8/17/94

REPORT OF SOIL AND GROUND WATER INVESTIGATION

Windsor Square Auto Repair UST Site
1900 Lewelling Boulevard
San Leandro, California

CWEC: 20507-001-02

Prepared for:

Mr. Johnny Lin
P.O. Box 4154
San Leandro, CA 94579

Prepared by:

Century West Engineering Corporation
7950 Dublin Blvd., Suite 203
Dublin, California 94568

August 17, 1994

centurywest
ENGINEERING CORPORATION

August 17, 1994

Alameda County UST Local
Oversight Program
80 Swan Way, Suite 200
Oakland, CA 94621

Attention: Mr. Scott Seery

Subject: Report of Soil and Ground Water Investigation
Windsor Square Auto Repair UST Site
1900 Lewelling Blvd.
San Leandro, California
CWEC 20507-001-02
Alameda County Site ID 3583

Ladies and Gentlemen:

This report, submitted on behalf of Mr. Johnny Lin, describes and documents the recent soil and ground water investigation conducted at the subject site in San Leandro, California. This investigation, which included the drilling and sampling of six soil borings, and the conversion of five of the borings to ground water monitoring wells, was conducted in accordance with the March 30, 1994 workplan approved by Mr. Scott Seery of your office.

Results of this investigation indicate that past excavation and over-excavation adjacent to the former gasoline and waste oil underground storage tanks (USTs) has adequately remediated hydrocarbon-laden soils beneath the project site. In addition, laboratory results indicate that ground water quality has not been significantly impacted downgradient from either the former gasoline USTs or the former waste oil UST. Based on these results, Century West Engineering recommends quarterly ground water monitoring of all five monitoring wells at the site for one year, after which closure options for the site can be assessed.

7950 Dublin Blvd., Suite 203 Dublin, California 94568 Phone: (510) 551-7774 FAX: (510) 551-7776

We appreciate the opportunity to present this report for your review. Please contact us if you have questions or require additional information.

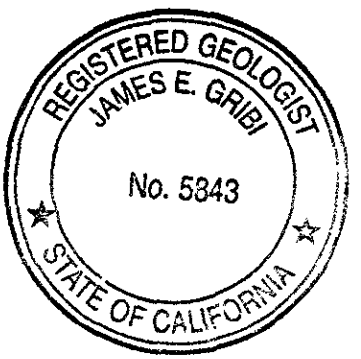
Very truly yours,

Robert Bogar
Geologist

James E. Gribi
Registered Geologist
California No. 5843

RB/JEG/:cc
Enclosures

c Johnny Lin



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1.0 INTRODUCTION

Century West Engineering Corporation was contracted by Mr. Johnny Lin to conduct a soil and ground water investigation at the project site located at 1900 Lewelling Boulevard, in San Leandro, California (see Figure 1 and Figure 2). This report describes the investigative methods and summarizes the results of the investigation.

1.1 Site Background

The project site was formerly occupied by a gasoline service station for many years prior to Mr. Johnny Lin's purchase of the property in 1985. According to Mr. Lin, as a condition of the sale and during escrow, four gasoline underground storage tanks (USTs) were removed from a common excavation in December 1985. Some soil samples taken from the excavation cavity contained elevated levels of gasoline constituents. Surface features at the site indicate that the UST cavity was overexcavated, backfilled, and resurfaced with asphalt. It was Mr. Lin's understanding that following these activities, the San Leandro Fire Department granted closure for this case.

Before purchasing the subject property, Mr. Lin was not informed about the existence of a 200-gallon waste oil UST behind the project site building. After discovering this UST, Mr. Lin contracted VCI of California to remove the UST. This waste oil UST was removed by VCI in October 1990. One soil sample taken below the tank contained significant levels of gasoline, motor oil, chlorinated solvents, and semi-volatile organic compounds.

On January 24, 1991, the waste oil UST cavity was re-excavated and overexcavated by VCI of California. Soil samples collected from the excavation cavity revealed hydrocarbon concentrations which were below regulatory action levels for soil. After completing the overexcavation activities, the excavation cavity was backfilled with clean imported fill material. The excavated soils, which showed high levels of volatile and semi-volatile hydrocarbons, was mixed with nutrients and placed in a bioremediation pad at the project site. Periodic sampling of the bioremediating soils documented a 93% reduction in semi-volatile constituents and 100% reduction in volatile constituents over a three-year period. Bioremediated soils, which are currently acceptable for Class III landfill disposal, are still present at the project site.

The overexcavation and bioremediation activities summarized above are described and documented in *Report of Waste Oil UST Soil Excavation and Remediation* (Century West Engineering, March 30, 1994). This report also contained a workplan proposing the installation of five ground water monitoring wells at the site. The implementation of this workplan, with subsequent conditions imposed by Alameda County UST Local Oversight Program, is described and documented herein.

1.2 Scope of Work

In accordance with the approved workplan, Century West Engineering conducted the following tasks:

- **Task 1 Drilled and sampled six soil borings.**
- **Task 2 Installed ground water monitoring wells in five of the six soil borings.**
- **Task 3 Developed, sampled, and surveyed the five ground water monitoring wells.**
- **Task 4 Conducted laboratory analysis of soil and water samples.**
- **Task 5 Prepared summary report of findings.**

These tasks were conducted in accordance with guidelines contained in *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites*, (August 10, 1990) and *LUFT Field Manual*, (October 18, 1989).

1.3 Limitations

The services provided under this contract as described in this report include professional opinions and judgments based on data collected. These services have been provided according to generally accepted environmental protocol. The opinions and conclusions contained in this report are typically based on information obtained from:

1. Observations and measurements made by our field staff.
2. Contacts and discussions with regulatory agencies and others.
3. Review of available hydrogeologic data.

1.4 Regulatory Approval

Alameda County UST Local Oversight Program granted written approval of the workplan on April 11, 1994, with the condition that at least 24 hours elapse between well development and sampling, and that on additional boring be advanced in the area of the former piping/dispensers.

A monitoring well installation permit (Drilling Permit no. 94391) was obtained from Alameda County Zone 7 Water Agency (see Appendix A).

On Saturday, June 25, 1994, Subtronic Corporation conducted an underground survey of the project site area and identified no impeding underground utilities in the proposed well and boring locations. Underground Services Alert (USA) was notified on June 23, 1994.

Prior to beginning field activities, a Site Safety Plan was issued to the drilling crew and a tailgate safety meeting was conducted.

2.0 DESCRIPTION OF FIELD ACTIVITIES

Soil boring and well installation activities were conducted by Exploration Geoservices, Inc. on Monday, June 27, 1994.

2.1 Location of Well and Soil Borings

In order to meet the project goals, the five wells were sited as follows (see Figure 2 for well locations): (1) MW-1 was located on the expected upgradient (easterly) side of the site; (2) MW-2 was sited approximately five feet in the expected downgradient (southwest) direction from the former waste oil UST; (3) MW-3 was located within the former gasoline UST excavation; (4) MW-4 and MW-5 were sited in the expected downgradient direction from the former gasoline USTs. Shallow boring IB-1 was placed slightly downgradient from the former fuel island and inside the fuel line trench.

2.2 Drilling and Sampling of Soil Borings

All soil boring and well installation activities were conducted using hollow-stem auger equipment. The five monitoring well borings (MW-1 through MW-5) were drilled to total depths of approximately 20 feet below grade, and the investigative boring (IB-1) was drilled to a total depth of approximately five feet below grade. All borings were logged and field screened by a qualified Century West Engineering geologist using sight and smell. Soil cuttings were placed in 55-gallon drums pending laboratory results. Boring logs are contained in Appendix B.

Representative soil samples from each well boring were taken at approximate depths of six and 11 feet below grade (ground water was encountered in the borings at approximately seven feet below grade). The shallow investigative boring was sampled at approximately five feet below grade. Undisturbed soils were sampled in advance of the auger as follows: (1) A two-inch inside diameter California-style split spoon sampler was driven into undisturbed soil ahead of the drill bit; (2) The sampler was raised quickly to the surface and the brass liners exposed; (3) The brass liner containing the most undisturbed soil was quickly sealed with aluminum foil and plastic end caps, labeled, and wrapped tightly with tape; and (4) The sealed soil sample was immediately placed in a cooler with crushed ice for transport to the analytical laboratory under formal chain-of-custody.

All sampling equipment was thoroughly cleaned and decontaminated between each sample collection by triple rinsing first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water. All downhole drilling equipment, including auger and drill bit, was steam cleaned before and after drilling each boring. Steam cleaning rinseate was contained onsite in sealed drums pending laboratory results.

2.3 Installation of Monitoring Wells

The wells were constructed using two-inch diameter Schedule 40 threaded PVC casing according to the following specifications: (1) 0.020-inch slotted well casing was placed from approximately 19 feet to 4 feet in depth (screen depths were adjusted in the field in order to place screen approximately five feet

above and ten feet below the water table); (2) Filter sand was placed around the casing to a depth of approximately 3 feet below grade; (3) A bentonite seal was placed around the casing from 3 feet to 2 feet in depth; and (4) A grout seal consisting of a cement/sand slurry (bentonite less than 5 percent) was placed in the remaining annulus. The top of each well was enclosed in a traffic rated locking box set in concrete slightly above grade (see Figure 3 for well construction diagram).

2.4 Well Development and Sampling

The five ground water monitoring wells were developed on July 1, 1994 using a two-inch submersible 12-volt DC electric purge pump. Well development consisted of continuously purging approximately four well volumes of water from each well. Before developing each well, the purge pump was thoroughly decontaminated by triple rinsing as described previously in this report.

Purging and sampling of the five wells was conducted on July 5, 1994 using two-inch disposable PVC bailers. Prior to sampling, a single bail of water was taken to check for free product in the well. Well purging consisted of bailing approximately three well volumes from each well, while periodically monitoring for hydrocarbon presence, pH, specific conductance, temperature and visible clarity. After these parameters had stabilized, ground water was sampled directly from the bailer in the following manner: (1) Two one-liter amber jars (when necessary) and four 40-ml glass VOC vials were completely filled with a minimum of agitation; (2) After making sure that no air bubbles were present, each container was tightly sealed with a teflon-lined septum; and (3) Each container was labeled and placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. All purged ground water was stored onsite in sealed drums pending analytical results of the ground water samples. All sampling equipment was thoroughly cleaned and decontaminated between each sample collection by triple rinsing as described above.

2.5 Determination of Ground Water Flow Gradient

After unlocking the well caps and allowing ground water to stabilize in each of the wells, water depths were measured to the nearest 0.01 feet using a Solonist electronic probe. Mean sea level elevations of the top of the well casings were surveyed by Raymond F. Greenwood, a licensed California surveyor. The surveyor's report is contained in Appendix C. Well elevations and calculated ground water elevations are shown in Table 1. Ground water flow gradient is shown graphically on Figure 2.

Table 1
WELL ELEVATION DATA
Windsor Square Auto Repair UST Site

Well Number	*Elevation of Top of Casing*[1]	*Depth to Water*[2] *(ft)*	*Water Table Elevation*[1]
MW-1	14.20	6.95	7.25
MW-2	13.70	6.44	7.26
MW-3	12.41	5.11	7.30
MW-4	12.56	5.57	6.99
MW-5	11.76	5.08	6.68

1 - Elevation in feet above mean sea level.
2 - Depth to ground water from top of casing.

