010B	8/19/2005	0.5	1	0.50	21	mg/Kg	1601
Zinc	SW6010B	8/19/2005	4	1	4.0	31	mg/Kg	1601
TPH (Diesel)	SW8015B	8/18/2005	2	500	1500	5090	mg/Kg	R6944
Surr: Pentacosane	SW8015B	8/18/2005	0	500	53.5-127	D	%REC	R6944
Note: Sample chromatogram does not resemble typical diesel pattern. Hydrocarbons within diesel range quantitated as diesel. Surrogates diluted out.								
TPH (Gasoline)	SW8015B	8/17/2005	0.1	500	50.0	877	mg/Kg	R6937
Surr: Trifluorotoluene	SW8015B	8/17/2005	0	500	44.7-125	98.0	%REC	R6937
Benzene	SW8260B	8/17/2005	10	100	1000	ND	µg/Kg	R6927
Ethylbenzene	SW8260B	8/17/2005	10	100	1000	3800	µg/Kg	R6927
Methyl tert-butyl ether (MTBE)	SW8260B	8/17/2005	10	100	1000	ND	µg/Kg	R6927
Toluene	SW8260B	8/17/2005	10	100	1000	ND	µg/Kg	R6927
Xylenes, Total	SW8260B	8/17/2005	10	100	1000	ND	µg/Kg	R6927
Surr: 4-Bromofluorobenzene	SW8260B	8/17/2005	0	100	65-135	98.4	%REC	R6927
Surr: Dibromofluoromethane	SW8260B	8/17/2005	0	100	65-135	106	%REC	R6927
Surr: Toluene-d8	SW8260B	8/17/2005	0	100	65-135	120	%REC	R6927

Report prepared for: Charlie Almedsted
KLEINFELDER

Date Received: 8/17/2005
Date Reported: 8/19/2005

Client Sample ID:	North (S2)	Lab Sample ID:	0508101-002
Sample Location:	Independent Road (54504)	Date Prepared:	8/17/2005
Sample Matrix:	SOIL		
Date/Time Sampled	8/17/2005 11:05:00 AM		

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Cadmium	SW6010B	8/19/2005	0.5	1	0.50	ND	mg/Kg	1601
Chromium	SW6010B	8/19/2005	0.5	1	0.50	46	mg/Kg	1601
Lead	SW6010B	8/19/2005	0.368	1	0.37	6.2	mg/Kg	1601
Nickel	SW6010B	8/19/2005	0.5	1	0.50	44	mg/Kg	1601
Zinc	SW6010B	8/19/2005	4	1	4.0	38	mg/Kg	1601
TPH (Diesel)	SW8015B	8/18/2005	2	1	2.00	9.46	mg/Kg	R6944
Surr: Pentacosane	SW8015B	8/18/2005	0	1	53.5-127	113	%REC	R6944
Note: Sample chromatogram does not resemble typical diesel pattern. Hydrocarbons within diesel range quantitated as diesel.								
TPH (Gasoline)	SW8015B	8/17/2005	0.1	100	10.0	236	mg/Kg	R6937
Surr: Trifluorotoluene	SW8015B	8/17/2005	0	100	44.7-125	106	%REC	R6937
Benzene	SW8260B	8/17/2005	10	100	1000	ND	µg/Kg	R6927
Ethylbenzene	SW8260B	8/17/2005	10	100	1000	2800	µg/Kg	R6927
Methyl tert-butyl ether (MTBE)	SW8260B	8/17/2005	10	100	1000	ND	µg/Kg	R6927
Toluene	SW8260B	8/17/2005	10	100	1000	ND	µg/Kg	R6927
Xylenes, Total	SW8260B	8/17/2005	10	100	1000	2900	µg/Kg	R6927
Surr: 4-Bromofluorobenzene	SW8260B	8/17/2005	0	100	65-135	103	%REC	R6927
Surr: Dibromofluoromethane	SW8260B	8/17/2005	0	100	65-135	108	%REC	R6927
Surr: Toluene-d8	SW8260B	8/17/2005	0	100	65-135	109	%REC	R6927

Client Sample ID:	Dispenser	Lab Sample ID:	0508101-007
Sample Location:	Independent Road (54504)	Date Prepared:	8/17/2005
Sample Matrix:	SOIL		
Date/Time Sampled	8/17/2005 11:30:00 AM		

