KLEINFELDER

SUBSURFACE INVESTIGATION
3623 ADELINE STREET,
EMERYVILLE, CALIFORNIA
Job No. 10-3002-39/001

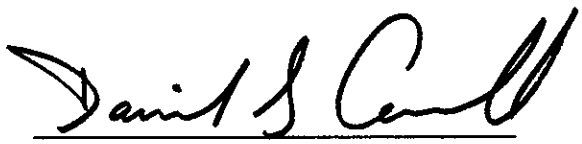
January 29, 1996

Owens Financial Group
2221 Olympic Boulevard
Walnut Creek, California 94596

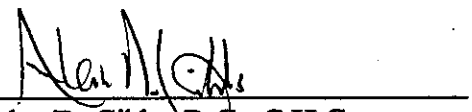
SUBSURFACE INVESTIGATION
OWENS FINANCIAL GROUP,
3623 ADELINE STREET,
EMERYVILLE, CALIFORNIA

Kleinfelder Job No. 10 3002 39/001

Prepared by:



Daniel S. Carroll P.E.
Project Manager



Alan D. Gibbs, R.G., C.H.G.
Environmental Manager

KLEINFELDER, INC.
7133 Koll Center Parkway, Suite 100
Pleasanton, California 94566

January 29, 1996

TABLES OF CONTENTS

INTRODUCTION

Kleinfelder Inc. (Kleinfelder) is pleased to present this report documenting the installation of six soil borings and one monitoring well at Owens Financial Group (Owens) property located at 3623 Adeline Street, Emeryville, California (Plate 1). This investigation was performed in response to a request from Ms. Susan Hugo of the Alameda County Department of Environmental Health (ACDEH) and in accordance with our workplan/proposal dated September 29, 1995.

Soil and groundwater samples were collected from six soil borings (B-1 through B-6), and one 6-inch groundwater monitoring well (EW-1) was installed, as depicted on Plate 2. This report was prepared by Kleinfelder on behalf of Owens. Soil boring logs and well construction details are presented in Appendix A; Kleinfelder's field protocol is presented in Appendix B; Well development and sampling logs are presented in Appendix C; and laboratory reports and chain-of-custody documentation are presented in Appendix D.

BACKGROUND

A Preliminary Site Assessment (PSA) was performed at the site by Converse Environmental, dated July 29, 1994. Based on information provided by the Sanborn Fire Insurance Maps of the site for years 1906 and 1912, included with the PSA, an underground storage tank (UST) was installed sometime between 1906 and 1912. Based on the age of this UST (approximately 85 to 90 years) and of the known historical site uses, it is likely that the UST was used to store fuel, possibly ranging in composition from kerosene to diesel. The UST was removed in September 1995 by Owens at the request of the ACDEH.

It was observed at the time of tank removal that a pipe leading from the base of the UST had been sheared. No water or product was observed emanating from the pipe. This pipe was assumed at the time to be either a fill or a supply line. The pipe was capped as directed by Susan Hugo of ACDEH.

Before tank removal, the tank was pumped out. During tank removal, a small amount of residual fuel oil was released into the excavation; this product was pumped out and soil excavated. A total of 54 tons of soil was excavated. Additional excavation was deemed not to be feasible due to site conditions and engineering constraints, and the excavation was backfilled upon approval by ACDEH.

In November 1995, Kleinfelder was retained to conduct this soil and groundwater investigation.

SCOPE OF SERVICES

The following scope of services was developed based on the information provided to Kleinfelder by Owens on September 29, 1995 and October 5, 1995. Observations made in the field during the initial field work of November 14, 1995 led to a change in the initial scope of serves described in our proposal/workplan dated October 25, 1995. A second proposal/workplan dated

December 4, 1995 was then submitted to Owens, outlining the changes needed to the original scope of services. A summary of the actual scope of services performed is presented below.

Task 1 - Work Plan, Permitting, Coordination, and Health & Safety Plan

- Prior to commencement of field work, Kleinfelder acquired appropriate boring/well installation permits from the ACDEH and encroachment permits from the City of Oakland.

- The proposed locations of all soil borings were checked for underground utilities by Subdynamics of San Jose, California, using geophysical methods to a depth of approximately eight feet below ground surface (bgs). The utility locating survey was conducted to locate not only subsurface utility lines, but also to check for other structures which may have been present beneath the surface, thus minimizing the possibility of damaging subsurface structures. In addition, Kleinfelder notified Underground Service Alert (USA) prior to the beginning of field work. USA subscribers were given the option to meet in the field with our representative prior to commencement of exploration work.

- Kleinfelder prepared a Health and Safety Plan to address worker health and safety as well as contingency plans for emergency situations.

Task 2 - Field Operations - Well Installation

- Kleinfelder installed one monitoring well (EW-1) at a location within 10 feet of the tank excavation in the inferred downgradient direction (west-southwest) with respect to the former tank, based on instructions from Ms. Susan Hugo of the ACDEH. Information regarding gradient was obtained which pertained to the former City of Paris facility, located one-quarter mile southeast and down gradient from the site.

- The boring for the monitoring well was advanced to a depth of approximately 18 feet bgs and converted into a groundwater monitoring well. The depth of the boring was based on depth-to-water data collected at the City of Paris facility in February 1995, which indicated a depth to water of 7.62 to 10.92 feet. The well was constructed of 6-inch Schedule 40 polyvinyl chloride (PVC) casing in accordance with Kleinfelder's Field Protocol, which is presented in Appendix B.

- Due to the presence of the concrete flooring in the building, a concrete cutting contractor was required to cut a hole of sufficient size in order to install the proposed boring. The core diameter was 13 inches.

Task 3 - Field Operations - Well Development and Sampling

- Approximately 12 days after the installation of EW-1, Kleinfelder developed the monitoring well using surging and bailing techniques as described in Kleinfelder's Field Protocol (Appendix B).

- Approximately 48 hours after development, Kleinfelder purged and sampled the well. A purge log is enclosed in Appendix C.

Task 4 - Field Operations - GEOPROBE™ Exploration

- During well construction, a Geoprobe™ exploration rig installed six soil borings (B-1 through B-6) to a depth of 20 feet bgs. Soil samples were collected for chemical analysis from the 15-foot depth interval of each of the six borings. Soil samples were recovered from the other 5-foot depth intervals (i.e. 5-, 10-, and 20-foot) in two of the six borings for lithologic logging purposes. In addition to the soil samples, one groundwater sample was collected from each of the six borings at the 20-foot depth interval, with the exception of boring B-2, in which no groundwater accumulated.

Task 5 - Chemical Analyses

- The soil and groundwater samples were collected in accordance with Kleinfelder's Field Protocol (Appendix B). The selected soil and groundwater samples were submitted to NET Pacific, a laboratory certified by the State of California for the requested analyses.

- The following Environmental Protection Agency (EPA) analytical methods were performed on soil and groundwater samples:

  ◊ EPA method 8015/5030 - modified for total petroleum hydrocarbons quantified as diesel, kerosene and motor oil (TPH-d/mo);) and

  ◊ EPA method 8020 for benzene, toluene, ethylbenzene and total xylenes (BTEX).

- These analyses are based on the Tri-Regional Board Staff Recommendation for Preliminary Evaluation and Investigation of Underground Tank Sites, Table 2 - Recommended Minimum Verification Analyses for Fuel/Heating Oil Tanks.

Task 6 - Report Preparation

Kleinfelder has prepared this report summarizing our investigation, field sampling activities, laboratory data and results, and conclusions and recommendations.

RESULTS

The analytical results from soil and groundwater sampling are tabulated and presented on Table 1. The boring logs, field data sheets, and well construction details are presented in Appendix A. The laboratory analytical data reports are presented in Appendix D.

Field Investigation - EW-1 Development

EW-1 installation was completed on December 6, 1995. Monitoring Well EW-1 was developed on December 18, 1995 (see well development protocol in Appendix B). During development, groundwater exhibited a strong petroleum odor, but no separate phase petroleum hydrocarbons were observed. NOTE: During the field investigation of November 14, 1995, free product was observed in groundwater at EW-1. A bailer was lowered into the well and allowed to fill slowly. The retrieved bailer contained a very thin film of separate-phase hydrocarbons (less than 0.01 feet); however, an oil-water interface probe, which is designed to measure the thickness of separate-phase petroleum hydrocarbon layers, did not detect separate phase hydrocarbons.

A 4-inch PVC bailer was used to bail the film out of the well prior to surging; approximately ten gallons of water were removed. The well was then surged for ten minutes using the same PVC bailer. A surge block was not used in an effort to safeguard against the smearing of the separate-phase hydrocarbons on the well screen. The well was subsequently purged using a submersible 12-volt dedicated pump that was factory set to pump at 2.5 gallons per minute. It was noted at the time of purging that the well would dewater at this extraction rate. After water in the well was drawn down approximately five feet, the recovery rate was measured. We found that the well was recovering at approximately 0.1 foot per minute. On that basis, we estimate that this well will yield less than 0.2 gallons per minute.

Analytical Results - EW-1

Soil samples were retrieved from Monitoring Well EW-1 during well installation at the 5, 9, and 15 foot bgs intervals. These samples were then submitted to NET Pacific for analysis of BTEX and TPH-d/k/mo. Results of these analyses are summarized below.

- No petroleum hydrocarbons were detected above the method reporting limits in the 5 foot sample;
- The sample from the 9-foot interval contained 29 milligrams/kilogram (mg/kg) of TPH-d; and
- The sample from the 15-foot interval contained 56 mg/kg of TPH-d.

The groundwater sample collected from EW-1 (following development) contained 4 milligrams per liter (mg/L) of TPH-d.

Analytical Results - GEOPROBE™ Soil Borings

Soil samples were retrieved from borings B-1, B-4, and B-5 at the 5, 10, and 15-foot bgs intervals. Soil samples were retrieved only from the 15-foot interval in borings B-2, B-3, and B-6. Grab groundwater samples were retrieved from each boring at a depth of 20-feet bgs, with the exception of Boring B-2, in which groundwater did not accumulate. These samples were submitted to NET Pacific laboratory for analysis of BTEX and TPH-d/k/mo in accordance with our ACDEH-approved workplan.

Petroleum hydrocarbons were detected in samples collected from each boring, with the exception of Boring B-2, which did not contain detectable petroleum hydrocarbons. Analytical results suggest that more than one grade of fuel may be present. The laboratory conducted a fuel fingerprint on a liquid sample from Monitoring Well EW-1, and determined that the sample contained weathered petroleum hydrocarbons, diesel, with a lighter hydrocarbon also present, perhaps kerosene.

No petroleum hydrocarbons were detected above the method reporting limits in the groundwater sample collected from boring B-4. Petroleum hydrocarbons were detected in each of the remaining groundwater samples collected, with concentrations ranging from 0.29 mg/L to 15 mg/L. Please refer to Table 1 and Plate 3 for tabulated analytical results.

CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical results for the soil and groundwater samples collected at the site during this investigation, it appears that soil and groundwater have been impacted by petroleum hydrocarbons west and south of the former UST.

Based on the observations made in the field, the dispersal of the analytical data, and on the assumed use of the former UST, it appears that the source of the petroleum hydrocarbons in the soil and groundwater in the southern and western areas of the site is attributable to the former UST.