2.6 Laboratory Analysis of Soil and Ground Water Samples

A total of ten soil samples and five ground water samples were analyzed by Superior Precision Analytical, Inc., as follows:

- One soil and one ground water sample from the upgradient well (MW-1) were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G), Volatile Organic Compounds (VOCs), and Semi-Volatile Organic Compounds (SVOCs). The soil sample from MW-1 was also analyzed for Total Petroleum Hydrocarbons as Diesel and Motor Oil (TPH-D/MO).

- Two soil samples and one water sample from the waste oil UST well (MW-2) were analyzed for TPH-G, VOCs, and SVOCs. In addition, one of the soil samples and the one water sample from MW-2 were analyzed for TPH-D/MO.

- Two soil samples and one water sample each from MW-3, MW-4, and MW-5 for were analyzed for TPH-G and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX). In addition, one of the soil samples and the one water sample from MW-5 were analyzed for TPH-D/MO, and one soil sample from MW-5 was analyzed for Total Lead (PB).

- One soil sample from the dispenser soil boring (IB-1) was analyzed for TPH-G, TPH-D/MO, BTEX, and PB.

3.0 RESULTS OF INVESTIGATION

3.1 General Subsurface Conditions

Native soils encountered in borings during drilling generally consisted of grey fine sands and silts, with some clays and clayey silts. Backfill material encountered in boring MW-3 appeared to extend to approximately 12 feet below ground surface and consisted of medium grained sand with no hydrocarbon odors or discoloration.

Moderated hydrocarbon odors were noted in soils from MW-2 and MW-5 below five feet in depth, and moderate to strong hydrocarbon odors were noted in IB-1 at five feet in depth. Slight hydrocarbon odors were noted in native soils below 12 feet in depth in MW-3, and slight hydrocarbon odors were noted from four to seven feet in depth in MW-4 soils.

Ground water was encountered in the five monitoring wells at approximately seven feet below grade. Ground water flow beneath the project site is to the southwest, with apparent mounding of the ground water table within the backfilled excavation pit (possibly due to greater ground water recharge in the UST excavation backfill sands). No hydrocarbon odors or sheens were noted in any water samples from the five wells.

3.2 Results of Laboratory Analyses

Soil and ground water analytical results are summarized in Table 2. Laboratory data reports and chain-of-custody records for all analyses are contained in Appendix D.

Table 2
SUMMARY OF SOIL AND GROUND WATER ANALYTICAL RESULTS
Windsor Square Auto Repair UST Site

Sample ID	Sample Depth	Concentration (ppm)									
		TPH-G	TPH-D	TPH-MO	B	T	E	X	VOCS[1]	SVOCS[2]	PB
Soil Samples											
MW-1.1	6.0 ft	ND(1)[3]	ND(10)	ND(10)	ND(0.005)	ND(0.015)	ND(0.015)	ND(0.015)	ND(0.015)	0.340[4]	--[5]
MW-2.1	6.0 ft	ND(1)	ND(10)	ND(10)	ND(0.005)	ND(0.015)	ND(0.015)	ND(0.015)	ND(0.015)	ND(0.300)	--
MW-2.2	11.0 ft	ND(1)	--	--	ND(0.005)	ND(0.015)	ND(0.015)	ND(0.015)	ND(0.015)	ND(0.300)	--
MW-3.1	7.0 ft	ND(1)	--	--	0.008	ND(0.005)	ND(0.005)	ND(0.005)	--	--	--
MW-3.2	13.0 ft	3.0	--	--	0.72	0.029	0.048	0.61	--	--	--
MW-4.1	6.0 ft	ND(1)	--	--	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	--	--	--
MW-4.2	11.0 ft	ND(1)	--	--	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	--	--	--
MW-5.1	6.0 ft	ND(1)	ND(10)	ND(10)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	--	--	ND(5)
MW-5.2	11.0 ft	ND(1)	--	--	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	--	--	--
IB-1.1	6.0 ft	6.0	ND(10)	ND(10)	1.9	0.021	0.34	0.087	--	--	5
Ground Water Samples											
MW-1	---	ND(0.05)	--	--	ND(.001)	ND(.003)	ND(.003)	ND(.003)	ND(.003)	ND(.010)	--
MW-2	---	ND(0.05)	ND(0.05)	ND(0.5)	ND(.001)	ND(.003)	ND(.003)	ND(.003)	0.600[6]	ND(.010)	--
MW-3	---	5.0	--	--	0.015	0.0079	0.08	0.23	--	--	--
MW-4	---	ND(0.05)	--	--	0.0009	ND(.0005)	ND(.0005)	ND(.0005)	--	--	--
MW-5	---	ND(0.05)	ND(0.05)	ND(0.5)	0.0011	ND(.0005)	ND(.0005)	ND(.0005)	--	--	--

Notes:

1 - Volatile organic compounds. Includes analysis for approximately 40 individual compounds. The detection limits vary for some compounds; however, the detection limit listed below is the most prevalent for this method.
2 - Semi-volatile organic compounds. Includes analysis for approximately 70 individual compounds. The detection limits are the same for all compounds.
3 - Not detected above the value expressed in the parentheses.
4 - 0.340 ppm as di-n-butylphthlate (detection level = 0.300 ppm); no other semi-volatile organic compounds were detected in the sample.
5 - Not analyzed.
6 - 0.600 ppm as methyl-t-butylether; no other volatile organic compounds were detected in the sample.
MTBE

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4.0 CONCLUSIONS

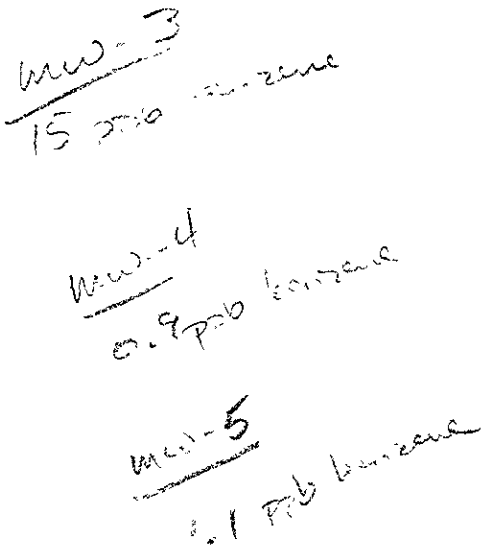
Although hydrocarbon odors and staining were noted in all borings except MW-1, soil analytical results indicate that no significant levels of hydrocarbons are present in soils beneath the site. All soil samples contained nondetectable levels of TPH except MW-3.2 and IB-1.1, which contained 3.0 ppm and 6.0 ppm of TPH-G, respectively. These levels are well below the 100-ppm regulatory cleanup level. Thus, it appears that while residual hydrocarbon odors and staining may be present in subsurface soils, all significant hydrocarbon constituents have either been remediated by excavation or by natural attenuation.

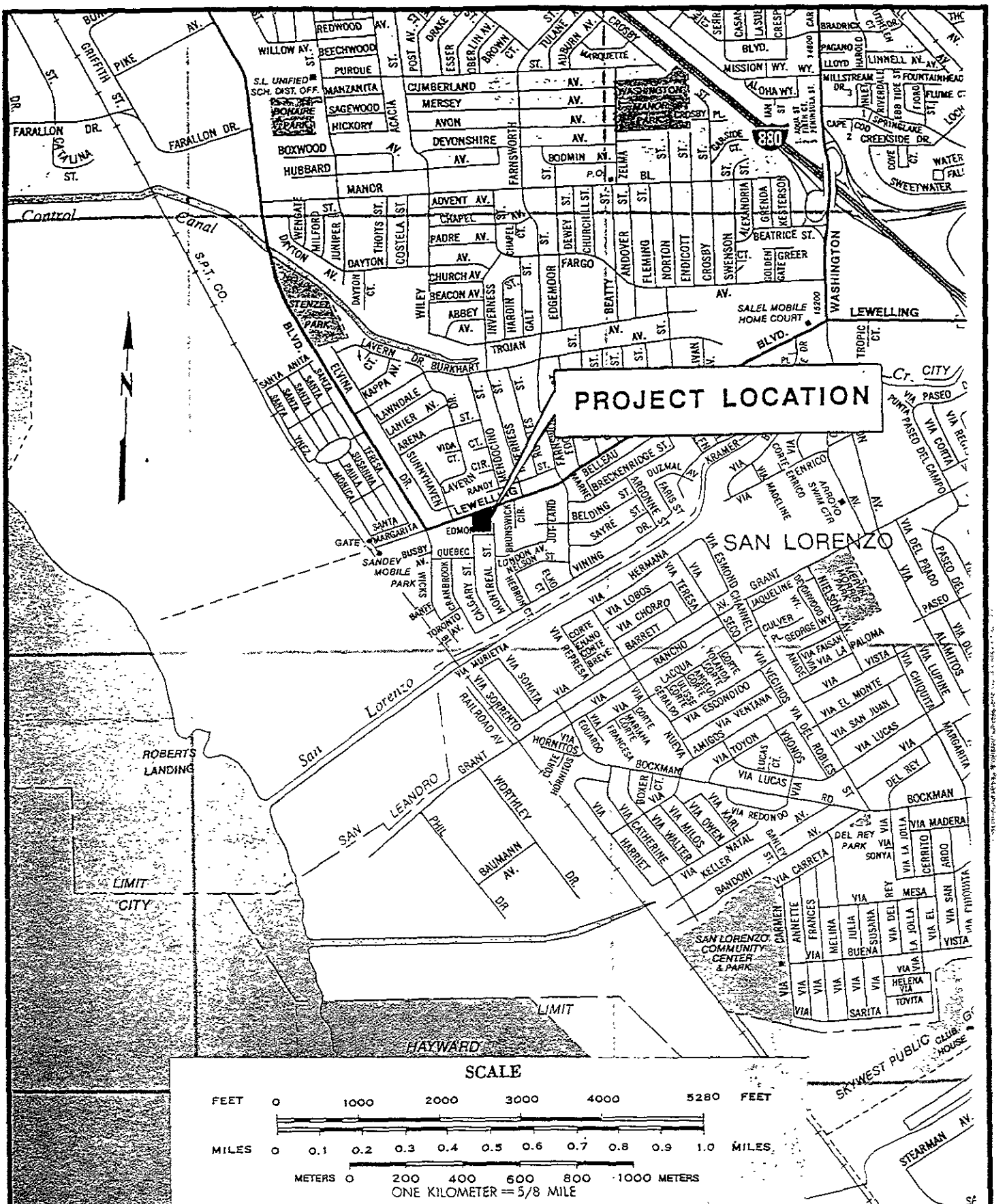
The only significant hydrocarbons encountered in ground water samples were: (1) 5.0 ppm of TPH-G in MW-3; and (2) 0.600 of methyl-t-butylether in MW-2. However, the low or nondetectable levels of hydrocarbons in MW-5, which is located in native soils downgradient from MW-3, indicate that the dissolved gasoline plume is very small in lateral extent, and does not extent significantly beyond the backfilled gasoline UST excavation.

The low level of methyl-t-butylether in MW-2 ground water is unusual because: (1) This compound has not ever been detected in any soil samples associated with the waste oil UST; and (2) This compound is not normally associated with waste oils or solvents (it is generally used as a gasoline additive or as a laboratory solvent).