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Cadmium	SW6010B	8/19/2005	0.5	1	0.50	ND	mg/Kg	1601
Chromium	SW6010B	8/19/2005	0.5	1	0.50	23	mg/Kg	1601
Lead	SW6010B	8/19/2005	0.368	1	0.37	15	mg/Kg	1601
Nickel	SW6010B	8/19/2005	0.5	1	0.50	28	mg/Kg	1601
Zinc	SW6010B	8/19/2005	4	1	4.0	67	mg/Kg	1601
TPH (Diesel)	SW8015B	8/18/2005	2	10	20.0	246	mg/Kg	R6944
Surr: Pentacosane	SW8015B	8/18/2005	0	10	53.5-127	113	%REC	R6944
Note: Sample chromatogram does not resemble typical diesel pattern. Hydrocarbons within diesel range quantitated as diesel.								
TPH (Gasoline)	SW8015B	8/18/2005	0.1	1	0.100	0.185	mg/Kg	R6937
Surr: Trifluorotoluene	SW8015B	8/18/2005	0	1	44.7-125	69.2	%REC	R6937
Benzene	SW8260B	8/17/2005	10	1	10	ND	µg/Kg	R6927
Ethylbenzene	SW8260B	8/17/2005	10	1	10	ND	µg/Kg	R6927
Methyl tert-butyl ether (MTBE)	SW8260B	8/17/2005	10	1	10	ND	µg/Kg	R6927
Toluene	SW8260B	8/17/2005	10	1	10	ND	µg/Kg	R6927
Xylenes, Total	SW8260B	8/17/2005	10	1	10	ND	µg/Kg	R6927
Surr: 4-Bromofluorobenzene	SW8260B	8/17/2005	0	1	65-135	112	%REC	R6927
Surr: Dibromofluoromethane	SW8260B	8/17/2005	0	1	65-135	129	%REC	R6927
Surr: Toluene-d8	SW8260B	8/17/2005	0	1	65-135	101	%REC	R6927

Client Sample ID:	Comp (Stockpile A,B,C,D)	Lab Sample ID:	0508101-008
Sample Location:	Independent Road (54504)	Date Prepared:	8/17/2005
Sample Matrix:	SOIL		
Date/Time Sampled	8/17/2005 11:30:00 AM		

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Cadmium	SW6010B	8/19/2005	0.5	1	0.50	ND	mg/Kg	1601
Chromium	SW6010B	8/19/2005	0.5	1	0.50	57	mg/Kg	1601
Lead	SW6010B	8/19/2005	0.368	1	0.37	19	mg/Kg	1601
Nickel	SW6010B	8/19/2005	0.5	1	0.50	26	mg/Kg	1601
Zinc	SW6010B	8/19/2005	4	1	4.0	54	mg/Kg	1601

TPH (Diesel)	SW8015B	8/18/2005	2	10	20.0	236	mg/Kg	R6944
Surr: Pentacosane	SW8015B	8/18/2005	0	10	53.5-127	124	%REC	R6944

Note: Sample chromatogram does not resemble typical diesel pattern. Hydrocarbons within diesel range quantitated as diesel.

TPH (Gasoline)	SW8015B	8/18/2005	0.1	1	0.100	0.104	mg/Kg	R6937
Surr: Trifluorotoluene	SW8015B	8/18/2005	0	1	44.7-125	39.0	%REC	R6937

Low surrogate recovery, matrix effects suspected.

Benzene	SW8260B	8/17/2005	10	1	10	ND	µg/Kg	R6927
Ethylbenzene	SW8260B	8/17/2005	10	1	10	ND	µg/Kg	R6927
Methyl tert-butyl ether (MTBE)	SW8260B	8/17/2005	10	1	10	ND	µg/Kg	R6927
Toluene	SW8260B	8/17/2005	10	1	10	ND	µg/Kg	R6927
Xylenes, Total	SW8260B	8/17/2005	10	1	10	18	µg/Kg	R6927
Surr: 4-Bromofluorobenzene	SW8260B	8/17/2005	0	1	65-135	104	%REC	R6927
Surr: Dibromofluoromethane	SW8260B	8/17/2005	0	1	65-135	110	%REC	R6927
Surr: Toluene-d8	SW8260B	8/17/2005	0	1	65-135	102	%REC	R6927

