

ENVIRONMENTAL
PROTECTION
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PHASE II ENVIRONMENTAL SITE ASSESSMENT
HOMESTEAD SAVINGS
3900 PIEDMONT AVENUE
OAKLAND, CALIFORNIA

ESE PROJECT #6-93-5146

PRESENTED TO:

FIRST NATIONWIDE BANK
840 STILLWATER ROAD
WEST SACRAMENTO, CALIFORNIA 95606-1649

PREPARED BY:

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.
4090 NELSON AVENUE, SUITE J
CONCORD, CA 94520
(510) 685-4053

NOVEMBER 15, 1993

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This report has been prepared by Environmental Science & Engineering, Inc. for the exclusive use of First Nationwide as it pertains to their site located at 3900 Piedmont Avenue, Oakland, California. Our professional services have been performed using that degree of care and skill ordinarily exercised under similar circumstances by other geologists and engineers practicing in this field. No other warranty, express or implied, is made as to professional advice in this report.

REPORT PREPARED BY:

Christopher H Valcheff / sb

Christopher H. Valcheff
Staff Geologist

11/22/93

Date

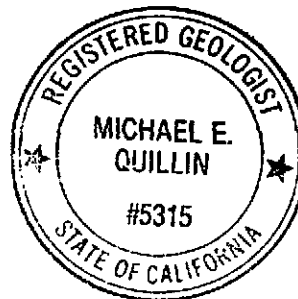
UNDER THE PRIMARY REVIEW OF:

Michael E. Quillin / for

Michael E. Quillin
Senior Hydrogeologist
California Registered Geologist No. 5315

11/22/93

Date



Project No. 6-93-5146

1.0 INTRODUCTION

Environmental Science & Engineering, Inc. (ESE) has prepared this report to present the findings of a Phase II environmental site assessment (ESA) conducted at the Homestead Savings property located at 3900 Piedmont Avenue, Oakland, Alameda County, California (Property). ESE conducted this investigation, at the request of First Nationwide Bank, to identify subsurface contamination in soil and ground water prior to finalization of a property transaction.

The scope of work for this Phase II ESA included:

- Preparation of a health and safety plan,
- Obtaining permits and site clearance,
- Conducting a subsurface investigation consisting of soil and ground water sampling,
- Analyzed samples for fuel fingerprint with Volatile Organic Compounds (VOCs), and
- Prepared this report.

1.1 BACKGROUND

The subject Property (APN No. 12-935-46), is located on the eastern side of the intersection of Montell Street and Piedmont Avenue (Figure 1 - Location Map). The Property is currently composed of a single commercial building occupied by First Nationwide Bank. A Phase I ESA was performed at the Property by Augeas Corporation, and the results were presented in a May 1993 Environmental Site Assessment Report (Augeas, 1993).

ESE updated the Phase I ESA in October 1993 and concurred with findings that a Phase II ESA was needed for this Property due to site history (ESE, 1993). According to sources used for the Phase I research, the Property was occupied by a service station up to approximately 1978 when an application for a permit to demolish the service station was filed with the City of Oakland.

1.2 REGIONAL GEOLOGY AND HYDROGEOLOGY

The Property is located at the foot of a small range of hills approximately 1.2 miles north of Lake Merritt and 2.2 miles east of the San Francisco Bay in the urban area of Oakland. The property is situated in the East Bay Plain adjacent to the foothills of the Diablo Ranges. The site is underlain by Holocene aged estuarine deposits, predominately clays and silty clays containing lenses of well-sorted fine-grained sands and silts (Helley, 1979).

The site is located at an elevation of approximately 80 feet above mean sea level (amsl) (U.S.G.S., 1980). The surface topography in the area slopes to the southwest towards the San Francisco Bay, with a topographic gradient of approximately 80 feet per mile (0.01 feet/foot). It is likely that regional shallow ground water flow is southwestward also.

2.0 METHODS AND PROCEDURES

On October 20 and 21, 1993, ESE drilled eight soil borings at the Property. Soil boring locations are shown on Figure 2 - Site Map. Nine soil borings were originally proposed but only eight were completed due to the size of the site and overhead restraints encountered.

Five borings (FNBO-1, FNBO-2, FNBO-5, FNBO-7, and FNBO-8) were drilled to a depth of approximately 11- $\frac{1}{2}$ feet below ground surface (bgs) at five locations on the property perimeter, as shown on Figure 2. Two soil borings (FNBO-3 and FNBO-6; Figure 2) were completed to a total depth of 16.5 feet bgs. One boring, FNBO-4 was completed to a depth of only 7.5 feet bgs due to an obstruction encountered in the subsurface. The soil borings were drilled by Soils Exploration Services, Inc. (SES) of Vacaville, California, using hollow stem auger drilling equipment and techniques. Drilling activities were performed in accordance with ESE Standard Operating Procedure (SOP) No. 1 for Soil Borings and Soil Sampling with Hollow-Stem Augers in Unconsolidated Formations (Appendix A).

The objective of borings FNBO-1 through FNBO-4 was to evaluate shallow soil conditions near and in the presumed downgradient direction of a former waste oil tank reportedly present near the northeastern margin of the Property. Borings FNBO-5 and FNBO-6 were drilled in the vicinity of former underground fuel storage tanks (USTs). Borings FNBO-7 and FNBO-8 were drilled in the vicinity of the former fuel dispenser island and associated piping.

The soil generated from the borings (soil samples and soil cuttings) was classified by the ESE geologist in accordance with the Unified Soil Classification System (USCS). Additionally, the ESE geologist noted soil color, relative density, moisture content and odor, if present. These observations and a graphical presentation of the soil borings are presented in Appendix B - Geologic Boring Logs.

Subsequent to drilling, each bore hole was backfilled with a neat cement grout to ground surface. All soil cuttings generated during the drilling activities were stored onsite in appropriately labeled, D.O.T.-rated 55-gallon drums pending analysis and proper disposal. A total of three drums containing soil cuttings remain at the site.

2.1 SOIL SAMPLING

Soil samples were collected in each boring at approximate five-foot intervals by driving a split-spoon sampler, lined with brass sleeves, 18-inches through the center of and ahead of the hollow stem augers. The samplers were driven by dropping a 140-pound hammer 30-inches onto rods attached to the top of the sampler. The number of blows required to drive the sampler each six-inch interval were noted and appear on the geologic boring logs (Appendix A). The ends of one brass sleeve from each sampler were covered with Teflon lined plastic end caps, which were sealed to the brass sleeve with duct tape, labeled and placed on ice. A portion of each soil sample was sealed in a clean individual Ziploc bag and set in direct sunlight to enhance the volatilization of any volatile organic compounds (VOCs) present in the soil. After approximately 15-minutes each sample was screened for VOCs using a Photoionization Detector (PID). PID readings appear on the geologic boring logs. All drilling and soil sampling equipment was steam cleaned between use in each bore hole. The steam-clean rinse water was contained in one D.O.T.-rated 55-gallon drum pending proper disposal. These activities are consistent with ESE SOP No. 1.

All soil samples were transported under chain of custody to Coast to Coast Analytical Services (CCAS) of Benicia, California. CCAS is a state-certified analytical laboratory. At the request of ESE, the soil samples showing the highest PID readings from each boring were analyzed by CCAS for fuel fingerprinting and VOCs using Environmental Protection Agency (EPA) Method 8260. Soil samples collected to investigate possible waste oil impacts, as described above, were analyzed for total recoverable petroleum hydrocarbons (TRPH) using EPA Method 418.1. The remaining samples were held by CCAS for possible future analysis, pending results for the requested analyses.

2.2 GROUND WATER SAMPLING

A ground water sample was collected in boring FNBO-6 by drilling five feet into the ground water table, removing the augers from the base of the boring in the water-bearing zone, allowing the water to infiltrate the open borehole, and extracting ground water using a precleaned disposable bailer fitted with new string. This location was chosen for ground water sampling because it most closely represented the approximate location of the former fuel USTs at the Property.

The ground water sample, comprised of three 40-milliliter vials and one 1-liter bottle, was collected, labeled, placed on ice and delivered under chain of custody documentation to CCAS. The sample was analyzed by CCAS for fuel fingerprinting/VOCs and for TRPH using the methodology described above.

3.0 RESULTS

3.1 FIELD OBSERVATIONS

The following describes the field observations made during the subsurface investigation on October 20 and 21, 1993.

3.1.1 Site Conditions

The Property has been converted for use as a bank with associated parking and drive-through teller operations, and there is no evidence of former service station operations. While drilling the original location of boring FNBO-4, ESE encountered auger refusal at approximately seven feet bgs. ESE moved a few feet north and east of that location and again attempted to complete the boring; however, auger refusal was encountered at about 7.5 feet bgs. Fragments of heavy black molded plastic were recovered from the boring, at which time drilling was stopped. Both boreholes were backfilled with neat cement and capped with concrete patch. A new boring FNBO-4 was then drilled and completed at the location shown in Figure 2.

3.1.2 Site Geology and Hydrogeology

Below silty gravel fill present to approximately three feet bgs, all eight soil borings found generally clayey soils with varying amounts of clayey sands, clayey gravels, and sandy silt. In general, these soils are comparable to the estuarine deposits described as the surficial geologic unit regionally. Ground water was found at a depth of approximately 11 feet bgs.

3.2 SOIL ANALYTICAL RESULTS

Soil samples collected from all borings were analyzed for fuel fingerprinting using EPA method 8260. Additionally, soil samples collected from borings FNBO-1, FNBO-2, FNBO-4, FNBO-5, and FNBO-6 were analyzed for TRPH by EPA method 418.1 and for Volatile Organic Compounds (VOCs) using EPA method 624/8240/8260. This method provides a

petroleum fuel fingerprint for light distillates. This method was selected due to the site history revealing a former gasoline station at the subject property. Laboratory analytical reports for soil samples are included as Appendix C to this report.

Laboratory results for soil samples are summarized on Table 1 - Analytical Results for Soil Samples. Petroleum hydrocarbons were not detected in soil samples from borings FNBO-3 and FNBO-8. VOCs were not detected in any of the samples for which they were analyzed. In general, petroleum hydrocarbons in the gasoline range were detected in at least one sample from each boring. The highest concentration of TPH-G was in sample FNBO-5 at 6 feet bgs (3,400 ppm). BTEX constituents were detected in samples from borings FNBO-5, FNBO-6, and FNBO-7 at concentrations ranging from .03 to 19 ppm. The concentrations of benzene (7.7 ppb) exceeds the California maximum containment level (MCL) of 1.0 ppb. TRPH was detected in each of the samples for which it was analyzed, at concentrations ranging from 10 to 350 ppm. No VOCs or petroleum hydrocarbons in the diesel fuel range were detected in any of the samples.

3.3 GROUND WATER ANALYTICAL RESULTS

The ground water sample from FNBO-6 was analyzed for VOCs with fuel fingerprint and TRPH. Laboratory analytical reports for the ground water sample are included as Appendix D and laboratory results are summarized on Table 2.

TPH-G was detected in the sample at a concentration of 7,800 micrograms per liter or parts per billion (ppb); TRPH was detected at a concentration of 2.8 milligrams per Liter or ppm; and benzene, toluene, ethylbenzene, and total xylenes were all detected at concentrations of 7.7 ppb, 21 ppb, 260 ppb, and 260 ppb, respectively. VOCs detected were acetone at 30 ppb and carbon disulfide at 33 ppb.