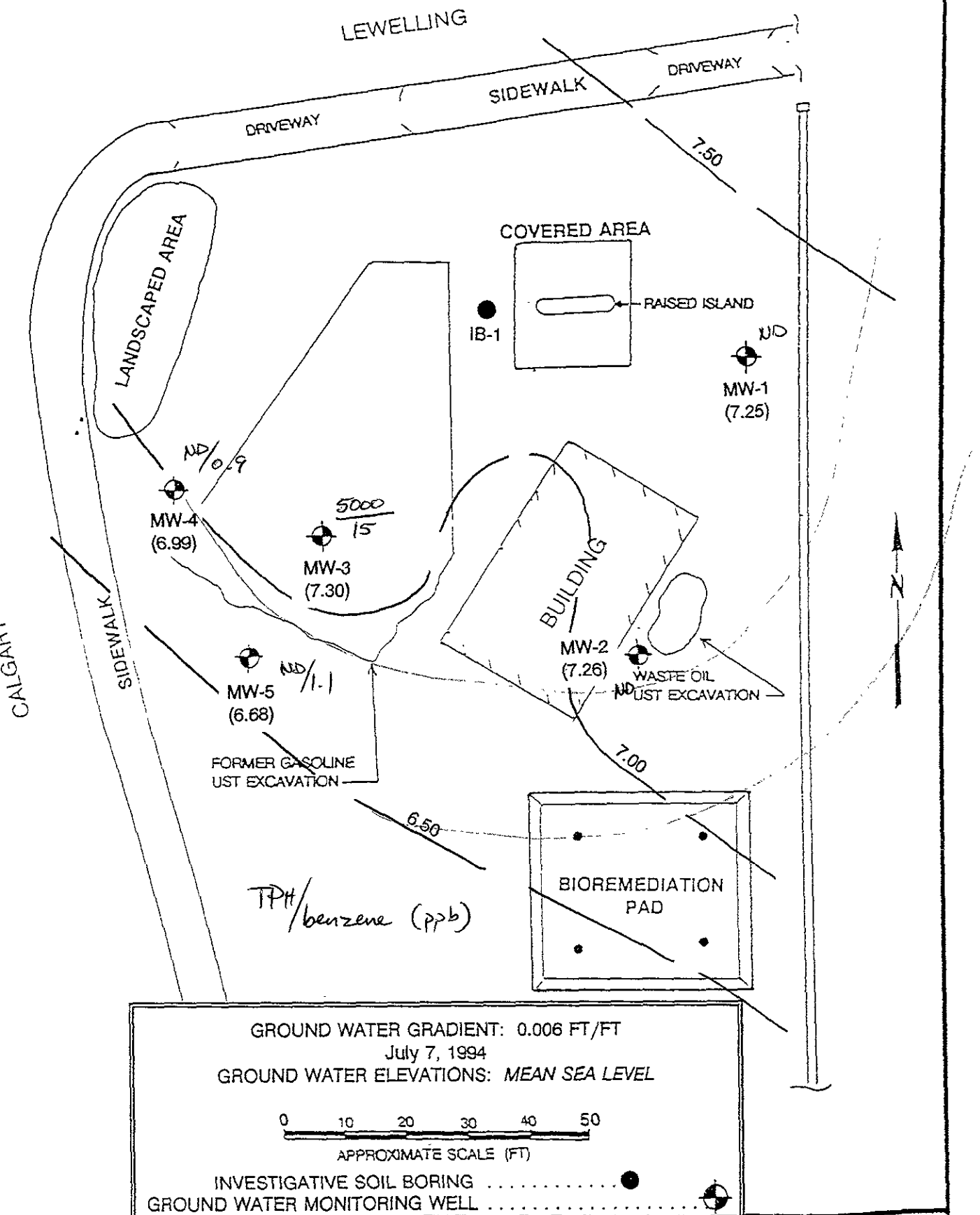
5.0 RECOMMENDATIONS

Based on the conclusions outlined above, Century West Engineering recommends quarterly ground water monitoring of all five monitoring wells at the site for one year, after which closure options for the site can be assessed.

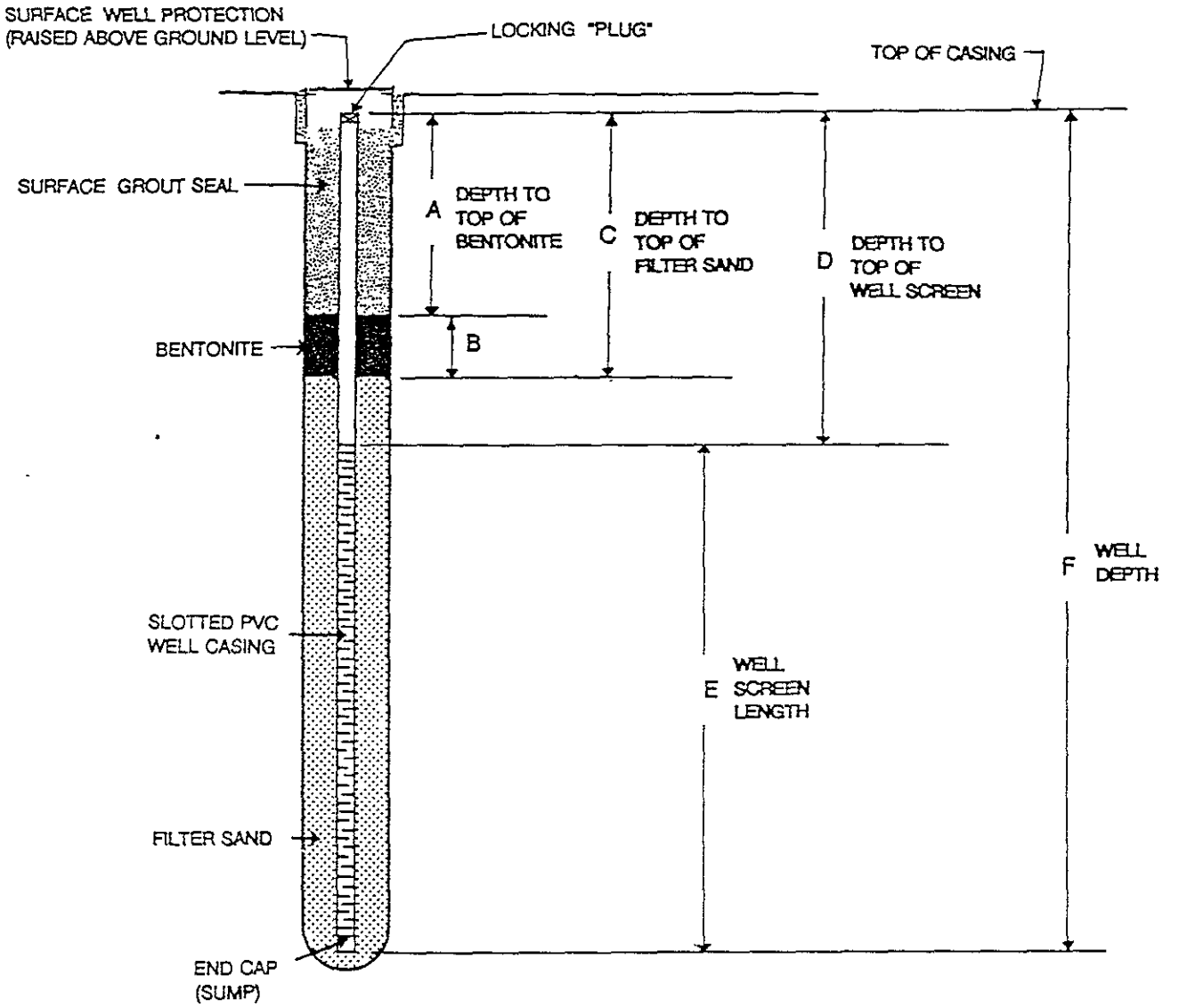




DESIGNED BY:	CHECKED BY:	FIGURE 1 SITE VICINITY MAP CWEC: 20507-001-01	DATE:	FIGURE:
DRAWN BY:	SCALE:		CENTURY WEST ENGINEERING	
DWG. NO.:				



DESIGNED BY:	CHECKED BY:	FIGURE 2 SITE PLAN/GRADIENT MAP	DATE:	FIGURE:
DRAWN BY:	SCALE:		CENTURY WEST ENGINEERING	
DWG. NO.:		CWEC: 20507-001-02		



MONITORING WELL SPECIFICATIONS (ft)

WELL	A	B	C	D	E	F
MW-1	3.0	1.0	4.0	5.01	14.62	20.01
MW-2	3.0	1.0	4.0	3.97	14.74	18.72
MW-3	1.5	1.0	2.5	2.98	14.31	17.67
MW-4	2.0	1.0	3.0	3.03	14.26	17.67
MW-5	2.0	1.0	3.0	2.95	14.38	17.71

OGDEN SURVEYING EQUIPMENT CO. 94420

DESIGN BY		CHECKED BY		FIGURE 3	APPROVED
SURVEY BY		SCALE	NO SCALE	WELL CONSTRUCTION DIAGRAM	DATE
DRAWN BY	JEG	DWG. NO.		CWEC: 20507-001-02	

CENTURY WEST ENGINEERING CORPORATION

APPENDIX A

DRILLING PERMIT

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 1900 LEWELLING BLVD.
SAN LEANDRO CA.

CLIENT
Name Mr. JOHNNY TSU LIN
Address P O Box 4154 Phone (510)352-5422
City SAN Leandro Zip 94578

APPLICANT
Name JAMES E. GRIBI
Century WEST ENGINEERING
Address 7950 Dublin Blvd # 203 Phone (510) 551-7774
City Dublin CA Zip 94568

TYPE OF PROJECT INSTALL 5 MONITORING WELLS

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	
Water Supply	___	Contamination	X
Monitoring	X	Well Destruction	___

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other MONITORING
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. 484288

WELL PROJECTS

Drill Hole Diameter	8"	in.	Maximum Depth	20	ft.
Casing Diameter	2"	in.			
Surface Seal Depth	5'	ft.	Number	5	

GEOTECHNICAL PROJECTS

Number of Borings	___		Maximum Depth	___	ft.
Hole Diameter	___	in.			

