
LAW OFFICES OF
TOMMY A. CONNER

ARTESIAN ENVIRONMENTAL
CORPORATION

444 De Haro Street
Suite 121
San Francisco, CA 94107
Tel 415-621-3939
Fax 415-621-3999

February 3, 1998

#4610

Alameda County Health Care Services
Environmental Health Services
ATTN : Mr. Barney Chan
1131 Harbor Bay Parkway, Suite 250
Alameda, California 95402-6577

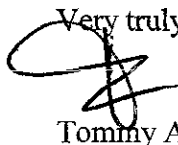
Re: *Groundwater Sampling Point Installation and Sampling Report*
3927 East 14th Street
Oakland, California

Dear Mr. Chan:

Enclosed is a copy of the *Groundwater Sampling Installation and Sampling Report* prepared for Ruben Hausauer's 3927 East 14th Street, Oakland, California site. This report documents the installation of an additional groundwater monitoring well and the results of the groundwater monitoring performed at the well. Groundwater monitoring was performed on 18 November 1997 by Artesian Environmental personnel. This report was prepared by Artesian Environmental at the request of Ruben Hausauer.

If you have any questions or comments, please call either Artesian Environmental at (510) 307-9943, or me at (415) 621-3939. Thank you for your time and attention.

Very truly yours,



Tommy A. Conner

TAC:syr/Enclosure

cc: State Water Resources Control Board (w/encl)
P. O. Box 944212
Sacramento, California 94244-2120

Regional Water Quality Control Board (w/encl)
ATTN: Fuel Leaks
2101 Webster Street, Suite 500
Oakland, CA 94612

DOCUMENT PREPARED BY ARTESIAN ENVIRONMENTAL

ARTESIAN ENVIRONMENTAL

January 30, 1998



Mr. Ruben Hausauer
c/o The Law Offices of Tommy A. Conner
444 De Haro Street, Suite 121
San Francisco, California 94107

RE: Groundwater Sampling Point Installation and Sampling Report
3927 East 14th Street
Oakland, California

Dear Mr. Conner:

Artesian Environmental Consultants (Artesian) has been retained by Ruben Hausauer (Client) to install and sample one groundwater monitoring well (HMW-4) in the down gradient direction of a former underground storage tank (UST) at 3927 East 14th Street in Oakland, California (Site) (Figures 1 and 2). The work was requested by the Alameda County Health Care Services Agency (ACHCSA). The work was authorized by the client by a signed contract dated August 13, 1997.

BACKGROUND

The Hausauer site is presently occupied by New Genico, an auto repair facility. The site is located in a commercial and residential area at 3927 East 14th Street at 40th Avenue in Oakland, California. The site is at an elevation of approximately 30 feet above mean sea level (MSL) in western Alameda County. The Brooklyn Basin Tidal Channel is approximately 3/4 mile to the south west. The site lies in a gently sloping plain dipping south west towards San Francisco Bay. The Oakland Hills are located approximately 2 miles to the north east.

One 550 gallon UST was removed from beneath the sidewalk along 40th Avenue in August 1996. Soil samples collected from beneath the UST contained up to 5,000 milligrams per kilogram (mg/kg) (equivalent to parts per million [ppm]) total petroleum hydrocarbons as motor oil (TPH-mo), 1,700 ppm total petroleum hydrocarbons as diesel (TPH-d), and 940 ppm total petroleum hydrocarbons as gasoline (TPH-g). Groundwater samples collected from groundwater monitoring well MW-1 (closest to the former UST) contained 7,400 micrograms per liter ($\mu\text{g/L}$) (equivalent to parts per billion [ppb]) TPH-g and 1,200 ppb benzene. The furthest down gradient well (MW-2) contained 6,300 ppb TPH-g, 7,400 ppb TPH-d, 2,100 ppb TPH-mo and 170 ppb benzene. Several subsurface investigations have occurred at the Hausauer site since September 1993. There are presently four groundwater monitoring wells at the Hausauer site including the new groundwater sampling point.

An adjacent site (Motor Partners site) located southwest (cross-gradient) of the Hausauer site, is reported to have petroleum impacted soil and groundwater associated with two former USTs located at 1234 40th Avenue. A 1,000 gallon gasoline UST and a 500 gallon waste oil UST were removed from the site in October 1990. Soil samples collected from beneath the USTs contained up to 1,600 ppm TPH-g and 650 ppm TPH-d. Groundwater samples collected from Motor Partners monitoring well MW-1 contained

67,000 ppb TPH-g, 53,000 TPH-d, and 1,200 ppb benzene. There are presently four groundwater monitoring wells at the Motor Partners site.

GROUNDWATER SAMPLING POINT INSTALLATION

On November 18, 1997, Artesian drilled and installed one groundwater monitoring well using a direct push technology (DPT) drill rig. A groundwater monitoring well construction permit was obtained from the Alameda County Public Works Agency Water Resource Section and an excavation permit was obtained from the City of Oakland Office of Planning and Building. Underground utilities were located by Underground Service Alert (USA) prior to drilling. Artesian provided additional limited magnetic and induction line locating services to aid in locating other buried pipes and utilities prior to drilling. Groundwater monitoring well HMW-4 is located approximately 250 feet in the down gradient of the former UST and approximately 100 feet down gradient of groundwater monitoring well HMW-2. Figure 2 shows the groundwater monitoring well locations.

The drilling was performed by Artesian, a California-licensed driller (C-57 624461). Logging of soils encountered was performed by a geologist under the direct supervision of a California Registered Geologist using the Unified Soils Classification System (ASTM D2488-90). The boring log and well completion diagram are attached. A copy of the well installation permit, excavation permit and the State Department of Water Resources (DWR Form 188) well registry are attached. Drill cuttings were placed in a labeled 5-gallon DOT pail pending disposal.

Soil samples were collected continuously using a 4-foot drive sampler equipped with polyethylene terephthalate glycol (PETG) liners for logging purposes. Soil samples were screened for organic vapors in the field using a photoionization detector (PID). PID readings are presented on the boring log. A soil sample was collected from immediately above the current groundwater table for chemical analyses. The soil sample was stored in a refrigerated environment and transported under chain-of-custody control to a California state certified laboratory. Artesian's standard operating procedures for groundwater monitoring well installation, organic vapor screening and soil sampling are attached.