3.4 QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

Standard internal quality assurance/quality control (QA/QC) sample analyses performed by CCAS included method blanks and QC matrix spikes. QA/QC results for soil and ground water are presented with analytical results in Appendices B and C, respectively. All results were within standard tolerances. Although acetone and carbon disulfide were detected in the ground water sample, they were not detected in the laboratory QA/QC samples.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this investigation, ESE makes the following conclusions:

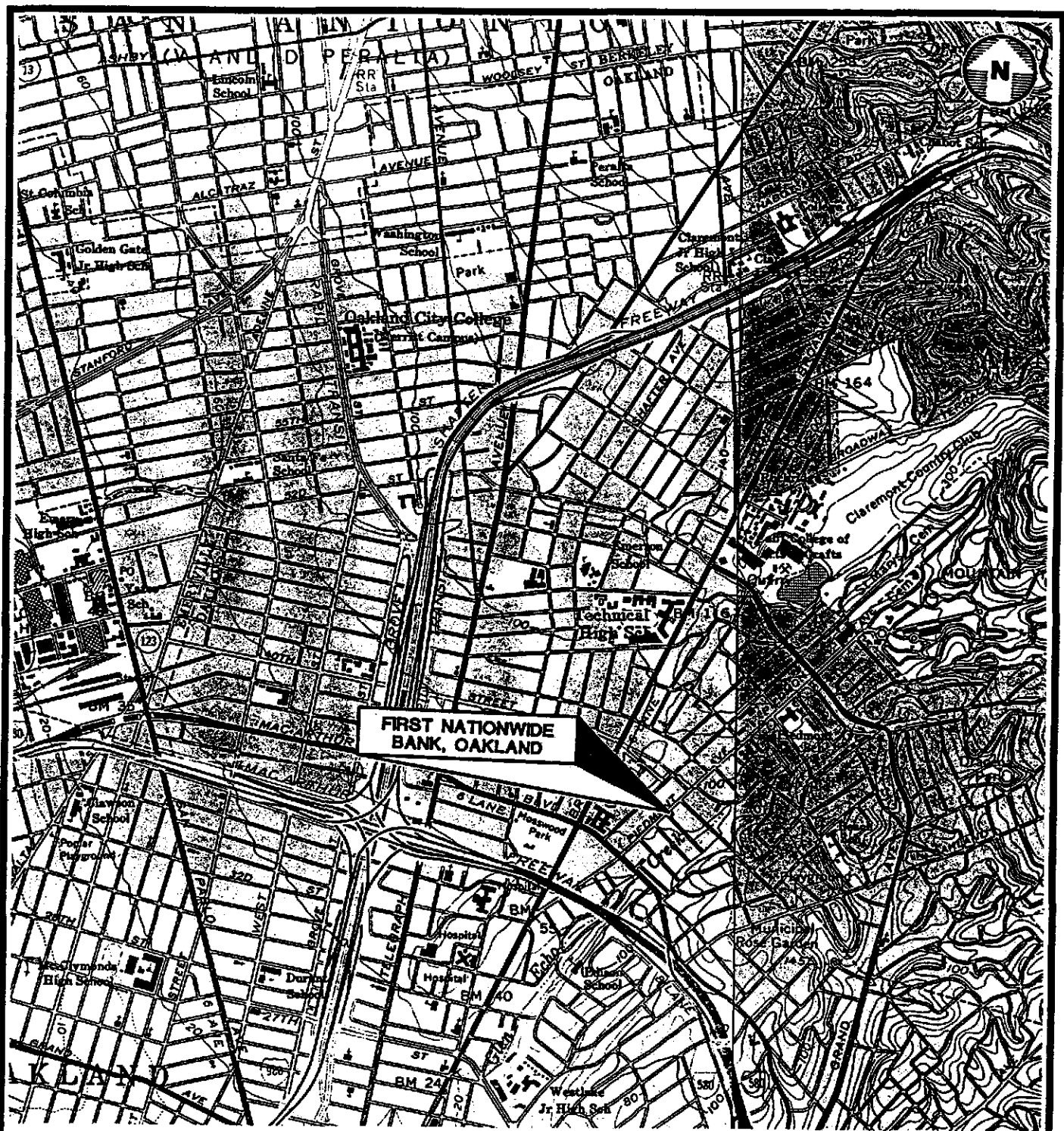
- Some or all of the underground piping and or tank system from the former service station operations may still be present beneath the Property.
- Shallow soil and ground water beneath the Property have been impacted by petroleum hydrocarbons in the gasoline and waste oil ranges.
- Light petroleum distillates and VOCs detected in soil and ground water may be the result of regional contamination unrelated to the Property or its past uses.
- Concentrations of petroleum hydrocarbons in soil and ground water, namely TPH-G and benzene, exceed applicable California action levels and will probably require remediation.
- Contamination of soil and ground water with petroleum hydrocarbons probably extends offsite to the southwest.

Based on these conclusions, ESE recommends the following:

- Conduct additional investigation to determine the horizontal extent of soil and ground water impacted with petroleum hydrocarbons.
- Install at least three ground water monitoring wells on or near the Property to determine the direction and magnitude of ground water flow at the site.
- Conduct appropriate profiling and characterization for the three drums of soil and one drum of decontamination rinseate left onsite as a result of this investigation, so that proper disposal of the materials can be coordinated.

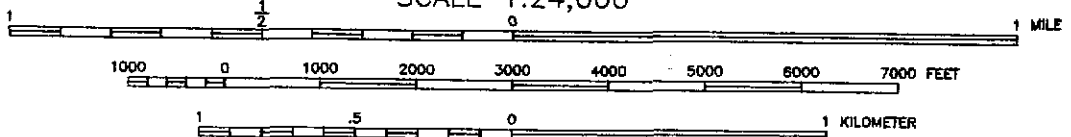
5.0 REFERENCES

- Augeas Corporation, 1993, Environmental Site Assessment, Homestead Savings, 3900 Piedmont Avenue, Oakland, California; dated May 1993.**
- Environmental Science & Engineering, Inc. (ESE), 1993, A Limited Phase I Environmental Assessment, First Nationwide Bank, 3900 Piedmont Avenue, Oakland, California; dated October 27, 1993.**
- Helley, E.J. and K.R. LaJoie, 1979, "Flatland Deposits of the San Francisco Bay Region, California - Their Geology and Engineering Properties, and Their Importance to Comprehensive Planning", U.S. Geological Survey Professional Paper 943, United States Government Printing Office, Washington, D.C., 88pp.**
- U. S. Geological Survey (USGS), 1980, Oakland East and Oakland West Quadrangle, 7.5-minute Topographic Map, Photorevised 1980.**



**FIRST NATIONWIDE
BANK, OAKLAND**

SCALE 1:24,000



ADAPTED FROM U.S.G.S. OAKLAND EAST AND OAKLAND WEST, CALIFORNIA, 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAP, 1959, PHOTOREVISED 1980.



**Environmental
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DATE
11/93

REVISED

CAD FILE
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LOCATION MAP

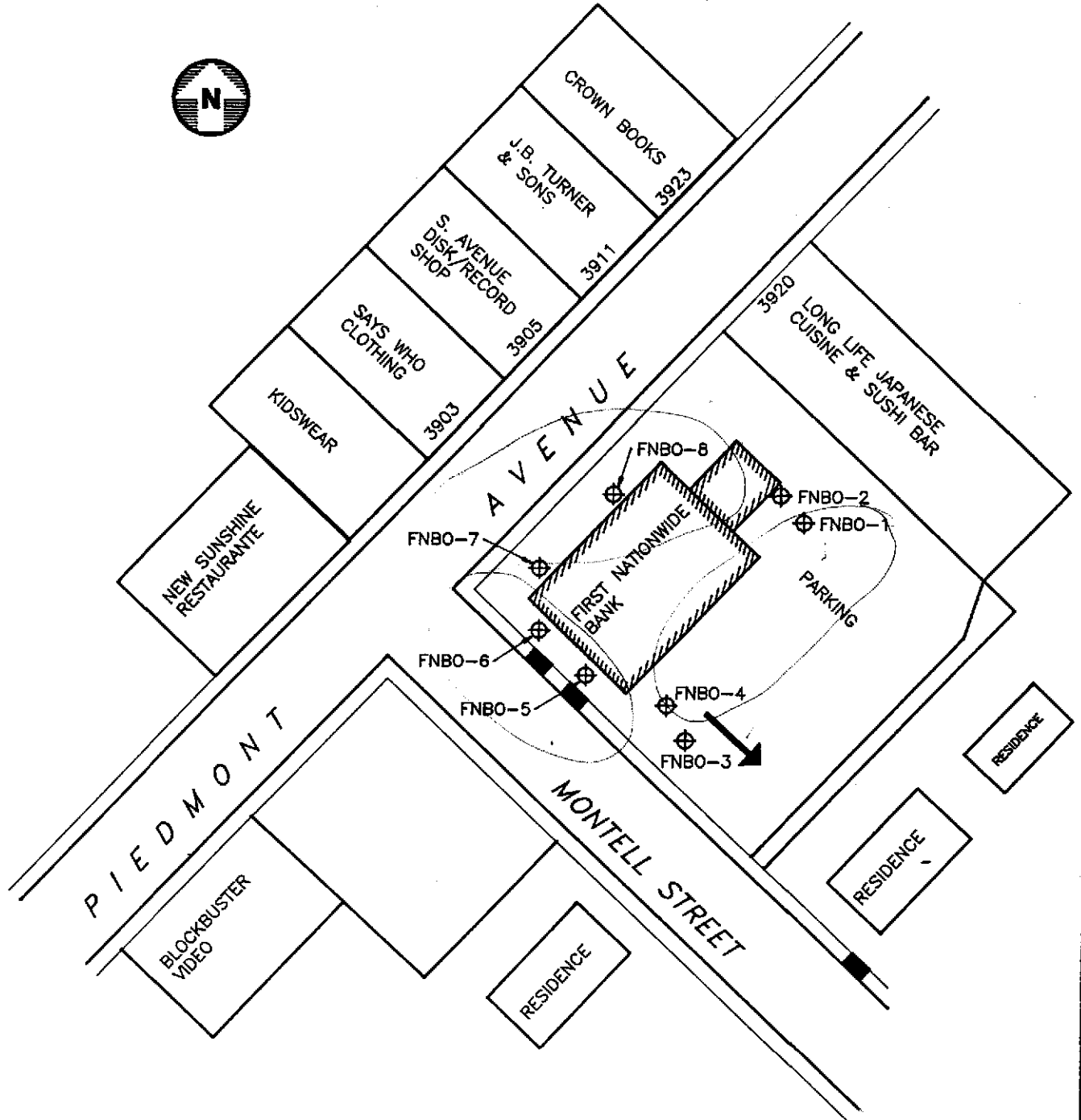
FIGURE NO.

1




4090 NELSON AVENUE, SUITE J
CONCORD, CA 94520

FIRST NATIONWIDE BANK
3900 PIEDMONT AVENUE
OAKLAND, CALIFORNIA

PROJ. NO.
6-93-5146



LEGEND

-  TRANSFORMER
-  SOIL BORING LOCATION
-  SURFACE DRAINAGE FLOW



**Environmental
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4090 NELSON AVENUE, SUITE J
CONCORD, CA 94520

DATE
11/93

REVISED

CAD FILE
51461001

SITE MAP

FIRST NATIONWIDE BANK
3900 PIEDMONT AVENUE
OAKLAND, CALIFORNIA

FIGURE NO.