ESTIMATED STARTING DATE 6-27-94
ESTIMATED COMPLETION DATE 6-28-94

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE James C Gribi Date 6-22-94

FOR OFFICE USE

PERMIT NUMBER 94391
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 5 Jul 94
Wyman Hong

31992

APPENDIX B

BORING LOGS

WELL BORING LOG MW-1

Century West Engineering

Site Location: 1900 Lewelling Blvd.	Boring ID: MW-1
Boring Location: Upgradient well	Elevation:
Purpose: Subsurface Investigation	Logged By: Bob Bogar
Date: 06/27/94	Blank Casing: From: 0.0 To: 4.64
Consulting Firm: Century West Engineering	Perforations: From: 5.01 To: 19.63
Project Number: 20507-001-02	Filter Sand: From: 19.6 To: 4.0
Drilling Contractor: Exploration Geoservices	Bentonite: From: 4.0 To: 3.0
Drilling Method: Hollow Stem Auger	Grout: From: 3.0 To: 0.5

Depth	Sample Interval	Sample ID	Blow Counts	Profile	Soil Description		Remarks
01 02 03 04 05					0 - 0.5 ft 0.5 - 4.0 ft	Asphalt Medium brown, silty, gravelly SAND; some clayey, clasts to 2 cm in gravels, soft; no hydrocarbon odor or discoloration.	
06 07 08 09 10	T ⊥	MW-1.1	2 2 3	▽	4.0 - 10.0 ft	Light to medium grey, silty fine SAND; moist to saturated; no hydrocarbon odor or discoloration.	
11 12 13 14 15	T ⊥	MW-1.2	3 3 5		10.0 - 20.0 ft	Medium grey SILT; wet to saturated; no hydrocarbon odor or discoloration.	
16 17 18 19 20					Approximate Ground Water Depth - 7.0 feet Final Auger Depth - 20 feet		

WELL BORING LOG MW-2

Century West Engineering

Site Location: 1900 Lewelling Blvd.	Boring ID: MW-2
Boring Location: Adjacent to waste oil tank	Elevation:
Purpose: Subsurface Investigation	Logged By: Bob Bogar
Date: 06/27/94	Blank Casing: From: 0.0 To: 3.92
Consulting Firm: Century West Engineering	Perforations: From: 3.94 To: 18.68
Project Number: 20507-001-02	Filter Sand: From: 19.0 To: 3.5
Drilling Contractor: Exploration Geoservices	Bentonite: From: 3.5 To: 2.5
Drilling Method: Hollow Stem Auger	Grout: From: 2.5 To: 0.5

Depth	Sample Interval	Sample ID	Blow Counts	Profile	Soil Description	Remarks
01 02 03 04 05					0 - 0.5 ft Asphalt 0.5 - 4.0 ft Light brown, clayey SILT; moist, soft; no hydrocarbon odor or discoloration.	
06 07 08 09 10	T ⊥	MW-2.1	6 10 9	▽	4.0 - 10.0 ft Light to dark brown, silty, fine SAND; moist to saturated; slight to moderate hydrocarbon odor.	
11 12 13 14 15	T ⊥	MW-2.2	3 3 6		10.0 - 20.0 ft Light to dark grey, clayey, silty, fine SAND; saturated, soft, color change to dark grey at approx. 15 feet; no hydrocarbon odor.	
16 17 18 19					Approximate Ground Water Depth - 7.0 feet Final Auger Depth - 19 feet	

WELL BORING LOG MW-3

Century West Engineering

Site Location: 1900 Lewelling Blvd.	Boring ID: MW-3
Boring Location: Center of Excavation	Elevation:
Purpose: Subsurface Investigation	Logged By: Bob Bogar
Date: 06/27/94	Blank Casing: From: 0.0 To: 2.99
Consulting Firm: Century West Engineering	Perforations: From: 2.98 To: 17.29
Project Number: 20507-001-02	Filter Sand: From: 17.6 To: 2.5
Drilling Contractor: Exploration Geoservices	Bentonite: From: 2.5 To: 2.0
Drilling Method: Hollow Stem Auger	Grout: From: 2.0 To: 0.5

Depth	Sample Interval	Sample ID	Blow Counts	Profile	Soil Description	Remarks
01 02 03 04 05					0 - 0.5 ft Asphalt 0.5 - 12.0 ft Light brown to medium grey (when wet), clean silty, SAND; clasts to 2 cms; no hydrocarbon odor or discoloration; non-native material (backfill).	
06 07 08 09 10	T ⊥	MW-3.1	2 3 9			
11 12 13 14 15	T ⊥	MW-3.2	5 6 7		12.0 - 18.0 ft Medium to dark grey, SILT; soft, saturated; slightly greenish discoloration, slight odor.	
16 17 18					Ground Water Depth - Not measured Final Auger Depth - 18 feet	

WELL BORING LOG MW-4

Century West Engineering

Site Location: 1900 Lewelling Blvd.	Boring ID: MW-4
Boring Location: Next to landscaped area	Elevation:
Purpose: Subsurface Investigation	Logged By: Bob Bogar
Date: 06/27/94	Blank Casing: From: 0.0 To: 3.03
Consulting Firm: Century West Engineering	Perforations: From: 3.03 To: 17.29
Project Number: 20507-001-02	Filter Sand: From: 17.7 To: 2.5
Drilling Contractor: Exploration Geoservices	Bentonite: From: 2.5 To: 2.0
Drilling Method: Hollow Stem Auger	Grout: From: 2.0 To: 0.5

Depth	Sample Interval	Sample ID	Blow Counts	Profile	Soil Description	Remarks
01					0 - 0.5 ft Asphalt	
02					0.5 - 3.5 ft Light brown, sandy SILT; cobbles to 2cms; no hydrocarbon odor or discoloration.	
03						
04					3.5 - 7.0 ft Dark grey to dark green silt to fine SAND; slight hydrocarbon odor.	
05						
06	T	MW-4.1	3			
07	⊥		6			
08			7		7.0 - 18.0 ft Dark grey, SILT to fine SAND; wet to saturated; no hydrocarbon odor.	
09						
10						
11	T	MW-4.2	6			
12	⊥		6			
13			8			
14						
15						
16					Ground Water Depth - Not measured Final Auger Depth - 18 feet	
17						
18						

WELL BORING LOG MW-5

Century West Engineering

Site Location: 1900 Lewelling Blvd.	Boring ID: MW-5
Boring Location: Downgradient Well	Elevation:
Purpose: Subsurface Investigation	Logged By: Bob Bogar
Date: 06/27/94	Blank Casing: From: 0.0 To: 2.95
Consulting Firm: Century West Engineering	Perforations: From: 2.95 To: 17.33
Project Number: 20507-001-02	Filter Sand: From: 17.7 To: 2.5
Drilling Contractor: Exploration Geoservices	Bentonite: From: 2.5 To: 2.0
Drilling Method: Hollow Stem Auger	Grout: From: 2.0 To: 0.5

Depth	Sample Interval	Sample ID	Blow Counts	Profile	Soil Description	Remarks
01					0 - 0.5 ft Asphalt	
02					0.5 - 3.5 ft Light brown silty fine SAND; moist,soft; no hydrocarbon odor or discoloration.	
03						
04					3.5 - 5.0 ft Dark grey to dark green, fine SAND to SILT; moist to wet; moderate hydrocarbon odor.	
05						
06	T	MW-5.1	8			
07	⊥		6		5.0 - 18.0 ft Dark grey to dark green, SILT; saturated; moderate hydro-carbon odor.	
08			6			
09						
10						
11	T	MW-5.2	5			
12	⊥		5			
13			6			
14						
15						
16					Ground Water Depth - Not measured Final Auger Depth - 18 feet	
17						
18						

BORING LOG IB-1

Century West Engineering

Site Location: 1900 Lewelling Blvd.	Boring ID: IB-1
Boring Location: Next to fuel dispenser island	Elevation:
Purpose: Subsurface Investigation	Logged By: Bob Bogar
Date: 06/27/94	Blank Casing: From: To:
Consulting Firm: Century West Engineering	Perforations: From: To:
Project Number: 20507-001-02	Filter Sand: From: To:
Drilling Contractor: Exploration Geoservices	Bentonite: From: To:
Drilling Method: Hollow Stem Auger	Grout: From: To:

Depth	Sample Interval	Sample ID	Blow Counts	Profile	Soil Description	Remarks
01 02 03 04 05					0 - 0.5 ft Asphalt 0.5 - 3.0 ft Light to medium brown, clean medium grained SAND; no hydrocarbon odor or discoloration. 3.0 - 5.0 ft Dark grey to green fine SAND to SILT; moist, soft; moderate to strong hydrocarbon odor.	Note: Sample attempted at three feet; however, no material was recovered in sampling tubes.
06 07	T ⊥	IB-1	6 6 7		Final Auger Depth - 5 feet	

APPENDIX C

SURVEYOR'S REPORT

RAYMOND F. GREENWOOD, INC.
A California Corporation
CIVIL ENGINEERING & LAND SURVEYING
19131 Redwood Road, Suite A * Castro Valley, CA 94546
Tel 510\581-2772 Fax 510\581-6913

July 8, 1994

Century West Engineering
7950 Dublin Boulevard, Suite 203
Dublin, Ca. 94568

Attn: Bob Bogar

Subject: Monitoring Wells at 1900 Lewelling Blvd., San Leandro
CWEC No. 20507-001-02

Dear Mr. Bogar:

We have completed the rim elevation measurements for the five monitoring wells located on the subject property in accordance with your request. The results are as follows:

WELL NUMBER	RIM ELEVATION
MW-1	14.20
MW-2	13.70
MW-3	12.41
MW-4	12.56
MW-5	11.76

The above elevation measurements were taken at the top of the well casings at the north side of each well and are based upon mean sea level datum per an official City of San Leandro benchmark.

I hope that the above provides you with the required information. Please call me should you have any questions.

Very truly yours,

Douglas J. Rodgers

DJR/dr

APPENDIX D

LABORATORY DATA REPORTS AND CHAIN OF CUSTODY RECORDS

Superior Precision Analytical, Inc.
A member of ESSCON Environmental Support Service Consortium

CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 06-July-1994

ANALYSIS FOR GASOLINE RANGE HYDROCARBONS - by EPA SW-846 Methods 5030/8015M.

Chronology

Laboratory Number 58343

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-1.1	06/27/94	06/28/94	07/01/94	07/01/94		1
MW-2.1	06/27/94	06/28/94	07/01/94	07/01/94		2
MW-2.2	06/27/94	06/28/94	07/01/94	07/01/94		3

Certified Laboratories
1555 Burke St., Unit 1 ▪ San Francisco, California 94124 ▪ (415) 647-2081 / fax (415) 821-7123

CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 06-July-1994

ANALYSIS FOR GASOLINE RANGE HYDROCARBONS - by EPA SW-846 Methods 5030/8015M.

Laboratory Number	Sample Identification	Matrix
58343- 1	MW-1.1	Soil
58343- 2	MW-2.1	Soil
58343- 3	MW-2.2	Soil

RESULTS OF ANALYSIS

Laboratory Number:	58343- 1	58343- 2	58343- 3
Gasoline_Range:	ND<1	ND<1	ND<1
Concentration:	mg/kg	mg/kg	mg/kg
-- Surrogate % Recoveries --			
Trifluorotoluene (SS):	93	100	100

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ANALYSIS FOR GASOLINE RANGE HYDROCARBONS - by EPA SW-846 Methods 5030/8015M.
Quality Assurance and Control Data - Soil
Laboratory Number 58343

Compound	Method Blank (mg/kg)	RL (mg/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Gasoline_Range:	ND<1	1	103/107	55-139	4%

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
mg/kg = Parts per million (ppm)
QC File No. 58343

Cecilia G Joaquin 7/6/94
Senior Chemist
Account Manager

Certified Laboratories
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Superior Precision Analytical, Inc.
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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 06-July-1994

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES
by EPA SW-846 Methods 5030/8015M/8020.

