STID 2516

enviros®

May 22, 1996

Ms. Eva Chu
Alameda County Health Care Services
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

RE: Shell Service Station - Case Closure Summary
7194 Amador Valley Boulevard
Dublin, California
WIC 204-2277-0105

Dear Ms. Chu:

The enclosed Case Closure Summary has been prepared by Enviros, Inc. on behalf of Shell Oil Products Company for the above referenced site. This summary includes a Case Closure Summary form, a Data Summary describing previous site activities, and copies of pertinent report sections.

If you have any questions, please call.

Sincerely,

Enviros, Inc.

Diane M. Lundquist, P.E.
Senior Engineer
C46725

REGISTERED PROFESSIONAL ENGINEER
DIANE M. LUNDQUIST
NO. C46725
CIVIL
STATE OF CALIFORNIA

ENVIRONMENTAL PROTECTION
96 MAY 28 PM 3:03

cc: Mr. R. Jeff Granberry, Shell Oil Products Company

Enviros, Inc.

CASE CLOSURE FORM

LEAKING UNDERGROUND FUEL STORAGE TANK PROGRAM

I. Agency Information

Agency name: Alameda County Health Care Services	Address: 1131 Harbor Bay Parkway 2nd Floor
City/State/Zip: Alameda, Ca. 94502	Phone: (707) 253-4269
Responsible staff person: Eva Chu	Title: Hazardous Materials Specialist

II. Case Information

Site facility name: Former Shell Service Station		
Site facility address: 7194 Amador Valley Boulevard, Dublin, Ca.		
RB LUSTIS Case No.:	Local case No.:	LOP Case No.:
URF filing date:	SWEEPS No.:	
Responsible Parties	**Addresses**	**Phone Numbers**
Shell Oil Products Company - Attn: Mr. R. Jeff Granberry	P.O. Box 4023 Concord, California 94524	(510) 675-6168

Tank No.	Size in Gal.	Contents	Closed in-Place/Removed?	Date
1,2,3	10,000-Gal. ea.	Gasoline	Removed	August 1987
4	280-Gal.	Waste Oil	Removed	August 1987

III. Release and Site Characterization Information

Cause and type of release: Unknown		
Site characterization complete? (Yes) No	Date approved by oversight agency:	
Monitoring wells installed? (Yes) No	Number: 13	Proper screened interval?: Yes
Deepest GW depth below ground surface: 12.65 Ft.	Shallowest depth: 5.16 Ft.	Flow direction: NE-SE
Most sensitive current use: None		
Are drinking water wells affected? Yes (No)	Aquifer name:	
Is surface water affected? Yes (No)	Nearest/affected SW name: N/A	
Off-site beneficial use impacts (addresses/locations): Data indicate offsite uses not affected		
Report(s) on file? Yes	Where is report(s) filed? RWQCB - San Francisco Bay Region, ACHCS	

Treatment and Disposal of Affected Material

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination	Date
Fuel Tanks soil	4,600 cu. yds.	Disposal facility unknown	1988
Waste Oil Tank soil	Unknown	Disposal facility unknown	1988

Release and Site Characterization Information (Continued)

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)		Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After		Before	After	Before	After
TPH (Gas)	2900	1400	85000	150	Xylenes	480	280	11000	<0.5
TPH (Diesel)	45	45	Unk.	Unk	Ethylbenzene	87	51	960	9.1
Waste Oil	75	75	Unk.	Unk.	VOCs	ND	ND	Unk.	Unk.
Benzene	99	Unk.	1400	37	Oil & Grease	Unk.	Unk.	Unk.	Unk.
Toluene	120	99	3600	<0.5	SVOCs	Unk.	Unk.	Unk.	Unk.

Comments (Depth of Remediation, etc.): Soils were excavated to the fullest extent possible during the removal of the fuel USTs. A series of 10 overexcavations were performed to delineate soil contamination. Overexcavation occurred to groundwater. Due to proposed construction on the site, excavation was ceased and soil borings were drilled. A total of 4,600 cu. yds. of soil were excavated from the site. Subsequent investigations identified an immediate upgradient source (Dutch Pride Dairy property). Wells MW-10 and MW-13 were installed immediately downgradient of the two former USTs on this adjoining property. Excavation of this property indicated that contamination had migrated onto the former Shell site.

IV. Closure

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? (Yes) No

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? (Yes) No

Does corrective action protect public health for current land use? (Yes) No

Site management requirements: None required

Should corrective action be reviewed if land use changes? (Yes) No (Review if excavation is performed)

Monitoring wells decommissioned: (Yes) No | Number decommissioned: 1 | Number retained: 12

List enforcement actions taken:

List enforcement actions rescinded:

V. Local Agency Representative Data

Name: Ms. Eva Chu	Title: Hazardous Materials Specialist
Signature	Date:

VI. RWQCB Notification

Date submitted to RB:		RB response:
RWQCB staff name:	Title:	Date:

VII. Additional Comments, Data, etc.

Shell's initial remedial approach was to extract ground water from recover well RW-1 and treatment contaminated water at the surface. However, aquifer test results in conjunction with a file search of the BP, Unocal, and ARCO investigations on the other three corners of the same intersection revealed that pumping would influence the Unocal site and hydraulically pull contamination from the Unocal site onto the former Shell site. Further data evaluations indicated a potential source upgradient (based primarily on ground water sampling data from former monitoring well MW-10). This well was installed immediately downgradient of the Dutch Pride Dairy USTs. Ground water sampling data from well MW-10 led to a soil and ground water investigation on the adjoining property. This investigation included the removal of two USTs and excavation up to the former Shell site property line. Soils in the Dutch Pride Dairy excavation contained TPH-G concentrations as high as 6,000 ppm and benzene concentrations as high as 0.019 ppm. Well MW-10 was destroyed during excavation activities, and was replaced by Well MW-13. Since its installation, Well MW-13 has contained TPH-G concentrations as high as 8,900 ppb and benzene concentrations as high as 670 ppb.

Ground water data across the former Shell site indicate that natural attenuation processes are taking place. The Shell plume has remained stable and is expected to be biodegraded in place.

DATA SUMMARY

FORMER SHELL SERVICE STATION
7194 Amador Valley Boulevard
Dublin, California
WIC 204-2277-0105

Site Description and History

The former Shell service station site is located on the east corner of the intersection between Amador Valley Boulevard and Village Parkway in Dublin, California (Plates 1, 2 and 3) and is currently occupied by Oil Changers.

In August 1987, four underground storage tanks (USTs) were removed from the site. These tank removals included a 280-gallon waste oil tank and three 10,000-gallon fuel tanks. The fuel tanks were constructed of fiberglass and appeared to be in good condition upon their removal. The waste oil tank was constructed of steel and no holes were observed in this tank. Ground water was encountered in the fuel tank pit at a depth of approximately 11.5 feet below grade (fbg). Four soil samples (designated A1, B1, C1 and D1) were collected from the excavation sidewalls at a depth of 11.0 fbg. One water sample was collected from the excavation pit (designated W1). One soil sample was collected from native soil beneath the waste oil tank (designated W.O.-1) at a depth of 9.0 fbg. Fuel tank excavation soil samples and the water sample were analyzed for gasoline and benzene, toluene and xylenes (BTX). The waste oil tank excavation soil sample was analyzed for diesel, BTX, Total Oil & Grease, halogenated volatile organics and aromatic volatile organics. Soil samples A1, B1, C1 and D1 contained Total Hydrocarbons as Gasoline ranging from 270 to 1,900 parts per million (ppm) and benzene concentrations ranging from 4.2 to 31 ppm. Water sample W1 contained 85,000 ppb Total Hydrocarbons as Gasoline, 1,400 ppb benzene, 3,600 ppb toluene and 11,000 ppb xylenes. Waste oil tank sample W.O.-1 contained 45 ppm diesel, 75 ppm gravimetric waste oil, was ND for benzene and was ND for volatile organic compounds (VOCs). Results for aromatic volatile organics could not be located in existing Shell files. The locations of the soil and water samples are presented on the Kaprealian Engineering drawing in Appendix A. Laboratory reports are also presented in Appendix A.

In August 1987, additional soil excavation was performed to remove petroleum hydrocarbon-impacted soils detected during UST removals. Four additional side wall soil samples were collected for chemical analysis (designated A11, A12, D11 and D12). These soil samples were analyzed for Total Hydrocarbons as Gasoline (TPH-G) and BTX compounds. TPH-G concentrations in these soil samples ranged from 500 to 2,100 ppm. Benzene concentrations ranged from 5.1 to 39 ppm. The locations of these soil samples and laboratory reports are presented in Appendix A.

In December 1987, an additional 1,000 cubic yards of soil were excavated at the site (Figure 1 & 2 - Appendix A). Radial trenching and excavation were performed to delineate the extent of petroleum hydrocarbons in soil. Eleven soil samples were collected and analyzed from the trenches (T-1A, T-1B, T-2, T-3, and T-4A through T-4G). These trench samples contained TPH-G ranging from 150 to 2,900 ppm and benzene ranging from 9.6 to 98 ppm. Following trenching, the open excavation from the former UST pit was extended beyond the trenches. Soil sampling data are presented in Appendix A. Permission to aerate stockpiled excavation soils on site was granted by the Bay Area Air Quality Management District (BAAQMD).

On January 6, 1988, additional soil excavation was performed to remove petroleum impacted soils (refer to Figure 4 - Kaprealian Drawing in Appendix A). Approximately 600 cubic yards of soil were excavated to the depth of the water table and stockpiled on site. Stockpiled soils were analyzed and found to contain TPH-G concentrations ranging from 24 to 58 ppm and benzene concentration concentrations ranging from 0.5 to 3.9 ppm.

On January 18 and 19, 1988, an additional 1,200 cubic yards of petroleum impacted soil were excavated (Figure 4 - Appendix A), and stockpiled on site. On January 20, 1988, the BAAQMD granted permission to aerate these newly excavated soils on site. Stockpiled soils from this excavation event contained 5.0 to 820 ppm TPH-G and 0.5 to 51 ppm benzene.

On February 1 and 2, 1988, an additional 400 cubic yards of petroleum impacted soil were excavated (Figure 4 - Appendix A). Four side wall soil samples (S-1 through S-4), were collected for analysis of TPH-G and BTEX compounds. These soil samples contained TPH-G concentrations ranging from 300 to 1,400 ppm and benzene concentrations ranging from 5.5 to 22 ppm. Laboratory reports for these four samples are contained in Appendix A.

On February 3, 1988, an additional 1000 cubic yards of petroleum impacted soil were excavated. The extent of these excavation activities is shown on Figure 5 (Appendix A). Two side wall soil samples (S-5 and S-6), were collected for chemical analysis. TPH-G concentrations in these two samples ranged from 270 to 1,500 ppm and benzene concentrations ranged from 31 to 36 ppm. On February 5, 1988, soil aeration began on these recently excavated soils.

On February 5, 1988, an additional 100 cubic yards of soil were excavated (Figure 6 - Appendix A). One soil sample (T-7) was collected approximately six inches above the ground water surface for chemical analysis. Soil sample T-7 contained 960 ppm TPH-G and 99 ppm benzene. The laboratory report for the soil sample (T-7) analysis is presented in Appendix A.

In March 1988 ... another 1,200 cy of soil were excavated

In April 1988. four ground water monitoring wells (MW-1 through MW-4), were installed at the subject site. The locations of these four monitoring wells are shown on Plate 2 Soil and ground water samples were collected and analyzed during this investigation. Soils collected from the four well borings contained Total Volatile Hydrocarbons (TVH) ranging from 18 to 290 ppm and benzene ranging from 0.16 to 5 7 ppm. Ground water samples analyzed from the four wells contained TVH ranging from ND to 440 ppb and benzene ranging from ND to 120 ppb. Soil data are presented in the Ensco Table 1 - Results of Analyses for Soil and Ground Water (Appendix A). Ground water flow direction was calculated during this investigation to be toward the southeast The exploratory boring logs

and well completion details for MW-1 through MW-4 are contained in Appendix C. A 1/2-mile radius well survey was also performed during this investigation. A total of nine wells were identified during the survey. These findings are presented in Table 2 - Summary of Well Survey Within 1/2 Mile Radius of Former Shell Site (Appendix D). The locations of the identified wells with respect to the subject site are shown on Ensco Figure 1 - Site Location & Well Survey Map (Appendix D). Of the wells identified, only three wells (Figure designations C and D), are located in the down-gradient direction from the subject property, and are located 1/4-mile to 1/2-mile from the site, respectively. The well descriptions indicate they are used for monitoring and testing purposes.

Between July 19 and August 12, 1988, off-site ground water monitoring wells MW-5 through MW-7 were installed (Plate 2). These three newly installed wells were sampled on August 26, 1988. Well MW-5 contained 210 ppb TPH-G and 6.0 ppb benzene. Well MW-6 contained 15,000 ppb TPH-G and 390 ppb benzene. Well MW-7 was ND for TPH-G and contained 0.8 ppb benzene (slightly above the detection limit). Soil data from these well borings identified the presence of TPH-G ranging from ND to 75 ppm. This investigation also included the performance of a soil gas survey, and drilling, sampling, and lithlogging of six soil exploratory borings (B-1 through B-6), (refer to Site Plan in Appendix A). Chemical analysis results of soil samples collected from the six borings and from the well borings are presented in Table 2 - Soil Analysis Results Summary (Appendix A). TPH-G was identified in these borings ranging from ND to 540 ppm and benzene ranged from 3.9 to 9.8 ppm. A recovery well (designated RW-1), was also installed and was used for slug testing to evaluate remediation design parameters (exploratory boring log and well details are contained in Appendix C). In addition to these investigations, Oil Changers purchased the subject property from Shell Oil Company. As part of Oil Changers plans to construct their facilities on the property, they also installed a concrete pad for possible installation of future remediation equipment.

In January 1989, a Remediation Action Plan (RAP) was prepared by Ensco. The plan was formulated based on data from the excavation of the USTs, installation of seven ground water monitoring wells (MW-1 through MW-7), drilling and sampling of six soil borings (B-1 through B-6), installation of one recovery well (RW-1), aquifer testing results, and the performance of a soil gas survey. Based on accrued data, ground water extraction and treatment was proposed.

Between February 21 and 23, 1989, five additional off-site ground water monitoring wells (MW-8 through MW-12), were installed at the site. These wells were added to the quarterly monitoring and sampling schedule for the site. The initial results from sampling these wells in March 1989 identified the presence of petroleum hydrocarbons in only one well (MW-10). Wells MW-8, MW-9, MW-11 and MW-12 were ND for petroleum hydrocarbons. Well MW-10 contained 1,000 ppb TPH-G and 140 ppb benzene. These sampling results are presented in Table 2 - Historical Ground Water Quality (Appendix B).

In June 1989, Ensco prepared a Final Assessment Report, which evaluated the extent of off-site contamination from the subject property. The source of contamination for off-site well MW-10 (the only well to contain detectable levels of petroleum hydrocarbons), was found to be unused USTs located on an adjacent property (Dutch Pride Dairy), located southwest of the former Shell site (refer to 6/28/89 Ground Water Elevation Contour Map in Appendix B). It was also determined that petroleum hydrocarbon leakage from these tanks had impacted the former Shell site. Based on the discovery of these tanks, an investigation was initiated on the adjoining Dutch Pride Dairy property.

In late July and early August 1989, Ensco performed a series of aquifer tests on recovery well RW-1. An initial step-drawdown test was followed by a 72 hours constant-rate discharge test. Transducers were placed in recovery well RW-1 and ground water monitoring wells MW-1 through MW-5 to record test data. The GWAP analytical computer model was used to determine aquifer parameters and estimate effective capture zone. Based on test data and computer model results, it was determined that the effective radius of influence from pumping RW-1 at 3 gallons per minute (gpm) was 200 feet, and that no additional recovery wells would be required to capture and treat dissolved hydrocarbons in ground water.

In April 1990, Ensco performed a file search of the BP, Unocal and ARCO sites located on the remaining three corners of the intersection of Village Parkway and Amador Valley Boulevard. The purpose of this research was to evaluate potential impacts to the subject property and determine whether ground water pumping from the Shell recovery well (RW-1) could potentially induce migration of contaminants from the three other sites onto the former Shell site. The results of the file search indicated that ground water pumping from the former Shell site (recovery well RW-1), would impact the Unocal site, potentially drawing contaminants onto the subject site. These findings were presented in a letter to Shell dated April 3, 1990.

In January 1990, Aqua Terra Technologies (ATT), removed two USTs on the Dutch Pride Dairy property southwest of the former Shell site. Separate-phase petroleum hydrocarbons were encountered. The Alameda County Department of Environmental Health (ACDEH), confirmed that the Dutch Pride Dairy release had impacted the former Shell site. Soil samples taken from the tank excavation contained concentrations as high as 6,000 ppm of TPH-G and 0.019 ppm benzene. Over-excavation of the tank pit was performed up to the property line of the former Shell site. This assessment of the Dutch Pride Dairy site was presented in a correspondence to Shell on October 15, 1992 by Pacific Environmental Group, Inc. During the removal of one of the tanks, well MW-10 was destroyed.

In April 1991, ATT installed well MW-13 to replace former well MW-10. This new well was installed within 3 feet of the former well. The well was sampled for TPH-G and BTEX compounds. TPH-G was detected in well MW-13 at a concentration of 1,000 ppb and benzene was detected at a concentration of 430 ppb (refer to Historical Ground Water Quality Database in Appendix B.

In November 1991, joint ground water monitoring and sampling was begun on the former Shell site, the BP site, the Unocal site and ARCO site. The purpose of the joint monitoring and sampling effort was to evaluate subsurface conditions in the general area of all four sites. Routine joint monitoring and sampling for the four corner sites has continued to date.

Subsurface Characterization

During site investigation activities, the subsurface materials encountered consisted primarily of silty clay (CL and CH) with minor amounts of sandy clay (CH) to the total depth explored of 31.5 fbg. Copies of exploratory boring logs and well completion details for MW-1 through MW-4 and RW-1 are presented in Appendix C. Shell files did not contain logs or well completion details for remaining wells.

Depth to ground water has ranged from 5.16 to 12.65 fbg. Ground water flow direction has ranged historically towards the northeast-southeast. The hydraulic gradient has ranged between 0.003 and 0.01. Ground water contour maps from the last four consecutive monitoring and sampling reports are presented in Appendix B.

Summary of Previous Reports

A listing and copies of site reports used in preparing this summary are attached. The following presents a brief summary of each report.

August 11, 1987

This Kaprealian Engineering report summarizes the removal of the three 10,000-gallon capacity USTs and the 280-gallon waste oil tank and presents soil sampling data taken from the UST excavation soils (side wall samples A1, B1, C1 and D1), and ground water (sample W-1), and soil from waste oil tank excavation (sample W.O.-1).

December 16, 1987

This Kaprealian Engineering report presents the results of over-excavation related to the UST pit and contains sample analysis data for four over-excavation side wall soil samples (A11, A12, D11 and D-12).

January 6, 1988

This Kaprealian Engineering report documents over-excavation activities associated with the UST complex. An additional 1,000 cubic yards of soil were removed during these activities.

January 26, 1988

This Kaprealian Engineering report documents over-excavation activities associated with the former UST complex. An additional 1,200 cubic yards of soil were removed and sampled to delineate the extent of petroleum hydrocarbons in soil.

February 4, 1988

This Kaprealian Engineering report documents the over-excavation of an additional 400 cubic yards of soil associated with the former UST complex, and presents soil sampling analyses for soil samples S-1 through S-4 (side wall soil samples). Based on these data, an additional 1,000 cubic yards of soil were excavated and side wall samples were analyzed (samples S-5 and S-6).

February 17, 1988

This Kaprealian report documents over-excavation of an additional 100 cubic yards of soil at the site and presents chemical data for soil sample T-7.

May 25, 1988

This Ensco report presents the installation of monitoring wells MW-1 through MW-4, includes the exploratory boring logs and well completion details, and presents well boring soil sampling results and ground water monitoring and sampling results for the newly installed wells. This report also includes a 1/2-mile radius well survey.

January 24, 1989

This Ensco report presents a Remedial Action Plan (RAP) for the subject site.

June 12, 1989

This Ensco report presents ground water sampling data and describes the installation of Wells MW-5 through MW-7, and off-site wells MW-8 through MW-12.

December 15, 1989

This Ensco report describes the results of the step-drawdown and constant-rate discharge pump test performed in recovery well RW-1.

April 3, 1991

This Ensco reports describes the installation of well MW-13 by ATT, a replacement well for MW-10 that was destroyed during the removal of two tanks on the adjoining Dutch Pride Dairy property.

August 8, 1991

This RESNA report describes ground water sampling results and presents a benzene concentration map with the newly installed Well MW-13 data.

January 28, 1992

This RESNA report presents ground water data from the first joint monitoring and ground water sampling effort among Shell, BP, Unocal and ARCO.

Quarterly Reports (Various)

Various quarterly reports prepared by Ensco, RESNA, Pacific Environmental Group, and Enviros, dating from 1989 through 1995.

Waste Oil Tank Removal Summary

The 280-gallon waste oil tank was removed in August 1987. Following tank removal, the tank was visually inspected and no holes were identified. One soil sample (W.O. - 1), was collected and analyzed from native soil beneath the tank at a depth of 9 fbg. The soil sample contained 45 ppm diesel and 75 ppm gravimetric waste oil. Sample W.O. -1 was ND for BTX and volatile organic compounds (VOCs). Chemical analytical data are presented in Appendix A. Based on these data, no additional excavation was performed. These soils were stockpiled on site with the excavated fuel UST complex soils and transported to a disposal facility.

Underground Storage Tank Removal Summary

The three 10,000-gallon fuel USTs were removed in August 1987. The three tanks were constructed of fiberglass and appeared to be in good condition. Excavation to remove the tanks encountered ground water at a depth of approximately 11.5 fbg. Upon removal of the tanks, four side wall soil samples (A1, B1, C1 and D1), were collected and analyzed for petroleum hydrocarbons. These soil samples contained TPH-G ranging from 270 to 1,900 ppm and benzene from 4.2 to 31 ppm.

As a result of the initial excavation soil sampling data, a series of over-excavations (10 total), were performed to delineate the extent of petroleum hydrocarbons in soil (Figure 7 - Appendix A). Soil analytical data for these over-excavation activities are presented in Appendix A. Side wall sampling results from these over-excavation activities indicated that a more effective approach to delineating petroleum hydrocarbons in soils would be through the drilling of soil borings. Approximately 4,600 cubic yards of soil were excavated/over-excavated around the former UST's location to ground water to remove petroleum hydrocarbon sources.

Soil Handling & Disposal

~6500 cy (April 8, 1988 KEI Update Rpt # 7)

Approximately 4,600 cubic yards of soil were excavated on the subject site. Shell received permission from the BAAQMD to aerate soils on site. Following aeration and characterization, these soils were transported to a disposal facility.

Off-site Source Search

Based on the results of ground water sampling data, review of data from former Well MW-10 and Well MW-13, and data analysis for excavation activities and related soil sampling from the adjoining Dutch Pride Dairy property, soil and ground water data indicate that petroleum hydrocarbons from the former two tanks located on the adjacent Dutch Pride Dairy site leaked and petroleum hydrocarbons migrated onto the Shell site.

In September 1995, three soil borings (B-1 through B-3), were installed near the south property line on the former Shell site to evaluate whether contamination was coming onto the subject property from the former Dutch Pride property. Soil sample S-1 taken from boring B-3 at a depth of 12 fbg contained 1100 ppm TPH-G and 8.4 ppm benzene. A grab water sample from this boring contained 120,000 ppb TPH-G and 19,000 ppb benzene. These data indicate that petroleum hydrocarbons are migrating onto the former Shell site from the former Dutch Pride USTs. Soil data are presented in Appendix A. Ground water data are presented in Appendix B

Soil Sampling Summary

Soil sampling beneath the former waste oil tank identified low levels of petroleum hydrocarbons in soil. Diesel was detected at a concentration of 45 ppm and gravimetric waste oil at 75 ppm. Benzene was ND and VOC analyses were ND. Based on these data, no further excavation was performed.

A series of soil excavation activities took place following the removal of the three fuel USTs. Several over-excavations were performed in an attempt to delineate and remove the extent of petroleum hydrocarbons in soil. These excavations took place between August 1987 and February 1988. The extent of these over-excavations is shown on Figure 6 (Appendix A). Based on trenching soil sample analysis to delineate the extent of hydrocarbons in soil (Figure 1 - Appendix A), the entire area within the trenching perimeter was excavated to ground water (Figure 2 - Appendix A) on December 18, 1987. Trenching samples contained TPH-G concentrations ranging from 150 to 2900 ppm. Benzene ranged from 9.6 to 98 ppm. Soil sampling data for these over-excavations are also presented in Appendix A.

Over-excavation continued, with periodic soil sampling. Shell was is the process of relinquishing the subject property to Oil Changers, who wanted to open a business at this location. While excavation activities were occurring, Oil Changers was in the process of finalizing their purchasing agreement with Shell and were actively pursuing construction planning, permitting, etc. to open their business on the subject property by the end of the summer of 1988. Based on established deadlines set by Oil Changers, additional over-excavation was ceased, so that the property could be made ready for construction of their new building. The new building was to be located in the area were over-excavation had been completed.

Excavated soils were aerated on site in selected volumes. Soil aeration was approved by the BAAQMD. When acceptable petroleum hydrocarbons levels were achieved through aeration, the soils were transported to an appropriate disposal facility.

Soils analyzed from well borings MW-1 through MW-4 contained TPH-G ranging from 18 to 290 ppm and benzene ranging from 0.16 to 5.7 ppm. These data are presented in Table 1 - Results of Analyses for Soil and Ground Water (Appendix A). Soils analyzed from well borings MW-6 and MW-7 contained TPH-G concentrations ranging from ND to 75 ppm (Table 2 - Soil Analysis Results Summary, Appendix A).

A soil gas survey was performed in 1988. Additional site characterization continued with the institution of a soil and ground water investigation. A total of six soil borings (B-1 through B-6), were drilled off-site, around the northwest, north and northeast property lines (refer to Ensco Site Plan contained in Appendix A). These borings were located as a result of information obtained from a soil gas survey. Soil analytical results from sampling these borings identified TPH-G concentrations ranging from ND to 540 ppm and benzene ranging from ND to 9.8 ppm. Borings B-2, B-3 and B-4 were ND for TPH-G and BTEX. The highest concentrations of petroleum hydrocarbons in these borings were identified in soils less than 10 fbg. Below a depth of 10 feet, petroleum hydrocarbon concentrations decreased or were ND. These data are presented in Table 2 - Soil Analysis Results Summary (Appendix A). Further off-site soil investigations were not pursued due to

ongoing soil and ground water investigations at the BP, Unocal and ARCO sites located on the remaining three corners of the same intersection.

Ground Water Monitoring and Sampling Summary

One water sample (W1), was collected in August 1987 from the open excavation when the former USTs were removed. This water sample contained 85,000 ppb TPH-G and 1,400 ppb benzene, 3,600 ppb toluene and 11,000 ppb xylenes.

In April 1988, a total of four on site monitoring wells were installed (MW-1 through MW-4), along the inside of the property lines to characterize ground water quality (Plate 2). Well MW-1 was installed in the down-gradient direction of the former USTs location, and Wells MW-2, MW-3 and MW-4 were installed in the up-gradient direction. The initial sampling results of these five wells identified TPH-G concentrations ranging from ND to 440 ppb and benzene ranging from ND to 120 ppb.

Based on the sampling results for Wells MW-1 through MW-4, an additional three monitoring wells (MW-5 through MW-7), were installed at the site in July and August of 1988 (Plate 2). Well MW-5 was installed as a deeper on site well, adjacent to Well MW-1, to characterize the vertical extent of petroleum hydrocarbons. Well MW-6 was installed as an off-site well on the street at the intersection of Amador Valley Boulevard and Village Parkway. Well MW-7 was installed across Village Parkway in the street. Well MW-5 initially contained 210 ppm TPH-G and 6.0 ppb benzene. Well MW-6 initially contained 15,000 ppb TPH-G and 390 ppb benzene. Well MW-7 initially contained 0.8 ppb benzene. There was no TPH-G in well MW-7. RW-1 (recovery well) was installed to provide ground water pumping and surface treatment of petroleum hydrocarbons.

As a result of ongoing monitoring and sampling data evaluations from the existing seven wells, five new wells (MW-8 through MW-12), were installed off-site in February 1989. The initial sampling of these wells resulted in ND levels of petroleum hydrocarbons in four of the five wells (MW-8, MW-9, MW-11 and MW-12). The locations of these wells are shown on Plate 2. Only Well MW-10 contained detectable concentrations of TPH-G (1,000 ppb) and benzene (140 ppb). Well MW-10 was installed in the immediate down-gradient direction of the USTs present on the Dutch Pride Dairy property.

The ground water data from well MW-10, and wells MW-2, MW-3 and MW-4 indicated an off-site source of contamination migrating onto the former Shell site. Based on routine ground water sampling results, a soil and ground water investigation commenced on the adjoining Dutch Pride Dairy property. During UST removal activities on the Dutch Pride Dairy property, separate-phase hydrocarbons were identified in the tank pit water. Well MW-10 was subsequently destroyed during excavation activities. TPH-G concentrations as high as 6,000 ppm and benzene concentrations as high as 0.019 ppm were identified in soils. Over-excavation proceeded on this site, up to the property line between the former Shell site and the Dutch Pride Dairy site. Following completion of excavation activities, Well MW-13 was installed to replace well MW-10. Initial sampling results from well MW-13 identified TPH-G at a concentration of 1,100 ppb and 430 ppb benzene in ground water. These data, in conjunction with excavation data at the adjoining site, clearly indicated that petroleum hydrocarbon contamination had migrated onto the Shell site from the Dutch Pride Dairy site. ACDEH confirmed that contamination from the Dutch Pride Dairy had impacted the former Shell site.

Based on soil and ground water investigations performed by Shell and surrounding sites, especially the Dutch Pride Dairy property, Shell continued to monitor ground water and perform routine sampling and analyses for TPH-G and BTEX compounds. These data are presented in Tables 1 and 2 (Appendix B). Data presented in Table 2 indicate that natural degradation of petroleum hydrocarbons has occurred. Down-gradient wells (from the former Shell USTs) have been at or near ND concentrations for numerous sampling events. Well MW-1 has been at or near ND for TPH-G and benzene since November 1993. Well MW-5 has remained ND for TPH-G and BTEX since February 1994. Well MW-7 has been ND for TPH-G and BTEX since December 1988, with the exception of one isolated detection of TPH-G and two isolated detections of benzene. The one detection of TPH-G occurred in August 1992 at a concentration of 52 ppb. The two benzene detections (0.8 ppb and 1.9 ppb) occurred in August 1992 and February 1995, respectively. Cross-gradient well MW-6 has steadily decreased in TPH-G and benzene concentrations over time. With the exception of two isolated detections of TPH-G (61 and 140 ppm) in well MW-11 in February and August 1993, and one benzene detection in MW-11 (18 ppb) in August 1993, wells MW-8, MW-9, MW-11 and MW-12 have been ND since they were installed.

Cumulatively, ground water data indicate that the extensive soil excavation activities performed at the former Shell site have been effective in removing the source of petroleum hydrocarbons that could impact ground water. Historic field monitoring and ground water quality data are presented in Tables 1 and 2 in Appendix B. This is most evidenced by wells MW-2 and MW-5, which are located down-gradient from the former UST complex (Plate 2). While detectable concentrations of TPH-G and benzene remain in well MW-6, these concentrations have decreased steadily through time via natural attenuation processes. It is expected that these processes will continue to degrade petroleum hydrocarbons in this area. Although elevated concentration of TPH-G and benzene are still present in well MW-13, this monitoring point is up-gradient (off-site) of the former Shell site and is located immediately down-gradient from the former USTs at Dutch Pride Dairy. Historical excavation data and ground water sampling from this site (i.e. well MW-13) clearly indicate that petroleum hydrocarbons from the two former USTs at this site have impacted the former Shell site.

The September 1995 investigation data indicate that petroleum hydrocarbons are migrating onto the former Shell site from the old USTs that existed on the Dutch Pride Dairy property. Petroleum hydrocarbons were detected in both soil and ground water at elevated concentrations adjacent to the southern property line on the former Shell site.

Aquifer Test Data

In July and August 1989, a step-drawdown test and constant-rate discharge test was performed on recovery well RW-1. The results of this test indicated an approximate radius of influence of 200 feet. Based on these results, Shell performed a file search of the BP, ARCO and Unocal sites on the other three corners of Amador Valley Boulevard and Village Parkway. Based on available environmental investigation data at that time, it was determined that a ground water pump and treat system, even at low flow rates (≤3 gpm), would impact Unocal's site, and draw contaminants onto the former Shell site. Aquifer test data are summarized in Appendix E.

Site Remediation

Site remediation has consisted of removing 4,600 cubic yards of soils containing petroleum hydrocarbons during the removal of the former USTs.

Ground water pumping was initially proposed as the most viable remedial alternative, however, further investigations (i.e. pump test data from recovery well RW-1), indicated that contaminants from other service sites would be influenced and result in the migration of contaminants onto the former Shell site.

Since source removal activities on the subject property, down-gradient well MW-1 has been ND for TPH-G six of the last eight consecutive quarters. Benzene concentrations during the last eight consecutive quarters have ranged from ND to 12 ppb. The last two quarters have been ND for TPH-G and benzene. Well MW-5 has remained ND for TPH-G since August 1992 and for BTEX since February 1994. Natural attenuation processes are expected to continue to reduce petroleum hydrocarbons in this area.

Further investigations into potential off-site sources revealed that the adjoining property to the southwest (Dutch Pride Dairy), had two USTs still in the ground in early 1990. Additionally, off-site well MW-10 consistently contained elevated concentrations of petroleum hydrocarbons. This well was located immediately down-gradient of the Dutch Pride Dairy tanks. The subsequent soil and ground water investigation on the Dutch Pride Dairy property included UST removals, over-excavation of soils and replacement of well MW-10 (destroyed during tank removals), by well MW-13. Separate-phase product was identified on the tank pit water during excavation activities. Over-excavation was performed and continued up to the property line of the former Shell site. Excavation soils sampling identified TPH-G as high as 6,000 ppm and benzene up to 0.019 ppm on the Dutch Pride Dairy site. ACDEH confirmed that petroleum hydrocarbons had impacted the former Shell site.