2

PROJ. NO.
6-93-5146

TABLE 1

ANALYTICAL RESULTS FOR SOIL SAMPLES

First Nationwide Bank
3900 Piedmont Avenue
Oakland, California

Sample I.D.	Depth (feet bgs)	Date Sampled	TRPH (mg/Kg)	VOCs (mg/Kg)	TPH-G (mg/Kg)	TPH-D (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)
FNBO-1	10.5	10/20/93	350	ND	1.9'	<5.0	<0.005	<0.005	<0.005	<0.005
FNBO-2	10	10/20/93	86	ND	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005
FNBO-3	10.5	10/20/93	NA	NA	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005
FNBO-4	6	10/20/93	320	ND	1.4	<5.0	<0.005	<0.005	<0.005	<0.005
FNBO-5	6	10/21/93	NA	NA	3,400	<500	<0.5	<0.5	19.0	7.5
FNBO-5	10	10/21/93	160	ND	15.0	<5.0	30 ppb 0.03	<0.005	0.31	0.12
FNBO-6	5.5	10/21/93	NA	NA	5.0'	<10	<0.02	<0.02	<0.02	<0.02
FNBO-6	10	10/21/93	10.0	ND	3.6'	<5.0	<0.005	<0.005	0.034	0.041
FNBO-7	6	10/21/93	NA	NA	350'	<400	<0.40	<0.40	<0.40	<0.40
FNBO-7	11	10/21/93	NA	NA	400'	<500	1000 ppm 1.0	1.5	5.0	13.0
FNBO-8	11	10/21/93	NA	NA	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005

NOTES:

bgs = below ground surface

TRPH = Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1

VOCs = Volatile Organic Compounds by EPA Method 8260

TPH-G = Total Petroleum Hydrocarbons as Gasoline and/or light petroleum distillate by EPA Method-8266

TPH-D = Total Petroleum Hydrocarbons as Diesel by EPA Method-8266

mg/Kg = milligram per kilogram or parts per million (ppm)

ND = None Detected

NA = Not Analyzed

• = quantified as light petroleum distillates

! = quantified as gasoline and light petroleum distillates

< = less than listed detection limits

TABLE 2

ANALYTICAL RESULTS FOR GROUND WATER SAMPLE

**First Nationwide Bank
3900 Piedmont Avenue
Oakland, California**

Sample I.D.	Date Sampled	TRPH (mg/L)	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	VOCs	
								Acetone (µg/L)	Carbon Disulfide (µg/L)
FNBO-6	10/21/93	2.8	7,800	7.7	21	260	260	30	33

NOTES: MCL 1 150 700 1750

TRPH = Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1
 TPH-G = Total Petroleum Hydrocarbons as Gasoline by EPA Method 8260
 VOC's = Volatile Organic Compounds by EPA Method 8260
 mg/L = milligram per liter or parts per million (ppm)
 µg/L = micrograms per liter or parts per billion (ppb)

APPENDIX A

ESE STANDARD OPERATING PROCEDURES

**ENVIRONMENTAL SCIENCE & ENGINEERING, INC.
CONCORD, CALIFORNIA OFFICE**

**STANDARD OPERATING PROCEDURE NO. 1
FOR SOIL BORINGS AND SOIL SAMPLING WITH HOLLOW-STEM AUGERS
IN UNCONSOLIDATED FORMATIONS**

Environmental Science & Engineering, Inc. (ESE) typically drills soil borings using a truck-mounted, continuous-flight, hollow-stem auger drill rig. The drill rig is owned and operated by a drilling company possessing a valid State of California C-57 license. The soil borings are conducted under the direct supervision and guidance of an experienced ESE geologist. The ESE geologist logs each borehole during drilling in accordance with the Unified Soil Classification System (USCS). Additionally, the ESE geologist observes and notes the soil color, relative density or stiffness, moisture content, odor (if obvious) and organic content (if present). The ESE geologist will record all observations on geologic boring logs.

Soil samples are collected during drilling at a minimum of five-foot intervals by driving an 18-inch long Modified California Split-spoon sampler (sampler), lined with new, thin-wall brass sleeves, through the center of and ahead of the hollow stem augers, thus collecting a relatively undisturbed soil sample core. The brass sleeves are typically 2-inches in diameter and 6-inches in length. The sampler is driven by dropping a 140-pound hammer 30-inches onto rods attached to the top of the sampler. Soil sample depth intervals and the number of hammer blows required to advance the sampler each six-inch interval are recorded by the ESE geologist on geologic boring logs. The ends of one brass sleeve are covered with Teflon sheeting, then covered with plastic end caps. The end caps are sealed to the brass sleeve using duct tape. Each sample is then labeled and placed on ice in a cooler for transport under chain of custody documentation to the designated analytical laboratory. A portion of the remaining soil in the sampler is placed in either a new Ziploc® bag or a clean Mason Jar® and set in direct sunlight to enhance the volatilization of any Volatile Organic Compounds (VOCs) present in the soil. After approximately 15-minutes that sample is screened for VOCs using a photoionization detector (PID). The PID measurements will be noted on the geologic boring logs. The PID provides qualitative data for use in selecting samples for laboratory analysis. Soil samples from the saturated zone (beneath the ground-water table) are collected as described above, are not screened with the PID, and are not submitted to the analytical laboratory. The samples from the saturated zone are used for descriptive purposes. Soil samples from the saturated zone may be retained as described above for physical analyses (grain size, permeability and porosity testing).

If the soil boring is not going to be completed as a well, then the boring is typically terminated upon penetrating the saturated soil horizon or until a predetermined interval of soil containing no evidence of contamination is penetrated. This predetermined interval is typically based upon site specific regulatory or client guidelines. The boring is then backfilled using either neat cement, neat cement and bentonite powder mixture (not exceeding 5% bentonite), bentonite pellets, or a sand and cement mixture (not exceeding a 2:1 ratio of sand to cement). However, if the boring is to be completed as a monitoring well, then the boring is continued until either a competent, low estimated-permeability, lower confining soil layer is found or 10 to 15-feet of the saturated soil horizon is penetrated, whichever occurs first. If a low estimated-permeability soil layer is found, the soil boring will be advanced approximately five-feet into that layer to evaluate its competence as a lower confining layer, prior to the termination of that boring.

All soil sampling equipment is cleaned between each sample collection event using an Alconox® detergent and tap water solution followed by a tap water rinse. Additionally, all drilling equipment and soil sampling equipment is cleaned between borings, using a high pressure steam cleaner, to prevent cross-contamination. All wash and rinse water is collected and contained onsite in Department of Transportation approved containers (typically 55-gallon drums) pending laboratory analysis and proper disposal/recycling.

APPENDIX B

GEOLOGIC BORING LOGS



**Environmental
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**BORING LOG AND
WELL COMPLETION SUMMARY**

FNBO-2

WELL COMPLETION

Completion Depth: **N/A**

Size/Type From To

Casing:
Screen: **N/A**
Filter:
Seal:

Well Cap or Box:

Project Name: **First Nationwide Bank** Project No: **6-93-5146**

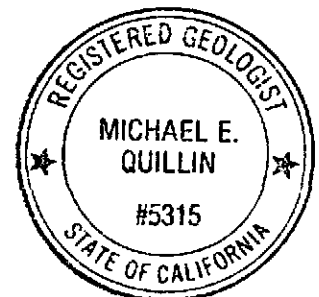
Location: **3900 Piedmont Avenue
Oakland, CA**

Driller: **Soils Exploration Services, Inc.**
Method: **Hollow Stem Auger**
Hole Diameter: **6"** Total Depth: **11.5 Feet**
Ref. Elevations:
Logged By: **Chris Valchoff**

Page 1 of 1

Dates:
Start: **10-20-93**
Finish: **10-20-93**

Depth (ft)	Lithologic Description	USC	Graphic Log		Vapor	Remarks Water, drilling/completion, summary, sample type
			Sample/Blows	Lithology		
0	ASPHALT					
0	SILTY GRAVEL FILL					
2	SANDY SILT, light brown, stiff, damp, 10-20% fine to medium grained sands, no odor.	SM				
5.5	SANDY CLAY, dark brown, stiff, damp, 20-30% fine to medium grained sand, no odor.	SC	7 22 30			SAMPLE @ 6.0 FEET
8.5	SANDY CLAY, light brown, stiff, moist, 10-20% very fine to fine grained sand, no odor.	SC				
10.5	SILTY SAND, light brown, dense, moist, 10-20% silts, fine to medium grained sand, no odor.	SM	12 19 22			SAMPLE @ 10.0 FEET
11.5						Water @ 11.5 feet
11.5						TOTAL DEPTH = 11.5 FEET Backfilled with grout.





**Environmental
Science &
Engineering, Inc.**

BORING LOG AND WELL COMPLETION SUMMARY

FNBO-3

WELL COMPLETION

Completion Depth: N/A

Size/Type From To

Casing:
Screen: N/A
Filter:
Seal:

Well Cap or Box:

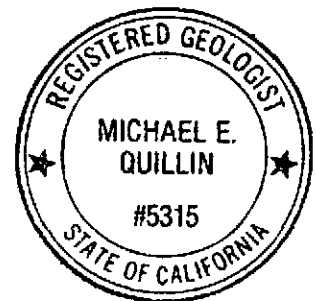
Project Name: First Nationwide Bank Project No: 6-93-5146
Location: 3900 Piedmont Avenue
Oakland, CA

Driller: Soils Exploration Services, Inc.
Method: Hollow Stem Auger
Hole Diameter: 6" Total Depth: 16.5 Feet
Ref. Elevations:
Logged By: Chris Valchreff

Page 1 of 1

Dates:
Start: 10-20-93
Finish: 10-20-93

Depth (ft)	Lithologic Description	USC	Graphic Log			Vapor	Remarks Water, drilling/completion, summary, sample type
			Sample/Blows	Lithology	Well Installation		
0	ASPHALT						
0	SILTY GRAVEL FILL						
1							
1	SANDY SILT, grey, stiff, damp, 10-20% fine to medium grained sand, slight hydrocarbon odor.	SM					
2	As above, black.	SM					
3							
4	As above, brown, stiff, damp, 10-20% fine grained sand, no odor.	SM					
5							
5	SANDY CLAY, light brown, very stiff, damp, 30-40% medium to coarse grained sand, no odor.	CL	15				
6			25				0 SAMPLE @ 6.0 FEET
6			25				
7							
7	SANDY CLAY, light grey, stiff, damp, 5-10% fine grained sand, no odor.	CL					
8							
9							
10							
10	SANDY SILT, light grey with brown mottles, stiff, moist, 10-20% very fine grained sand, no odor.	SM	7				0 SAMPLE @ 10.5 FEET
11	As above, 20-30% very fine sand, saturated.		14				0 Water @ 11.0 feet
11			20				
12							
13							
14							
15	As above, saturated.	SM					
16							
17							



SATURATED SAMPLES
TOTAL DEPTH = 16.5 FEET
Backfilled with grout.