Laboratory Number 58343

Chronology Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-3.1	06/27/94	06/28/94	07/05/94	07/05/94		4
MW-3.2	06/27/94	06/28/94	07/02/94	07/02/94		5
MW-4.1	06/27/94	06/28/94	07/05/94	07/05/94		6
MW-4.2	06/27/94	06/28/94	07/02/94	07/02/94		7
MW-5.1	06/27/94	06/28/94	07/05/94	07/05/94		8
MW-5.2	06/27/94	06/28/94	07/02/94	07/02/94		9
IB-1.1	06/27/94	06/28/94	07/02/94	07/02/94		11

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 06-July-1994

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES

Laboratory Number	Sample Identification	Matrix
58343- 4	MW-3.1	Soil
58343- 5	MW-3.2	Soil
58343- 6	MW-4.1	Soil
58343- 7	MW-4.2	Soil
58343- 8	MW-5.1	Soil
58343- 9	MW-5.2	Soil
58343-11	IB-1.1	Soil

RESULTS OF ANALYSIS

Laboratory Number:	58343- 4	58343- 5	58343- 6	58343- 7	58343- 8
Gasoline_Range:	ND<1	3	ND<1	ND<1	ND<1
Benzene:	0.008	0.72	ND<.005	ND<.005	ND<.005
Toluene:	ND<.005	0.029	ND<.005	ND<.005	ND<.005
Ethyl Benzene:	ND<.005	0.048	ND<.005	ND<.005	ND<.005
Total Xylenes:	ND<.005	0.61	ND<.005	ND<.005	ND<.005
Concentration:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
-- Surrogate % Recoveries --					
Trifluorotoluene (SS):	100	129	100	116	103

Laboratory Number:	58343- 9	58343-11
Gasoline_Range:	ND<1	6
Benzene:	ND<.005	1.9
Toluene:	ND<.005	0.021
Ethyl Benzene:	ND<.005	0.34
Total Xylenes:	ND<.005	0.087
Concentration:	mg/kg	mg/kg
-- Surrogate % Recoveries --		
Trifluorotoluene (SS):	102	75

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Superior Precision Analytical, Inc.
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ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES
Quality Assurance and Control Data - Soil
Laboratory Number 58343

Compound	Method Blank (mg/kg)	RL (mg/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Gasoline_Range:	ND<1	1	77/85	55-139	10%
Benzene:	ND<.005	.005	85/90	67-141	6%
Toluene:	ND<.005	.005	80/88	67-141	10%
Ethyl Benzene:	ND<.005	.005	80/85	67-141	6%
Total Xylenes:	ND<.005	.005	85/95	67-141	11%

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
mg/kg = Parts per million (ppm)
QC File No. 58343

Cecilia G. Joaquin 7/6/94
Senior Chemist
Account Manager

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 05-July-1994

Total Petroleum Hydrocarbons by Modified Method 8015

Laboratory Number 58343

Chronology Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-1.1	06/27/94	06/28/94	06/28/94	06/30/94		1
MW-2.1	06/27/94	06/28/94	06/28/94	06/30/94		2
MW-2.2	06/27/94	06/28/94	06/28/94	06/30/94		3
MW-5.1	06/27/94	06/28/94	06/28/94	06/30/94		8
IB-1.1	06/27/94	06/28/94	06/28/94	06/30/94		11

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 05-July-1994

Total Petroleum Hydrocarbons by Modified Method 8015

Laboratory Number	Sample Identification	Matrix
58343- 1	MW-1.1	Soil
58343- 2	MW-2.1	Soil
58343- 3	MW-2.2	Soil
58343- 8	MW-5.1	Soil
58343-11	IB-1.1	Soil

RESULTS OF ANALYSIS

Laboratory Number:	58343- 1	58343- 2	58343- 3	58343- 8	58343-11
Diesel Range:	ND<10	ND<10	ND<10	ND<10	ND<10
Motor Oil Range:	ND<10	ND<10	ND<10	ND<10	ND<10
Concentration:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

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Total Petroleum Hydrocarbons by Modified Method 8015
Quality Assurance and Control Data - Soil
Laboratory Number 58343

Compound	Method Blank (mg/kg)	RL (mg/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Diesel Range:	ND<10	10	116/107	50-150	8%
Motor Oil Range:	ND<10	10			

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
mg/kg = Parts per million (ppm)
QC File No. 58343

Cecilia G Jaquin 7/6/94
Senior Chemist
Account Manager

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 06-July-1994

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by GAS CHROMATOGRAPHY - MASS SPECTROMETRY

Chronology

Laboratory Number 58343

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-1.1	06/27/94	06/28/94	06/29/94	06/29/94		1
MW-2.1	06/27/94	06/28/94	06/29/94	06/29/94		2
MW-2.2	06/27/94	06/28/94	06/29/94	06/29/94		3

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 06-July-1994

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS

Laboratory Number	Sample Identification	Matrix
58343- 1	MW-1.1	Soil
58343- 2	MW-2.1	Soil
58343- 3	MW-2.2	Soil

RESULTS OF ANALYSIS

Laboratory Number:	58343- 1	58343- 2	58343- 3
Chloromethane:	ND<50	ND<50	ND<50
Bromomethane:	ND<50	ND<50	ND<50
Vinyl Chloride:	ND<50	ND<50	ND<50
Chloroethane:	ND<50	ND<50	ND<50
Methylene Chloride:	ND<50	ND<50	ND<50
Acetone:	ND<100	ND<100	ND<100
Carbon Disulfide:	ND<15	ND<15	ND<15
Trichlorofluoromethane:	ND<15	ND<15	ND<15
1,1-Dichloroethene:	ND<15	ND<15	ND<15
1,1-Dichloroethane:	ND<15	ND<15	ND<15
t-1,2-Dichloroethene:	ND<15	ND<15	ND<15
Chloroform:	ND<15	ND<15	ND<15
1,2-Dichloroethane:	ND<5	ND<5	ND<5
2-Butanone:	ND<100	ND<100	ND<100
1,1,1-Trichloroethane:	ND<15	ND<15	ND<15
Carbon tetrachloride:	ND<15	ND<15	ND<15
Vinyl Acetate:	ND<50	ND<50	ND<50
Bromodichloromethane:	ND<15	ND<15	ND<15
1,2-Dichloropropane:	ND<15	ND<15	ND<15
c-1,2-Dichloroethene:	ND<15	ND<15	ND<15
c-1,3-Dichloropropene:	ND<15	ND<15	ND<15
Trichloroethene:	ND<15	ND<15	ND<15
Dibromochloromethane:	ND<15	ND<15	ND<15
1,1,2-Trichloroethane:	ND<15	ND<15	ND<15
Benzene:	ND<5	ND<5	ND<5
t-1,3-Dichloropropene:	ND<15	ND<15	ND<15
Bromoform:	ND<15	ND<15	ND<15
4-Methyl-2-Pentanone:	ND<50	ND<50	ND<50
2-Hexanone:	ND<50	ND<50	ND<50
Concentration:	ug/kg	ug/kg	ug/kg

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 06-July-1994

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS

Laboratory Number	Sample Identification	Matrix
58343- 1	MW-1.1	Soil
58343- 2	MW-2.1	Soil
58343- 3	MW-2.2	Soil

RESULTS OF ANALYSIS

Laboratory Number:	58343- 1	58343- 2	58343- 3
Tetrachloroethene:	ND<15	ND<15	ND<15
1,1,2,2-Tetracl-ethane:	ND<15	ND<15	ND<15
Toluene:	ND<15	ND<15	ND<15
Chlorobenzene:	ND<15	ND<15	ND<15
Ethyl Benzene:	ND<15	ND<15	ND<15
Styrene:	ND<15	ND<15	ND<15
Xylenes:	ND<15	ND<15	ND<15
1,3-Dichlorobenzene:	ND<15	ND<15	ND<15
1,4-Dichlorobenzene:	ND<15	ND<15	ND<15
1,2-Dichlorobenzene:	ND<15	ND<15	ND<15
Concentration:	ug/kg	ug/kg	ug/kg
-- Surrogate % Recoveries --			
1,2-Dichloroethane-d4:	95	100	96
Toluene-d8:	104	102	101
Bromofluorobenzene:	103	100	101

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EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
Quality Assurance and Control Data - Soil
Laboratory Number 58343

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Chloromethane:	ND<50	50			
Bromomethane:	ND<50	50			
Vinyl Chloride:	ND<50	50			
Chloroethane:	ND<50	50			
Methylene Chloride:	ND<50	50			
Acetone:	ND<100	100			
Carbon Disulfide:	ND<15	15			
Trichlorofluoromethane:	ND<15	15			
1,1-Dichloroethene:	ND<15	15	104/106	77-133	2%
1,1-Dichloroethane:	ND<15	15			
t-1,2-Dichloroethene:	ND<15	15			
Chloroform:	ND<15	15			
1,2-Dichloroethane:	ND<5	5			
2-Butanone:	ND<100	100			
1,1,1-Trichloroethane:	ND<15	15			
Carbon tetrachloride:	ND<15	15			
Vinyl Acetate:	ND<50	50			
Bromodichloromethane:	ND<15	15			
1,2-Dichloropropane:	ND<15	15			
c-1,2-Dichloroethene:	ND<15	15			
c-1,3-Dichloropropene:	ND<15	15			
Trichloroethene:	ND<15	15	92/93	69-111	1%
Dibromochloromethane:	ND<15	15			
1,1,2-Trichloroethane:	ND<15	15			
Benzene:	ND<5	5	101/104	78-119	3%
t-1,3-Dichloropropene:	ND<15	15			
Bromoform:	ND<15	15			
4-Methyl-2-Pentanone:	ND<50	50			
2-Hexanone:	ND<50	50			

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EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
Quality Assurance and Control Data - Soil
Laboratory Number 58343

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Tetrachloroethene:	ND<15	15			
1,1,2,2-Tetracl-ethane:	ND<15	15			
Toluene:	ND<15	15	99/102	76-124	3%
Chlorobenzene:	ND<15	15	98/102	82-118	4%
Ethyl Benzene:	ND<15	15			
Styrene:	ND<15	15			
Xylenes: . .	ND<15	15			
1,3-Dichlorobenzene:	ND<15	15			
1,4-Dichlorobenzene:	ND<15	15			
1,2-Dichlorobenzene:	ND<15	15			
1,2-Dichloroethane-d4:	93			70-121	
Toluene-d8:	99			81-117	
Bromofluorobenzene:	103			74-121	

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
ug/kg = Parts per billion (ppb)
QC File No. 58343

Cecilia G. Joaquin 7/6/94
Senior Chemist
Account Manager

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A member of ESSCON Environmental Support Service Consortium

CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 05-July-1994

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Chronology

Laboratory Number 58343

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-1.1	06/27/94	06/28/94	07/01/94	07/02/94		1
MW-2.1	06/27/94	06/28/94	07/01/94	07/02/94		2
MW-2.2	06/27/94	06/28/94	07/01/94	07/02/94		3

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 05-July-1994

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58343- 1	MW-1.1	Soil
58343- 2	MW-2.1	Soil
58343- 3	MW-2.2	Soil