Historical ground water quality data for wells down-gradient and cross-gradient of the former Shell UST complex indicate that natural attenuation processes have been effective in remediating petroleum hydrocarbons in soil and ground water. Natural degradation processes are expected to continue.

Low-Risk Site Evaluation

Source Removal

The *"Interim Guidance on Low-Risk Petroleum Hydrocarbon Cleanups"* was used to evaluate the subject site. The "source" of petroleum hydrocarbons appears to have been the former USTs and associated piping based on soil sampling data (Appendix A) and UST pit water sample (W1) analysis (Appendix B). Extensive excavation and over-excavation have been performed to remove the source of petroleum hydrocarbons to ground water on site (Appendix A)

Low Risk Site

Employing the following Regional Water Quality Control Board (RWQCB) criteria:

- Ground water less than 50 feet,
- No drinking water wells screened in the shallow aquifer within 250 feet of the leak, and,
- No surface water or sensitive habitats that may be adversely impacted by the release.

The subject site meets these criteria and can be classified as a "low-risk" site. Extensive excavation and over-excavation have been performed to remove the source. Ground water sampling data indicate plume stabilization and in-place attenuation of petroleum hydrocarbons.

Sensitive Receptors

No water wells exist in close proximity to the subject property. There are no wetlands, marshes, mudflats, aquatic plants or wildlife habitats in close proximity to the subject property. what are human health risk of residual soil contam.

Conclusions

Soils containing petroleum hydrocarbons have been excavated during the removal of the USTs and during the removal of the waste oil tank. Approximately 4,600 cubic yards of soil were removed as a result of the excavation of the former USTs.

Ground water data indicate that source removal through excavation and natural attenuation processes have limited the extent of petroleum hydrocarbons in the subsurface. Contamination up-gradient of the former Shell USTs is believed to originate from the two USTs on the adjoining Dutch Pride Dairy property, southwest of the subject property.

Petroleum hydrocarbon sources which could pose a threat to ground water have been removed to the fullest extent possible from the subject site through tank removals, excavation of impacted soil, and through natural attenuation processes.

Recommendations

Data presented in this document indicate that source removal has been performed and that natural attenuation processes will mitigate the residual on site hydrocarbons. Therefore, we respectfully request that case closure be granted.

LISTING OF CORRESPONDENCES AND SITE REPORTS

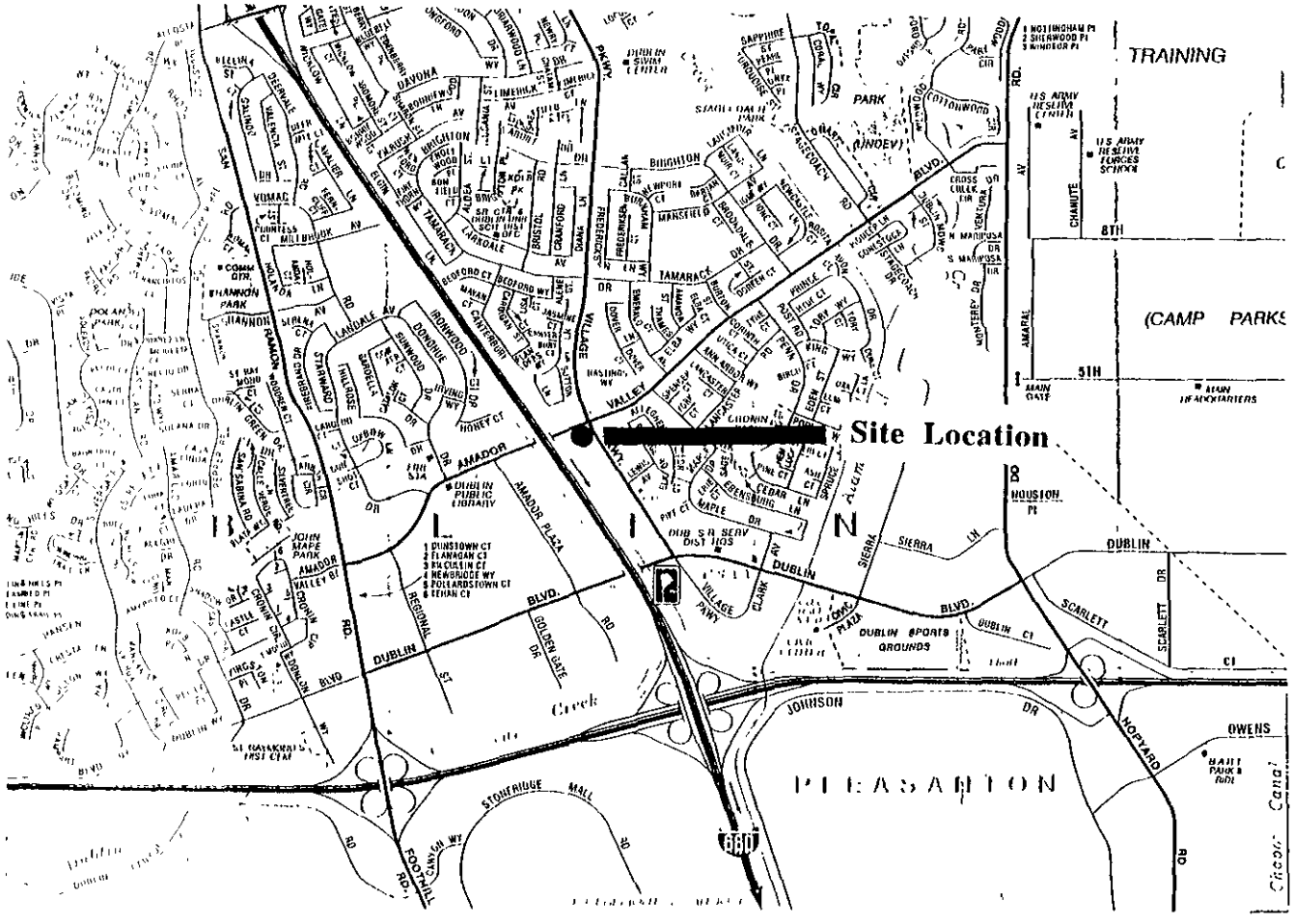
Former Shell Service Station
7194 Amador Valley Boulevard
Dublin, California

Consultant/Agency	Document Title/Subject	Date
Kaprealian Engineering	Soil Sampling Investigation Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California	August 11, 1987
Kaprealian Engineering	Update Report Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California	December 16, 1987
Kaprealian Engineering	Update Report #2 Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California	January 6, 1988
Kaprealian Engineering	Update Report #3 Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California	January 26, 1988
Kaprealian Engineering	Update Report #4 Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California	February 4, 1988
Kaprealian Engineering	Update Report #5 Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California	February 17, 1988
Ensco Environmental Services, Inc	Soil and Ground Water Investigation Shell Oil Company 7194 Amador Valley Boulevard Dublin, California	May 25, 1988

Ensco Environmental Services, Inc.	Remedial Action Plan Shell Oil Company 7194 Amador Valley Boulevard Dublin, California	January 18, 1989
Ensco Environmental Services, Inc.	June Quarterly Report Former Shell Station 7194 Amador Valley Boulevard Dublin, California	June 12, 1989
Ensco Environmental Services, Inc.	September Quarterly Report Former Shell Station 7194 Amador Valley Boulevard Dublin, California	September 28, 1989
Ensco Environmental Services, Inc.	Shallow Ground Water Aquifer Pump Test Former Shell Station 7194 Amador Valley Boulevard Dublin, California	December 15, 1989
Ensco Environmental Services, Inc.	December Quarterly Report Former Shell Station 7194 Amador Valley Boulevard Dublin, California	January 17, 1990
Ensco Environmental Services, Inc.	February Quarterly Report Former Shell Station 7194 Amador Valley Boulevard Dublin, California	April 3, 1990
Exceltech Correspondence	Reports of Stations with Reported Leaks Adjacent to Former Shell Station 7194 Amador Valley Boulevard Dublin, California	April 3, 1990
Exceltech	June Quarterly Ground Water Sampling and Analysis Former Shell Station 7194 Amador Valley Boulevard Dublin, California	July 2, 1990
Exceltech	September Quarterly Ground Water Sampling and Analysis Former Shell Station 7194 Amador Valley Boulevard Dublin, California	October 3, 1990

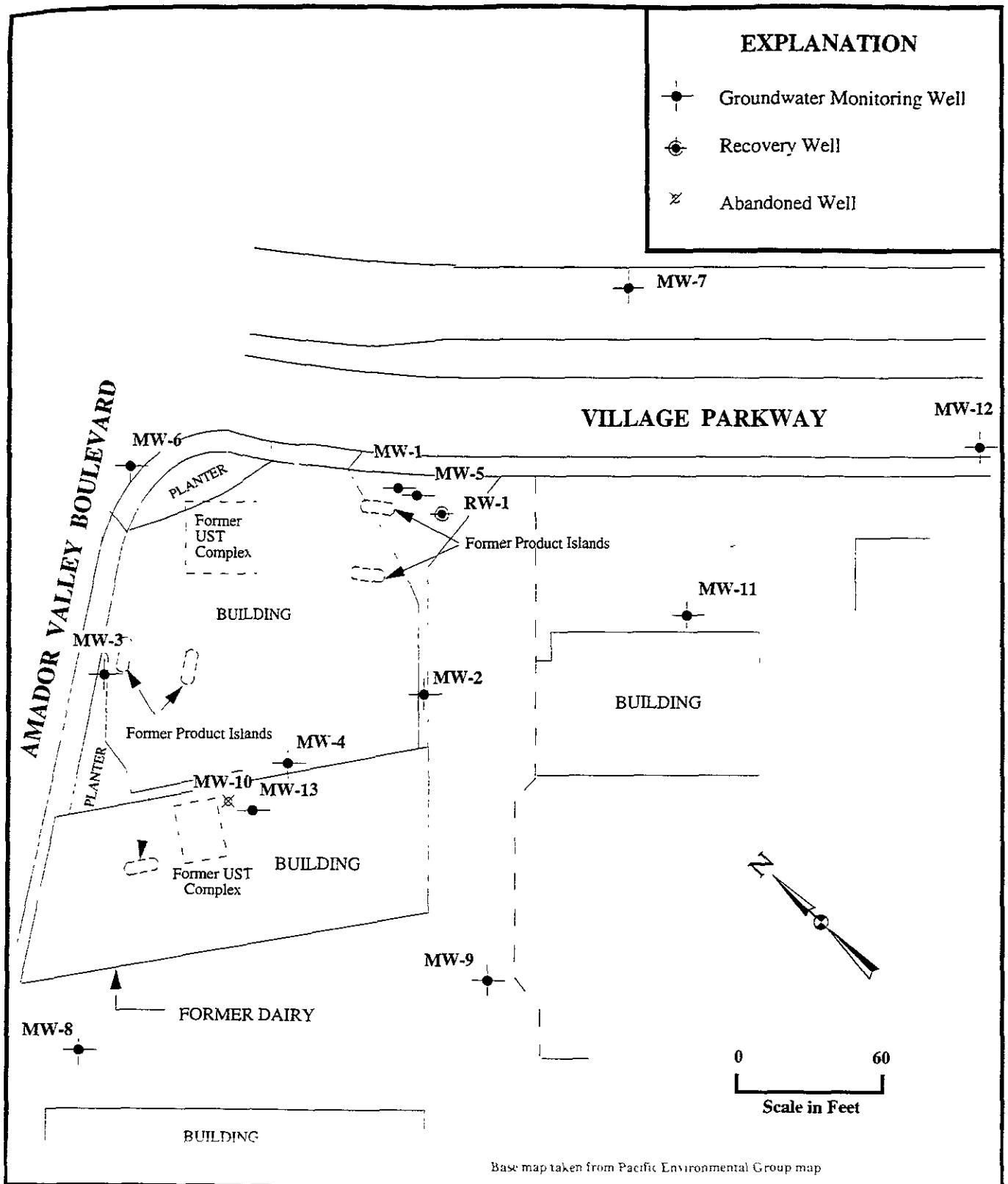
Exceltech	November Quarterly Ground Water Sampling and Analysis Former Shell Station 7194 Amador Valley Boulevard Dublin, California	December 20, 1990
Exceltech	February 1991 Quarterly Ground Water Monitoring Report Former Shell Station 7194 Amador Valley Boulevard Dublin, California	April 3, 1991
Exceltech	May 1991 Quarterly Ground Water Monitoring Report Former Shell Station 7194 Amador Valley Boulevard Dublin, California	August 8, 1991
Exceltech	August 1991 Quarterly Ground Water Monitoring Report Former Shell Station 7194 Amador Valley Boulevard Dublin, California	September 30, 1991
RESNA	November 1991 Quarterly Ground Water Monitoring Report Former Shell Station 7194 Amador Valley Boulevard Dublin, California	January 28, 1992
Pacific Environmental Group	Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California WIC No. 204-2277-0105	April 21, 1992
Pacific Environmental Group	Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California WIC No. 204-2277-0105	June 30, 1992
Pacific Environmental Group	Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California WIC No. 204-2277-0105	October 6, 1992
Pacific Environmental Group	Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California WIC No. 204-2277-0105	January 4, 1993

Pacific Environmental Group	Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California WIC No. 204-2277-0105	March 24, 1993
Pacific Environmental Group	Former Shell Service Station 7194 Amador Valley Boulevard Dublin, California WIC No. 204-2277-0105	June 24, 1993
Pacific Environmental Group	Quarterly Reports	11/93 to 4/95
Enviros, Inc.	Quarterly Reports	6/95 to 11/95



Note: Vicinity Map taken from California State AAA map.

PLATE	SITE VICINITY MAP	
1	Shell Oil Company 7194 Amador Valley Boulevard Dublin, California	enviros® 95285
Drawn By: JLP	Date: 4-26-95	Approved By: Jm Date: 2-Nov-95



Base map taken from Pacific Environmental Group map

PLATE **2**

SITE PLAN
Former Shell Service Station
7194 Amador Valley Boulevard
Dublin, California

enviros ®
95285

Drawn By JLP Date 5-2-95

Approved By _____ Date 2-NOV-95

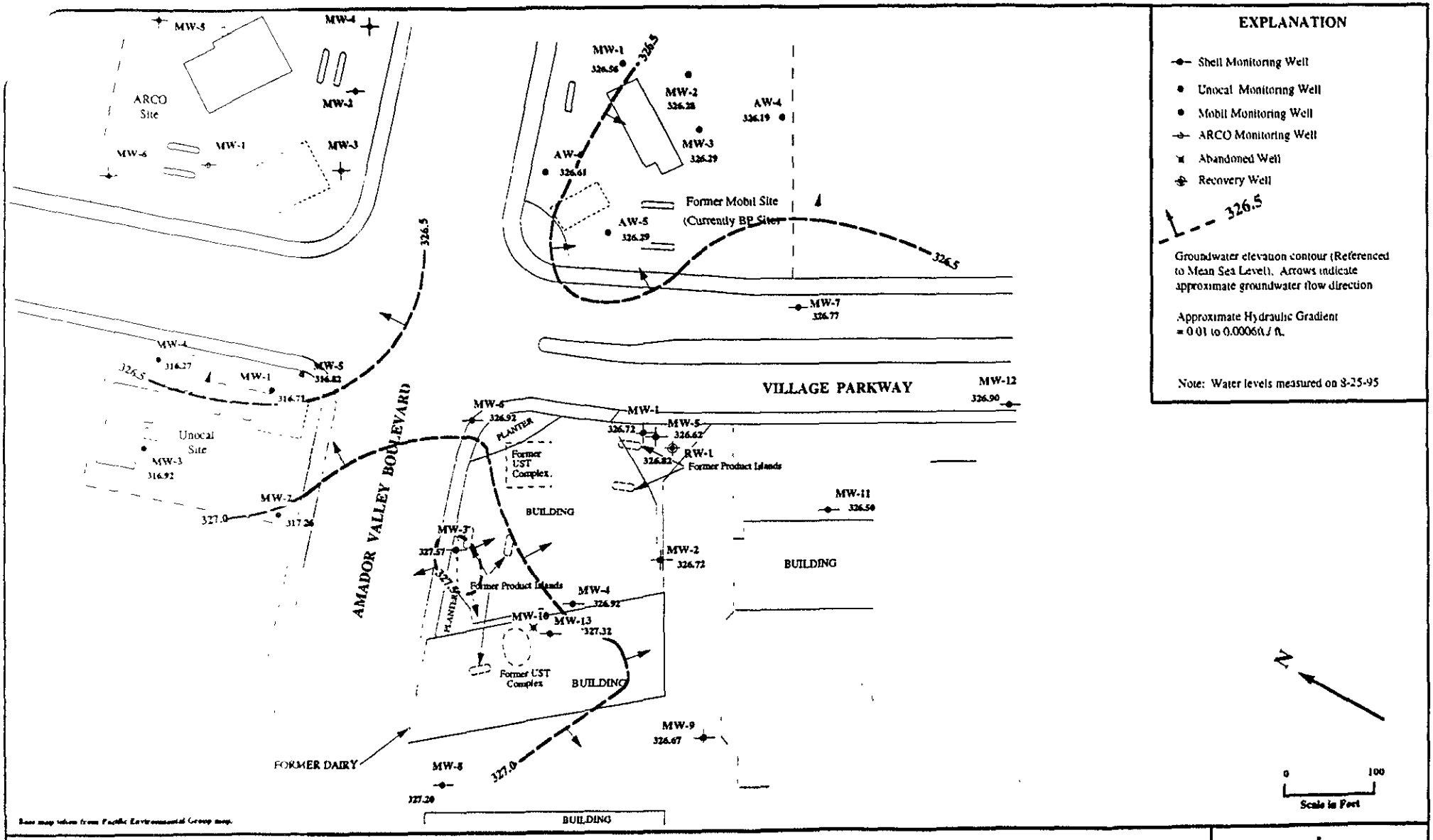


PLATE **3**

GROUNDWATER CONTOUR MAP
Former Shell Service Station
7194 Amador Valley Boulevard
Dublin, California

enviros 95285

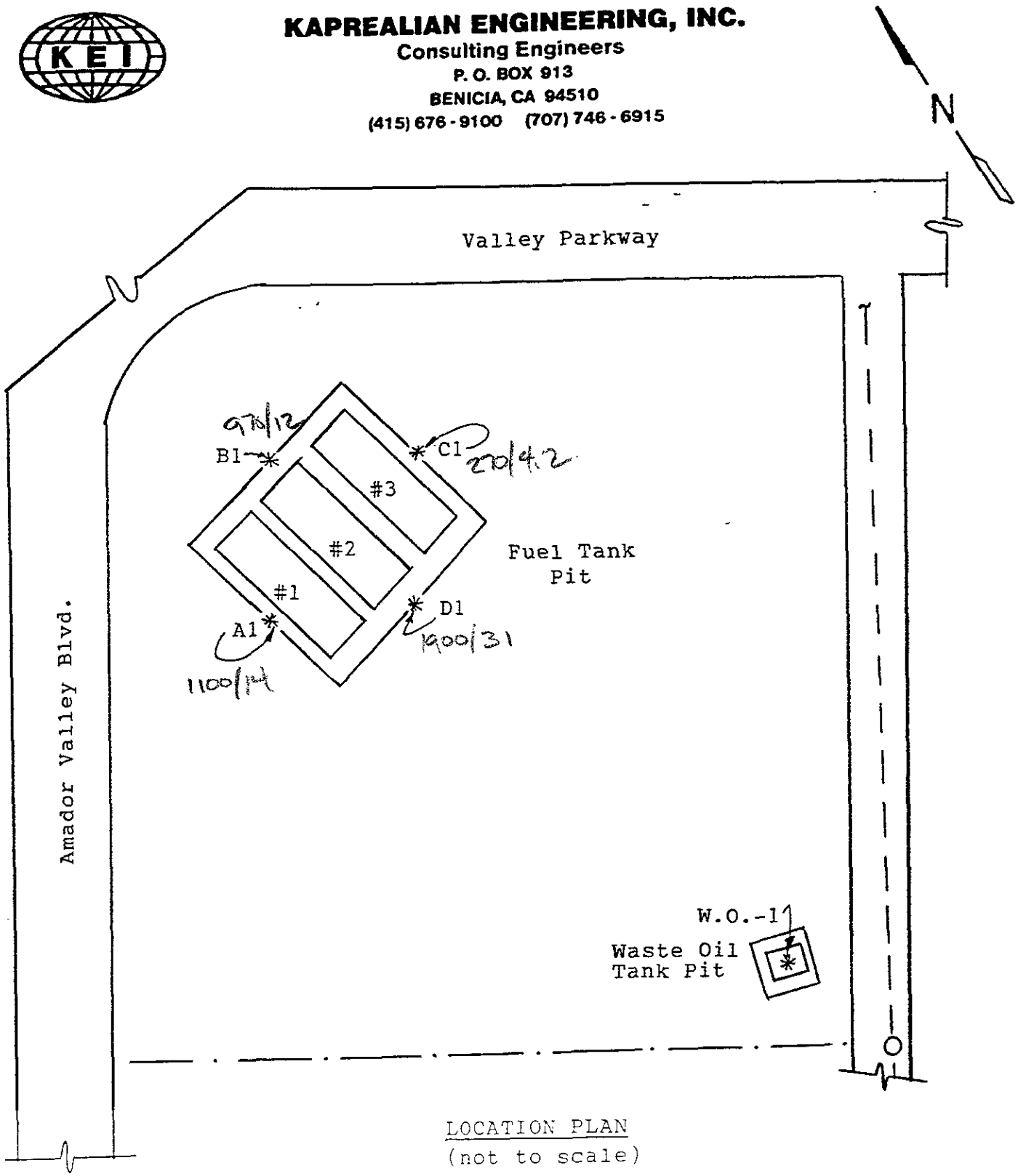
Drawn By: GLV Date: 10-17-95

Approved By: _____ Date: 2-Nov-95

APPENDIX A

Soil Analytical Data & Figures

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(415) 676-9100 (707) 746-6915



LOCATION PLAN
(not to scale)

* soil sample location

ABANDONED SHELL S/S
7194 Amador Valley Blvd.
Dublin, California

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Kaprealian Engineering, Inc.
P.O. Box 913
Benicia, CA 94510
Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 08-03-87
Date Received: 08-04-87
Date Reported: 08-06-87

Sample Number	Sample Description
7080041	Soil #A1 Shell at 7194 Amador Valley Blvd. in Dublin, CA

ANALYSIS

	Detection Limit ppm	Sample Results ppm
Total Hydrocarbons as Gasoline	1	1,100
Benzene	0.1	14
Toluene	0.1	4.5
Xylenes	0.1	37

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

jao

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Benicia, CA 94510
Attn: Mardo Kaprealian, P.E.
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Date Sampled: 08-03-87
Date Received: 08-04-87
Date Reported: 08-06-87

Sample Number

7080042

Sample Description

Soil # B1
Shell at 7194 Amador Valley Blvd.
in Dublin, CA

ANALYSIS

	Detection Limit ppm	Sample Results ppm
Total Hydrocarbons as Gasoline	1	970
Benzene	0.1	12
Toluene	0.1	22
Xylenes	0.1	60

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Date Sampled: 08-03-87
Date Received: 08-04-87
Date Reported: 08-06-87

Sample Number	Sample Description
7080043	Soil # C1 Shell at 7194 Amador Valley Blvd. in Dublin, CA

ANALYSIS

	Detection Limit ppm	Sample Results ppm
Total Hydrocarbons as Gasoline	1	270
Benzene	0.1	4.2
Toluene	0.1	0.45
Xylenes	0.1	2.7

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Benicia, CA 94510
Attn: Mardo Kaprealian, P.E.
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Date Sampled: 08-03-87
Date Received: 08-04-87
Date Reported: 08-06-87

Sample Number	Sample Description
7080044	Soil # D1 Shell at 7194 Amador Valley Blvd. in Dublin, CA

ANALYSIS

	Detection Limit ppm	Sample Results ppm
Total Hydrocarbons as Gasoline	1	1,900
Benzene	0.1	31
Toluene	0.1	5.5
Xylenes	0.1	36

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 08-03-87
Date Received: 08-04-87
Date Reported: 08-21-87

Sample Number	Sample Description	Detection Limit ppm	Gravimetric Waste Oil as Petroleum Oil ppm
7080054	Soil W.O.-1 Shell at 7194 Amador Valley Blvd. in Dublin, CA	30	75

NOTE: Analysis was performed using EPA extraction method 3550 with Trichlorotriflouroethane as solvent, and gravimetric determination by standard methods 503E.

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Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 08-03-87
Date Received: 08-04-87
Date Reported: 08-21-87

Sample Number	Sample Description	Detection Limit ppm	Total Hydrocarbons as Diesel ppm
7080054	Soil W.O.-1 Shell at 7194 Amador Valley Blvd. in Dublin, CA	1	45

NOTE: Analysis was performed using EPA methods 3550 and 8015.

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Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 08-03-87
Date Received: 08-04-87
Date Extracted: 08-17-87
Date Reported: 08-21-87

Sample Number

7080054

Sample Description

Soil W.O.-1
Shell at 7194
Amador Valley Blvd.
in Dublin, CA

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	< 10,000	trans-1,2-Dichloroethene	< 50
Acrylonitrile	< 10,000	1,2-Dichloropropane	< 50
Benzene	< 50	1,3-Dichloropropene	< 50
Bromomethane	< 50	Ethylbenzene	< 50
Bromodichloromethane	< 50	Methylene chloride	< 50
Bromoform	< 50	1,1,2,2-Tetrachloroethane	< 50
Carbon tetrachloride	< 50	Tetrachloroethene	< 50
Chlorobenzene	< 50	1,1,1-Trichloroethane	< 50
Chloroethane	< 50	1,1,2-Trichloroethane	< 50
2-Chloroethylvinyl ether	< 50	Trichloroethene	< 50
Chloroform	< 50	Toluene	< 50
Chloromethane	< 50	Vinyl chloride	< 50
Dibromochloromethane	< 50	1,2-Dichlorobenzene	< 50
1,1-Dichloroethane	< 50	1,3-Dichlorobenzene	< 50
1,2-Dichloroethane	< 50	1,4-Dichlorobenzene	< 50
1,1-Dichloroethene	< 50		

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NOTE: Methods 8010 & 8020 of the EPA were used for this analysis.

TABLE 1

SUMMARY OF LABORATORY ANALYSES

(Soil analyses in parts per million,
Water analysis in parts per billion)

Sample #	Type	Total Hydrocarbon	Benzene	Toluene	Xylene
A1	soil	1100	14	4.5	37
B1	soil	970	12	22	60
C1	soil	270	4.2	0.45	2.7
D1	soil	1900	31	5.5	36
W.O.-1*	soil	45	<0.05	<0.05	----
W1	water	85,000	1,400	3,600	11,000

* Gravimetric waste oil for this sample was 45 ppm.

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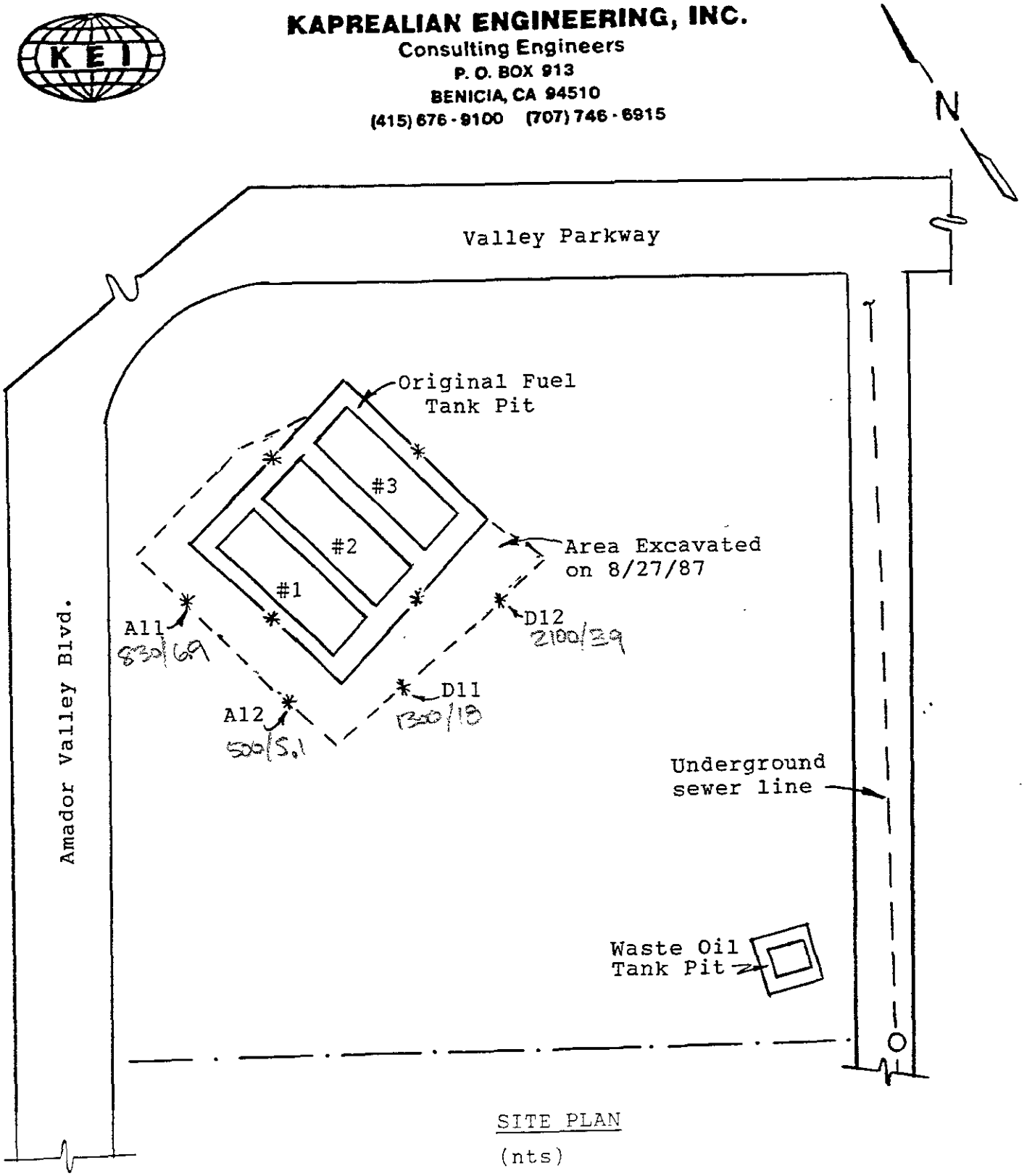

SITE PLAN

(nts)

* soil sample location

ABANDONED SHELL S/S
7194 Amador Valley Blvd.
Dublin, California

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Redwood City, CA 94063 • (415) 364-9222

Kaprealian Engineering, Inc.
P.O. Box 913
Benicia, CA 94510
Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 08/27/87
Date Received: 08/28/87
Date Reported: 09/01/87

Sample Number	Sample Description
7082239	Shell - Dublin, Soil A-11

ANALYSIS

	Detection Limit ppm	Sample Results ppm
Total Hydrocarbons as Gasoline	1	830
Benzene	0.1	6.9
Toluene	0.1	7.7
Xylenes	0.1	30

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

SEQUOIA ANALYTICAL LABORATORY

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Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 08/27/87
Date Received: 08/28/87
Date Reported: 09/01/87

Sample Number	Sample Description
7082240	Shell - Dublin, Soil A-12

ANALYSIS

	Detection Limit ppm	Sample Results ppm
Total Hydrocarbons as Gasoline	1	500
Benzene	0.1	5.1
Toluene	0.1	18
Xylenes	0.1	36

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Arthur G. Burton
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Benicia, CA 94510
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President

Date Sampled: 08/27/87
Date Received: 08/28/87
Date Reported: 09/01/87

Sample Number

7082241

Sample Description

Shell - Dublin,
Soil D-11

ANALYSIS

	Detection Limit ppm	Sample Results ppm
Total Hydrocarbons as Gasoline	1	1,300
Benzene	0.1	18
Toluene	0.1	23
Xylenes	0.1	69

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Benicia, CA 94510
Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 08/27/87
Date Received: 08/28/87
Date Reported: 09/01/87

Sample Number

7082242

Sample Description

Shell - Dublin,
Soil D-12

ANALYSIS

	Detection Limit ppm	Sample Results ppm
Total Hydrocarbons as Gasoline	1	2,100
Benzene	0.1	39
Toluene	0.1	91
Xylenes	0.1	59

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

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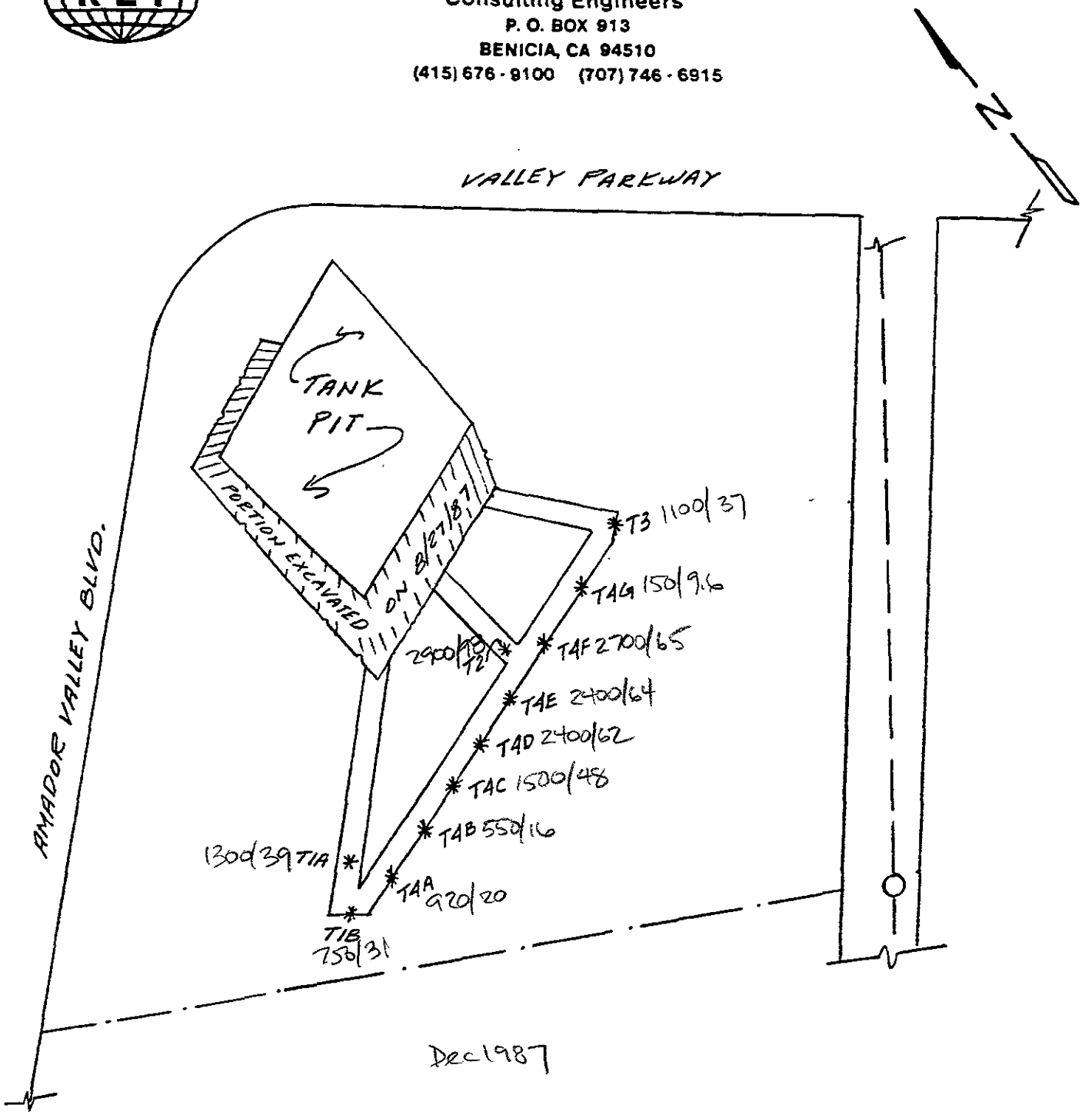