**Environmental
Science &
Engineering, Inc.**

BORING LOG AND WELL COMPLETION SUMMARY

FNBO-5

WELL COMPLETION

Completion Depth: **N/A**

Size/Type From To

Casing:
Screen:
Filter: **N/A**
Seal:

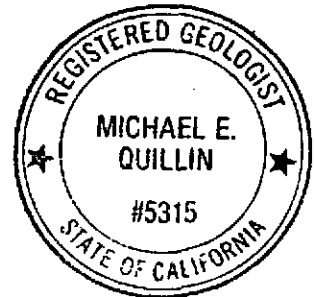
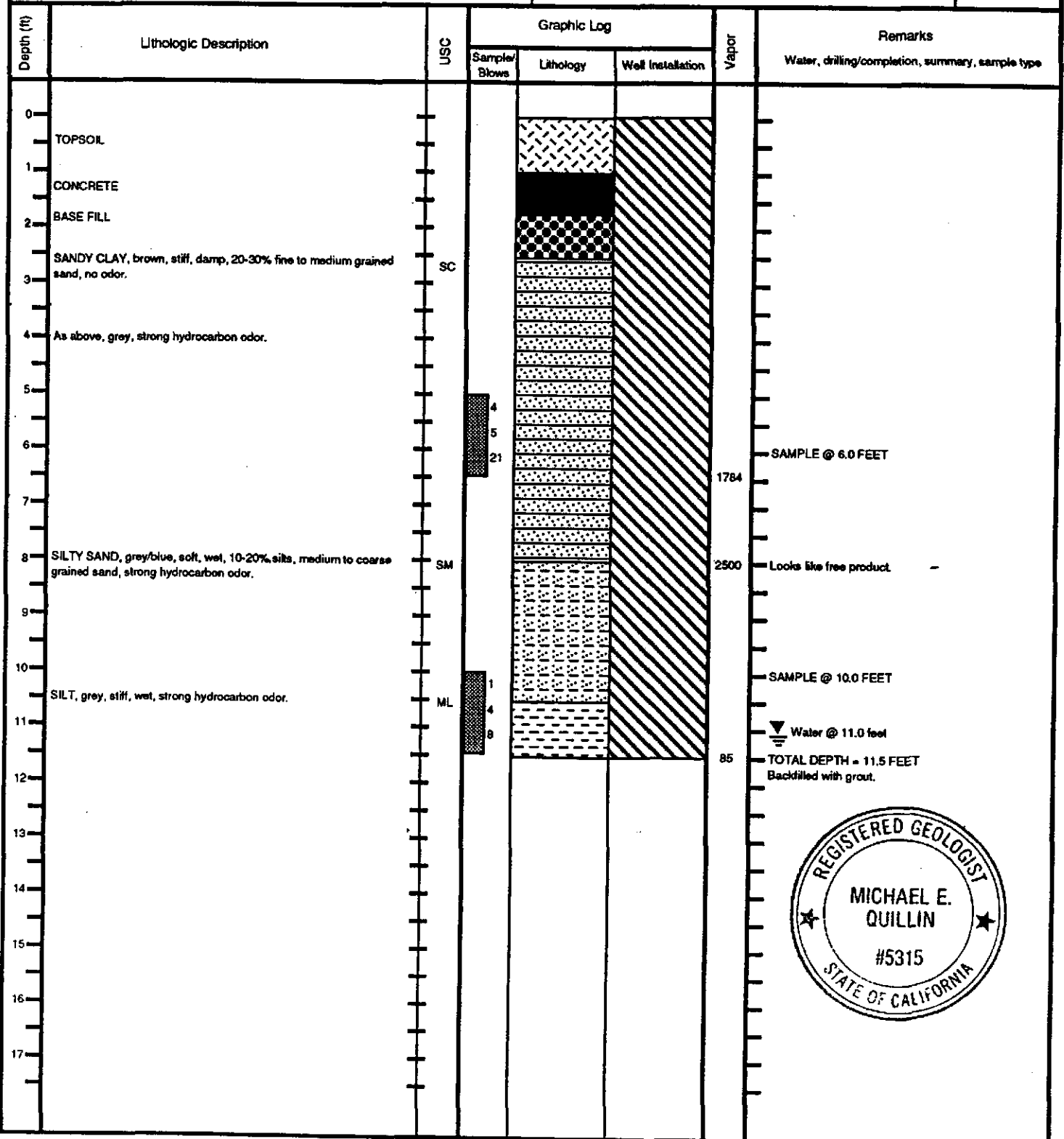
Well Cap or Box:

Project Name: **First Nationwide Bank** Project No: **6-83-5146**
Location: **3900 Piedmont Avenue**
Oakland, CA

Driller: **Soils Exploration Services, Inc.**
Method: **Hollow Stem Auger**
Hole Diameter: **6"** Total Depth: **11.5 Feet**
Ref. Elevations:
Logged By: **Chris Valchert**

Page 1 of 1

Dates:
Start: **10-21-93**
Finish: **10-21-93**





**Environmental
Science &
Engineering, Inc.**

BORING LOG AND WELL COMPLETION SUMMARY

FNBO-6

WELL COMPLETION

Completion Depth: N/A

Size/Type From To

Casing:
Screen: N/A
Filter:
Seal:

Well Cap or Box:

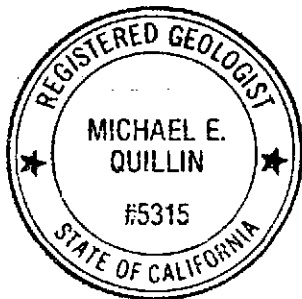
Project Name: First Nationwide Bank Project No: 6-93-5146
Location: 3900 Piedmont Avenue
Oakland, CA

Driller: Soils Exploration Services, Inc.
Method: Hollow Stem Auger
Hole Diameter: 6" Total Depth: 16.5 Feet
Ref. Elevations:
Logged By: Chris Valcheff

Page 1 of 1

Dates:
Start: 10-21-93
Finish: 10-21-93

Depth (ft)	Lithologic Description	USC	Graphic Log			Vapor	Remarks Water, drilling/completion, summary, sample type
			Sample Blows	Lithology	Well Installation		
0	TOPSOIL						
1	CONCRETE						
2	BASE FILL						
3	SANDY CLAY, brown, stiff, damp, 20-30% very fine to fine grained sand, no odor.	SC					
4	As above, grey, strong hydrocarbon odor.	SC					
5	As above, grey/green, "cedar"-like odor.	SC					
6	SANDY CLAY, green/brown, very stiff, damp, 30-40% coarse grained sand, strong hydrocarbon odor.	CL	12 20 34			696	SAMPLE @ 6.0 FEET
7							
8	SANDY CLAY, grey/green, stiff, damp, 30-40% fine to medium grained sand, strong hydrocarbon odor.	CL					
9							
10	As above.	CL	17 20 50			412	SAMPLE @ 10.0 FEET
11							Water @ 11.0 feet
12							
13							
14							
15			17 20 34				NO RECOVERY
16							TOTAL DEPTH = 16.5 FEET Backfilled with grout.
17							





**Environmental
Science &
Engineering, Inc.**

BORING LOG AND WELL COMPLETION SUMMARY

FNBO-7

WELL COMPLETION

Completion Depth: **N/A**

Size/Type _____ From _____ To _____

Casing:
Screen:
Filter: **N/A**
Seal:

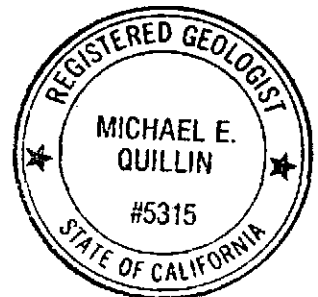
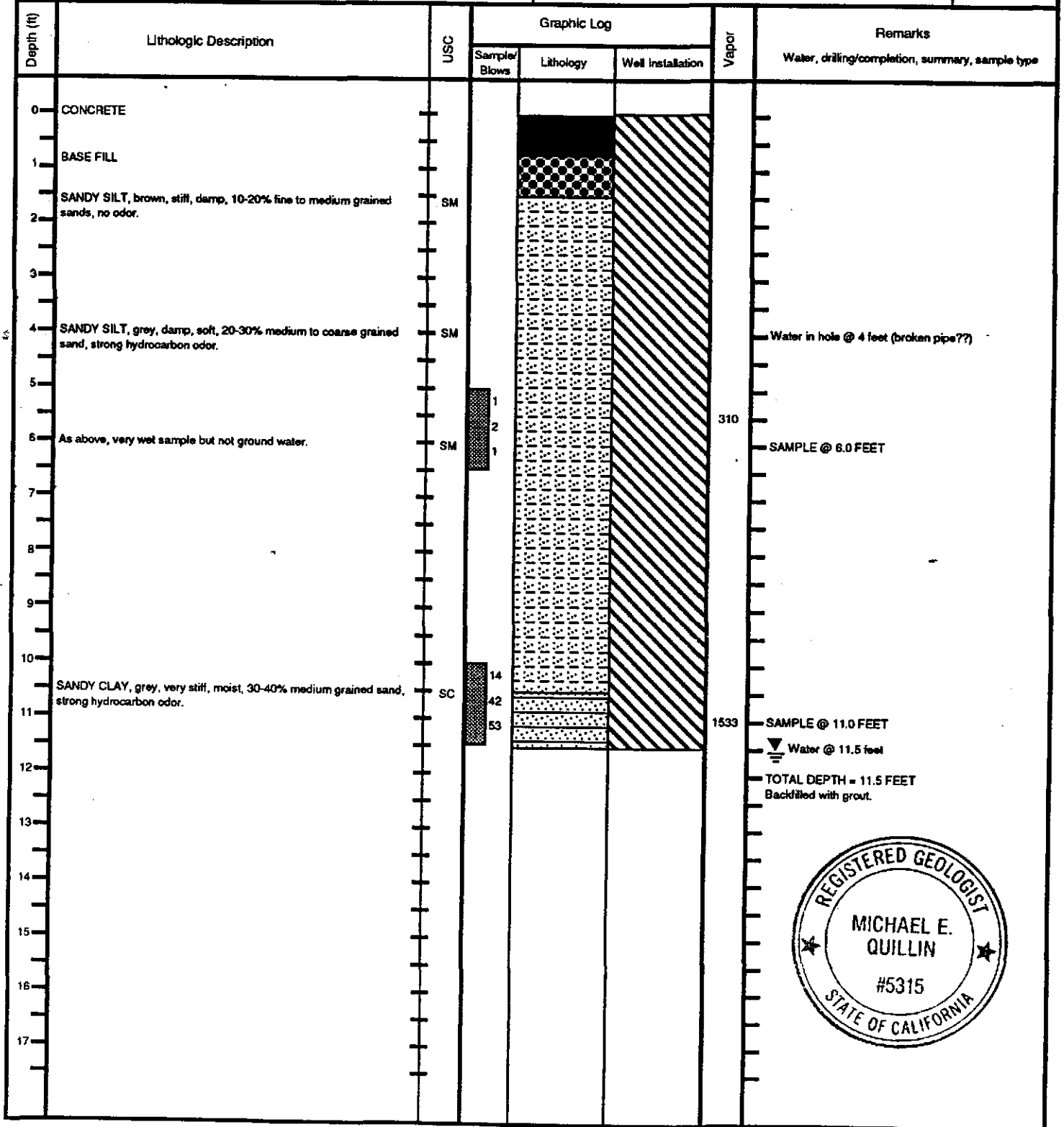
Well Cap or Box:

Project Name: First Nationwide Bank Project No: 6-93-5146
Location: 3900 Piedmont Avenue
Oakland, CA

Driller: Soils Exploration Services, Inc.
Method: Hollow Stem Auger
Hole Diameter: 6" Total Depth: 11.5 Feet
Ref. Elevations:
Logged By: Chris Valchell

Page 1 of 1

Dates:
Start: 10-21-93
Finish: 10-21-93





**Environmental
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Engineering, Inc.**

BORING LOG AND WELL COMPLETION SUMMARY

FNBO-8

WELL COMPLETION

Completion Depth: *N/A*

Size/Type	From	To

Casing:

Screen:

Filter:

Seal:

N/A

Well Cap or Box:

Project Name: First Nationwide Bank

Project No: 8-93-5146

Location: 3900 Piedmont Avenue
Oakland, CA

Driller: Soils Exploration Services, Inc.