The boring was hand augured to 5 feet below ground surface (bgs) with a 6-inch diameter auger, the remainder of the boring was drilled with DPT equipment to form a 2.2-inch diameter boring from 5 to 19 feet bgs. Ten feet of prepack screen and 5 feet of riser were lowered down the open borehole. The prepack screen is constructed of 1.6-inch outside diameter (OD) and 0.60-inch inside diameter (ID) Schedule 40 PVC. The prepack screen consists of 0.010-inch slotted PVC packed with Monterey No. 2/12 sand. The well riser consist of 0.6-inch ID schedule 40 PVC. Additional sand was placed 1-foot above the prepack and sealed with 2-feet of hydrated bentonite pellets, the remaining annulus was sealed with neat cement and capped with a traffic rated, weather tight well box set in concrete.

On December 10, 1997, David L. Contreras, a licensed surveyor, surveyed the top of the well casing for HMW-4 as well as monitoring wells HMW-1, HMW-2, and HMW-3 within 0.01 foot accuracy horizontally and vertically. The monitoring well survey map is attached.

Groundwater monitoring well HMW-4 was developed on November 24, 1997 by surging, followed by purging with a peristaltic pump. Development purge water was temporarily stored on site in labeled 5-gallon DOT pail pending disposal.

GROUNDWATER MONITORING WELL SAMPLING

On November 26, 1997, Artesian measured depth to water from groundwater monitoring well HMW-4. (Groundwater monitoring wells HMW-1, HMW-2, and HMW-3 were sampled by ATC Environmental on the same day.) The well was purged by pumping a minimum of three well casing volumes of groundwater while pH, temperature, and electrical conductivity were measured between each well casing volume. The well was considered stabilized and ready for sampling when two subsequent measurements of these three parameters were within 10% of each other. Groundwater samples were collected using a peristaltic pump and new disposable polyethylene tubing, and decanted into labeled bottles supplied by the laboratory. In order to reduce the loss of volatile hydrocarbons, samples for TPH-g and BTEX analysis were dispensed from the bailer into labeled 40-milliliter volatile organic analysis (VOA) vials. The VOA vials were filled completely, leaving no head space. Groundwater samples collected for TPH-d and TPH-mo were contained in labeled 950 milliliter amber bottles. The samples were stored in a refrigerated environment and transported under chain-of-custody control to a California state certified laboratory for the analyses requested. Artesian's standard operating procedures for well sampling are attached. Purge water was temporarily stored on site in labeled 5-gallon DOT pails pending disposal.

SUBSURFACE CONDITIONS

Soil encountered in boring was generally brown silty clay from the concrete paved surface to 7 feet bgs; gray silty clay from 7 to 9 feet bgs; gray, silty sand from 9 to 10 feet bgs; gray, gravelly silty sand from 10 to 16 feet bgs; orange brown silty clay from 16 feet bgs to total explored depth. See the attached Log of Boring for detailed soil descriptions.

Depth to water measured from the groundwater monitoring well HMW-4 on November 26, 1997 was 7.42 feet. Depth to water measurements are presented on Table 1.

LABORATORY ANALYTICAL RESULTS

The soil sample collected during the drilling of groundwater monitoring well HMW-4 was analyzed by McCampbell Analytical Inc. (McCampbell) of Pacheco, California, for TPH-g and TPH-d and TPH-mo by EPA Method 8015M and Methyl tert-Butyl Ether (MTBE) and BTEX by EPA Method 8020. The groundwater samples collected from the new groundwater monitoring well was analyzed by McCampbell for TPH-g and TPH-d and TPH-mo by EPA Method 8015M and MTBE and BTEX by EPA Method 8020.

The soil sample collected during the drilling of groundwater monitoring well HMW-4 was reported by the laboratory to contain 29 ppm of an unknown hydrocarbon in the TPH-g range, 14 ppm of an unknown hydrocarbon in the TPH-d range, 0.070 ppm toluene and 0.19 ppm total xylenes. TPH-mo, benzene, ethyl benzene and MTBE were not detected in the soil sample.

The groundwater sample collected from groundwater monitoring well HMW-4 contained 1,600 ppb of an unknown hydrocarbon in the TPH-g range, 400 ppb TPH-d, 4.2 ppb benzene, 3.1 ppb toluene, 1.7 ppb ethyl benzene, and 5.9 ppb total xylenes. TPH-mo and MTBE were not detected in the groundwater sample. Laboratory reports, quality assurance forms, and the chain of custody records are attached. Laboratory analytical results for soil and groundwater samples are summarized in Table 2.

SUMMARY

One small diameter groundwater monitoring well was installed approximately 100 feet in the approximate down gradient direction from monitoring well HMW-2. Laboratory results of the groundwater sample collected from groundwater monitoring well HMW-4 during this sampling event indicate that groundwater approximately 250 feet the former UST is impacted with petroleum hydrocarbons. No free product was observed in the groundwater from HMW-4. Groundwater monitoring wells HMW-1, HMW-2, and HMW-3 were sampled the same day by ATC Environmental. California Department of Health Services Maximum Contaminant Levels (MCLs) for drinking water standards were exceeded only for benzene in the groundwater sample collected from monitoring well HMW-4. Groundwater at the site is approximately 7.5 feet bgs.

LIMITATIONS

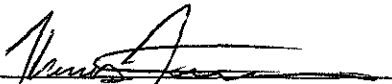
The authors and firm offer no assurance and assume no responsibility for site conditions or activities which were beyond the scope of work requested by the client and referenced in the introduction of this report. The compensation agreed to by the client and the firm corresponds to the scope of work defined, with the associated limitations which are an integral and important part of this report. This report was prepared with generally accepted standards of environmental geological practice in California at the time this investigation was performed. This investigation was conducted solely as a tool in assessing environmental conditions of the soil and/or groundwater with respect to relative hydrocarbon product contamination in the immediate vicinity of the former underground storage tanks. No soil engineering or geotechnical recommendations are implied or should be inferred.

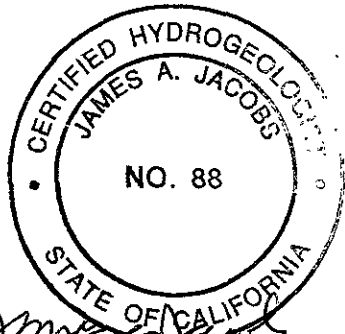
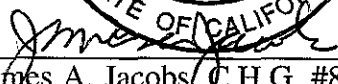
Evaluation of the geological conditions at the site for the purpose of this investigation is made from a limited number of observation points. There may be variations in subsurface conditions away from the sample points available. There are no representations, warranties, or guarantees that the points selected for sampling are in any way representative of the entire site. Data from this report reflects the sample conditions at specific locations at a specific point in time. No other interpretations, representations, warranties, guarantees, express or implied, are included or intended by this report. Additional work, including further subsurface investigation, can reduce the inherent uncertainties associated with this type of investigation.