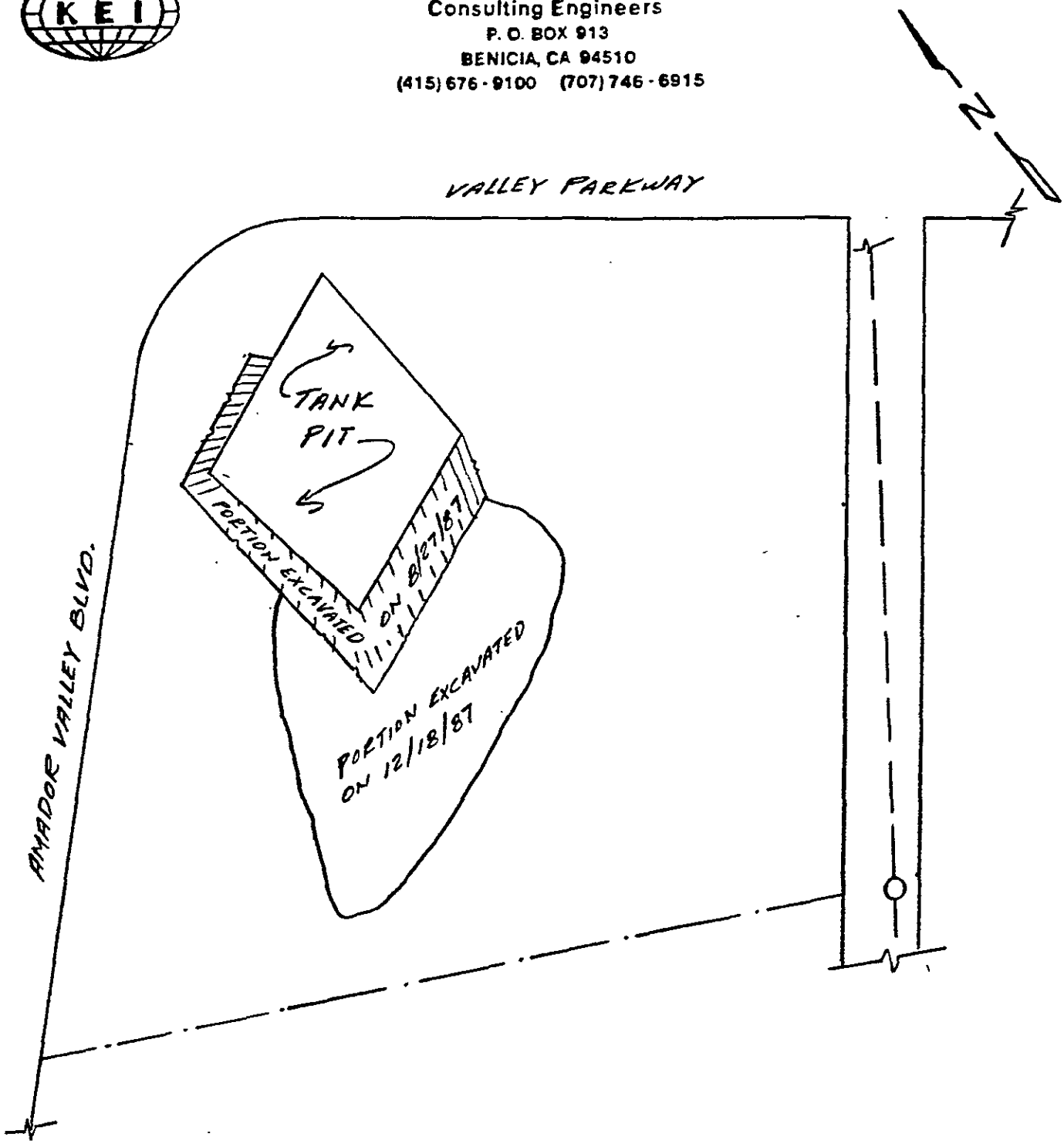
LOCATION PLAN
APPROX. SCALE 1" = 30'

* SOIL SAMPLE LOCATION

SHELL SERVICE STATION
7194 AMADOR VALLEY BLVD
DUBLIN, CALIF.

FIGURE 1

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(415) 676-9100 (707) 746-6915



LOCATION PLAN
APPROX. SCALE 1" = 30'

* SOIL SAMPLE LOCATION

SHELL SERVICE STATION
7194 AMADOR VALLEY BLVD
DUBLIN, CALIF.

FIGURE 2

HAZCAT Mobile Organics Lab

733 Dartmouth Avenue
San Carlos, CA 94070 • (415) 591-5820

Kaprealian Engineering, Inc.
P.O. BOX 913
Benicia ,CA 94510
Attn: Mardo Kaprealian, P.E.
President

Date Sampled:12-17-87
Date Received:12-17-87
Date Reported:12-18-87

Sample Number	Sample Description
127041	Shell Dublin T1-A SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	1,300
Benzene	0.1	39
Toluene	0.1	37
Xylenes	0.1	180
Ethylbenzene	0.1	34

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

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Lab Director

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Kaprealian Engineering, Inc.
P.O. BOX 913
Benicia ,CA 94510
Attn: Mardo Kaprealian, P.E.
President

Date Sampled:12-17-87
Date Received:12-17-87
Date Reported:12-18-87

Sample Number	Sample Description
127042	Shell Dublin T1-B SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	750
Benzene	0.1	31
Toluene	0.1	37
Xylenes	0.1	170
Ethylbenzene	0.1	32

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Date Sampled:12-17-87
Date Received:12-17-87
Date Reported:12-18-87

Sample Number	Sample Description
127043	Shell Dublin T-2 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	2,900
Benzene	0.1	98
Toluene	0.1	120
Xylenes	0.1	480
Ethylbenzene	0.1	87

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Date Sampled:12-17-87
Date Received:12-17-87
Date Reported:12-18-87

Sample Number	Sample Description
127044	Shell Dublin T-3 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	1,100
Benzene	0.1	37
Toluene	0.1	44
Xylenes	0.1	150
Ethylbenzene	0.1	30

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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President

Date Sampled:12-17-87
Date Received:12-17-87
Date Reported:12-18-87

Sample Number	Sample Description
127045	Shell Dublin T4-A SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	920
Benzene	0.1	20
Toluene	0.1	3.5
Xylenes	0.1	61
Ethylbenzene	0.1	15

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Attn: Mardo Kaprealian, P.E.
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Date Sampled:12-17-87
Date Received:12-17-87
Date Reported:12-18-87

Sample Number	Sample Description
127046	Shell Dublin T4-B SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	550
Benzene	0.1	16
Toluene	0.1	3.6
Xylenes	0.1	50
Ethylbenzene	0.1	10

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Attn: Mardo Kaprealian, P.E.
President

Date Sampled:12-17-87
Date Received:12-17-87
Date Reported:12-18-87

Sample Number	Sample Description
127047	Shell Dublin T4-C SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	1,500
Benzene	0.1	48
Toluene	0.1	11
Xylenes	0.1	160
Ethylbenzene	0.1	40

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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President

Date Sampled: 12-17-87
Date Received: 12-17-87
Date Reported: 12-18-87

Sample Number	Sample Description
127048	Shell Dublin T4-D SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	2,400
Benzene	0.1	62
Toluene	0.1	75
Xylenes	0.1	270
Ethylbenzene	0.1	52

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Attn: Mardo Kaprealian, P.E.
President

Date Sampled:12-17-87
Date Received:12-17-87
Date Reported:12-18-87

Sample Number	Sample Description
127049	Shell Dublin T4-E SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	2,400
Benzene	0.1	64
Toluene	0.1	82
Xylenes	0.1	360
Ethylbenzene	0.1	54

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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President

Date Sampled:12-17-87
Date Received:12-17-87
Date Reported:12-18-87

Sample Number	Sample Description
127050	Shell Dublin T4-F SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	2,700
Benzene	0.1	65
Toluene	0.1	84
Xylenes	0.1	400
Ethylbenzene	0.1	66

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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President

Date Sampled:12-17-87
Date Received:12-17-87
Date Reported:12-18-87

Sample Number	Sample Description
127051	Shell Dublin T4-G SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	150
Benzene	0.1	9.6
Toluene	0.1	14
Xylenes	0.1	28
Ethylbenzene	0.1	6.0

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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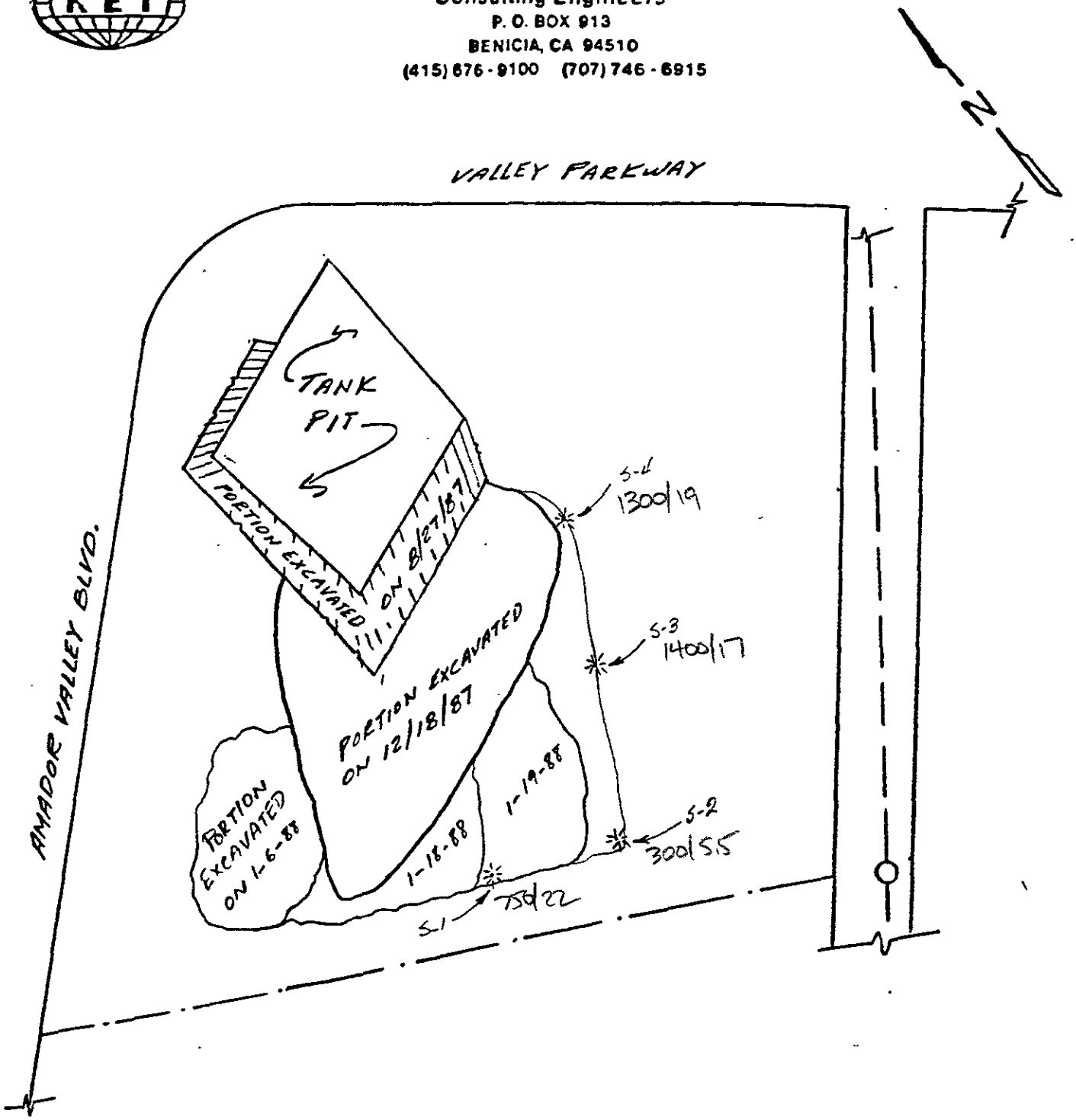

LOCATION PLAN
APPROX. SCALE 1" = 30'

* SOIL SAMPLE LOCATION

SHELL SERVICE STATION
7194 AMADOR VALLEY BLVD
DUBLIN, CALIF.

FIGURE 4

HAZCAT Mobile Organics Lab
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Kaprealian Engineering, Inc.
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Benicia ,CA 94510
Attn: Mardo Kaprealian, P.E.
President

Date Sampled:02-01-88
Date Received:02-02-88
Date Reported:02-02-88

Sample Number	Sample Description
028001	Shell-Dublin
	S-1 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	750
Benzene	0.1	22
Toluene	0.1	34
Xylenes	0.1	180
Ethylbenzene	0.1	25

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Attn: Mardo Kaprealian, P.E.
President

Date Sampled:02-01-88
Date Received:02-02-88
Date Reported:02-02-88

Sample Number	Sample Description
028002	Shell-Dublin
	S-2 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	300
Benzene	0.1	5.5
Toluene	0.1	1.8
Xylenes	0.1	98
Ethylbenzene	0.1	18

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 02-01-88
Date Received: 02-02-88
Date Reported: 02-02-88

Sample Number	Sample Description
028003	Shell-Dublin
	S-3 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	1,400
Benzene	0.1	17
Toluene	0.1	33
Xylenes	0.1	240
Ethylbenzene	0.1	45

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 02-01-88
Date Received: 02-02-88
Date Reported: 02-02-88

Sample Number	Sample Description
028004	Shell-Dublin
	S-4 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	1,300
Benzene	0.1	19
Toluene	0.1	34
Xylenes	0.1	230
Ethylbenzene	0.1	40

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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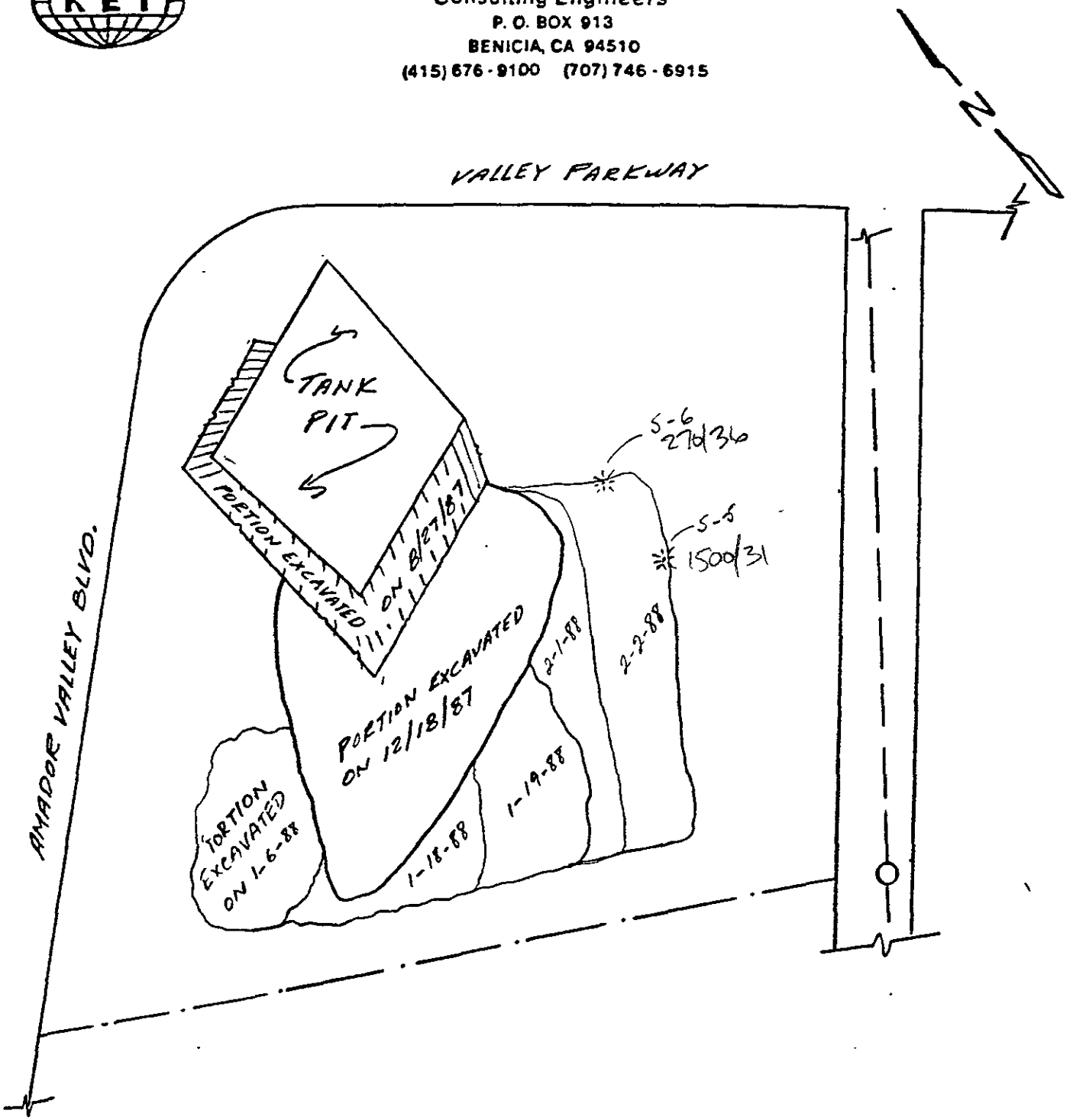

LOCATION PLAN
APPROX. SCALE 1" = 30'

* SOIL SAMPLE LOCATION

SHELL SERVICE STATION
7194 AMADOR VALLEY BLVD
DUBLIN, CALIF.

FIGURE 5

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Attn: Mardo Kaprealian, P.E.
President

Date Sampled:02-03-88
Date Received:02-03-88
Date Reported:02-03-88

Sample Number	Sample Description
028008	Shell-Dublin Amador & Village Pkwy. S-5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	1,500
Benzene	0.1	31
Toluene	0.1	56
Xylenes	0.1	280
Ethylbenzene	0.1	51

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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Attn: Mardo Kaprealian, P.E.
President

Date Sampled:02-03-88
Date Received:02-03-88
Date Reported:02-03-88

Sample Number	Sample Description
028009	Shell-Dublin Amador & Village Pkwy. S-6 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	270
Benzene	0.1	36
Toluene	0.1	44
Xylenes	0.1	75
Ethylbenzene	0.1	12

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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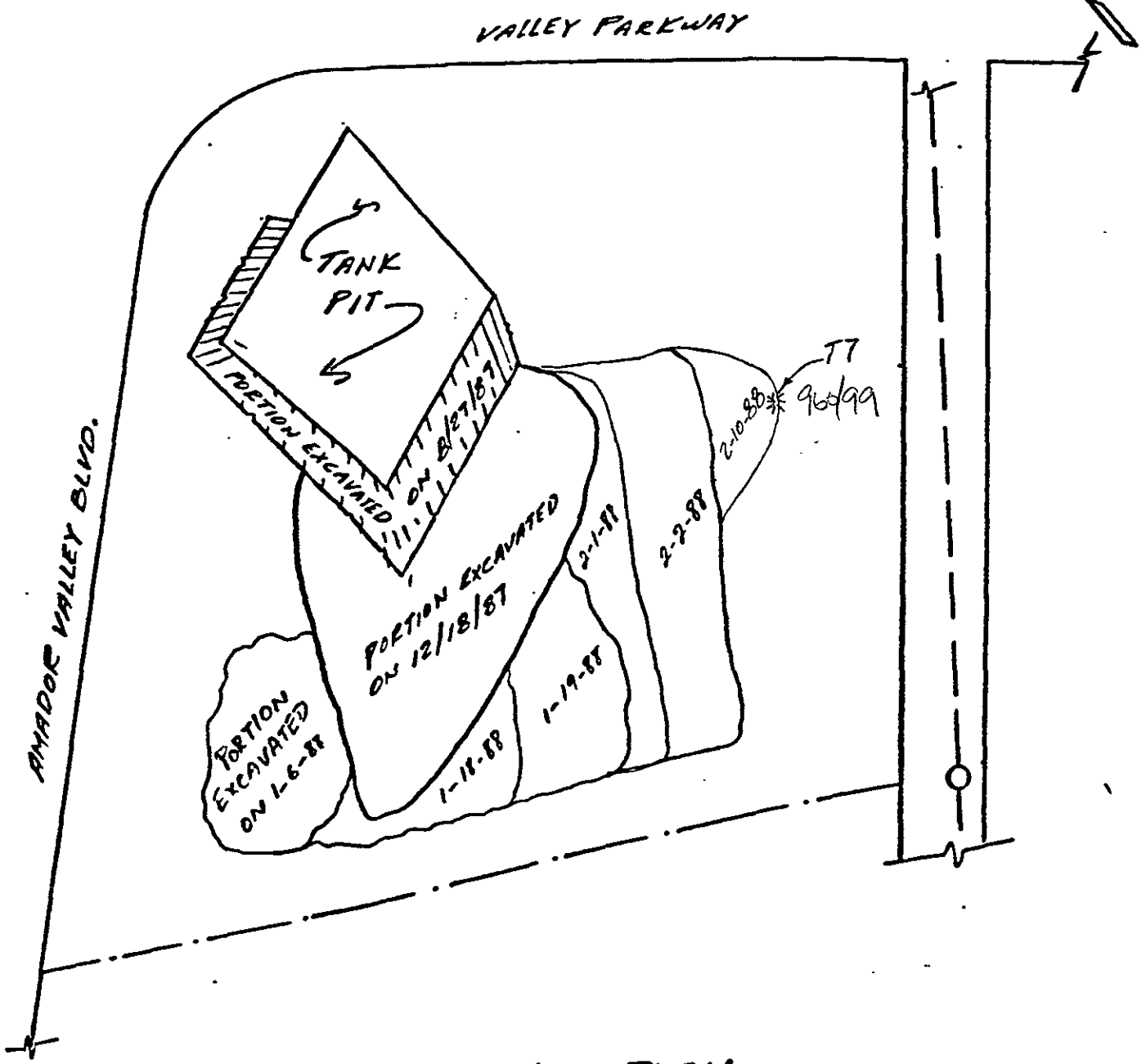


LOCATION PLAN
APPROX. SCALE 1" = 30'

* SOIL SAMPLE LOCATION

SHELL SERVICE STATION
7194 AMADOR VALLEY BLVD
DUBLIN, CALIF.

FIGURE 6

TABLE -1
Summary of Laboratory Analyses
(Results in ppm)

Date	Sample Number	TPH as Gasoline	Benzene	Toluene	Xylene	Ethylbenzene
2-08-88	T-7	960	99	99	260	42
2-10-88	Comp A	2.3	0.3	1.4	16	2.4

TABLE 1
RESULTS OF ANALYSES FOR SOIL AND GROUND WATER

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BLVD
DUBLIN, CALIFORNIA

SAMPLE LOCATION	SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE MATRIX	ANALYTICAL RESULTS (ppb) TVH	BENZENE	TOLUENE	XYLENES
MW-1	SDC-1002	9-10.5 FT.	SOIL	18,000	160	190	1,300
	SDC-1027	--	WATER	440	120	50	120
MW-2	SDC-1007	9-10.5 FT.	SOIL	95,000	1,500	410	11,000
	SDC-1028	--	WATER	ND<50	ND<0.5	ND<0.5	ND<0.5
MW-3	SDC-10012	10-11.5 FT.	SOIL	270,000	5,700	1,200	30,000
	SDC-1029	--	WATER	76	10	4.40	15
MW-4	SDC-1017	10-11.5 FT.	SOIL	290,000	3,800	10,000	23,000
	SDC-1030	--	WATER	290	76	33	150

TVH = Total Volatile Hydrocarbons
ppb = parts per billion
ND<0 5 = None Detected Above Indicated Detection Limit

Current California Department Of Health Services Action Levels For Water:
Benzene 0.7 ppb
Toluene 100 ppb
Xylenes 620 ppb
Note: Subject to change at DOHS discretion.

TABLE 2

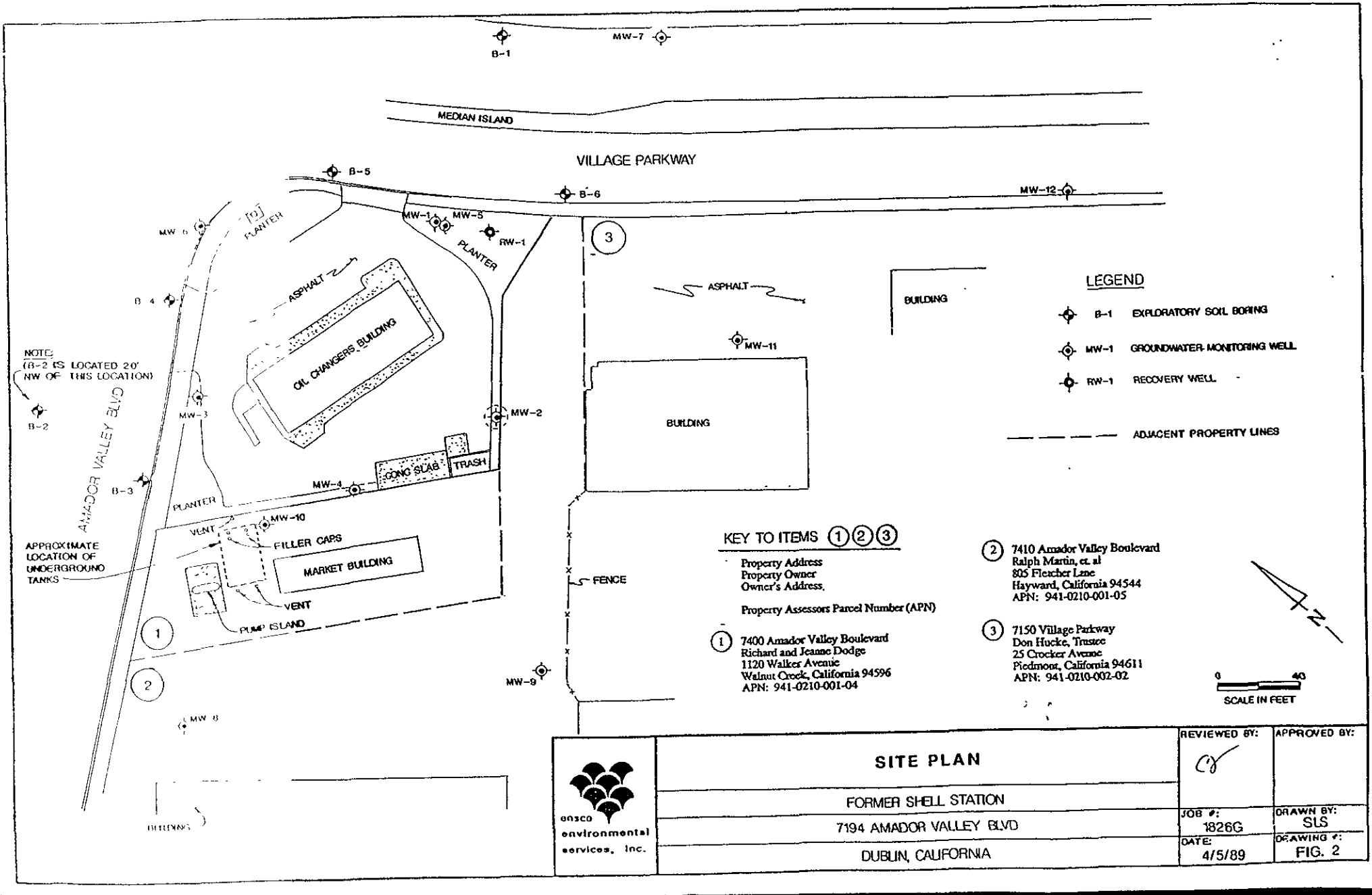
SOIL ANALYSIS RESULTS SUMMARY

Contaminants (ppm)

Sample Location	Approximate Depth (ft.)	TPH	Benzene	Toluene	Xylene
B-1	COMP	ND	NA	NA	NA
B-1	8	22	NA	NA	NA
B-2	COMP	ND	NA	NA	NA
B-3	COMP	ND	NA	NA	NA
B-4	COMP	ND	NA	NA	NA
B-5	COMP	ND	NA	NA	NA
B-5	8	420	9.8	1.8	36
B-5	10	43	NA	NA	NA
B-5	12	170	9.3	1.3	14
B-5	13	10	NA	NA	NA
B-6	COMP	ND	NA	NA	NA
B-6	7	66	4.8	5.6	1.8
B-6	9	540	3.9	6.4	42
B-6	10	130	ND	1.3	11
B-6	12	14	NA	NA	NA
B-6	13	ND	NA	NA	NA
MW-6	COMP	ND	NA	NA	NA
MW-6	10	11	NA	NA	NA
MW-6	12	75	NA	NA	NA
MW-7	COMP	ND	NA	NA	NA
RWQCB Priority Level (Ref. 9.3)		100	None	None	None
SWRCB Appraisal Limits (Ref. 9.4)		None	100	80	40

NOTES:

1. See Figure 2 for monitoring well and soil boring locations.
2. COMP: The sample analyzed was a composite of samples from several depths
3. ND: Not detected using EPA standard laboratory procedure.
4. NA: The sample was not analyzed for that compound



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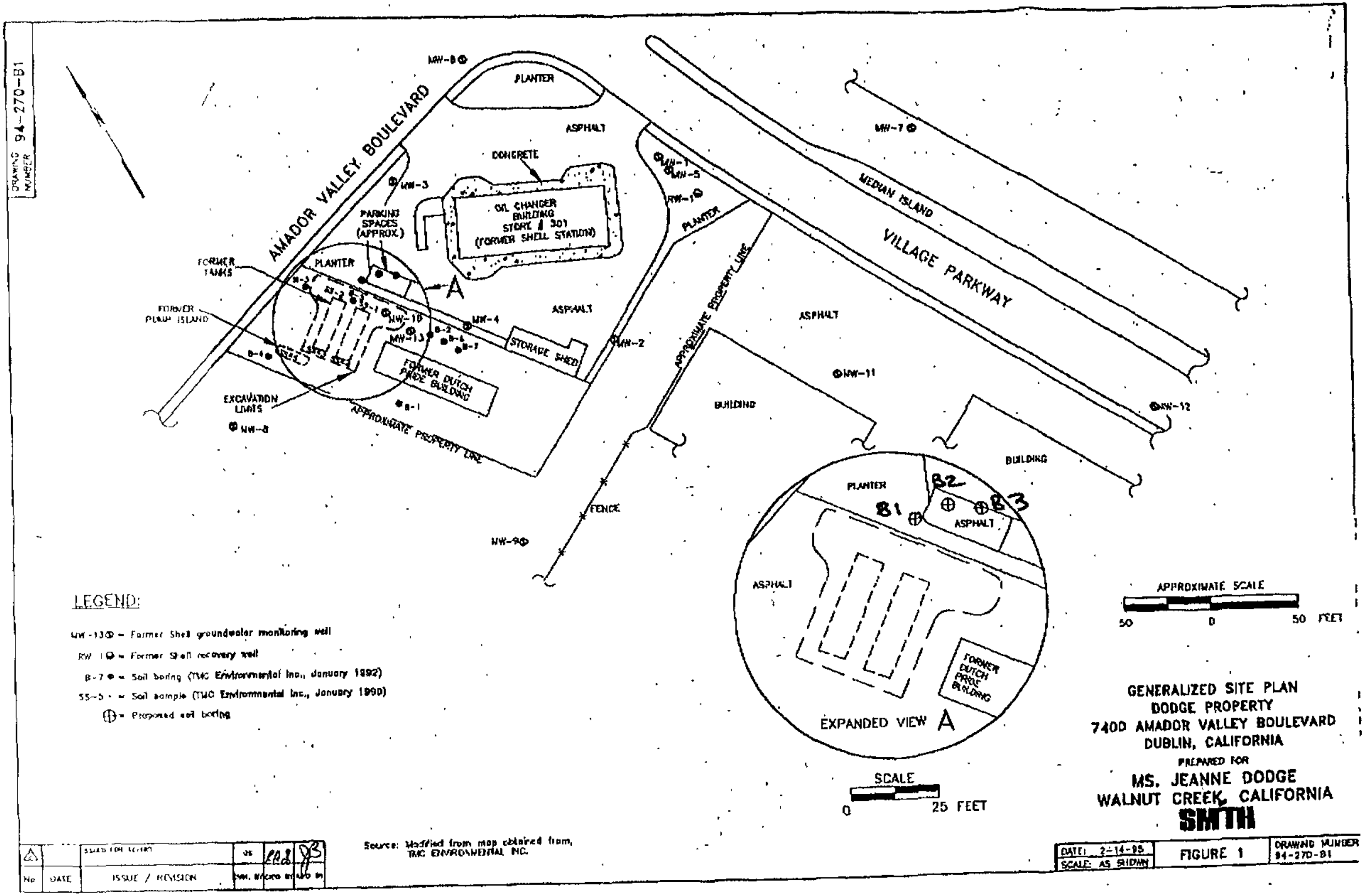
SITE PLAN

FORMER SHELL STATION

7194 AMADOR VALLEY BLVD

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
CB	
JOB #: 1826G	DRAWN BY: SLS
DATE: 4/5/89	DRAWING #: FIG. 2



Note: soil sample S-1 ~~from~~ boring B-3 /

water sample W-1 from boring B-3

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To Diane Lindquist	From eva chu
Co. enviros	Co. alameda Co. LOP
Dept.	Phone # (510) 567-6762
Fax # (707) 935-6649	Fax #

TABLE 2

LABORATORY ANALYTICAL RESULTS - WATER
OIL CHANGER PROPERTY
DUBLIN, CALIFORNIA

Sample Number	Date Sampled	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)
W-1	9/5/95	120,000	19,000	12,000	2,600	15,000
RW-1	9/5/95	< 250	< 2.5	< 2.5	< 2.5	< 2.5

grab GW sample

groundwater sample

Notes:

TPH-G Total petroleum hydrocarbons as gasoline
ppb Parts per billion (ug/l)
< Less than listed laboratory detection limit in ppb

SMITH

APPENDIX B

Ground Water Monitoring and Sampling Data Summary

TABLE 1

SUMMARY OF LABORATORY ANALYSES

(Soil analyses in parts per million,
Water analysis in parts per billion)

Sample #	Type	Total Hydrocarbon	Benzene	Toluene	Xylene
A1	soil	1100	14	4.5	37
B1	soil	970	12	22	60
C1	soil	270	4.2	0.45	2.7
D1	soil	1900	31	5.5	36
W.O.-1*	soil	45	<0.05	<0.05	----
W1	water	85,000	1,400	3,600	11,000

* Gravimetric waste oil for this sample was 45 ppm.