Method: Hollow Stem Auger

Hole Diameter: 6"

Total Depth: 11.5 Feet

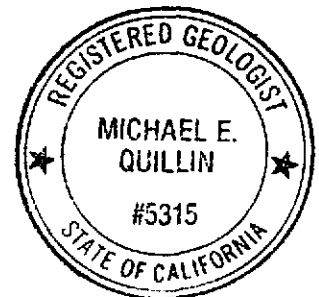
Ref. Elevations:

Logged By: Chris Valchell

Page 1 of 1

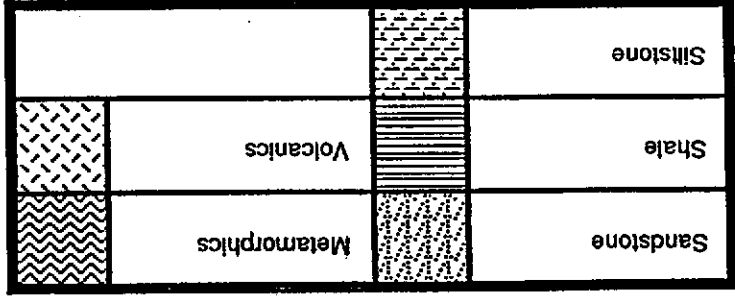
Dates:
Start: 10-21-93
Finish: 10-21-93

Depth (ft)	Lithologic Description	USC	Graphic Log			Vapor	Remarks
			Sample/Blows	Lithology	Well Installation		
0	CONCRETE						
1	GRAVEL FILL						
2	SANDY SILT, dark brown, stiff, damp, 10-20% fine to medium grained sands, no odor.	SM					
4	SANDY CLAY, orange/brown, stiff, damp, 10-20% very fine to fine grained sands, no odor.	SC					Water in hole @ 4 feet (broken pipe??)
5	As above, 20-30% medium to coarse grained sand, no odor.	SC	5				
6	As above, brown with grey mottling.	SC	10				SAMPLE @ 6.0 FEET
10			21				
9	SANDY CLAY, brown, stiff, damp, 20-30% very fine to fine grained sand, no odor.	SC					
10			10				SAMPLE @ 10.0 FEET
11	SILTY SAND, brown, dense, medium to coarse grained sand, 10-20% silts, no odor.	SM	12				Water @ 11.0 feet
12			27				TOTAL DEPTH - 11.5 FEET Backfilled with grout.



UNIFIED SOIL CLASSIFICATION SYSTEM (USC)

GROUP SYMBOLS	DESCRIPTION	MAJOR DIVISIONS						
		Clean sands	Gravels with fines	SANDS				
GW	Well-graded gravels, gravel-sand mixtures, little or no fines.	Clean sands	Gravels with fines	More than half of coarse fraction retained on the No. 4 sieve.				
GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines.							
GM	Silty gravels, gravel-sand mixtures.	Sands with fines	SANDS		50% or more retained on the No. 200 sieve.			
GC	Clayey gravels, gravel-sand-clay mixtures.							
SW	Well-graded sands, gravelly sands, little or no fines.	Clean sands	SANDS			More than 50% passing the No. 200 sieve.		
SP	Poorly-graded sands, gravelly sands, little or no fines.							
SM	Silty sands, sand-silt mixtures.	Sands with fines	SANDS	More than 50% passing the No. 200 sieve.				
SC	Clayey sands, sand clay mixtures.							
ML	Inorganic silts and very fine sands.	Liquid Limit below 50%	SILTS AND CLAYS		Highly organic soils			
CL	Inorganic clays, gravelly clays, sandy clays, lean clays.							
MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	Liquid Limit 50% and above				SILTS AND CLAYS	Highly organic soils	
CH	Inorganic fat clays.							
OH	Organic clays or organic silts.	Liquid Limit 50% and above		SILTS AND CLAYS				Highly organic soils
P	Peat, organic content greater than 60%.							

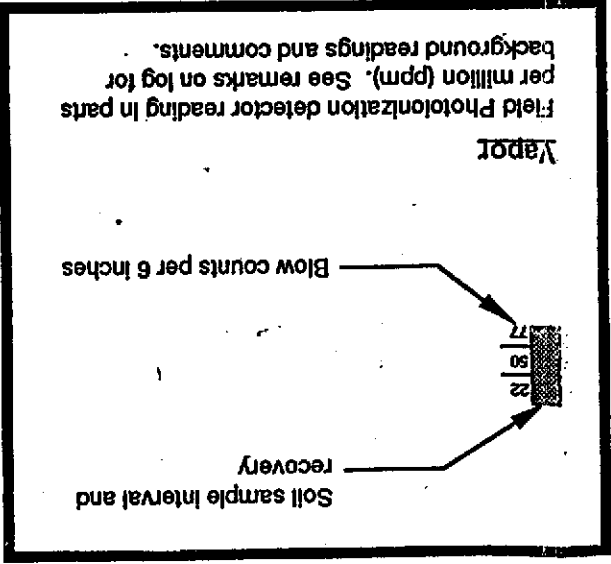


BEDROCK

SYMBOL	DESCRIPTION
	Bentonite/cement grout
	Bentonite Pellets
	Sand
	Screen section of well or piezometer
	Blank section of well or piezometer with centralizer
	Traffic rated well box with locking water-tight cap

See log for details of installation.

WELL INSTALLATION



LEGEND

Environmental Science & Engineering, Inc.
 4090 Nelson Avenue, Suite J
 Concord, CA 94520
 (415) 685-4053

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.
 A COLORADO COMPANY

DRAWN BY: CVS
 DATE: 3/91
 FILE NAME: LEGEND

LEGEND TO LOGS

APPENDIX C

**LABORATORY ANALYTICAL REPORTS:
SOIL SAMPLES**



Air, Water & Hazardous Waste Sampling, Analysis & Consultation
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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-1
Project : 6-93-5146, 1st
Nationwide, Oakland

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED				
FNBO-1-10.5'	Soil	Chris Valcheff	10/20/93	10/22/93			
CONSTITUENT	*PQL	RESULT	UNITS	METHOD	ANALYZED	BY	NOTES
Total Recoverable Petroleum Hydrocarbons	10.	350.	mg/Kg	418, 419	10/26/93	MT	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93

NG/mcc/mt
418931026B

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Nick Gaone
Inorganics Manager

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-1
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/31/93
Analyzed by: MM
Method : EPA 8260

REPORT OF ANALYTICAL RESULTS

Page 1 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-1-10.5'	Soil	Chris Valcheff	10/20/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
VOLATILE ORGANIC COMPOUNDS plus TOTAL PETROLEUM				1,2
HYDROCARBONS				
Acetone	(67641)	100.	ND	
Benzene	(71432)	5.	ND	
Bromodichloromethane	(75274)	5.	ND	
Bromoform	(75252)	5.	ND	
Bromomethane	(74839)	5.	ND	
2-Butanone (MEK)	(78933)	50.	ND	
Carbon Disulfide	(75150)	10.	ND	
Carbon Tetrachloride	(56235)	5.	ND	
Chlorobenzene	(108907)	5.	ND	
Chloroethane	(75003)	5.	ND	
2-Chloroethyl Vinyl Ether	(110758)	50.	ND	
Chloroform	(67663)	10.	ND	
Chloromethane	(74873)	5.	ND	
Dibromochloromethane	(124481)	5.	ND	
1,2-Dichlorobenzene	(95501)	5.	ND	
1,3-Dichlorobenzene	(541731)	5.	ND	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

(1) EXTRACTED by EPA 5030 (purge-and-trap)

(2) TPH is quantitated against stoddard solvent.

11/02/93
FIN2/103104B
DT/et/mcc/mt
FIN2-1031

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COAST
ANALYTICAL
SERVICES**

Air, Water & Hazardous Waste Sampling, Analysis & Consultation
Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-1
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/31/93
Analyzed by: MM
Method **8260**

REPORT OF ANALYTICAL RESULTS

Page 2 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-1-10.5'	Soil	Chris Valcheff	10/20/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
1,4-Dichlorobenzene	(106467)	5.	ND	
1,1-Dichloroethane	(75343)	5.	ND	
1,2-Dichloroethane	(107062)	5.	ND	
1,1-Dichloroethene	(75354)	5.	ND	
cis-1,2-Dichloroethene	(156592)	5.	ND	
trans-1,2-Dichloroethene	(156605)	5.	ND	
1,2-Dichloropropane	(78875)	5.	ND	
cis-1,3-Dichloropropene	(100610105)	5.	ND	
trans-1,3-Dichloropropene	(10061026)	5.	ND	
Ethylbenzene	(100414)	5.	ND	
2-Hexanone	(591786)	30.	ND	
Methyl Isobutyl Ketone (MIBK)	(108101)	30.	ND	
Methylene Chloride	(75092)	30.	ND	
Styrene	(100425)	5.	ND	
1,1,2,2-Tetrachloroethane	(79345)	5.	ND	
Tetrachloroethene	(127184)	5.	ND	
Toluene	(108883)	5.	ND	
1,1,1-Trichloroethane	(71556)	5.	ND	
1,1,2-Trichloroethane	(79005)	5.	ND	
Trichloroethene	(79016)	5.	ND	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
FIN2/103104B
DT/et/mcc/mt
FIN2-1031



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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-1
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/31/93
Analyzed by: MM
Method : EPA 8260

REPORT OF ANALYTICAL RESULTS

Page 3 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-1-10.5'	Soil	Chris Valcheff	10/20/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
Trichlorofluoromethane	(75694)	5.	ND	
Trichlorotrifluoroethane	(76131)	5.	ND	
Vinyl Acetate	(108054)	30.	ND	
Vinyl Chloride	(75014)	5.	ND	
Xylenes (total)	(1330207)	5.	ND	
Total Petroleum Hydrocarbons (Light Petroleum Distillate)		1000.	1900.	
Total Petroleum Hydrocarbons (Diesel)		5000.	ND	
D4-DCA (% Surrogate recovery #1)			102.	
D8-TOL (% Surrogate Recovery #2)			107.	
BFB (% Surrogate Recovery #3)			95.	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
FIN2/103104B
DT/et/mcc/mt
FIN2-1031

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager



Air, Water & Hazardous Waste Sampling, Analysis & Consultation
Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

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Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN
NorCal Division (San Jose Laboratory) San Jose, CA 95131
2059 Junction Ave. (408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-2
Project : 6-93-5146, 1st
Nationwide, Oakland

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED				
FNBO-2-10'	Soil	Chris Valcheff	10/20/93	10/22/93			
CONSTITUENT	*PQL	RESULT	UNITS	METHOD	ANALYZED	BY	NOTES
Total Recoverable Petroleum Hydrocarbons	10.	86.	mg/Kg	EPA 418.1	10/26/93	MT	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93

NG/mcc/mt
418931026B

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Nick J. Gaone

Nick Gaone
Inorganics Manager

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-2
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/28/93
Analyzed by: MM
Method : EPA 8260*

REPORT OF ANALYTICAL RESULTS

Page 1 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNEO-2-10'	Soil	Chris Valcheff	10/20/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
VOLATILE ORGANIC COMPOUNDS plus TOTAL PETROLEUM				1
HYDROCARBONS				
Acetone	(67641)	100.	ND	
Benzene	(71432)	5.	ND	
Bromodichloromethane	(75274)	5.	ND	
Bromoform	(75252)	5.	ND	
Bromomethane	(74839)	5.	ND	
2-Butanone (MEK)	(78933)	50.	ND	
Carbon Disulfide	(75150)	10.	ND	
Carbon Tetrachloride	(56235)	5.	ND	
Chlorobenzene	(108907)	5.	ND	
Chloroethane	(75003)	5.	ND	
2-Chloroethyl Vinyl Ether	(110758)	50.	ND	
Chloroform	(67663)	10.	ND	
Chloromethane	(74873)	5.	ND	
Dibromochloromethane	(124481)	5.	ND	
1,2-Dichlorobenzene	(95501)	5.	ND	
1,3-Dichlorobenzene	(541731)	5.	ND	
1,4-Dichlorobenzene	(106467)	5.	ND	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

(1) EXTRACTED by EPA 5030 (purge-and-trap)

11/02/93
FIN2/102806B
DT/et/mcc/mt
FIN2-1028



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 2059 Junction Ave.