Definitions, legends and Notes

Note	Description
ug/kg	Microgram per kilogram (ppb, part per billion).
ug/L	Microgram per liter (ppb, part per billion).
mg/kg	Milligram per kilogram (ppm, part per million).
mg/L	Milligram per liter (ppm, part per million).
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate.
MDL	Method detection limit.
MRL	Modified reporting limit. When sample is subject to dilution, reporting limit times dilution factor yields MRL.
MS/MSD	Matrix spike/matrix spike duplicate.
N/A	Not applicable.
ND	Not detected at or above detection limit.
NR	Not reported.
QC	Quality Control.
RL	Reporting limit.
% RPD	Percent relative difference.
a	pH was measured immediately upon the receipt of the sample, but it was still done outside the holding time.
sub	Analyzed by subcontracting laboratory, Lab Certificate #

CLIENT: KLEINFELDER
 Work Order: 0508101
 Project: 54504

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B_S

Sample ID	1601-MBLK	SampType:	MBLK	TestCode:	6010B_S	Units:	mg/Kg	Prep Date:	8/18/2005	RunNo:	6960			
Client ID:	ZZZZZ	Batch ID:	1601	TestNo:	SW6010B	(SW3050B)		Analysis Date:	8/19/2005	SeqNo:	102951			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cadmium		ND		0.50										
Chromium		ND		0.50										
Lead		ND		0.37										
Nickel		ND		0.50										
Zinc		ND		4.0										

Sample ID	1601-LCS	SampType:	LCS	TestCode:	6010B_S	Units:	mg/Kg	Prep Date:	8/18/2005	RunNo:	6960			
Client ID:	ZZZZZ	Batch ID:	1601	TestNo:	SW6010B	(SW3050B)		Analysis Date:	8/19/2005	SeqNo:	102949			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cadmium		96.46		0.50	100	0		96.5	82.4	125				
Chromium		88.75		0.50	100	0		88.7	68.1	122				
Lead		90.52		0.37	100	0		90.5	67.9	118				
Nickel		90.60		0.50	100	0		90.6	69.2	126				
Zinc		95.91		4.0	100	0		95.9	72.6	123				

Sample ID	1601-LCSD	SampType:	LCSD	TestCode:	6010B_S	Units:	mg/Kg	Prep Date:	8/18/2005	RunNo:	6960			
Client ID:	ZZZZZ	Batch ID:	1601	TestNo:	SW6010B	(SW3050B)		Analysis Date:	8/19/2005	SeqNo:	102950			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cadmium		105.3		0.50	100	0		105	82.4	125	96.46	8.78	30	
Chromium		96.45		0.50	100	0		96.4	68.1	122	88.75	8.32	30	
Lead		95.10		0.37	100	0		95.1	67.9	118	90.52	4.93	30	
Nickel		97.31		0.50	100	0		97.3	69.2	126	90.6	7.14	30	
Zinc		103.1		4.0	100	0		103	72.6	123	95.91	7.19	30	

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: KLEINFELDER
 Work Order: 0508101
 Project: 54504

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B_S

Sample ID	0508101-002AMS	SampType:	MS	TestCode:	6010B_S	Units:	mg/Kg	Prep Date:	8/18/2005	RunNo:	6960		
Client ID:	North (S2)	Batch ID:	1601	TestNo:	SW6010B	(SW3050B)		Analysis Date:	8/19/2005	SeqNo:	102931		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium		91.31		0.50	100	0	91.3	82.4	125				
Chromium		138.1		0.50	100	45.82	92.3	68.1	122				
Lead		92.26		0.37	100	6.248	86.0	67.9	118				
Nickel		135.7		0.50	100	44.14	91.5	69.2	126				
Zinc		132.9		4.0	100	38.24	94.6	72.6	123				

Sample ID	0508101-002AMSD	SampType:	MSD	TestCode:	6010B_S	Units:	mg/Kg	Prep Date:	8/18/2005	RunNo:	6960		
Client ID:	North (S2)	Batch ID:	1601	TestNo:	SW6010B	(SW3050B)		Analysis Date:	8/19/2005	SeqNo:	102932		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium		91.11		0.50	100	0	91.1	82.4	125	91.31	0.212	30	
Chromium		134.7		0.50	100	45.82	88.8	68.1	122	138.1	2.55	30	
Lead		89.97		0.37	100	6.248	83.7	67.9	118	92.26	2.52	30	
Nickel		131.3		0.50	100	44.14	87.1	69.2	126	135.7	3.31	30	
Zinc		130.0		4.0	100	38.24	91.8	72.6	123	132.9	2.18	30	

Qualifiers:	E Value above quantitation range	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike Recovery outside accepted recovery limits