This project involved hazardous or toxic compounds and there are certain inherent risk factors involved (such as limitations on laboratory or analytical methods or equipment, variations in subsurface conditions, and risks associated with specific analysis not requested by the client), which may adversely affect the results of the project, even though the services were performed with such skill and care as are generally accepted professional standards for the environmental geology profession.

This report and all matters contained herein were prepared for the sole and exclusive benefit of the client specified herein, and is intended only for the use of the client. Neither all, nor any part of the contents of this report, or copy thereof, shall be used for any purpose by anyone but the client specified herein. Any person or entity who obtains or reads this report, or copy thereof, other than the client specified herein, expressly assumes all risk of damages to himself or third person arising out of reliance thereon or use thereof and waives the right to bring any action based on this report, directly or indirectly, and the author shall have no liability to any such person or entity.

Sincerely,
Artesian Environmental Consultants


Thomas Fortner
Project Geologist



James A. Jacobs, C.H.G. #88
Certified Hydrogeologist

TABLES

ARTESIAN ENVIRONMENTAL CONSULTANTS

TABLE 1: SUMMARY OF GROUNDWATER ELEVATION DATA
Groundwater Monitoring Well Installation
Hausauer Property
3927 East 14th Street
Oakland, California

Well Number	Date Measured	TOC Elevation (feet MSL)	DTW (feet)	Groundwater Elevation (feet MSL)
HMW-4	11/18/97	28.80	7.42	21.38

NOTES:

TOC Top of Casing

MSL Mean Sea Level

DTW Depth to Water

Monitoring Well Surveyed 12/10/97

ARTESIAN ENVIRONMENTAL CONSULTANTS

TABLE 2: SUMMARY OF SOIL AND GROUNDWATER LABORATORY ANALYTICAL DATA
Groundwater Monitoring Well Installation
Hausauer Property
3927 East 14th Street
Oakland, California

Soil Sample

Sample Number	Date Sampled	TPH-g mg/Kg	TPH-d mg/Kg	TPH-mo mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl Benzene mg/Kg	Total Xylenes mg/Kg	MTBE µg/L
HMW-4 ¹²	11/18/97	29†	14†	<0.005	<0.005	0.070	<0.005	0.19	<0.25

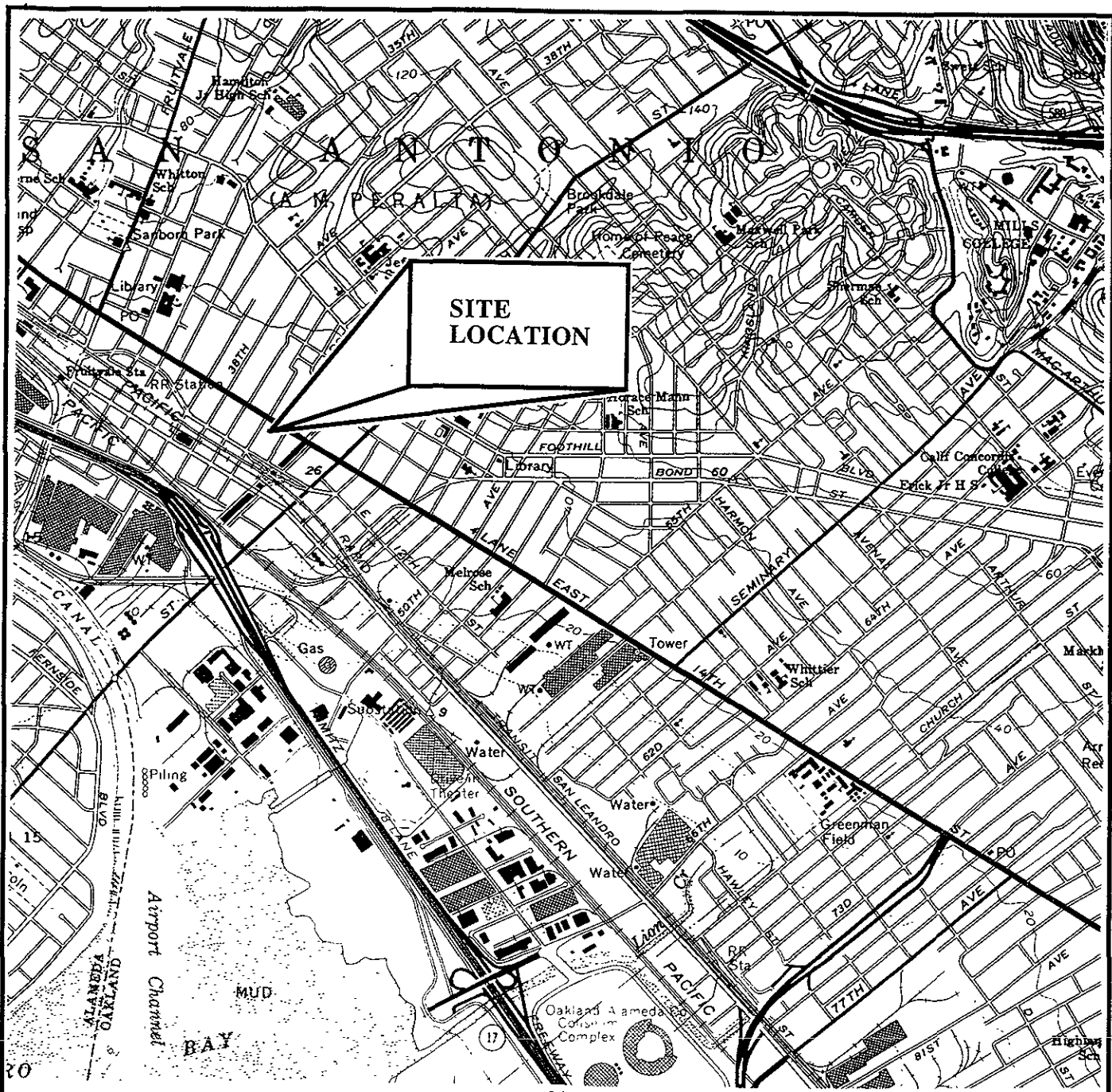
12' is within capillary zone & is indicative of gw contamination

Groundwater Sample

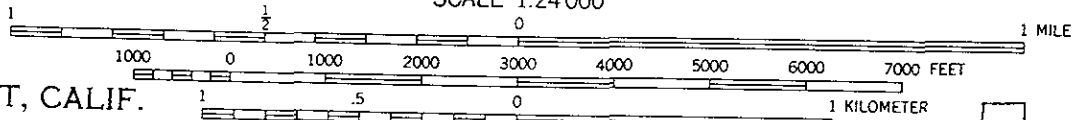
Sample Number	Date Sampled	TPH-g µg/L	TPH-d µg/L	TPH-mo µg/L	Benzene µg/L	Toluene µg/L	Ethyl Benzene µg/L	Total Xylenes µg/L	MTBE µg/L
HMW-4	11/26/97	1,600†	400	<250	4.2	3.1	1.7	5.9	<62
MCL		ns	ns	ns	1	150	700	1,750	ns

- TPH-g Total Petroleum Hydrocarbons as gasoline, analysis by EPA Method 8015M
- TPH-d Total Petroleum Hydrocarbons as diesel, analysis by EPA Method 8015M
- TPH-mo Total Petroleum Hydrocarbons as motor oil, analysis by EPA Method 8015M
- mg/Kg milligrams per Kilogram (equivalent to ppm)
- µg/L micrograms per liter (equivalent to ppb)
- ns No Standard
- MTBE Methyl tert-Butyl Ether, analysis by EPA Method 8020
- BTEX Benzene, Toluene, Ethyl benzene, and Total Xylenes, analysis by EPA Method 8020
- MCL Maximum Contaminant Level Established by the State of California Department of Health Services Water Quality Goals-Human Health and Welfare

FIGURES



SCALE 1:24 000



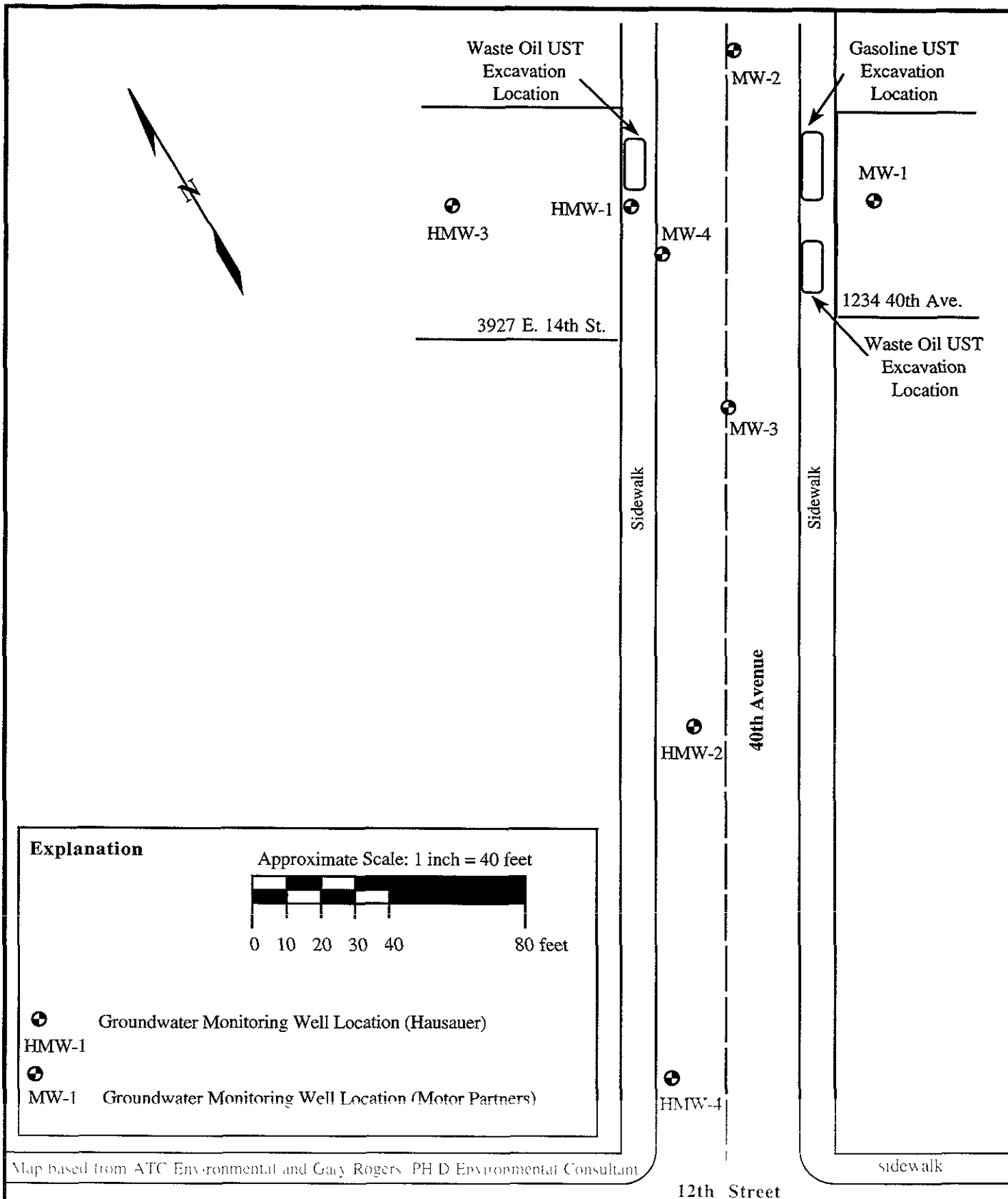
OAKLAND EAST, CALIF.

SW/4 CONCORD 15' QUADRANGLE
N3745—W12207.5/7 5

1959
PHOTOGRAPHIC SURVEY
U.S. GEOLOGICAL SURVEY



<p>ARTESIAN ENVIRONMENTAL 229 Tewksbury Avenue Point Richmond California 94801 Phone (510) 307-9943 Fax (510) 232-2823</p>		<p>SITE LOCATION MAP Hansauer Property 3927 East 14th Street Oakland California</p>	
<p>Project No. 197-002-01</p>	<p>Date 4/8/97</p>	<p>Prepared by T. Forner</p>	<p>Figure 1</p>



Explanation

Approximate Scale: 1 inch = 40 feet

0 10 20 30 40 80 feet

⊕ Groundwater Monitoring Well Location (Hausauer)
HMW-1

⊙ Groundwater Monitoring Well Location (Motor Partners)
MW-1

Map based from ATC Environmental and Gay Rogers, PH.D Environmental Consultant

12th Street

ARTESIAN ENVIRONMENTAL
229 Tewksbury Avenue
Point Richmond, California 94801
Phone (510) 307-9943 Fax (510) 232-2823

SITE MAP
Hausauer Property
3927 East 14th Street
Oakland, California

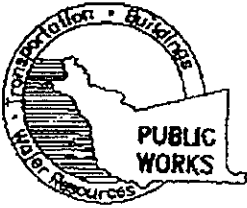
Project No. 197-002-01

Date 1/8/98

Prepared By T. Fortner

Figure 2

ATTACHMENTS



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 40th AVE @ ^E 12th Street
Oakland, CA

PERMIT NUMBER 97WR 210
WELL NUMBER _____
APN _____

California Coordinates Source _____ ft. Accuracy ± _____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

CLIENT
Name Ruben Hausauer
Address 3927 East 14th Street Phone _____
City Oakland CA Zip _____

(A) GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA 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.

APPLICANT
Name Artesian Environmental
Thomas Fortner Fax (510) 232-2728
Address 229 Tewkesbury Ave Phone (510) 307-9443
City Joint Richmond CA Zip 94801

B. WATER SUPPLY WELLS

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.

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Monitoring	<input checked="" type="checkbox"/>	Well Destruction	<input type="checkbox"/>

(C) GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet. → 5 feet

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>

D. 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.

E. CATHODIC

Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION

See attached.

G. SPECIAL CONDITIONS

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	Direct Push	

DRILLER'S LICENSE NO. 624461

WELL PROJECTS

Drift Hole Diameter	<u>6"</u> in.	Maximum	
Casing Diameter	<u>1</u> in.	Depth	<u>20</u> ft.
Surface Seal Depth	<u>3.5</u> ft.	Number	<u>1 (AMW-4)</u>

GEOTECHNICAL PROJECTS

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

ESTIMATED STARTING DATE 11/15/97

ESTIMATED COMPLETION DATE 11/15/97

APPROVED

DATE

11/17/97

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 77-58

APPLICANT'S SIGNATURE

DATE 11/6/97

Job Site 3927 INTERNATIONAL BL

Parcel# 033 -2156-004-01

App# X9701353

Descr installation of monitoring well . site location at 40th av. Permit Issued 11/13/97.

Work Type EXCAVATION-PRIVATE P

USA #

Util Co. Job #
Util Fund #

Acctg#:

Applicant

Phone#

Lic#

License Classes

Owner HAUSAUER RUBEN & CATHERINE

Contractor ARTESIAN ENVIRONMENTAL CONSULT X

Arch/Engr

Agent

Applic Addr 3100 KERNER BLVD, SAN RAFAEL CA, 94901

(415)257-4801 624461 A C57 B

\$246.00 TOTAL FEES PAID AT ISSUANCE	
\$41.00 Applic	\$205.00 Permit
\$.00 Process	\$.00 Rec Mgmt
\$.00 Gen Plan	\$.00 Invstg
\$.00 Other	

CITY OF OAKLAND



EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL
ENGINEERING

PAGE 2 of 2

PERMIT NUMBER X 9701353		SITE ADDRESS/LOCATION 3927 INTERNATIONAL SL
APPROX. START DATE	APPROX. END DATE	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number)
CONTRACTOR'S LICENSE # AND CLASS		CITY BUSINESS TAX #

ATTENTION:

- State law requires that the contractor/owner call *Underground Service Alert (USA)* two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1 (800) 642-2444. UNDERGROUND SERVICE ALERT (USA) #: _____
- 48 hours prior to starting work, YOU MUST CALL (510) 238-3651 TO SCHEDULE AN INSPECTION.**

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than \$500):

I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).

I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).

I am exempt under Sec. _____, B&PC for this reason _____

WORKER'S COMPENSATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).

Policy # _____ Company Name _____

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars (\$100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Chapter 6, Article 2 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law

Signature of Permittee <i>[Signature]</i>		Date 11/13/97	
<input type="checkbox"/> Agent for <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Owner			
DATE STREET LAST RESURFACED 1972	SPECIAL PAVING DETAIL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
ISSUED BY <i>M. Miller</i>		DATE ISSUED 11/13/97	

for 70TH AVE. (WELL LOCATION)
624461

UNIFIED SOIL CLASSIFICATION SYSTEM - ASTM D2488

MAJOR DIVISIONS		SYMBOL / GRAPHIC	DESCRIPTIONS
COARSE GRAINED SOILS (>50% by weight larger than #200 sieve)	GRAVEL AND GRAVELLY SOILS (more than 50% of coarse fraction is larger than the # 4 sieve)	Clean Gravels (little or no fines)	GW Well Graded Gravels, Gravels - Sand Mixtures
		Gravels With Fines (appreciable amount of fines)	GP Poorly Graded Gravels, Gravel - Sand Mixtures
			GM Silty Gravels, Gravel - Sand - Silt Mixtures
			GC Clayey Gravels, Gravel - Sand - Clay Mixtures
	SAND AND SANDY SOIL (more than 50% of coarse fraction is smaller than the #4 sieve)	Clean Sands (little or no fines)	SW Well Graded Sands, Gravelly Sands
		Sands With Fines (appreciable amount of fines)	SP Poorly Graded Sands, Gravelly Sands
			SM Silty Sands, Poorly Graded Sand - Silt Mixtures
			SC Clayey Sands, Poorly Graded Sand - Clay Mixtures
FINE GRAINED SOILS (>50% smaller than #200 sieve)	SILTS AND CLAYS (liquid limit less than 50)	ML Inorganic Silts and Very Fine Sands, Silty or Clayey Fine Sands	
		CL Inorganic Clays of Low to Medium Plasticity; Gravelly, Sandy or Silty Clays; Lean Clays	
		OL Organic Silts and Organic Silty Clays of Low Plasticity	
	SILTS AND CLAYS (liquid limit greater than 50)	MH Inorganic Silts, Micaceous or Diatomaceous Fine Sand or Silty Soils, Elastic Silts	
		CH Inorganic Clays of High Plasticity, Fat Clays	
		OH Organic Clays of Medium to High Plasticity, Organic Silts	
HIGHLY ORGANIC SOILS		PT Peat and Other Highly Organic Soils	



Indicates First Water



Indicates Static Water



Indicates Submitted Sample

hgs

below ground surface

PID

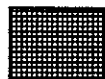
Photo-ionization detector readings

NR

No Recovery



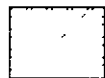
Asphalt



Concrete



Cement Grout

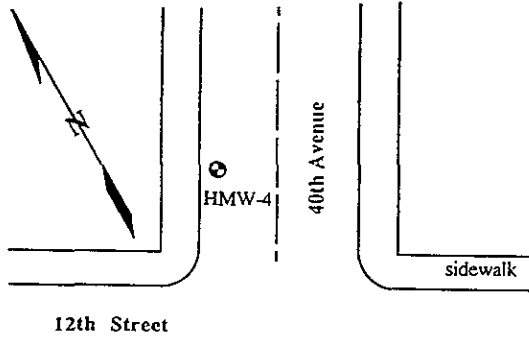


Pea Gravel

Artesian Environmental Consultants
229 Tewksbury Avenue
Point Richmond, California 94801

KEY TO BORING LOGS

LOG OF BORING HMW-4



Hausauer-New Genico

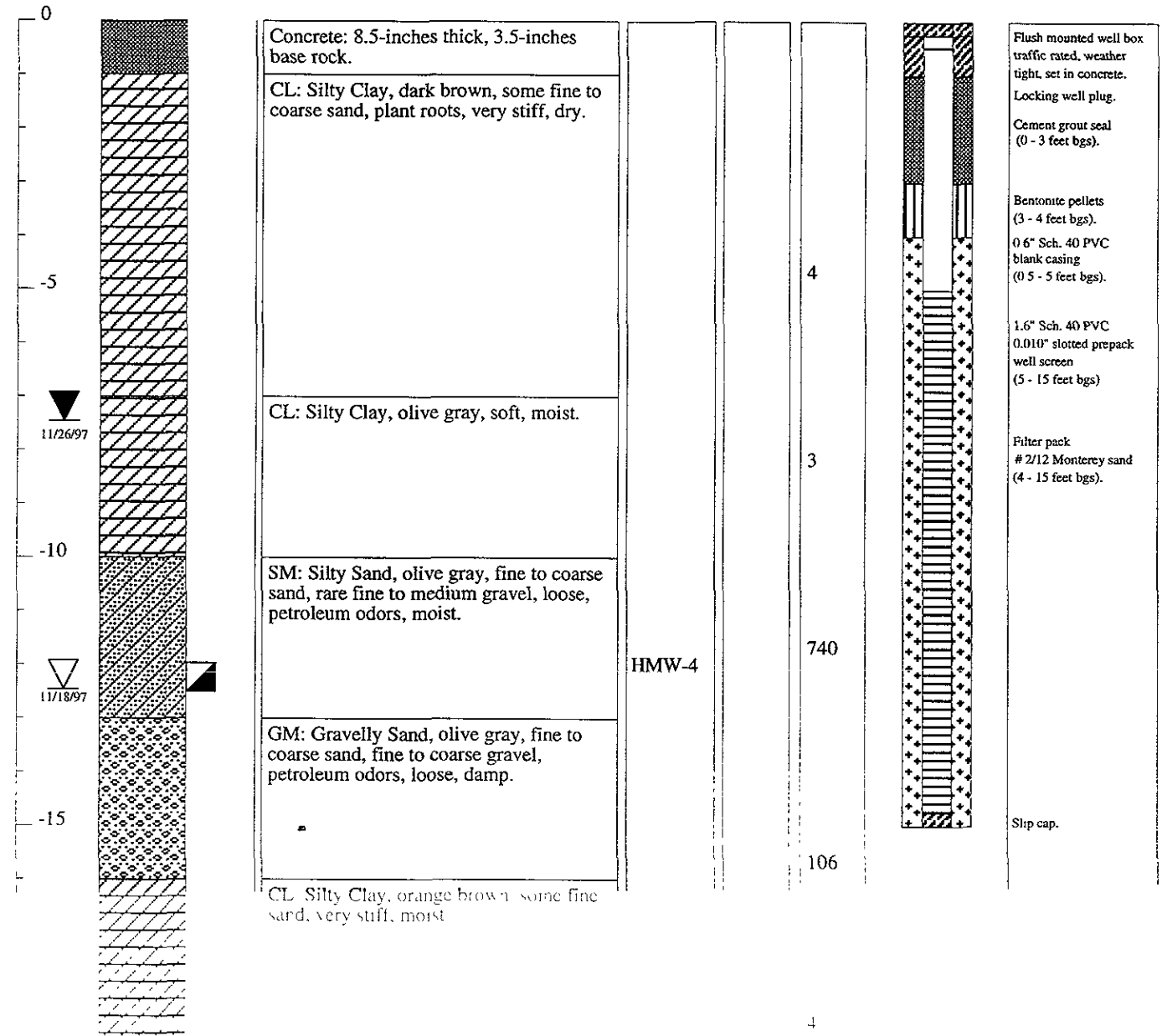
3927 East 14th Street
Oakland, California

DATES DRILLED:	11/18/97	SAMPLING METH.:	2.2-inch MacroCore
DRILLING CO.:	Artesian	TOTAL DEPTH:	19 feet bgs
DRILL TOOLS:	Geoprobe 420U	LOGGED BY:	T. Fortner
DRILLER:	T. Fortner	DATE DEV.:	11/24/97
PROJECT MANAGER:	T. Fortner	DRAWN BY:	T. Fortner
ARTESIAN JOB NO.:	197-002-01	DRAW DATE:	1/7/98