San Jose, CA 95131
 (408) 955-9077

CLIENT: Mike Quillin
 Environmental Science & Engineering
 4090 Nelson Avenue Suite J
 Concord, CA 94520

Lab Number : JJ-2159-2
 Project : 6-93-5146, 1st
 Nationwide, Oakland
 Analyzed : 10/28/93
 Analyzed by: MM
 Method : EPA 8260

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED		
FNBO-2-10'	Soil	Chris Valcheff	10/20/93	10/22/93	
CONSTITUENT		(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
1,1-Dichloroethane		(75343)	5.	ND	
1,2-Dichloroethane		(107062)	5.	ND	
1,1-Dichloroethene		(75354)	5.	ND	
cis-1,2-Dichloroethene		(156592)	5.	ND	
trans-1,2-Dichloroethene		(156605)	5.	ND	
1,2-Dichloropropane		(78875)	5.	ND	
cis-1,3-Dichloropropene		(100610105)	5.	ND	
trans-1,3-Dichloropropene		(10061026)	5.	ND	
Ethylbenzene		(100414)	5.	ND	
2-Hexanone		(591786)	30.	ND	
Methyl Isobutyl Ketone (MIBK)		(108101)	30.	ND	
Methylene Chloride		(75092)	30.	ND	
Styrene		(100425)	5.	ND	
1,1,2,2-Tetrachloroethane		(79345)	5.	ND	
Tetrachloroethene		(127184)	5.	ND	
Toluene		(108883)	5.	ND	
1,1,1-Trichloroethane		(71556)	5.	ND	
1,1,2-Trichloroethane		(79005)	5.	ND	
Trichloroethene		(79016)	5.	ND	
Trichlorofluoromethane		(75694)	5.	ND	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
 FIN2/102806B
 DT/et/mcc/mt
 FIN2-1028



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Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-2
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/28/93
Analyzed by: MM
Method : ~~EPA 8260~~

REPORT OF ANALYTICAL RESULTS

Page 3 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED		
FNBO-2-10'	Soil	Chris Valcheff	10/20/93	10/22/93	
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE	
Trichlorotrifluoroethane	(76131)	5.	ND		
Vinyl Acetate	(108054)	30.	ND		
Vinyl Chloride	(75014)	5.	ND		
Xylenes (total)	(1330207)	5.	ND		
Total Petroleum Hydrocarbons (Gasoline)		1000.	ND		
Total Petroleum Hydrocarbons (Diesel)		5000.	ND		
D4-DCA (% Surrogate recovery #1)			83.		
D8-TOL (% Surrogate Recovery #2)			75.		
BFB (% Surrogate Recovery #3)			76.		

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
FIN2/102806B
DT/et/mcc/mt
FIN2-1028

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager



Air, Water & Hazardous Waste Sampling, Analysis & Consultation
 Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories
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NorCal Division (San Jose Laboratory)
 2059 Junction Ave.

San Jose, CA 95131
 (408) 955-9077

CLIENT: Mike Quillin
 Environmental Science & Engineering
 4090 Nelson Avenue Suite J
 Concord, CA 94520

Lab Number : JJ-2159-6
 Project : 6-93-5146, 1st
 Nationwide, Oakland
 Analyzed : 10/26/93
 Analyzed by: ON
 Method : As Listed

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-3-10.5'	Soil	Chris Valcheff	10/20/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL mg/Kg	RESULT mg/Kg	NOTE
FUEL FINGERPRINT ANALYSIS				
Benzene		0.005	ND	1,2
Toluene		0.005	ND	
Ethylbenzene		0.005	ND	
Xylenes		0.005	ND	
1,2-Dichloroethane		0.005	ND	
Ethylene dibromide		0.005	ND	
Total Petroleum Hydrocarbons (Gasoline)		1.	ND	
Total Petroleum Hydrocarbons (Diesel 2)		5.	ND	
Percent Surrogate Recovery			86.	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

(1) EXTRACTED by EPA 5030 (purge-and-trap)

(2) ANALYZED by CAL DHS DRAFT TPH, ~~...~~ modified GC/MS

11/02/93
 MSD1/1AT70A
 DT/et/mt/on
 MSD1-1026

Respectfully submitted,
 COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
 Organics Manager



Air, Water & Hazardous Waste Sampling, Analysis & Consultation
Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-3
Project : 6-93-5146, 1st
Nationwide, Oakland

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED			
FNBO-4-6'	Soil	Chris Valcheff	10/20/93	10/22/93		
CONSTITUENT	*PQL	RESULT	UNITS	METHOD	ANALYZED BY	NOTES
Total Recoverable Petroleum Hydrocarbons	10.	320.	mg/Kg	10/25/93	MT	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93

NG/mcc/mt
418931026B

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Nick Gaone
Inorganics Manager



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NorCal Division (San Jose Laboratory)
 2059 Junction Ave.

San Jose, CA 95131
 (408) 955-9077

CLIENT: Mike Quillin
 Environmental Science & Engineering
 4090 Nelson Avenue Suite J
 Concord, CA 94520

Lab Number : JJ-2159-3
 Project : 6-93-5146, 1st
 Nationwide, Oakland
 Analyzed : 10/31/93
 Analyzed by: MM
 Method : EPA 8260

REPORT OF ANALYTICAL RESULTS

Page 1 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-4-6'	Soil	Chris Valcheff	10/20/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
VOLATILE ORGANIC COMPOUNDS plus TOTAL PETROLEUM				
HYDROCARBONS				
Acetone	(67641)	100.	ND	
Benzene	(71432)	5.	ND	
Bromodichloromethane	(75274)	5.	ND	
Bromoform	(75252)	5.	ND	
Bromomethane	(74839)	5.	ND	
2-Butanone (MEK)	(78933)	50.	ND	
Carbon Disulfide	(75150)	10.	ND	
Carbon Tetrachloride	(56235)	5.	ND	
Chlorobenzene	(108907)	5.	ND	
Chloroethane	(75003)	5.	ND	
2-Chloroethyl Vinyl Ether	(110758)	50.	ND	
Chloroform	(67663)	10.	ND	
Chloromethane	(74873)	5.	ND	
Dibromochloromethane	(124481)	5.	ND	
1,2-Dichlorobenzene	(95501)	5.	ND	
1,3-Dichlorobenzene	(541731)	5.	ND	
1,4-Dichlorobenzene	(106467)	5.	ND	

1

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
 (1) EXTRACTED by EPA 5030 (purge-and-trap)

11/02/93
 FIN2/103105B
 DT/et/mcc/mt
 FIN2-1031



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NorCal Division (San Jose Laboratory)
 2059 Junction Ave.

San Jose, CA 95131
 (408) 955-9077

CLIENT: Mike Quillin
 Environmental Science & Engineering
 4090 Nelson Avenue Suite J
 Concord, CA 94520

Lab Number : JJ-2159-3
 Project : 6-93-5146, 1st
 Nationwide, Oakland
 Analyzed : 10/31/93
 Analyzed by: MM
 Method [REDACTED]

REPORT OF ANALYTICAL RESULTS

Page 2 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-4-6'	Soil	Chris Valcheff	10/20/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
1,1-Dichloroethane	(75343)	5.	ND	
1,2-Dichloroethane	(107062)	5.	ND	
1,1-Dichloroethene	(75354)	5.	ND	
cis-1,2-Dichloroethene	(156592)	5.	ND	
trans-1,2-Dichloroethene	(156605)	5.	ND	
1,2-Dichloropropane	(78875)	5.	ND	
cis-1,3-Dichloropropene	(100610105)	5.	ND	
trans-1,3-Dichloropropene	(10061026)	5.	ND	
Ethylbenzene	(100414)	5.	ND	
2-Hexanone	(591786)	30.	ND	
Methyl Isobutyl Ketone (MIBK)	(108101)	30.	ND	
Methylene Chloride	(75092)	30.	ND	
Styrene	(100425)	5.	ND	
1,1,2,2-Tetrachloroethane	(79345)	5.	ND	
Tetrachloroethene	(127184)	5.	ND	
Toluene	(108883)	5.	ND	
1,1,1-Trichloroethane	(71556)	5.	ND	
1,1,2-Trichloroethane	(79005)	5.	ND	
Trichloroethene	(79016)	5.	ND	
Trichlorofluoromethane	(75694)	5.	ND	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
 FIN2/103105B
 DT/et/mcc/mt
 FIN2-1031



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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-3
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/31/93
Analyzed by: MM
Method [REDACTED]

REPORT OF ANALYTICAL RESULTS

Page 3 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-4-6'	Soil	Chris Valcheff	10/20/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
Trichlorotrifluoroethane	(76131)	5.	ND	
Vinyl Acetate	(108054)	30.	ND	
Vinyl Chloride	(75014)	5.	ND	
Xylenes (total)	(1330207)	5.	ND	
Total Petroleum Hydrocarbons (Gasoline)		1000.	1400.	
Total Petroleum Hydrocarbons (Diesel)		5000.	ND	
D4-DCA (% Surrogate recovery #1)			102.	
D8-TOL (% Surrogate Recovery #2)			100.	
BFB (% Surrogate Recovery #3)			90.	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
FIN2/103105B
DT/et/mcc/mt
FIN2-1031

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-7
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/26/93
Analyzed by: ON
Method : As Listed

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-5-6'	Soil	Chris Valcheff	10/21/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL mg/Kg	RESULT mg/Kg	NOTE
FUEL FINGERPRINT ANALYSIS				1,2
Benzene		0.5	ND	
Toluene		0.5	ND	
Ethylbenzene		0.5	19.	
Xylenes		0.5	7.5	
1,2-Dichloroethane		0.5	ND	
Ethylene dibromide		0.5	ND	
Total Petroleum Hydrocarbons (Gasoline)		100.	3400.	
Total Petroleum Hydrocarbons (Diesel 2)		500.	ND	
Percent Surrogate Recovery			94.	

San Jose Lab Certifications: CAELAP #1204


*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

(1) EXTRACTED by EPA 5030 (purge-and-trap)

(2) ANALYZED by CAL DHS DRAFT TPH, ~~XXXXXXXXXX~~ied (GC/MS)

11/02/93
MSD1/1AT73A
DT/et/on
MSD1-1026

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.


Dudley Torres
Organics Manager



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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-4
Project : 6-93-5146, 1st
Nationwide, Oakland

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNEO-5-10'	Soil	Chris Valcheff	10/21/93	10/22/93
CONSTITUENT	*PQL	RESULT	UNITS	METHOD ANALYZED BY NOTES
Total Recoverable Petroleum Hydrocarbons	10.	160.	mg/Kg	[REDACTED]/26/93 MT

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93

NG/mcc/mt
418931026B

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Nick Gaone
Inorganics Manager



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NorCal Division (San Jose Laboratory)
 2059 Junction Ave.