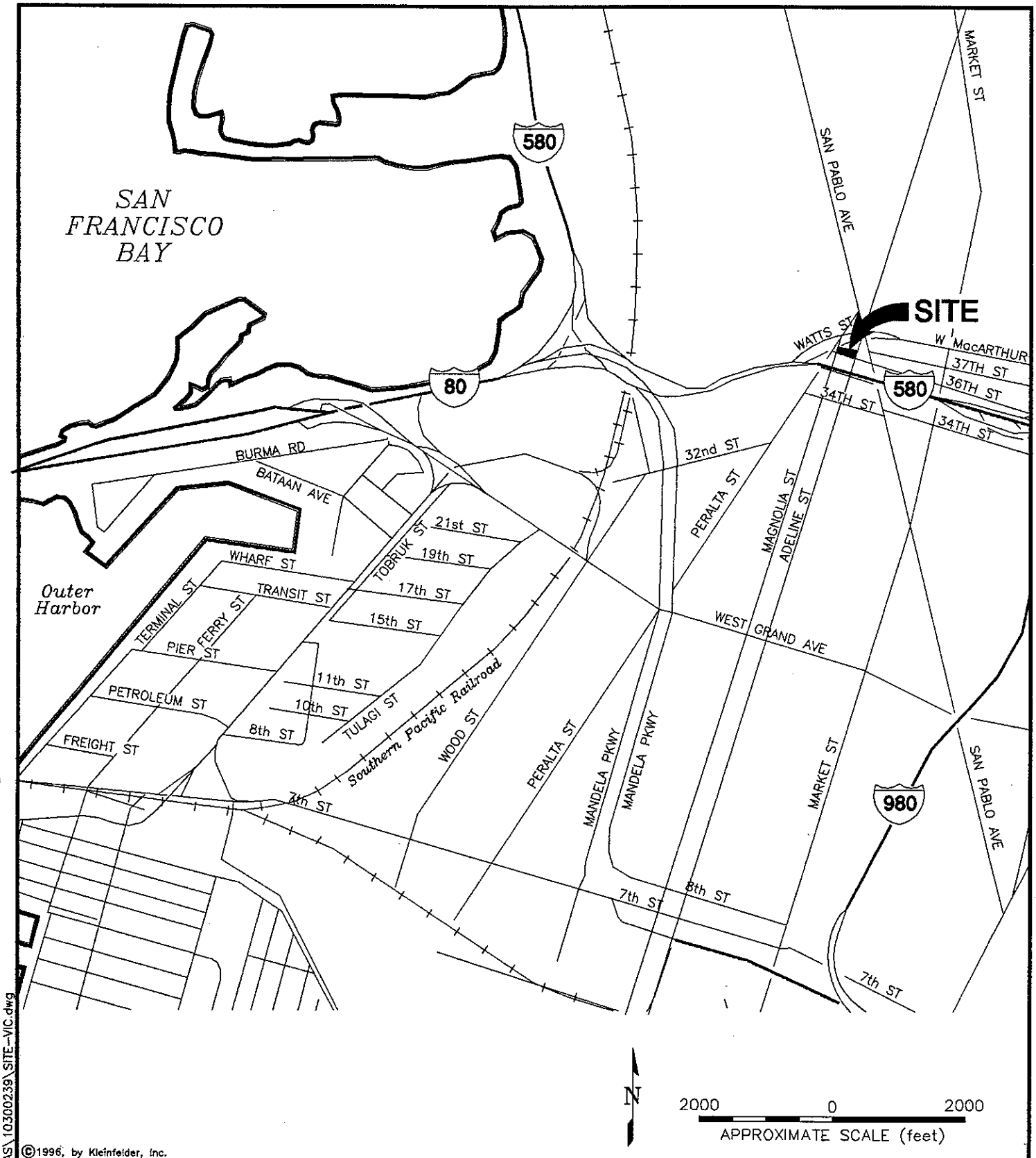
Source removal has been completed on-site with the removal of the UST and approximately 54 tons of impacted soil. Once source removal has occurred, passive bioremediation processes typically act to naturally reduce the mass of fuel hydrocarbons in the subsurface. Kleinfelder recommends that the site continue to undergo passive bioremediation to improve the existing soil and groundwater quality, based on the recent findings of the Lawrence Livermore National Laboratory Report (Recommendations to Improve the Cleanup Process for California's Leaking Underground Fuel Tanks, October 1995).

LIMITATIONS

This report was prepared in general accordance with the accepted standard of practice which exists in Northern California at the time the investigation was performed. It should be recognized that definition and evaluation of environmental conditions is a difficult and inexact art. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies, including additional environmental investigations, can tend to reduce the inherent uncertainties associated with such studies. If the Client wishes to reduce the uncertainty beyond the level associated with this study, Kleinfelder should be notified for additional consultation.

Our firm has prepared this report for the Client's exclusive use for this particular project and in accordance with generally accepted engineering practices within the area at the time of our investigation. No other representations, expressed or implied, and no warranty or guarantee is included or intended.

This report may be used only by the client and only for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both onsite and offsite) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use this report shall notify Kleinfelder of such intended use. 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 will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party.



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DRAFTED BY: L. Sue	DATE: 1-10-96
CHECKED BY: A. Gibbs	DATE: 1-24-96

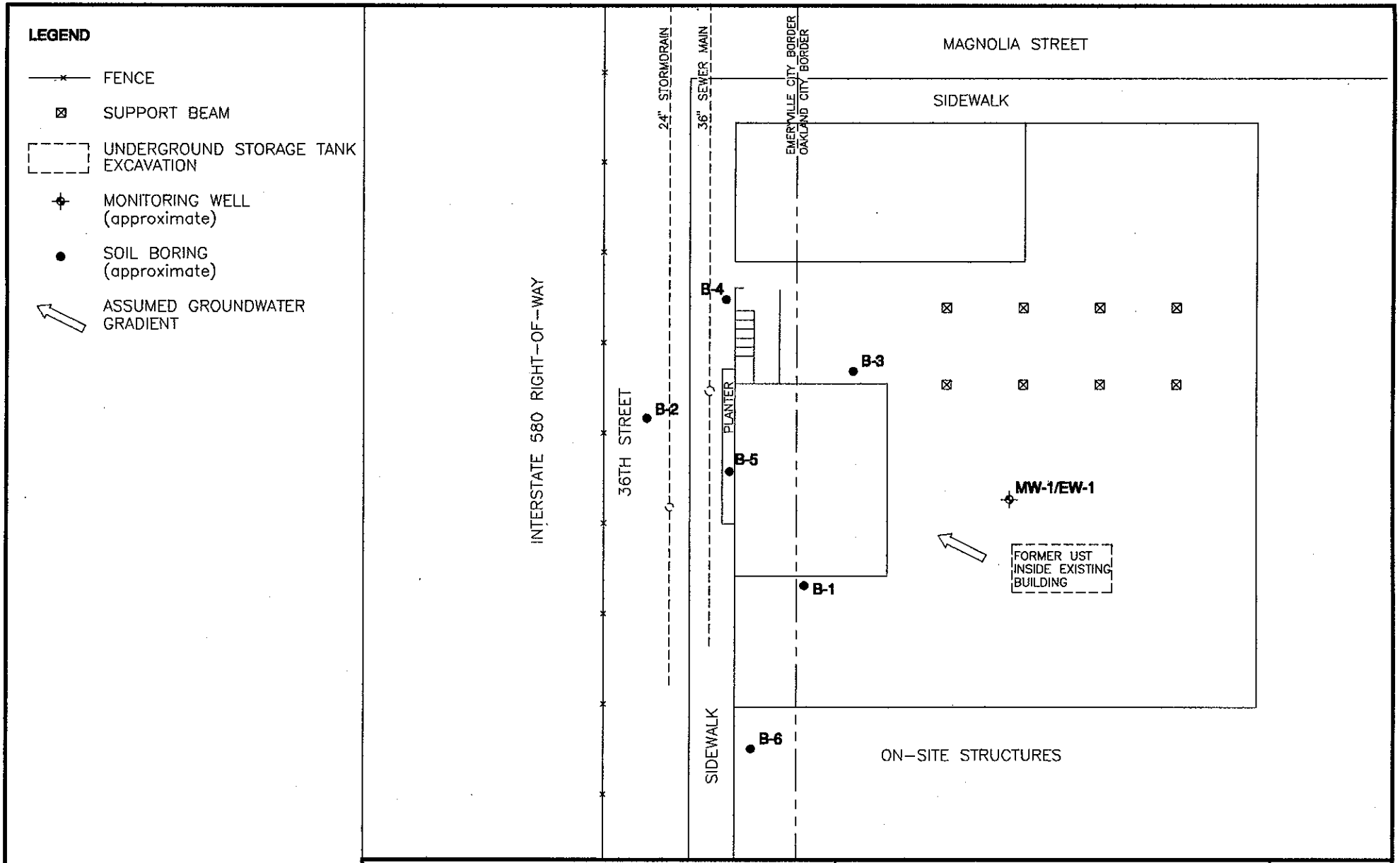
SITE LOCATION MAP

OWENS FINANCIAL
3623 ADELINE STREET
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-300239-001

PLATE

1



KLEINFELDER

DRAFTED BY: L. Sue DATE: 1-10-96

CHECKED BY: A. Gibbs DATE: 1-29-96

SITE PLAN

OWENS FINANCIAL
3623 ADELINE STREET
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-300239-001

PLATE 2

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LEGEND

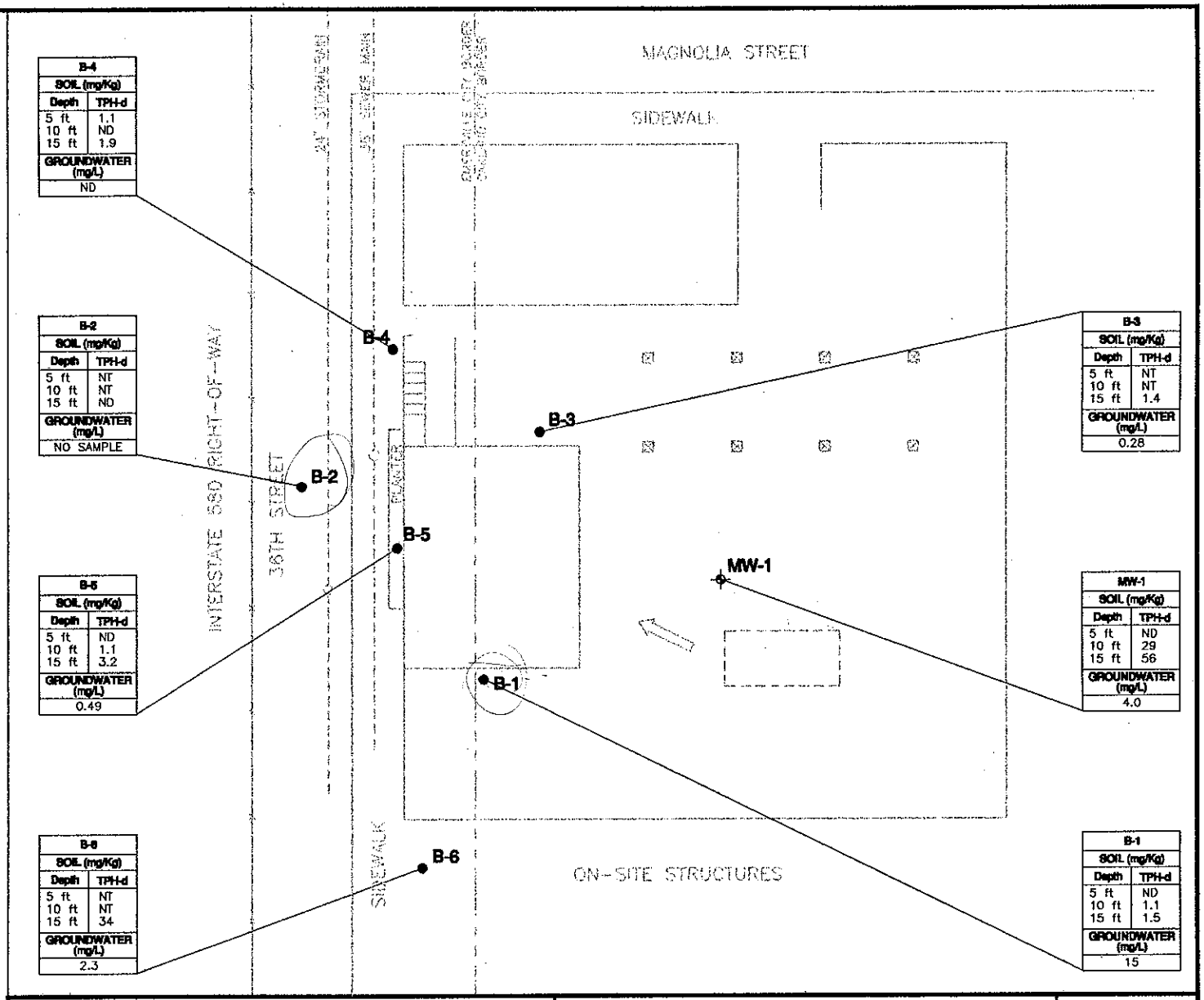
- FENCE
- SUPPORT BEAM
- UNDERGROUND STORAGE TANK EXCAVATION
- MONITORING WELL (approximate)
- SOIL BORING (approximate)
- ASSUMED GROUNDWATER GRADIENT

mg/Kg MILLIGRAMS PER KILOGRAM

mg/L MILLIGRAMS PER LITER

NT NOT TESTED

ND NOT DETECTED



30 0 30

APPROXIMATE SCALE (feet)