RESULTS OF ANALYSIS

Laboratory Number:	58343- 1	58343- 2	58343- 3
bis(2-chloroethyl)ethe:	ND<300	ND<300	ND<300
aniline:	ND<300	ND<300	ND<300
phenol:	ND<300	ND<300	ND<300
2-chlorophenol:	ND<300	ND<300	ND<300
1,3-dichlorobenzene:	ND<300	ND<300	ND<300
1,4-dichlorobenzene:	ND<300	ND<300	ND<300
1,2-dichlorobenzene:	ND<300	ND<300	ND<300
benzyl alcohol:	ND<300	ND<300	ND<300
bis-(2-chloroisopropyl:	ND<300	ND<300	ND<300
2-methylphenol:	ND<300	ND<300	ND<300
hexachloroethane:	ND<300	ND<300	ND<300
n-nitroso-di-n-propyla:	ND<300	ND<300	ND<300
4-methylphenol:	ND<300	ND<300	ND<300
nitrobenzene:	ND<300	ND<300	ND<300
isophorone:	ND<300	ND<300	ND<300
2-nitrophenol:	ND<300	ND<300	ND<300
2,4-dimethylphenol:	ND<300	ND<300	ND<300
bis(2-chloroethoxy)met:	ND<300	ND<300	ND<300
2,4-dichlorophenol:	ND<300	ND<300	ND<300
1,2,4-trichlorobenzene:	ND<300	ND<300	ND<300
naphthalene:	ND<300	ND<300	ND<300
benzoic acid:	ND<300	ND<300	ND<300
4-chloroaniline:	ND<300	ND<300	ND<300
hexachlorobutadiene:	ND<300	ND<300	ND<300
4-chloro-3-methylpheno:	ND<300	ND<300	ND<300
2-methyl-naphthalene:	ND<300	ND<300	ND<300
hexaclorocyclopentadie:	ND<300	ND<300	ND<300
2,4,6-trichlorophenol:	ND<300	ND<300	ND<300
2,4,5-trichlorophenol:	ND<300	ND<300	ND<300
Concentration:	ug/kg	ug/kg	ug/kg

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 05-July-1994

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58343- 1	MW-1.1	Soil
58343- 2	MW-2.1	Soil
58343- 3	MW-2.2	Soil

RESULTS OF ANALYSIS

Laboratory Number:	58343- 1	58343- 2	58343- 3
2-chloronaphthalene:	ND<300	ND<300	ND<300
2-nitroaniline:	ND<300	ND<300	ND<300
acenaphthylene:	ND<300	ND<300	ND<300
dimethylphthlate:	ND<300	ND<300	ND<300
2,6-dinitrotoluene:	ND<300	ND<300	ND<300
acenaphthene:	ND<300	ND<300	ND<300
3-nitroaniline:	ND<300	ND<300	ND<300
2,4-dinitrophenol:	ND<300	ND<300	ND<300
dibenzofuran:	ND<300	ND<300	ND<300
2,4-dinitrotoluene:	ND<300	ND<300	ND<300
4-nitrophenol:	ND<300	ND<300	ND<300
fluorene:	ND<300	ND<300	ND<300
4-chlorophenyl-phenyle:	ND<300	ND<300	ND<300
diethylphthlate:	ND<300	ND<300	ND<300
4-nitroaniline:	ND<300	ND<300	ND<300
4,6-dinitro-2-methylph:	ND<300	ND<300	ND<300
n-nitrosodiphenylamine:	ND<300	ND<300	ND<300
1,2-diphenylhydrazine:	ND<300	ND<300	ND<300
4-bromo-phenyl-phenyle:	ND<300	ND<300	ND<300
hexachlorobenzene:	ND<300	ND<300	ND<300
pentachlorophenol:	ND<300	ND<300	ND<300
phenanthrene:	ND<300	ND<300	ND<300
anthracene:	ND<300	ND<300	ND<300
di-n-butylphthlate:	340	ND<300	ND<300
fluoranthene:	ND<300	ND<300	ND<300
benzidine:	ND<300	ND<300	ND<300
pyrene:	ND<300	ND<300	ND<300
butylbenzylphthlate:	ND<300	ND<300	ND<300
3.3'-dichlorobenzidine:	ND<300	ND<300	ND<300
Concentration:	ug/kg	ug/kg	ug/kg

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 05-July-1994

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58343- 1	MW-1.1	Soil
58343- 2	MW-2.1	Soil
58343- 3	MW-2.2	Soil

RESULTS OF ANALYSIS

Laboratory Number:	58343- 1	58343- 2	58343- 3
benzo[a]anthracene:	ND<300	ND<300	ND<300
chrysene:	ND<300	ND<300	ND<300
bis(2-ethylhexyl)phtha:	ND<300	ND<300	ND<300
di-n-octylphthalate:	ND<300	ND<300	ND<300
benzo(b,k)fluoranthene:	ND<300	ND<300	ND<300
benzo[a]pyrene:	ND<300	ND<300	ND<300
indeno[1,2,3-cd]pyrene:	ND<300	ND<300	ND<300
dibenzo[a,h]anthracene:	ND<300	ND<300	ND<300
benzo[g,h,i]perylene:	ND<300	ND<300	ND<300
Concentration:	ug/kg	ug/kg	ug/kg
-- Surrogate % Recoveries --			
2-fluorophenol:	74	72	55
phenol-d6:	79	75	60
nitrobenzene-d5:	73	69	58
2-fluorobiphenyl:	86	82	70
2,4,6-tribromophenol:	72	70	59
terphenyl-d14:	89	87	72

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EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS
Quality Assurance and Control Data - Soil
Laboratory Number 58343

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
bis(2-chloroethyl)ethe:	ND<300	300			
aniline:	ND<300	300			
phenol:	ND<300	300	78/78	44-107	0%
2-chlorophenol:	ND<300	300	78/80	44-107	3%
1,3-dichlorobenzene:	ND<300	300			
1,4-dichlorobenzene:	ND<300	300	78/79	32-115	1%
1,2-dichlorobenzene:	ND<300	300			
benzyl alcohol:	ND<300	300			
bis-(2-chloroisopropyl:	ND<300	300			
2-methylphenol:	ND<300	300			
hexachloroethane:	ND<300	300			
n-nitroso-di-n-propyla:	ND<300	300	90/88	40-123	2%
4-methylphenol:	ND<300	300			
nitrobenzene:	ND<300	300			
isophorone:	ND<300	300			
2-nitrophenol:	ND<300	300			
2,4-dimethylphenol:	ND<300	300			
bis(2-chloroethoxy)met:	ND<300	300			
2,4-dichlorophenol:	ND<300	300			
1,2,4-trichlorobenzene:	ND<300	300	86/86	40-104	0%
naphthalene:	ND<300	300			
benzoic acid:	ND<300	300			
4-chloroaniline:	ND<300	300			
hexachlorobutadiene:	ND<300	300			
4-chloro-3-methylpheno:	ND<300	300	82/81	47-113	1%
2-methyl-naphthalene:	ND<300	300			
hexaclorocyclopentadie:	ND<300	300			
2,4,6-trichlorophenol:	ND<300	300			
2,4,5-trichlorophenol:	ND<300	300			

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EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS
Quality Assurance and Control Data - Soil
Laboratory Number 58343

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
2-chloronaphthalene:	ND<300	300			
2-nitroaniline:	ND<300	300			
acenaphthylene:	ND<300	300			
dimethylphthlate:	ND<300	300			
2,6-dinitrotoluene:	ND<300	300			
acenaphthene:	ND<300	300	87/87	43-110	0%
3-nitroaniline:	ND<300	300			
2,4-dinitrophenol:	ND<300	300			
dibenzofuran:	ND<300	300			
2,4-dinitrotoluene:	ND<300	300	90/87	35-100	3%
4-nitrophenol:	ND<300	300	47/44	36-117	7%
fluorene:	ND<300	300			
4-chlorophenyl-phenyle:	ND<300	300			
diethylphthlate:	ND<300	300			
4-nitroaniline:	ND<300	300			
4,6-dinitro-2-methylph:	ND<300	300			
n-nitrosodiphenylamine:	ND<300	300			
1,2-diphenylhydrazine:	ND<300	300			
4-bromo-phenyl-phenyle:	ND<300	300			
hexachlorobenzene:	ND<300	300			
pentachlorophenol:	ND<300	300	75/73	20-122	3%
phenanthrene:	ND<300	300			
anthracene:	ND<300	300			
di-n-butylphthlate:	ND<300	300			
fluoranthene:	ND<300	300			
benzidine:	ND<300	300			
pyrene:	ND<300	300	89/85	62-117	5%
butylbenzylphthlate:	ND<300	300			
3.3'-dichlorobenzidine:	ND<300	300			

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EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS
Quality Assurance and Control Data - Soil
Laboratory Number 58343

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
2-chloronaphthalene:	ND<300	300			
2-nitroaniline:	ND<300	300			
acenaphthylene:	ND<300	300			
dimethylphthlate:	ND<300	300			
2,6-dinitrotoluene:	ND<300	300			
acenaphthene:	ND<300	300	87/87	43-110	0%
3-nitroaniline:	ND<300	300			
2,4-dinitrophenol:	ND<300	300			
dibenzofuran:	ND<300	300			
2,4-dinitrotoluene:	ND<300	300	90/87	35-100	3%
4-nitrophenol:	ND<300	300	47/44	36-117	7%
fluorene:	ND<300	300			
4-chlorophenyl-phenyle:	ND<300	300			
diethylphthlate:	ND<300	300			
4-nitroaniline:	ND<300	300			
4,6-dinitro-2-methylph:	ND<300	300			
n-nitrosodiphenylamine:	ND<300	300			
1,2-diphenylhydrazine:	ND<300	300			
4-bromo-phenyl-phenyle:	ND<300	300			
hexachlorobenzene:	ND<300	300			
pentachlorophenol:	ND<300	300	75/73	20-122	3%
phenanthrene:	ND<300	300			
anthracene:	ND<300	300			
di-n-butylphthlate:	ND<300	300			
fluoranthene:	ND<300	300			
benzidine:	ND<300	300			
pyrene:	ND<300	300	89/85	62-117	5%
butylbenzylphthlate:	ND<300	300			
3.3'-dichlorobenzidine:	ND<300	300			

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EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS
Quality Assurance and Control Data - Soil
Laboratory Number 58343

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
benzo[a]anthracene:	ND<300	300			
chrysene:	ND<300	300			
bis(2-ethylhexyl)phtha:	ND<300	300			
di-n-octylphthalate:	ND<300	300			
benzo(b,k)fluoranthene:	ND<300	300			
benzo[a]pyrene:	ND<300	300			
indeno[1,2,3-cd]pyrene:	ND<300	300			
dibenzo[a,h]anthracene:	ND<300	300			
benzo[g,h,i]perylene:	ND<300	300			
2-fluorophenol:	74			25-121	
phenol-d6:	78			24-113	
nitrobenzene-d5:	74			23-120	
2-fluorobiphenyl:	75			30-115	
2,4,6-tribromophenol:	66			19-122	
terphenyl-d14:	82			18-137	

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
ug/kg = Parts per billion (ppb)
QC File No. 58343

Cecilia G. Joaquin 7/6/94
Senior Chemist
Account Manager

Certified Laboratories
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Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 ▪ Martinez, California 94553 ▪ (510) 229-1512 / fax (510) 229-1526

CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20570-001-02
Reported 01-July-1994

ANALYSIS FOR TOTAL LEAD
by EPA Method SW-846 6010

Chronology

Laboratory Number 58343

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-5.1	06/27/94	06/28/94	06/29/94	06/30/94		8
IB-1.1	06/27/94	06/28/94	06/29/94	06/30/94		11

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20570-001-02
Reported 01-July-1994

ANALYSIS FOR TOTAL LEAD

Laboratory Number	Sample Identification	Matrix
58343- 8	MW-5.1	Soil
58343-11	IB-1.1	Soil

RESULTS OF ANALYSIS

Laboratory Number:	58343- 8	58343-11
Lead (Pb):	ND<5	5
Concentration:	mg/Kg	mg/Kg

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ANALYSIS FOR TOTAL LEAD
Quality Assurance and Control Data - Soil

Laboratory Number 58343

Compound		Method Blank (mg/Kg)	RL (mg/Kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Lead	(Pb):	ND<5	5	95/97	75-125	2%

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
mg/Kg = Parts per million (ppm)
QC File No. 58343

Senior Chemist
Account Manager

68243

NET NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

COMPANY: CENTURY WEST ENGINEERING
ADDRESS: 7950 DUBLIN BLVD
PHONE: (510) 551-7774 FAX:
PROJECT NAME/LOCATION: Johnny Lin
PROJECT NUMBER: 205070-001-02
PROJECT MANAGER: J. GRIBI

REPORT TO:
INVOICE TO:
P.O. NO.
NET QUOTE NO.