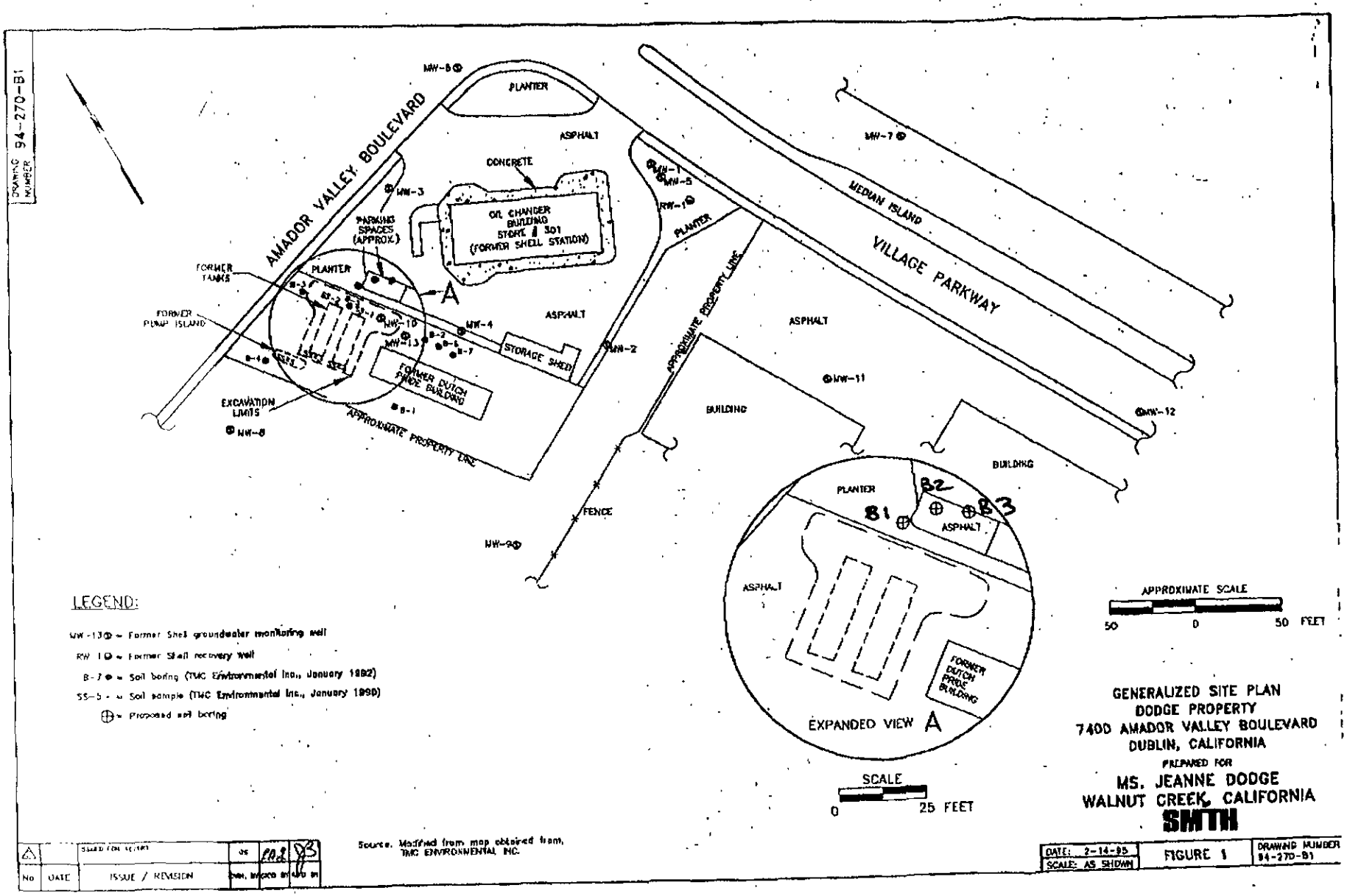
TABLE 1
RESULTS OF ANALYSES FOR SOIL AND GROUND WATER

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BLVD
DUBLIN, CALIFORNIA

SAMPLE LOCATION	SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE MATRIX	ANALYTICAL RESULTS (ppb) TVH	BENZENE	TOLUENE	XYLENES
MW-1	SDC-1002	9-10.5 FT.	SOIL	18,000	160	190	1,300
	SDC-1027	--	WATER	440	120	50	120
MW-2	SDC-1007	9-10.5 FT.	SOIL	95,000	1,500	410	11,000
	SDC-1028	--	WATER	ND<50	ND<0.5	ND<0.5	ND<0.5
MW-3	SDC-10012	10-11.5 FT.	SOIL	270,000	5,700	1,200	30,000
	SDC-1029	--	WATER	76	10	4.40	15
MW-4	SDC-1017	10-11.5 FT.	SOIL	290,000	3,800	10,000	23,000
	SDC-1030	--	WATER	290	76	33	150

TVH = Total Volatile Hydrocarbons
ppb = parts per billion
ND<0.5 = None Detected Above Indicated Detection Limit

Current California Department Of Health Services Action Levels For Water:
Benzene 0.7 ppb
Toluene 100 ppb
Xylenes 620 ppb
Note: Subject to change at DOHS discretion.



Note: soil sample S-1 from boring B-3 /

water sample W-1 from boring B-3

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To Diane Lundquist	From eva chu
Co. enviros	Co. Alameda Co. LOP
Dept.	Phone # (510) 567-6762
Fax # (707) 935-6649	Fax #

TABLE 1

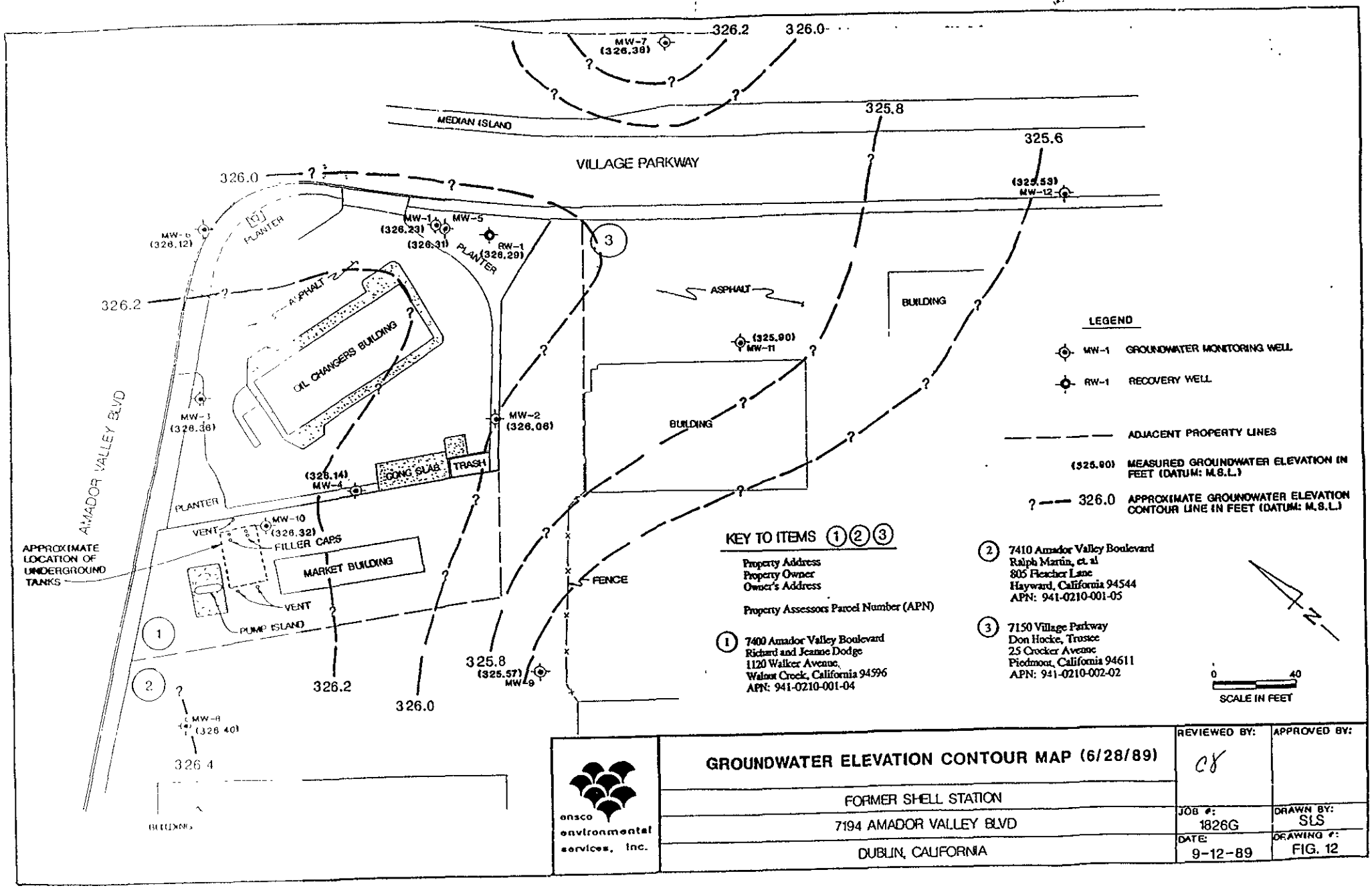
LABORATORY ANALYTICAL RESULTS - SOIL
OIL CHANGER PROPERTY
DUBLIN, CALIFORNIA

Sample Number	Date Sampled	Sample Depth (feet)	TPH-G (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Total Xylenes (ppm)	Total Lead (ppm)
soil from B-3 S-1	9/5/95	12	1,100	8.4	35	17	99	NR
stockpile soil SC-1	9/5/95	NA	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 5.0

Notes:

TPH-G Total petroleum hydrocarbons as gasoline
ppm Parts per million (kg/mg)
< Less than listed laboratory detection limit in ppm
NA Not applicable
NR Analyses not required

SMITH



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GROUNDWATER ELEVATION CONTOUR MAP (6/28/89)

FORMER SHELL STATION

7194 AMADOR VALLEY BLVD

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
CS	
JOB #: 1826G	DRAWN BY: SLS
DATE: 9-12-89	DRAWING #: FIG. 12

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-1	9-May-88	4.0	334.83	8.72		326.11
	26-Aug-88			9.15		325.68
	5-Oct-88			8.54		326.29
	22-Nov-88			9.31		325.52
	9-Dec-88			9.33		325.50
	13-Jan-89			NM		NM
	10-Feb-89			8.51		326.32
	2-Mar-89			8.71		326.12
	4-Apr-89			7.93		326.90
	1-May-89			8.43		326.40
	1-Jun-89			8.56		326.27
	29-Jun-89			8.60		326.23
	9-Aug-89			8.43		326.40
	11-Sep-89			8.65		326.18
	10-Oct-89			8.52		326.31
	25-Oct-89			8.56		326.27
	20-Dec-89			8.80		326.03
	17-Jan-90			8.47		326.36
	23-Feb-90			8.25		326.58
	4-Jun-90			8.62		326.21
	20-Nov-90			9.50		325.33
	12-Feb-91			9.51		325.32
	6-May-91			8.34		326.49
	28-Aug-91			9.28		325.55
	13-Nov-91			9.59		325.24
	25-Feb-92			7.49		327.34
	12-May-92			8.64		326.19
	12-Aug-92			9.15		325.68
	10-Nov-92			10.04		324.79
	10-Feb-93			7.24		327.59
	10-May-93			7.78		327.05
	12-Aug-93			8.54		326.29
	11-Nov-93			8.56		326.27
	11-Feb-94			8.62		326.21
	17-May-94			7.96		326.87
	25-Aug-94			9.24		325.59
	23-Nov-94			8.74		326.09
	15-Feb-95			6.84		327.99
	24-May-95			7.91		326.92

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-1 (cont.)	25-Aug-95			8.11		326.72
MW-2	9-May-88	4.0	336.96	10.85		326.11
	26-Aug-88			11.29		325.67
	5-Oct-88			10.83		326.13
	22-Nov-88			11.42		325.54
	9-Dec-88			11.45		325.51
	13-Jan-89			NM		NM
	10-Feb-89			10.74		326.22
	2-Mar-89			10.91		326.05
	4-Apr-89			10.06		326.90
	1-May-89			10.58		326.38
	31-May-89			10.73		326.23
	28-Jun-89			10.90		326.06
	8-Aug-89			10.78		326.18
	8-Sep-89			10.97		325.99
	9-Oct-89			10.88		326.08
	24-Oct-89			11.00		325.96
	21-Dec-89			11.06		325.90
	17-Jan-90			10.78		326.18
	23-Feb-90			10.35		326.61
	4-Jun-90			10.72		326.24
	20-Nov-90			11.35		325.61
	12-Feb-91			11.64		325.32
	6-May-91			10.05		326.91
	28-Aug-91			11.16		325.80
	13-Nov-91			11.57		325.39
	25-Feb-92			9.66		327.30
	12-May-92			10.97		325.99
	12-Aug-92			11.58		325.38
	10-Nov-92			12.05		324.91
	10-Feb-93			9.28		327.68
	10-May-93			9.65		327.31
	12-Aug-93			10.70		326.26
	11-Nov-93			11.36		325.60
	11-Feb-94			11.04		325.92
	17-May-94			10.29		326.67
	25-Aug-94			11.29		325.67
	23-Nov-94			10.92		326.04
	15-Feb-95			8.90		328.06

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-2 (cont.)	24-May-95			10.02		326.94
	25-Aug-95			10.24		326.72
MW-3	9-May-88	4.0	336.96	10.59		326.37
	26-Aug-88			11.10		325.86
	5-Oct-88			10.43		326.53
	22-Nov-88			11.16		325.80
	9-Dec-88			11.24		325.72
	13-Jan-89			NM		NM
	10-Feb-89			10.43		326.53
	2-Mar-89			10.59		326.37
	4-Apr-89			9.45		327.51
	1-May-89			10.20		326.76
	1-Jun-89			10.40		326.56
	28-Jun-89			10.60		326.36
	9-Aug-89			10.64		326.32
	11-Sep-89			10.83		326.13
	10-Oct-89			10.95		326.01
	26-Oct-89			10.86		326.10
	21-Dec-89			11.09		325.87
	17-Jan-90			10.90		326.06
	23-Feb-90			10.52		326.44
	4-Jun-90			10.52		326.44
	20-Nov-90			12.65		324.31
	12-Feb-91			11.16		325.80
	6-May-91		336.93	9.85		327.08
	28-Aug-91			10.90		326.03
	13-Nov-91			11.28		325.65
	25-Feb-92			9.04		327.89
	12-May-92			10.50		326.43
	12-Aug-92			10.94		325.99
	10-Nov-92			11.84		325.09
	10-Feb-93			8.82		328.11
	10-May-93			8.88		328.05
	12-Aug-93			10.36		326.57
	11-Nov-93			10.64		326.29
	11-Feb-94			10.68		326.25
	17-May-94			9.92		327.01
	25-Aug-94			11.30		325.63
	23-Nov-94			10.48		326.45
	15-Feb-95			8.35		328.58

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-3 (cont.)	24-May-95			9.67		327.26
	25-Aug-95			9.36		327.57
MW-4	9-May-88	4.0	337.14	10.88		326.26
	26-Aug-88			11.34		325.80
	5-Oct-88			10.87		326.27
	22-Nov-88			11.41		325.73
	9-Dec-88			11.46		325.68
	13-Jan-89			NM		NM
	10-Feb-89			10.78		326.36
	2-Mar-89			10.92		326.22
	4-Apr-89			10.04		327.10
	1-May-89			10.52		326.62
	31-May-89			10.62		326.52
	28-Jun-89			11.00		326.14
	9-Aug-89			10.92		326.22
	8-Sep-89			11.05		326.09
	10-Oct-89			10.97		326.17
	26-Oct-89			11.35		325.79
	21-Dec-89			11.07		326.07
	17-Jan-90			11.08		326.06
	23-Feb-90			10.90		325.24
	4-Jun-90			10.74		326.40
	20-Nov-90			11.45		325.69
	12-Feb-91			11.50		325.64
	6-May-91			10.04		327.10
	28-Aug-91			11.18		325.96
	13-Nov-91			11.60		325.54
	25-Feb-92			9.45		327.69
	12-May-92			10.84		326.30
	12-Aug-92			11.36		325.78
	10-Nov-92			12.12		325.02
	10-Feb-93			9.40		327.74
	10-May-93			9.54		327.60
	12-Aug-93			10.68		326.46
	11-Nov-93			11.97		325.17
	11-Feb-94			10.71		326.43
	17-May-94			10.30		326.84
	25-Aug-94			10.84		326.30
	23-Nov-94			10.78		326.36
	15-Feb-95			9.49		327.65

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT. DATE	CASING DIA (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-4 (cont.)	24-May-95			10.73		326.41
	25-Aug-95			10.22		326.92
MW-5	26-Aug-88	4.0	334.96	9.10		325.86
	5-Oct-88			9.95		325.01
	22-Nov-88			8.93		326.03
	9-Dec-88			10.48		324.48
	13-Jan-89			NM		NM
	10-Feb-89			10.35		324.61
	2-Mar-89			8.50		326.46
	5-Apr-89			7.72		327.24
	1-May-89			8.21		326.75
	1-Jun-89			8.40		326.56
	29-Jun-89			8.65		326.31
	9-Aug-89			8.76		326.20
	11-Sep-89			8.80		326.16
	10-Oct-89			11.92		323.04
	25-Oct-89			9.03		325.93
	20-Dec-89			11.26		323.70
	18-Jan-90			9.95		325.01
	23-Feb-90			8.30		326.66
	4-Jun-90			8.57		326.39
	20-Nov-90			9.45		325.51
	11-Feb-91			9.27		325.69
	6-May-91			7.90		327.06
	28-Aug-91			9.28		325.68
	13-Nov-91			9.36		325.60
	25-Feb-92			9.02		325.94
	12-May-92			8.65		326.31
	12-Aug-92			9.40		325.56
	10-Nov-92			9.68		325.28
	10-Feb-93			7.97		326.99
	10-May-93			7.76		327.20
	12-Aug-93			8.75		326.21
	11-Nov-93			9.32		325.64
	11-Feb-94			8.97		325.99
	17-May-94			8.12		326.84
	25-Aug-94			9.19		325.77
	23-Nov-94			8.78		326.18
	15-Feb-95			6.88		328.08
	24-May-95			8.04		326.92

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-5 (cont.)	25-Aug-95			8.34		326.62
MW-6	26-Aug-88	4.0	335.42	9.69		325.73
	5-Oct-88			9.27		326.15
	22-Nov-88			9.77		325.65
	9-Dec-88			9.85		325.27
	13-Jan-89			NM		NM
	10-Feb-89			9.10		326.32
	2-Mar-89			9.29		326.13
	4-Apr-89			8.48		326.94
	1-May-89			8.90		326.52
	1-Jun-89			9.16		326.26
	29-Jun-89			9.30		326.12
	9-Aug-89			9.30		326.12
	11-Sep-89			9.31		326.11
	10-Oct-89			9.32		326.10
	24-Oct-89			9.30		326.12
	20-Dec-89			9.58		325.84
	18-Jan-90			9.46		325.96
	23-Feb-90			8.94		326.48
	4-Jun-90			9.22		326.20
	20-Nov-90			9.65		325.77
	12-Feb-91			9.85		325.57
	6-May-91			9.12		326.30
	28-Aug-91			9.68		325.74
	13-Nov-91			10.00		325.42
	25-Feb-92			8.44		326.98
	12-May-92			9.11		326.31
	12-Aug-92			9.72		325.70
	10-Nov-92			10.56		324.86
	10-Feb-93			7.65		327.77
	10-May-93			8.10		327.32
	12-Aug-93			9.18		326.24
	11-Nov-93			9.38		326.04
	11-Feb-94			9.02		326.40
	17-May-94			8.58		326.84
	25-Aug-94			9.79		325.63
	23-Nov-94			9.20		326.22
	15-Feb-95			7.36		328.06
	24-May-95			8.80		326.62
	25-Aug-95			8.50		326.92

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-7	26-Aug-88	4.0	333.23	7.94		325.29
	5-Oct-88			7.54		325.69
	22-Nov-88			NM		NM
	9-Dec-88			7.53		325.70
	13-Jan-89			NM		NM
	10-Feb-89			6.62		326.61
	2-Mar-89			7.03		326.20
	5-Apr-89			6.80		326.43
	1-May-89			6.53		326.70
	31-May-89			6.93		326.30
	28-Jun-89			6.85		326.38
	9-Aug-89			6.67		326.56
	7-Sep-89			6.90		326.33
	10-Oct-89			6.90		326.33
	24-Oct-89			7.29		325.94
	20-Dec-89			7.47		325.76
	18-Jan-90			7.49		325.74
	23-Feb-90			6.92		326.31
	4-Jun-90			6.95		326.28
	20-Nov-90			8.10		325.13
	11-Feb-91			8.04		325.19
	6-May-91			6.37		325.86
	28-Aug-91			7.94		325.29
	13-Nov-91			8.41		324.82
	25-Feb-92			6.99		326.24
	12-May-92			7.42		325.81
	12-Aug-92			8.65		324.58
	10-Nov-92			8.82		324.41
	10-Feb-93			6.06		327.17
	10-May-93			6.68		326.55
	12-Aug-93			6.83		326.40
	11-Nov-93			6.90		326.33
	11-Feb-94			6.12		327.11
	17-May-94			6.06		327.17
	25-Aug-94			6.76		326 47
	23-Nov-94			6.75		326.48
	15-Feb-95			5.40		327.83
	24-May-95			6.82		326.41
	25-Aug-95			6.46		326.77
MW-8	1-Mar-89	4.0	335.80	8.28		327.52

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-8 (cont.)	4-Apr-89			7.31		328.49
	1-May-89			8.97		326.83
	31-May-89			9.17		326.63
	28-Jun-89			9.40		326.40
	8-Aug-89			9.42		326.28
	7-Sep-89			8.50		327.30
	10-Oct-89			9.46		326.34
	26-Oct-89			9.56		326.24
	21-Dec-89			9.57		326.23
	18-Jan-90			9.29		326.51
	26-Feb-90			8.50		327.30
	4-Jun-90			9.04		326.76
	11-Feb-91			9.40		326.40
	6-May-91			8.70		327.10
	28-Aug-91			9.68		326.12
	13-Nov-91			9.87		326.93
	25-Feb-92			7.45		328.35
	12-May-92			9.19		326.61
	12-Aug-92			9.82		325.98
	10-Nov-92			10.41		325.39
	10-Feb-93			7.35		328.45
	10-May-93			8.00		327.80
	12-Aug-93			9.00		326.80
	11-Nov-93			9.47		326.33
	11-Feb-94			8.80		327.00
	17-May-94			8.21		327.59
	25-Aug-94			9.52		326.28
	23-Nov-94			9.08		326.72
	15-Feb-95			6.67		329.13
	24-May-95			7.56		328.24
	25-Aug-95			8.60		327.20
MW-9	1-Mar-89	4.0	334.57	8.48		326.09
	4-Apr-89			7.69		326.88
	1-May-89			8.20		326.37
	31-May-89			8.72		325.85
	28-Jun-89			9.00		325.57
	8-Aug-89			8.53		326.04
	7-Sep-89			8.99		325.58
	9-Oct-89			8.89		325.68
	23-Oct-89			9.02		325.55

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-9 (cont.)	21-Dec-89			9.48		325.09
	18-Jan-90			8.73		325.84
	26-Feb-90			9.06		325.51
	4-Jun-90			8.64		325.93
	20-Nov-90			9.95		324.62
	11-Feb-91			9.85		324.72
	6-May-91			10.05		324.52
	28-Aug-91			10.34		324.23
	13-Nov-91			9.39		325.18
	25-Feb-92			7.18		327.39
	12-May-92			8.54		326.03
	12-Aug-92			8.97		325.60
	10-Nov-92			9.61		324.96
	10-Feb-93			7.20		327.37
	10-May-93			7.56		327.01
	12-Aug-93			8.25		326.32
	11-Nov-93			10.30		324.27
	11-Feb-94			8.88		325.69
	17-May-94			8.06		326.51
	25-Aug-94			8.79		325.78
	23-Nov-94			8.65		325.92
	15-Feb-95			7.36		327.21
	24-May-95			7.75		326.82
	25-Aug-95			7.90		326.67
MW-10	2-Mar-89	4.0	335.37	8.95		326.42
	4-Apr-89			7.89		327.48
	1-May-89			9.07		326.30
	1-Jun-89			8.86		326.51
	29-Jun-89			9.05		326.32
	9-Aug-89			9.70		326.67
	7-Sep-89			8.14		327.23
	10-Oct-89			9.21		326.16
	26-Oct-89			9.60		325.77
	20-Dec-89			9.42		325.95
	1-Jun-90			----------Well Destroyed----------		
MW-11	2-Mar-89	4.0	334.20	8.30		325.90
	4-Apr-89			7.52		325.68
	1-May-89			7.97		326.23
	20-Nov-90			NM		NM
	31-May-90			8.13		326.07

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-11 (cont.)	28-Jun-89			8.30		325.90
	8-Aug-89			8.22		325.98
	7-Sep-89			8.32		325.88
	9-Oct-89			8.28		325.92
	24-Oct-89			8.38		325.82
	20-Dec-89			8.48		325.72
	18-Jan-90			8.20		326.00
	26-Feb-90			7.86		326.34
	4-Jun-90			8.13		326.07
	20-Nov-90			8.83		325.37
	11-Feb-90			8.95		325.25
	6-May-91			7.71		326.49
	28-Aug-91			8.62		325.58
	15-Nov-91			8.99		325.21
	25-Feb-92			7.21		326.99
	12-May-92			8.26		325.94
	12-Aug-92			8.75		325.45
	10-Nov-92			9.47		324.73
	10-Feb-93			6.79		327.41
	10-May-93			7.18		327.02
	12-Aug-93			8.10		326.10
	11-Nov-93			8.56		325.64
	11-Feb-94			8.21		325.99
	17-May-94			7.61		326.59
	25-Aug-95			8.68		325.52
	23-Nov-94			8.27		325.93
	15-Feb-95			6.46		327.74
	24-May-95			7.69		326.51
	25-Aug-95			7.70		326.50
MW-12	2-Mar-89	4.0	332.53	6.94		325.59
	4-Apr-89			6.33		326.20
	1-May-89			6.62		325.91
	1-Jun-89			6.82		325.71
	29-Jun-89			7.00		325.53
	9-Aug-89			6.76		325.77
	7-Sep-89			6.81		325.72
	9-Oct-89			7.11		325.42
	24-Oct-89			7.60		324.93
	20-Dec-89			8.25		324.28
	18-Jan-90			8.23		324.30

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-12 (cont.)	26-Feb-90			7.54		324.99
	4-Jun-90			7.96		324.57
	20-Nov-90			8.80		323.73
	12-Feb-90			7.85		324.68
	6-May-91			7.35		325.18
	28-Aug-91			7.79		324.74
	13-Nov-91			7.89		324.64
	25-Feb-92			6.14		326.39
	12-May-92			7.54		324.99
	12-Aug-92			9.83		322.70
	10-Nov-92			8.32		324.21
	10-Feb-93			6.75		325.78
	10-May-93			------ Well Inaccessible -----		
	12-Aug-93			6.23		326.30
	11-Nov-93			7.43		325.10
	11-Feb-94			7.18		325.35
	17-May-94			6.80		325.73
	25-Aug-94			7.24		325.29
	23-Nov-94			7.16		325.37
	15-Feb-95			5.16		327.37
	24-May-95			6.95		325.58
	25-Aug-95			5.63		326.90
MW-13	6-May-91	4.0	335.64	8.37		327.27
	28-Aug-91			9.82		325.82
	13-Nov-91			10.19		325.45
	25-Feb-92			7.66		327.98
	12-May-92			9.16		326.48
	12-Aug-92			10.91		324.73
	10-Nov-92			10.69		324.95
	10-Feb-93			7.49		328.15
	10-May-93			8.06		327.58
	12-Aug-93			8.73		326.91
	11-Nov-93			9.15		326.49
	11-Feb-94			9.12		326.52
	17-May-94			8.62		327.02
	25-Aug-94			9.32		326.32
	23-Nov-94			9.37		326.27
	15-Feb-95			8.42		327.22
	24-May-95			9.90		325.74
	25-Aug-95			8.32		327.32

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
RW-1	9-Dec-89	6.0	336.19	10.73		325.46
	13-Jan-89			NM		NM
	10-Feb-89			10.91		325.28
	2-Mar-89			10.15		325.04
	5-Apr-89			9.34		326.85
	1-May-89			9.85		326.34
	1-Jun-89			9.96		326.23
	30-Jun-89			9.90		326.29
	9-Aug-89			9.80		326.39
	11-Sep-89			10.02		326.17
	10-Oct-89			9.88		326.31
	25-Oct-89			9.80		326.39
	21-Dec-89			10.25		325.94
	17-Jan-89			9.80		326.39
	23-Feb-90			9.60		326.59
	4-Jun-90			9.97		326.22
	20-Nov-90			10.50		325.69
	11-Feb-91			10.87		325.32
	25-Feb-92			----- Well Not Gauged -----		
	12-May-92			NM		NM
	12-Aug-92			NM		NM
	10-Nov-92			NM		NM
	10-May-93			9.26		326.93
	12-Aug-93			NM		NM
	11-Nov-93			NM		NM
	11-Feb-94			9.98		326.21
	17-May-94			9.29		326.90
	25-Aug-94			10.56		325.63
	23-Nov-94			10.07		326.12
	15-Feb-95			8.20		327.99
	24-May-95			9.66		326.53
	25-Aug-95			9.37		326.82

Notes

Elevations referenced to Mean Sea Level
Depth to water measured from top of casing
NM = Not measured

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-1	9-May-88	440	120	50	NR	120
	26-Aug-88	200,000	4,400	260	300	450
	5-Oct-88	17,000	6,700	360	210	730
	22-Nov-88	8,000	3,900	830	250	340
	9-Dec-88	11,000	790	36	7.3	68
	13-Jan-89	8,800	3,800	110	330	90
	10-Feb-89	18,000	4,700	400	660	190
	2-Mar-89	14,000	6,100	770	320	440
	4-Apr-89	11,000	4,800	770	270	780
	1-May-89	11,000	2,800	880	410	780
	1-Jun-89	<50	<0.5	<0.5	<0.5	<0.5
	29-Jun-89	4,700	310	160	75	260
	9-Aug-89	12,000	1,300	620	830	680
	11-Sep-89	<50	<0.5	<0.5	<0.5	2.2
	10-Oct-89	8,700	1,100	310	180	590
	25-Oct-89	7,500	660	250	460	480
	20-Dec-89	6,200	270	110	260	220
	17-Jan-90	7,400	200	170	160	260
	23-Feb-90	1,500	130	13	30	24
	4-Jun-90	830	88	10	2.6	28
	20-Nov-90	NA	NA	NA	NA	NA
	12-Feb-91	1,500	180	39	82	110
	6-May-91	510	41	11	25	35
	28-Aug-91	450	41	16	24	34
	13-Nov-91	320	41	14	23	33
	25-Feb-92	240	24	9.2	14	20
	12-May-92	320	60	25	29	41
	12-Aug-92	230	26	16	20	25
	12-Aug-92(D)	220	25	16	19	24
	10-Nov-92	120	13	8.8	9.0	13
	10-Feb-93	80	3.3	2.9	2.4	5.1
	10-May-93	100	8.5	5.5	5.2	10
	12-Aug-93	130	10	11	8.3	32
	11-Nov-93	<50	<0.5	<0.5	<0.5	<0.5
	11-Feb-94	110b	12	4.6	6.4	13
	17-May-94	<50	0.53	<0.5	<0.5	0.71
	25-Aug-94	<50	<0.5	<0.5	<0.5	<0.5
	23-Nov-94	<50	0.9	<0.5	<0.5	<0.5
	15-Feb-95	330	2.7	1.3[a]	1.5	2.3
	24-May-95	<50	<0.5	<0.5	<0.5	<0.5
	25-Aug-95	<50	<0.5	<0.5	<0.5	<0.5

