SEMI-ANNUAL GROUNDWATER MONITORING REPORT

PACIFIC GAS & ELECTRIC
GENERAL CONSTRUCTION YARD
4930 COLISEUM WAY
OAKLAND, CA 94610

#67

September 25, 1998

CET Project No. 3932-000

Prepared for

PACIFIC GAS & ELECTRIC COMPANY
123 Mission Street
San Francisco, CA 94111

Prepared by

CET ENVIRONMENTAL SERVICES, INC.
3033 Richmond Parkway, Suite 300
Richmond, CA 94806

Pacific Gas and Electric Company

General Construction
Gas Department
4930 Coliseum Way
Oakland, CA 94601
510/534-3265

Mr. Barney Chan
Alameda County Health Agency
Division of Environmental Protection
1131 Harbor Bay Parkway, 2nd Floor
Alameda, Ca. 94502

November 3, 1998

Dear Mr. Chan,

Enclosed please find your copy of our latest groundwater monitoring report for our facility at 4930 Coliseum Way. If you have any concerns, please feel free to call me. Thank you for your continuing support with this project.

Respectfully Yours,

John Robinson
Field Engineer
(510) 534-3265

SEMI-ANNUAL GROUNDWATER MONITORING REPORT

PACIFIC GAS & ELECTRIC
GENERAL CONSTRUCTION YARD
4930 COLISEUM WAY
OAKLAND, CA 94610

Prepared for

PACIFIC GAS & ELECTRIC COMPANY
123 Mission Street
San Francisco, California

Prepared by

CET ENVIRONMENTAL SERVICES, INC.
3033 Richmond Parkway, Suite 300
Richmond, California 94806

September 25, 1998

Edward Nakayama, EIT
Staff Engineer

Aaron N. Stessman, PE
Project Manager

Wojciech Bajsarowicz, REA
Regional Manager

TABLE OF CONTENTS

APPENDICES

APPENDIX A Sample Collection Records
Certified Laboratory Results

APPENDIX B Historical Monitoring Data

APPENDIX C Figures

1.0 BACKGROUND

This report presents the results of semiannual groundwater monitoring and sampling completed in the second quarter of 1998 at the PG&E Distribution and Construction Yard at 4930 Coliseum Way in Oakland, California. A vicinity map is included as Figure 1. This report was completed in accordance to the directive issued by the Alameda County Health Care Services Agency (ACHCSA) and a PG&E letter to Alameda County dated April 12, 1993. This report discusses the June 1998 monitoring and sampling event and summarizes the results from groundwater monitoring and sampling performed at the site between January 1990 and the present. The groundwater monitoring program involves the following activities: measuring groundwater elevations; collecting groundwater samples from shallow wells on the site; and performing analyses of the samples to determine the distribution of selected fuel compounds, solvents, and lead in the uppermost water bearing zone, beneath the northern portion of the yard. This area includes the former locations of five underground storage tanks and one above ground storage tank. Figure 2 shows the site plan for the subject property.

In January 1988, all of the site's underground storage tanks and associated piping within the PG&E property lines were removed. Analysis of their contents revealed that of the four tanks formerly located in a cluster at the north corner of the yard, two contained mineral spirits and two contained heavy oils. A concrete sump was located approximately 50 feet northeast of the tank cluster, near the location of a former welding shop. A fifth tank was formerly located near the west corner of the yard and contained diesel fuel. A soil sample collected below this tank indicated a concentration for diesel below the detection limit of 10 mg/kg. Following the tank removal, a subsurface investigation showed that soils immediately adjacent to the former diesel tank were not adversely impacted.

A number of soil samples collected near the former tank cluster, sump and shop location were found to contain Total Petroleum Hydrocarbons such as Diesel (TPH-D) at concentrations up to 3,900 mg/kg and Oil and Grease (O&G) at concentrations up to 1,000 mg/kg. These results were reported in the July 1988 report "Underground Tanks Investigation" by PG&E's Technical and Ecological Services Division.

In November and December 1991, approximately 2,000 cubic yards of soil was excavated as a remedial action for the petroleum hydrocarbons identified in the soil. Soil was excavated to the depth of groundwater, approximately 8 to 8 ½ feet below ground surface at the time, and replaced with clean, compacted backfill. The backfill below approximately 7 feet consisted of drain rock while backfill above 7 feet consisted of Class II aggregate base. The northwest and northeast excavation boundaries reached the approximate PG&E property lines. During the remedial excavation, confirmatory samples were taken along the sidewalls and bottom of the excavation to confirm that all the contaminated soil with concentrations above the regulatory agency approved cleanup target levels was removed. The cleanup targets for gasoline (TPH-G) and diesel (TPH-D) were 10 mg/kg and 100 mg/kg, respectively. The cleanup target for O&G was 1,000 mg/kg, and for Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) compounds was 5 µg/kg (total BTEX). This work was described in an EARTH TECHNOLOGY CORPORATION (formerly Aqua Resources, Inc.) document "Site Remediation and Closure Report ... Former Tank Cluster Area" dated February 1992.