SAMPLED BY: Bob Bogar (PRINT NAME) SIGNATURE: Bob Bogar
(PRINT NAME) SIGNATURE

ANALYSES

	DATE	TIME	SAMPLE ID/DESCRIPTION	GRAB	COMP	# OF CONTAINERS TYPE	MATRIX	PRESERVED Y/N	TPH-G/BTEX	TPH-D/ms	TPH-G	8240/8020	(8270)		HOLD	6010 (Pb)			COMMENTS
1			MW-1.1 (6')							X	X	X	X						
2			MW-2.1 (6')							X	X	X	X						
3			MW-2.2 (11')							X	X	X	X						
4			MW-3.1 (7')						X										
5			MW-3.2 (13')						X										
6			MW-4.1 (6')						X										
7			MW-4.2 (11')						X										
8			MW-5.1 (6')						X	X						X			
9			MW-5.2 (11')						X										
10			MW-1.2 (11')												X				DO NOT ANALYSE
11			IB-1.1 (6')						X	X						X			

Please initial: [initials] 2°C
Samples Stored in ice ✓
Appropriate containers N/A
Samples preserved N/A
VOA's without headspace
Comments:

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO
COC SEALS PRESENT AND INTACT? (YES) / NO
VOLATILES FREE OF HEADSPACE? YES / NO N/A
TEMPERATURE UPON RECEIPT: 2°C

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS DATE

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED FOR NET BY:
Bob Bogar	6/25/94 10:31	Syl Fadal	S. Fadal	6.28.94 12:00	[signature] 6/28/94 12 PM

METHOD OF SHIPMENT

REMARKS:

Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 11-July-1994

ANALYSIS FOR GASOLINE RANGE HYDROCARBONS - by EPA SW-846 Methods 5030/8015M.

Chronology

Laboratory Number 58384

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-1	07/05/94	07/05/94	07/08/94	07/08/94		1
MW-2	07/05/94	07/05/94	07/08/94	07/08/94		2

Certified Laboratories

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 11-July-1994

ANALYSIS FOR GASOLINE RANGE HYDROCARBONS - by EPA SW-846 Methods 5030/8015M.

Laboratory Number	Sample Identification	Matrix
58384- 1	MW-1	Water
58384- 2	MW-2	Water

RESULTS OF ANALYSIS

Laboratory Number:	58384- 1	58384- 2
Gasoline_Range:	ND<50	ND<50
Concentration:	ug/L	ug/L

Certified Laboratories

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Superior Precision Analytical, Inc.
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ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES
Quality Assurance and Control Data - Water
Laboratory Number 58384

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Gasoline_Range:	ND<50	50	88/93	61-134	6%
Benzene:	ND<0.5	0.5	109/82	60-135	28%
Toluene:	ND<0.5	0.5	93/86	60-135	8%
Ethyl Benzene:	ND<0.5	0.5	73/78	60-135	7%
Total Xylenes:	ND<0.5	0.5	94/84	60-135	11%

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
ug/L = Parts per billion (ppb)
QC File No. 58384

Cecilia G Joaquin 7/12/94
Senior Chemist
Account Manager

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Project 20507-001-02
Reported 11-July-1994

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES
by EPA SW-846 Methods 5030/8015M/8020.

Chronology

Laboratory Number 58384

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-3	07/05/94	07/05/94	07/08/94	07/08/94		3
MW-4	07/05/94	07/05/94	07/09/94	07/09/94		4
MW-5	07/05/94	07/05/94	07/09/94	07/09/94		5

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Project 20507-001-02
Reported 11-July-1994

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES

Laboratory Number	Sample Identification	Matrix
58384- 3	MW-3	Water
58384- 4	MW-4	Water
58384- 5	MW-5	Water

RESULTS OF ANALYSIS

Laboratory Number:	58384- 3	58384- 4	58384- 5
Gasoline_Range:	5000	ND<50	ND<50
Benzene:	15	0.9	1.1
Toluene:	7.9	ND<0.5	ND<0.5
Ethyl Benzene:	80	ND<0.5	ND<0.5
Total Xylenes:	230	ND<0.5	ND<0.5
Concentration:	ug/L	ug/L	ug/L
-- Surrogate % Recoveries --			
Trifluorotoluene (SS):	MI	94	86

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ANALYSIS FOR GASOLINE RANGE HYDROCARBONS - by EPA SW-846 Methods 5030/8015M
Quality Assurance and Control Data - Water
Laboratory Number 58384

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Gasoline_Range:	ND<50	50	95/93	61-134	2%

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
ug/L = Parts per billion (ppb)
QC File No. 58384

Cecilia G Joaquin 7/12/94
Senior Chemist
Account Manager

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 08-July-1994

Total Petroleum Hydrocarbons by EPA Method 8015M

Chronology

Laboratory Number 58384

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-2	07/05/94	07/05/94	07/07/94	07/07/94		2
MW-5	07/05/94	07/05/94	07/05/94	07/06/94		5

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 08-July-1994

Total Petroleum Hydrocarbons by EPA Method 8015M

Laboratory Number	Sample Identification	Matrix
58384- 2	MW-2	Water
58384- 5	MW-5	Water

RESULTS OF ANALYSIS

Laboratory Number:	58384- 2	58384- 5
Diesel Range:	ND<50	ND<50
Motor Oil Range:	ND<500	ND<500
Concentration:	ug/L	ug/L

Certified Laboratories

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Total Petroleum Hydrocarbons by EPA Method 8015M
Quality Assurance and Control Data - Water
Laboratory Number 58384

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Diesel Range:	ND<50	50	105/86	50-150	20%
Motor Oil Range:	ND<500	500			

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
ug/L = Parts per billion (ppb)
QC File No. 58384

Cecilia G Joaquin 7/12/94
Senior Chemist
Account Manager

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 18-July-1994

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by GAS CHROMATOGRAPHY - MASS SPECTROMETRY

Chronology

Laboratory Number 58384

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-1	07/05/94	07/05/94	07/10/94	07/10/94		1
MW-2	07/05/94	07/05/94	07/15/94	07/15/94		2

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 18-July-1994

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS

Laboratory Number	Sample Identification	Matrix
58384- 1	MW-1	Water
58384- 2	MW-2	Water

RESULTS OF ANALYSIS

Laboratory Number:	58384- 1	58384- 2
Chloromethane:	ND<10	ND<10
Bromomethane:	ND<10	ND<10
Vinyl Chloride:	ND<10	ND<10
Chloroethane:	ND<10	ND<10
Methylene Chloride:	ND<10	ND<10
Acetone:	ND<20	ND<20
Carbon Disulfide:	ND<3	ND<3
Trichlorofluoromethane:	ND<3	ND<3
1,1-Dichloroethene:	ND<3	ND<3
1,1-Dichloroethane:	ND<3	ND<3
t-1,2-Dichloroethene:	ND<3	ND<3
Chloroform:	ND<3	ND<3
1,2-Dichloroethane:	ND<1	ND<1
2-Butanone:	ND<20	ND<20
1,1,1-Trichloroethane:	ND<3	ND<3
Carbon tetrachloride:	ND<3	ND<3
Vinyl Acetate:	ND<10	ND<10
Bromodichloromethane:	ND<3	ND<3
1,2-Dichloropropane:	ND<3	ND<3
c-1,2-Dichloroethene:	ND<3	4.2
c-1,3-Dichloropropene:	ND<3	ND<3
Trichloroethene:	ND<3	ND<3
Dibromochloromethane:	ND<3	ND<3
1,1,2-Trichloroethane:	ND<3	ND<3
Benzene:	ND<1	ND<1
t-1,3-Dichloropropene:	ND<3	ND<3
Bromoform:	ND<3	ND<3
4-Methyl-2-Pentanone:	ND<10	ND<10
2-Hexanone:	ND<10	ND<10
Concentration:	ug/L	ug/L

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 18-July-1994

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS

Laboratory Number	Sample Identification	Matrix
58384- 1	MW-1	Water
58384- 2	MW-2	Water

RESULTS OF ANALYSIS

Laboratory Number:	58384- 1	58384- 2
Tetrachloroethene:	ND<3	ND<3
1,1,2,2-Tetracl-ethane:	ND<3	ND<3
Toluene:	ND<3	ND<3
Chlorobenzene:	ND<3	ND<3
Ethyl Benzene:	ND<3	ND<3
Styrene:	ND<3	ND<3
Xylenes:	ND<3	ND<3
1,3-Dichlorobenzene:	ND<3	ND<3
1,4-Dichlorobenzene:	ND<3	ND<3
1,2-Dichlorobenzene:	ND<3	ND<3
Methyl-t-butylether:	NA	600
Concentration:	ug/L	ug/L
-- Surrogate % Recoveries --		
1,2-Dichloroethane-d4:	99	100
Toluene-d8:	100	101
Bromofluorobenzene:	93	92

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EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
Quality Assurance and Control Data - Water

Laboratory Number 58384

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Chloromethane:	ND<10	10			
Bromomethane:	ND<10	10			
Vinyl Chloride:	ND<10	10			
Chloroethane:	ND<10	10			
Methylene Chloride:	ND<10	10			
Acetone:	ND<20	20			
Carbon Disulfide:	ND<3	3			
Trichlorofluoromethane:	ND<3	3			
1,1-Dichloroethene:	ND<3	3	97/100	79-127	3%
1,1-Dichloroethane:	ND<3	3			
t-1,2-Dichloroethene:	ND<3	3			
Chloroform:	ND<3	3			
1,2-Dichloroethane:	ND<1	1			
2-Butanone:	ND<20	20			
1,1,1-Trichloroethane:	ND<3	3			
Carbon tetrachloride:	ND<3	3			
Vinyl Acetate:	ND<10	10			
Bromodichloromethane:	ND<3	3			
1,2-Dichloropropane:	ND<3	3			
c-1,2-Dichloroethene:	ND<3	3			
c-1,3-Dichloropropene:	ND<3	3			
Trichloroethene:	ND<3	3	98/96	69-117	2%
Dibromochloromethane:	ND<3	3			
1,1,2-Trichloroethane:	ND<3	3			
Benzene:	ND<1	1	99/95	78-122	4%
t-1,3-Dichloropropene:	ND<3	3			
Bromoform:	ND<3	3			
4-Methyl-2-Pentanone:	ND<10	10			
2-Hexanone:	ND<10	10			

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Superior Precision Analytical, Inc.
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EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
Quality Assurance and Control Data - Water

Laboratory Number 58384

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Tetrachloroethene:	ND<3	3			
1,1,2,2-Tetracl-ethane:	ND<3	3			
Toluene:	ND<3	3	99/97	78-120	2%
Chlorobenzene:	ND<3	3	98/97	78-122	1%
Ethyl Benzene:	ND<3	3			
Styrene:	ND<3	3			
Xylenes:	ND<3	3			
1,3-Dichlorobenzene:	ND<3	3			
1,4-Dichlorobenzene:	ND<3	3			
1,2-Dichlorobenzene:	ND<3	3			
Methyl-t-butylether:	ND<3	3			
1,2-Dichloroethane-d4:	92			76-114	
Toluene-d8:	101			88-110	
Bromofluorobenzene:	92			86-115	