CLIENT: KLEINFELDER
 Work Order: 0508101
 Project: 54504

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
blk	MBLK	8260_S	µg/Kg	8/17/2005	6927						
Client ID: ZZZZZ	Batch ID: R6927	TestNo: SW8260B		Analysis Date: 8/17/2005	SeqNo: 102485						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	10									
Ethylbenzene	ND	10									
Methyl tert-butyl ether (MTBE)	ND	10									
Toluene	ND	10									
Xylenes, Total	ND	10									
Surr: 4-Bromofluorobenzene	48.70	0	50	0	97.4	65	135				
Surr: Dibromofluoromethane	48.60	0	50	0	97.2	65	135				
Surr: Toluene-d8	53.50	0	50	0	107	65	135				

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
BLK1	MBLK	8260_S	µg/Kg	8/17/2005	6927						
Client ID: ZZZZZ	Batch ID: R6927	TestNo: SW8260B		Analysis Date: 8/17/2005	SeqNo: 102628						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	10									
Ethylbenzene	ND	10									
Methyl tert-butyl ether (MTBE)	ND	10									
Toluene	ND	10									
Xylenes, Total	ND	10									
Surr: 4-Bromofluorobenzene	48.70	0	50	0	97.4	65	135				
Surr: Dibromofluoromethane	48.60	0	50	0	97.2	65	135				
Surr: Toluene-d8	53.50	0	50	0	107	65	135				

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
lcs	LCS	8260_S	µg/Kg	8/16/2005	6927						
Client ID: ZZZZZ	Batch ID: R6927	TestNo: SW8260B		Analysis Date: 8/16/2005	SeqNo: 102486						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	49.20	10	50	0	98.4	77.6	130				
Toluene	53.90	10	50	3.4	101	76.7	134				
Surr: 4-Bromofluorobenzene	50.40	0	50	0	101	65	135				
Surr: Dibromofluoromethane	51.50	0	50	0	103	65	135				

Qualifiers: E Value above quantitation range ND Not Detected at the Reporting Limit	H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits	J Analyte detected below quantitation limits S Spike Recovery outside accepted recovery limits
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CLIENT: KLEINFELDER
 Work Order: 0508101
 Project: 54504

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S

Sample ID	ics	SampType: LCS	TestCode: 8260_S	Units: µg/Kg	Prep Date: 8/16/2005	RunNo: 6927
Client ID:	ZZZZZ	Batch ID: R6927	TestNo: SW8260B		Analysis Date: 8/16/2005	SeqNo: 102486
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Surr: Toluene-d8	54.90	0	50	0	110	65 135

Sample ID	LCS1	SampType: LCS	TestCode: 8260_S	Units: µg/Kg	Prep Date: 8/17/2005	RunNo: 6927
Client ID:	ZZZZZ	Batch ID: R6927	TestNo: SW8260B		Analysis Date: 8/17/2005	SeqNo: 102629
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	47.60	10	50	0	95.2	77.6 130
Toluene	55.70	10	50	3.4	105	76.7 134
Surr: 4-Bromofluorobenzene	52.20	0	50	0	104	65 135
Surr: Dibromofluoromethane	58.00	0	50	0	116	65 135
Surr: Toluene-d8	53.50	0	50	0	107	65 135

Sample ID	icsd	SampType: LCSD	TestCode: 8260_S	Units: µg/Kg	Prep Date: 8/16/2005	RunNo: 6927
Client ID:	ZZZZZ	Batch ID: R6927	TestNo: SW8260B		Analysis Date: 8/16/2005	SeqNo: 102487
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	50.30	10	50	0	101	77.6 130 49.2 2.21 30
Toluene	53.30	10	50	3.4	99.8	76.7 134 53.9 1.12 30
Surr: 4-Bromofluorobenzene	51.70	0	50	0	103	65 135 0 0 0
Surr: Dibromofluoromethane	56.70	0	50	0	113	65 135 0 0 0
Surr: Toluene-d8	54.10	0	50	0	108	65 135 0 0 0

Sample ID	LCSD1	SampType: LCSD	TestCode: 8260_S	Units: µg/Kg	Prep Date: 8/17/2005	RunNo: 6927
Client ID:	ZZZZZ	Batch ID: R6927	TestNo: SW8260B		Analysis Date: 8/17/2005	SeqNo: 102631
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	53.10	10	50	0	106	77.6 130 47.6 10.9 30
Toluene	57.50	10	50	3.4	108	76.7 134 55.7 3.18 30
Surr: 4-Bromofluorobenzene	49.90	0	50	0	99.8	65 135 0 0 0
Surr: Dibromofluoromethane	59.60	0	50	0	119	65 135 0 0 0

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: KLEINFELDER
Work Order: 0508101
Project: 54504

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S

Sample ID LCSD1	SampType: LCSD	TestCode: 8260_S	Units: µg/Kg	Prep Date: 8/17/2005	RunNo: 6927						
Client ID: ZZZZZ	Batch ID: R6927	TestNo: SW8260B		Analysis Date: 8/17/2005	SeqNo: 102631						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	53.00	0	50	0	106	65	135	0	0	0	

Sample ID 0508096-002A MS	SampType: MS	TestCode: 8260_S	Units: µg/Kg	Prep Date: 8/17/2005	RunNo: 6927						
Client ID: ZZZZZ	Batch ID: R6927	TestNo: SW8260B		Analysis Date: 8/17/2005	SeqNo: 102638						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	59.50	10	50	0	119	70	130				
Toluene	51.60	10	50	0	103	70	130				
Surr: 4-Bromofluorobenzene	53.00	0	50	0	106	65	135				
Surr: Dibromofluoromethane	63.50	0	50	0	127	65	135				
Surr: Toluene-d8	51.50	0	50	0	103	65	135				

Sample ID 0508096-002A MSD	SampType: MSD	TestCode: 8260_S	Units: µg/Kg	Prep Date: 8/18/2005	RunNo: 6927						
Client ID: ZZZZZ	Batch ID: R6927	TestNo: SW8260B		Analysis Date: 8/18/2005	SeqNo: 102639						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	59.40	10	50	0	119	70	130	59.5	0.168	30	
Toluene	57.80	10	50	0	116	70	130	51.6	11.3	30	
Surr: 4-Bromofluorobenzene	49.20	0	50	0	98.4	65	135	0	0	0	
Surr: Dibromofluoromethane	55.50	0	50	0	111	65	135	0	0	0	
Surr: Toluene-d8	53.50	0	50	0	107	65	135	0	0	0	

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: KLEINFELDER
 Work Order: 0508101
 Project: 54504

ANALYTICAL QC SUMMARY REPORT

TestCode: TPH_DSL_S_8015B

Sample ID SD050817-MB	SampType: MBLK	TestCode: TPH_DSL_S_ Units: mg/Kg	Prep Date: 8/17/2005	RunNo: 6944							
Client ID: ZZZZZ	Batch ID: R6944	TestNo: SW8015B	Analysis Date: 8/17/2005	SeqNo: 102801							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel)	ND	2.00									
Surr: Pentacosane	3.878	0	3.3	0	118	53.5	127				

Sample ID SD050817-LCS	SampType: LCS	TestCode: TPH_DSL_S_ Units: mg/Kg	Prep Date: 8/17/2005	RunNo: 6944							
Client ID: ZZZZZ	Batch ID: R6944	TestNo: SW8015B	Analysis Date: 8/17/2005	SeqNo: 102802							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel)	30.07	2.00	33.33	1.161	86.7	46.2	109				
Surr: Pentacosane	3.707	0	3.3	0	112	53.5	127				

Sample ID SD050817-LCSD	SampType: LCSD	TestCode: TPH_DSL_S_ Units: mg/Kg	Prep Date: 8/17/2005	RunNo: 6944							
Client ID: ZZZZZ	Batch ID: R6944	TestNo: SW8015B	Analysis Date: 8/17/2005	SeqNo: 102803							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel)	28.91	2.00	33.33	1.161	83.2	46.2	109	30.07	3.96	30	
Surr: Pentacosane	3.641	0	3.3	0	110	53.5	127	0	0	0	

Sample ID 0508085-004A MS	SampType: MS	TestCode: TPH_DSL_S_ Units: mg/Kg	Prep Date: 8/17/2005	RunNo: 6944							
Client ID: ZZZZZ	Batch ID: R6944	TestNo: SW8015B	Analysis Date: 8/18/2005	SeqNo: 102808							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel)	27.99	2.00	33.33	0	84.0	46.2	109				
Surr: Pentacosane	3.482	0	3.3	0	106	53.5	127				

Sample ID 0508085-004A MSD	SampType: MSD	TestCode: TPH_DSL_S_ Units: mg/Kg	Prep Date: 8/17/2005	RunNo: 6944							
Client ID: ZZZZZ	Batch ID: R6944	TestNo: SW8015B	Analysis Date: 8/18/2005	SeqNo: 102809							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel)	23.33	2.00	33.33	2.247	63.3	46.2	109				
Surr: Pentacosane	3.341	0	3.3	0	101	53.5	127				