San Jose, CA 95131
 (408) 955-9077

CLIENT: Mike Quillin
 Environmental Science & Engineering
 4090 Nelson Avenue Suite J
 Concord, CA 94520

Lab Number : JJ-2159-4
 Project : 6-93-5146, 1st
 Nationwide, Oakland
 Analyzed : 11/01/93
 Analyzed by: MM
 Method : EPA 8260

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-5-10'	Soil	Chris Valcheff	10/21/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
VOLATILE ORGANIC COMPOUNDS plus TOTAL PETROLEUM				1
HYDROCARBONS				
Acetone	(67641)	100.	ND	
Benzene	(71432)	5.	30.	
Bromodichloromethane	(75274)	5.	ND	
Bromoform	(75252)	5.	ND	
Bromomethane	(74839)	5.	ND	
2-Butanone (MEK)	(78933)	50.	ND	
Carbon Disulfide	(75150)	10.	ND	
Carbon Tetrachloride	(56235)	5.	ND	
Chlorobenzene	(108907)	5.	ND	
Chloroethane	(75003)	5.	ND	
2-Chloroethyl Vinyl Ether	(110758)	50.	ND	
Chloroform	(67663)	10.	ND	
Chloromethane	(74873)	5.	ND	
Dibromochloromethane	(124481)	5.	ND	
1,2-Dichlorobenzene	(95501)	5.	ND	
1,3-Dichlorobenzene	(541731)	5.	ND	
1,4-Dichlorobenzene	(106467)	5.	ND	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

(1) EXTRACTED by EPA 5030 (purge-and-trap)

11/02/93
 FIN2/110104B
 DT/et/mcc/mt
 FIN2-1101

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-4
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 11/01/93
Analyzed by: MM
Method

REPORT OF ANALYTICAL RESULTS

Page 2 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-5-10'	Soil	Chris Valcheff	10/21/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
1,1-Dichloroethane	(75343)	5.	ND	
1,2-Dichloroethane	(107062)	5.	ND	
1,1-Dichloroethene	(75354)	5.	ND	
cis-1,2-Dichloroethene	(156592)	5.	ND	
trans-1,2-Dichloroethene	(156605)	5.	ND	
1,2-Dichloropropane	(78875)	5.	ND	
cis-1,3-Dichloropropene	(100610105)	5.	ND	
trans-1,3-Dichloropropene	(10061026)	5.	ND	
Ethylbenzene	(100414)	5.	310.	
2-Hexanone	(591786)	30.	ND	
Methyl Isobutyl Ketone (MIBK)	(108101)	30.	ND	
Methylene Chloride	(75092)	30.	ND	
Styrene	(100425)	5.	ND	
1,1,2,2-Tetrachloroethane	(79345)	5.	ND	
Tetrachloroethene	(127184)	5.	ND	
Toluene	(108883)	5.	ND	
1,1,1-Trichloroethane	(71556)	5.	ND	
1,1,2-Trichloroethane	(79005)	5.	ND	
Trichloroethene	(79016)	5.	ND	
Trichlorofluoromethane	(75694)	5.	ND	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
FIN2/110104B
DT/et/mcc/mt
FIN2-1101



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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-4
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 11/01/93
Analyzed by: MM
Method [REDACTED]

REPORT OF ANALYTICAL RESULTS

Page 3 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-5-10'	Soil	Chris Valcheff	10/21/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
Trichlorotrifluoroethane	(76131)	5.	ND	
Vinyl Acetate	(108054)	30.	ND	
Vinyl Chloride	(75014)	5.	ND	
Xylenes (total)	(1330207)	5.	120.	
Total Petroleum Hydrocarbons (Gasoline)		1000.	15000.	
Total Petroleum Hydrocarbons (Diesel)		5000.	ND	
D4-DCA (% Surrogate recovery #1)			124.	
D8-TOL (% Surrogate Recovery #2)			81.	
BFB (% Surrogate Recovery #3)			87.	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
FIN2/110104B
DT/et/mcc/mt
FIN2-1101

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager



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NorCal Division (San Jose Laboratory)
 2059 Junction Ave.

San Jose, CA 95131
 (408) 955-9077

CLIENT: Mike Quillin
 Environmental Science & Engineering
 4090 Nelson Avenue Suite J
 Concord, CA 94520

Lab Number : JJ-2159-8
 Project : 6-93-5146, 1st
 : Nationwide, Oakland
 Analyzed : 10/26/93
 Analyzed by: ON
 Method : As Listed

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-6-5.5'	Soil	Chris Valcheff	10/21/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL mg/Kg	RESULT mg/Kg	NOTE
FUEL FINGERPRINT ANALYSIS				1,2,3
Benzene		0.02	ND	
Toluene		0.02	ND	
Ethylbenzene		0.02	ND	
Xylenes		0.02	ND	
1,2-Dichloroethane		0.02	ND	
Ethylene dibromide		0.02	ND	
Total Petroleum Hydrocarbons (Light Petroleum Distillate)		2.	5.	
Total Petroleum Hydrocarbons (Diesel 2)		10.	ND	
Percent Surrogate Recovery			87.	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

- (1) EXTRACTED by EPA 5030 (purge-and-trap)
- (2) ANALYZED by CAL DHS DRAFT TPH, EPA 8260 modified (GC/MS)
- (3) TPH is quantitated against stoddard solvent.

11/02/93
 MSD1/1AU39A
 DT/et/mcc/cn
 MSD1-1101

Respectfully submitted,
 COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
 Organics Manager



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NorCal Division (San Jose Laboratory) • Phoenix, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN
2059 Junction Ave. San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-5
Project : 6-93-5146, 1st
Natick, Oakland

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED				
FNBO-6-10'	Soil	Chris Valcheff	10/21/93	10/22/93			
CONSTITUENT	*PQL	RESULT	UNITS	METHOD	ANALYZED	BY	NOTES
Total Recoverable Petroleum Hydrocarbons	10.	10.	mg/Kg		10/22/93	MT	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93

NG/mcc/mt
418931026B

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Nick Gaone
Inorganics Manager

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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-5
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/28/93
Analyzed by: MM
Method : EPA 8260

REPORT OF ANALYTICAL RESULTS

Page 1 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED DATE RECEIVED	
FNBO-6-10'	Soil	Chris Valcheff		10/21/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE	
VOLATILE ORGANIC COMPOUNDS plus TOTAL PETROLEUM					1,2,3
HYDROCARBONS					
Acetone	(67641)	100.	ND		
Benzene	(71432)	5.	ND		
Bromodichloromethane	(75274)	5.	ND		
Bromoform	(75252)	5.	ND		
Bromomethane	(74839)	5.	ND		
2-Butanone (MEK)	(78933)	50.	ND		
Carbon Disulfide	(75150)	10.	ND		
Carbon Tetrachloride	(56235)	5.	ND		
Chlorobenzene	(108907)	5.	ND		
Chloroethane	(75003)	5.	ND		
2-Chloroethyl Vinyl Ether	(110758)	50.	ND		
Chloroform	(67663)	10.	ND		
Chloromethane	(74873)	5.	ND		
Dibromochloromethane	(124481)	5.	ND		
1,2-Dichlorobenzene	(95501)	5.	ND		

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

- (1) EXTRACTED by EPA 5030 (purge-and-trap)
- (2) Fuel pattern resembled a mixture of gasoline and light petroleum distillate.
- (3) TPH is quantitated against stoddard solvent.

11/02/93
FIN2/102808B
DT/et/mcc/mt
FIN2-1028



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 Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN
 NorCal Division (San Jose Laboratory) San Jose, CA 95131
 2059 Junction Ave. (408) 955-9077

CLIENT: Mike Quillin
 Environmental Science & Engineering
 4090 Nelson Avenue Suite J
 Concord, CA 94520

Lab Number : JJ-2159-5
 Project : 6-93-5146, 1st
 Nationwide, Oakland
 Analyzed : 10/28/93
 Analyzed by: MM
 Method : ██████████

REPORT OF ANALYTICAL RESULTS

Page 2 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED		
FNBO-6-10'	Soil	Chris Valcheff	10/21/93	10/22/93	
CONSTITUENT		(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
1,3-Dichlorobenzene		(541731)	5.	ND	
1,4-Dichlorobenzene		(106467)	5.	ND	
1,1-Dichloroethane		(75343)	5.	ND	
1,2-Dichloroethane		(107062)	5.	ND	
1,1-Dichloroethene		(75354)	5.	ND	
cis-1,2-Dichloroethene		(156592)	5.	ND	
trans-1,2-Dichloroethene		(156605)	5.	ND	
1,2-Dichloropropane		(78875)	5.	ND	
cis-1,3-Dichloropropene		(100610105)	5.	ND	
trans-1,3-Dichloropropene		(10061026)	5.	ND	
Ethylbenzene		(100414)	5.	34.	
2-Hexanone		(591786)	30.	ND	
Methyl Isobutyl Ketone (MIBK)		(108101)	30.	ND	
Methylene Chloride		(75092)	30.	ND	
Styrene		(100425)	5.	ND	
1,1,1,2-Tetrachloroethane		(79345)	5.	ND	
Tetrachloroethene		(127184)	5.	ND	
Toluene		(108883)	5.	ND	
1,1,1-Trichloroethane		(71556)	5.	ND	
1,1,2-Trichloroethane		(79005)	5.	ND	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
 FIN2/102808B
 DT/et/mcc/mt
 FIN2-1028



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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-5
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/28/93
Analyzed by: MM
Method

REPORT OF ANALYTICAL RESULTS

Page 3 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED		
FNBO-6-10'	Soil	Chris Valcheff	10/21/93	10/22/93	
CONSTITUENT		(CAS RN)	*PQL µg/Kg	RESULT µg/Kg	NOTE
Trichloroethene		(79016)	5.	ND	
Trichlorofluoromethane		(75694)	5.	ND	
Trichlorotrifluoroethane		(76131)	5.	ND	
Vinyl Acetate		(108054)	30.	ND	
Vinyl Chloride		(75014)	5.	ND	
Xylenes (total)		(1330207)	5.	41.	
Total Petroleum Hydrocarbons (Gasoline and Light Petroleum Distillate)			1000.	3600.	
Total Petroleum Hydrocarbons (Diesel)			5000.	ND	
D4-DCA (% Surrogate recovery #1)				68.	
D8-TOL (% Surrogate Recovery #2)				72.	
BFB (% Surrogate Recovery #3)				68.	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
FIN2/102808B
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Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager



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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-9
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/26/93
Analyzed by: ON
Method : As Listed

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-7-6'	Soil	Chris Valcheff	10/21/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL mg/Kg	RESULT mg/Kg	NOTE
FUEL FINGERPRINT ANALYSIS				
Benzene		0.4	ND	1,2,3
Toluene		0.4	ND	
Ethylbenzene		0.4	ND	
Xylenes		0.4	ND	
1,2-Dichloroethane		0.4	ND	
Ethylene dibromide		0.4	ND	
Total Petroleum Hydrocarbons (Gasoline and Light Petroleum Distillate)		80.	350.	
Total Petroleum Hydrocarbons (Diesel 2)		400.	ND	
Percent Surrogate Recovery			102.	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

- (1) EXTRACTED by EPA 5030 (purge-and-trap)
- (2) ANALYZED by CAL DHS DRAFT TPH, ~~XXXXXXXXXX~~ed (GC/MS)
- (3) Fuel pattern resembled a mixture of gasoline and light petroleum distillate. TPH is quantitated against stoddard solvent.

11/02/93
MSD1/1AT75A
DT/et/mcc/on
MSD1-1026

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

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2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-10
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/26/93
Analyzed by: ON
Method : As Listed

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-7-11'	Soil	Chris Valcheff	10/21/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL mg/Kg	RESULT mg/Kg	NOTE
FUEL FINGERPRINT ANALYSIS				
Benzene		0.5	1.0	1,2,3
Toluene		0.5	1.5	
Ethylbenzene		0.5	5.0	
Xylenes		0.5	13.	
1,2-Dichloroethane		0.5	ND	
Ethylene dibromide		0.5	ND	
Total Petroleum Hydrocarbons (Gasoline and Light Petroleum Distillate)		100.	400.	
Total Petroleum Hydrocarbons (Diesel 2)		500.	ND	
Percent Surrogate Recovery			87.	

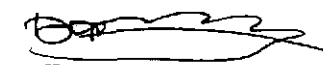
San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

- (1) EXTRACTED by EPA 5030 (purge-and-trap)
- (2) ANALYZED by CAL DHS DRAFT TPH, [REDACTED] (GC/MS)
- (3) Fuel pattern resembled a mixture of gasoline and light petroleum distillate. TPH is quantitated against stoddard solvent.

11/02/93
MSD1/1AT74A
DT/et/mcc/on
MSD1-1026

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.



Dudley Torres
Organics Manager



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2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-11
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 10/26/93
Analyzed by: ON
Method : As Listed

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED	
FNBO-8-11'	Soil	Chris Valcheff	10/21/93	10/22/93
CONSTITUENT	(CAS RN)	*PQL mg/Kg	RESULT mg/Kg	NOTE
FUEL FINGERPRINT ANALYSIS				
Benzene		0.005	ND	1,2
Toluene		0.005	ND	
Ethylbenzene		0.005	ND	
Xylenes		0.005	ND	
1,2-Dichloroethane		0.005	ND	
Ethylene dibromide		0.005	ND	
Total Petroleum Hydrocarbons (Gasoline)		1.	ND	
Total Petroleum Hydrocarbons (Diesel 2)		5.	ND	
Percent Surrogate Recovery			92.	

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

(1) EXTRACTED by EPA 5030 (purge-and-trap)

(2) ANALYZED by CAL DHS DRAFT TPH, ~~XXXXXXXXXXXX~~ (GC/MS)

11/02/93
MSD1/1AT72A
DT/et/on
MSD1-1026

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager



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QC Batch ID: MSD1-1026

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 10/26/93
Analyzed by: CN
Method : As Listed

METHOD BLANK
REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED		
METHOD BLANK	Solid				
CONSTITUENT	(CAS RN)	*PQL mg/Kg	RESULT mg/Kg	NOTE	
FUEL FINGERPRINT ANALYSIS					
Benzene		0.005	ND	1,2	
Toluene		0.005	ND		
Ethylbenzene		0.005	ND		
Xylenes		0.005	ND		
1,2-Dichloroethane		0.005	ND		
Ethylene dibromide		0.005	ND		
Total Petroleum Hydrocarbons (Gasoline)		1.	ND		
Total Petroleum Hydrocarbons (Diesel 2)		5.	ND		
Percent Surrogate Recovery			89.		

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

(1) EXTRACTED by EPA 5030 (purge-and-trap)

(2) ANALYZED by CAL DHS DRAFT TPH [REDACTED] (GC/MS)

11/02/93
MSD1/1AT55A
DT/et/cn
JJ2179-7

Respectfully submitted,
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Dudley Torres
Organics Manager



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(408) 955-9077

QC Batch ID: MSD1-1026

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 10/26/93
Analyzed by: ON
Method : As Listed

QC MATRIX SPIKE
REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED		
MATRIX SPIKE	Solid				
CONSTITUENT		ORIGINAL RESULT	SPIKE AMOUNT	RESULT mg/Kg	%REC NOTE
FUEL FINGERPRINT ANALYSIS					
Benzene		ND	0.10	0.097	97. 1,2
Toluene		ND	0.10	0.099	99.
Ethylbenzene		ND	0.10	0.12	120.
Xylenes		ND	0.10	0.11	110.
1,2-Dichloroethane		ND	0.10	0.10	100.
Ethylene dibromide		ND	0.10	0.097	97.
Total Petroleum Hydrocarbons (Diesel 2)		ND	10.	10.	100.

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND', were not detected at or above the listed PQL (Practical Quantitation Limit)

(1) EXTRACTED by EPA 5030 (purge-and-trap)

(2) ANALYZED by CAL DHS DRAFT TPH, [REDACTED]

11/02/93
MSD1/LAT59A/56A
DI/et/mcc/on
JJ2179-7

Respectfully submitted,
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Dudley Torres
Organics Manager

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QC Batch ID: MSD1-1026

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 10/26/93
 Analyzed by: ON
 Method : As Listed

QC MATRIX SPIKE
 REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED DATE RECEIVED		
MATRIX SPIKE DUPLICATE	Solid					
CONSTITUENT	ORIGINAL RESULT	SPIKE AMOUNT	RESULT mg/Kg	%REC	%DIFF	NOTE
FUEL FINGERPRINT ANALYSIS						
Benzene	ND	0.10	0.10	100.	3.	1,2
Toluene	ND	0.10	0.10	100.	1.	
Ethylbenzene	ND	0.10	0.12	120.	0.	
Xylenes	ND	0.10	0.12	120.	8.7	
1,2-Dichloroethane	ND	0.10	0.10	100.	0.	
Ethylene dibromide	ND	0.10	0.10	100.	3.	
Total Petroleum Hydrocarbons (Diesel 2)	ND	10.	9.6	96.	4.1	

San Jose Lab Certifications: CAELAP #1204

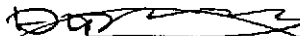
*RESULTS listed as 'ND', were not detected at or above the listed PQL (Practical Quantitation Limit)

(1) EXTRACTED by EPA 5030 (purge-and-trap)

(2) ANALYZED by CAL DHS DRAFT TPH, [REDACTED] (S)

11/02/93
 MSD1/1AT60A/57A
 DT/et/mcc/on
 JJ2179-7

Respectfully submitted,
 COAST-TO-COAST ANALYTICAL SERVICES, INC.




Dudley Torres
 Organics Manager

CHAIN OF CUSTODY RECORD

PROJECT NAME MTREX/VIDE OAKLAND
 ADDRESS 3900 PISGAMONT AVE
OAKLAND CA
 PROJECT NO. G-23-5146
 SAMPLED BY CHRIS VALCHER
 LAB NAME _____

ANALYSES TO BE PERFORMED										MATRIX	NUMBER OF CONTAINERS	REMARKS (CONTAINER, SIZE, ETC.)
FULL FINGERPRINT	TRPH 418.1	VOL								MATRIX		
X										SOIL	1	6" BRASS Ring -7
X	X	X									1	-4
X											1	-8
X	X	X									1	-5
X											1	6" BRASS RING
X											1	6" BRASS RING -9
X											1	-10
X											1	(HOLD) -16
X											1	-11
X										WATER	4	3 VOA - ALTER CW



Environmental Science & Engineering, Inc.
 4090 Nelson Avenue Suite J Concord, CA 94520
 Phone (510) 685-4053 Fax (510) 685-5323

RELINQUISHED BY: (signature)	RECEIVED BY: (signature)	date	time	S	TOTAL NUMBER OF CONTAINERS
1. <i>Chris Valcher</i>	<i>M. D. Smith</i>	10/21/93	0630		
2. <i>M. D. Smith</i>	<i>Brad Stoen</i>	10/21/93	0945	REPORT RESULTS TO: MIKE QUILLIN	SPECIAL SHIPMENT REQUIREMENTS COLD TRANSPORT CCAS COURIER
3. <i>Brad Stoen</i>	<i>Allison A. Abraham</i>	10/22/93	1130		
4.					
5.					

INSTRUCTIONS TO LABORATORY (handling, analyses, storage, etc.):
NORMAL (5-DAY) TA
↳ 7 days

CHAIN OF CUSTODY SEALS	
REC'D GOOD COND'TN/COLD	Y
CONFORMS TO RECORD	Y

APPENDIX D

**LABORATORY ANALYTICAL REPORTS:
GROUND WATER SAMPLE**

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 2059 Junction Ave.

San Jose, CA 95131
 (408) 955-9077

CLIENT: Mike Quillin
 Environmental Science & Engineering
 4090 Nelson Avenue Suite J
 Concord, CA 94520

Lab Number : JJ-2159-12
 Project : 6-93-5146, 1st
 Nationwide, Oakland

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED DATE RECEIVED	
FNEO-6	Aqueous	Chris Valcheff		10/21/93	10/22/93
CONSTITUENT	*PQL	RESULT	UNITS	METHOD	ANALYZED BY NOTES
Total Recoverable Petroleum Hydrocarbons	0.5	2.8	µg/L	EPA 418.1	10/25/93 MT

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93

NG/mcc/mt
 418931025A

Respectfully submitted,
 COAST-TO-COAST ANALYTICAL SERVICES, INC.

Nick F. Gaone

Nick Gaone
 Inorganics Manager

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2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-12
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 11/01/93
Analyzed by: AZ
Method : EPA 8260

REPORT OF ANALYTICAL RESULTS

Page 1 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED		
FNBO-6	Aqueous	Chris Valcheff	10/21/93	10/22/93	
CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE	
VOLATILE ORGANIC COMPOUNDS plus TOTAL PETROLEUM					1
HYDROCARBONS					
Acetone	(67641)	20.	30.		
Benzene	(71432)	0.5	7.7		
Bromodichloromethane	(75274)	0.5	ND		
Bromoform	(75252)	0.5	ND		
Bromomethane	(74839)	0.5	ND		
2-Butanone (MEK)	(78933)	10.	ND		
Carbon Disulfide	(75150)	2.	33.		
Carbon Tetrachloride	(56235)	0.5	ND		
Chlorobenzene	(108907)	0.5	ND		
Chloroethane	(75003)	0.5	ND		
2-Chloroethyl Vinyl Ether	(110758)	5.	ND		
Chloroform	(67663)	0.5	ND		
Chloromethane	(74873)	0.5	ND		
Dibromochloromethane	(124481)	0.5	ND		
1,2-Dichlorobenzene	(95501)	0.5	ND		
1,3-Dichlorobenzene	(541731)	0.5	ND		
1,4-Dichlorobenzene	(106467)	0.5	ND		

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)

11/02/93
FIN1/110106A
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FIN1-1101

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(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-12
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 11/01/93
Analyzed by: AZ
Method : EPA 8260

REPORT OF ANALYTICAL RESULTS

Page 2 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED		
FNBO-6	Aqueous	Chris Valcheff	10/21/93	10/22/93	
CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE	
1,1-Dichloroethane	(75343)	0.5	ND		
1,2-Dichloroethane	(107062)	0.5	ND		
1,1-Dichloroethene	(75354)	0.5	ND		
cis-1,2-Dichloroethene	(156592)	0.5	ND		
trans-1,2-Dichloroethene	(156605)	0.5	ND		
1,2-Dichloropropane	(78875)	0.5	ND		
cis-1,3-Dichloropropene	(100610105)	0.5	ND		
trans-1,3-Dichloropropene	(10061026)	0.5	ND		
Ethylbenzene	(100414)	0.5	260.		
2-Hexanone	(591786)	5.	ND		
Methyl Isobutyl Ketone (MIBK)	(108101)	5.	ND		
Methylene Chloride	(75092)	5.	ND		
Styrene	(100425)	0.5	ND		
1,1,2,2-Tetrachloroethane	(79345)	0.5	ND		
Tetrachloroethene	(127184)	0.5	ND		
Toluene	(108883)	0.5	21.		
1,1,1-Trichloroethane	(71556)	0.5	ND		
1,1,2-Trichloroethane	(79005)	0.5	ND		
Trichloroethene	(79016)	0.5	ND		
Trichlorofluoromethane	(75694)	0.5	ND		

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
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FINL-1101



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NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Mike Quillin
Environmental Science & Engineering
4090 Nelson Avenue Suite J
Concord, CA 94520

Lab Number : JJ-2159-12
Project : 6-93-5146, 1st
Nationwide, Oakland
Analyzed : 11/01/93
Analyzed by: AZ
Method : EPA 8260

REPORT OF ANALYTICAL RESULTS

Page 3 of 3

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE RECEIVED		
FNBO-6	Aqueous	Chris Valcheff	10/21/93	10/22/93	
CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE	
Trichlorotrifluoroethane	(76131)	5.	ND		
Vinyl Acetate	(108054)	5.	ND		
Vinyl Chloride	(75014)	0.5	ND		
Xylenes (total)	(1330207)	0.5	260.		
Total Petroleum Hydrocarbons (Gasoline)		50.	7800.		
D4-DCA (% Surrogate recovery #1)			195.		
D8-TOL (% Surrogate Recovery #2)			112.		
BFB (% Surrogate Recovery #3)			103.		

San Jose Lab Certifications: CAELAP #1204

*RESULTS listed as 'ND', were not detected at or above the listed PQL (Practical Quantitation Limit)

11/02/93
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DT/et/mcc
FIN1-1101

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