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-2	9-May-88	<50	<0.5	<0.5	NR	<0.5
	26-Aug-88	1,700	230	16	87	120
	5-Oct-88	200	20	2.3	8.3	12
	22-Nov-88	800	93	1.6	4.3	60
	9-Dec-88	270	45	3.6	7.2	14
	13-Jan-89	180	26	2.3	17	7.0
	10-Feb-89	320	43	1.7	34	15
	2-Mar-89	230	24	0.9	9.2	18
	4-Apr-89	230	53	2.3	7.1	20
	1-May-89	<50	2.7	<0.5	<0.5	<0.5
	31-May-89	120	14	<0.5	3.9	7.6
	28-Jun-89	<50	4.1	<0.5	<0.5	<0.5
	8-Aug-89	88	3.9	<0.5	<0.5	<0.5
	8-Sep-89	<50	3.2	<0.5	<0.5	<0.5
	9-Oct-89	110	6.7	<0.5	<0.5	<0.5
	24-Oct-89	<50	2.5	<0.5	<0.5	1.9
	21-Dec-89	<50	7.1	<0.5	5.0	9.8
	17-Jan-90	<50	4.4	<0.5	1.6	1.4
	23-Feb-90	70	6.3	<0.5	2.7	2.5
	4-Jun-90	60	2.4	<0.5	0.8	<0.5
	20-Nov-90	60	5.6	<0.5	<0.5	<0.5
	12-Feb-91	130	14	<0.5	0.9	0.5
	6-May-91	60	1.5	<0.5	5.0	<0.5
	28-Aug-91	100	6.3	<0.5	1	1.1
	13-Nov-91	<50	11	<0.5	1.3	<0.5
	25-Feb-92	<50	3.8	<0.5	<0.5	<0.5
	12-May-92	<50	6	<0.5	<0.5	<0.5
	12-Aug-92	110	6.8	<0.5	1.0	<0.5
	10-Nov-92	56	4.5	<0.5	<0.5	<0.5
	10-Feb-93	81	4.8	0.6	1.4	1.9
	10-May-93	90	0.8	0.8	0.6	3.2
	12-Aug-93	420	61	18	21	53
	11-Nov-93	<50	<0.5	<0.5	<0.5	<0.5
	11-Feb-94	<50	0.64	<0.5	<0.5	<0.5
	17-May-94	<50	3	<0.5	<0.5	0.51
	25-Aug-94	<50	17	<0.5	<0.5	<0.5
	23-Nov-94	<50	9.3	<0.5	<0.5	<0.5
	15-Feb-95	160	4.4	1.1[b]	0.6	1.5
	24-May-95	70	3.9	<0.5	1.4	<0.5
	25-Aug-95	<50	20	<0.5	<0.5	<0.5

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-3	9-May-88	76	10	4.4	NR	15
	26-Aug-88	5,200	170	6.0	32	54
	5-Oct-88	260	100	2.7	5.8	7.0
	22-Nov-88	180	75	1.4	8.1	4.0
	9-Dec-88	160	5	5.9	<0.5	<0.5
	13-Jan-89	160	36	1.2	3.0	2.0
	10-Feb-89	300	83	<0.5	8.6	8.0
	2-Mar-89	570	160	1.0	17	9.0
	4-Apr-89	150	64	0.8	2.7	6.0
	1-May-89	130	48	1.2	3.4	2.0
	1-Jun-89	<50	<0.5	<0.5	<0.5	<0.5
	28-Jun-89	90	68	0.7	<0.5	5.1
	9-Aug-89	150	23	5.3	2.6	<0.5
	11-Sep-89	<50	<0.5	<0.5	<0.5	<0.5
	10-Oct-89	80	6.4	0.72	<0.5	<0.5
	26-Oct-89	150	11	<0.5	1.6	<0.5
	21-Dec-89	<50	6.8	<0.5	<0.5	<0.5
	17-Jan-90	<50	4.0	<0.5	6.8	<0.5
	23-Feb-90	50	10	<0.5	1.2	0.9
	4-Jun-90	80	10	<0.5	1.4	<0.5
	20-Nov-90	100	26	0.7	1.2	1.9
	12-Feb-91	130	27	<0.5	<0.5	<0.5
	6-May-91	120	31	0.8	2.1	0.8
	28-Aug-91	340	87	1.1	6.5	3.8
	13-Nov-91	240	140	<0.5	3.1	0.9
	25-Feb-92	80	17	<0.5	<0.5	<0.5
	12-May-92	74	31	<0.5	2.6	<0.5
	12-Aug-92	160	24	0.5	2.9	<0.5
	10-Nov-92	130	27	<0.5	1.1	0.9
	10-Nov-92(D)	110	2.6	<0.5	1.1	0.7
	10-Feb-93	92	5.7	<0.5	<0.5	<0.5
	10-Feb-93(D)	80	5.2	<0.5	<0.5	<0.5
	10-May-93	250	100	<0.5	<0.5	<0.5
	10-May-93(D)	200	80	<0.5	2.4	<0.5
	12-Aug-93	380	110	16	13	43
	11-Nov-93	170	35	8.0	29	9.2
	11-Feb-94	76c	23	<0.5	<0.5	<0.5
	17-May-94	84d	26	<0.5	2.2	<0.5
	25-Aug-94	<50	7.7	<0.5	0.6	<0.5
	25-Aug-94(D)	<50	14	<0.5	1.5	<0.5
	23-Nov-94	<50	2.7	<0.5	<0.5	<0.5

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-3 (cont.)	15-Feb-95	50	19	0.9[b]	1.4	1.5
	24-May-95	380	200	1.7	<0.5	0.6
	25-Aug-95	70	22	<0.5	4.1	<0.5
	25-Aug-95 (D)	70	37	<0.5	6.2	<0.5
MW-4	9-May-88	290	76	33	NA	150
	26-Aug-88	210	640	41	110	160
	5-Oct-88	450	110	6.3	16	20
	22-Nov-88	500	110	4.0	20	27
	9-Dec-88	260	920	7.5	5.9	11
	13-Jan-89	990	200	6.5	46	14
	10-Feb-89	290	90	3.6	8.8	9.0
	2-Mar-89	630	210	6.2	34	7.0
	4-Apr-89	640	340	13	25	40
	1-May-89	100	65	2.0	3.0	4.0
	31-May-89	60	<0.5	<0.5	<0.5	<0.5
	28-Jun-89	110	62	1.3	<0.5	4.8
	9-Aug-89	160	110	2.0	6.4	<0.5
	8-Sep-89	94	45	0.5	3.8	<0.5
	10-Oct-89	90	30	1.0	1.9	<0.5
	26-Oct-89	<50	3.4	<0.5	<0.5	<0.5
	21-Dec-89	<50	35	1.1	3.6	1.6
	17-Jan-90	<50	4.0	<0.5	6.8	<0.5
	23-Feb-90	<50	8.0	<0.5	1.1	0.7
	4-Jun-90	160	85	1.1	1.9	<0.5
	20-Nov-90	140	52	1.0	0.8	0.9
	12-Feb-91	130	48	<0.5	1.5	<0.5
	6-May-91	140	49	1.3	4.1	1.7
	28-Aug-91	90	13	<0.5	1.0	1.1
	13-Nov-91	<50	10	<0.5	<0.5	<0.5
	25-Feb-92	120	47	<0.5	0.5	0.5
	12-May-92	Well Sampled Semiannually				
	12-Aug-92	<50	3.5	<0.5	<0.5	<0.5
	10-Nov-92	Well Sampled Semiannually				
	11-Feb-93	190	59	3.2	3.6	3.1
	10-May-93	Well Sampled Semiannually				
	12-Aug-93	50	4.1	1.1	1.3	3.2
	11-Nov-93	Well Sampled Semiannually				
	11-Feb-93	<50	0.62	<0.5	<0.5	<0.5
	17-May-94	Well Sampled Semiannually				
	25-Aug-94	<50	<0.5	<0.5	<0.5	<0.5
	23-Nov-94	Well Sampled Semiannually				

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-4 (cont.)	15-Feb-95	<50	13	0.9[b]	<0.5	1.5
	24-May-95	---------- Well Sampled Semiannually ----------				
	25-Aug-95	<50	2.4	<0.5	<0.5	<0.5
MW-5	26-Aug-88	210	6.0	44	9.0	19
	5-Oct-88	7,500	2,700	<0.5	110	590
	22-Nov-88	150	21	26	3.0	2.0
	9-Dec-88	240	37	2.2	6.7	7.7
	13-Jan-89	80	1.6	<0.5	7.7	2.0
	10-Feb-89	60	<0.5	<0.5	<0.5	<0.5
	2-Mar-89	<50	<0.5	<0.5	<0.5	<0.5
	5-Apr-89	<50	<0.5	<0.5	<0.5	<0.5
	1-May-89	<50	1.3	<0.5	<0.5	<0.5
	1-Jun-89	<50	<0.5	<0.5	<0.5	<0.5
	29-Jun-89	<50	<0.5	<0.5	<0.5	<0.5
	9-Aug-89	89	8.5	1.8	1.5	2.2
	11-Sep-89	1,100	7.8	1.4	<0.5	6.3
	10-Oct-89	<50	<0.5	<0.5	<0.5	<0.5
	25-Oct-89	<50	1.4	<0.5	<0.5	1.6
	20-Dec-89	<50	<0.5	<0.5	<0.5	<0.5
	18-Jan-90	<50	<0.5	<0.5	<0.5	<0.5
	23-Feb-90	<50	<0.5	<0.5	0.6	<0.5
	4-Jun-90	<50	<0.5	<0.5	<0.5	<0.5
	20-Nov-90	<50	<0.5	<0.5	<0.5	1.0
	11-Feb-91	<50	<0.5	<0.5	<0.5	<0.5
	6-May-91	<50	<0.5	<0.5	<0.5	<0.5
	28-Aug-91	<50	<0.5	<0.5	<0.5	1.0
	13-Nov-91	<50	<0.5	<0.5	<0.5	<0.5
	25-Feb-92	<50	<0.5	<0.5	<0.5	<0.5
	12-May-92	<50	<0.5	<0.5	<0.5	<0.5
	12-Aug-92	56	0.5	<0.5	<0.5	<0.5
	10-Nov-92	<50	<0.5	<0.5	<0.5	<0.5
	11-Feb-93	<50	<0.5	<0.5	<0.5	<0.5
	10-May-93	<50	1.5	<0.5	1.2	5.2
	16-Sep-93	<50	<0.5	<0.5	<0.5	<0.5
	11-Nov-93	<50	12	<0.5	1.2	<0.5
	11-Feb-94	<50	<0.5	<0.5	<0.5	<0.5
	17-May-94	<50	<0.5	<0.5	<0.5	<0.5
	25-Aug-94	<50	<0.5	<0.5	<0.5	<0.5
	23-Nov-94	<50	<0.5	<0.5	<0.5	<0.5
	15-Feb-95	<50	<0.5	<0.5	<0.5	<0.5
	24-May-95	<50	<0.5	<0.5	<0.5	<0.5

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-5 (cont.)	25-Aug-95	<50	<0.5	<0.5	<0.5	<0.5
MW-6	26-Aug-88	15,000	390	390	670	1,700
	5-Oct-88	2,700	130	38	960	220
	22-Nov-88	NA	NA	NA	NA	NA
	9-Dec-88	540	62	3	26	5
	13-Jan-89	980	160	22	120	29
	10-Feb-89	1,900	290	24	93	48
	2-Mar-89	1,400	160	20	130	33
	4-Apr-89	1,200	220	27	74	69
	1-May-89	790	120	11	25	17
	1-Jun-89	1,200	49	49	69	30
	29-Jun-89	940	130	15	69	35
	9-Aug-89	1,400	280	39	170	64
	11-Sep-89	<50	<0.5	<0.5	<0.5	<0.5
	10-Oct-89	1,000	85	11	12	16
	24-Oct-89	1,500	67	20	50	39
	20-Dec-89	<50	4.9	5.1	<0.5	<0.5
	18-Jan-90	<50	67	12	48	18
	23-Feb-90	1.0	150	16	47	30
	4-Jun-90	190	<0.5	<0.5	<0.5	0.6
	20-Nov-90	730	120	12	39	21
	12-Feb-91	550	65	10	33	16
	6-May-91	550	72	11	38	23
	28-Aug-91	580	82	7.6	28	20
	13-Nov-91	430	60	7.6	20	12
	25-Feb-92	400	52	6.6	18	11
	12-May-92	950	260	36	12	49
	12-Aug-92	660	90	15	55	18
	10-Nov-92	350	23	3.7	15	6.8
	11-Feb-93	660	42	11	29	17
	10-May-93	190	<0.5	<0.5	<0.5	<0.5
	12-Aug-93	360	39	15	23	38
	12-Aug-93(D)	330	43	16	23	40
	11-Nov-93	<50	<0.5	<0.5	<0.5	<0.5
	11-Feb-94	370b	32	7 0	19	9.3
	17-May-94	<50	42	13	33	22
	25-Aug-94	190	0.6	<0.5	<0.5	<0.5
	23-Nov-94	310	5	1.2	1.9	<0.5
	15-Feb-95	360	46	11[b]	19	18
	24-May-95	280	22	<0.5	<0.5	<0.5
	24-May-95(D)	330	25	<0.5	<0.5	<0.5

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-6 (cont.)	25-Aug-95	150	16	3.2	9.1	4
MW-7	26-Aug-88	<50	0.8	<0.5	<0.5	<0.5
	5-Oct-88	<50	<0.5	<0.5	<0.5	<0.5
	22-Nov-88	700	41	9.0	1.0	20
	9-Dec-88	<50	<0.5	<0.5	<0.5	0.6
	13-Jan-89	<50	<0.5	<0.5	<0.5	<0.5
	10-Feb-89	<50	<0.5	<0.5	<0.5	<0.5
	2-Mar-89	<50	<0.5	<0.5	<0.5	<0.5
	5-Apr-89	<50	<0.5	<0.5	<0.5	<0.5
	1-May-89	<50	<0.5	<0.5	<0.5	<0.5
	31-May-89	<50	<0.5	<0.5	<0.5	<0.5
	28-Jun-89	<50	<0.5	<0.5	<0.5	<0.5
	9-Aug-89	<50	<0.5	<0.5	<0.5	<0.5
	7-Sep-89	<50	<0.5	<0.5	<0.5	<0.5
	10-Oct-89	<50	<0.5	<0.5	<0.5	<0.5
	24-Oct-89	<50	<0.5	<0.5	<0.5	<0.5
	20-Dec-89	<50	<0.5	<0.5	<0.5	<0.5
	18-Jan-90	<50	<0.5	<0.5	<0.5	<0.5
	23-Feb-90	<50	<0.5	<0.5	<0.5	<0.5
	4-Jun-90	<50	<0.5	<0.5	<0.5	<0.5
	20-Nov-90	<50	<0.5	<0.5	<0.5	<0.5
	11-Feb-91	<50	<0.5	<0.5	<0.5	<0.5
	6-May-91	<50	<0.5	<0.5	<0.5	<0.5
	28-Aug-91	<50	<0.5	<0.5	<0.5	<0.5
	13-Nov-91	<50	<0.5	<0.5	<0.5	<0.5
	25-Feb-92	<50	<0.5	<0.5	<0.5	<0.5
	12-May-92	---------- Well Sampled Semiannually ----------				
	12-Aug-92	52	0.8	0.9	<0.5	<0.5
	10-Nov-92	---------- Well Sampled Semiannually ----------				
	11-Feb-93	<50	<0.5	<0.5	<0.5	<0.5
	10-May-93	---------- Well Sampled Semiannually ----------				
	16-Sep-93	<50	<0.5	<0.5	<0.5	<0.5
	11-Nov-93	---------- Well Sampled Semiannually ----------				
	11-Feb-94	<50	<0.5	<0.5	<0.5	<0.5
	17-May-94	---------- Well Sampled Semiannually ----------				
	25-Aug-94	<50	<0.5	<0.5	<0.5	<0.5
	23-Nov-94	---------- Well Sampled Semiannually ----------				
	15-Feb-95	<50	1.9	1.5[b]	<0.5	2.0
	24-May-95	---------- Well Sampled Semiannually ----------				
	25-Aug-95	<50	<0.5	<0.5	<0.5	<0.5

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-8	1-Mar-89	<50	<0.5	<0.5	<0.5	<0.5
	4-Apr-89	<50	<0.5	<0.5	<0.5	<0.5
	1-May-89	<50	<0.5	<0.5	<0.5	<0.5
	31-May-89	<50	<0.5	<0.5	<0.5	<0.5
	28-Jun-89	<50	<0.5	<0.5	<0.5	<0.5
	8-Aug-89	<50	<0.5	<0.5	<0.5	<0.5
	7-Sep-89	<50	<0.5	<0.5	<0.5	<0.5
	10-Oct-89	<50	<0.5	<0.5	<0.5	<0.5
	26-Oct-89	<50	<0.5	<0.5	<0.5	<0.5
	21-Dec-89	<50	<0.5	<0.5	<0.5	<0.5
	18-Jan-90	<50	<0.5	<0.5	<0.5	<0.5
	26-Feb-90	<50	<0.5	<0.5	<0.5	<0.5
	4-Jun-90	<50	<0.5	<0.5	<0.5	<0.5
	20-Nov-90	<50	<0.5	<0.5	<0.5	<0.5
	11-Feb-91	<50	<0.5	<0.5	<0.5	<0.5
	6-May-91	<50	<0.5	<0.5	<0.5	<0.5
	28-Aug-91	<50	<0.5	<0.5	<0.5	<0.5
	13-Nov-91	<50	<0.5	<0.5	<0.5	<0.5
	25-Feb-92	<50	<0.5	<0.5	<0.5	<0.5
	12-May-92	---------- Well Sampled Semiannually ----------				
	12-Aug-92	<50	<0.5	<0.5	<0.5	<0.5
	10-Nov-92	---------- Well Sampled Semiannually ----------				
	10-Feb-93	<50	<0.5	<0.5	<0.5	<0.5
	10-May-93	---------- Well Sampled Semiannually ----------				
	16-Sep-93	<50	0.7	<0.5	<0.5	1.4
	11-Nov-93	---------- Well Sampled Semiannually ----------				
	11-Feb-94	<50	1.3	<0.5	0.71	2.5
	17-May-94	---------- Well Sampled Semiannually ----------				
	25-Aug-94	<50	<0.5	<0.5	<0.5	<0.5
	23-Nov-94	---------- Well Sampled Semiannually ----------				
	15-Feb-95	<50	<0.5	<0.5	<0.5	1.4
	24-May-95	---------- Well Sampled Semiannually ----------				
	25-Aug-95	<50	<0.5	<0.5	<0.5	<0.5
MW-9	1-Mar-89	<50	<0.5	<0.5	<0.5	<0.5
	4-Apr-89	<50	<0.5	<0.5	<0.5	<0.5
	1-May-89	<50	<0.5	<0.5	<0.5	<0.5
	31-May-89	<50	<0.5	<0.5	<0.5	<0.5
	28-Jun-89	<50	<0.5	<0.5	<0.5	<0.5
	8-Aug-89	<50	<0.5	<0.5	<0.5	<0.5
	7-Sep-89	<50	<0.5	<0.5	<0.5	<0.5
	9-Oct-89	<50	<0.5	<0.5	<0.5	<0.5

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-9 (cont.)	23-Oct-89	<50	<0.5	<0.5	<0.5	<0.5
	21-Dec-89	<50	<0.5	<0.5	<0.5	<0.5
	18-Jan-90	<50	<0.5	<0.5	<0.5	<0.5
	26-Feb-90	<50	<0.5	<0.5	<0.5	<0.5
	4-Jun-90	<50	<0.5	<0.5	<0.5	<0.5
	20-Nov-90	<50	<0.5	<0.5	<0.5	<0.5
	11-Feb-91	<50	<0.5	<0.5	<0.5	<0.5
	6-May-91	<50	<0.5	<0.5	<0.5	<0.5
	28-Aug-91	<50	<0.5	<0.5	<0.5	<0.5
	13-Nov-91	<50	<0.5	<0.5	<0.5	<0.5
	25-Feb-92	<50	<0.5	<0.5	<0.5	<0.5
	12-May-92	---------- Well Sampled Semiannually ----------				
	12-Aug-92	<50	<0.5	<0.5	<0.5	<0.5
	10-Nov-92	---------- Well Sampled Semiannually ----------				
	10-Feb-93	<50	<0.5	<0.5	<0.5	<0.5
	10-May-93	---------- Well Sampled Semiannually ----------				
	16-Sep-93	<50	<0.5	<0.5	<0.5	<0.5
	11-Nov-93	---------- Well Sampled Semiannually ----------				
	11-Feb-94	<50	<0.5	<0.5	<0.5	<0.5
	17-May-94	---------- Well Sampled Semiannually ----------				
	25-Aug-94	<50	<0.5	<0.5	<0.5	<0.5
	23-Nov-94	---------- Well Sampled Semiannually ----------				
	15-Feb-95	<50	<0.5	<0.5	<0.5	<0.5
	24-May-95	---------- Well Sampled Semiannually ----------				
	25-Aug-95	<50	<0.5	<0.5	<0.5	<0.5
MW-10	2-Mar-89	1,000	140	36	<0.5	77
	4-Apr-89	3,300	760	240	46	630
	1-May-89	680	99	24	8.1	32
	1-Jun-89	1,400	120	39	<0.5	45
	29-Jun-89	1,300	51	1.4	6.1	91
	9-Aug-89	860	310	26	45	82
	7-Sep-89	390	55	2.9	4.0	18
	10-Oct-89	460	85	7.6	10	45
	26-Oct-89	270	20	1.4	3.5	9.3
	20-Dec-89	<50	5.7	<0.5	<0.5	<0.5
	18-Jan-90	NA	NA	NA	NA	NA
	1-Jun-90	----------Well Destroyed----------				
MW-11	2-Mar-89	<50	<0.5	<0.5	<0.5	<0.5
	4-Apr-89	<50	<0.5	<0.5	<0.5	<0.5
	1-May-89	<50	<0.5	<0.5	<0.5	<0.5
	20-Nov-90	<50	<0.5	<0.5	<0.5	<0.5

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-11 (cont.)	31-May-89	<50	<0.5	<0.5	<0.5	<0.5
	28-Jun-89	<50	<0.5	<0.5	<0.5	<0.5
	8-Aug-89	<50	<0.5	<0.5	<0.5	<0.5
	7-Sep-89	<50	<0.5	<0.5	<0.5	<0.5
	9-Oct-89	<50	<0.5	<0.5	<0.5	<0.5
	24-Oct-89	<50	<0.5	<0.5	<0.5	<0.5
	20-Dec-89	<50	<0.5	<0.5	<0.5	<0.5
	18-Jan-90	<50	<0.5	<0.5	<0.5	<0.5
	26-Feb-90	<50	<0.5	<0.5	<0.5	<0.5
	4-Jun-90	<50	<0.5	<0.5	<0.5	<0.5
	20-Nov-90	<50	<0.5	<0.5	<0.5	<0.5
	11-Feb-91	<50	<0.5	<0.5	<0.5	<0.5
	6-May-91	<50	<0.5	<0.5	<0.5	<0.5
	28-Aug-91	<50	<0.5	<0.5	<0.5	1.0
	15-Nov-91	<50	<0.5	<0.5	<0.5	<0.5
	25-Feb-92	<50	<0.5	<0.5	<0.5	<0.5
	12-May-92	---------- Well Sampled Semiannually ----------				
	12-Aug-92	<50	<0.5	<0.5	<0.5	<0.5
	10-Nov-92	---------- Well Sampled Semiannually ----------				
	11-Feb-93	61[a]	<0.5	<0.5	<0.5	<0.5
	10-May-93	---------- Well Sampled Semiannually ----------				
	12-Aug-93	140	18	13	7.5	32
	11-Nov-93	---------- Well Sampled Semiannually ----------				
	11-Feb-94	<50	<0.5	<0.5	<0.5	<0.5
	17-May-94	---------- Well Sampled Semiannually ----------				
	25-Aug-94	<50	<0.5	<0.5	<0.5	<0.5
	23-Nov-94	---------- Well Sampled Semiannually ----------				
	15-Feb-95	<50	<0.5	0.6[b]	<0.5	<0.5
	24-May-95	---------- Well Sampled Semiannually ----------				
	25-Aug-95	<50	<0.5	<0.5	<0.5	<0.5
MW-12	2-Mar-89	<50	<0.5	<0.5	<0.5	<0.5
	4-Apr-89	<50	<0.5	<0.5	<0.5	<0.5
	1-May-89	<50	<0.5	<0.5	<0.5	<0.5
	1-Jun-89	<50	<0.5	<0.5	<0.5	<0.5
	29-Jun-89	<50	<0.5	<0.5	<0.5	<0.5
	9-Aug-89	<50	<0.5	<0.5	<0.5	<0.5
	7-Sep-89	<50	<0.5	<0.5	<0.5	<0.5
	9-Oct-89	<50	<0.5	<0.5	<0.5	<0.5
	24-Oct-89	<50	<0.5	<0.5	<0.5	<0.5
	20-Dec-89	<50	<0.5	<0.5	<0.5	<0.5
	18-Jan-90	<50	<0.5	<0.5	<0.5	<0.5

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-12 (cont.)	26-Feb-90	<50	<0.5	<0.5	<0.5	<0.5
	4-Jun-90	<50	<0.5	<0.5	<0.5	<0.5
	20-Nov-90	<50	<0.5	<0.5	<0.5	<0.5
	12-Feb-91	<50	<0.5	<0.5	<0.5	<0.5
	6-May-91	<50	<0.5	<0.5	<0.5	<0.5
	28-Aug-91	<50	<0.5	<0.5	<0.5	1.0
	13-Nov-91	<50	<0.5	<0.5	<0.5	<0.5
	25-Feb-92	<50	<0.5	<0.5	<0.5	<0.5
	12-May-92	---------- Well Removed from Sampling Program ----------				
MW-13	6-May-91	1,100	430	30	41	130
	28-Aug-91	1,000	350	6.4	44	43
	13-Nov-91	680	320	5.6	38	17
	25-Feb-92	780	260	3.5	26	15
	12-May-92	660	210	3.5	26	5.8
	12-Aug-92	400	140	9.6	21	23
	10-Nov-92	60	220	2.9	23	11
	11-Feb-93	970	340	11	29	32
	10-May-93	2,300	440	<0.5	<0.5	<0.5
	12-Aug-93	8,900	670	23	76	61
	11-Nov-93	470	230	<2.5	27	11
	11-Nov-93(D)	610	190	<2.5	21	8.0
	11-Feb-94	200b	39	<0.5	4.7	3.9
	11-Feb-94(D)	290b	55	1.3	8.8	4.8
	17-May-94	<50	88	<0.5	12	10
	17-May-94(D)	<50	96	ND	13	11
	25-Aug-94	410	110	4.2	10	15
	23-Nov-94	180	66	4.8	8.2	9.8
	23-Nov-94(D)	240	430	6.5	11	13
	15-Feb-95	320	79	5.6[b]	7.5	23
	15-Feb-95(D)	300	90	5.7[b]	7.4	24
	24-May-95	230	32	1.2	1.1	2.5
	25-Aug-95	930	320	17	48	36
RW-1	9-Dec-89	6,800	740	5	11	37
	13-Jan-89	10,000	3,200	27	60	<0.5
	10-Feb-89	6,000	2,800	<0.5	<0.5	<0.5
	2-Mar-89	3,900	2,400	<0.5	<0.5	<0.5
	5-Apr-89	1,700	1,000	<0.5	9.0	<0.5
	1-May-89	900	390	5	10	<0.5
	1-Jun-89	1,100	1.4	3.3	<0.5	13
	30-Jun-89	1,400	<0.5	<0.5	<0.5	<0.5
	9-Aug-89	7,500	1,700	210	280	300

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA
WIC 204-2277-0105

SAMPLE POINT	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
(RW-1 (cont.)	11-Sep-89	97	1.7	2.1	2.3	14
	10-Oct-89	1,400	48	4.5	<0.5	3.0
	25-Oct-89	820	51	1.2	25	3.0
	21-Dec-89	490	16	1.0	8.5	19
	17-Jan-90	<50	27	1.7	14	1.6
	23-Feb-90	420	42	1.8	13	2.7
	4-Jun-90	180	23	0.7	5.3	1.2
	20-Nov-90	1,900	170	52	29	38
	11-Feb-91	---------- Well Not Sampled ----------				

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015

PPB = Parts per billion

<x = Not detected at detection limit of x

NR = Not requested

NA = Not analyzed

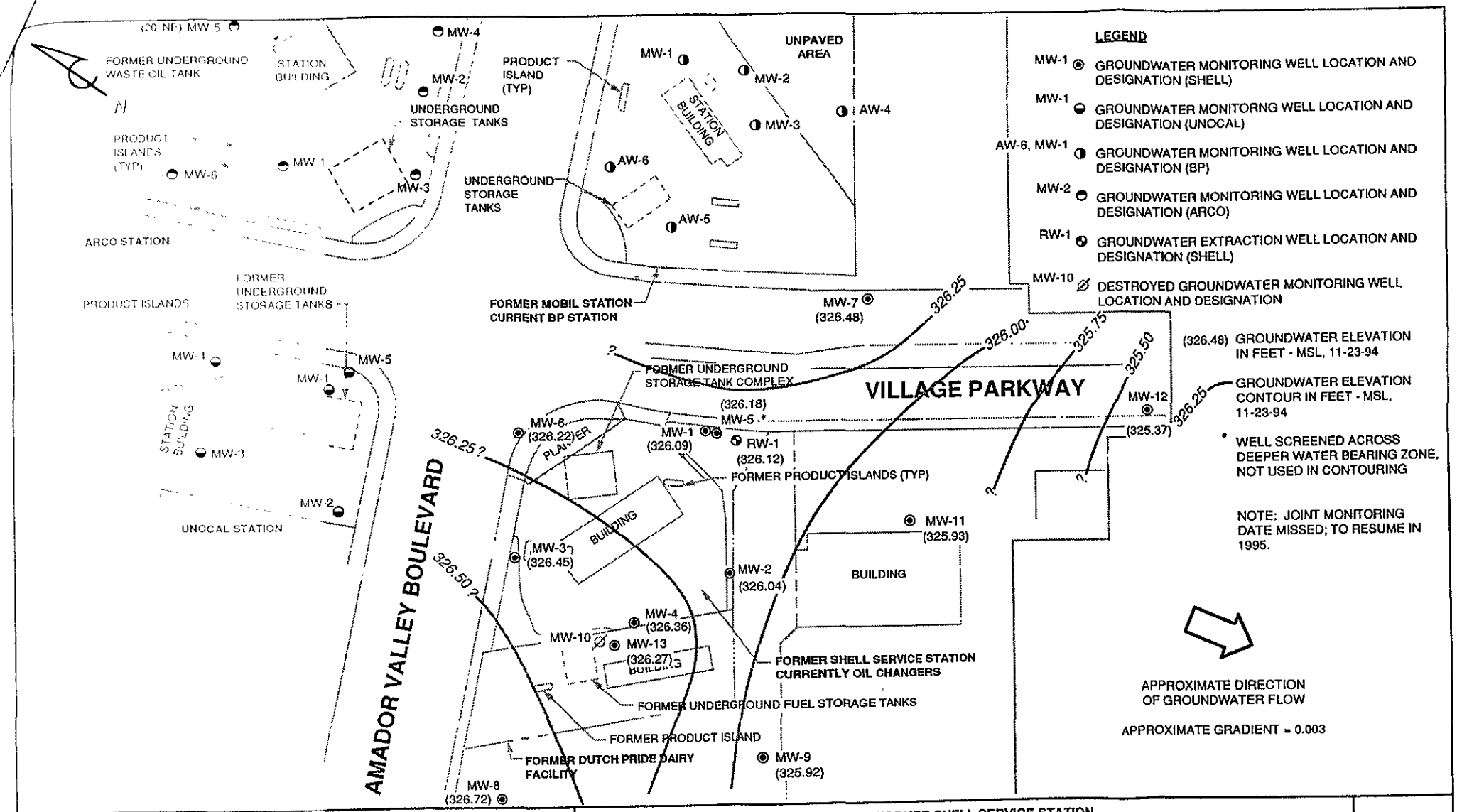
(D) = Duplicate sample

Notes:

Benzene, Toluene, Ethylbenzene, Xylenes analyzed by EPA Method 8020

a = Laboratory noted concentration is not indicative of gasoline.

b = National Environmental Testing, Inc. noted toluene in the equipment and trip blanks at 1.1 and 1.0 ppb, respectively. This may have affected results for this quarter.



PACIFIC ENVIRONMENTAL GROUP INC

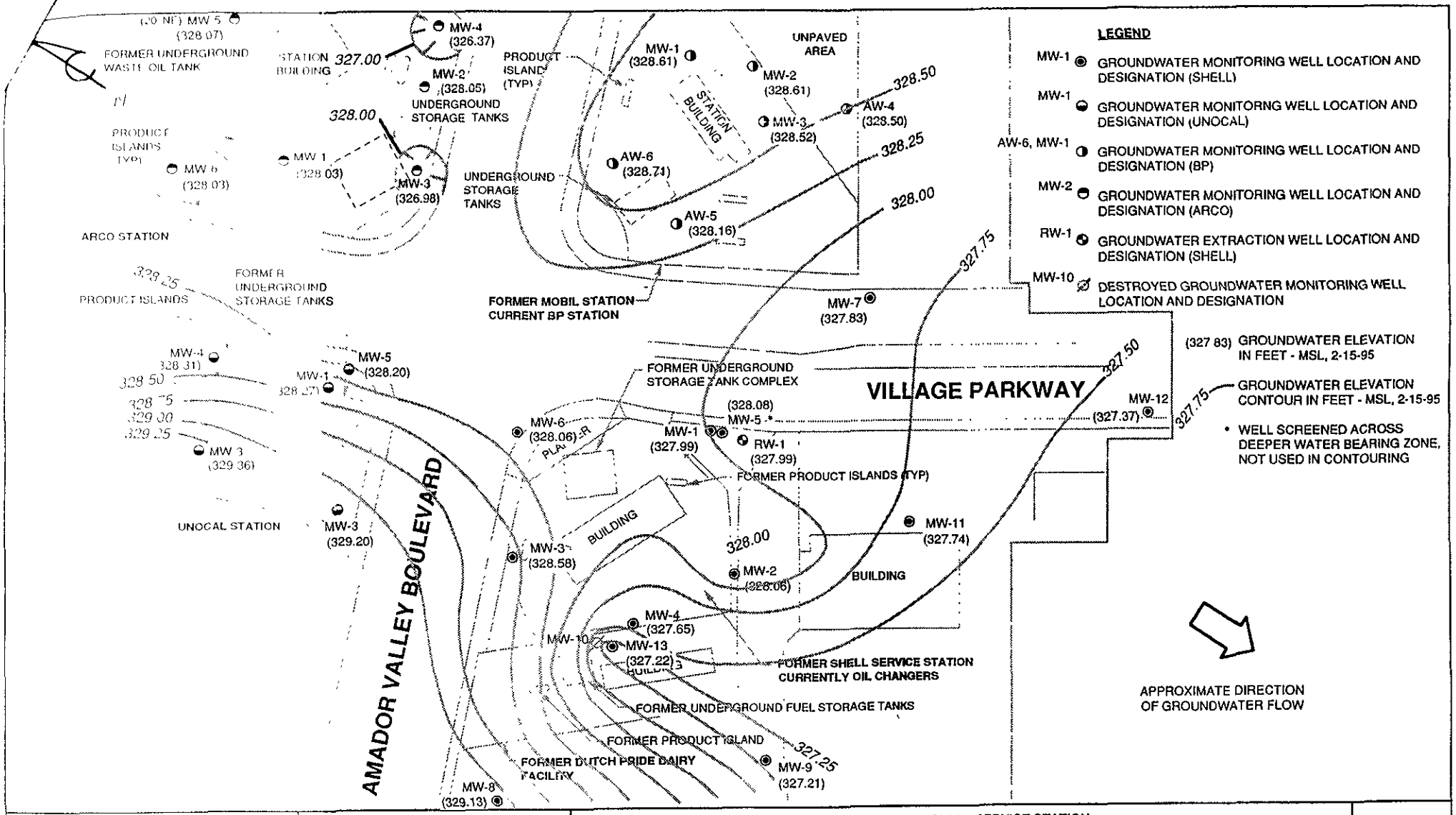
SCALE
0 60 120 FEET

FORMER SHELL SERVICE STATION
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE: 1
PROJECT: 305-087.2B

11/22/95



PACIFIC ENVIRONMENTAL GROUP, INC

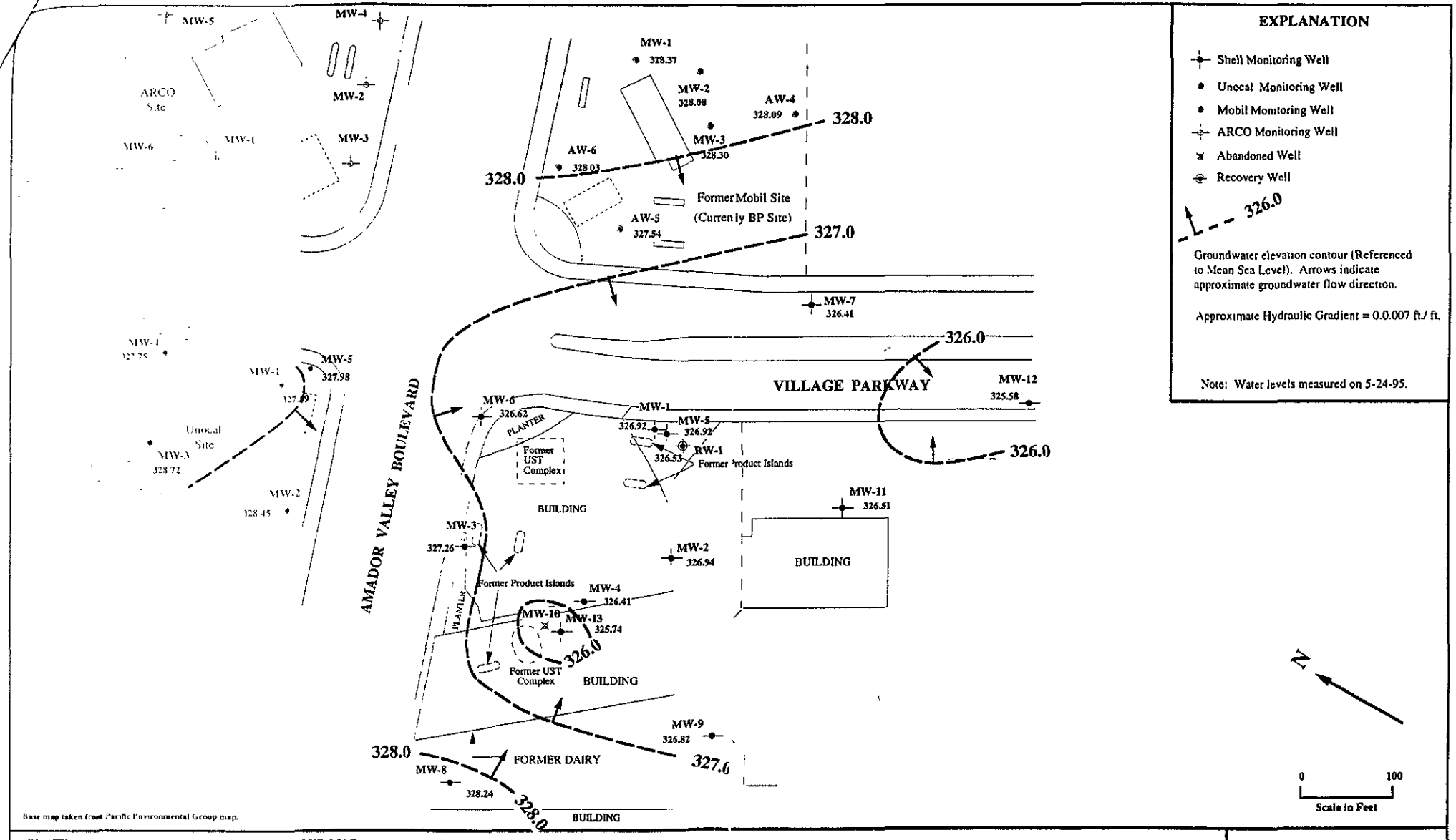
SCALE 0 60 120 FEET

FORMER SHELL SERVICE STATION
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE: 1
PROJECT: 305-087.2C

04/ 17/ 95



Base map taken from Pacific Environmental Group map.

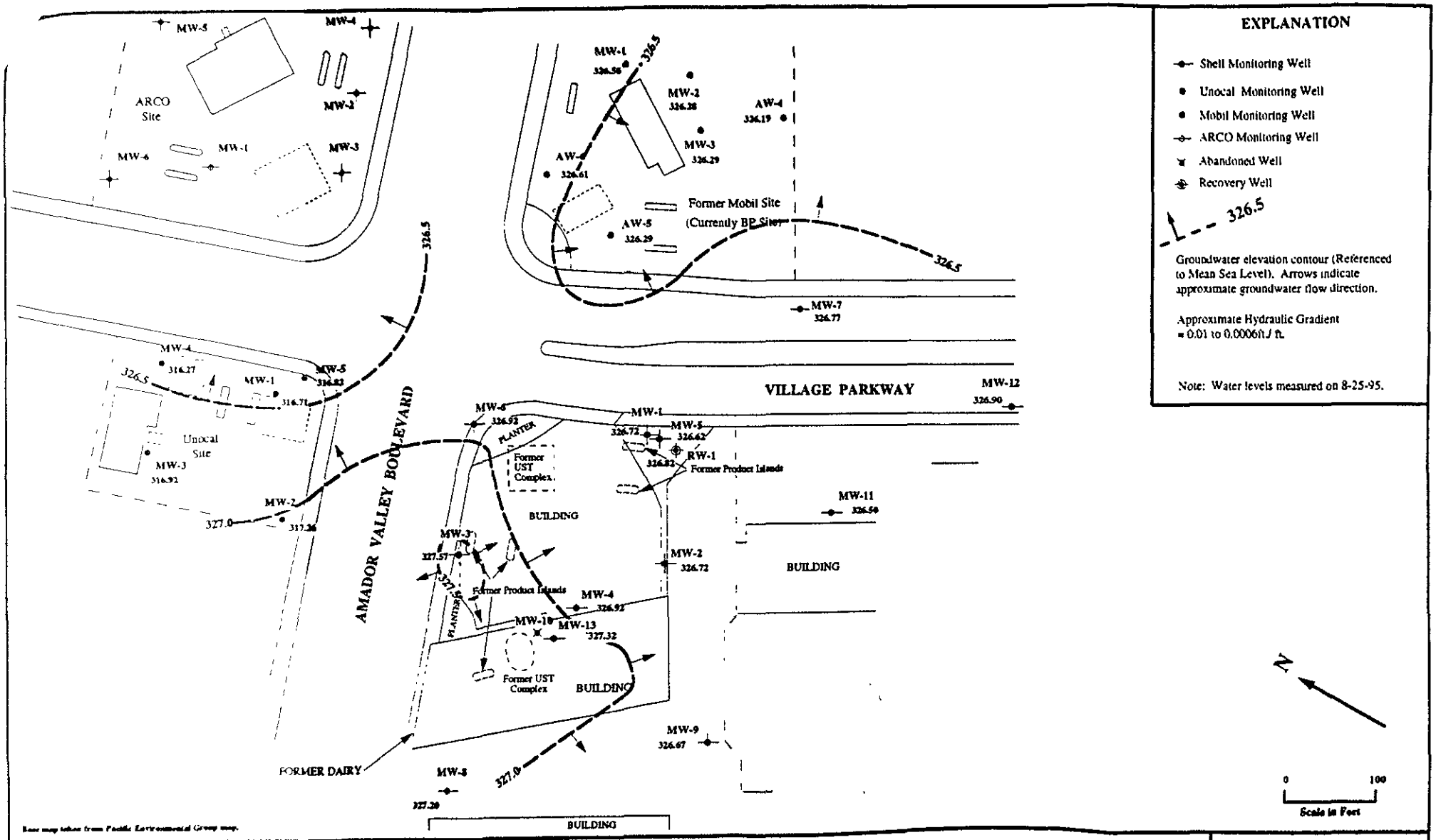
PLATE **3**

GROUNDWATER CONTOUR MAP
Former Shell Service Station
7194 Amador Valley Boulevard
Dublin, California

enviros ®
95285

Drawn By JLP Date: 7-11-95

Approved By: JLP Date: 7/11/95



Base map taken from Pacific Environmental Group map.

PLATE **3**

GROUNDWATER CONTOUR MAP
Former Shell Service Station
7194 Amador Valley Boulevard
Dublin, California

enviros
95285

Drawn By: GLV Date: 10-17-95

Approved By: Date: 2-Nov-95

APPENDIX C

Exploratory Soil Borings

Well Completion Details

ensco environmental services, inc.

EXPLORATORY BORING LOG

PROJECT NAME: Shell Oil Company
Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-1
DATE DRILLED: 28-Apr-88
LOGGED BY: J. Rike

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1–4			CH	SILTY CLAY - very dark grey (2.5 YR N3), 5 to 10% medium gravel, medium stiff, plastic, moist, organic odor and slight product odor.		
5	SDC-1001	14				12
6–8						
				Static Water Level Measured 9-May-88 At 8.72 Feet.	▼	
9–10	SDC-1002	11				20
11–14				- grades to dark grayish brown (10YR, 4/2), mottled with oxidation staining, no product odor.		
15	SDC-1003	8				14
16–18			CL	SILTY CLAY - dark grey (7.5 YR N5), stiff, low plasticity, wet, no product odor.		
19–20	SDC-1004	19				8
				Continued Next Page		

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EXPLORATORY BORING LOG

PROJECT NAME: Shell Oil Company Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-1
DATE DRILLED: 28-Apr-88
LOGGED BY: J. Rike

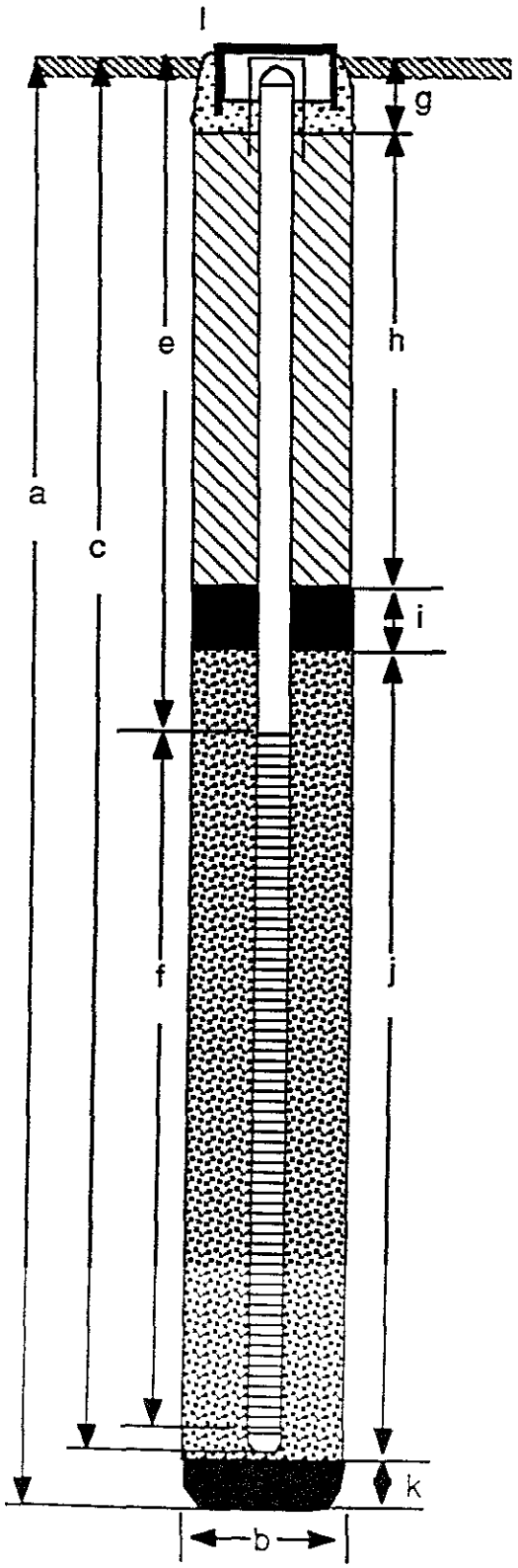
DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm	
21			CL	SILTY CLAY - dark grey (7.5 YR N5), stiff, low plasticity, wet, no product odor.			
22							
23							
24				- grades to dark greenish grey (5GY 5/1),			
25	SDC-1005	25				1	
26				Bottom Of Boring 25.5 Feet			

SUPERVISED AND APPROVED BY: L. D. Powers C.E.G. No. 1187

Monitoring Well Detail

PROJECT NUMBER 1826G
PROJECT NAME Shell Oil Company-Dublin
COUNTY Alameda
WELL PERMIT NO. 88082

BORING / WELL NO. MW-1
TOP OF CASING ELEV. 334.84
GROUND SURFACE ELEV. ---
DATUM Mean Sea Level



EXPLORATORY BORING

a. Total Depth 25.5 ft.
b. Diameter 10 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing length 25.28 ft.
Material Schedule 40 PVC
d. Diameter 4 in.
e. Depth to top perforations 5 ft.
f. Perforated length 20 ft.
Perforated interval from 5 to 25 ft.
Perforation type machine slot
Perforation size 0.02 in.
g. Surface seal .5 ft.
Seal Material Concrete
h. Backfill 3 ft.
Backfill material Neat Cement Grout
i. Seal 1 ft.
Seal Material 1/2 In. Bentonite Pellets
j. Gravel pack 21 ft.
Pack material 2/20 Monterey Type Sand
k. Bottom seal --- ft.
Seal material n/a
l. Steel Protective Casing With Locking Cover

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EXPLORATORY BORING LOG

PROJECT NAME: Shell Oil Company
Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-2
DATE DRILLED: 28-Apr-88
LOGGED BY: J. Rike

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1–4			CH	SILTY CLAY - very dark grey (2.5 YR N3), trace very fine sand, trace gravel (<5%), medium stiff, plastic, damp, organic odor and slight product odor, minor small wood fragments and oxidation staining.		
5	SDC-1006	9				5
10	SDC-1007	17		- stiff and strong product odor at 10 feet, moist Static Water Level Measured 9-May-88 At 10.85 Feet.	▼	60
15	SDC-1008	14		- grades to dark greyish brown (10YR 4/2), mottling with grey, stiff, moist, plastic, no product odor.		7
17–20	SDC-1009	24	CL	SILTY CLAY - dark gray (5YR, 4/1), very stiff to stiff, plastic, moist, no product odor		0
				Continued Next Page		

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EXPLORATORY BORING LOG

PROJECT NAME: Shell Oil Company
Dublin, CA

PROJECT NUMBER: 1826G

BORING NO. MW-2
DATE DRILLED: 28-Apr-88
LOGGED BY: J. Rike

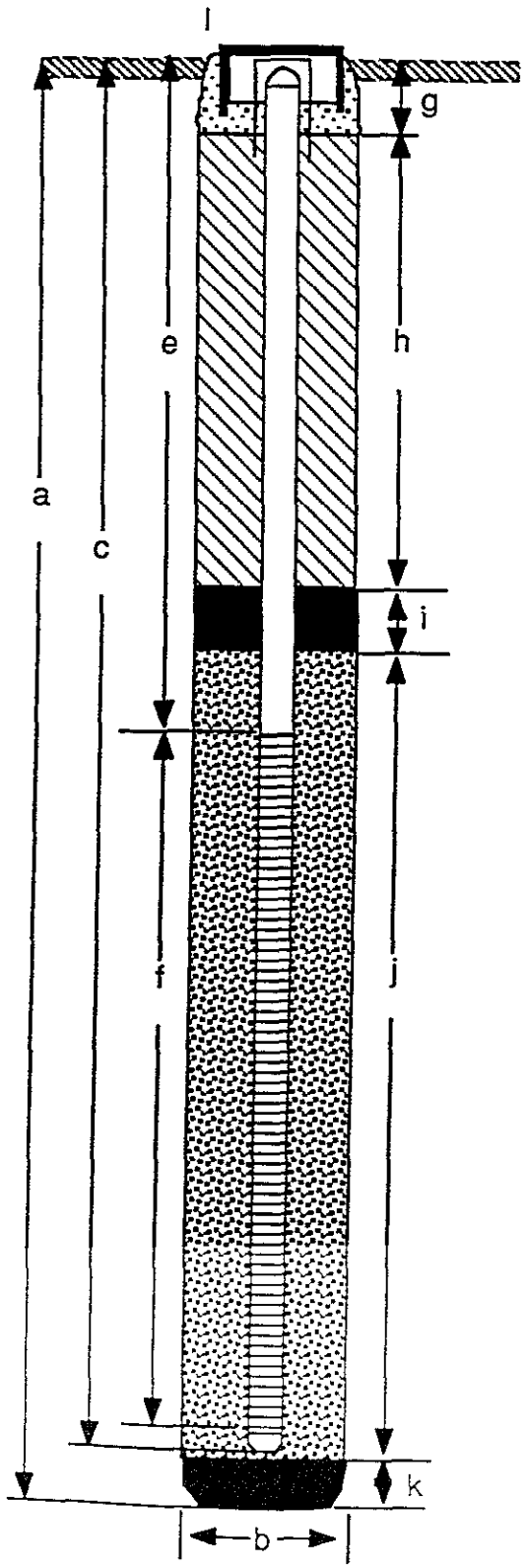
DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm	
21			CL	SILTY CLAY - dark grey (5 YR 4/1), stiff to very stiff, less plastic, moist, no product odor.			
22							
23							
24				- grades to dark greenish grey (5GY 5/1),			
25	SDC-1010	24				1	
26				Bottom Of Boring 25.5 Feet			

SUPERVISED AND APPROVED BY: L. D. Powell C.E.G. No. 1157

Monitoring Well Detail

PROJECT NUMBER 1826G
PROJECT NAME Shell Oil Company-Dublin
COUNTY Alameda
WELL PERMIT NO. 88082

BORING / WELL NO. MW-2
TOP OF CASING ELEV. 336.96
GROUND SURFACE ELEV. ---
DATUM Mean Sea Level



EXPLORATORY BORING

a. Total Depth 25.5 ft.
b. Diameter 10 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing length 24.66 ft.
Material Schedule 40 PVC
d. Diameter 4 in.
e. Depth to top perforations 6 ft.
f. Perforated length 18 ft.
Perforated interval from 6 to 24 ft.
Perforation type machine slot
Perforation size 0.02 in.
g. Surface seal .5 ft.
Seal Material Concrete
h. Backfill 3 ft.
Backfill material Neat Cement Grout
i. Seal 1 ft.
Seal Material 1/2 In. Bentonite Pellets
j. Gravel pack 20 ft.
Pack material 2/20 Monterey Type Sand
k. Bottom seal --- ft.
Seal material n/a
l. Steel Protective Casing With Locking Cover

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EXPLORATORY BORING LOG

PROJECT NAME: Shell Oil Company
Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-3
DATE DRILLED: 29-Apr-88
LOGGED BY: B. Von Thaden

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1–4			OL	SILTY CLAY - very dark grey (2.5 YR N3), trace fine sand, trace gravel (<5%), stiff, low to moderate plasticity, damp, organic odor, no product odor.		
5	SDC-1011	19				1
6–8				- increasing moisture at 8 feet		
9				- at 10 feet, strong product odor		
10	SDC-1012	14		Static Water Level Measured 9-May-88 At 10.59 Feet.	▼	64
11–13				- grades to dark grayish brown (2.5YR, 4/2), mottled with oxidation staining, medium plasticity, firm, wet, no product odor.		
14–15	SDC-1013	8				3
16–17						
18			CL	SILTY CLAY - dark greenish grey (7.5 YR N5) mottled with dark grayish brown (2.5YR 4/2), low to medium plasticity, stiff, wet, no product odor.		
19–20	SDC-1014	9				7
				Continued Next Page		

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EXPLORATORY BORING LOG

PROJECT NAME: Shell Oil Company Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-3
DATE DRILLED: 29-Apr-88
LOGGED BY: B. Von Thaden

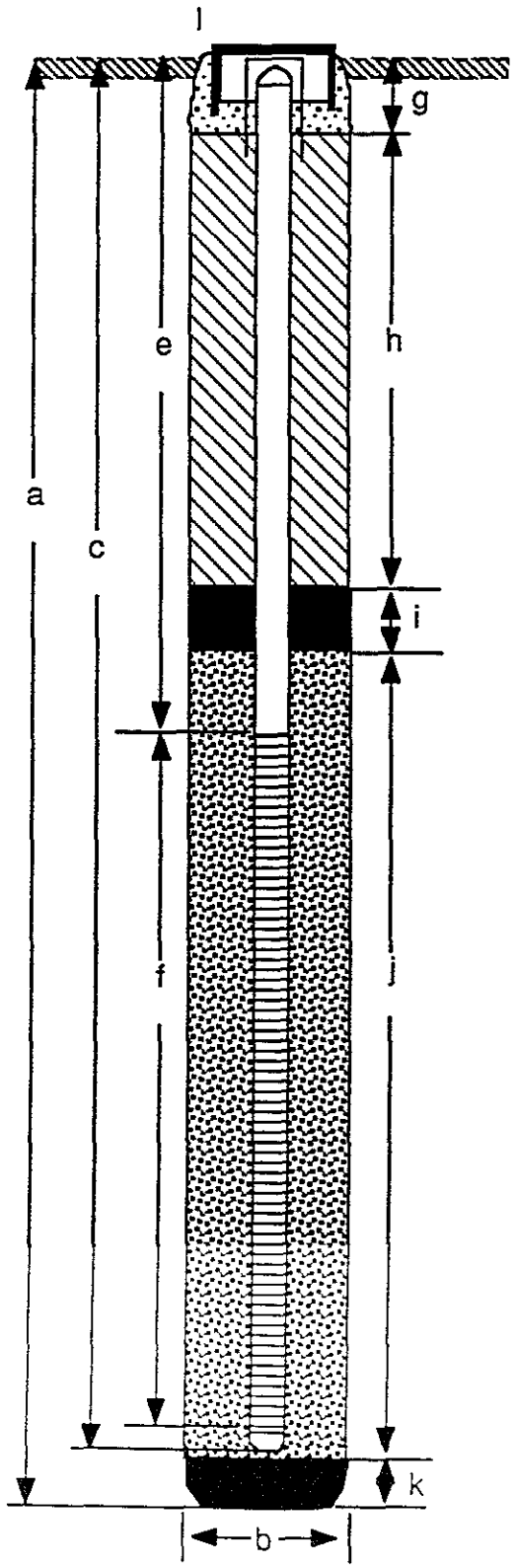
DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm	
21			CL	SILTY CLAY - dark greenish grey (7.5 YR N5) mottled with dark grayish brown (2.5YR 4/2), low to medium plasticity, stiff, wet, no product odor.			
22							
23							
24							
25	SDC-1015	21				0	
26				Bottom Of Boring 25.5 Feet			

SUPERVISED AND APPROVED BY: R. D. Powell C.E.G. No. 1187

Monitoring Well Detail

PROJECT NUMBER 1826G
PROJECT NAME Shell Oil Company-Dublin
COUNTY Alameda
WELL PERMIT NO. 88082

BORING / WELL NO. MW-3
TOP OF CASING ELEV. 336.97
GROUND SURFACE ELEV. ---
DATUM Mean Sea Level



EXPLORATORY BORING

a. Total Depth 25.5 ft.
b. Diameter 10 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing length 24.44 ft.
Material Schedule 40 PVC
d. Diameter 4 in.
e. Depth to top perforations 6 ft.
f. Perforated length 18 ft.
Perforated interval from 6 to 24 ft.
Perforation type machine slot
Perforation size 0.02 in.
g. Surface seal .5 ft.
Seal Material Concrete
h. Backfill 3 ft.
Backfill material Neat Cement Grout
i. Seal 1 ft.
Seal Material 1/2 In. Bentonite Pellets
j. Gravel pack 20 ft.
Pack material 2/20 Monterey Type Sand
k. Bottom seal --- ft.
Seal material n/a
l. Steel Protective Casing With Locking Cover

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EXPLORATORY BORING LOG

PROJECT NAME: Shell Oil Company
Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-4
DATE DRILLED: 29-Apr-88
LOGGED BY: B. Von Thaden

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1–7	SDC-1016	15	CL	SILTY CLAY - grey brown, ~ 40% silt, trace fine sand, stiff, low plasticity, damp, slight product odor.		22
8–11	SDC-1017	15	OL	SILTY CLAY - very dark gray, low to medium plasticity, stiff, minor roots, damp to moist, strong product odor.		62
				Static Water Level Measured 9-May-88 At 10.88 Feet.	▼	
12–17	SDC-1018	11		- grades to dark grayish brown (2.5YR, 4/2), slight mottling, medium plasticity, stiff, moist to wet, no product odor.		3
18–20	SDC-1019	5	CL	SILTY CLAY - dark greenish grey (7.5 YR N5) mottled with dark grayish brown (2.5YR 4/2), low to medium plasticity, medium stiff, wet, no product		0
				Continued Next Page		

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EXPLORATORY BORING LOG

PROJECT NAME: Shell Oil Company Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-4
DATE DRILLED: 29-Apr-88
LOGGED BY: B. Von Thaden

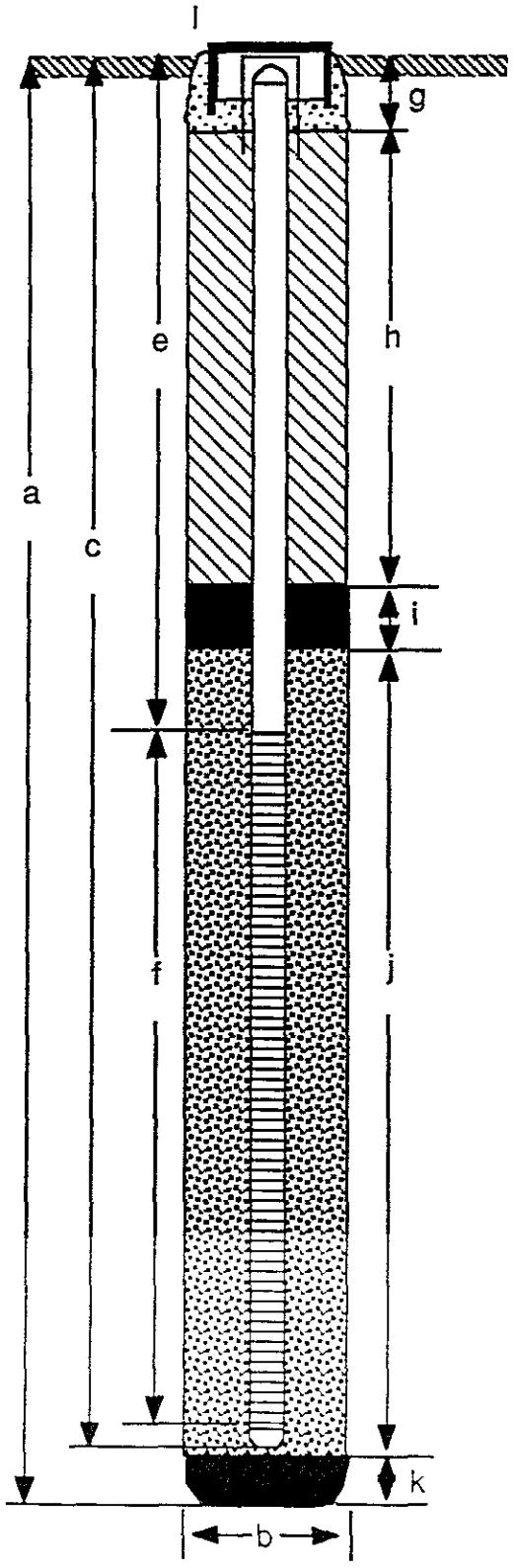
DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm	
21			CL	SILTY CLAY - dark greenish grey (7.5 YR N5) mottled with dark grayish brown (2.5YR 4/2), low to medium plasticity, medium stiff, wet, no product odor.			
22							
23							
24							
25	SDC-1020	18				0	
26				Bottom Of Boring 25.5 Feet			

SUPERVISED AND APPROVED BY: L. D. Powell C.E.G. No. 1187

Monitoring Well Detail

PROJECT NUMBER 1826G
PROJECT NAME Shell Oil Company-Dublin
COUNTY Alameda
WELL PERMIT NO. 88082

BORING / WELL NO. MW-4
TOP OF CASING ELEV. 337.15
GROUND SURFACE ELEV. ---
DATUM Mean Sea Level



EXPLORATORY BORING

a. Total Depth 25.5 ft.
b. Diameter 10 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing length 24.90 ft.
Material Schedule 40 PVC
d. Diameter 4 in.
e. Depth to top perforations 6 ft.
f. Perforated length 18 ft.
Perforated interval from 6 to 24 ft.
Perforation type machine slot
Perforation size 0.02 in.
g. Surface seal .5 ft.
Seal Material Concrete
h. Backfill 3 ft.
Backfill material Neat Cement Grout
i. Seal 1 ft.
Seal Material 1/2 In. Bentonite Pellets
j. Gravel pack 20 ft.
Pack material 2/20 Monterey Type Sand
k. Bottom seal --- ft.
Seal material n/a
l. Steel Protective Casing With Locking Cover

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EXPLORATORY BORING LOG

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PROJECT NAME: Shell Oil, Dublin
7194 Amador Valley Blvd.

BORING NO. RW-1

DATE DRILLED: 7/27/89

PROJECT NUMBER: 1826G

LOGGED BY: S.C.

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVM READING ppm
1–5				FILL: Sandy Gravel, 75% fine to coarse gravel, 25% medium to coarse sand, damp to dry		
6	R1-1	13	CH	SILTY CLAY, black (5YR 2.5/1), trace fine sand, trace fine gravel, high plasticity, stiff, damp		5
11	R1-2	10		CLAY, black (10YR 2/1), trace of sand, minor roots, high plasticity, stiff, moist		20 310
16	R1-3	8	CH	Color change to dark grayish brown (2.5Y 4/2) mottled with very dark gray (10YR 3/1), becomes silty, trace fine to coarse sand, rare fine gravel, few to common decayed roots, common rootholes (wet), medium stiff, wet, water noted in holes	▽	0.5
21	R1-3	10		Color change to black (5Y 2.5/1), no gravel, no roots, few rootholes (wet), stiff, wet		0.5

REVIEWED BY R.G./C.E.G.

EXPLORATORY BORING LOG

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PROJECT NAME: Shell Oil, Dublin
7194 Amador Valley Blvd.

BORING NO. RW-1

DATE DRILLED: 7/27/89

PROJECT NUMBER: 1826G

LOGGED BY: S.C.

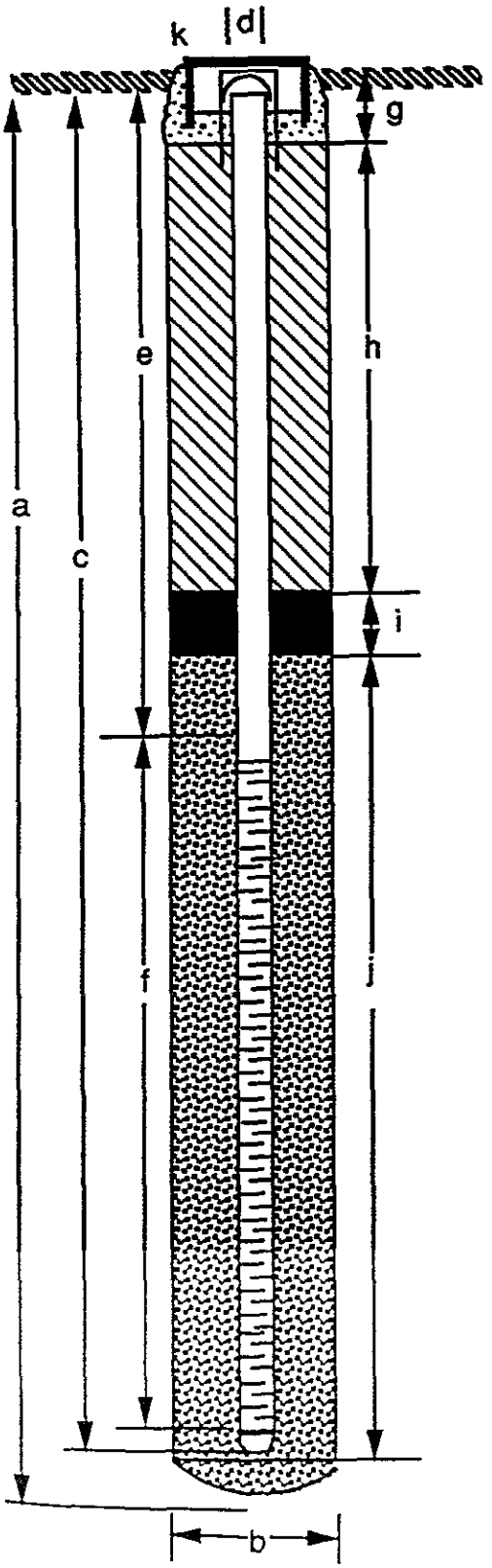
DEPTH (ft.)	SAMPLE No	BLOWS/FOOT	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVM READING ppm
22			CH	SILTY CLAY, as above		
23						
24						
25			CL	SANDY CLAY, dark gray (5Y 4/1), 15% fine to coarse sand, rare root fibers, rare root holes, trace black organic staining, low to moderate plasticity, stiff, damp		
26	R1-5	16				0.5
27						
28						
29			CH	SANDY CLAY, dark gray (5Y 4/1) with very slight orange-brown staining, 15% fine sand, becomes 40% fine to coarse sand at shoe, some rootholes, very stiff, wet		
30						
31	R1-6	19				0.5
32				Bottom of Boring = 31.5 feet		
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						

REVIEWED BY R.G./C.E.G

Recovery Well Detail

PROJECT NUMBER 1826G Shell Oil
PROJECT NAME 7194 Amador Valley Blvd.
COUNTY Alameda
WELL PERMIT NO.