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
ug/L = Parts per billion (ppb)
QC File No. 58384

7/18/94
Senior Chemist
Account Manager

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Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-02
Reported 07-July-1994

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Chronology

Laboratory Number 58384

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-1	07/05/94	07/05/94	07/06/94	07/07/94		1
MW-2	07/05/94	07/05/94	07/06/94	07/07/94		2

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Project 20507-001-02
Reported 07-July-1994

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58384- 1	MW-1	Water
58384- 2	MW-2	Water

RESULTS OF ANALYSIS

Laboratory Number:	58384- 1	58384- 2
bis(2-chloroethyl)ethe:	ND<10	ND<10
aniline:	ND<10	ND<10
phenol:	ND<10	ND<10
2-chlorophenol:	ND<10	ND<10
1,3-dichlorobenzene:	ND<10	ND<10
1,4-dichlorobenzene:	ND<10	ND<10
1,2-dichlorobenzene:	ND<10	ND<10
benzyl alcohol:	ND<10	ND<10
bis-(2-chloroisopropyl:	ND<10	ND<10
2-methylphenol:	ND<10	ND<10
hexachloroethane:	ND<10	ND<10
n-nitroso-di-n-propyla:	ND<10	ND<10
4-methylphenol:	ND<10	ND<10
nitrobenzene:	ND<10	ND<10
isophorone:	ND<10	ND<10
2-nitrophenol:	ND<10	ND<10
2,4-dimethylphenol:	ND<10	ND<10
bis(2-chloroethoxy)met:	ND<10	ND<10
2,4-dichlorophenol:	ND<10	ND<10
1,2,4-trichlorobenzene:	ND<10	ND<10
naphthalene:	ND<10	ND<10
benzoic acid:	ND<10	ND<10
4-chloroaniline:	ND<10	ND<10
hexachlorobutadiene:	ND<10	ND<10
4-chloro-3-methylpheno:	ND<10	ND<10
2-methyl-naphthalene:	ND<10	ND<10
hexaclorocyclopentadie:	ND<10	ND<10
2,4,6-trichlorophenol:	ND<10	ND<10
2,4,5-trichlorophenol:	ND<10	ND<10
Concentration:	ug/L	ug/L

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Reported 07-July-1994

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58384- 1	MW-1	Water
58384- 2	MW-2	Water

RESULTS OF ANALYSIS

Laboratory Number:	58384- 1	58384- 2
2-chloronaphthalene:	ND<10	ND<10
2-nitroaniline:	ND<10	ND<10
acenaphthylene:	ND<10	ND<10
dimethylphthlate:	ND<10	ND<10
2,6-dinitrotoluene:	ND<10	ND<10
acenaphthene:	ND<10	ND<10
3-nitroaniline:	ND<10	ND<10
2,4-dinitrophenol:	ND<10	ND<10
dibenzofuran:	ND<10	ND<10
2,4-dinitrotoluene:	ND<10	ND<10
4-nitrophenol:	ND<10	ND<10
fluorene:	ND<10	ND<10
4-chlorophenyl-phenyle:	ND<10	ND<10
diethylphthlate:	ND<10	ND<10
4-nitroaniline:	ND<10	ND<10
4,6-dinitro-2-methylph:	ND<10	ND<10
n-nitrosodiphenylamine:	ND<10	ND<10
1,2-diphenylhydrazine:	ND<10	ND<10
4-bromo-phenyl-phenyle:	ND<10	ND<10
hexachlorobenzene:	ND<10	ND<10
pentachlorophenol:	ND<10	ND<10
phenanthrene:	ND<10	ND<10
anthracene:	ND<10	ND<10
di-n-butylphthlate:	ND<10	ND<10
fluoranthene:	ND<10	ND<10
benzidine:	ND<10	ND<10
pyrene:	ND<10	ND<10
butylbenzylphthlate:	ND<10	ND<10
3.3'-dichlorobenzidine:	ND<10	ND<10
Concentration:	ug/L	ug/L

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Project 20507-001-02
Reported 07-July-1994

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58384- 1	MW-1	Water
58384- 2	MW-2	Water

RESULTS OF ANALYSIS

Laboratory Number:	58384- 1	58384- 2
benzo[a]anthracene:	ND<10	ND<10
chrysene:	ND<10	ND<10
bis(2-ethylhexyl)phtha:	ND<10	ND<10
di-n-octylphthalate:	ND<10	ND<10
benzo(b,k)fluoranthene:	ND<10	ND<10
benzo[a]pyrene:	ND<10	ND<10
indeno[1,2,3-cd]pyrene:	ND<10	ND<10
dibenzo[a,h]anthracene:	ND<10	ND<10
benzo[g,h,i]perylene:	ND<10	ND<10
Concentration:	ug/L	ug/L
-- Surrogate % Recoveries --		
2-fluorophenol:	39	29
phenol-d5:	30	21
nitrobenzene-d5:	82	88
2-fluorobiphenyl:	91	96
2,4,6-tribromophenol:	76	82
terphenyl-d14:	93	96

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EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS
Quality Assurance and Control Data - Water
Laboratory Number 58384

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
bis(2-chloroethyl)ethe:	ND<10	10			
aniline:	ND<10	10			
phenol:	ND<10	10	41/42	10-72	2%
2-chlorophenol:	ND<10	10	81/83	55-93	2%
1,3-dichlorobenzene:	ND<10	10			
1,4-dichlorobenzene:	ND<10	10	79/83	50-103	5%
1,2-dichlorobenzene:	ND<10	10			
benzyl alcohol:	ND<10	10			
bis-(2-chloroisopropyl:	ND<10	10			
2-methylphenol:	ND<10	10			
hexachloroethane:	ND<10	10			
n-nitroso-di-n-propyla:	ND<10	10	82/86	45-121	5%
4-methylphenol:	ND<10	10			
nitrobenzene:	ND<10	10			
isophorone:	ND<10	10			
2-nitrophenol:	ND<10	10			
2,4-dimethylphenol:	ND<10	10			
bis(2-chloroethoxy)met:	ND<10	10			
2,4-dichlorophenol:	ND<10	10			
1,2,4-trichlorobenzene:	ND<10	10	86/87	53-92	1%
naphthalene:	ND<10	10			
benzoic acid:	ND<10	10			
4-chloroaniline:	ND<10	10			
hexachlorobutadiene:	ND<10	10			
4-chloro-3-methylpheno:	ND<10	10	78/78	56-94	0%
2-methyl-naphthalene:	ND<10	10			
hexaclorocyclopentadie:	ND<10	10			
2,4,6-trichlorophenol:	ND<10	10			
2,4,5-trichlorophenol:	ND<10	10			

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EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS
Quality Assurance and Control Data - Water
Laboratory Number 58384

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
2-chloronaphthalene:	ND<10	10			
2-nitroaniline:	ND<10	10			
acenaphthylene:	ND<10	10			
dimethylphthlate:	ND<10	10			
2,6-dinitrotoluene:	ND<10	10			
acenaphthene:	ND<10	10	88/91	60-100	3%
3-nitroaniline:	ND<10	10			
2,4-dinitrophenol:	ND<10	10			
dibenzofuran:	ND<10	10			
2,4-dinitrotoluene:	ND<10	10	88/87	43-94	1%
4-nitrophenol:	ND<10	10	24/22	1-75	9%
fluorene:	ND<10	10			
4-chlorophenyl-phenyle:	ND<10	10			
diethylphthlate:	ND<10	10			
4-nitroaniline:	ND<10	10			
4,6-dinitro-2-methylph:	ND<10	10			
n-nitrosodiphenylamine:	ND<10	10			
1,2-diphenylhydrazine:	ND<10	10			
4-bromo-phenyl-phenyle:	ND<10	10			
hexachlorobenzene:	ND<10	10			
pentachlorophenol:	ND<10	10	77/80	36-109	4%
phenanthrene:	ND<10	10			
anthracene:	ND<10	10			
di-n-butylphthlate:	ND<10	10			
fluoranthene:	ND<10	10			
benzidine:	ND<10	10			
pyrene:	ND<10	10	87/88	66-124	1%
butylbenzylphthlate:	ND<10	10			
3.3'-dichlorobenzidine:	ND<10	10			

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EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS
Quality Assurance and Control Data - Water
Laboratory Number 58384

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
benzo[a]anthracene:	ND<10	10			
chrysene:	ND<10	10			
bis(2-ethylhexyl)phtha:	ND<10	10			
di-n-octylphthalate:	ND<10	10			
benzo(b,k)fluoranthene:	ND<10	10			
benzo[a]pyrene:	ND<10	10			
indeno[1,2,3-cd]pyrene:	ND<10	10			
dibenzo[a,h]anthracene:	ND<10	10			
benzo[g,h,i]perylene:	ND<10	10			
2-fluorophenol:	45			21-110	
phenol-d5:	34			10-110	
nitrobenzene-d5:	67			35-114	
2-fluorobiphenyl:	76			43-116	
2,4,6-tribromophenol:	76			10-123	
terphenyl-d14:	75			33-141	

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
ug/L = Parts per billion (ppb)
QC File No. 58384

Cecilia G Joaquin 7/12/94
Senior Chemist
Account Manager

Certified Laboratories
1555 Burke St., Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

5884

NET NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

COMPANY: CENTURY WEST ENGINEERING
ADDRESS: 7950 DUBLIN BLVD, DUBLIN
PHONE: (510) 551-7724 FAX: (510) 551-7776
PROJECT NAME/LOCATION: JOHNNY LIN
PROJECT NUMBER: 20507-001-02
PROJECT MANAGER: J GRIBI

REPORT TO:
INVOICE TO:
P.O. NO.
NET QUOTE NO.

SAMPLED BY
Bob Bogan (PRINT NAME) Bob Bogan SIGNATURE
(PRINT NAME) SIGNATURE

ANALYSES

DATE	TIME	SAMPLE ID/DESCRIPTION	GRAB	COMP	# OF CONTAINERS TYPE	MATRIX	PRESERVED Y/N	TPH-G/BTEX	TPH-D/MO	TPH-G	624	625	COMMENTS
7/5		MW-1 (6 VOAS, 3 AMBER)			9	H_2O	Y			X	X	X	
7/5		MW-2 (6 VOAS, 3 AMBER)			9	"	Y			X	X	X	
7/6		MW-3 (4 VOAS, 1 AMBER)			5	"	Y	X					
7/5		MW-4 (4 VOAS, 1 AMBER)			5	"	Y	X					
7/5		MW-5 (4 VOAS, 2 AMBER)			5	"	Y	X	X				

Please initial: SS
Samples Stored in ice 40c
Appropriate containers
Samples preserved
VOA's without headspace
Comments:

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO
COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO
TEMPERATURE UPON RECEIPT:

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS DATE

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED FOR NET BY:
Bob Bogan	5:38 pm 7/5/94	S/A Fedal #736	7/5/94 3:40pm S/A Fedal	7/5/94 4:40pm	

METHOD OF SHIPMENT

REMARKS: Received by Sapelsya S/A-SF 7/5/94 4:40 PM

OCEAN

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK