ADDITIONAL SOIL EXCAVATION AND QUARTERLY GROUND-WATER MONITORING REPORT

Avis Rent A Car System, Inc.
Oakland International Airport Facility
Oakland, California

Prepared for

Avis Rent A Car System, Inc.
900 Old Country Road
Garden City, New York 11530

May 20, 1991

McCULLEY, FRICK & GILMAN, INC.
Consulting Hydrologists and Geologists

PROFESSIONAL CERTIFICATION

This report has been prepared by McCulley, Frick & Gilman, Inc. under the professional supervision of Edward P. Conti. The findings, recommendations, specifications and/or professional opinions presented in this report have been prepared in accordance with generally accepted professional hydrogeologic practice, and within the scope of the project. There is no other warranty, either express or implied.

May 20, 1991

Edward P. Conti
RG No. 4721
Project Geologist
McCULLEY, FRICK & GILMAN, INC.

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ADDITIONAL SOIL EXCAVATION
AND
QUARTERLY GROUND-WATER MONITORING REPORT

Avis Rent A Car System, Inc.
Oakland International Airport Facility
Oakland, California

1.0 INTRODUCTION

This report presents the methods and results of the first quarter 1991 ground-water monitoring event and additional remedial activities performed at the Avis Rent A Car System, Inc. (Avis) facility at Oakland International Airport, Neil Armstrong Way, Oakland, California (the Site). The Site location is illustrated in Figure 1. This report was prepared by McCulley, Frick & Gilman, Inc. (MFG) on behalf of Avis.

The ground-water monitoring program conducted at the Avis Facility consisted of the following tasks:

(1) Measurement of water levels in monitoring wells MW-1, MW-2 and MW-3; and

(2) Collection and chemical analysis of ground-water samples from monitoring wells MW-1A, MW-2 and MW-3.

The remedial activities performed at the Site included:

(1) Destruction of monitoring well MW-1 (following quarterly water level measurement);

(2) Additional soil excavation in the vicinity of monitoring well MW-1 and the former underground tanks;

(3) Collection and chemical analysis of soil samples from the walls and floor of the excavation;

(4) Removal and disposal of ground water from the excavation; and

(5) Installation of monitoring well MW-1A downgradient of the excavation.

The ground-water monitoring program and remedial activities were performed in accordance with Section 8.0 of the report prepared by MFG entitled: Soil and Ground-Water Investigation Report, Avis Rent A Car System, Inc. Oakland International Airport Facility, Oakland, California, and dated September 19, 1990. Background information regarding the Site, including a summary of previous remedial activities performed by Avis, is included in the September 19, 1990 Soil and Ground-Water Investigation Report.

2.0 GROUND-WATER SAMPLING AND ANALYSIS

2.1 FIELD METHODS

The methods used to measure the water levels and collect ground-water samples from the monitoring wells are described below. The monitoring well locations are shown in Figure 2.

2.1.1 Water Level Measurement

MFG measured the water levels in monitoring wells MW-1, MW-2 and MW-3 on February 26, 1991 using a weighted, graduated steel tape. These measurements were performed prior to destruction of well MW-1 (Section 4.1) so the water level data could be used in selection of the location for replacement well MW-1A (Section 4.4). Evaluation of the water level data is discussed in Section 3.0 of this report. Following water level measurement, MFG checked for the presence of a light immiscible layer (free product) or sheen using a clear, acrylic bailer. No free product or sheen was observed in the three wells.

2.1.2 Ground-Water Sampling

MFG collected ground-water samples from monitoring wells MW-2 and MW-3 on March 13, 1991, and from well MW-1A on April 30, 1991. Prior to collecting a sample, each well was purged using a positive displacement hand pump. Well MW-2 was pumped dry after removal of approximately 3.8 casing volumes (six gallons) of water. Well MW-3 was pumped dry after removal of approximately 2.5 casing volumes (four gallons). Well MW-1A was pumped dry after removal of approximately three casing volumes (four gallons). The temperature, pH and specific conductance of the water were monitored during purging of each well.

After purging, the ground-water samples were collected using a Teflon™ bailer. One bailer volume collected from each well was used to measure the temperature, pH and specific conductance of the sample. The field measured values of these parameters were as follows:

Sample	Temperature (°C)	pH	Specific Conductance (micromhos/cm at 25°C)
MW-2	17.0	7.3	4,000
MW-3	17.0	7.3	16,000
MW-1A	18.0	7.4	8,200

The following samples were subsequently collected from each well and placed in containers supplied by the laboratory:

A. Total Volatile Petroleum Hydrocarbons (TPH) as Gasoline and Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX): three, 40-milliliter (ml) glass vials closed with a screw cap with a Teflon™-lined septum, containing hydrochloric acid placed in the vials by the laboratory for sample preservation;

B. Polynuclear Aromatic Hydrocarbons (PNA's): two, one-liter amber glass bottles with Teflon™-lined lids.

After filling, the ground-water sample containers were placed in an ice-cooled, insulated chest for transport to the laboratory for analysis. A chain-of-custody record was completed for the samples and accompanied the samples until receipt by the laboratory.

All equipment used in purging the wells was washed in an Alconox detergent-water solution and rinsed with tap water both before and after use in each well. All equipment used in sampling the wells was washed in an Alconox detergent-water solution, rinsed with tap water, and then rinsed with deionized water both before and after use in each well.

2.2 ANALYTICAL METHODS AND RESULTS

The ground-water samples were analyzed by Anametrix Inc. (Anametrix) laboratory of San Jose, California. The following analyses were performed by Anametrix:

A. TPH as Gasoline (EPA method 5030/modified EPA method 8015)

B. BTEX (modified EPA method 8020)

C. PNA's (EPA method 8310)

All target constituents were below their respective laboratory method reporting limits in the ground-water samples collected from wells MW-2, MW-3 and MW-1A. The laboratory results are summarized in Table 1. The laboratory report and chain-of-custody record are included in Appendix A.

3.0 EVALUATION OF LATERAL HYDRAULIC GRADIENT

MFG measured the depth to ground water in wells MW-1, MW-2 and MW-3 on February 26, 1991 (Table 2). The depth to water in the wells ranged from approximately 6 to 7 feet below the ground surface. The elevations of the water surface in the wells were calculated using the depth to water measurements and the measuring point (north side, top of casing) elevations of the wells. A potentiometric surface map of the shallow ground water on February 26, 1991 was constructed using these data and is shown in Figure 6. The potentiometric surface contours illustrate that the direction of the lateral hydraulic gradient on February 26, 1991 was east-southeast, with an approximate magnitude of .005.

A potentiometric surface map of the shallow ground water constructed using the previous quarterly water level measurements (December 17, 1990; Figure 5) indicates that the direction of the lateral hydraulic gradient was south-southeast at that time. A potentiometric surface map of the shallow ground water constructed using the September 26, 1990 water level measurements (Figure 4) indicates that the direction of the lateral hydraulic gradient was southeast at that time. A potentiometric surface map of the shallow ground water constructed using the May 23, 1990 water level measurements (Figure 3) indicates that the direction of the lateral hydraulic gradient was south-southeast at that time, similar to the December 17, 1990 gradient direction.

4.0 REMEDIAL ACTIVITIES

4.1 DESTRUCTION OF MONITORING WELL MW-1

MFG sealed and abandoned monitoring well MW-1 on February 26, 1991. This well was installed by MFG on May 17, 1990. The former well location is shown in Figure 2. Well MW-1 was destroyed because it was within the area of planned additional excavation (Section 4.2).

Prior to abandonment, MFG obtained a well destruction permit from the Zone 7, Alameda County Flood Control and Water Conservation District. A copy of the permit is included in Appendix B. A copy of the California Department of Water Resources Water Well Drillers Report for destruction of well MW-1 is also included in Appendix B.

Drilling services for abandonment were provided by HEW Drilling Company, Inc. of East Palo Alto, California. The well abandonment procedures included: 1) removal of the PVC casing and the cement annular seal by pulling with the drill rig; 2) drilling an 8-inch diameter borehole to the total depth of the former well; and 3) sealing of the boring with cement grout. The grout was pumped from the bottom of the boring using a tremie pipe.

4.2 SOIL EXCAVATION AND SAMPLING

4.2.1 Soil Excavation

Soil was excavated in the vicinity of the former underground tanks on March 26, 1991. The excavated area is illustrated in Figure 7. Soil excavation was performed by Pearson Equipment and Maintenance Company of San Jose, California.

Approximately 50 cubic yards of soil were removed from a 10- by 24-foot area southeast of and adjacent to the former tanks (Figure 7). The final depth of the pit ranged from about 3 feet

below ground level (bgl) near the southern edge of the pit to about 10 feet bgl in the northwest corner. During excavation, a black, oily liquid and black-stained soil were observed at a depth of approximately six feet bgl near the northwest corner of the pit. The excavation proceeded until the soil containing the black, oily liquid was removed. Excavation northward and westward was limited by the presence of a concrete pad along those margins of the excavation (Figure 7) and the existing gasoline pump island (west of the pit). Black-stained soil remained in the wall of the pit in the northwest corner when excavation was halted. A sample of the stained soil (sample S-4) was collected from this corner for laboratory analysis. Soil sampling methods and analytical results are discussed in Section 4.2.2.

The depth to water in the pit was measured at approximately six feet bgl about two hours after completion of digging. A sheen was present on the water surface at that time. Removal of ground water from the pit is discussed in Section 4.3.

4.2.2 Soil Sampling and Analysis

Following completion of digging, seven soil samples were collected from the walls and floor of the pit. The approximate sample locations are shown in Figure 7; the sample locations and depths are listed in Table 3. The soil samples were collected by: 1) removing soil from the pit with a backhoe; 2) scraping off the top few inches of soil in the backhoe bucket; and 3) pounding brass liners into the soil in the backhoe bucket. Following sample collection, the ends of each brass liner were covered with aluminum foil, capped with a polyethylene lid, and then taped. The samples were labeled and immediately placed in an insulated, ice-cooled chest. A chain-of-custody record was completed for the samples and accompanied the samples until receipt by the laboratory.

The soil samples were analyzed by Anametrix Inc. (Anametrix) laboratory of San Jose, California. The following analyses were performed by Anametrix:

A. Total Volatile Petroleum Hydrocarbons (TPH) as Gasoline [EPA Method 5030/modified EPA Method 8015]

B. Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX) [modified EPA Method 8020]

C. Polynuclear Aromatic Hydrocarbons (PNA's) (EPA Method 8310)

TPH as gasoline, benzene, total xylenes, and PNA's were not detected in any of the seven soil samples. Toluene and ethylbenzene were detected in sample S-4 at concentrations of 0.006 and 0.007 mg/Kg, respectively. Sample S-4 was collected from the wall of the pit near the northwest corner, at a depth of approximately 6.5 feet bgl. The laboratory results are summarized in Table 3. The laboratory report and chain-of-custody record are included in Appendix C.

4.3 REMOVAL OF GROUND WATER FROM EXCAVATION

Ground water was pumped from the pit on March 27, 1991 by H & H Environmental Services (H & H) of San Francisco, California under the supervision of MFG. Approximately 2,000 gallons of water were removed from the pit; a skimmer was used to remove most of the sheen which was present on the water surface. Nearly all the water was pumped from the pit, then water was allowed to recharge. Water recharged to the pit slowly; only approximately eight inches of water were present in the pit after about one hour. The water which had recharged to the pit after about an hour was pumped out again.

The water removed from the pit was transported by H & H to their disposal facility in San Francisco, California. A copy of the Uniform Hazardous Waste Manifest is included in Appendix D.

4.4 INSTALLATION OF MONITORING WELL MW-1A

Monitoring well MW-1A was installed at the Site on April 1, 1991. The location of well MW-1A is included in Figure 2. In accordance with the letter from Cynthia Chapman of the Alameda County Department of Environmental Health, Hazardous Materials Program, to Beth Hamilton of Pillsbury, Madison & Sutro, dated October 31, 1990, monitoring well MW-1A was installed as a replacement for monitoring well MW-1 on the downgradient side of the new excavation. Prior to drilling at the Site, a permit for monitoring well construction was obtained from the Zone 7 Alameda County Flood Control and Water Conservation District. A copy of the permit is included in Appendix B. A copy of the California Department of Water Resources Water Well Drillers Report for construction of well MW-1A is also included in Appendix B.

4.4.1 Soil Boring and Sampling

The soil boring for well MW-1A was drilled with a CME-75 drilling rig using an eight-inch outside diameter (o.d.) by 3.75-inch inside diameter (i.d.) hollow-stem auger. Drilling was performed by HEW Drilling Company, Inc. of East Palo Alto, California, under the supervision of MFG. The boring was completed as a monitoring well following drilling and soil sampling. The monitoring well installation is discussed in Section 4.4.3. The log of the soil boring with well construction details is included in Appendix E.

Boring MW-1A was advanced to a total depth of approximately 18 feet below ground level (bgl). A split-spoon sampler (two inches i.d. and 1.5 feet long) was used to collect soil samples for visual description and for chemical analysis. The soil samples were collected within brass liners inserted into the split-spoon sampler. The sampler was driven approximately 18 inches into the soil using a 140-pound, free-falling drive hammer with a 30-inch drop. Blow counts were recorded for every six-inch interval sampled and are noted on the boring log in Appendix E.

The lithology of soils encountered during drilling was described in the field. Detailed soil descriptions are included on the boring log in Appendix E. In general, predominantly clayey soils were encountered in the boring from near the ground surface to about 11.5 feet bgl. Sandy silt

occurred from about 11.5 feet to about 15.5 feet bgl and was underlain by sandy clay to approximately 17.3 feet bgl. Clayey sand was present from about 17.3 feet bgl to the bottom of the boring at 18 feet bgl.

Soil samples from the depth intervals 2.5 to 3 feet bgl (sample MW-1A-1-1) and 6 to 6.5 feet bgl (sample MW-1A-2-2) were collected for laboratory analysis. Following sample collection, the ends of each brass liner to be submitted to the laboratory were covered with aluminum foil, capped with a polyethylene lid, and then taped. The samples were labeled and immediately placed in an insulated, ice-cooled chest. A chain-of-custody record was completed for the samples and accompanied the samples until receipt by the laboratory.

Soil cuttings generated during drilling were stockpiled adjacent to an existing, on-site stockpile of excavated soil and were covered with plastic sheets.

4.4.2 Soil Analytical Methods and Results

Soil samples were analyzed by Anametrix Inc. (Anametrix) laboratory of San Jose, California. The following analyses were performed by Anametrix:

A. Total Volatile Petroleum Hydrocarbons (TPH) as Gasoline [EPA Method 5030/modified EPA Method 8015]

B. Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX) [modified EPA Method 8020]

C. Polynuclear Aromatic Hydrocarbons (EPA Method 8310)

All target constituents were below their respective laboratory method reporting limits in the soil samples collected from boring MW-1A. The laboratory results are summarized in Table 3. The laboratory report and chain-of-custody record are included in Appendix C.

4.4.3 Monitoring Well Construction

Boring MW-1A was completed as a monitoring well on April 1, 1991 under the supervision of MFG. The monitoring well construction details are included on the boring log in Appendix E.

The bottom of the soil boring was backfilled with bentonite pellets from the total depth of the boring (18 feet bgl) to the completion depth of the monitoring well (13.5 feet bgl). The monitoring well was constructed inside of the auger as the auger flights were removed from the borehole in small increments. The well was constructed using steam cleaned, two-inch diameter, flush threaded PVC unperforated and slotted (0.010-inch slots) casing. A PVC cap with stainless steel screws was placed on the bottom of the casing prior to lowering it through the center of the hollow-stem augers. The slotted casing interval extends from approximately 4.5 feet to 13.5 feet bgl, and the unperforated casing interval extends from the top of the slotted section to near the ground surface.

A filter pack consisting of Lonestar Lapis Lustre #2/16 Monterey sand was installed from the bottom of the casing to approximately 1.5 feet above the slotted interval (3 feet bgl). One foot of bentonite pellets was then placed on top of the filter pack and hydrated with water. The remaining annular space, from the top of the bentonite pellets to approximately 0.5 foot bgl, was then sealed using cement/bentonite grout. A locking, watertight plug was placed in the top of the PVC well casing, and a surface vault was set in concrete around the well. The top of the surface vault was finished slightly above the surrounding grade.

Following well construction, the elevation of the measuring point (MP) of the well was surveyed by Meridian Surveying Engineering, Inc. of San Francisco, California. The MP is the north side of the top of the PVC well casing, and the elevations are referenced to the National Geodetic Vertical Datum of 1929 (NGVD). The elevation survey report is included in Appendix F.

4.4.4 Monitoring Well Development

Well MW-1A was developed on April 9, 1991 by alternately pumping with a positive displacement hand pump and surging. Prior to beginning development, MFG checked for the presence of a light immiscible layer (free product) or sheen using a clear, acrylic bailer. No free product or sheen was observed in the well. The well was then developed until the ground water removed from it was relatively clear and relatively free of sediment. Approximately 20 casing volumes (30 gallons) of water were removed from well MW-1A during the development process.

The temperature, pH and specific conductance of the ground water removed from the well were monitored during development. These parameters stabilized as development proceeded. The water generated during development of the well was placed in a 55-gallon drum, which was labeled and stored on Site.

Well development equipment was washed in an Alconox detergent-water solution and rinsed with tap water prior to use in each well.

A ground-water sample was collected from well MW-1A on April 30, 1991. The ground-water sampling methods and analytical results are discussed in Section 2.0.

5.0 RECOMMENDATIONS

MFG recommends that quarterly ground-water monitoring at the Site continue for two additional periods to assess whether ground-water quality at the Site has been impacted by gasoline components. This proposed quarterly monitoring program will consist of:

(1) Measurement of water levels in monitoring wells MW-1A, MW-2 and MW-3, and preparation of potentiometric surface maps of the shallow ground water; and

(2) Collection and chemical analysis of ground-water samples from monitoring wells MW-1A, MW-2 and MW-3.

The ground-water samples will be analyzed for total petroleum hydrocarbons (TPH) as gasoline; benzene, toluene, ethylbenzene, total xylenes (BTEX); and polynuclear aromatic hydrocarbons (PNA's) using the methods discussed in Section 2.2 of this report.

Since well MW-1A was sampled in April 1991, the anticipated sampling dates for the proposed two additional quarters are July 1991 and October 1991. Quarterly ground-water monitoring reports will be prepared and submitted approximately 30 days after receipt of the final analytical results for each monitoring period. The anticipated submittal dates for these reports are August 1991 and November 1991.

TABLE 1
(Page 1 of 2)

SUMMARY OF CHEMICAL ANALYSES OF GROUND-WATER SAMPLES[1]

Avis Rent A Car System, Inc.
Oakland International Airport Facility
Oakland, California

WELL NO.	SAMPLE NO.	DATE SAMPLED	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (mg/L)	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYLBENZENE (mg/L)	TOTAL XYLENES (mg/L)	NAPHTHALENE (mg/L)	OTHER POLYNUCLEAR AROMATIC HYDROCARBONS (mg/L)
		Reporting Limit:	0.05	0.0005	0.0005	0.0005	0.0005	0.01	0.01
MW-1	MW-1	23-May-90	12	0.65	0.05	ND[2] [0.05][3]	2.2	0.25	0.033[4]
	MW-1	26-Sep-90	0.66	ND [0.0025]	0.004	0.028	0.046	0.016	ND
	MW-1	17-Dec-90[5]	1.6	0.19	ND [0.005]	0.063	0.027	0.039	0.023[6]
MW-1A[7]	MW-1A	30-Apr-91	ND	ND	ND	ND	ND	ND	ND
MW-2	MW-2	23-May-90	ND	ND	ND	ND	ND	ND	ND
	MW-2	26-Sep-90	ND	ND	ND	ND	ND	ND	ND
	MW-2	17-Dec-90	ND	ND	ND	ND	ND	ND	ND
	MW-2	13-Mar-91	ND	ND	ND	ND	ND	ND	ND

TABLE 1
(Page 2 of 2)

SUMMARY OF CHEMICAL ANALYSES OF GROUND-WATER SAMPLES[1]

Avis Rent A Car System, Inc.
Oakland International Airport Facility
Oakland, California

WELL NO.	SAMPLE NO.	DATE SAMPLED	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (mg/L)	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYLBENZENE (mg/L)	TOTAL XYLENES (mg/L)	NAPHTHALENE (mg/L)	OTHER POLYNUCLEAR AROMATIC HYDROCARBONS (mg/L)
		Reporting Limit:	0.05	0.0005	0.0005	0.0005	0.0005	0.01	0.01
MW-3	MW-3	23-May-90	ND	ND	ND	ND	ND	ND	ND
	MW-3	26-Sep-90	ND	ND	ND	ND	ND	ND	ND
	MW-3	17-Dec-90	ND	ND	ND	ND	ND	ND	ND
	MW-3	13-Mar-91	ND	ND	ND	ND	ND	ND	ND

NOTES:

[1] Constituents in the EPA Method 8270 or 8310 analyses (PNA's) which are not listed were not detected in ground-water samples.

[2] ND = Not Detected at or above the reporting limit indicated at top of column.

[3] [ ] Indicates reporting limit other than that indicated at top of column.

[4] The PNA compound 2-methyl-naphthalene was detected at a concentration of 0.033 mg/L.

[5] Monitoring Well MW-1 was sealed and abandoned on February 26, 1991.

[6] The PNA compound acenaphthene was detected at a concentration of 0.023 mg/L.

[7] Monitoring Well MW-1A was installed on April 1, 1991.

TABLE 2

SUMMARY OF WATER LEVEL DATA FOR GROUND-WATER MONITORING WELLS

Avis Rent A Car System, Inc.
Oakland International Airport Facility
Oakland, California

WELL	MEASUREMENT DATE	DEPTH TO WATER (ft BMP[1])	MEASURING POINT ELEVATION[2] (ft NGVD[3])	WATER LEVEL ELEVATION (ft NGVD)
MW-1	23-May-90	5.62	3.34	-2.28
	26-Sep-90	6.29	3.34	-2.95
	17-Dec-90	5.92	3.34	-2.58
	26-Feb-91[4]	5.69	3.34	-2.35
MW-1A	30-Apr-91[5]	5.10	3.20	-1.90
MW-2	23-May-90	6.13	4.25	-1.88
	26-Sep-90	6.62	4.25	-2.37
	17-Dec-90	6.40	4.25	-2.15
	26-Feb-91	5.96	4.25[6]	-1.71
MW-3	23-May-90	6.77	3.98	-2.79
	26-Sep-90	7.28	3.98	-3.30
	17-Dec-90	7.05	3.98	-3.07
	26-Feb-91	6.63	3.98	-2.65

NOTES:

1 BMP = Below Measuring Point.

2 Measuring Point is north side of top of PVC well casing.

3 National Geodetic Vertical Datum of 1929.

[4] Monitoring Well MW-1 was sealed and abandoned on February 26, 1991.

[5] Monitoring well MW-1A was installed on April 1, 1991.

[6] The top of the PVC casing for well MW-2 was repaired on March 13, 1991. The measuring point elevation of well MW-2 was resurveyed on April 9, 1991 (Appendix F.) The new measuring point elevation is 4.07 ft. NGVD.

TABLE 3

SUMMARY OF CHEMICAL ANALYSES OF SOIL SAMPLES FROM EXCAVATION AND SOIL BORING

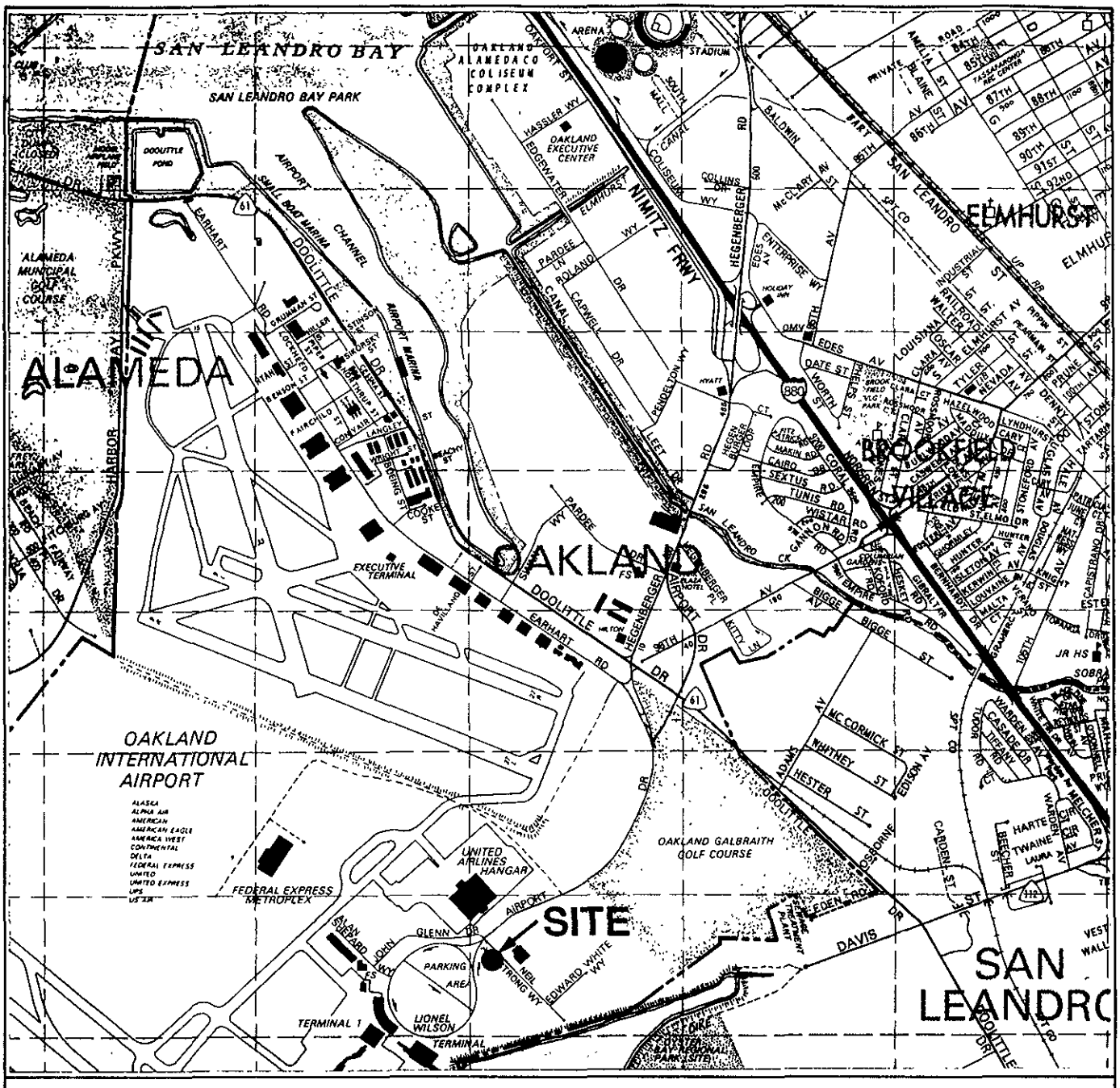
Avis Rent A Car System, Inc.
Oakland International Airport Facility
Oakland, California

SAMPLE NO.	SAMPLE LOCATION[3]	SAMPLE DEPTH (ft. bgl)[4]	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	POLYNUCLEAR AROMATIC HYDROCARBONS[1] (mg/Kg)
		Reporting Limit:	0.5	0.005	0.005	0.005	0.005	1.650[2]
S-1	Floor	8	ND[5]	ND	ND	ND	ND	ND
S-2	E. Wall	5	ND	ND	ND	ND	ND	ND
S-3	S. Wall (SW Corner)	5	ND	ND	ND	ND	ND	ND
S-4	N. Wall (NW Corner)	6.5	ND	ND	0.006	0.007	ND	ND
S-5	N. Wall	6	ND	ND	ND	ND	ND	ND
S-6	S. Wall (SE Corner)	5	ND	ND	ND	ND	ND	ND
S-7	Floor	5	ND	ND	ND	ND	ND	ND
MW-1A-1-1	MW-1A	2.5 - 3	ND	ND	ND	ND	ND	ND
MW-1A-2-2	MW-1A	6 - 6.5	ND	ND	ND	ND	ND	ND

NOTES:

[1] Polynuclear aromatic hydrocarbons were analyzed using EPA Method 8310.
[2] The laboratory reporting limit for EPA Method 8310 varied from 0.160 to 1.650 mg/Kg. The reporting limit for each compound is included in the laboratory report in Appendix C.
[3] Samples S-1 through S-7 were collected from the walls and floor of the excavation. Samples MW-1A-1-1 and MW-1A-2-2 were collected from the soil boring for well MW-1A. Approximate sample locations are shown in Figure 7.
[4] Feet below ground level.
[5] ND = Not detected at or above the laboratory method reporting limit.

4QTRTAB3.OAK



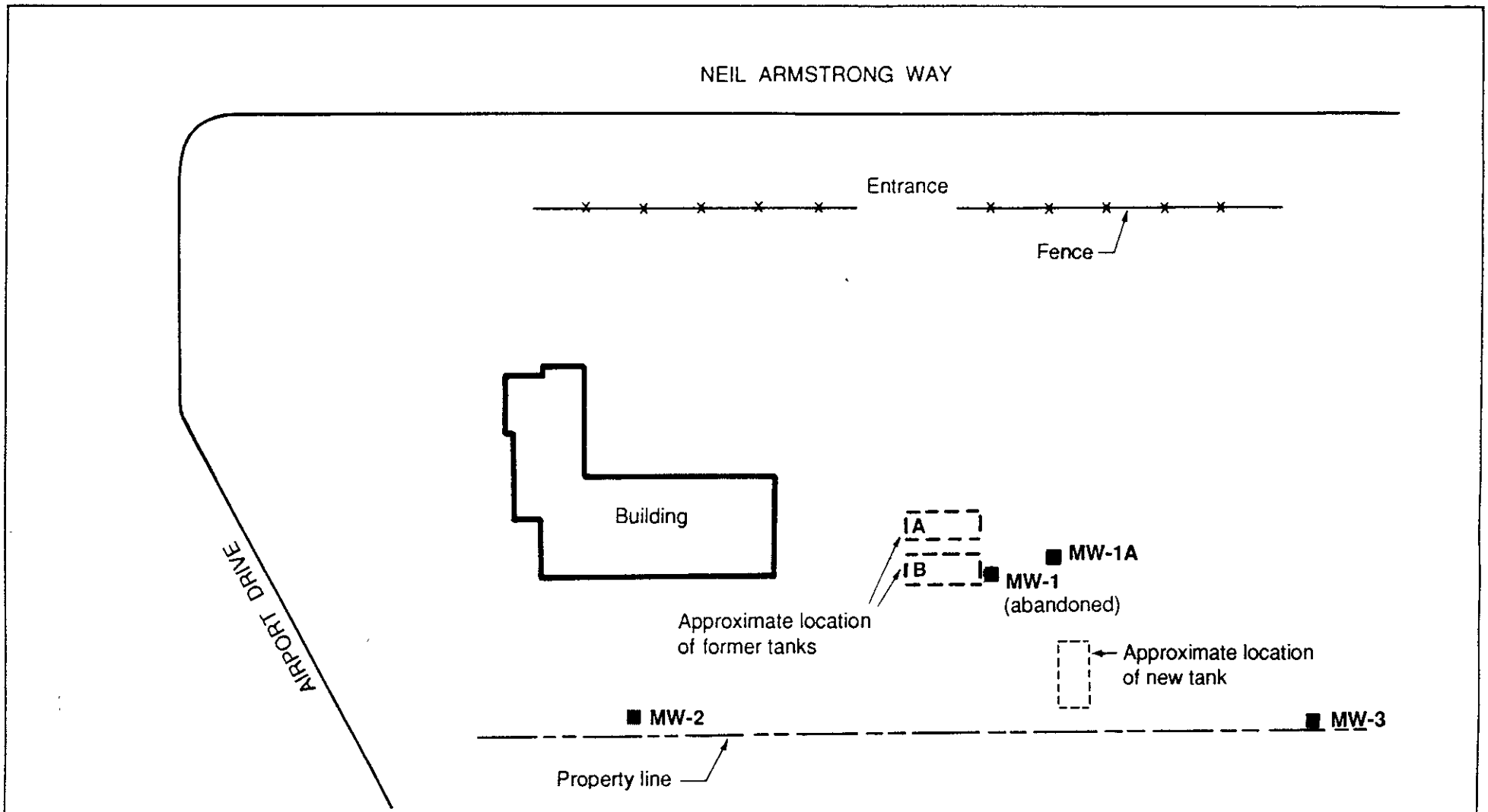
Source: The Thomas Guide,
Alameda and Santa Clara Counties Street Guide and Directory,
1989 Edition

N

0 1/2 Mile

LOCATION MAP
Avis Rent A Car System, Inc. Facility
Oakland International Airport
Oakland, California

McCulley, Frick & Gilman, Inc.	Project No. 90-2143	Figure 1



EXPLANATION

MW-2 ■ Location of monitoring well

Notes:

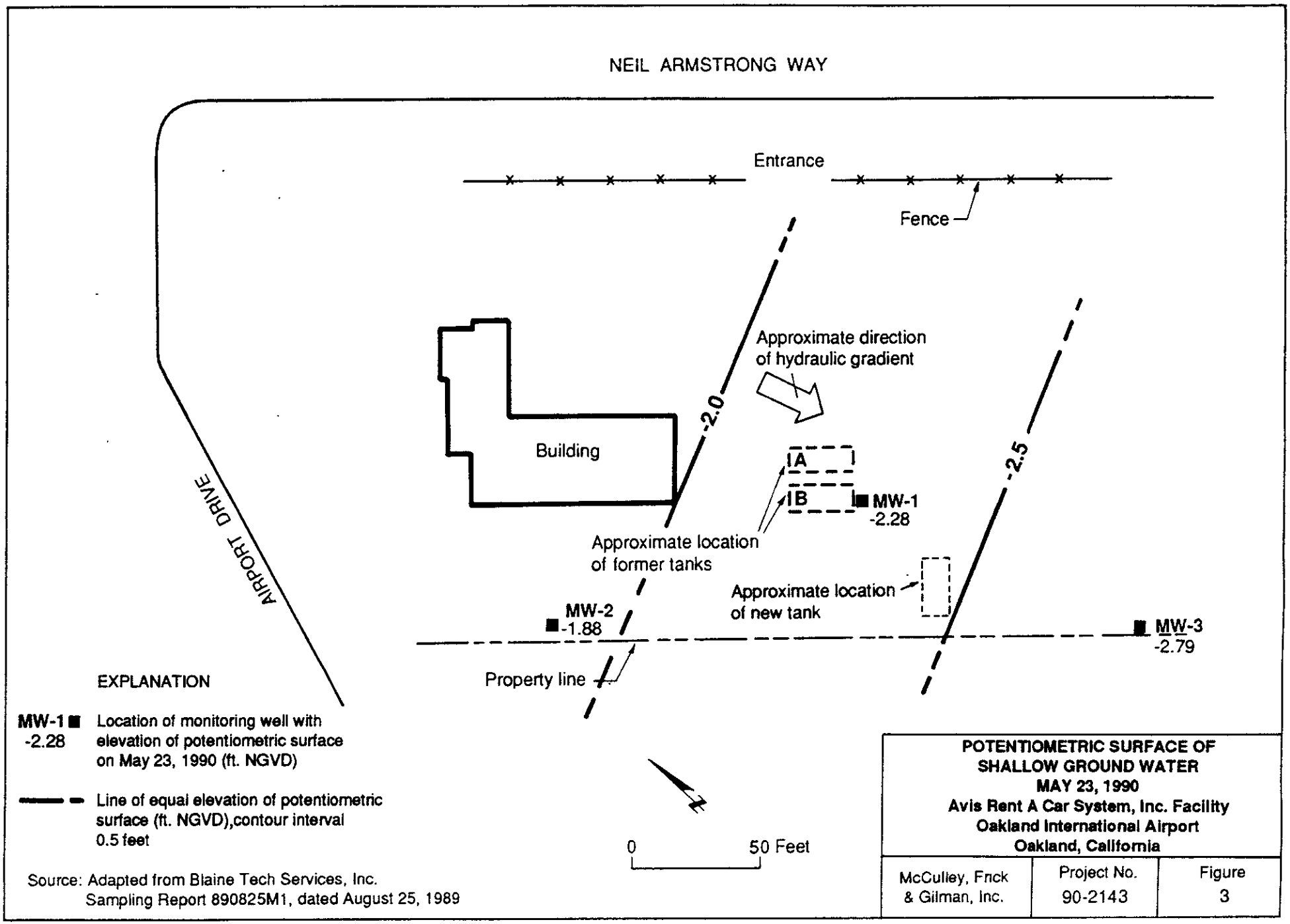
1. Well MW-1 abandoned on February 26, 1991.
2. Well MW-1A installed on April 1, 1991.

Source: Adapted from Blaine Tech Services, Inc.
Sampling Report 890825M1, dated August 25, 1989

0 50 Feet

SITE PLAN
Avis Rent A Car System, Inc. Facility
Oakland International Airport
Oakland, California

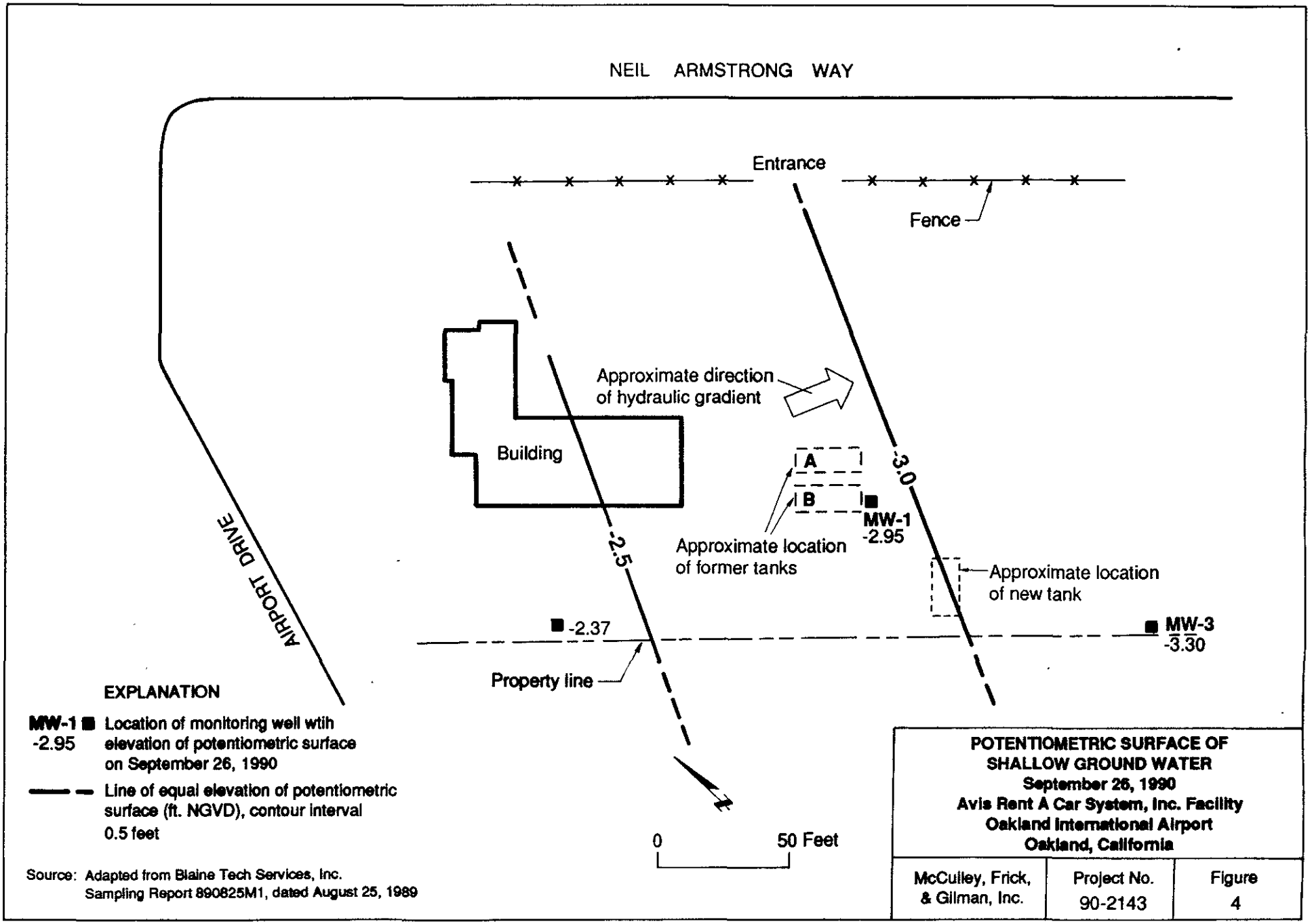
McCulley, Frick & Gilman, Inc.	Project No. 90-2143	Figure 2

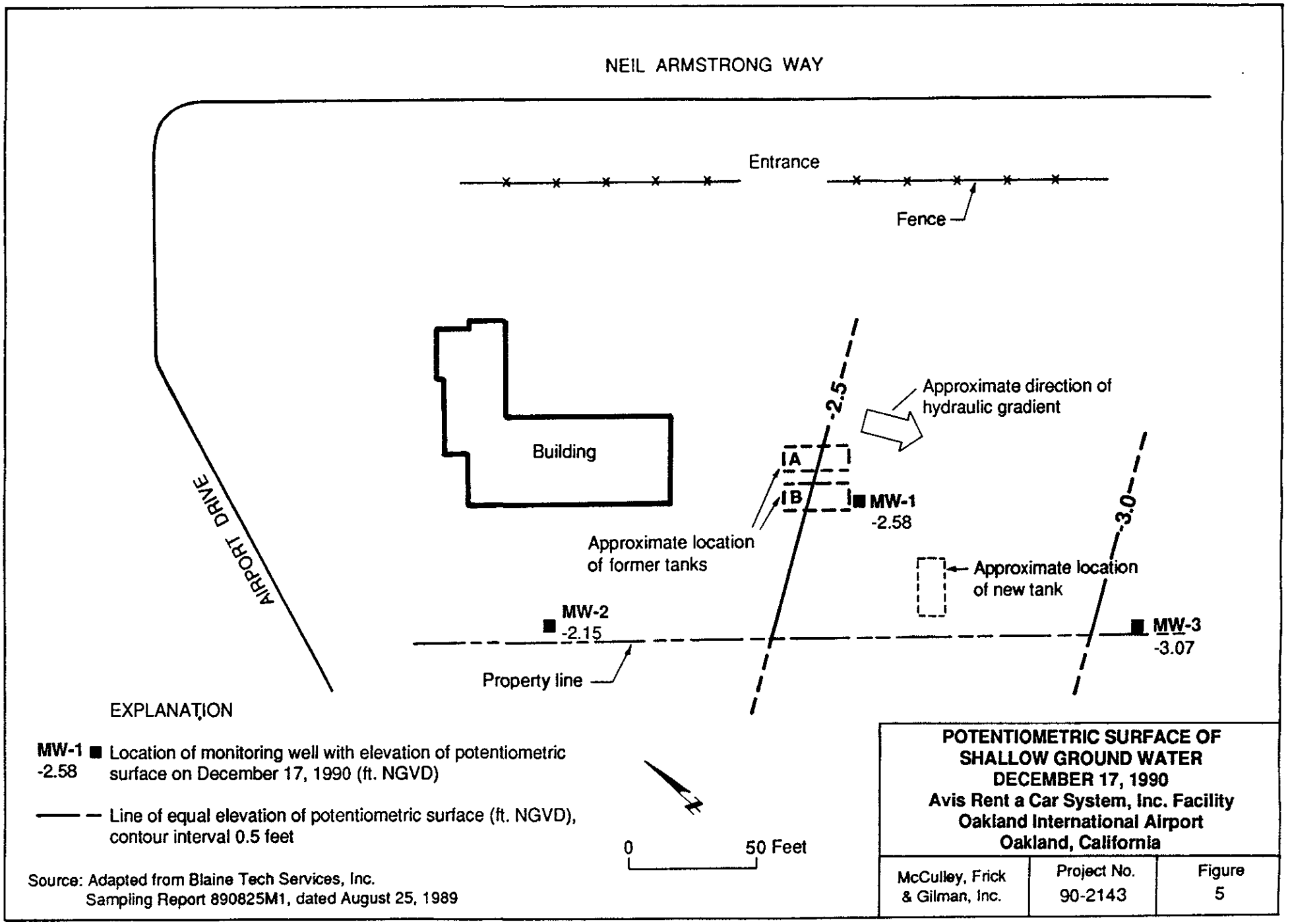


Source: Adapted from Blaine Tech Services, Inc. Sampling Report 890825M1, dated August 25, 1989

POTENTIOMETRIC SURFACE OF SHALLOW GROUND WATER
MAY 23, 1990
Avis Rent A Car System, Inc. Facility
Oakland International Airport
Oakland, California

McCulley, Frick & Gilman, Inc.	Project No. 90-2143	Figure 3

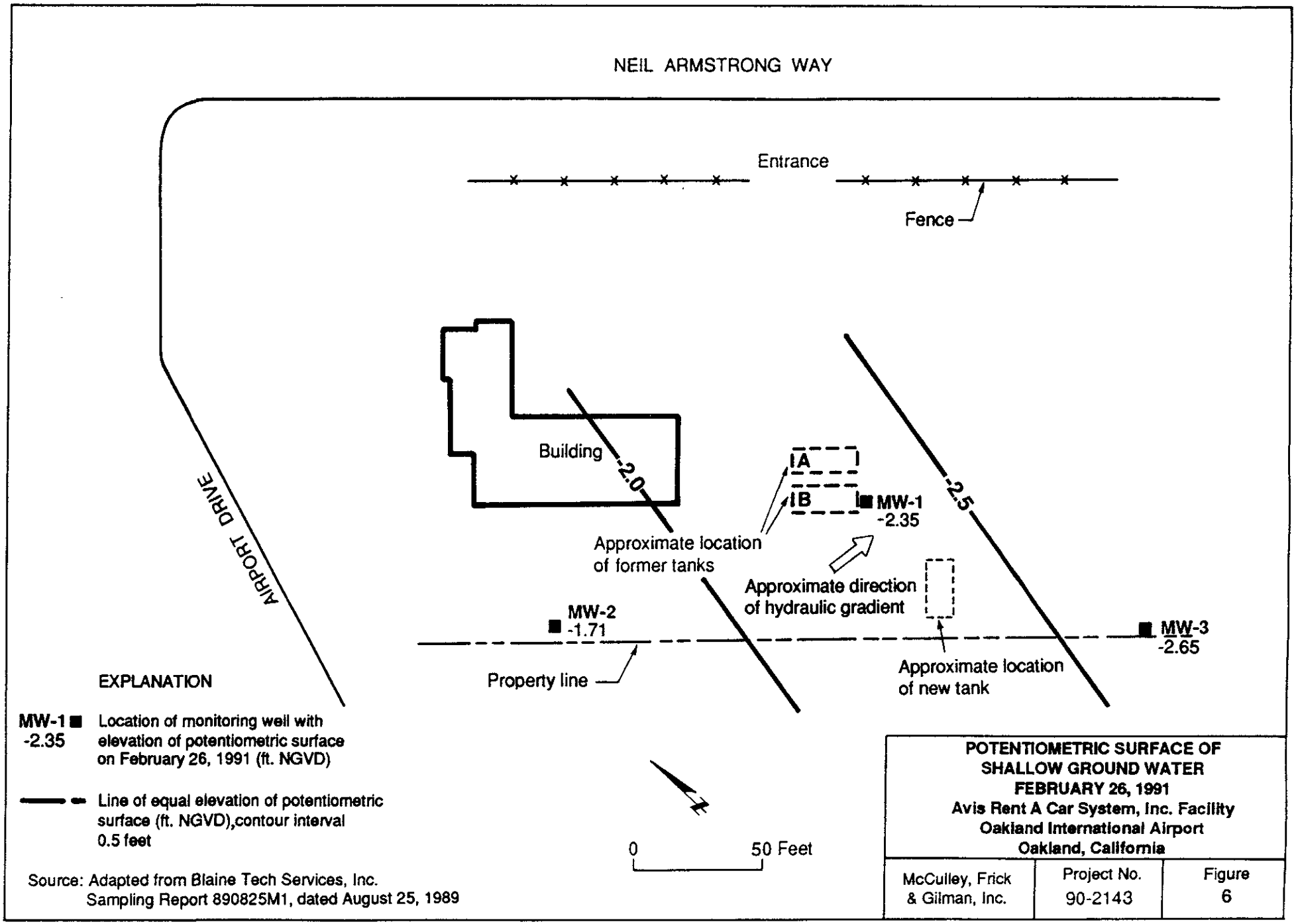

NEIL ARMSTRONG WAY
Entrance
Fence
Approximate direction of hydraulic gradient
Building
A
B
MW-1
-2.95
-3.0
-2.5
Approximate location of former tanks
Approximate location of new tank
AIRPORT DRIVE
-2.37
MW-3
-3.30
Property line
EXPLANATION
MW-1 -2.95 Location of monitoring well wtih elevation of potentiometric surface on September 26, 1990
Line of equal elevation of potentiometric surface (ft. NGVD), contour interval 0.5 feet
0
50 Feet
Source: Adapted from Blaine Tech Services, Inc. Sampling Report 890825M1, dated August 25, 1989
POTENTIOMETRIC SURFACE OF SHALLOW GROUND WATER
September 26, 1990
Avis Rent A Car System, Inc. Facility
Oakland International Airport
Oakland, California
McCulley, Frick, & Gilman, Inc.
Project No. 90-2143
Figure 4



Source: Adapted from Blaine Tech Services, Inc.
Sampling Report 890825M1, dated August 25, 1989

POTENTIOMETRIC SURFACE OF SHALLOW GROUND WATER DECEMBER 17, 1990
Avis Rent a Car System, Inc. Facility
Oakland International Airport
Oakland, California

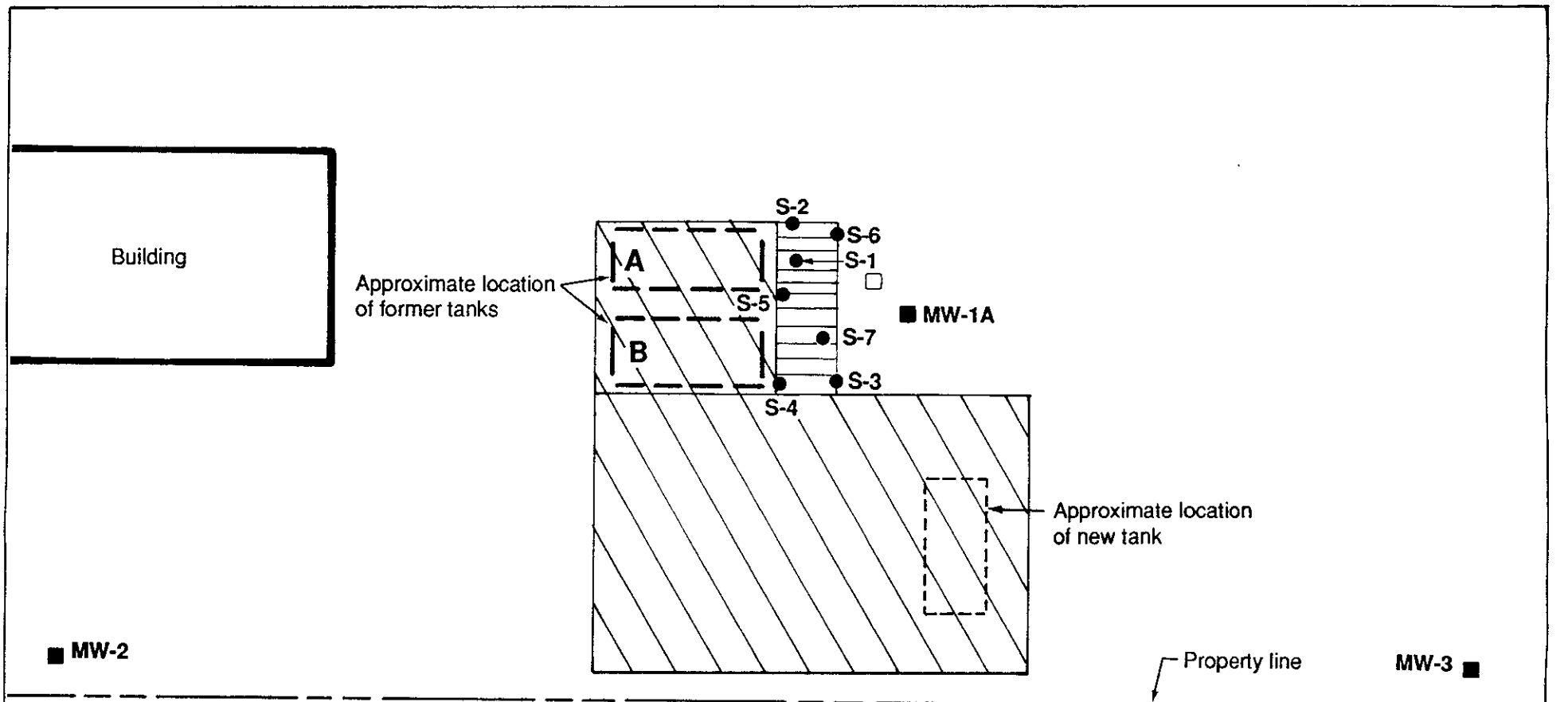
McCulley, Frick & Gilman, Inc.	Project No. 90-2143	Figure 5



Source: Adapted from Blaine Tech Services, Inc.
Sampling Report 890825M1, dated August 25, 1989

POTENTIOMETRIC SURFACE OF SHALLOW GROUND WATER FEBRUARY 26, 1991
Avis Rent A Car System, Inc. Facility
Oakland International Airport
Oakland, California

McCulley, Frick & Gilman, Inc.	Project No. 90-2143	Figure 6



EXPLANATION

- Location of excavation performed on March 26, 1991
- Approximate location of soil sample from excavation
- Storm drain catch basin
- Reinforced concrete pad
- MW-2 Location of monitoring well

0 25 50 Feet

Source: Adapted from Blaine Tech Services, Inc. Sampling Report 890825M1, dated August 25, 1989

EXCAVATION AND SOIL SAMPLE LOCATIONS
Avis Rent A Car System, Inc. Facility
Oakland International Airport
Oakland, California

McCulley, Frick & Gilman, Inc.	Project No. 90-2143	Figure 7

APPENDIX A

Laboratory Report and Chain-of-Custody Record for Ground-Water Samples

ANAMETRIX INC
Environmental & Analytical Chemistry

REPORT

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

RECEIVED
MAR 29 1991
M, F & G, INC

Workorder # : 9103193
Date Received : 03/14/91
Project ID : 90-2143
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9103193- 1	MW-2
9103193- 2	MW-3
9103193- 3	TRIP BLANK

This report consists of 9 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Burt Sutherland
Laboratory Director

3-29-91
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9103193
Date Received : 03/14/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: PEST

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9103193- 1	MW-2	WATER	03/13/91	8310
9103193- 2	MW-3	WATER	03/13/91	8310

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

RECEIVED
MAR 29 1991
M, F & G, INC.

Workorder # : 9103193
Date Received : 03/14/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: PEST

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Department Supervisor Date

Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 90-2143 MW-2	Anametrix I.D.	: 9103193-01
Matrix	: WATER	Analyst	: CH
Date sampled	: 03/13/91	Supervisor	: SD
Date ext.	: 03/19/91	Date released	: 03/26/91
Date analyzed:	03/21/91	Volume ext.	: 1000 mL
Dilut. factor:	NONE	Instrument ID	: HP17

RECEIVED
MAR 29 1991
T, F & G, Inc.

CAS #	Compound Name	Reporting Limit (ug/L)	Amount Found (ug/L)
91-20-3	* Naphthalene	10	ND
208-96-8	* Acenaphthylene	10	ND
91-57-6	* 2-Methyl-Naphthalene	10	ND
83-32-9	* Acenaphthene	10	ND
86-73-7	* Fluorene	10	ND
85-01-8	* Phenanthrene	5	ND
120-12-7	* Anthracene	5	ND
206-44-0	* Fluoranthene	5	ND
129-00-0	* Pyrene	5	ND
56-55-3	* Benz(a)Anthracene	5	ND
218-01-9	* Chrysene	5	ND
205-99-2	* Benz(b)Fluoranthene	5	ND
207-08-9	* Benz(k)Fluoranthene	5	ND
50-32-8	* Benz(a)Pyrene	5	ND
53-70-3	* DiBenz(ah)Anthracene	5	ND
191-24-2	* Benz(g,h,i)Perylene	5	ND
193-39-5	* Indeno(123cd)Pyrene	5	ND
	% Surrogate Recovery	15-120%	80%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 90-2143 MW-3
Matrix : WATER
Date sampled : 03/13/91
Date ext. : 03/19/91
Date analyzed: 03/21/91
Dilut. factor: NONE

RECEIVED
MAR 29 1991
T, F & G, INC.

Anametrix I.D. : 9103193-02
Analyst : FH
Supervisor : SP
Date released : 03/26/91
Volume ext. : 1000 mL
Instrument ID : HP17

CAS #	Compound Name	Reporting Limit (ug/L)	Amount Found (ug/L)
91-20-3	* Naphthalene	10	ND
208-96-8	* Acenaphthylene	10	ND
91-57-6	* 2-Methyl-Naphthalene	10	ND
83-32-9	* Acenaphthene	10	ND
86-73-7	* Fluorene	10	ND
85-01-8	* Phenanthrene	5	ND
120-12-7	* Anthracene	5	ND
206-44-0	* Fluoranthene	5	ND
129-00-0	* Pyrene	5	ND
56-55-3	* Bnz(a)Anthracene	5	ND
218-01-9	* Chrysene	5	ND
205-99-2	* Bnz(b)Fluoranthene	5	ND
207-08-9	* Bnz(k)Fluoranthene	5	ND
50-32-8	* Bnz(a)Pyrene	5	ND
53-70-3	* DiBnz(ah)Anthracene	5	ND
191-24-2	* Bnz(g,h,i)Perylene	5	ND
193-39-5	* Indeno(123cd)Pyrene	5	ND
	% Surrogate Recovery	15-120%	69%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: METHOD BLANK	Anametrix I.D.	: PWBL031991
Matrix	: WATER	Analyst	: FH
Date sampled	: 03/13/91	Supervisor	: SD
Date ext.	: 03/19/91	Date released	: 03/26/91
Date analyzed:	03/21/91	Volume ext.	: 1000 mL
Dilut. factor:	NONE	Instrument ID	: HP17

RECEIVED
MAR 29 1991
1, F & G, mx

CAS #	Compound Name	Reporting Limit (ug/L)	Amount Found (ug/L)
91-20-3	* Naphthalene	10	ND
208-96-8	* Acenaphthylene	10	ND
91-57-6	* 2-Methyl-Naphthalene	10	ND
83-32-9	* Acenaphthene	10	ND
86-73-7	* Fluorene	10	ND
85-01-8	* Phenanthrene	5	ND
120-12-7	* Anthracene	5	ND
206-44-0	* Fluoranthene	5	ND
129-00-0	* Pyrene	5	ND
56-55-3	* Bnz(a)Anthracene	5	ND
218-01-9	* Chrysene	5	ND
205-99-2	* Bnz(b)Fluoranthene	5	ND
207-08-9	* Bnz(k)Fluoranthene	5	ND
50-32-8	* Bnz(a)Pyrene	5	ND
53-70-3	* DiBnz(ah)Anthracene	5	ND
191-24-2	* Bnz(g,h,i)Perylene	5	ND
193-39-5	* Indeno(123cd)Pyrene	5	ND
	% Surrogate Recovery	15-120%	75%

ND : Not detected at or above the practical quantitation limit for the method.

POLYNUCLEAR AROMATIC HYDROCARBONS METHOD SPIKE REPORT
EPA METHOD 610/8310
ANAMETRIX, INC. (408)432-8192

Sample I.D. : METHOD SPIKE
Matrix : WATER
Date sampled : N/A
Date extracted: 03/19/91
Date analyzed : 03/21/91

RECEIVED
MAR 29 1991
T, P & G, Inc.

Anametrix I.D. : 9103193
Analyst : FH
Supervisor : SD
Date released : 03/26/91
Instrument I.D.: HP17A

COMPOUND	SPIKE AMT. (ug/L)	MS (ug/L)	%REC MS	MSD (ug/L)	%REC MSD	RPD	%REC LIMITS
Naphthalene	50.0	32.3	65%	32.2	64%	0%	25-125%
Acnaphthene	50.0	37.1	74%	35.6	71%	-4%	25-125%
Flurene	50.0	38.1	76%	39.7	79%	4%	25-125%
Benzo(a)anthracene	10.0	7.8	78%	7.6	76%	-3%	25-125%
Chrysene	10.0	8.1	81%	8.1	81%	0%	25-125%

* Limits established by Anametrix,Inc.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9103193
Date Received : 03/14/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9103193- 1	MW-2	WATER	03/13/91	TPHg/BTEX
9103193- 2	MW-3	WATER	03/13/91	TPHg/BTEX
9103193- 3	TRIP BLANK	WATER	03/13/91	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

RECEIVED
MAR 2 9 1991
M, F & G, INC

Workorder # : 9103193
Date Received : 03/14/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for this workorder.

Stanley Dinnan 3-28-91
Department Supervisor Date

Garth Voigt 3/28/91
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

RECEIVED
MAR 29 1991
T, F & G, ...

Anametrix W.O.: 9103193
Matrix : WATER
Date Sampled : 03/13/91

Project Number : 90-2143
Date Released : 03/26/91

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW-2 -01	Sample I.D.# MW-3 -02	Sample I.D.# TRIP BLANK -03	Sample I.D.# 12B0320A BLANK	Sample I.D.# 04B0319A BLANK
Benzene	0.5	ND	ND	ND	ND	ND
Toluene	0.5	ND	ND	ND	ND	ND
Ethylbenzene	0.5	ND	ND	ND	ND	ND
Total Xylenes	0.5	ND	ND	ND	ND	ND
TPH as Gasoline	50	ND	ND	ND	ND	ND
% Surrogate Recovery		101%	101%	96%	100%	97%
Instrument I.D.		HP12	HP12	HP4	HP12	HP4
Date Analyzed		03/20/91	03/20/91	03/19/91	03/20/91	03/19/91
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.
RLMF - Reporting Limit Multiplication Factor.
Anametrix control limits for surrogate recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 3.27.91 Date

Supervisor 3/27/91 Date

9103193 — 718 — 16/17

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

McCULLEY, FRICK & GILMAN, INC.

NO.

☐ 3300 Arapahoe Ave., Suite 218, Boulder, CO 80303, TEL: (303) 447-1823, FAX: (303) 447-1836

☐ 5818 Balcones Dr., Suite 202, Austin, TX 78731, TEL: (512) 371-1667, FAX: (512) 454-4126

☒ 5 Third St., Suite 916, San Francisco, CA 94103, TEL: (415) 495-7110, FAX: (415) 495-7107

RECEIVED MAR 29 1991 MF&G, INC

PROJECT No.: 90-2143 PROJECT NAME: Avis - Oakland Intl Airport PAGE 1 OF 1

SAMPLER (Signature): [signature] DATE: 3/13/91

METHOD OF SHIPMENT: Anametrix Courier CARRIER/ WAYBILL NO. — DESTINATION: Anametrix

SPECIAL INSTRUCTIONS/HAZARDS: Acidified samples* keep PNAs samples in dark.

Lab No.	Sample Identification	Sample Collection DATE	Sample Collection TIME	Matrix*	Preservation: HCL	HNO3	H2SO4	COLD	NONE	OTHER DARK	Containers*: VOL. (ml)	TYPE*	No.	Methods*: EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	TPH as Gasoline	TPH as Diesel	BTEX	PNAs (EPA8310)				Handling: HOLD	RUSH	STANDARD	REMARKS (Special handling procedures, specific analytical methods, observations, etc.)
01	MW-2	3/13	1520	AQ	X			X			40ml	G	3					X		X							X	* PNAs (EPA8310)
	MW-2*	3/13	1520	AQ				X		X	1000	G	2								X						X	+2-methylnaphthalene
02	MW-3	3/13	1710	AQ	X			X			40ml	G	3					X		X							X	(See Special Instructions
	MW-3*	3/13	1710	AQ				X		X	1000	G	2							~~X~~	X						X	Worksheet)
03	Trip blank	3/13	—	AQ	X			X			40	G	3					X		X							X	

TOTAL NUMBER OF CONTAINERS: 13

LABORATORY COMMENTS/ CONDITION OF SAMPLES

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
[signature]	Yohji Ono	MFG	3/14/91	1010	[signature]	BENNY S. CARRIZOSA	ANAMETRIX
[signature]	BENNY S. CARRIZOSA	ANAMETRIX	3/14/91	1230	[signature]	Sylvia Anametrix	03/14/91 1230 LABORATORY

*KEY: Matrix AQ-aqueous NA-nonaqueous SO-soil SL-sludge P-petroleum A-air OT other Containers P-plastic G-glass T teflon B-brass OT-other

DISTRIBUTION: PINK Field Copy YELLOW Laboratory Copy WHITE Return to Originator

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive Suite [illegible] San Jose CA 95131
(408)432-8192 • Fax (408) [illegible]

RECEIVED
MAY 16 1991
McCULLEY, FRICK
& GILMAN, INC.

REPORT

MR. ED CONTI
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9105006
Date Received : 05/01/91
Project ID : 90-2143
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9105006- 1	MW-1A
9105006- 2	TRIP BLANK

This report consists of 8 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Manager

5-15-91
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. ED CONTI
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9105006
Date Received : 05/01/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: PEST

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9105006- 1	MW-1A	WATER	04/30/91	8310

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. ED CONTI
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9105006
Date Received : 05/01/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: PEST

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Stratos Dimou 5-15-91
Department Supervisor Date

Elizabeth Hawley 5-14-91
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 90-2143 MW-1A	Anametrix I.D.	: 9105006-01
Matrix	: WATER	Analyst	: FH
Date sampled	: 04/30/91	Supervisor	: SD
Date ext.	: 05/06/91	Date released	: 05/14/91
Date analyzed	: 05/12/91	Volume ext.	: 1000 ml
Dilut. factor	: NONE	Instrument ID	: HP17

CAS #	Compound Name	Reporting Limit (ug/L)	Amount Found (ug/L)
91-20-3	* Naphthalene	10	ND
208-96-8	* Acenaphthylene	10	ND
91-57-6	* 2-Methylnaphthalene	10	ND
83-32-9	* Acenaphthene	10	ND
86-73-7	* Fluorene	10	ND
85-01-8	* Phenanthrene	5	ND
120-12-7	* Anthracene	5	ND
206-44-0	* Fluoranthene	5	ND
129-00-0	* Pyrene	5	ND
56-55-3	* Bnz(a)Anthracene	5	ND
218-01-9	* Chrysene	5	ND
205-99-2	* Bnz(b)Fluoranthene	5	ND
207-08-9	* Bnz(k)Fluoranthene	5	ND
50-32-8	* Bnz(a)Pyrene	5	ND
53-70-3	* DiBnz(ah)Anthracene	5	ND
191-24-2	* Bnz(g,h,i)Perylene	5	ND
193-39-5	* Indeno(123cd)Pyrene	5	ND
	% Surrogate Recovery	15-120%	73%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: METHOD BLANK	Anametrix I.D.	: PWBL050691
Matrix	: WATER	Analyst	: FH
Date sampled	: N/A	Supervisor	: SD
Date ext.	: 05/06/91	Date released	: 05/14/91
Date analyzed	: 05/12/91	Volume ext.	: 1000 ml
Dilut. factor	: NONE	Instrument ID	: HP17

CAS #	Compound Name	Reporting Limit (ug/L)	Amount Found (ug/L)
91-20-3	* Naphthalene	10	ND
208-96-8	* Acenaphthylene	10	ND
91-57-6	* 2-Methylnaphthalene	10	ND
83-32-9	* Acenaphthene	10	ND
86-73-7	* Fluorene	10	ND
85-01-8	* Phenanthrene	5	ND
120-12-7	* Anthracene	5	ND
206-44-0	* Fluoranthene	5	ND
129-00-0	* Pyrene	5	ND
56-55-3	* Bnz(a)Anthracene	5	ND
218-01-9	* Chrysene	5	ND
205-99-2	* Bnz(b)Fluoranthene	5	ND
207-08-9	* Bnz(k)Fluoranthene	5	ND
50-32-8	* Bnz(a)Pyrene	5	ND
53-70-3	* DiBnz(ah)Anthracene	5	ND
191-24-2	* Bnz(g,h,i)Perylene	5	ND
193-39-5	* Indeno(123cd)Pyrene	5	ND
	% Surrogate Recovery	15-120%	67%

ND : Not detected at or above the practical quantitation limit for the method.

POLYNUCLEAR AROMATIC HYDROCARBONS METHOD SPIKE REPORT
EPA METHOD 610/8310
ANAMETRIX, INC. (408)432-8192

Sample I.D. : METHOD SPIKE
Matrix : WATER
Date sampled : N/A
Date extracted: 05/06/91
Date analyzed : 05/12/91

Anametrix I.D. : SPK050691
Analyst : FH
Supervisor : SD
Date released : 05/14/91
Instrument I.D.: HP17

COMPOUND	SPIKE AMT. (ug/L)	MS (ug/L)	%REC MS	MSD (ug/L)	%REC MSD	RPD	%REC LIMITS
Naphthalene	100.0	65.0	65%	60.0	60%	-8%	25-125%
Acenaphthene	100.0	70.0	70%	64.0	64%	-9%	25-125%
Fluorene	100.0	93.0	93%	88.0	88%	-6%	25-125%
Benzo(a)anthracene	20.0	21.0	105%	21.0	105%	0%	25-125%
Chrysene	20.0	19.0	95%	19.0	95%	0%	25-125%

* Limits established by ANAMETRIX.INC.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. ED CONTI
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9105006
Date Received : 05/01/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9105006- 1	MW-1A	WATER	04/30/91	TPHg/BTEX
9105006- 2	TRIP BLANK	WATER	04/30/91	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. ED CONTI
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9105006
Date Received : 05/01/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Department Supervisor — Date

Chemist — 5.14.91 Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS (GASOLINE WITH BTEX)

ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9105006
Matrix : WATER
Date Sampled : 04/30/91

Project Number : 90-2143
Date Released : 05/14/91

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW-1A -01	Sample I.D.# TRIP BLANK -02	Sample I.D.# 04B0506A BLANK
Benzene	0.5	ND	ND	ND
Toluene	0.5	ND	ND	ND
Ethylbenzene	0.5	ND	ND	ND
Total Xylenes	0.5	ND	ND	ND
TPH as Gasoline	50	ND	ND	ND
% Surrogate Recovery		109%	111%	127%
Instrument I.D.		HP4	HP4	HP4
Date Analyzed		05/06/91	05/06/91	05/06/91
RLMF		1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020.
RLMF - Reporting Limit Multiplication Factor.
Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst — 5.14.91 Date

Supervisor — 5/14/91 Date

4/CS006 E 2:15 11/22 23J

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

NO._____

McCULLEY, FRICK & GILMAN, INC.

RECEIVED
MAY 16 1991
90-214M, F & G, INC

RECEIVED
MAY 16 1991
McCULLEY, FRICK & GILMAN, INC.

☐ 3300 Arapahoe Ave., Suite 218
Boulder, CO 80303
TEL: (303) 447-1823
FAX: (303) 447-1836

☐ 5818 Balcones Dr., Suite 202
Austin, TX 78731
TEL: (512) 371-1667
FAX: (512) 454-4126

☒ 5 Third St., Suite 916
San Francisco, CA 94103
TEL: (415) 495-7110
FAX: (415) 495-7107

PROJECT No.: ~~90-215-X~~ PROJECT NAME: Avis - Oakland Intl Airport PAGE: 1 OF: 1

SAMPLER (Signature): [signature] DATE: 4/30/91

METHOD OF SHIPMENT: Anametrix Courier CARRIER/ WAYBILL NO. — DESTINATION: Anametrix, Inc.

SPECIAL INSTRUCTIONS/HAZARDS:

SAMPLES

ANALYSIS REQUEST

Lab No.	Sample Identification	Sample Collection DATE	Sample Collection TIME	Matrix*	Preservation HCL	Preservation HNO_3	Preservation H_2SO_4	Preservation COLD	Preservation NONE	Preservation OTHER	Containers* VOL. (ml)	Containers* TYPE*	Containers* No.	Methods EPA 601/8010	Methods EPA 602/8020	Methods EPA 624/8240	Methods EPA 625/8270	Methods TPH as Gasoline	Methods TPH as Diesel	Methods BTEX	Methods EPA 8310	Handling HOLD	Handling RUSH	Handling STANDARD	REMARKS (Special handling procedures, specific analytical methods, observations, etc.)
①	MW-1A	4/30	1015	AQ	X			X			40	G	3					X		X				X	ALL SAMPLES COLD IN PROPER CONTAINER W/ HEADSPACE.
①	MW-1A	4/30	1015	AQ				X			1000	G	2								X			X	
②	Trip blank	4/30	—	AQ	N			X			40	G	3					X		X				X	

TOTAL NUMBER OF CONTAINERS 8

LABORATORY COMMENTS/ CONDITION OF SAMPLES

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
[signature]	Toby Ono	MFG	4/30/91	1248	[signature]	Diane Gowan	Anametrix

LABORATORY

*KEY: Matrix AQ-aqueous NA-nonaqueous SO-soil SL-sludge P-petroleum A air OT other Containers P-plastic G-glass T-teflon B-brass OT-other

DISTRIBUTION PINK Field Copy YELLOW Laboratory Copy WHITE Return to Originator

APPENDIX B

Alameda County Flood Control and Water Conservation District
Groundwater Protection Ordinance Permits
and
California Department of Water Resources Water Well Drillers Reports
for
Destruction of Monitoring Well MW-1
and
Construction of Monitoring Well MW-1A

RECEIVED
JAN 3 0 1991
M. F & G, INC

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE • PLEASANTON, CALIFORNIA 94566 • (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Oakland International Airport
Avis Rent a Car System, Inc. Facility
Corner of Airport Dr. & Neil Armstrong Way

CLIENT
Name Avis Rent A Car System, Inc.
Address 900 Old Country Rd. Phone (516) 222-4735
City Garden City, NY Zip 11530

APPLICANT
Name McCulley, Frick & Gilman, Inc.
5 Third Street, Suite 916
Address Phone (415) 495-7110
City San Francisco Zip 94103

TYPE OF PROJECT

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

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

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

DRILLER'S LICENSE NO. 384167

WELL PROJECTS
Drill Hole Diameter ___ in. Maximum
Casing Diameter ___ in. Depth ___ ft.
Surface Seal Depth ___ ft. Number ___

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

ESTIMATED STARTING DATE 28 Jan 91
ESTIMATED COMPLETION DATE 8 Feb 91

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

APPLICANT'S SIGNATURE Edward P. Conte Date 1/21/91
R.G. # 4721

FOR OFFICE USE

PERMIT NUMBER 91039
LOCATION NUMBER 2S/3W 32H80

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 completio of permitted work the original Department o Water Resources Water Well Drillers Report o equivalent for well projects, or drilling log and location sketch for geotechnical projects.
3. Permit is void if project not begun within 9 days of approval date.

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

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

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

(E.) WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 24 Jan 91
Wyman Hong

12198

25 January 1991

ZONE 7
WATER RESOURCES ENGINEERING
GROUNDWATER PROTECTION ORDINANCE

AVIS RENT-A-CAR
AIRPORT DRIVE AND NEIL ARMSTRONG WAY
OAKLAND
WELL 2S/3W 32H80
PERMIT 91039

Destruction Requirements

1. Drill out the well so that casing, seal, and gravel pack are removed to the bottom of the well.

2. Using a tremie pipe, fill the hole to 2 feet below the lower of finished grade or original ground with neat cement.

3. After seal has set, backfill the remaining hole with compacted material.

These destruction requirements as proposed by Edward Conti of McCulley, Frick and Gilman, Inc. meet or exceed the Zone 7 minimum requirements.

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

90-2143

RECEIVED

JAN 29 1991

M. F & G, INC

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE ♦ PLEASANTON, CALIFORNIA 94566 ♦ (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Oakland International Airport
Avis Rent A Car System, Inc. Facility
Corner of Airport Dr. & Neil Armstrong Way

CLIENT
Name Avis Rent A Car System, Inc.
Address 900 Old Country Rd. Phone (516) 222-4735
City Garden City, NY Zip 11530

APPLICANT
Name McCulley, Frick & Gilman, Inc.
5 Third Street, Suite 916
Address Phone (415) 495-7110
City San Francisco, CA Zip 94103

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	___
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. 384167

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in. Depth 20 ft.
Surface Seal Depth 2 ft. Number 1

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

ESTIMATED STARTING DATE 15 Feb 91
ESTIMATED COMPLETION DATE 22 Feb 91

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

APPLICANT'S SIGNATURE Edward Mento Date 1/21/91
R.G. # 4721

FOR OFFICE USE

PERMIT NUMBER 91038
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 completio of permitted work the original Department o Water Resources Water Well Drillers Report o equivalent for well projects, or drilling log and location sketch for geotechnical projects.
3. Permit is void if project not begun within 9 days of approval date.

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

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

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

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 23 Jan 9
Wyman Hong

1219

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

APPENDIX C

Laboratory Reports and Chain-of-Custody Records
for
Soil Samples Collected From Excavation and Soil Boring MW-1A

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite [illegible], San Jose, CA [illegible]

REPORT

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9103325
Date Received : 03/26/91
Project ID : 90-2143
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9103325- 1	S-1
9103325- 2	S-2
9103325- 3	S-3
9103325- 4	S-4
9103325- 5	S-5
9103325- 6	S-6
9103325- 7	S-7

This report consists of 16 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Manager

4-3-91
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

RECEIVED
APR 4 1991
McCULLEY, FRICK & GILMAN, INC.

Workorder # : 9103325
Date Received : 03/26/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: PEST

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9103325- 1	S-1	SOIL	03/26/91	8310
9103325- 2	S-2	SOIL	03/26/91	8310
9103325- 3	S-3	SOIL	03/26/91	8310
9103325- 4	S-4	SOIL	03/26/91	8310
9103325- 5	S-5	SOIL	03/26/91	8310
9103325- 6	S-6	SOIL	03/26/91	8310
9103325- 7	S-7	SOIL	03/26/91	8310

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9103325
Date Received : 03/26/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: PEST

QA/QC SUMMARY :

- Samples S-4 and S-5 were diluted due to low solubility of some of the matrix components in methanol.

Department Supervisor — 4 3 91 — Date

Chemist — 4-3-91 — Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 90-2143 S-1	Anametrix I.D.	: 9103325-01
Matrix	: SOIL	Analyst	: FH
Date sampled	: 03/26/91	Supervisor	: JMJ
Date ext.	: 03/27/91	Date released	: 03/29/91
Date analyzed	: 03/28/91	Weight ext.	: 15 g
Dilut. factor	: NONE	Instrument ID	: HP17

RECEIVED
APR 4 1991
McCULLEY, FRICK & GILMAN, INC.

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
91-20-3	* Naphthalene	330	ND
208-96-8	* Acenaphthylene	330	ND
91-57-6	* 2-Methyl-Naphthalene	330	ND
83-32-9	* Acenaphthene	330	ND
86-73-7	* Fluorene	330	ND
85-01-8	* Phenanthrene	160	ND
120-12-7	* Anthracene	160	ND
206-44-0	* Fluoranthene	160	ND
129-00-0	* Pyrene	160	ND
56-55-3	* Bnz(a)Anthracene	160	ND
218-01-9	* Chrysene	160	ND
205-99-2	* Bnz(b)Fluoranthene	160	ND
207-08-9	* Bnz(k)Fluoranthene	160	ND
50-32-8	* Bnz(a)Pyrene	160	ND
53-70-3	* DiBnz(ah)Anthracene	160	ND
191-24-2	* Bnz(g,h,i)Perylene	160	ND
193-39-5	* Indeno(123cd)Pyrene	160	ND
	% Surrogate Recovery	15-120%	68%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 90-2143 S-2	Anametrix I.D.	: 9103325-02
Matrix	: SOIL	Analyst	: FH
Date sampled	: 03/26/91	Supervisor	: [illegible]
Date ext.	: 03/27/91	Date released	: 03/29/91
Date analyzed	: 03/28/91	Weight ext.	: 15 g
Dilut. factor	: NONE	Instrument ID	: HP17

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
91-20-3	* Naphthalene	330	ND
208-96-8	* Acenaphthylene	330	ND
91-57-6	* 2-Methyl-Naphthalene	330	ND
83-32-9	* Acenaphthene	330	ND
86-73-7	* Fluorene	330	ND
85-01-8	* Phenanthrene	160	ND
120-12-7	* Anthracene	160	ND
206-44-0	* Fluoranthene	160	ND
129-00-0	* Pyrene	160	ND
56-55-3	* Bnz(a)Anthracene	160	ND
218-01-9	* Chrysene	160	ND
205-99-2	* Bnz(b)Fluoranthene	160	ND
207-08-9	* Bnz(k)Fluoranthene	160	ND
50-32-8	* Bnz(a)Pyrene	160	ND
53-70-3	* DiBnz(ah)Anthracene	160	ND
191-24-2	* Bnz(g,h,i)Perylene	160	ND
193-39-5	* Indeno(123cd)Pyrene	160	ND
	% Surrogate Recovery	15-120%	87%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 90-2143 S-3		Anametrix I.D.	: 9103325-03
Matrix	: SOIL		Analyst	: FH
Date sampled	: 03/26/91		Supervisor	: [illegible]
Date ext.	: 03/27/91		Date released	: 03/29/91
Date analyzed	: 03/28/91		Weight ext.	: 15 g
Dilut. factor	: NONE		Instrument ID	: HP17

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
91-20-3	* Naphthalene	330	ND
208-96-8	* Acenaphthylene	330	ND
91-57-6	* 2-Methyl-Naphthalene	330	ND
83-32-9	* Acenaphthene	330	ND
86-73-7	* Fluorene	330	ND
85-01-8	* Phenanthrene	160	ND
120-12-7	* Anthracene	160	ND
206-44-0	* Fluoranthene	160	ND
129-00-0	* Pyrene	160	ND
56-55-3	* Bnz(a)Anthracene	160	ND
218-01-9	* Chrysene	160	ND
205-99-2	* Bnz(b)Fluoranthene	160	ND
207-08-9	* Bnz(k)Fluoranthene	160	ND
50-32-8	* Bnz(a)Pyrene	160	ND
53-70-3	* DiBnz(ah)Anthracene	160	ND
191-24-2	* Bnz(g,h,i)Perylene	160	ND
193-39-5	* Indeno(123cd)Pyrene	160	ND
	% Surrogate Recovery	15-120%	97%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 90-2143 S-4	Anametrix I.D.	: 9103325-04
Matrix	: SOIL	Analyst	:
Date sampled	: 03/26/91	Supervisor	:
Date ext.	: 03/27/91	Date released	: 03/29/91
Date analyzed	: 03/28/91	Weight ext.	: 15 g
Dilut. factor	: 5	Instrument ID	: HP17

RECEIVED
APR 4 1991
McCLELLEY, ERICK & GILMAN, INC.

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
91-20-3	* Naphthalene	1650	ND
208-96-8	* Acenaphthylene	1650	ND
91-57-6	* 2-Methyl-Naphthalene	1650	ND
83-32-9	* Acenaphthene	1650	ND
86-73-7	* Fluorene	1650	ND
85-01-8	* Phenanthrene	800	ND
120-12-7	* Anthracene	800	ND
206-44-0	* Fluoranthene	800	ND
129-00-0	* Pyrene	800	ND
56-55-3	* Bnz(a)Anthracene	800	ND
218-01-9	* Chrysene	800	ND
205-99-2	* Bnz(b)Fluoranthene	800	ND
207-08-9	* Bnz(k)Fluoranthene	800	ND
50-32-8	* Bnz(a)Pyrene	800	ND
53-70-3	* DiBnz(ah)Anthracene	800	ND
191-24-2	* Bnz(g,h,i)Perylene	800	ND
193-39-5	* Indeno(123cd)Pyrene	800	ND
	% Surrogate Recovery	15-120%	113%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 90-2143 S-5		Anametrix I.D.	: 9103325-05
Matrix	: SOIL		Analyst	: CH
Date sampled	: 03/26/91	RECEIVED	Supervisor	: JKS
Date ext.	: 03/27/91		Date released	: 03/29/91
Date analyzed	: 03/28/91	APR 4 1991	Weight ext.	: 15 g
Dilut. factor	: 2		Instrument ID	: HP17

McCULLEY, FRICK & GILMAN, INC.

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
91-20-3	* Naphthalene	660	ND
208-96-8	* Acenaphthylene	660	ND
91-57-6	* 2-Methyl-Naphthalene	660	ND
83-32-9	* Acenaphthene	660	ND
86-73-7	* Fluorene	660	ND
85-01-8	* Phenanthrene	320	ND
120-12-7	* Anthracene	320	ND
206-44-0	* Fluoranthene	320	ND
129-00-0	* Pyrene	320	ND
56-55-3	* Bnz(a)Anthracene	320	ND
218-01-9	* Chrysene	320	ND
205-99-2	* Bnz(b)Fluoranthene	320	ND
207-08-9	* Bnz(k)Fluoranthene	320	ND
50-32-8	* Bnz(a)Pyrene	320	ND
53-70-3	* DiBnz(ah)Anthracene	320	ND
191-24-2	* Bnz(g,h,i)Perylene	320	ND
193-39-5	* Indeno(123cd)Pyrene	320	ND
	% Surrogate Recovery	15-120%	82%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 90-2143 S-6	RECEIVED	Anametrix I.D.	: 9103325-06
Matrix	: SOIL		Analyst	: FH
Date sampled	: 03/26/91		Supervisor	: [illegible]
Date ext.	: 03/27/91	APR 4 1991	Date released	: 03/29/91
Date analyzed	: 03/28/91		Weight ext.	: 15 g
Dilut. factor	: NONE	McCULLEY, FRICK & GILMAN, INC.	Instrument ID	: HP17

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
91-20-3	* Naphthalene	330	ND
208-96-8	* Acenaphthylene	330	ND
91-57-6	* 2-Methyl-Naphthalene	330	ND
83-32-9	* Acenaphthene	330	ND
86-73-7	* Fluorene	330	ND
85-01-8	* Phenanthrene	160	ND
120-12-7	* Anthracene	160	ND
206-44-0	* Fluoranthene	160	ND
129-00-0	* Pyrene	160	ND
56-55-3	* Bnz(a)Anthracene	160	ND
218-01-9	* Chrysene	160	ND
205-99-2	* Bnz(b)Fluoranthene	160	ND
207-08-9	* Bnz(k)Fluoranthene	160	ND
50-32-8	* Bnz(a)Pyrene	160	ND
53-70-3	* DiBnz(ah)Anthracene	160	ND
191-24-2	* Bnz(g,h,i)Perylene	160	ND
193-39-5	* Indeno(123cd)Pyrene	160	ND
	% Surrogate Recovery	15-120%	106%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 90-2143 S-7	RECEIVED	Anametrix I.D.	: 9103325-07
Matrix	: SOIL		Analyst	: FH
Date sampled	: 03/26/91	APR 4 1991	Supervisor	: RJ
Date ext.	: 03/27/91		Date released	: 03/29/91
Date analyzed	: 03/28/91	McCULLEY, FRICK & GILMAN, INC.	Weight ext.	: 15 g
Dilut. factor	: NONE		Instrument ID	: HP17

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
91-20-3	* Naphthalene	330	ND
208-96-8	* Acenaphthylene	330	ND
91-57-6	* 2-Methyl-Naphthalene	330	ND
83-32-9	* Acenaphthene	330	ND
86-73-7	* Fluorene	330	ND
85-01-8	* Phenanthrene	160	ND
120-12-7	* Anthracene	160	ND
206-44-0	* Fluoranthene	160	ND
129-00-0	* Pyrene	160	ND
56-55-3	* Bnz(a)Anthracene	160	ND
218-01-9	* Chrysene	160	ND
205-99-2	* Bnz(b)Fluoranthene	160	ND
207-08-9	* Bnz(k)Fluoranthene	160	ND
50-32-8	* Bnz(a)Pyrene	160	ND
53-70-3	* DiBnz(ah)Anthracene	160	ND
191-24-2	* Bnz(g,h,i)Perylene	160	ND
193-39-5	* Indeno(123cd)Pyrene	160	ND
	% Surrogate Recovery	15-120%	75%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: METHOD BLANK		Anametrix I.D.	:	PWBL032791
Matrix	: SOIL		Analyst	:	FH
Date sampled	: 03/26/91		Supervisor	:	JK
Date ext.	: 03/27/91		Date released	:	03/29/91
Date analyzed	: 03/28/91		Weight ext.	:	15 g
Dilut. factor	: NONE		Instrument ID	:	HP17

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
91-20-3	* Naphthalene	330	ND
208-96-8	* Acenaphthylene	330	ND
91-57-6	* 2-Methyl-Naphthalene	330	ND
83-32-9	* Acenaphthene	330	ND
86-73-7	* Fluorene	330	ND
85-01-8	* Phenanthrene	160	ND
120-12-7	* Anthracene	160	ND
206-44-0	* Fluoranthene	160	ND
129-00-0	* Pyrene	160	ND
56-55-3	* Bnz(a)Anthracene	160	ND
218-01-9	* Chrysene	160	ND
205-99-2	* Bnz(b)Fluoranthene	160	ND
207-08-9	* Bnz(k)Fluoranthene	160	ND
50-32-8	* Bnz(a)Pyrene	160	ND
53-70-3	* DiBnz(ah)Anthracene	160	ND
191-24-2	* Bnz(g,h,i)Perylene	160	ND
193-39-5	* Indeno(123cd)Pyrene	160	ND
	% Surrogate Recovery	15-120%	100%

ND : Not detected at or above the practical quantitation limit for the method.

POLYNUCLEAR AROMATIC HYDROCARBONS MATRIX SPIKE REPORT
EPA METHOD 610/8310
ANAMETRIX, INC. (408)432-8192

Sample I.D. : 90-2143 S-1
Matrix : SOIL
Date sampled : 03/26/91
Date extracted: 03/27/91
Date analyzed : 03/29/91

Anametrix I.D. : 9103325-1
Analyst : FH
Supervisor : SP
Date released : 03/29/91
Instrument I.D.: HP17

COMPOUND	SPIKE AMT. (ug/Kg	MS (ug/Kg)	%REC MS	MSD (ug/Kg)	%REC MSD	RPD	%REC LIMITS
Naphthalene	6700	4100	61%	4200	63%	2%	25-125%
Acenaphthene	6700	4200	63%	4500	67%	7%	25-125%
Fluorene	6700	5000	75%	5400	81%	8%	25-125%
Benzo(a)anthracene	1350	900	67%	1000	74%	11%	25-125%
Chrysene	1350	1100	81%	1100	81%	0%	25-125%

* Limits established by ANAMETRIX,INC.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

RECEIVED
APR 4 1991
McCULLEY, FRICK & GILMAN, INC.

Workorder # : 9103325
Date Received : 03/26/91
Project ID : 90-2143
Purchase Order: M/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9103325- 1	S-1	SOIL	03/26/91	TPHg/BTEX
9103325- 2	S-2	SOIL	03/26/91	TPHg/BTEX
9103325- 3	S-3	SOIL	03/26/91	TPHg/BTEX
9103325- 4	S-4	SOIL	03/26/91	TPHg/BTEX
9103325- 5	S-5	SOIL	03/26/91	TPHg/BTEX
9103325- 6	S-6	SOIL	03/26/91	TPHg/BTEX
9103325- 7	S-7	SOIL	03/26/91	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9103325
Date Received : 03/26/91
Project ID : 90-2143
Purchase Order: M/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for this workorder.

Department Supervisor — Date

Chemist — Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9103325
Matrix : SOIL
Date Sampled : 03/26/91

Project Number : 90-2134
Date Released : 03/29/91

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# S-1 -01	Sample I.D.# S-2 -02	Sample I.D.# S-3 -03	Sample I.D.# S-4 -04	Sample I.D.# S-5 -05
Benzene	0.005	ND	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	0.006	ND
Ethylbenzene	0.005	ND	ND	ND	0.007	ND
Total Xylenes	0.005	ND	ND	ND	ND	ND
TPH as Gasoline	0.5	ND	ND	ND	ND	ND
% Surrogate Recovery		98%	90%	107%	100%	128%
Instrument I.D.		HP8	HP8	HP8	HP8	HP8
Date Analyzed		03/27/91	03/27/91	03/27/91	03/27/91	03/27/91
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.
RLMF - Reporting Limit Multiplication Factor.
Anametrix Control limits for surrogate recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst — Date 04-02-91

Supervisor — Date 4/2/91

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9103325
Matrix : SOIL
Date Sampled : 03/26/91

Project Number : 90-2134
Date Released : 03/29/91

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# S-6 -06	Sample I.D.# S-7 -07	Sample I.D.# 08B0327A BLANK
Benzene	0.005	ND	ND	ND
Toluene	0.005	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND
Total Xylenes	0.005	ND	ND	ND
TPH as Gasoline	0.5	ND	ND	ND
% Surrogate Recovery		94%	96%	109%
Instrument I.D.		HP8	HP8	HP8
Date Analyzed		03/27/91	03/27/91	03/27/91
RLMF		1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.
RLMF - Reporting Limit Multiplication Factor.
Anametrix Control limits for surrogate recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 04-01-91 Date

Supervisor Date

BTEX MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 90-2143 S-7	Anametrix I.D.	: 9103325-07
Matrix	: SOIL	Analyst	: IY
Date Sampled	: 03/26/91	Supervisor	:
Date Analyzed	: 03/27/91	Date Released	: 03/29/91

COMPOUND	SPIKE AMT. (mg/Kg)	MS (mg/Kg)	REC MS	MSD (mg/Kg)	REC MSD	RPD	%REC LIMITS
Benzene	0.010	0.010	95%	0.011	110%	14%	49-159
Toluene	0.010	0.0091	91%	0.011	114%	23%	53-156
Ethylbenzene	0.010	0.0095	95%	0.012	123%	26%	54-151
M+P-Xylenes	0.0067	0.0060	90%	0.0071	106%	17%	56-157
O-Xylene	0.0033	0.0032	98%	0.0041	124%	23%	58-154

* Limits established by Anametrix, Inc.

910 3325

(2) 3/4 15:45

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

NO.

McCULLEY, FRICK & GILMAN, INC.

RECEIVED
APR 4 1991
McCULLEY, FRICK & GILMAN, INC.

☐ 3300 Arapahoe Ave., Suite 218
Boulder, CO 80303
TEL: (303) 447-1823
FAX: (303) 447-1836

☐ 5818 Balcones Dr., Suite 202
Austin, TX 78731
TEL: (512) 371-1667
FAX: (512) 454-4126

☒ 5 Third St., Suite 916
San Francisco, CA 94103
TEL: (415) 495-7110
FAX: (415) 495-7107

PROJECT No.: 90-3143 PROJECT NAME: Arco Oakland PAGE: 1 OF: 1
SAMPLER (Signature): DATE: 3/26/91
METHOD OF SHIPMENT: by lab courrier CARRIER/ WAYBILL NO. DESTINATION: Anametrix
SPECIAL INSTRUCTIONS/HAZARDS: Rush - 48 hr

SAMPLES

Lab No.	Sample Identification	Sample Collection DATE	Sample Collection TIME	Matrix*	Preservation HCL	Preservation HNO3	Preservation H2SO4	Preservation COLD	Preservation NONE	Preservation OTHER	Containers* VOL. (ml)	Containers* TYPE*	Containers* No.
01	S-1	3/26/91	1035	SO				X			2"x4"	B	1
02	S-2	"	1040	SO				X			"	B	1
03	S-3	"	1125	SO				X			"	B	1
04	S-4	"	1135	SO				X			"	B	1
05	S-5	"	1140	SO				X			"	B	1
06	S-6	"	1145	SO				X			"	B	1
07	S-7	"	1200	SO				X			"	B	1

TOTAL NUMBER OF CONTAINERS 7

ANALYSIS REQUEST

Methods EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	TPH as Gasoline	TPH as Diesel	BTEX	8310 + 2-methylnaphthalene			Handling HOLD	RUSH 4 Days	STANDARD
				X		X	X				X	
				X		X	X				X	
				X		X	X				X	
				X		X	X				X	
				X		X	X				X	
				X		X	X				X	
				X		X	X				X	

REMARKS (Special handling procedures, specific analytical methods, observations, etc.)

Rush all analyses
48 hr.
For method 8310
See special instructions Sheet - Add 2-methyl naphthalene

LABORATORY COMMENTS/ CONDITION OF SAMPLES

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
	Edmund Conti	MFG	3/26/91	1350		Benny S. Carrizosa	Anametrix
	Benny S. Carrizosa	Anametrix	3/26/91	1535		Michael Schlenz	Anametrix LABORATORY

*KEY: Matrix AQ-aqueous NA-nonaqueous SO-soil SL-sludge P-petroleum A-air OT-other Containers P-plastic G-glass T-teflon B-brass OT-other

DISTRIBUTION: PINK: Field Copy YELLOW: Laboratory Copy WHITE: Return to Originator

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive Suite F San Jose CA 95131
(408) [illegible] Fax (408) 432-8198

REPORT

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9104012
Date Received : 04/01/91
Project ID : 90-2143
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9104012- 1	MW-1A-1-1
9104012- 2	MW-1A-2-2

This report consists of 9 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Manager

4-12-91
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9104012
Date Received : 04/01/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: PEST

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9104012- 1	MW-1A-1-1	SOIL	04/01/91	8310
9104012- 2	MW-1A-2-2	SOIL	04/01/91	8310

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9104012
Date Received : 04/01/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: PEST

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Department Supervisor — Date: 4-12-91

Chemist — Date: 4-12-91

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

RECEIVED
APR 16 1991
McCULLEY, FRICK & GILMAN, INC.

Sample I.D.	: 90-2143 MW-1A	Anametrix I.D.	: 9104012-01
Matrix	: SOIL	Analyst	: FH
Date sampled	: 04/01/91	Supervisor	: [illegible]D
Date ext.	: 04/04/91	Date released	: 04/10/91
Date analyzed	: 04/08/91	Weight ext.	: 15 g
Dilut. factor	: NONE	Instrument ID	: HP17

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
91-20-3	* Naphthalene	330	ND
91-57-6	* 2-Methylnaphthalene	330	ND
208-96-8	* Acenaphthylene	330	ND
83-32-9	* Acenaphthene	330	ND
86-73-7	* Fluorene	330	ND
85-01-8	* Phenanthrene	160	ND
120-12-7	* Anthracene	160	ND
206-44-0	* Fluoranthene	160	ND
129-00-0	* Pyrene	160	ND
56-55-3	* Bnz(a)Anthracene	160	ND
218-01-9	* Chrysene	160	ND
205-99-2	* Bnz(b)Fluoranthene	160	ND
207-08-9	* Bnz(k)Fluoranthene	160	ND
50-32-8	* Bnz(a)Pyrene	160	ND
53-70-3	* DiBnz(ah)Anthracene	160	ND
191-24-2	* Bnz(g,h,i)Perylene	160	ND
193-39-5	* Indeno(123cd)Pyrene	160	ND
	% Surrogate Recovery	15-120%	91%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

RECEIVED
APR 16 1991
McCULLEY, FRICK & GILMAN, INC.

Sample I.D.	: 90-2143 MW-1A-2-2	Anametrix I.D.	: 9104012-02
Matrix	: SOIL	Analyst	: FAI
Date sampled	: 04/01/91	Supervisor	: SD
Date ext.	: 04/04/91	Date released	: 04/10/91
Date analyzed	: 04/08/91	Weight ext.	: 15 g
Dilut. factor	: NONE	Instrument ID	: HP17

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
91-20-3	* Naphthalene	330	ND
91-57-6	* 2-Methylnaphthalene	330	ND
208-96-8	* Acenaphthylene	330	ND
83-32-9	* Acenaphthene	330	ND
86-73-7	* Fluorene	330	ND
85-01-8	* Phenanthrene	160	ND
120-12-7	* Anthracene	160	ND
206-44-0	* Fluoranthene	160	ND
129-00-0	* Pyrene	160	ND
56-55-3	* Bnz(a)Anthracene	160	ND
218-01-9	* Chrysene	160	ND
205-99-2	* Bnz(b)Fluoranthene	160	ND
207-08-9	* Bnz(k)Fluoranthene	160	ND
50-32-8	* Bnz(a)Pyrene	160	ND
53-70-3	* DiBnz(ah)Anthracene	160	ND
191-24-2	* Bnz(g,h,i)Perylene	160	ND
193-39-5	* Indeno(123cd)Pyrene	160	ND
	% Surrogate Recovery	15-120%	91%

ND : Not detected at or above the practical quantitation limit for the method.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 610/8310
ANAMETRIX, INC. (408) 432-8192

RECEIVED
APR 16 1991
McCULLEY, FRICK & GILMAN, INC.

Sample I.D.	: METHOD BLANK	Anametrix I.D.	: PABL040491
Matrix	: SOIL	Analyst	: FH
Date sampled	: N/A	Supervisor	: SD
Date ext.	: 04/04/91	Date released	: 04/10/91
Date analyzed:	04/08/91	Weight ext.	: 15 g
Dilut. factor:	NONE	Instrument ID	: HP17

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
91-20-3	* Naphthalene	330	ND
91-57-6	* 2-Methylnaphthalene	330	ND
208-96-8	* Acenaphthylene	330	ND
83-32-9	* Acenaphthene	330	ND
86-73-7	* Fluorene	330	ND
85-01-8	* Phenanthrene	160	ND
120-12-7	* Anthracene	160	ND
206-44-0	* Fluoranthene	160	ND
129-00-0	* Pyrene	160	ND
56-55-3	* Bnz(a)Anthracene	160	ND
218-01-9	* Chrysene	160	ND
205-99-2	* Bnz(b)Fluoranthene	160	ND
207-08-9	* Bnz(k)Fluoranthene	160	ND
50-32-8	* Bnz(a)Pyrene	160	ND
53-70-3	* DiBnz(ah)Anthracene	160	ND
191-24-2	* Bnz(g,h,i)Perylene	160	ND
193-39-5	* Indeno(123cd)Pyrene	160	ND
	% Surrogate Recovery	15-120%	77%

ND : Not detected at or above the practical quantitation limit for the method.

POLYNUCLEAR AROMATIC HYDROCARBONS MATRIX SPIKE REPORT
EPA METHOD 610/8310
ANAMETRIX, INC. (408)432-8192

Sample I.D. : 90-2143 MW-1A-1-1
Matrix : SOIL
Date sampled : 04/01/91
Date extracted: 04/04/91
Date analyzed : 04/08/91

Anametrix I.D. : 9104012-1
Analyst : FH.
Supervisor : SD
Date released : 04/10/91
Instrument I.D.: HP17

COMPOUND	SPIKE AMT. (ug/Kg	MS (ug/Kg)	%REC MS	MSD (ug/Kg)	%REC MSD	RPD	%REC LIMITS
Naphthalene	6700	6400	96%	6000	90%	-6%	25-125%
Acenaphthene	6700	6300	94%	5800	87%	-8%	25-125%
Fluorene	6700	7400	110%	7000	104%	-6%	25-125%
Benzo(a)anthracene	1350	1300	96%	1200	89%	-8%	25-125%
Chrysene	1350	1500	111%	1400	104%	-7%	25-125%

* Limits established by ANAMETRIX,INC.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

Workorder # : 9104012
Date Received : 04/01/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9104012- 1	MW-1A-1-1	SOIL	04/01/91	TPHg/BTEX
9104012- 2	MW-1A-2-2	SOIL	04/01/91	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. YOHJI ONO
McCULLEY, FRICK & GILMAN, INC.
5 THIRD STREET, SUITE 916
SAN FRANCISCO, CA 94103

RECEIVED
APR 16 1991
McCULLEY, FRICK & GILMAN, INC.

Workorder # : 9104012
Date Received : 04/01/91
Project ID : 90-2143
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Department Supervisor — Date 4/9/91

Chemist — Date 4.9.91

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS (GASOLINE WITH BTEX)

ANAMETRIX, INC. - (408) 432-8192

RECEIVED
APR 16 1991
McCULLEY, FRICK & GILMAN, INC.

Anametrix W.O.: 9104012
Matrix : SOIL
Date Sampled : 04/01/91

Project Number : 90-2143
Date Released : 04/08/91

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# MW-1A -1-1 -01	Sample I.D.# MW-1A -2-2 -02	Sample I.D.# 04B0403A BLANK
Benzene	0.005	ND	ND	ND
Toluene	0.005	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND
Total Xylenes	0.005	ND	ND	ND
TPH as Gasoline	0.5	ND	ND	ND
% Surrogate Recovery		109%	109%	103%
Instrument I.D.		HP4	HP4	HP4
Date Analyzed		04/03/91	04/03/91	04/03/91
RLMF		1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020.
RLMF - Reporting Limit Multiplication Factor.
Anametrix control limits for surrogate recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 4.9.91 Date

Supervisor 4/5/91 Date

9104012 MS (2) 19:15

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

RECEIVED APR 16 1991 McCULLEY, FRICK & GILMAN, INC.

McCULLEY, FRICK & GILMAN, INC.

NO.

☐ 3300 Arapahoe Ave., Suite 218, Boulder, CO 80303, TEL: (303) 447-1823, FAX: (303) 447-1836

☐ 5818 Balcones Dr., Suite 202, Austin, TX 78731, TEL: (512) 371-1667, FAX: (512) 454-4126

☒ 5 Third St., Suite 916, San Francisco, CA 94103, TEL: (415) 495-7110, FAX: (415) 495-7107

PROJECT No.: 90-243 PROJECT NAME: [illegible] PAGE: 1 OF 1
SAMPLER (Signature): [signature] DATE: 4/1/91
METHOD OF SHIPMENT: VIA LAB COURIER CARRIER/ WAYBILL NO. — DESTINATION Anametrix, Inc.
SPECIAL INSTRUCTIONS/HAZARDS: see attached special instruction sheet

	SAMPLES													ANALYSIS REQUEST											
Lab No.	Sample Identification	Sample Collection DATE	TIME	Matrix*	Preservation HCL	HNO3	H2SO4	COLD	NONE	OTHER	Containers* VOL. (ml)	TYPE*	No.	Methods* EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	TPH as Gasoline	TPH as Diesel	BTEX	EPA 8310 (PNAs)	Handling HOLD	RUSH	STANDARD	REMARKS (Special handling procedures, specific analytical methods, observations, etc.)
01	MW-11-1-1	4/1	935	SO				X			2"x6"	B	1					X	X	X	X				*EPA 8310 + 2-methyl naphthalene
02	MW-11-2-2	4/1	942	SO				X			"	B	1					X	X	X	X				

TOTAL NUMBER OF CONTAINERS 2

LABORATORY COMMENTS/ CONDITION OF SAMPLES

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
[signature]	[illegible]	MFG	4/1/91	1534	[signature]	BENNY S. CARRIZOSA	ANAMETRIX
[signature]	BENNY S. CARRIZOSA	ANAMETRIX	4/1/91	1700	[signature]	Michael Schultz	ANAMETRIX LABORATORY

*KEY: Matrix AQ-aqueous NA-nonaqueous SO-soil SL-sludge P-petroleum A-air OT-other Containers P-plastic G-glass T-teflon B-brass OT-other

DISTRIBUTION: PINK Field Copy YELLOW Laboratory Copy WHITE Return to Originator

APPENDIX D

Uniform Hazardous Waste Manifest
for
Ground Water Removed from Excavation

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. *Form designed for use on elite (12-pitch typewriter).*

See Instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Substances Control Division
2Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: C A L 0 0 0 0 2 0 0 6 4 | Manifest Document No.: 0 0 0 0 1

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

RECEIVED
APR 03 1991
M F & G INC.

3. Generator's Name and Mailing Address
AVIS RENT-A-CAR
P. O. Box 2521, Oakland, Ca. 94614
4. Generator's Phone (415) 577-6370

A. State Manifest Document Number: 90547037
B. State Generator's ID:

5. Transporter 1 Company Name: H & H Ship Service Company
6. US EPA ID Number: C A D 0 0 4 7 7 1 1 6 8
C. State Transporter's ID: 200560
D. Transporter's Phone: (415) 543-4835

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
H & H Ship Service Company
220 China Basin Street
San Francisco, CA 94107
10. US EPA ID Number: C A D 0 0 4 7 7 1 1 6 8
G. State Facility's ID: C A D 0 0 4 7 7 1 1 6 8
H. Facility's Phone: (415) 543-4835

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. OIL AND WATER NON RCRA HAZARDOUS WASTE LIQUID	0 0 1	T T	02000	G	State 135 EPA/Other
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above
FUEL, OIL AND WATER

K. Handling Codes for Wastes Listed Above
a. 01 b. c. d.

15. Special Handling Instructions and Additional Information
JOB #7308
24 Hr. Emergency Contact - H & H #(415) 543-4835
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR
JOB SITE: AVIS RENT-A CAR SVC. CEN.
Apt Dr. & Neil Armstg Wy
Oakland, California

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: C CECCARELLI — Signature: [signature] — Month Day Year: 10 3 2 7 9 1

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: WAYMON H. MC DONALD — Signature: [signature] — Month Day Year: 10 3 2 7 9 1

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: PETER YIMBO — Signature: Peter O. Yimbo — Month Day Year: 10 3 2 7 9 1

Do Not Write Below This Line

DHS 8022 A
EPA 8700—22
(Rev. 6-89) Previous editions are obsolete.

White: TSDF SENDS THIS COPY TO DOHS WITHIN 30 DAYS
To: P.O. Box 3000, Sacramento, CA 95812

GENERATOR

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

90547037

APPENDIX E

Soil Boring Log and Well Construction Data for Monitoring Well MW-1A

ABBREVIATIONS/SYMBOLS USED IN BORING LOGS

GENERAL

PID - Photoionization Detector
OVM - Organic Vapor Meter
ppm - Parts Per Million in Air
sfc csg - Surface Casing
USCS - Unified Soil Classification System
NGVD - National Geodetic Vertical Datum of 1929
NA - Not Analyzed
BGL - Below Ground Level

COLORS

v - very
lt - light
dk - dark
yel - yellow/yellowish
brn - brown/brownish
red-brn - reddish brown
a.a. - as above
(10 YR 4/6) - Munsell notation (hue value/chroma)

SAND GRAIN SIZE

VF - Very Fine
F - Fine
Med - Medium
Crs - Coarse

DENSITY/STIFFNESS

Med - Medium
V - Very

GEOLOGICAL CONTACTS

———— Sharp Contact
— — — Gradational Contact

GEOTECHNICAL

L.L. - Liquid Limit in percent
P.I. - Plasticity Index in percent
K - Vertical Hydraulic Conductivity (permeability) in cm/sec

MOISTURE CONTENT

∇ Observed top of saturated soil interval

EXPLANATION FOR BORING LOGS

McCULLEY, FRICK & GILMAN, INC.

Avis Rent A Car System, Inc.

LOG OF MONITORING WELL MW-1A

BORING LOCATION: *Oakland International Airport, Oakland, CA*		ELEVATION AND DATUM: *3.20 ft. NGVD top of casing*	
DRILLING AGENCY: *HEW Drilling Company, Inc.*	DRILLER. *Tomas Jaime*	DATE STARTED: *4/1/91*	DATE FINISHED: *4/1/91*
DRILLING METHOD: *Hollow-stem auger*		DRILL BIT. *8" O.D. auger*	COMPLETION DEPTH: *13.5'*
SIZE AND TYPE OF CASING: *2" I.D. flush-threaded SCH40 PVC; 0.010" slots*		LOGGED BY: *Y. Ono*	CHECKED BY. *E.P. Conti R.G. # 4721*
SAMPLING METHOD: *Drive sample, 140 lb. hammer*			
SAMPLER TYPE: *2" I.D. split-spoon*	LENGTH: *1.5'* DROP: *30"*		

DEPTH (feet)	DESCRIPTION	USCS CLASS	WELL CONSTRCT.	DEPTH (feet)	SAMPLING RUN NO (Recov)	SAMPLING BLOWS/ 6 in.	REMARKS (drill rate, fluid loss, odor, etc.)
	ASPHALT						PID = ppm as isobutylene
	GRAVEL FILL	GW					
1	CLAYEY SAND, olive gray (5y 4/2), F sand to gravel to 1/2", dense, moist	SC		1			
	↓ mottled brn	CL					Sample MW-1A-1-1 (2.5 to 3' BGL) PID = 0 ppm
2	SANDY CLAY, mottled olive brn (2.5Y 4/4) and yel brn (10YR 5/6), F sand, little Med sand to gravel to 1", some yel, brn, red-brn and black mottling, stiff, moist		Cement / Bent.	2	1 (0.9')	6 11 15	
3				3			
4				4			
5				5			
	↓ mottled brn (10YR 5/3) and olive (5Y 5/3), F sand, trace Med to Crs sand, some yel, brn, black and dk gray mottling						Sample MW-1A-2-2 (6 to 6.5' BGL) PID = 0 ppm
6				6	2 (1.3')	5 3 5	
7	▼		Monterey sand #2/16	7			Driller call: bay mud (soft)
8				8			
9				9			
10				10			
	CLAYEY SILT, dk greenish gray (5GY 4/1), little F sand, soft, wet	ML					Musty (bay mud) odor PID = 0 ppm
11				11	3 (1.3')	1 1 1	
	SANDY SILT, a.a., F sand, trace shell fragments, soft	ML					
12				12			
13				13			
14			Bentonite	14			
15				15			

Avis Rent A Car System, Inc.

LOG OF MONITORING WELL MW-1A

DEPTH (feet)	DESCRIPTION	USCS CLASS	WELL CONSTRCT.	DEPTH (feet)	SAMPLING RUN NO (Recov)	SAMPLING BLOWS/ 6 in.	REMARKS (drill rate, fluid loss, odor, etc.)
		ML					
16	SANDY CLAY, v dk gray (5Y 3/1), F sand, little Med sand, little silt, stiff	CL		16	4 (1.5')	5 7 12	PID = 0 ppm
	↓ increase in sand						
17	↓ greenish gray (5GY 5/1)			17			1.5 in. diam. sampler used for Run #5; PID = 0 ppm
	CLAYEY SAND, a.a., F sand, little Med sand, little silt, decrease in clay with depth, dense	SC			5 (1.0')	Push	
18	Bottom of boring at 18.0' BGL			18			water level = 6.9' BGL (inside of auger)
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
26				26			
27				27			
28				28			
29				29			
30				30			
31				31			
32				32			

Bentonite

APPENDIX F

Monitoring Well Elevation Survey Report

MERIDIAN SURVEYING ENGINEERING, INC.
210 FELL ST.
SAN FRANCISCO, CA 94102
415-861-3687

McCulley, Frick & Gilman
5 Third Street, #916
San Francisco, CA 94103
(415) 495-7110
FAX 495-7107

Attn: Yohji Ono

RE: Monitoring Well Elevations
Site Location: Avis Rent A Car System, Inc. Facility
Oakland International Airport
Oakland, California
MF&G project: 90-2143
MSE, INC project #: 91029

Dear Mr. Ono,

According to your request, on Tuesday, April 9, 1991, our surveyors established elevations on two monitoring wells at the Oakland International Airport site.

Basis of Elevation was Monitoring Well 3 (casing rim) Elevation= 3.98' (referenced from Moran Engineering June 4, 1990 90-2465) as provided to MSE, INC surveyor on the site.

Elevations are given in tenths and hundreths of feet (thousandths are estimated).

Scribes are located on the protective well box rim above the M.P..

Well #	Scribe (Elevation)	Measuring Point	Comments
MW1 A	3.575	3.205	
MW2	4.60	4.07	

Please feel free to call if you have any questions.

Sincerely,

Mohamad N. Ali, P.E.

re: 90035.els