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DRAFTED BY: L. Sue DATE: 1-10-96

CHECKED BY: A. Gibbs DATE: 1-29-96

TOTAL PETROLEUM HYDROCARBONS AS DIESEL (TPH-D) IN SOIL AND GROUNDWATER

OWENS FINANCIAL
3623 ADELINE STREET
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-300239-001

PLATE 3

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TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
3623 Adeline Street/1168 36th Street, Emeryville, California

Boring No.	Sample Depth (ft bgs)	Sample Date	Petroleum Hydrocarbons (8015M)		Volatile Organics (8020)			
			TPH-d (mg/kg)	TPH-o (mg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethyl-benzene (µg/kg)	Total Xylenes (µg/kg)
EW-1	5.0	11/14/95	ND	ND	ND	ND	ND	ND
	9.5	11/14/95	29	ND	ND	ND	ND	ND
	15.0	11/14/95	56[a]	55	27	400	360	1300
B-1	5.0	12/6/95	ND	16	ND	ND	ND	ND
	10.0	12/6/95	1.1[b]	ND	ND	ND	ND	ND
	15.0	12/6/95	1.5[c]	ND	8.5	22	36	91
B-2	15.0	12/6/95	ND	ND	ND	ND	ND	ND
B-3	15.0	12/6/95	1.4[d]	ND	ND	ND	ND	ND
B-4	5.0	12/6/95	1.1[d]	ND	ND	ND	ND	ND
	10.0	12/6/95	ND	ND	ND	ND	ND	ND
	15.0	12/6/95	1.9[d]	ND	ND	ND	ND	ND
B-5	5.0	12/6/95	ND	ND	ND	ND	ND	ND
	10.0	12/6/95	1.1	ND	ND	ND	ND	ND
	15.0	12/6/95	3.2	ND	ND	ND	ND	ND
B-6	15.0	12/6/95	34[c]	ND	ND	30	49	88

EXPLANATION

ft bgs	feet below ground surface.
mg/kg	milligrams per kilogram ~ parts per million.
µg/kg	micrograms per kilogram ~ parts per billion.
–	not tested.
ND	target analytes were not detected at or above the laboratory method reporting limit. See laboratory report for detection limits by analyte.
TPH	total petroleum hydrocarbons quantified as noted below.
d	= quantified as diesel
o	= quantified as bunker oil
k	= quantified as kerosene

NOTES

a	The sample appears to be a mixture of components which are both lighter and heavier than diesel. The hydrocarbon pattern representing the heavier fraction exhibits characteristics which are peculiar to fuel oil.
b	The result for the diesel range hydrocarbons is an unknown hydrocarbon consisting of a single peak
c	The positive result appears to be a lighter hydrocarbon than diesel
d	Laboratory reported the positive result as having an atypical pattern for diesel analysis

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
3623 Adeline Street/1168 36th Street, Emeryville, California

Boring No.	Sample Date	Petroleum Hydrocarbons EPA 8015M			Volatile Organics EPA 8020			
		TPH-d (mg/L)	TPH-o (mg/L)	TPH-k (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)
EW-1	12/21/95	4.0	ND	ND	0.7	9.2	0.8	3.8
B-1	12/6/95	15[a]	ND	--	13	ND	28	ND
B-3	12/6/95	0.28[a]	ND	--	ND	ND	ND	1.5
B-4	12/6/95	ND	ND	--	ND	ND	ND	ND
B-5	12/6/95	0.49[a]	ND	--	0.9	0.6	4.8	20
B-6	12/6/95	2.3[a]	ND	--	28	20	65	11

EXPLANATION

ft bgs	feet below ground surface.
mg/L	milligrams per liter ~ parts per million.
µg/L	micrograms per liter ~ parts per billion.
--	not tested.
ND	target analytes were not detected at or above the laboratory method reporting limit. See laboratory report for detection limits by analyte.
TPH	total petroleum hydrocarbons quantified as noted below.
d	= quantified as diesel
o	= quantified as bunker oil oil
k	= quantified as kerosene

NOTES

The above samples (excluding EW-1) are grab samples and were not sampled from monitoring wells
No groundwater was recoverable from B-2

a The positive result appears to be a lighter hydrocarbon than diesel

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ENVIRONMENTAL BORING AND MONITORING WELL DATA SHEET

Project	Boring No.
oWENS fINANCIAL	MW-1
Number 10-300239-001	
Total Depth 25.0 feet	**Sheet** 1

Location

Well Location	Section, Range, Township	Owner and Mailing Information
3623 Adeline Street Emeryville, CA	**APN** _____ **Local Permit #** X9500880	Owen's Financial 2221 Olympic Boulevard Walnut Creek, CA

Drilling Operations

Drilling Company Baylands	**Logged By** R. Conery/S.T. Davis	**Task**	**Start**	**Finish**
Rig Make/Model Limited Access	**Driller/Crew** Baylands	**Drilling**	11-14-95, 08:00	12-6-95, 11:50
Bit Type/Diameter Hollowstem auger, 6"ø	**Inspector** Lee White	**Completion**	12-6-95, 12:00	12-6-95, 15:00
Hammer Data 140 pounds, 30 inches	**Agency** City of Oakland	**Development**	12-18-95, 12:00	12-18-95, 15:00

Boring Completion

Monumentation		Well Design	Material and Size	Top	Bottom
Reference Point Description		**Surface Casing**	6"ø Sch 40 PVC	-1.5 feet	0 feet
Northing	**Easting**	**Casing**	6"ø Sch 40 PVC	0 feet	5.0 feet
Elevation		**Screen**	6"ø PVC, 0.001" slot	5.0 feet	25.0 feet
Reference Point	**Ground**	**Filter Pack**	RMC Lonestar #2	4.0 feet	25.0 feet
Datum		**Bentonite**	3/8" Pellets	3.5 feet	4.0 feet
Surveyed By	**Date**	**Surface Seal**	Portland cement	1.0 feet	3.5 feet

Field Hydrologic Conditions and Observations

Weather			Other Observations	Ground Water			
Temperature	**Max.** 60°F	**Min.** 60°F	**Recent Rainfall/Precipitation** N/A (indoors)	**Sym.**	**Date**	**Time**	**Level**
Humidity			**Nearby Wells Pumping** None		12-18-95	12:00	11.23 ft
Windspeed/Direction Breeze			**Nearby Surface Water** None				
Cloud Cover Foggy			**Nearby Utilities** Yes, Overhead				

Surface Conditions

Inside warehouse with concrete flooring

Development Information

Very low recharge rate

Additional Remarks

Appendix A

Date: 1-18-96

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Revision Date: _____

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		LTR	DESCRIPTION
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	Well-graded gravels or gravel sand mixtures, little or no fines.
		GP	Poorly-graded gravels or gravel sand mixture little or no fines.
		GM	Silty gravels, gravel-sand-silt mixtures.
		GC	Clayey gravels, gravel-sand-clay mixtures.
	SAND AND SANDY SOILS	SW	Well-graded sands or gravelly sands, little or no fines.
		SP	Poorly-graded sands or gravelly sands, little or no fines.
		SM	Silty sands, sand, and silt mixtures.
		SC	Clayey sands, and clay mixtures.
FINE GRAINED SOILS	SILTS AND CLAYS LL < 50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean silty clays.
		OL	Organic silts and organic silt-clays of low plasticity.
	SILTS AND CLAYS LL > 50	MH	Inorganic silts, micaceous or diato-maceous fine or silty soils, elastic silts.
		CH	Inorganic clays of high plasticity, fat clays.
		OH	Organic clays of medium to high plasticity.
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils.

- Bulk, bag, or grab sample
- Standard Penetration Split Spoon Sampler (SPT), 2"ø
- Modified California (Porter) Sampler (MPS), 2.5"ø
- California Sampler, 3"ø
- Shelby Tube, 3"ø

- OVA — Organic Vapor Analyzer
- PID — Total organic vapors (parts per million) measured by a photo-ionization device
- FID — Total organic vapors (parts per million) measured by a flame-ionization device

- Blank casing
- Screened casing
- Cement grout
- Bentonite
- Sand pack or gravel pack

- Sharp Contact (observed)
- Inferred Contact (contact not observed)
- Gradational Contact (observed)
- Water level observed in boring
- Stabilized water level
- NFWE — No free water encountered

NOTES: Blow counts represent the number of blows of a 140-pound hammer falling 30 inches required to drive a sampler through the last 12 inches of an 18-inch penetration.

The lines separating strata on the logs represent approximate boundaries only. The actual transition may be gradual. No warranty is provided as to the continuity of soil strata between borings. Logs represent the soil section observed at the boring location on the date of drilling only.

References to plasticity of cohesive soils are based on qualitative field observations and not on quantitative field or laboratory tests. Qualitative soil plasticity is noted solely to aid in stratigraphic correlation and is not intended for geotechnical characterization of soils.

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DRAFTED BY: L. Sue DATE: 1-12-96

CHECKED BY: A. Gibbs DATE: 1-24-96

BORING LOG LEGEND

OWENS FINANCIAL
3623 ADELINE STREET
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-300239-001

PLATE

CAD FILE: D:\-KA_PROJ\PLEAS\10300239\BLOG-LEG.dwg

KLEINFELDER

Project	Boring No.
Owens Financial	MW-1
Number: 10-300239-001	
Total Depth: 20.0 feet	Sheet: 1 of 1

LOG OF BORING

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) ☑ PID ☐ FID	USCS	Description	Remarks	Well Construction
1–4		MODIFIED CAL.			NA		CONCRETE		
1–4						CH	CLAY – dark brown, moist, soft, high plasticity, trace very fine sand, with silt; ESTIMATE 99% fines, <5% sand		
5	MW1-5		8	100		SM	SILTY SAND – greenish gray, moist, medium dense, very fine grained, well graded; estimate 45% fines, 55% sand		
6	MW1-6		34	100					
7–8							increasing sand content with depth; estimate 30% fines, 70% sand		
9	MW1-9		20	100		CL	CLAY – greenish gray with dark green banding, moist, very stiff, low plasticity		
10	MW1-9.5								
15	MW1-15		23	100			interbedded fine sand at 14.5 ft. 11-14-95 ▽	Boring completed to 16 ft. on 11-14-95; boring redrilled on 12-6-95 to 25 ft.	
16–18							plasticity increases to medium; trace angular, pea-sized gravel		
25								Boring completed to 25 ft. as 6 in. ø well; no Christy box; left for completion as vaulted extraction well.	