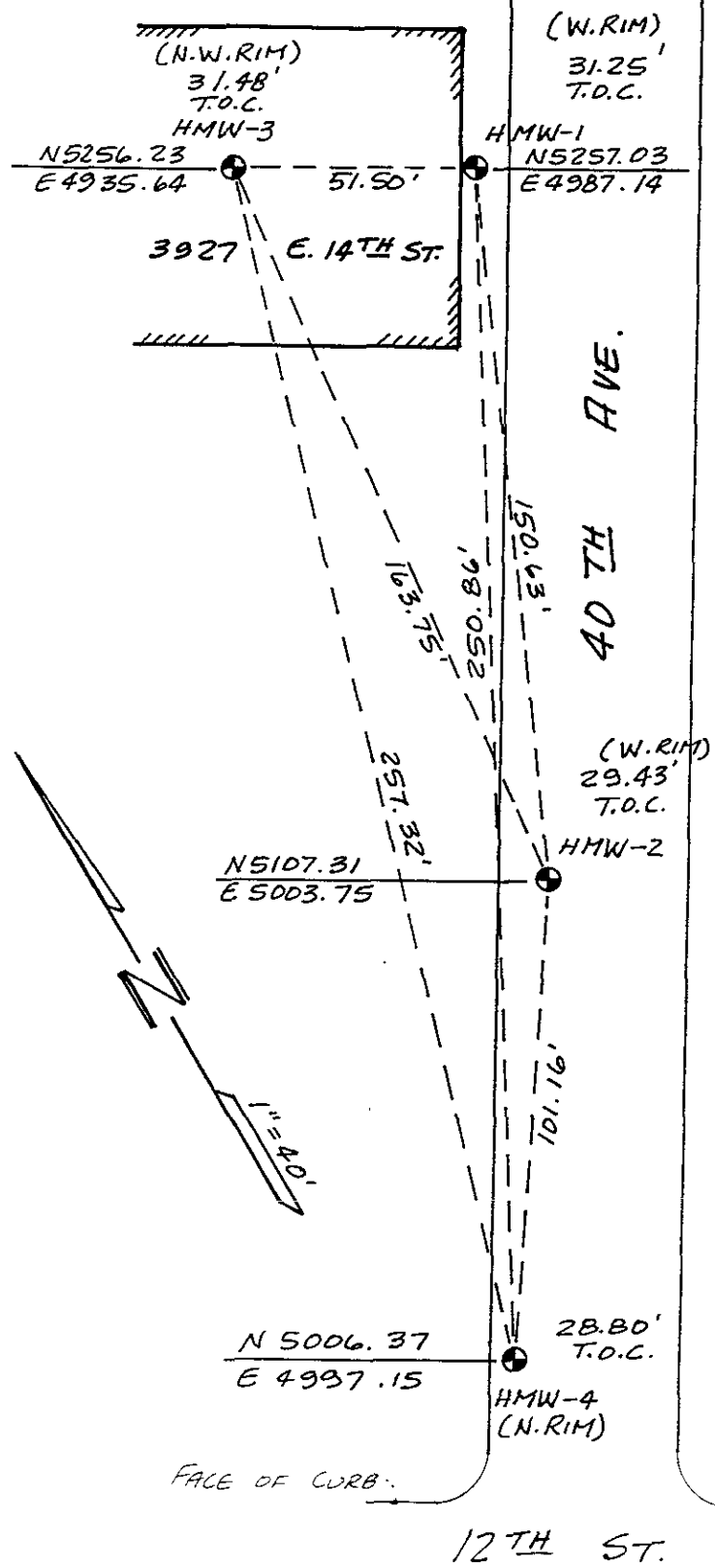
ARTESIAN ENVIRONMENTAL CONSULTANTS

229 Tewksbury Avenue, Point Richmond, California 94801
TEL (510) 307-9943 • FAX (510) 232-2823

DEPTH (feet)	SOIL SYMBOLS/ FIELD TEST DATA	SOIL DESCRIPTION	SAMPLE NO.	BLOWS /6 in.	PID ppm	COMPLETION DIAGRAM	DESCRIPTION
--------------	----------------------------------	------------------	------------	--------------	---------	--------------------	-------------



MONITORING WELL SURVEY
 OF
 3927 EAST 14TH ST.
 OAKLAND, CALIFORNIA
 FOR
ARTESIAN ENVIRONMENTAL
 DAVID L. CONTRERAS, LAND SURVEYOR
 (415) 892-5905
 20 VIVIAN CT. NOVATO, CA
 SCALE: 1" = 40' DECEMBER 10, 1997



- NOTES
- 1) PUNCH MARK SET AT TOP OF CASING (AS NOTED) AT WELLS HMW-1 THROUGH HMW-4 IS BASIS OF MEASUREMENT OF COORDINATES, DISTANCES AND ELEVATIONS.
 - 2) ELEVATION DATUM: ELEVATION OF HMW-1 = 31.25', HMW-2 = 29.43', HMW-3 = 31.48'; ALL VALUES SUPPLIED BY ARTESIAN ENVIRONMENTAL. THESE VALUES FIT FIELD MEASUREMENTS OF THIS SURVEY, AND WERE THE BASIS FOR DETERMINING THE ELEVATION OF HMW-4.

LICENSED LAND SURVEYOR
 DAVID L. CONTRERAS
 5085
 STATE OF CALIFORNIA
 L S 5065
 LIC 6-30-99

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

9919 XA 11

McCAMPBELL ANALYTICAL

110 2nd AVENUE, # D7

PACHECO, CA 94553

(510) 798-1820

FAX (510) 798-1822

CHAIN OF CUSTODY RECORD

TURN AROUND TIME:

RUSH

24 HOUR

48 HOUR

5 DAY

REPORT TO: *Thomas Fortner* BILL TO:

COMPANY: *Artesian Environmental*

229 Tewksbury Ave

Point Richmond, CA 94801

TELE: FAX #

PROJECT NUMBER: *197-002-01* PROJECT NAME: *Hausaver*

PROJECT LOCATION: *Oakland* SAMPLER SIGNATURE: *[Signature]*

ANALYSIS REQUEST

OTHER

BTEX & TPH as Gasoline (602/8020 & 8015)MFC	<input checked="" type="checkbox"/>
TPH as Diesel (8015) & Motor Oil	<input checked="" type="checkbox"/>
Total Petroleum DI & Grease (5520 ERF/2020 B1F)	<input type="checkbox"/>
Total Petroleum Hydrocarbons (418.1)	<input type="checkbox"/>
EPA 601/8010	<input type="checkbox"/>
EPA 602/8020	<input type="checkbox"/>
EPA 608/8080	<input type="checkbox"/>
EPA 608/8080 - PCBs Dly	<input type="checkbox"/>
EPA 624/8240/8260	<input type="checkbox"/>
EPA 625/8270	<input type="checkbox"/>
CAH - 17 Metals	<input type="checkbox"/>
EPA - Priority Pollutant Metals	<input type="checkbox"/>
LEAD (7240/7421/2392/6010)	<input type="checkbox"/>
ORGANIC LEAD	<input type="checkbox"/>
PCU	<input type="checkbox"/>

83193

COMMENTS

SAMPLE ID	LOCATION	SAMPLING		# CONTAINERS	TYPE CONTAINERS	MATRIX					METHOD PRESERVED		
		DATE	TIME			WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HRD,	OTHER
<i>13MW-412</i>		<i>11/12/97</i>	<i>16:32</i>	<i>1</i>	<i>PETG</i>		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

ICE/CAP:
 GOOD CONDITION:
 HEAD SPACE ABSENT:

VOAS: O&G: METALS: OTHER:
 PRESERVATION APPROPRIATE:
 CONTAINERS:

RELINQUISHED BY: <i>[Signature]</i>	DATE: <i>11/19/97</i>	TIME: <i>14:35</i>	RECEIVED BY: <i>[Signature]</i>
RELINQUISHED BY: <i>[Signature]</i>	DATE: <i>11-19-97</i>	TIME: <i>1510</i>	RECEIVED BY: <i>[Signature]</i>
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY LABORATORY:

REMARKS:



McCAMPBELL ANALYTICAL INC.