BORING / WELL NO. RW-1
TOP OF CASING ELEV.
GROUND SURFACE ELEV.
DATUM Mean Sea Level



EXPLORATORY BORING

a. Total Depth 31.5 ft.
b. Diameter 10 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing length 30 ft.
Material Schedule 40 PVC
d. Diameter 6 in.
e. Depth to top perforations 10 ft.
f. Perforated length 20 ft.
Perforated interval from 30 to 10 ft.
Perforation type Machine Slot
Perforation size 0.020 in.
g. Surface seal -- ft.
Seal Material n/a
h. Backfill 8 ft.
Backfill material Grout
i. Seal 1 ft.
Seal Material Bentonite
j. Gravel pack 21 ft.
Pack material 2/12 Monterey Type Sand
k.

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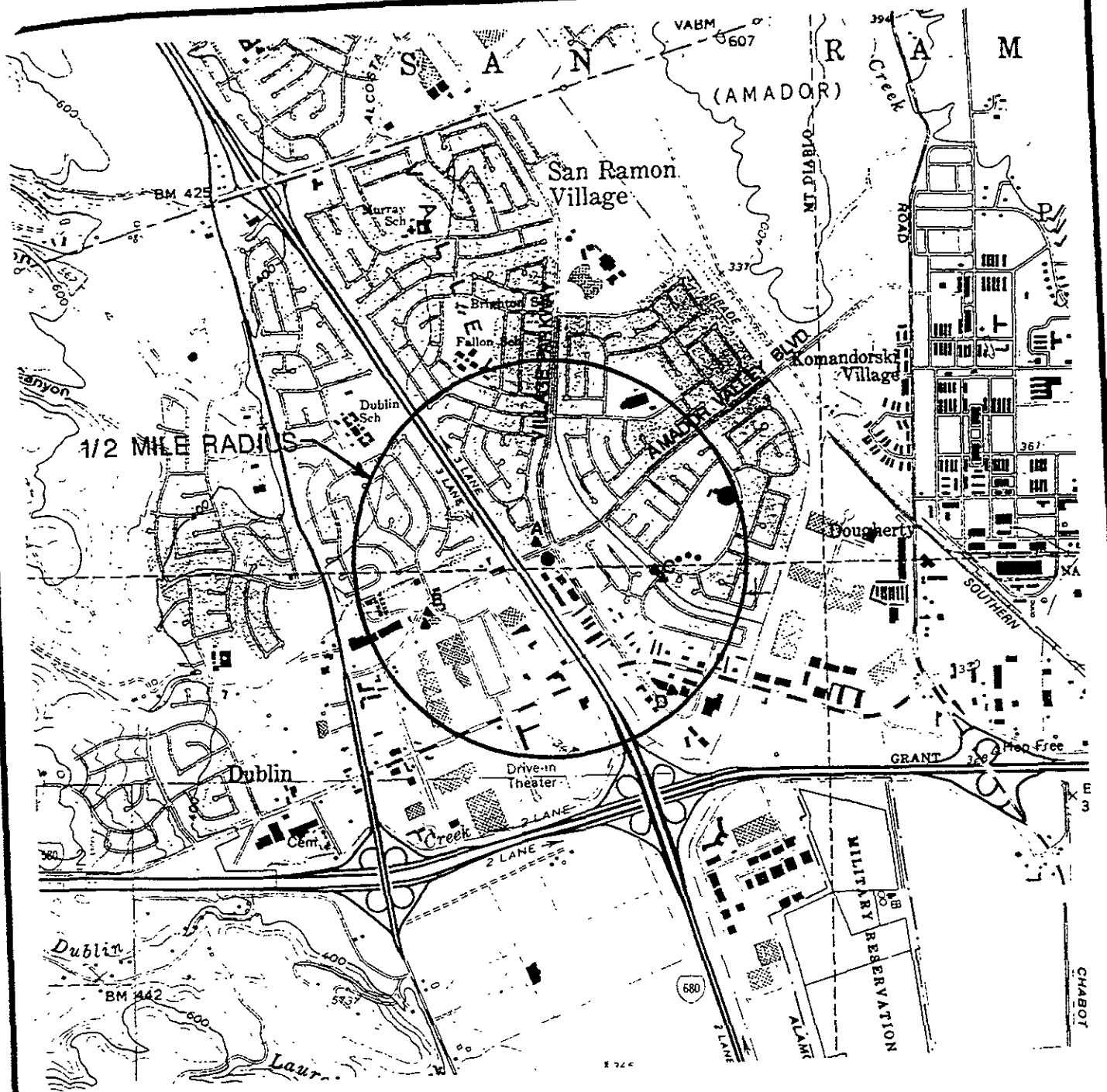
APPENDIX D

1/2-Mile Radius Well Survey



NOTE: SEE ATTACHED PAGE FOR WELL DESCRIPTIONS

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FIGURE 1 - SITE LOCATION & WELL SURVEY MAP

FORMER SHELL STATION
7194 AMADOR VALLEY
DUBLIN, CALIFORNIA

REVIEWED BY	APPROVED BY
LKR	LKR
JOB # 1826G	DRAWN BY J.C.
DATE 5-25-88	DRAWING # FIG. 1

TABLE 2
SUMMARY OF WELL SURVEY WITHIN
1/2 MILE RADIUS OF FORMER SHELL SITE

SHELL OIL COMPANY
7194 AMADOR VALLEY BLVD.
DUBLIN, CALIFORNIA

FIGURE 1 DESIGNATION	WELL DESCRIPTION			
	OWNER OF WELLS AND LOCATION	NUMBER OF WELLS	TYPE OF WELLS	APPROXIMATE DEPTH OF WELLS
A	UNOCAL STATION #5366 7375 Amador Valley Blvd. Dublin, CA	4	Ground Water Monitoring Well	20 Feet
B	City Of Dublin Dublin Library	2	Test Water Wells	24 & 50 Feet
C	ACFC&WCD Flood Control Channel Mable Av. Dublin, CA	2	Test Water Wells	25 & 108 Feet
D	LUCKY STORES 600 Clark Av. Dublin, CA	1	Ground Water Monitoring Well	20 Feet

ACFC&WCD = Alameda County Flood Control & Water Conservation District

Note: The Location Of The Wells And Their Designation Are Shown On Figure 1.

TABLE 1

GROUNDWATER ELEVATION DATA

Pre-Pump Test
June 28 through 30, 1989

Well No.	Date	Groundwater Elevation (ft. datum MSL)	Distance From RW-1 (ft.)
MW-1	6/29/89	326.23	25
MW-2	6/29/89	326.06	85
MW-3	6/29/89	326.36	160
MW-4	6/29/89	326.14	140
MW-6	6/29/89	326.12	135
MW-7	6/29/89	326.38	125
MW-8	6/29/89	326.40	275
MW-9	6/29/89	325.57	210
MW-10	6/29/89	326.32	175
MW-11	6/29/89	325.90	130
MW-12	6/29/89	325.53	275
RW-1	6/30/89	326.29	0

TABLE 2

GROUNDWATER ELEVATION DATA

Maximum Drawdown
14:03 August 4, 1989

Well Number	Groundwater Elevation (ft. datum MSL)
MW-1	324.13
MW-2	324.91
MW-3	325.88
MW-4	325.45
MW-6	325.62
MW-7	326.98
MW-8	326.14
MW-9	325.12
MW-10	325.88
MW-11	325.15
MW-12	325.38
RW-1	321.74

APPENDIX E

Aquifer Test Data

TABLE 1

GROUNDWATER ELEVATION DATA

Pre-Pump Test
June 28 through 30, 1989

Well No.	Date	Groundwater Elevation (ft. datum MSL)	Distance From RW-1 (ft.)
MW-1	6/29/89	326.23	25
MW-2	6/29/89	326.06	85
MW-3	6/29/89	326.36	160
MW-4	6/29/89	326.14	140
MW-6	6/29/89	326.12	135
MW-7	6/29/89	326.38	125
MW-8	6/29/89	326.40	275
MW-9	6/29/89	325.57	210
MW-10	6/29/89	326.32	175
MW-11	6/29/89	325.90	130
MW-12	6/29/89	325.53	275
RW-1	6/30/89	326.29	0

TABLE 2

GROUNDWATER ELEVATION DATA

Maximum Drawdown
14:03 August 4, 1989

Well Number	Groundwater Elevation (ft. datum MSL)
MW-1	324.13
MW-2	324.91
MW-3	325.88
MW-4	325.45
MW-6	325.62
MW-7	326.98
MW-8	326.14
MW-9	325.12
MW-10	325.88
MW-11	325.15
MW-12	325.38
RW-1	321.74

TABLE 3

MAXIMUM DRAWDOWN DATA

Ends of Pump Test
14:03 August 4, 1989

Well Number	Groundwater Elevation (ft. datum MSL)
MW-1	-1.84
MW-2	-0.89
MW-3	-0.22
MW-4	-0.43
MW-6	-0.24
MW-7	0.00
MW-8	0.00
MW-9	-0.19
MW-10	-0.18
MW-11	-0.49
MW-12	0.00
RW-1	-4.29

TABLE 4

AQUIFER CHARACTERISTICS

Constant Discharge Pump Test Analysis
August 1 through 4, 1989

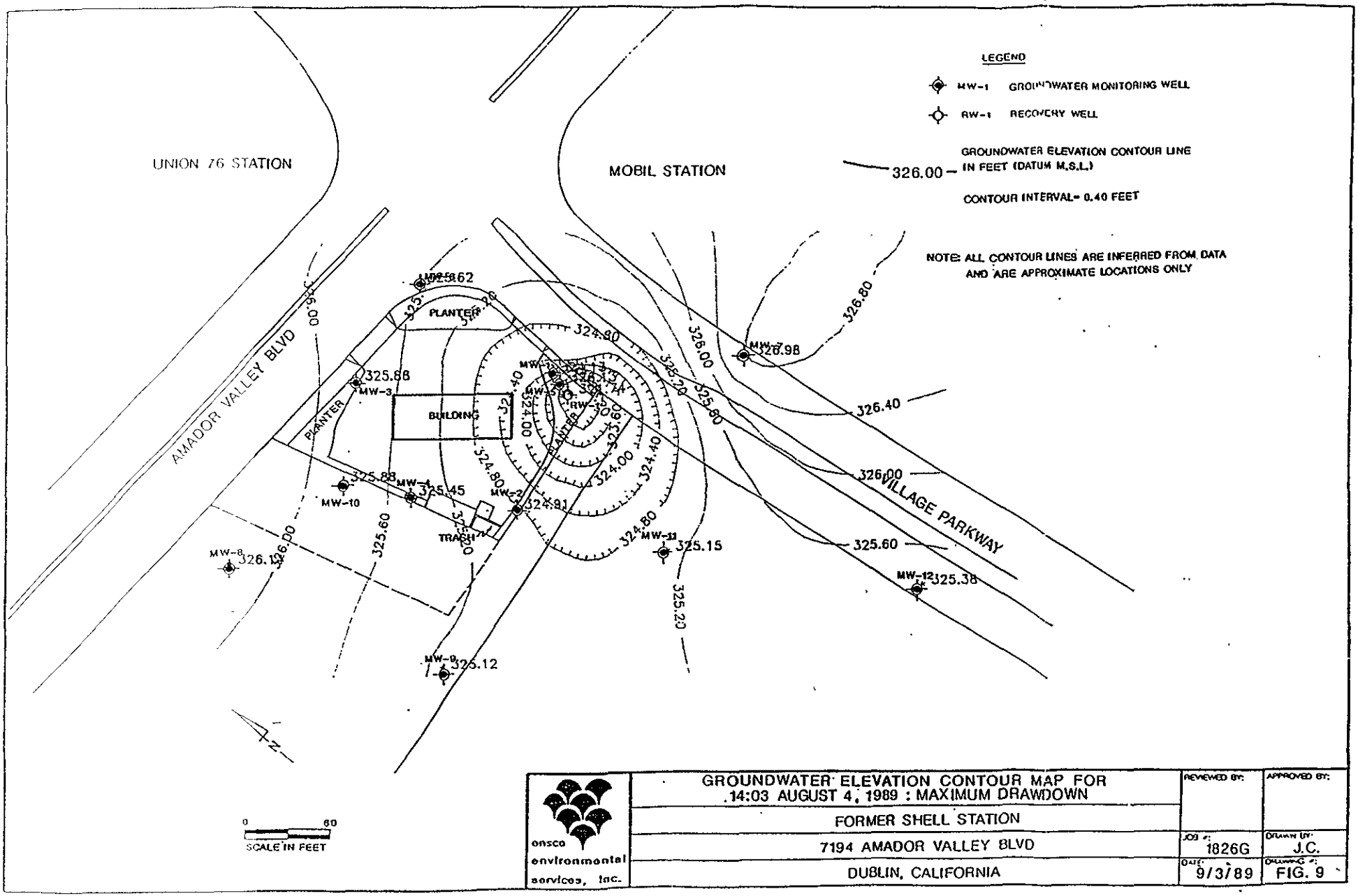
Well Number	Transmissivity (gpd/ft.)	Saturated Aquifer Thickness (ft.)	Hydraulic Conductivity (gpd/ft2)	Storativity Coeffecient
MW-1	844	17.3	48.9	0.185
MW-2	1160	14.8	78.7	0.00172
MW-3	2020	15.1	134	0.00202
MW-4	1610	14.7	110	0.00262
MW-6	2550	13.8	185	0.00221
MW-8	2670	6.92	386	0.00426
MW-9	1890	9.36	202	0.00292
MW-10	1930	8.90	217	0.00370
MW-11	1430	8.42	170	0.00309
MW-12	5450	10.3	527	0.00804
RW-1	433	20.6	21.0	0.226

TABLE 5

GROUNDWATER ELEVATION DATA

Maximum Drawdown
14:03 August 4, 1989

Well Number	Groundwater Elevation (ft. datum MSL)
MW-1	326.21
MW-2	325.98
MW-3	326.33
MW-4	326.02
MW-6	325.69
MW-7	326.98
MW-8	326.14
MW-9	325.13
MW-10	325.47
MW-11	325.22
MW--12	325.38
RW-1	325.31



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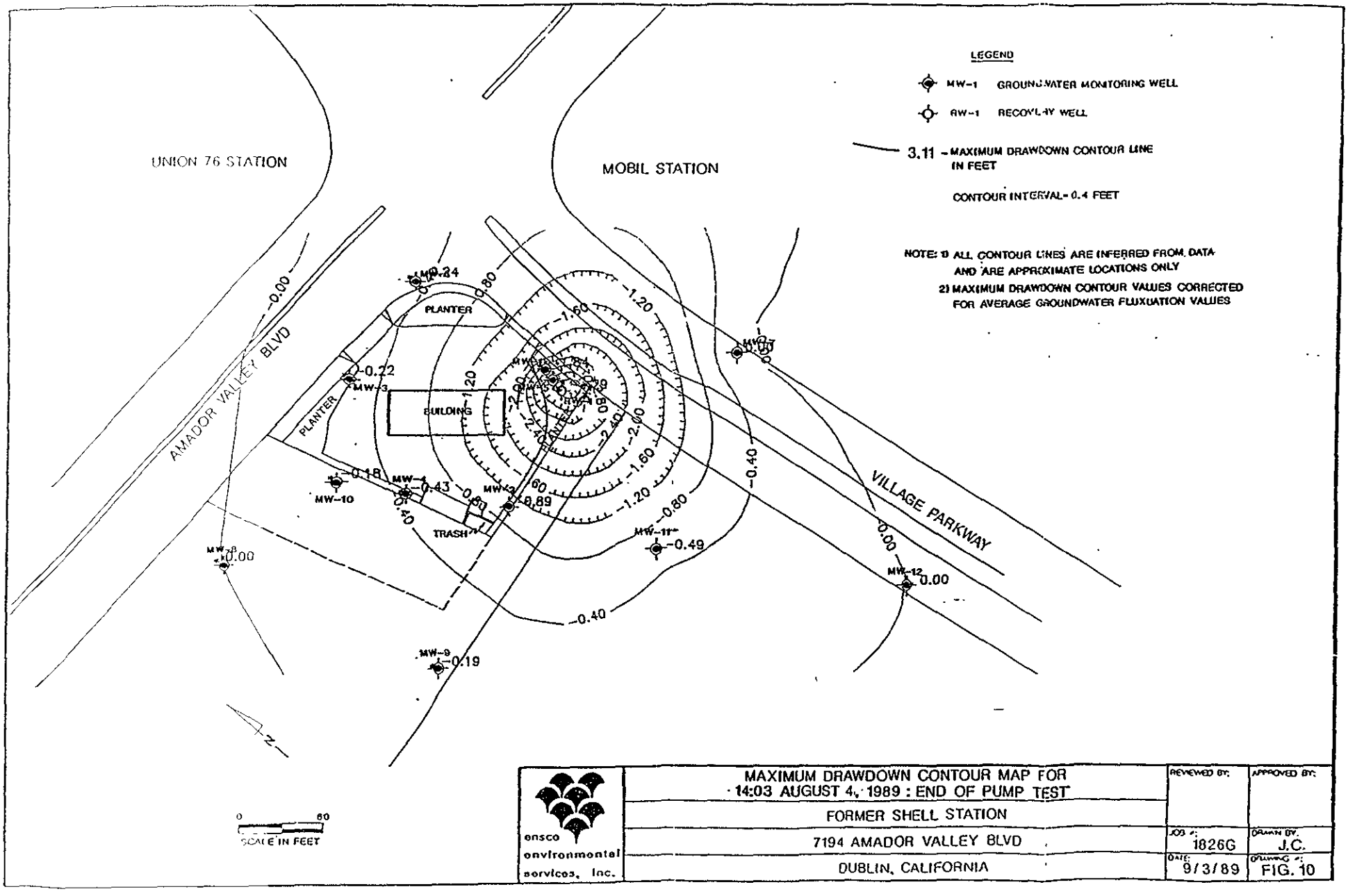
GROUNDWATER ELEVATION CONTOUR MAP FOR 14:03 AUGUST 4, 1989 : MAXIMUM DRAWDOWN		REVIEWED BY:	APPROVED BY:
FORMER SHELL STATION			
7194 AMADOR VALLEY BLVD	JOB #: 1826G		DRAWN BY: J.C.
DUBLIN, CALIFORNIA	DATE: 9/3/89		DRAWING #: FIG. 9



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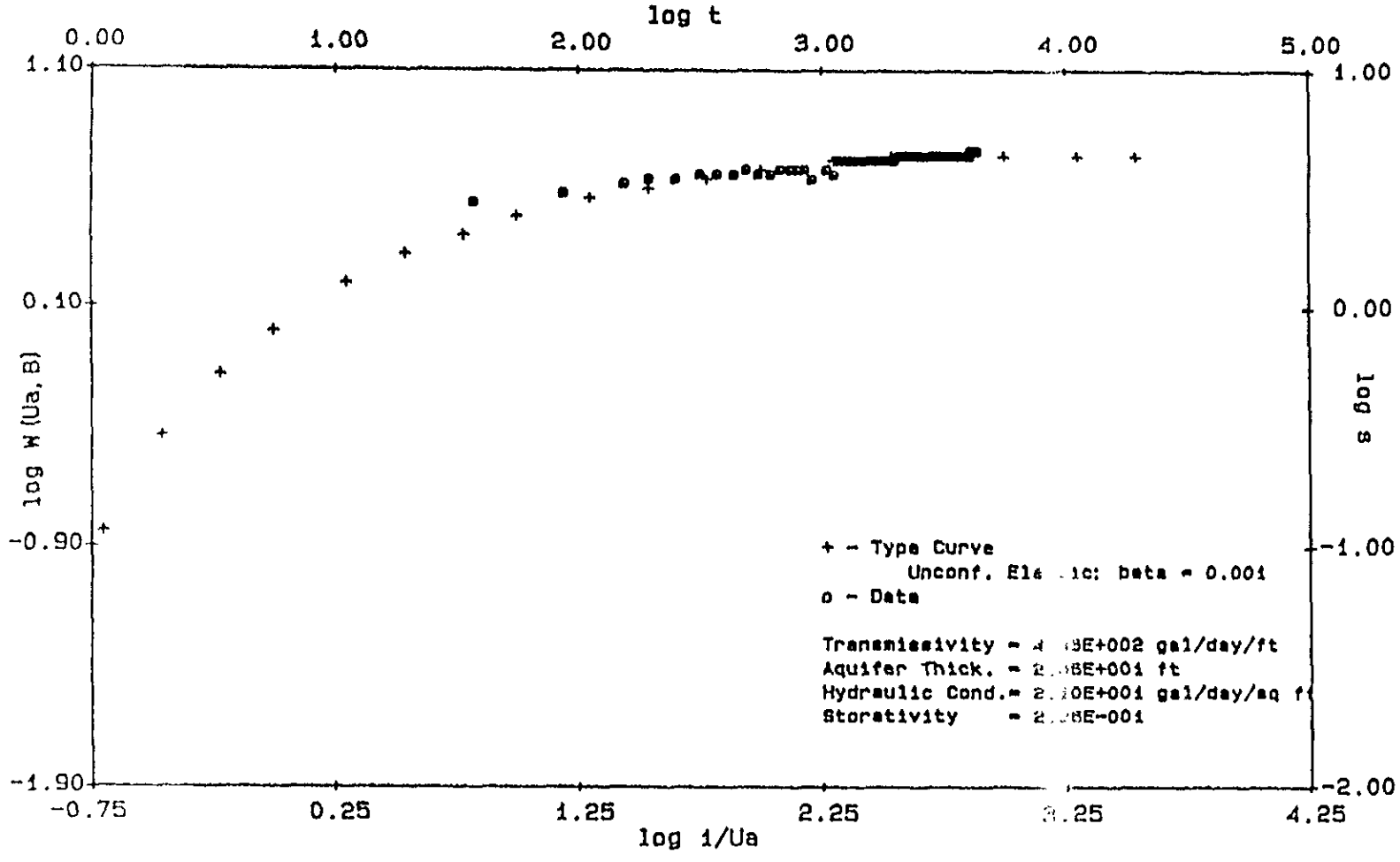
MAXIMUM DRAWDOWN CONTOUR MAP FOR
14:03 AUGUST 4, 1989 : END OF PUMP TEST
FORMER SHELL STATION
7194 AMADOR VALLEY BLVD
DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
JOB #: 1826G	DRAWN BY: J.C.
DATE: 9/3/89	DRAWING #: FIG. 10



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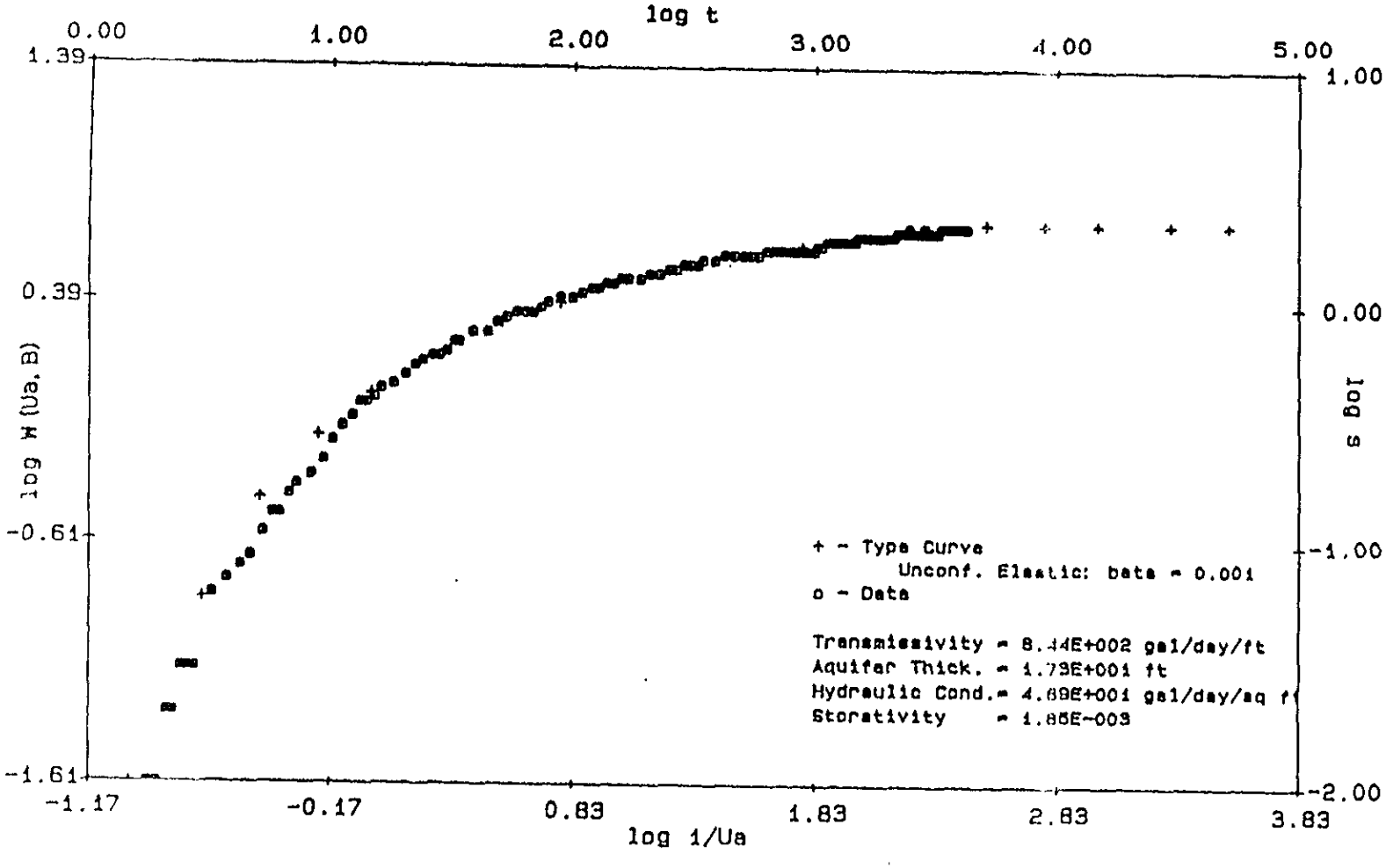
RW-1 CONSTANT DISCHARGE PUMP TEST ANALYSIS (AUGUST 1-4, 1989)

FORMER SHELL SERVICE STATION

7194 AMADOR VALLEY BLVD.

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
JOB #: 1826G	DRAWN BY: J.C.
DATE: 8-25-89	DRAWING #: FIG. 11



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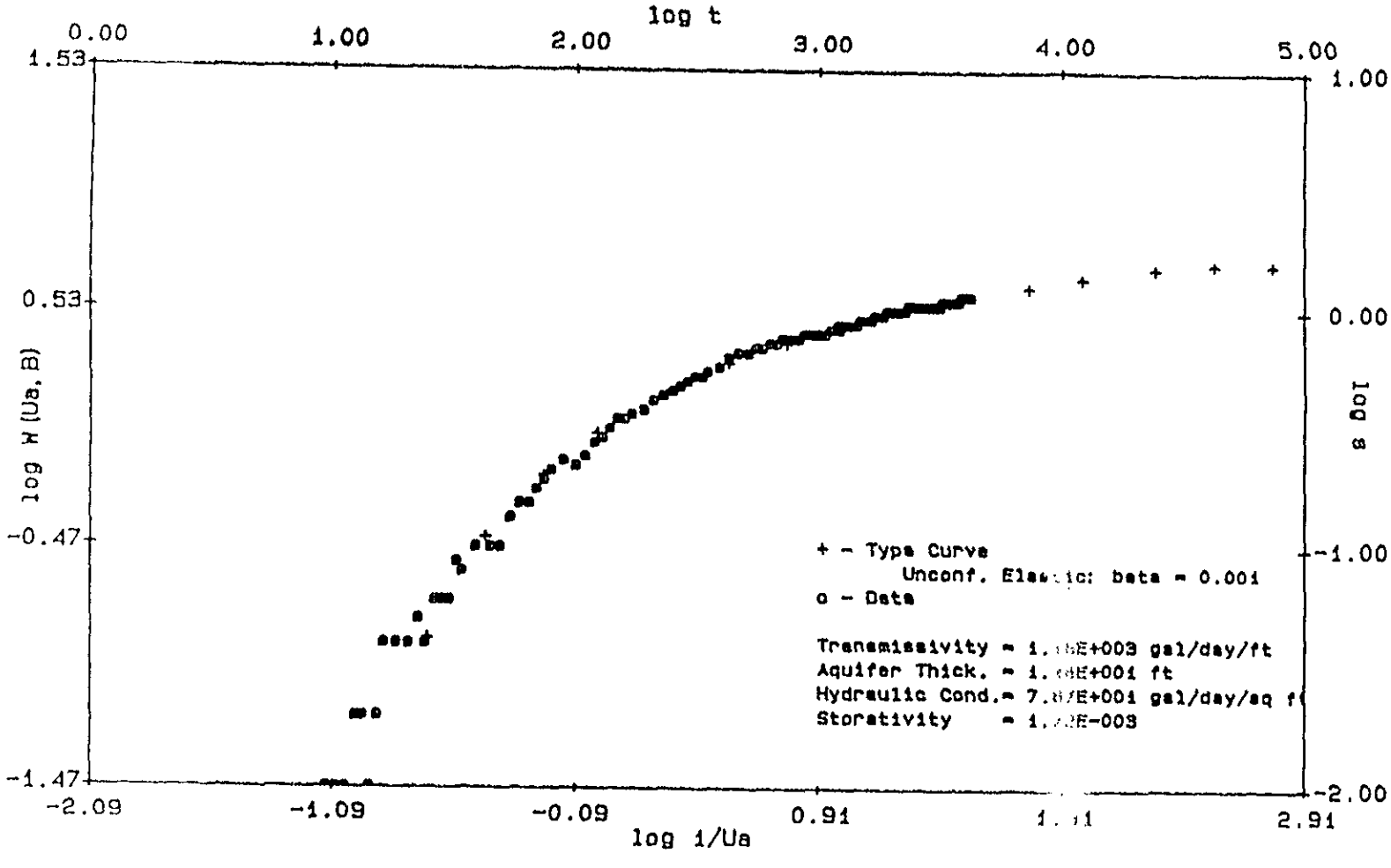
MW-1 CONSTANT DISCHARGE PUMP TEST ANALYSIS (AUGUST 1-4, 1989)

FORMER SHELL SERVICE STATION

7194 AMADOR VALLEY BLVD.

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
JOB #: 1826G	DRAWN BY: J.C.
DATE: 8-25-89	DRAWING #: FIG. 12



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MW-2 CONSTANT DISCHARGE PUMP TEST ANALYSIS (AUGUST 1-4, 1989)

FORMER SHELL SERVICE STATION

7194 AMADOR VALLEY BLVD.

DUBLIN, CALIFORNIA

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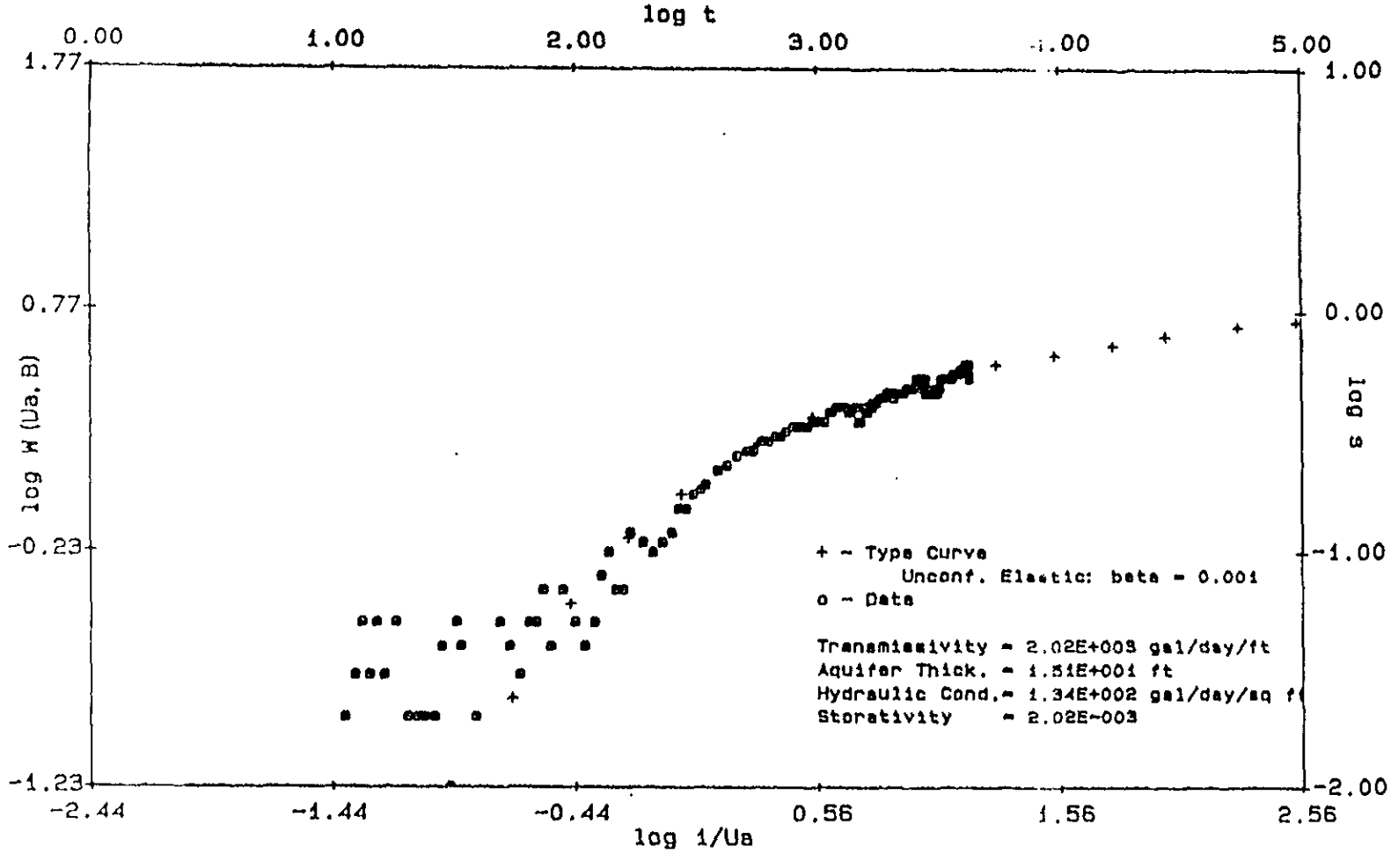
JOB #: 1826G	DRAWN BY: J.C.
DATE: 8-25-89	DRAWING #: FIG. 13



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MW-3 CONSTANT DISCHARGE PUMP TEST ANALYSIS (AUGUST 1-4, 1989)

FORMER SHELL SERVICE STATION

7194 AMADOR VALLEY BLVD.

DUBLIN, CALIFORNIA

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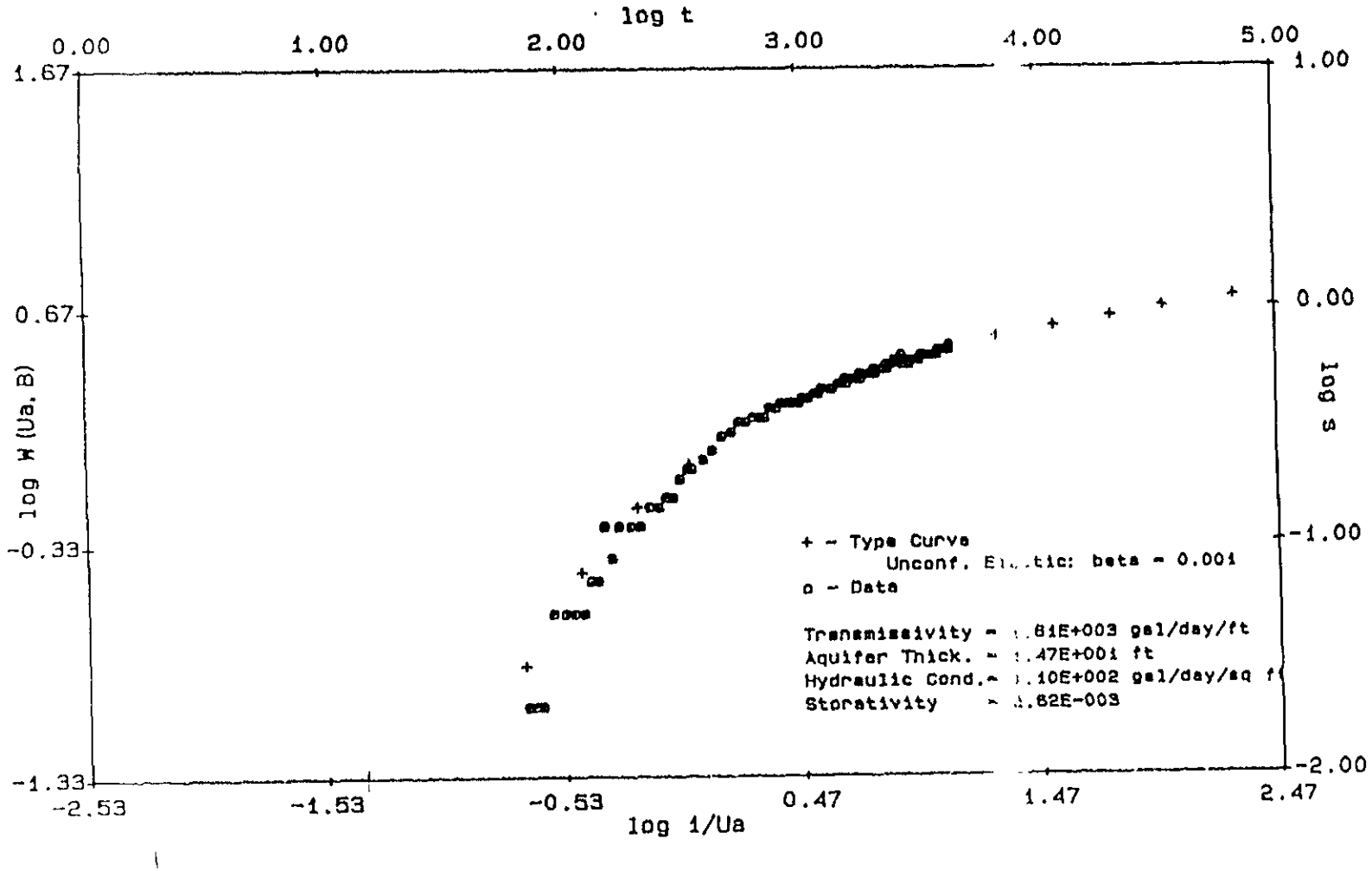
JOB #: 1826G	DRAWN BY: J.C.
DATE: 8-25-89	DRAWING #: FIG. 14



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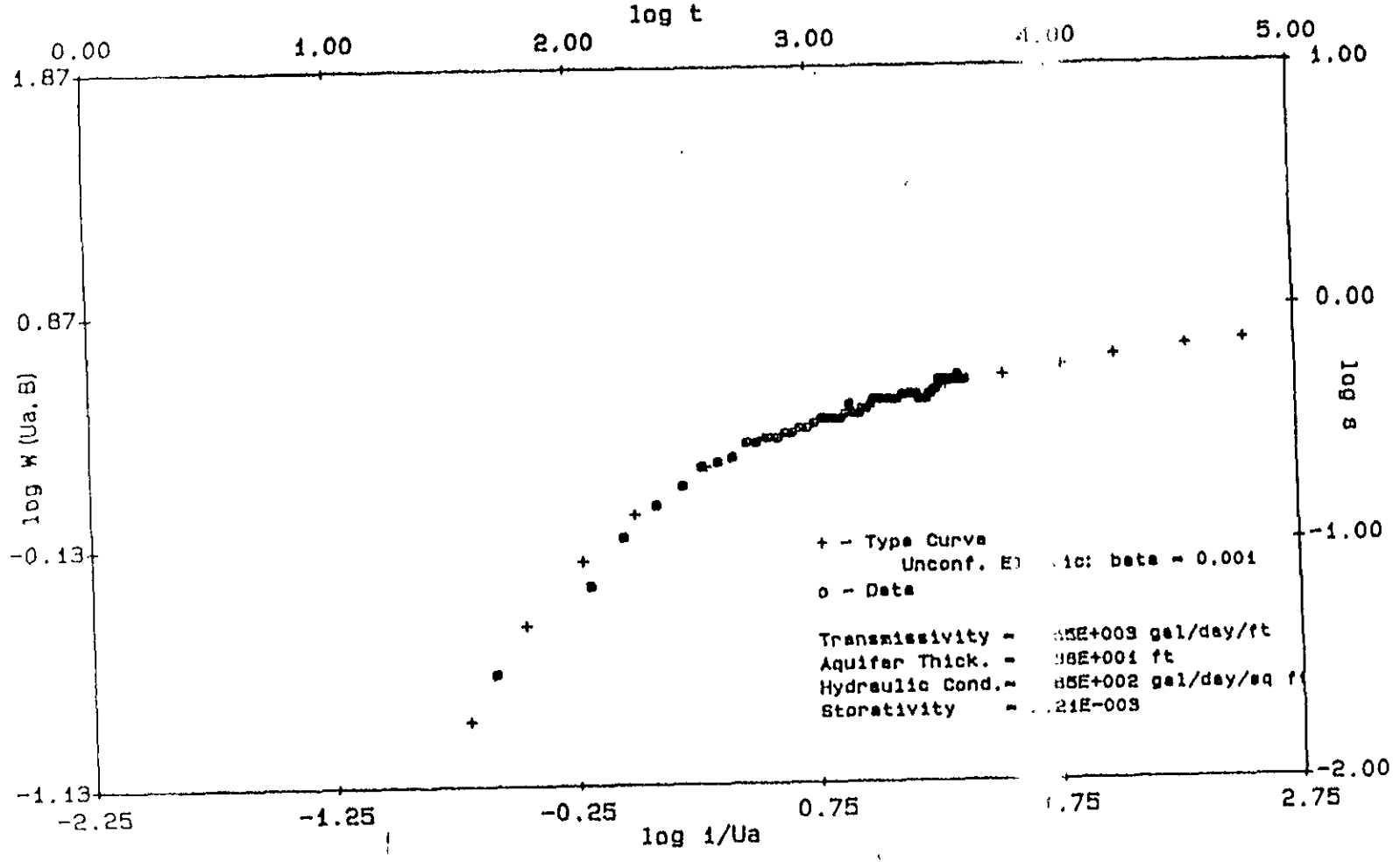
MW-4 CONSTANT DISCHARGE PUMP TEST ANALYSIS (AUGUST 1-4, 1989)

FORMER SHELL SERVICE STATION

7194 AMADOR VALLEY BLVD.

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
JOB #: 1826G	DRAWN BY: J.C.
DATE: 8-25-89	DRAWING #: FIG. 15



MW-6 CONSTANT DISCHARGE PUMP TEST ANALYSIS
(AUGUST 1-4, 1989)

FORMER SHELL SERVICE STATION

7194 AMADOR VALLEY BLVD.

DUBLIN, CALIFORNIA

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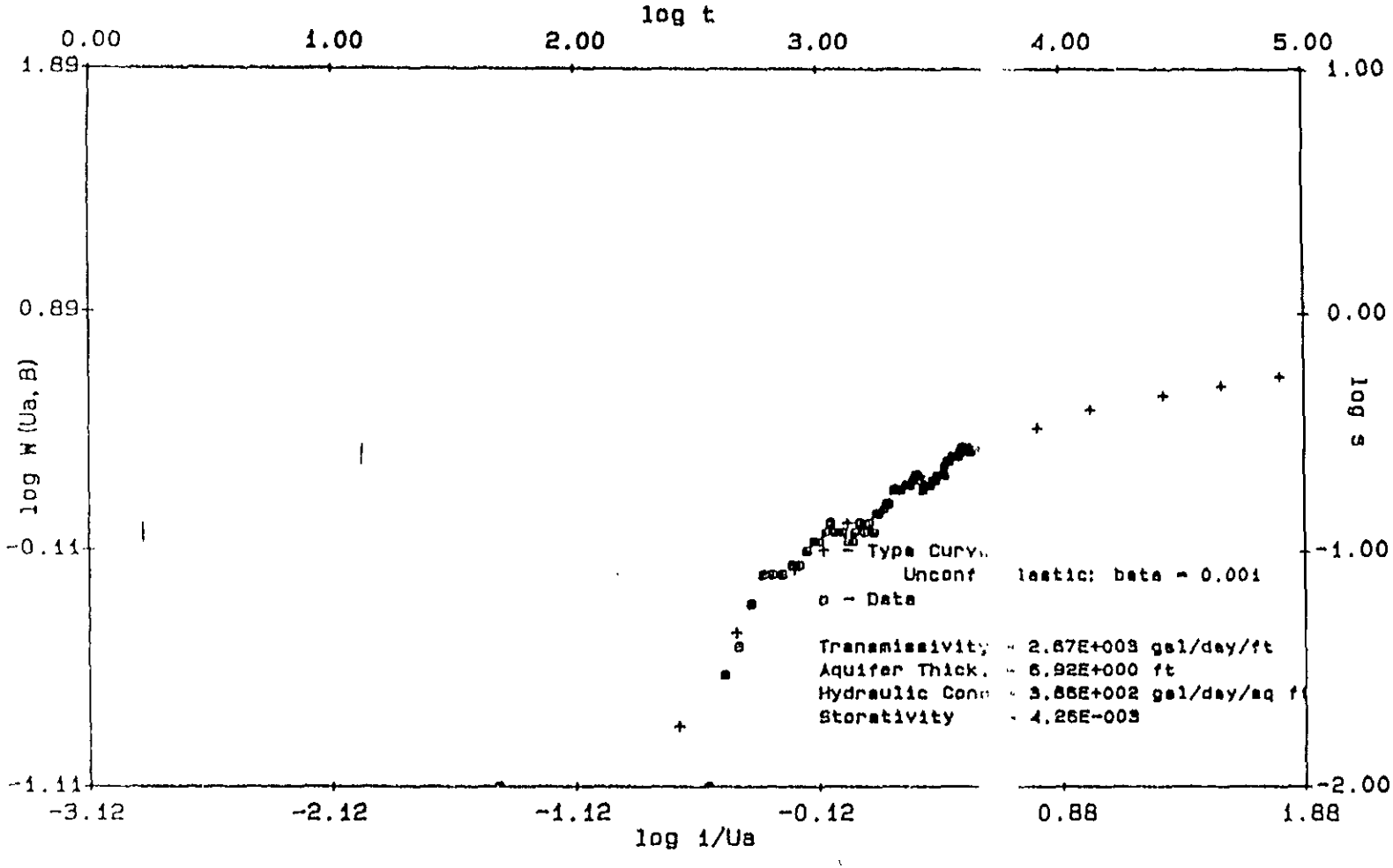
JOB #: 1826G	DRAWN BY: J.C.
DATE: 8-25-89	DRAWING #: FIG. 16



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MW-8 CONSTANT DISCHARGE PUMP TEST ANALYSIS (AUGUST 1-4, 1989)

FORMER SHELL SERVICE STATION

7194 AMADOR VALLEY BLVD.

DUBLIN, CALIFORNIA

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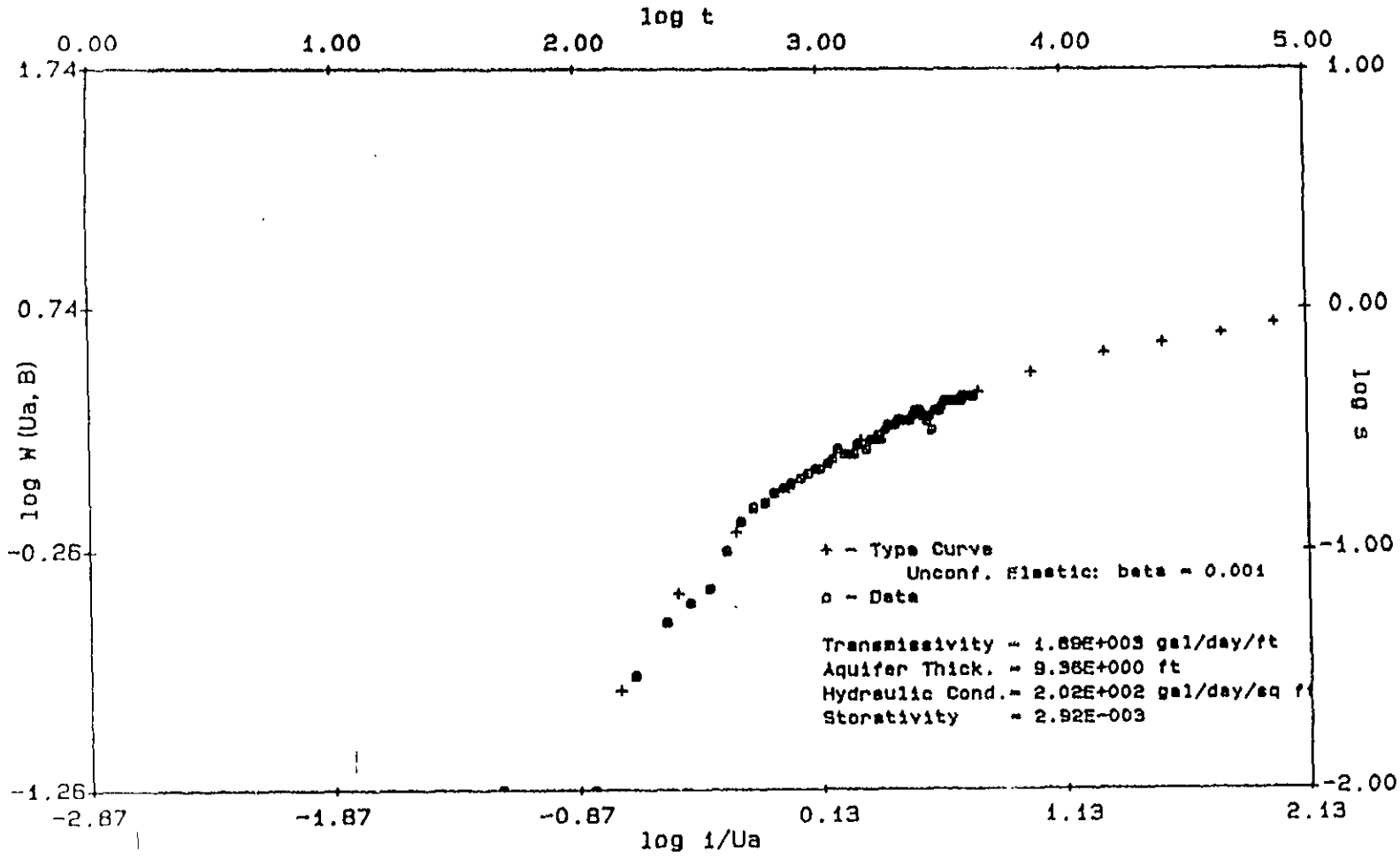
JOB #: 1826G	DRAWN BY: J.C.
DATE: 8-25-89	DRAWING #: FIG. 17



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MW-9 CONSTANT DISCHARGE PUMP TEST ANALYSIS (AUGUST 1-4, 1989)

FORMER SHELL SERVICE STATION

7194 AMADOR VALLEY BLVD.

DUBLIN, CALIFORNIA

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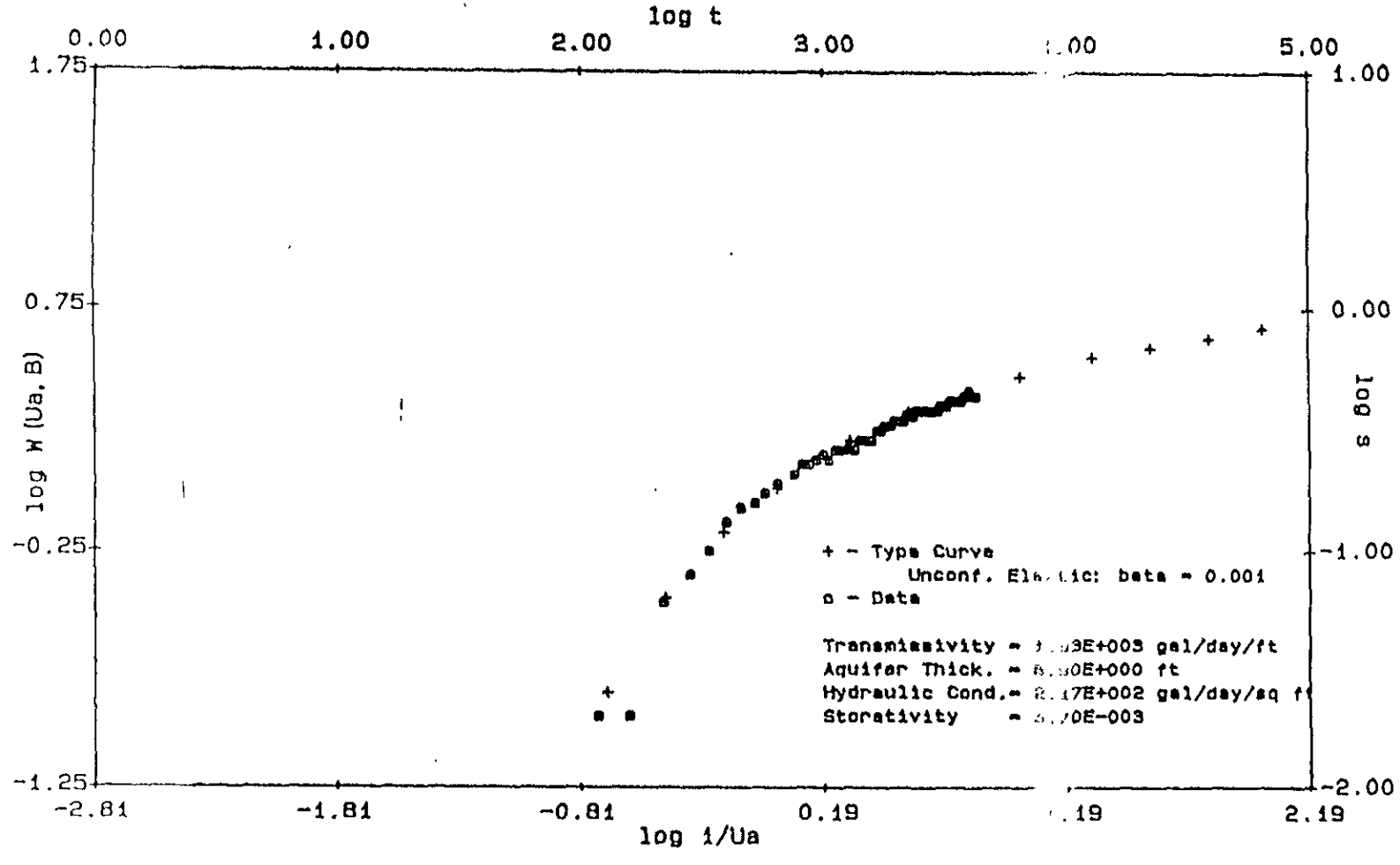
JOB #: 1826G	DRAWN BY: J.C.
DATE: 8-25-89	DRAWING #: FIG. 18



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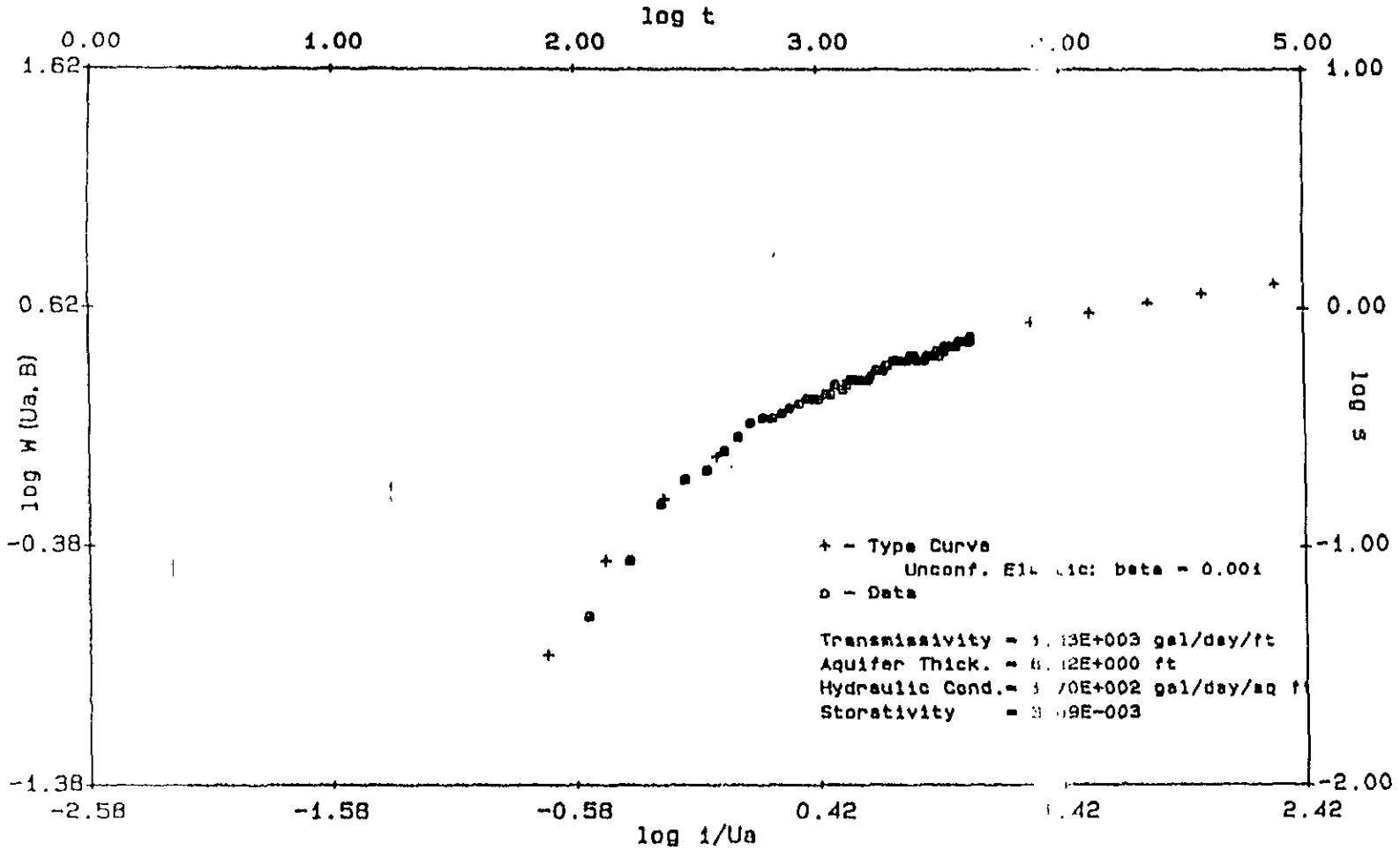
MW-10 CONSTANT DISCHARGE PUMP TEST ANALYSIS (AUGUST 1-4, 1989)

FORMER SHELL SERVICE STATION

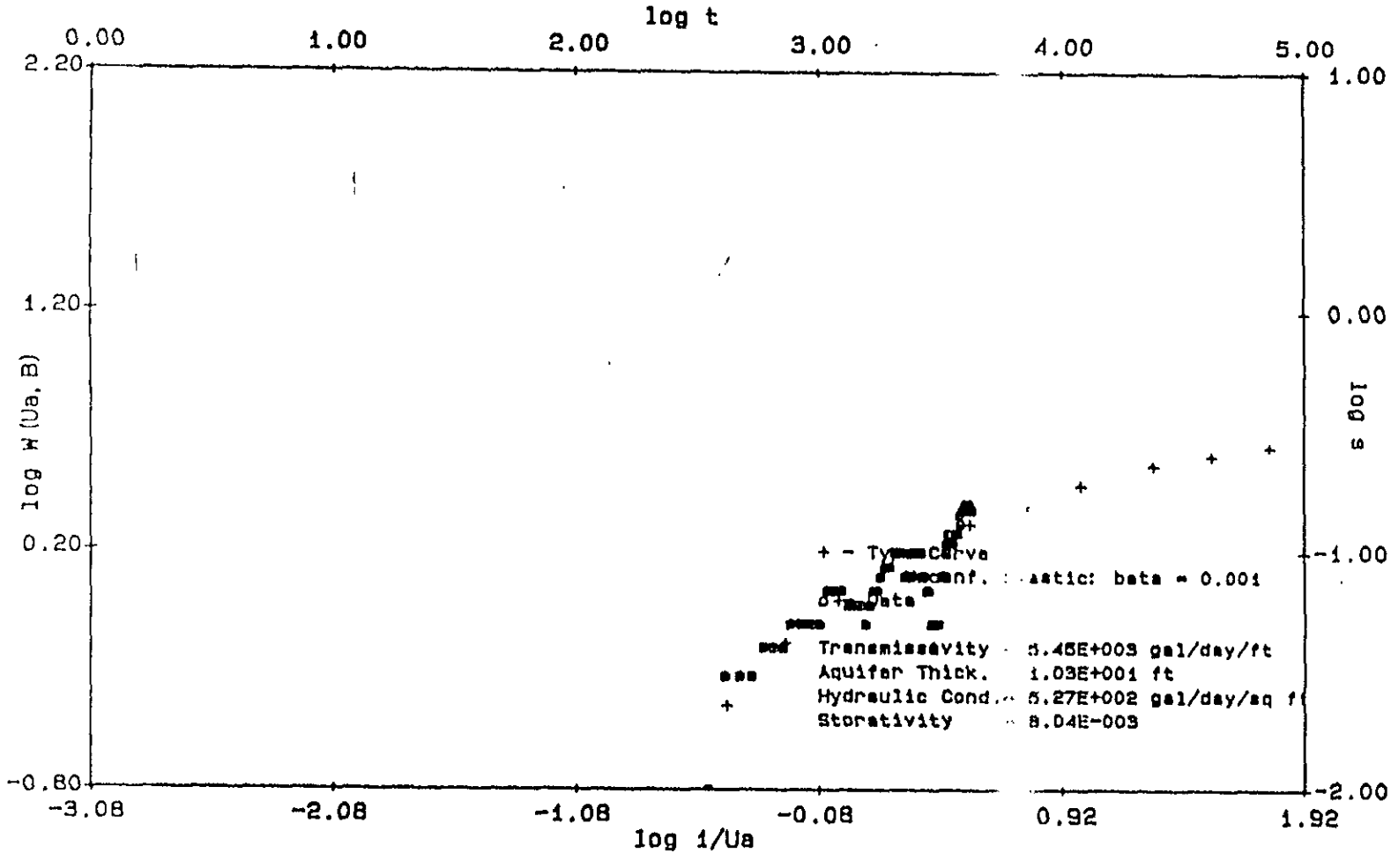
7194 AMADOR VALLEY BLVD.

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
JOB #: 1826G	DRAWN BY: J.C.
DATE: 8-25-89	DRAWING #: FIG. 19



ensco environmental services, Inc.	**MW-11 CONSTANT DISCHARGE PUMP TEST ANALYSIS (AUGUST 1-4, 1989)**	REVIEWED BY:	APPROVED BY
	FORMER SHELL SERVICE STATION		
	7194 AMADOR VALLEY BLVD.	JOB #: 1826G	DRAWN BY: J.C.
	DUBLIN, CALIFORNIA	DATE: 8-25-89	DRAWING #: FIG. 20



ensco environmental services, Inc.

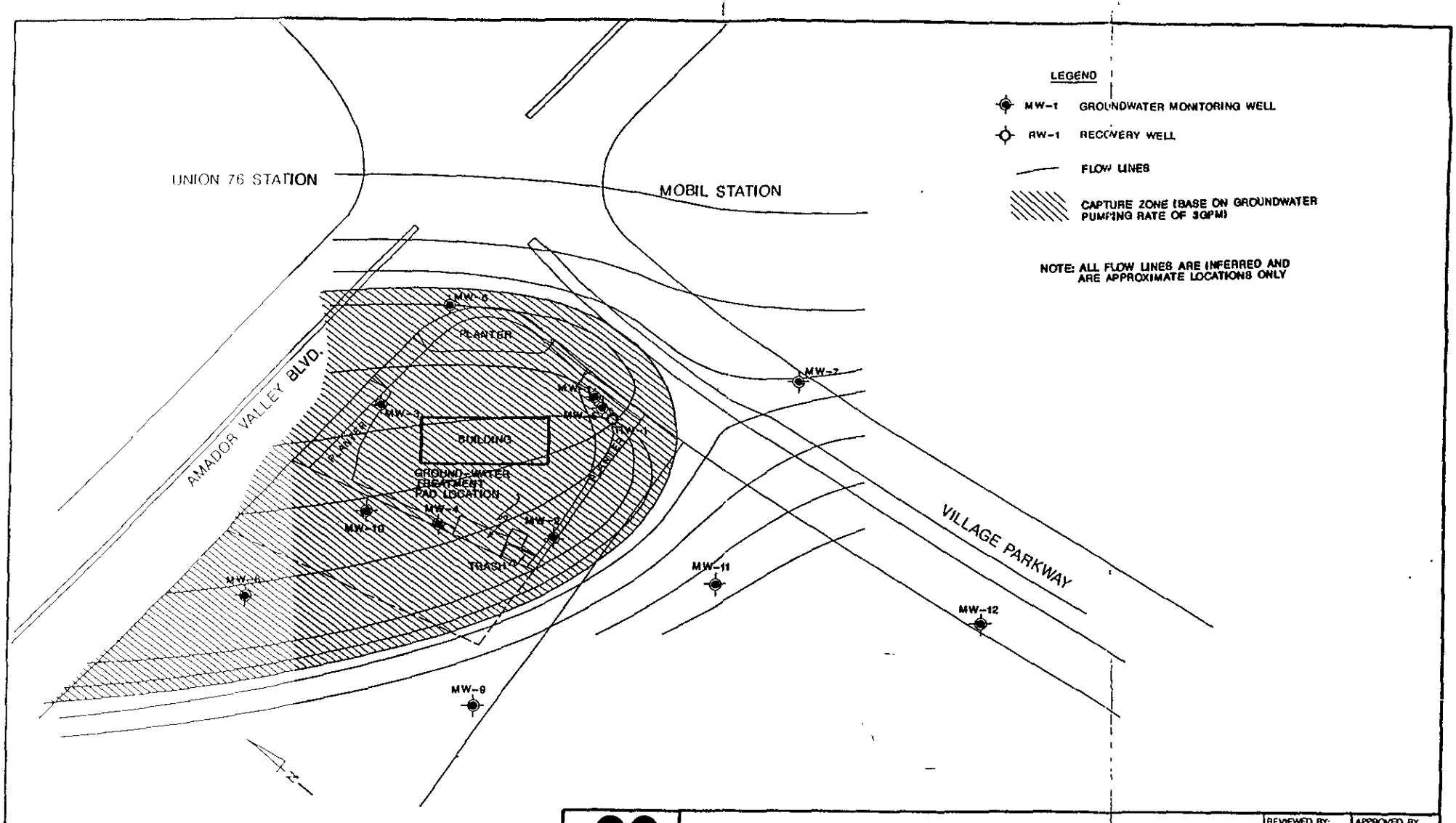
MW-12 CONSTANT DISCHARGE PUMP TEST ANALYSIS (AUGUST 1-4, 1989)

FORMER SHELL SERVICE STATION

7194 AMADOR VALLEY BLVD.

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
JOB #: 1826G	DRAWN BY: J.C.
DATE: 8-25-89	DRAWING #: FIG. 21



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CAPTURE ZONE FLOW MODEL DIAGRAM

FORMER SHELL STATION

7194 AMADOR VALLEY BLVD

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY
JOB # 1826G	DRAWN BY J.C.
DATE 10/20/89	DRAWING # FIG. 24