Designated Purpose(s) of Log

Site Characterization

Note: Logs are to be used only for designated purpose(s).

Logged by	Date	Plate
R. Conery/T. Davis	12-6-95	
Drafted by: L. Sue	Date: 1-12-96	
Reviewed by: A. Gibbs	Date: 1-24-96	

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KLEINFELDER

Project	Boring No.
Owens Financial	B-1
Number: 10-300239-001	
Total Depth: 20.0 feet	Sheet: 1 of 1

LOG OF BORING

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) ☑PID ☐FID	USCS	Description	Remarks	Well Construction
1		GEOPROBE	NA		NA		CONCRETE		
2						CL	SITLY CLAY – brown, moist, soft, low plasticity, trace sand; estimate > 95% fines, >5% sand		
3									
4									
5	B1-5			100		CL	CLAY – bluish gray, stiff, low plasticity; estimate >95% fines, >5% sand		
6									
7									
8									
9									
10	B1-10			100		CL	CLAY – bluish brown, stiff, medium soft, low plasticity, trace sand; estimate >95% fines, >5% sand		
11									
12									
13									
14									
15	B1-15			100		CL	CLAY – bluish gray, soft, medium plasticity; estimate 100% fines 12-6-95 ▽	slight odor	
16									
17									
18									
19									
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31									
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33									
34									
35									
36									

Designated Purpose(s) of Log

Site Characterization

Note: Logs are to be used only for designated purpose(s).

Logged by	Date	Plate
S.T. Davis	12-6-95	
Drafted by: L. Sue	Date: 1-12-96	
Reviewed by: A. Gibbs	Date: 1-24-96	

KLEINFELDER

Project	Boring No.
Owens Financial	B-2
Number: 10-300239-001	
Total Depth: 20.0 feet	Sheet: 1 of 1

LOG OF BORING

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) ☑PID ☐FID	USCS	Description	Remarks	Well Construction
1		GEOPROBE	NA		NA		ASPHALT and roadbase		
1						CL	CLAY – bluish gray to 13 ft.		
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14	B2-15			100		CL	CLAY with SILT – brown, moist, soft, medium plasticity, gravelly interbeds, trace very fine sand; estimate >95% fines, <5% sand, <5% gravel to 0.24 in. diameter		
15									
16									
17									
18									
19									
20									
21							NFWE		
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									

Designated Purpose(s) of Log

Site Characterization

Note: Logs are to be used only for designated purpose(s).

Logged by	Date	Plate
R.Conery	12-6-95	
Drafted by: L. Sue	Date: 1-12-96	
Reviewed by: A. Gibbs	Date: 1-24-96	

KLEINFELDER

Project	Boring No.
Owens Financial	B-3
Number: 10-300239-001	
Total Depth: 20.0 feet	Sheet: 1 of 1

LOG OF BORING

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) ☑ PID ☐ FID	USCS	Description	Remarks	Well Construction
1–20	B3-15	GEOPROBE	NA	100	NA	ML	SILTY CLAY – brown, moist, stiff, gravelly seams; estimate >95% fines, <5% sand, <5% gravel		
						SC	CLAYEY SAND with GRAVEL – bluish gray, moist, stiff; estimate 35% fines, 55% sand, 10% gravel		
21–36									

Designated Purpose(s) of Log

Site Characterization

Note: Logs are to be used only for designated purpose(s).

Logged by	Date	Plate
R.Conery	12-6-95	
Drafted by: L. Sue	Date: 1-12-96	
Reviewed by: A. Gibbs	Date: 1-24-96	

KLEINFELDER

Project	Boring No.
Owens Financial	B-4
Number: 10-300239-001	
Total Depth: 20.0 feet	Sheet: 1 of 1

LOG OF BORING

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) ☑ PID ☐ FID	USCS	Description	Remarks	Well Construction
1		GEOPROBE	NA				CONCRETE		
2						fill	FILL – SILTY CLAY – brown, moist, soft, with fine sand		
3						CL	CLAY – bluish gray, moist, soft to medium stiff, medium plasticity, black speckling, trace gravel; estimate >95% fines, <5% sand, <5% gravel		
4									
5	B4-5			100					
6						ML	SILT – yellowish brown, with rust red mottling, moist, stiff, very low plasticity, trace very fine sand, trace gravel; estimate >95% fines, <5% sand, <5%gravel		
7									
8									
9	B4-10			100			at 9 ft., color changes to bluish gray; interbedded gravels		
10									
11									
12							at 12 ft., color change to brown		
13							at 13 ft., increasing plasticity, increasing softness, increasing moisture		
14									
15	B4-15			100					
16							12-6-95 ▽		
17									
18									
19									
20									
21									
22									
23									
24									
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26									
27									
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31									
32									
33									
34									
35									
36									

Designated Purpose(s) of Log

Site Characterization

Note: Logs are to be used only for designated purpose(s).

Logged by	Date	Plate
R.Conery	12-6-95	
Drafted by: L. Sue	Date: 1-12-96	
Reviewed by: A. Gibbs	Date: 1-24-96	

CAD FILE: D:\-KA_PROJ\PLEAS\10300239\LOGBASE.dwg

KLEINFELDER

Project	Boring No.
Owens Financial	B-5
Number: 10-300239-001	
Total Depth: 20.0 feet	Sheet: 1 of 1

LOG OF BORING

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) ☑ PID ☐ FID	USCS	Description	Remarks	Well Construction
1–20	B5-5	GEOPROBE	NA	100		fill	CLAY with SILT and SAND – moist, soft, organic particles (planter fill)		
						CL	SILTY CLAY – brown, with black speckling, moist, soft, medium plasticity, cemented nodules; estimate >95% fines, <5% sand		
							at 7 ft., intrbedded angular gravel, approximately 6-in. thick		
	B5-10			100					
						SC	SAND – blue gray, wet, soft, fine grained, with trace angular gravel; estimate 25% fines, 75% sand, <5% gravel to 0.25 in.		
	B5-15			100			12-6-95 ▽		
21–36									

Designated Purpose(s) of Log

Site Characterization

Note: Logs are to be used only for designated purpose(s).

Logged by	Date	Plate
R.Conery	12-6-95	
Drafted by: L. Sue	Date: 1-12-96	
Reviewed by: A. Gibbs	Date: 1-24-96	

KLEINFELDER

Project	Boring No.
Owens Financial	B-6
Number: 10-300239-001	
Total Depth: 20.0 feet	Sheet: 1 of 1

LOG OF BORING

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) ☑PID ☐FID	USCS	Description	Remarks	Well Construction
1		GEOPROBE	NA				CONCRETE		
2						fill	BASE FILL		
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14	B6-15			100		CH	CLAY with SILT – bluish gray, moist, soft, medium to high plasticity, rust red streaks, black specks, trace very fine sand, trace gravel; estimate >95% fines, <5% sand, <5% gravel		
15									
16									
17									
18									
19									
20									
21									
22									
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35									
36									

Designated Purpose(s) of Log
Site Characterization

Note: Logs are to be used only for designated purpose(s).

Logged by	Date	Plate
R.Conery	12-6-95	
Drafted by: L. Sue	Date: 1-12-96	
Reviewed by: A. Gibbs	Date: 1-24-96	

CAD FILE: D:\-KA_PROJ\PLEAS\10300239\LOGBASE.dwg

DRILLING AND SAMPLING PROCEDURES

PERMITTING

Kleinfelder prepared permit applications and submitted them to the Alameda County Department of Health. Copies of the signed permits and variance requests were on-site during drilling operations, and were available for inspection by appropriate agencies.

DRILLING

The hollow-stem auger method was used for the installation of soil borings at the site. This method involved the use of a 10-inch continuous flight hollow-stem auger advanced into the subsurface by a truck mounted CME drill rig. All of the soil cuttings from this operation were transferred to 55 gallon drums at the time of drilling. These drums were marked clearly with the date, location, well number, and client's name and stored on-site pending laboratory results.

Equipment Cleaning

Drilling equipment was thoroughly steam-cleaned prior to arriving on-site to prevent the introduction of off-site contamination. Clean equipment was stored in a clean location when not in use. Hydrocarbon based lubricants were not used on drilling equipment. Equipment was steam-cleaned on-site in designated areas prior to reuse.

Sampler Cleaning

Soil samplers were disassembled, washed with a solution containing TSP or non-phosphate detergent, or steam-cleaned, and double-rinsed with distilled water prior to use. The samplers were then lined with clean stainless steel tubes and reassembled for use.

Lithologic Sampling

The subsurface stratigraphy was interpreted on-site by a Kleinfelder geologist. The materials recovered during drilling and the undisturbed soil samples recovered from the boreholes were observed in the field for lithologic type, color, moisture content, density and/or stiffness, percentages of gravels/sands/fines, and distinguishing characteristics.

All appropriate terminology and techniques were consistent with the Unified Soil Classification Chart.

Two soil samples were collected per boring. The first was retrieved from 5 to 6 feet below ground surface (bgs) of the boring and the second from 10 to 15 feet bgs. Soils were sampled using an 18-inch by 2-inch Internal Diameter California-modified U-type sampler containing three 6-inch cleaned brass liners. The sampler was then driven into the undisturbed subsurface soils below the open borehole by a 140 pound hammer falling 30 inches.

The number of blows required to drive the sampler each 6-inch increment was recorded directly on the field log.

The soil samples collected were taken from the bottom liner and labeled, sealed, and preserved in an ice-cooled container for laboratory analyses. Selected soil samples were delivered under a chain-of-custody record to a State-certified laboratory for chemical analyses. Soils collected in the upper and middle liners from the sampler were extruded in the field, and examined by Kleinfelder's geologist to help provide detailed lithologic information.

Qualitative Field Screening

An organic vapor analyzer (OVA or PID) using a flame ionization detector or a photo ionization detector was used to provide a qualitative screening of each soil sample collected during drilling.

Sample Preservation

The samples selected for chemical testing were sealed in stainless steel liners in the field with Teflon™ sheeting covers placed on the ends of the liner directly on the exposed soils, and held in place by clean plastic caps. The sample caps were then sealed onto the stainless steel liner by a silicon tape wrap. Sealed soil samples were then labelled and placed in a covered ice-cooled container.

Soil Sampling with the GEOPROBE System

The Geoprobe soil sampling system utilizes direct-push technology to retrieve a relatively undisturbed, discrete soil sample. The sampler consists of 1.5-inch outer diameter stainless steel tube lined on the inside with an acetate sampling liner. The sampler is driven into the subsurface using a truck-mounted percussion hammer until the target depth is reached, at which time the conical tip is drawn back up the inside of the

sampler. The sampler is then driven two feet further into the bore hole, collecting the desired lithologic interval.

After the sampler is drawn out of the bore hole, it is opened and the acetate sample tubing is withdrawn. The geologist who is on-site is then capable of observing the soil through the acetate and can select the most proper interval for analysis or field screening.

Groundwater Sampling with the GEOPROBE System

Geoprobe grab groundwater samples were collected during the soil sampling field program using the Geoprobe groundwater sampling device installed through the open auger. The Geoprobe system of groundwater sample collection is used in order to retrieve relatively undisturbed formational groundwater samples. The Geoprobe sampling rod consists of a steel inner core well screen inside a 1-inch diameter steel outer sampling sheath.