110 Second Avenue South, #D7, Pacheco, CA 94553
Telephone : 510-798-1620 Fax : 510-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

Artesian Environmental 229 Tewksbury Avenue Point Richmond, CA 94801	Client Project ID: #197-002-01; Hausauer	Date Sampled: 11/18/97
		Date Received: 11/19/97
	Client Contact: Thomas Fortner	Date Extracted: 11/19/97
	Client P.O:	Date Analyzed: 11/19/97

11/26/97

Dear Tom:

Enclosed are:

- 1). the results of 1 samples from your #197-002-01; Hausauer project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director



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Artesian Environmental 229 Tewksbury Avenue Point Richmond, CA 94801	Client Project ID: #197-002-01; Hausauer	Date Sampled: 11/18/97
		Date Received: 11/19/97
	Client Contact: Thomas Fortner	Date Extracted: 11/19/97
	Client P.O:	Date Analyzed: 11/19/97

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*
 EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) [†]	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
83193	HMW-4-12	S	29 _j	ND<0.25	ND	0.070	ND	0.19	132 [#]
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	5.0	0.5	0.5	0.5	0.5	
	S		1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sediment samples in mg/kg, and all TCLP and SPLP extracts in ug/L

[†] Total petroleum chromatogram sample peak coelutes with surrogate

The following descriptions of the TPH chromatogram were used to generate Method 5030. Method 5030 is not responsible for (a) petroleum or non-petroleum or weakly modified gasoline (e.g. from a motor vehicle) if gasoline compounds are significantly lighter than gasoline, (b) lighter gasoline range compounds (e.g. motor vehicle exhaust) if gasoline range compounds having broad chromatographic peaks are significant, biologically altered gasoline (e.g. TPH from a refinery) if gasoline compounds are significantly lighter than gasoline, (c) a few isolated peaks present, (d) strongly aged gasoline or diesel, (e) diesel, (f) diesel lighter than water, (g) miscible liquids, (h) liquid sample that contains greater than 5% oil, (i) sediment (e.g. petroleum, diesel, etc.)



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Artesian Environmental 229 Tewksbury Avenue Point Richmond, CA 94801	Client Project ID: #197-002-01; Hausauer	Date Sampled: 11/18/97
		Date Received: 11/19/97
	Client Contact: Thomas Fortner	Date Extracted: 11/19/97
	Client P.O:	Date Analyzed: 11/19/97

Diesel Range (C10-C23) and Oil-Range (C18+) Extractable Hydrocarbons as Diesel and Motor Oil*
 EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) ⁺	TPH(mo) ⁺	% Recovery Surrogate
83193	HMW-4-12	S	14,d,b	ND	106
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	250 ug/L	
	S		1.0 mg/kg	5.0 mg/kg	

*Water samples are reported in ug/L, wipe samples in ug/wipe. Solid phase extracts are reported as TPH, SHC, SPP extracts in ug/L.

⁺ Colored chromatogram resulting in co-eluted surrogate due to presence of surrogate below detection limit or surrogate has been diminished by dilution of original extract.

The following descriptions of the TPH chromatogram are given for the MCL system. A station is not responsible for detection of a non-diesel or weakly modified diesel if significant diesel range compounds are significant, no recognizable portion of diesel range compounds are significant, or a gasoline range compound is present in the sample that does not match diesel. If only one or a few isolated peaks present, gasoline range compounds are significant, or the sample is a miscellaneous blend is present in a liquid sample that contains greater than 5 vol % sediment.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 11/19/97

Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		RPD
	Sample (#79459)	MS	MSD		MS	MSD	
TPH (gas)	0.000	1.803	1.806	2.03	89	89	0.2
Benzene	0.000	0.184	0.182	0.2	92	91	1.1
Toluene	0.000	0.194	0.190	0.2	97	95	2.1
Ethylbenzene	0.000	0.192	0.190	0.2	96	95	1.0
Xylenes	0.000	0.576	0.570	0.6	96	95	1.0
TPH(diesel)	0	290	288	300	97	96	0.4
TRPH (oil and grease)	0.0	19.9	19.9	20.8	96	96	0.0

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$



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Artesian Environmental 229 Tewksbury Avenue Point Richmond, CA 94801	Client Project ID: #197-002-01; Hausauer	Date Sampled: 11/26/97
		Date Received: 11/26/97
	Client Contact: Thomas Fortner	Date Extracted: 11/26/97
	Client P.O:	Date Analyzed: 11/26/97

12/05/97

Dear Tom:

Enclosed are:

- 1). the results of 1 samples from your #197-002-01; Hausauer project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director



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Artesian Environmental 229 Tewksbury Avenue Point Richmond, CA 94801	Client Project ID: #197-002-01; Hausauer	Date Sampled: 11/26/97
	Client Contact: Thomas Fortner	Date Received: 11/26/97
	Client P.O:	Date Extracted: 11/27-12/01/97
		Date Analyzed: 11/27-12/01/97

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
83436	HMW-4	W	1600,j	ND<62	4.2	3.1	1.7	5.9	116 [#]
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	5.0	0.5	0.5	0.5	0.5	
	S		1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil & sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L.

cluttered chromatogram, sample peak coelutes with surrogate peak

The following descriptions of the TPH chromatogram are to serve as a guide. Modified from Analytical Services, Inc. responsible for their interpretation: a) unmodified or weakly modified gasoline is significant (i.e. most of the gasoline range compounds are significant/aged gasoline?), b) lighter gasoline range compounds (i.e. most mobile fractions) are significant (i.e. gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline), c) TPH peak does not appear to be derived from gasoline (?), d) one to a few isolated peaks present, e) strongly aged gasoline or diesel range compounds are significant, f) lighter than water immiscible stream is present, g) liquid sample that contains greater than ~5 vol % sediment or recognizable pattern.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 11/27/97

Matrix: WATER

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		RPD
	Sample (#83335)	MS	MSD		MS	MSD	
TPH (gas)	0.0	100.2	107.3	100.0	100.2	107.3	6.8
Benzene	0.0	10.7	10.1	10.0	107.0	101.0	5.8
Toluene	0.0	11.0	10.4	10.0	110.0	104.0	5.6
Ethyl Benzene	0.0	11.1	11.1	10.0	111.0	111.0	0.0
Xylenes	0.0	33.5	31.8	30.0	111.7	106.0	5.2
TPH(diesel)	0	148	140	150	99	94	5.3
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 11/29/97

Matrix: WATER

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		RPD
	Sample (#83410)	MS	MSD		MS	MSD	
TPH (gas)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethyl Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xylenes	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TPH(diesel)	0	131	124	150	87	83	5.3
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 12/01/97

Matrix: WATER

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		
	Sample (#83355)	MS	MSD		MS	MSD	RPD
TPH (gas)	0.0	96.6	97.3	100.0	96.6	97.3	0.7
Benzene	0.0	9.1	9.3	10.0	91.0	93.0	2.2
Toluene	0.0	9.9	10.0	10.0	99.0	100.0	1.0
Ethyl Benzene	0.0	10.5	10.7	10.0	105.0	107.0	1.9
Xylenes	0.0	32.2	32.7	30.0	107.3	109.0	1.5
TPH(diesel)	0	150	151	150	100	100	0.4
TRPH (oil & grease)	0	22100	21400	23700	93	90	3.2

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