Qualifiers:	E Value above quantitation range	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike Recovery outside accepted recovery limits

CLIENT: KLEINFELDER
 Work Order: 0508101
 Project: 54504

ANALYTICAL QC SUMMARY REPORT

TestCode: TPH_GAS_S_8015B

Sample ID blk	SampType: MBLK	TestCode: TPH_GAS_S	Units: mg/Kg	Prep Date:	RunNo: 6937						
Client ID: ZZZZZ	Batch ID: R6937	TestNo: SW8015B		Analysis Date: 8/17/2005	SeqNo: 102614						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	ND	0.100									
Surr: Trifluorotoluene	0.1500	0	0.2	0	75.0	44.7	125				

Sample ID lcs	SampType: LCS	TestCode: TPH_GAS_S	Units: mg/Kg	Prep Date:	RunNo: 6937						
Client ID: ZZZZZ	Batch ID: R6937	TestNo: SW8015B		Analysis Date: 8/17/2005	SeqNo: 102615						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	0.9414	0.100	1	0	94.1	64.2	126				
Surr: Trifluorotoluene	0.1461	0	0.2	0	73.0	44.7	125				

Sample ID lcsd	SampType: LCSd	TestCode: TPH_GAS_S	Units: mg/Kg	Prep Date:	RunNo: 6937						
Client ID: ZZZZZ	Batch ID: R6937	TestNo: SW8015B		Analysis Date: 8/17/2005	SeqNo: 102616						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	0.8970	0.100	1	0	89.7	64.2	126	0.9414	4.83	30	
Surr: Trifluorotoluene	0.1209	0	0.2	0	60.4	44.7	125	0	0	30	

Sample ID 0508065-002A MS	SampType: MS	TestCode: TPH_GAS_S	Units: mg/Kg	Prep Date:	RunNo: 6937						
Client ID: ZZZZZ	Batch ID: R6937	TestNo: SW8015B		Analysis Date: 8/18/2005	SeqNo: 102619						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	0.6411	0.100	1	0.0216	62.0	65	135	0.2385	0	0	S
Surr: Trifluorotoluene	0.1154	0	0.2	0	57.7	44.7	125	0	0	0	

Qualifiers:	E Value above quantitation range	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike Recovery outside accepted recovery limits



KLEINFELDER

PROJECT NO. 54504		PROJECT NAME INDEPENDENT ROAD				RECEIVING LAB: TORRENT													
L.P. NO. (P.O. NO.)		SAMPLERS: (Signature/Number) <i>[Signature]</i>				INSTRUCTIONS/REMARKS 0508101													
DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CON- TAINERS	TYPE OF CON- TAINERS	ANALYSIS	THOD	BOIS	DIEX	A	8260	MTBE	HEX	LUFTS	M	P	K		
8/17/05	S1-11am	SOUTH	SOIL	1	SSD SLAKE	X	X	X										- 001 A	Rapid turn around please
	S2-11am	NORTH				X	X	X										- 002 A	" " " "
8/17/05	SPA-1130	Stock pile -A	soil	1	tub	X	X	X										- 003 A	Composite ^{into} one one sample Rapid turn around
"	SPB - "	-B	"	1	"													- 004 A	
"	SPC - "	-C	"	1	"													- 005 A	
"	SPD - "	-D	"	1	"													- 006 A	
"	Dispenser		soil	1	"	X	X	X										- 007 A	Std turn around
"	Comp SP A, B, C, D					X	X	X										- 008 A	
	(3A, 4A, 5A, 6A)																		

Relinquished by: (Signature)
[Signature]
Date/Time
8/17/05 1:20

Relinquished by: (Signature)
[Signature]
Date/Time
8-17-05 2:20

Relinquished by: (Signature)
[Signature]
Date/Time

Received by: (Signature) 8-17-05
[Signature] 1:21

Received by: (Signature) 8/17/05
[Signature] 2:20

Received for Laboratory by: (Signature)

Instructions/Remarks:
Fax or email results to:
Charlie Almestad
Six 510 628-9009
email CALMESTAD@KLEINFELDER.COM

Send Results To:
KLEINFELDER
1970 Broadway
SUITE 710
Oakland, CA 94612
(510) 628-9000

Attn:

APPENDIX C