After groundwater is encountered, the Geoprobe sampler is lowered into the open borehole. The outer sheath of the Geoprobe is then pulled back 2 feet to expose the screened steel inner core. Groundwater is allowed to collect inside and then retrieved using clean Teflon tubing equiped with a check valve on the down-hole end. Groundwater is then decanted into the proper sample glassware.

Equipment Cleaning

To reduce the potential of cross-contamination among sampling locations, the equipment used for sample collection was steam-cleaned and/or washed with tri-sodium phosphate solution and triple-rinsed with distilled water prior to use. Disposable items, such as tubing and septa, were replaced after use at each sampling location.

Sample Labeling and Preservation

Sample bottles were labeled with identification number, date and time of collection, sampler's name, project identification, and sampler's identification number. Samples were then placed in an ice-cooled container for transport to the State certified subcontracted laboratory.

SAMPLE HANDLING

Chain of Custody Procedures

In order to document and trace sample possession from time of collection to time of analysis, chain-of-custody records were filled out by the sampler, and accompanied the

samples through the laboratory analyses. The completed chain-of-custody records are included with the laboratory reports in this report.

Information contained on the duplicate, carbonless chain-of-custody form includes:

- Date and time the sample was taken.
- Sample number and the number of sample containers;
- analyses required.
- Remarks, including preservatives added and any special conditions.

Sample containers were not opened, except by laboratory personnel who performed the chemical analyses. Soil samples were analyzed by a laboratory certified by the State of California, Department of Health Services. Requests for sample analyses were made in writing and were included as part of the chain-of-custody record.

GROUNDWATER MONITORING WELL INSTALLATION PROCEDURES

Filter Material

Filter material was a clean, rounded sand or gravel with less than 2 percent, by weight, passing through a No. 200 sieve. The filter material was selected to retain a high percentage of the saturated zone (native materials) to be monitored and was graded similarly. The filter material extends along the length of the perforated section plus a maximum of 2 feet above the top of it.

Well Casing and Screen

The monitoring well consists of schedule 40 PVC flush-threaded casing. The inside diameter (ID) of both the perforated and solid casing is 6 inches.

Annular Seal

The annular seal consists of 3/8-inch bentonite pellets installed throught the open auger. The bentonite was thoroughly hydrated and allowed to swell before grouting.

Sanitary Grout

The sanitary grout consists of Portland cement. The consistency of the grout mix as well as the method of emplacement was determined in the field by the Kleinfelder geologist.

MONITORING WELL DEVELOPMENT

The monitoring well was developed to remove sediment from the well casing and to stabilize the filter material, so that the well will yield water with low mechanical turbidity. The monitoring well will be developed by surging, bailing or pumping. Development will be continued until the movement of fine sediment stabilizes or ceases, and turbidity stabilizes.

Final disposal of groundwater generated during development procedures will be conducted in accordance with local regulatory requirements, and will be the responsibility of the well owner.

DOCUMENTING WELL CONSTRUCTION AND DEVELOPMENT

Kleinfelder will record monitoring well construction details, and well development data on forms designed for those purposes.

GROUNDWATER SAMPLING PROTOCOL

The procedures summarized in this protocol are used by Kleinfelder to obtain groundwater samples which are representative of the conditions present at the sampling point at the time of sampling. The resulting data are consistent, reliable, and reproducible. Such data supports the accurate characterization of groundwater conditions at the site at the time of sampling. These procedures are general in scope and application. As work progresses, appropriate revisions are made and approved by the project manager.

To sample groundwater Kleinfelder:

- uses clean sampling equipment;
- measures water levels;
- purges stagnant water from well;
- samples fresh formation water;
- properly packages and transports the samples; and
- submits the samples for laboratory analysis.

Purging and Sampling Equipment

Purging and sampling equipment includes any materials or equipment that may contact the sample at any point between the sampling point and the final sample storage vessel (e.g., sample bottles). This does not include testing equipment or materials where a portion of the sample is tested and discarded during field testing activities.

Purging and sampling equipment must be free of materials which may affect the results of sample analyses. To this end Kleinfelder carefully selects and maintains appropriate sampling equipment. This equipment may be of three general types: 1) new disposable equipment which is discarded after use at each individual sampling location; 2) reusable equipment which is thoroughly decontaminated between each sampling location; or 3) reusable equipment dedicated to a specific sampling location and not used for any other.

Dedicated and disposable equipment are obtained from vendors assuring the cleanliness of the equipment for the intended sampling. When disposable or dedicated equipment is not used it is thoroughly cleaned prior to arrival to the project site and between sampling

points. The equipment used and any necessary cleaning procedures are documented on the sampler's field log.

Water Level Measurements and Visual Observations

The static depth to water is commonly measured in each monitoring well at the start of each sampling event using a conductivity-based water level indicator. These data are used to calculate the elevation of the water surface and the required purge volumes. Depth-to-water measurements are recorded to the nearest 0.01 foot.

Monitoring wells completed in areas where groundwater is suspected or known to contain hydrocarbons may be bailed for a visual assessment prior to measuring the static depth-to-water. The bailed sample is collected in a clean Teflon™, PVC, or other suitable bailer. If a product layer or sheen is observed, its thickness may then be measured in the well using a floating product meter or a steel tape coated with a hydrocarbon sensitive paste. Alternatively, the well may be measured using the product-thickness sensing device without the prior visual assessment.

Unless specifically instructed otherwise, Kleinfelder does not collect groundwater samples through a floating product layer.

Well Purging

Prior to actual sample collection Kleinfelder removes stagnant water within the well casing and filter material. This allows formation water to enter the well allowing the collection of a representative sample of the groundwater contained within the saturated zone. Removal of the stagnant water is accomplished by pumping or bailing the water contained within the well. Purged water is stored in holding tanks or drums for disposal by the client, unless Kleinfelder is otherwise instructed.

Where dedicated purging and sampling devices are not installed, one or more of the following purging devices may be used:

- a Teflon™, PVC, or stainless steel bailer;
- a submersible pump;
- a centrifugal pump;
- a positive gas-displacement, Teflon™ and/or stainless steel-housed Teflon™ bladder pump;
- a peristaltic pump or;
- a two-stage air-lift pump (Teflon™ or stainless steel).

The purging rate used at a particular monitoring well depends on the expected or known hydraulic yield.

When purging a low-yield well (one that yields less than three casing volumes prior to being purged to dryness), the well is purged to dryness. When the well recovers or when it contains a sufficient volume of water for the required analyses, samples are collected. At no time is a well purged to dryness if the rate of recharge is such that formation water will cascade down the sides of the casing, or if a purge rate of greater than one-quarter gallon per minute can be maintained.

groundwater samples are removed from a monitoring well of moderate- to high-yield only after a minimum of four casing volumes have been purged from the well casing, or purging has been of sufficient duration to result in stabilization of pH, temperature, and electrical conductivity (EC) measurements. In no case, unless otherwise instructed, will more than six casing-volumes be purged prior to sample collection.

Field parameters are measured using a pH meter calibrated to standard buffer solutions and an electrical conductivity meter equipped with a thermometer. Field equipment are checked and standardized at the beginning of each use according the manufacturers' specifications.

The pH, temperature, and EC parameters are measured and recorded during purging. A minimum of one measurement set is recorded for each casing volume purged. Stabilization of these parameters is indicated by consistent temperature, pH and EC values for two consecutive casing volumes.

A field sampling log is maintained for each sampling of each monitoring well and, as appropriate, includes the following:

- sampler's identification;
- monitoring well identification;
- weather conditions.
- depth to water, before and after purging;
- type of purging and sampling device;
- purging rate and volume;
- relative well yield volume;
- field parameter measurements (pH, EC, temperature);
- type and number of samples collected; and

- date and time collected.

An example field log may be found in Appendix B

Sample Collection

Samples of groundwater are collected only after the well has been properly purged. To assure that groundwater samples are representative of the groundwater contained within the formation it is important to minimize physical or chemical alteration of the sample during the collection process. If disposable or dedicated sampling devices are not used, the following procedures are strictly followed:

- Teflon™ and/or stainless steel sampling pumps or bailers are used.

- Sampling equipment is thoroughly cleaned between each sampling point in accordance with Section 2.1 ("Equipment Cleaning") of this protocol.

- Blank samples may be collected during the final rinse of the cleaning process.

Samples are collected in an order such that those parameters most sensitive to volatilization are collected first. A general order of collection for some common groundwater analyses follows:

- volatile organic compounds
- purgeable organic halogen compounds
- total organic carbon
- extractable organic compounds
- total metals
- dissolved metals
- phenols
- cyanide
- sulfate and chloride
- turbidity
- nitrate and ammonia

Samples are collected in such a manner as to minimize the volatilization of the sample due to agitation and/or transference from pump or bailer to sample container. When a bladder pump is used to sample for volatile compounds, the flow rate is adjusted to provide a constant flow stream of approximately 100 milliliters/minute. After samples for volatile compounds are collected, higher flow rates may be used, particularly if large sample volumes are required. The sampling flow rates will not exceed the purging process flow rate. When a bailer is used to retrieve a sample, a bottom discharge unit is used to minimize volatilization during transference between bailer and sample container.

Quality Assurance / Quality Control (QA/QC) Samples

Quality assurance/quality control samples and the resulting analytical data are used to monitor the filed sampling methods, laboratory performance, and as indicators of potential sources of cross-contamination.

Field QA/QC Samples

One or more field QA/QC samples may be collected as appropriate. These QA/QC samples are handled and transported in the same manner as the groundwater samples.

Travel (Trip) Blank Samples: These samples allow for an assessment of potential contamination of the samples while they are stored and transported in their sealed containers. They consist of organic free water placed in a sample container at the laboratory and transported from the laboratory to the field and back. The are prepared and analyzed at a rate of one travel blank per container type per sampling episode.

Equipment Blank Samples: These samples allow for the assessment of field equipment cleaning procedures but do not distinguish from contamination by ambient conditions. They are collected, if appropriate, by circulating steam-distilled water through cleaned sampling equipment during the final rinse. These samples may be collected at a rate of one blank per sampling episode.

Field Blank Samples: These samples allow for the assessment of sample contamination by ambient environmental conditions. They are collected, if appropriate, by transferring organic free water from a container prepared and sealed by the laboratory, into sampling containers identical to those used for groundwater sample collection, at a specific sample location. During the transfer potential contaminants from the environment surrounding the sample location may be absorbed into and contaminate the blank sample. These samples may be collected at a rate of one blank per sampling episode.

Laboratory QA/QC Samples

Two types of replicate samples may be collected to allow an assessment of laboratory performance. Such replicate samples are collected from a single well and from a single

casing volume when possible. When a single casing volume is insufficient, such samples are collected in as rapid a succession as possible.

Duplicate samples: These samples, if requested, are collected at a rate of one duplicate per ten samples, or one duplicate per sampling episode (if fewer than ten samples are collected). Duplicate samples are delivered to the primary laboratory to evaluate the laboratory's reliability.

Split samples: These samples may also be collected. A split sample is handled the same as the primary sample, but is delivered to a second laboratory. A comparison of the split sample results can be made to further evaluate the primary laboratory's performance.

Sample Analyses

Groundwater samples are analyzed by an analytical laboratory certified by an appropriate regulatory body (e.g., the State of California, Department of Health Services in California) or other regulatory body or agency as required. Requests for sample analyses are made in writing as part of the chain-of-custody record.

Documentation

Kleinfelder records Well purging data on forms designed for those purposes (see Appendix B)

SAMPLE HANDLING PROCEDURES

Decontamination

Sampling equipment must be free of materials which may affect the results of sample analyses. To this end Kleinfelder carefully selects and maintains appropriate sampling equipment. This equipment may be of three general types: 1) new disposable equipment which is discarded after use at each individual sampling location; 2) reusable equipment which is thoroughly decontaminated between each sampling location; or 3) reusable equipment dedicated to a specific sampling location and not used for any other.

Clean equipment is stored in a clean location when not in use.
Dedicated and disposable equipment are obtained from vendors assuring the cleanliness of the equipment for the intended sampling.

When reusable equipment is used it is thoroughly cleaned following ASTM D 5088. The equipment is cleaned prior to arrival at the project site to reduce the potential for the introduction of off-site contamination, and between sampling points to reduce the potential for cross-contaminaiton. Such equpiment is disassembled, washed with a

solution containing TSP, Alconox™, a non-phosphate detergent, or steam-cleaned, rinsed with steam distilled water, and air-dried immediately prior to use. Soil samplers are generally lined with similarly cleaned and dried brass tubes, and reassembled for use. Wires, hoses and connectors are likewise cleaned in a similar manner. Other decontamination procedures may be used based on specific requirements of the project.

To further reduce the potential for cross-contamination, hydrocarbon based lubricants are not used on drilling equipment. Kleinfelder recommends use of a solid food-grade vegetable shortening or a Teflon™-based lubricant. Prior to reuse equipment is also steam-cleaned on-site in designated areas .

General Sample Packaging and Transport

Sample Labeling

Sample containers are labeled in the field. Sample labels contain the following information:

- consultant's identification;
- project number or identification;
- date of collection
- sample identification
- sample location (optional).

Sample Transport

The elapsed time between sample collection and delivery to the laboratory will not exceed 72 hours. Sealed sample containers are not opened by other than the laboratory personnel who perform the requested analyses.

Chain-of-Custody

In order to document and trace sample possession from time of collection to time of analysis, a positive signature chain-of-custody record is completed by the sampler. This record accompanies the sample from the field through the laboratory analyses. Completed chain-of-custody records are included in the laboratory's final report.

Information contained on the duplicate, carbonless chain-of-custody form includes:

- date and time the sample was taken;

- sample number and the number of sample containers;
- analyses required; and
- remarks, including preservatives added and any special conditions.

Custody Seal

If it is necessary for samples or sample chests to leave the immediate control of the sampler prior to being delivered to the laboratory, a custody seal is placed on each sample container and/or sample chest to discourage tampering during transportation. The custody seal contains the sampler's signature, and the date and time seal was emplaced.

Sample Preservation

Sample preservation is in accordance with current standards. Sample containers will not be opened, except by laboratory personnel who will perform the chemical analyses. Soil samples will be analyzed by a laboratory certified by the State of California, Department of Health Services. Requests for sample analyses will be made in writing and will be included as part of the chain-of-custody record.

Water Samples

5.4.1 Sample Preservation

Many chemical analytes and physical parameters monitored in groundwater are not chemically stable, and therefore require chemical preservation. Sample containers and preservatives are generally supplied by the contract laboratory. Samples are held on ice in a covered, secured ice chest specifically designated for the purpose of sample storage and transport.

Sample Filtration

For some analyses, samples may require filtration to remove suspended particles. As needed, Kleinfelder filters samples in the field. Unless otherwise specified, 45-micron cellulose acetate filters are generally used. One of two filter types are used: an in-line filter which is used in conjunction with a sample pump, or a pressure or vacuum cylinder filter which is used in conjunction with a bailer.

Date: 12/19/95 Weather: Clear Sheet 1 of 1

Project: 10.3502.39/001 Submitted By: RKC Date:

Project Number: OWENS FIN. Approved By: Date:

PURGE CHARACTERIZATION AND ~~SAMPLE~~ DEVELOPMENT LOG Well No. MW-7

Purging Equipment	Bailer	Disposable Bailer	Bladder Pump	(Dedicated) Pump	Suction Pump	Other:
Sampling Equipment	Bailer	Disposable Bailer	Bladder Pump	Dedicated Pump	Other:	

Cleaning Methods	Wash	Rinse I	Rinse II	Rinse III
	DI	DI	(DI)	DI
	(Tap)	(Tap)	Tap	Tap
TSP	Other	Other	Other	Other
(Alconox)	Steam	Steam	Steam	Steam
Other:	Hot	Hot	Hot	Hot
	(Cold)	(Cold)	(Cold)	Cold
Vol. (gal):				

Water Source: TAP IN WAREHOUSE / BOTTLES

Notes:

Last Calibration Check (include supporting documentation)

pH meter Date/Time: AM. 12/18 Meter No. HYDAC

Conductivity meter Date/Time: Meter No.

Turbidity meter Date/Time: Meter No.

Other: (list in notes)

								Code
Military Time	1120	1225	1345					
Gallons Purged	30	60	≈85					42
Purge Rate	≈2 gpm	≈.5 gpm	<.5 gpm					21
pH	8.22	7.28	7.25					27
Temperature (°C)	16.31	16.28	16.11					30
Cond. (µmhos/cm)	1200	900	950					33
Salinity (‰)	<0.1	<0.1	<0.1					
Turbidity (NTU's)	~~OR~~							
Color	SLTY	SLTY	CLOUDY/CLEAR					
Depth to Water	11.27							0
Reference Point:	TOC							

Sample Number	Time	Quantity	Volume	Type	Preserv.	Filtration	Analysis	Lab

T.D. Well: 25' Casing Diameter: 6"

1 Casing Volume: ≈ 30g 3 Casing Volumes: 300g

Odor: no (yes) Floating Product: none (sheen) (film) ≈.10 feet thick

Other Observations:

RECHARGE VERY SLOW. ~~B~~ DRAWDOWN TOO MUCH — STOPPED PURGE SO SCREEN DOES NOT GET SMEARED W/ SHEEN/FILM

Draft 5/5/94

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
3636 North Laughlin Road
Suite 110
Santa Rosa, CA 95403-8226
Tel: (707) 526-7200
Fax: (707) 541-2333

Curtis Payton
Kleinfelder
7133 Koll Center Parkway
Ste. 100
Pleasanton, CA 94566

Date: 01/03/1996
NET Client Acct. No: 30002
NET Job No: 95.04843
Received: 12/22/1995

FILE COPY

Client Reference Information

Owens Financial/Proj. No. 10.3002.39

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel free to call me at (707) 541-2305.

Submitted by:

Ginger Brinlee
Project Coordinator

Enclosure(s)

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04843

Date: 01/03/1996
ELAP Cert: 1386

Ref: Owens Financial/Proj. No. 10.3002.39

SAMPLE DESCRIPTION: EW-1
Date Taken: 12/21/1995
Time Taken: 09:00
NET Sample No: 257661

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Liquid)								
DILUTION FACTOR*	1						01/02/1996	3440
Benzene	0.7		0.5	ug/L	8020		01/02/1996	3440
Toluene	9.2		0.5	ug/L	8020		01/02/1996	3440
Ethylbenzene	0.8		0.5	ug/L	8020		01/02/1996	3440
Xylenes (Total)	3.8		0.5	ug/L	8020		01/02/1996	3440
SURROGATE RESULTS	--						01/02/1996	3440
Bromofluorobenzene (SURR)	127	MI		% Rec.	8020		01/02/1996	3440
METHOD M8015 (EXT., Liquid)						12/26/1995		
DILUTION FACTOR*	1						12/29/1995	1137
as Bunker C	ND		0.5	mg/L	3510		12/29/1995	1137
as Diesel	4.0		0.05	mg/L	3510		12/29/1995	1137
as Kerosene	ND		0.05	mg/L	3510		12/29/1995	1137

MI : Matrix Interference Suspected.

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04843

Date: 01/03/1996
ELAP Cert: 1386

Ref: Owens Financial/Proj. No. 10.3002.39

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 8020 (GC,Liquid)							
Benzene	100.6	5.03	5.00	ug/L	01/02/1996	aal	3440
Toluene	96.6	4.83	5.00	ug/L	01/02/1996	aal	3440
Ethylbenzene	97.4	4.87	5.00	ug/L	01/02/1996	aal	3440
Xylenes (Total)	99.3	14.9	15.0	ug/L	01/02/1996	aal	3440
Bromofluorobenzene (SURR)	96.0	96	100	% Rec.	01/02/1996	aal	3440
METHOD M8015 (EXT., Liquid)							
as Bunker C	100	0.5	0.5	mg/L	12/29/1995		1137
as Diesel	101	0.051	0.05	mg/L	12/29/1995		1137
as Kerosene	N/A		0.05	mg/L	12/29/1995		1137
Ortho-terphenyl (SURR)	101			% Rec.	12/29/1995		1137

Ref: Owens Financial/Proj. No. 10.3002.39

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 8020 (GC,Liquid)						
Benzene	ND	0.5	ug/L	01/02/1996	aal	3440
Toluene	ND	0.5	ug/L	01/02/1996	aal	3440
Ethylbenzene	ND	0.5	ug/L	01/02/1996	aal	3440
Xylenes (Total)	ND	0.5	ug/L	01/02/1996	aal	3440
Bromofluorobenzene (SURR)	101		% Rec.	01/02/1996	aal	3440
METHOD M8015 (EXT., Liquid)						
as Bunker C	ND	0.5	mg/L	12/29/1995		1137
as Diesel	ND	0.05	mg/L	12/29/1995		1137
as Kerosene	ND	0.05	mg/L	12/29/1995		1137
Ortho-terphenyl (SURR)	93		% Rec.	12/29/1995		1137

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04843

Date: 01/03/1996
ELAP Cert: 1386
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Ref: Owens Financial/Proj. No. 10.3002.39

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	Duplicate LCS % Recovery	RPD	LCS Amount Found	Duplicate LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch
METHOD M8015 (EXT., Liquid) as Diesel	53.6			0.536		1.00	mg/L	12/29/1995		1137
Ortho-terphenyl (SURR)	85.0			85		100	% Rec.	12/29/1995		1137

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04843

Date: 01/03/1996
ELAP Cert: 1386
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Ref: Owens Financial/Proj. No. 10.3002.39

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
METHOD 8020 (GC,Liquid)											257789
Benzene	92.4	93.5	1.2	8.21	ND	7.59	7.68	ug/L	01/02/1996	3440	257789
Toluene	92.3	95.2	3.1	27.1	ND	25.0	25.8	ug/L	01/02/1996	3440	257789
METHOD M8015 (EXT., Liquid)											257610
as Diesel	93.5	71.5	26.7	2.00	ND	1.87	1.43	mg/L	12/29/1995	1137	257610

NET®

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

KLEINFELDER

#41687

JOJ NO	PROJECT NAME
002.39/001	OWENS FINANCIAL
P NO / O. NO. 126	SAMPLERS: (Signature/Number) RKC /2678

DATE DD YY	SAMPLE I.D. TIME HH MM SS	SAMPLE I.D	NO OF CONTAINERS	ANALYSIS: TPH-d/TPH-g/k BTEX	REMARKS
12.1.95	0900	EW-1	5	X X	3 VOA, 2 L

NET

H_2O TPH-d/TPH-g/k = quantity against diesel ~~motor~~ oil / kerosene fuel

CUSTODY SEALED
Date 12/21/95 Time 1450 Initials
SEAL INTACT?
Yes ✓ No Initials

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
		12/22/95 15:15
Relinquished by: (Signature)	12/21/95 18:32	Received by: (Signature)
Relinquished by: (Signature)	Date/Time 12/22/95 08:00	Received for Laboratory by: (Signature) TEMP.: 0°

Remarks: 6 day turnaround

Send Results To
CURTIS PAYTON / DAN CARROLL
KLEINFELDER
7133 KOLL CENTER PARKWAY
SUITE 100
PLEASANTON, CA 94566
(510) 484-1700

White - Sampler Canary - Return Copy To Shipper Pink - Lab Copy

No 559

CHAIN OF CUSTODY

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
3636 North Laughlin Road
Suite 110
Santa Rosa, CA 95403-8226
Tel: (707) 526-7200
Fax: (707) 541-2333

Curtis Payton
Kleinfelder
7133 Koll Center Parkway
Ste. 100
Pleasanton, CA 94566

Date: 12/21/1995
NET Client Acct. No: 30002
NET Job No: 95.04686
Received: 12/08/1995

Client Reference Information

Owens Financial/Project No. 10.3002.37

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel free to call me at (707) 541-2305.

Submitted by:

Ginger Brinlee
Project Coordinator

Enclosure(s)

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04686

Date: 12/21/1995
ELAP Cert: 1386
Page: 2

Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B5-W
Date Taken: 12/06/1995
Time Taken: 10:30
NET Sample No: 257036

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Liquid)								
DILUTION FACTOR*	1						12/15/1995	3410
Benzene	0.9		0.5	ug/L	8020		12/15/1995	3410
Toluene	0.6		0.5	ug/L	8020		12/15/1995	3410
Ethylbenzene	4.8		0.5	ug/L	8020		12/15/1995	3410
Xylenes (Total)	20		0.5	ug/L	8020		12/15/1995	3410
SURROGATE RESULTS	--						12/15/1995	3410
Bromofluorobenzene (SURR)	123	MI		% Rec.	8020		12/15/1995	3410
METHOD M8015 (EXT., Liquid)						12/13/1995		
DILUTION FACTOR*	1						12/14/1995	1130
as Diesel	0.49	DL	0.05	mg/L	3510		12/14/1995	1130
as Motor Oil	ND		0.5	mg/L	3510		12/14/1995	1130

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
MI : Matrix Interference Suspected.

Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B4-W
Date Taken: 12/06/1995
Time Taken: 11:30
NET Sample No: 257037

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Liquid)								
DILUTION FACTOR*	1						12/14/1995	3415
Benzene	ND		0.5	ug/L	8020		12/14/1995	3415
Toluene	ND		0.5	ug/L	8020		12/14/1995	3415
Ethylbenzene	ND		0.5	ug/L	8020		12/14/1995	3415
Xylenes (Total)	ND		0.5	ug/L	8020		12/14/1995	3415
SURROGATE RESULTS	--						12/14/1995	3415
Bromofluorobenzene (SURR)	88			% Rec.	8020		12/14/1995	3415
METHOD M8015 (EXT., Liquid)						12/13/1995		
DILUTION FACTOR*	1						12/14/1995	1130
as Diesel	ND		0.05	mg/L	3510		12/14/1995	1130
as Motor Oil	ND		0.5	mg/L	3510		12/14/1995	1130

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04686

Date: 12/21/1995
ELAP Cert: 1386
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Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B3-W
Date Taken: 12/06/1995
Time Taken: 12:45
NET Sample No: 257038

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Liquid)								
DILUTION FACTOR*	1						12/14/1995	3415
Benzene	ND		0.5	ug/L	8020		12/14/1995	3415
Toluene	ND		0.5	ug/L	8020		12/14/1995	3415
Ethylbenzene	ND		0.5	ug/L	8020		12/14/1995	3415
Xylenes (Total)	1.5		0.5	ug/L	8020		12/14/1995	3415
SURROGATE RESULTS	--						12/14/1995	3415
Bromofluorobenzene (SURR)	105			% Rec.	8020		12/14/1995	3415
METHOD M8015 (EXT., Liquid)						12/13/1995		
DILUTION FACTOR*	1						12/14/1995	1130
as Diesel	0.28	DL	0.05	mg/L	3510		12/14/1995	1130
as Motor Oil	ND		0.5	mg/L	3510		12/14/1995	1130

DL : The positive result appears to be a lighter hydrocarbon than Diesel.

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04686

Date: 12/21/1995
ELAP Cert: 1386
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Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B2-W
Date Taken: 12/06/1995
Time Taken: 14:45
NET Sample No: 257039

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Liquid)							12/15/1995	3410
DILUTION FACTOR*	10						12/15/1995	3410
Benzene	13		5	ug/L	8020		12/15/1995	3410
Toluene	ND		5	ug/L	8020		12/15/1995	3410
Ethylbenzene	28		5	ug/L	8020		12/15/1995	3410
Xylenes (Total)	ND		5	ug/L	8020		12/15/1995	3410
SURROGATE RESULTS	--						12/15/1995	3410
Bromofluorobenzene (SURR)	117			% Rec.	8020		12/15/1995	3410
METHOD M8015 (EXT., Liquid)						12/13/1995		
DILUTION FACTOR*	10						12/14/1995	1130
as Diesel	15	DL	0.5	mg/L	3510		12/14/1995	1130
as Motor Oil	ND		5	mg/L	3510		12/14/1995	1130

DL : The positive result appears to be a lighter hydrocarbon than Diesel.

Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B6-W
Date Taken: 12/06/1995
Time Taken: 16:20
NET Sample No: 257040

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Liquid)								
DILUTION FACTOR*	10						12/15/1995	3410
Benzene	28		5	ug/L	8020		12/15/1995	3410
Toluene	20		5	ug/L	8020		12/15/1995	3410
Ethylbenzene	65		5	ug/L	8020		12/15/1995	3410
Xylenes (Total)	11		5	ug/L	8020		12/15/1995	3410
SURROGATE RESULTS	--						12/15/1995	3410
Bromofluorobenzene (SURR)	131	MI		% Rec.	8020		12/15/1995	3410
METHOD M8015 (EXT., Liquid)						12/13/1995		
DILUTION FACTOR*	1						12/14/1995	1130
as Diesel	2.3	DL	0.05	mg/L	3510		12/14/1995	1130
as Motor Oil	ND		0.5	mg/L	3510		12/14/1995	1130

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
MI : Matrix Interference Suspected.

NET®

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04686

Date: 12/21/1995
ELAP Cert: 1386
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Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B5-5
Date Taken: 12/06/1995
Time Taken: 10:00
NET Sample No: 257041

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)								
DILUTION FACTOR*	1						12/13/1995	1906
Benzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Toluene	ND		2.5	ug/kg	8020		12/13/1995	1906
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1995	1906
SURROGATE RESULTS	--						12/13/1995	1906
Bromofluorobenzene (SURR)	97			% Rec.			12/13/1995	1906
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	ND		1	mg/kg	3550		12/18/1995	1134
as Motor Oil	ND		10	mg/kg	3550		12/18/1995	1134

Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B5-10
Date Taken: 12/06/1995
Time Taken: 10:10
NET Sample No: 257042

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)								
DILUTION FACTOR*	1						12/13/1995	1906
Benzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Toluene	ND		2.5	ug/kg	8020		12/13/1995	1906
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1995	1906
SURROGATE RESULTS	--						12/13/1995	1906
Bromofluorobenzene (SURR)	96			% Rec.			12/13/1995	1906
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	1.1	D1	1	mg/kg	3550		12/18/1995	1134
as Motor Oil	ND		10	mg/kg	3550		12/18/1995	1134

D1 : The result for Diesel is an unk. HC which consists of a single peak.

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04686

Date: 12/21/1995
ELAP Cert: 1386
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Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B5-15
Date Taken: 12/06/1995
Time Taken: 10:20
NET Sample No: 257043

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)								
DILUTION FACTOR*	1						12/13/1995	1906
Benzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Toluene	ND		2.5	ug/kg	8020		12/13/1995	1906
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1995	1906
SURROGATE RESULTS	--						12/13/1995	1906
Bromofluorobenzene (SURR)	112			% Rec.			12/13/1995	1906
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	3.2	DL	1	mg/kg	3550		12/18/1995	1134
as Motor Oil	ND		10	mg/kg	3550		12/18/1995	1134

DL : The positive result appears to be a lighter hydrocarbon than Diesel.

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04686

Date: 12/21/1995
ELAP Cert: 1386
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SAMPLE DESCRIPTION: B4-5
Date Taken: 12/06/1995
Time Taken: 11:00
NET Sample No: 257044

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)								
DILUTION FACTOR*	1						12/13/1995	1906
Benzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Toluene	ND		2.5	ug/kg	8020		12/13/1995	1906
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1995	1906
SURROGATE RESULTS	--						12/13/1995	1906
Bromofluorobenzene (SURR)	96			% Rec.			12/13/1995	1906
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	1.1	D-	1	mg/kg	3550		12/18/1995	1134
as Motor Oil	ND		10	mg/kg	3550		12/18/1995	1134

D- : The positive result has an atypical pattern for Diesel analysis.

Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B4-10
Date Taken: 12/06/1995
Time Taken: 11:10
NET Sample No: 257045

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)								
DILUTION FACTOR*	1						12/13/1995	1906
Benzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Toluene	ND		2.5	ug/kg	8020		12/13/1995	1906
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1995	1906
SURROGATE RESULTS	--						12/13/1995	1906
Bromofluorobenzene (SURR)	94			% Rec.			12/13/1995	1906
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	ND		1	mg/kg	3550		12/18/1995	1134
as Motor Oil	ND		10	mg/kg	3550		12/18/1995	1134

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04686

Date: 12/21/1995
ELAP Cert: 1386
Page: 12

Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B4-15
Date Taken: 12/06/1995
Time Taken: 11:15
NET Sample No: 257046

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)								
DILUTION FACTOR*	1						12/13/1995	1906
Benzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Toluene	ND		2.5	ug/kg	8020		12/13/1995	1906
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1995	1906
SURROGATE RESULTS	--						12/13/1995	1906
Bromofluorobenzene (SURR)	94			% Rec.			12/13/1995	1906
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	1.9	D-	1	mg/kg	3550		12/18/1995	1134
as Motor Oil	ND		10	mg/kg	3550		12/18/1995	1134

D- : The positive result has an atypical pattern for Diesel analysis.

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04686

Date: 12/21/1995
ELAP Cert: 1386
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Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B3-15
Date Taken: 12/06/1995
Time Taken: 12:30
NET Sample No: 257047

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)							12/13/1995	1906
DILUTION FACTOR*	1						12/13/1995	1906
Benzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Toluene	ND		2.5	ug/kg	8020		12/13/1995	1906
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1995	1906
SURROGATE RESULTS	--						12/13/1995	1906
Bromofluorobenzene (SURR)	90			% Rec.			12/13/1995	1906
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	1.4	D-	1	mg/kg	3550		12/18/1995	1134
as Motor Oil	ND		10	mg/kg	3550		12/18/1995	1134

D- : The positive result has an atypical pattern for Diesel analysis.

Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B2-15
Date Taken: 12/06/1995
Time Taken: 13:30
NET Sample No: 257048

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)								
DILUTION FACTOR*	1						12/13/1995	1906
Benzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Toluene	ND		2.5	ug/kg	8020		12/13/1995	1906
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1995	1906
SURROGATE RESULTS	--						12/13/1995	1906
Bromofluorobenzene (SURR)	92			% Rec.			12/13/1995	1906
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	ND		1	mg/kg	3550		12/18/1995	1134
as Motor Oil	ND		10	mg/kg	3550		12/18/1995	1134

Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B1-5
Date Taken: 12/06/1995
Time Taken: 14:15
NET Sample No: 257049

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)								
DILUTION FACTOR*	1						12/13/1995	1906
Benzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Toluene	ND		2.5	ug/kg	8020		12/13/1995	1906
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1995	1906
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1995	1906
SURROGATE RESULTS	--						12/13/1995	1906
Bromofluorobenzene (SURR)	92			% Rec.			12/13/1995	1906
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	ND		1	mg/kg	3550		12/18/1995	1134
as Motor Oil	16		10	mg/kg	3550		12/18/1995	1134

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04686

Date: 12/21/1995
ELAP Cert: 1386
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Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B1-10
Date Taken: 12/06/1995
Time Taken: 14:19
NET Sample No: 257050

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)								
DILUTION FACTOR*	1						12/14/1995	1907
Benzene	ND		2.5	ug/kg	8020		12/14/1995	1907
Toluene	ND		2.5	ug/kg	8020		12/14/1995	1907
Ethylbenzene	ND		2.5	ug/kg	8020		12/14/1995	1907
Xylenes (Total)	ND		2.5	ug/kg	8020		12/14/1995	1907
SURROGATE RESULTS	--						12/14/1995	1907
Bromofluorobenzene (SURR)	89			% Rec.			12/14/1995	1907
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	1.1	D1	1	mg/kg	3550		12/18/1995	1134
as Motor Oil	ND		10	mg/kg	3550		12/18/1995	1134

D1 : The result for Diesel is an unk. HC which consists of a single peak.

Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B1-15
Date Taken: 12/06/1995
Time Taken: 14:26
NET Sample No: 257051

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)								
DILUTION FACTOR*	1						12/14/1995	1907
Benzene	8.5		2.5	ug/kg	8020		12/14/1995	1907
Toluene	22		2.5	ug/kg	8020		12/14/1995	1907
Ethylbenzene	36		2.5	ug/kg	8020		12/14/1995	1907
Xylenes (Total)	91		2.5	ug/kg	8020		12/14/1995	1907
SURROGATE RESULTS	--						12/14/1995	1907
Bromofluorobenzene (SURR)	134	MI		% Rec.			12/14/1995	1907
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	1.5	DL	1	mg/kg	3550		12/18/1995	1134
as Motor Oil	ND		10	mg/kg	3550		12/18/1995	1134

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
MI : Matrix Interference Suspected.

Ref: Owens Financial/Project No. 10.3002.37

SAMPLE DESCRIPTION: B6-15
Date Taken: 12/06/1995
Time Taken: 16:14
NET Sample No: 257052

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8020 (GC,Solid)								
DILUTION FACTOR*	1						12/14/1995	1907
Benzene	ND		2.5	ug/kg	8020		12/14/1995	1907
Toluene	30		2.5	ug/kg	8020		12/14/1995	1907
Ethylbenzene	49		2.5	ug/kg	8020		12/14/1995	1907
Xylenes (Total)	88		2.5	ug/kg	8020		12/14/1995	1907
SURROGATE RESULTS	--						12/14/1995	1907
Bromofluorobenzene (SURR)	112			% Rec.			12/14/1995	1907
METHOD M8015 (EXT., Solid)						12/18/1995		
DILUTION FACTOR*	1						12/18/1995	1134
as Diesel	34	DL	1	mg/kg	3550		12/18/1995	1134
as Motor Oil	ND		10	mg/kg	3550		12/18/1995	1134

DL : The positive result appears to be a lighter hydrocarbon than Diesel.

Client Name: Kleinfelder
Client Acct: 30002
NET Job No: 95.04686

Date: 12/21/1995
ELAP Cert: 1386

Ref: Owens Financial/Project No. 10.3002.37

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 8020 (GC,Liquid)							
Benzene	98.6	4.93	5.00	ug/L	12/15/1995	dld	3410
Toluene	96.4	4.82	5.00	ug/L	12/15/1995	dld	3410
Ethylbenzene	96.8	4.84	5.00	ug/L	12/15/1995	dld	3410
Xylenes (Total)	98.7	14.8	15.0	ug/L	12/15/1995	dld	3410
Bromofluorobenzene (SURR)	98.0	98	100	% Rec.	12/15/1995	dld	3410
METHOD 8020 (GC,Liquid)							
Benzene	94.2	4.71	5.00	ug/L	12/14/1995	dld	3415
Toluene	89.4	4.47	5.00	ug/L	12/14/1995	dld	3415
Ethylbenzene	95.8	4.79	5.00	ug/L	12/14/1995	dld	3415
Xylenes (Total)	97.3	14.6	15.0	ug/L	12/14/1995	dld	3415
Bromofluorobenzene (SURR)	99.0	99	100	% Rec.	12/14/1995	dld	3415
METHOD M8015 (EXT., Liquid)							
as Diesel	104.0	1040	1000	mg/L	12/14/1995	tts	1130
as Motor Oil	96.0	960	1000	mg/L	12/14/1995	tts	1130
METHOD 8020 (GC,Solid)							
Benzene	99.2	24.8	25.0	ug/kg	12/13/1995	aal	1906
Toluene	92.8	23.2	25.0	ug/kg	12/13/1995	aal	1906
Ethylbenzene	98.0	24.5	25.0	ug/kg	12/13/1995	aal	1906
Xylenes (Total)	99.5	74.6	75.0	ug/kg	12/13/1995	aal	1906
Bromofluorobenzene (SURR)	101.0	101	100	% Rec.	12/13/1995	aal	1906
METHOD 8020 (GC,Solid)							
Benzene	94.4	23.6	25.0	ug/kg	12/14/1995	dld	1907
Toluene	89.6	22.4	25.0	ug/kg	12/14/1995	dld	1907
Ethylbenzene	96.0	24.0	25.0	ug/kg	12/14/1995	dld	1907
Xylenes (Total)	97.3	73.0	75.0	ug/kg	12/14/1995	dld	1907
Bromofluorobenzene (SURR)	99.0	99	100	% Rec.	12/14/1995	dld	1907
METHOD M8015 (EXT., Solid)							
as Diesel	95.4	954	1000	mg/kg	12/18/1995	tts	1134
as Motor Oil	94.4	944	1000	mg/kg	12/18/1995	tts	1134

Ref: Owens Financial/Project No. 10.3002.37

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 8020 (GC,Liquid)						
Benzene	ND	0.5	ug/L	12/15/1995	dld	3410
Toluene	ND	0.5	ug/L	12/15/1995	dld	3410
Ethylbenzene	ND	0.5	ug/L	12/15/1995	dld	3410
Xylenes (Total)	ND	0.5	ug/L	12/15/1995	dld	3410
Bromofluorobenzene (SURR)	93		% Rec.	12/15/1995	dld	3410
METHOD 8020 (GC,Liquid)						
Benzene	ND	0.5	ug/L	12/14/1995	dld	3415
Toluene	ND	0.5	ug/L	12/14/1995	dld	3415
Ethylbenzene	ND	0.5	ug/L	12/14/1995	dld	3415
Xylenes (Total)	ND	0.5	ug/L	12/14/1995	dld	3415
Bromofluorobenzene (SURR)	100		% Rec.	12/14/1995	dld	3415
METHOD M8015 (EXT., Liquid)						
as Diesel	ND	0.05	mg/L	12/14/1995	tts	1130
as Motor Oil	ND	0.5	mg/L	12/14/1995	tts	1130
METHOD 8020 (GC,Solid)						
Benzene	ND	2.5	ug/kg	12/13/1995	aal	1906
Toluene	ND	2.5	ug/kg	12/13/1995	aal	1906
Ethylbenzene	ND	2.5	ug/kg	12/13/1995	aal	1906
Xylenes (Total)	ND	2.5	ug/kg	12/13/1995	aal	1906
Bromofluorobenzene (SURR)	104		% Rec.	12/13/1995	aal	1906
METHOD 8020 (GC,Solid)						
Benzene	ND	2.5	ug/kg	12/14/1995	dld	1907
Toluene	ND	2.5	ug/kg	12/14/1995	dld	1907
Ethylbenzene	ND	2.5	ug/kg	12/14/1995	dld	1907
Xylenes (Total)	ND	2.5	ug/kg	12/14/1995	dld	1907
Bromofluorobenzene (SURR)	100		% Rec.	12/14/1995	dld	1907
METHOD M8015 (EXT., Solid)						
as Diesel	ND	1	mg/kg	12/18/1995	tts	1134
as Motor Oil	ND	10	mg/kg	12/18/1995	tts	1134

Ref: Owens Financial/Project No. 10.3002.37

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
METHOD 8020 (GC,Liquid)											257197
Benzene	93.5	97.8	4.5	7.81	ND	7.30	7.64	ug/L	12/15/1995	3410	257197
Toluene	93.9	97.7	4.0	26.1	ND	24.5	25.5	ug/L	12/15/1995	3410	257197
METHOD 8020 (GC,Liquid)											257024
Benzene	93.9	88.0	6.5	7.98	ND	7.49	7.02	ug/L	12/14/1995	3415	257024
Toluene	96.4	96.0	0.4	22.4	ND	21.6	21.5	ug/L	12/14/1995	3415	257024
METHOD M8015 (EXT., Liquid)											257079
as Diesel	56.5	56.5	0.0	2.00	0.19	1.32	1.32	mg/L	12/14/1995	1130	257079
METHOD 8020 (GC,Solid)											256887
Benzene	80.8	77.8	3.8	39.6	5.8	37.8	36.6	ug/kg	12/13/1995	1906	256887
Toluene	82.1	79.8	2.8	115.4	14	108.7	106.1	ug/kg	12/13/1995	1906	256887
METHOD 8020 (GC,Solid)											256841
Benzene	93.2	83.7	10.7	42.4	ND	39.6	35.5	ug/kg	12/14/1995	1907	256841
Toluene	96.4	87.5	9.7	119	ND	115	100	ug/kg	12/14/1995	1907	256841
METHOD M8015 (EXT., Solid)											256881
as Diesel	97.0	86.2	11.8	16.7	12	28.2	26.4	mg/kg	12/18/1995	1134	256881

Ref: Owens Financial/Project No. 10.3002.37

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	Duplicate LCS % Recovery	RPD	LCS Amount Found	Duplicate LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch
METHOD M8015 (EXT., Liquid) as Diesel	39.6			0.396		1.00	mg/L	12/14/1995	tts	1130
METHOD M8015 (EXT., Solid) as Diesel	79.6			13.3		16.7	mg/kg	12/18/1995	tts	1134

NET®

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

KLEINFELDER

4513

PROJ NO	PROJECT NAME
10.3002.37	OWENS FINANCIAL
LP NO (P.O. NO.)	SAMPLERS: (Signature/Number)
	RKC / TD

DATE MM DD YY	SAMPLE I.D. TIME HH MM SS	SAMPLE I.D	NO OF CONTAINERS	ANALYSIS TPH-d / MO BTEX	REMARKS
12 6 95	1030	B5-W	4		NET WATER
	1130	B4-W			
	1245	B3-W			
	1445	B2-W			
	1620	B6-W	↓		↓
	1000	B5-5	1		SOIL
	1010	B5-10			
	1020	B5-15			
	1100	B4-5			
	1110	B4-10			
	1115	B4-15			
	1230	B3-15			
	1330	B2-15			
	1415	B1-5			
	1419	B1-10			
	1426	B1-15			
↓	1614	B6-15	↓		↓ VIALS

CUSTODY SEALED
Date 12/7/95 Time 1145 Initials
SEAL INTACT?
Yes
No
Initials

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	12/7/95 1120	Betty Darsey
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Betty Darsey	12/7/95 1145	
Relinquished by (Signature)	Date/Time	Received for Laboratory by (Signature)
	12/8/95 0830	

Remarks

Send Results To
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KLEINFELDER
7133 KOLL CENTER PARKWAY
SUITE 100
PLEASANTON, CA 94566
(510) 484-1700

M-60 White - Sampler Canary - Return Copy To Shipper Pink - Lab Copy

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