The samples collected along the PG&E property lines were above cleanup target levels, while each of the remaining confirmatory samples was below the cleanup target levels. The samples collected along the northeastern property line were above cleanup targets primarily due to TPH-D and O&G concentrations. The soils in this excavation wall contained visible tar and heavy oil, and also two pipes containing a similar petroleum product. Analytical testing of the product found in the pipes indicated TPH-D at 7,000 mg/kg and did not indicate VOCs above the method detection limit. The samples on the northwestern property line were above cleanup target levels for one or more of TPH-G, TPH-D, O&G, and BTEX.

The conclusions of the February 1992 closure report suggested that offsite sources of petroleum hydrocarbons may exist in both the northeast and northwest directions, and requested regulatory agency input in initiating an investigation of these potential sources. Quarterly groundwater monitoring and sampling for a period of one year was recommended in the 1992 report for wells OW-1, OW-4, OW-6 and OW-7.

In September and October of 1992, a containment mitigation cap was constructed over the surface soils in an area south of the hydrocarbon remediation area. These soils are contaminated with lead, believed to originate from lead-containing paint chips generated from sandblasting of a large above-ground natural gas storage tank. The tank was removed in May 1990, and the soils were found contaminated with total and soluble lead above California Code of Regulations (CCR) levels for hazardous wastes. CCR Total Threshold Limit Concentration (TTLC) for lead is 1000 mg/kg and the Soluble Threshold Limit Concentration (STLC) is 5 mg/L, equivalent to parts per million (ppm). The ACHCSA and the Regional Water Quality Control Board (RWQCB) approved capping as the selected remedial option for this area. As part of the remedial option the County agreed upon continued groundwater monitoring and sampling for lead. Following containment capping, the remaining open ground at the site was covered with asphalt concrete.

In February 1993, well OW-8 was installed in the southern area of the yard in the vicinity of the former above-ground storage tank (AST). A maximum lead concentration of 27 µg/L (April 1993) was reported in samples collected from OW-8, which is below the state Maximum Contaminant Level (MCL) of 50 µg/L for drinking water. Wells OW-2 and OW-5 are located in the vicinity of the former AST and are also being monitored for lead. Lead has not been detected above the State MCL in any monitoring events for wells OW-2, OW-5 and OW-8.

Based on lead levels consistently falling below the MCL for drinking water, the lead regulatory agency, ACHCSA, issued a letter (Appendix C) on July 14, 1994 reducing the required lead sampling frequency from quarterly to semi-annually. Similarly, petroleum hydrocarbon and VOC monitoring is presently performed semi-annually for specific wells.

2.0 GROUNDWATER MONITORING AND SAMPLING ACTIVITIES

Four of the five originally installed monitoring wells remain in existence at the site. Monitoring well OW-3 was destroyed during the remedial excavations performed in November 1991 in the northern corner of the yard. Two new monitoring wells, OW-6 and OW-7, were installed on December 19, 1991. OW-6 was placed in the vicinity of OW-3 to act as a replacement, and OW-7 was installed at the northeastern end of the remediation area to monitor upgradient contamination of the shallow groundwater underlying the site. Both wells penetrate the clean, compacted backfill placed in the previously excavated remediation area. Monitoring well OW-8 was installed in February 1993 to monitor possible lead contamination in the groundwater, downgradient of the former AST. The locations of the new wells were approved by the ACHCSA.

On June 29, 1998, groundwater samples were collected by CET Environmental Services, Inc. (CET) personnel from monitoring wells OW-1, OW-2, OW-4, OW-5, OW-6, OW-7 and OW-8. Prior to sampling, four casing volumes of groundwater were purged with a bailer from each well to ensure the collection of formational water. The parameters pH and conductivity were measured periodically during purging until stabilized. Groundwater samples were then collected and properly stored for transportation to a State of California certified laboratory for analysis. This report presents the results of the June 29, 1998 sampling event.

The groundwater samples collected from each well were selectively analyzed by Curtis & Tompkins, Ltd. Analytical Laboratories, Berkeley, California for TPH-D (LUFT Manual, October 1989), TPH-G (LUFT Manual, October 1989), BTEX (EPA method 8020), purgeable halocarbons compounds (EPA method 8010) and lead (EPA method 6010A) according to the analyses. In addition, method blank analyses labeled OW-9B were performed for the purposes of quality assurance (QA) on the groundwater samples. Table 2.1 presents the current monitoring schedule with appropriate sample analyses. This schedule has been adopted with approval from the ACHCSA as provided in their letter dated July 14, 1994.

Table 2.1 Well Monitoring Schedule and Analyses

	TPH-D	TPH-G BTEX	EPA 8010 (VOCs)	Lead	Groundwater Elevation
OW - 1	S	S			S
OW - 2				S	S
OW - 4	S	S			S
OW - 5	S	S	S	S	S
OW - 6	S	S	S		S
OW - 7	S	S	S		S
OW - 8				S	S

S = Semiannual monitoring

Certified laboratory results are presented in Appendix A along with chain-of-custody documentation. A table of the historical results of the laboratory analyses is included in Appendix B.

3.0 ANALYTICAL RESULTS

3.1 PETROLEUM HYDROCARBONS

Table 3.1 summarizes the analytical results for petroleum hydrocarbons detected in the groundwater samples collected on June 29, 1998. TPH-D was detected in all of the monitoring wells sampled for TPH-D and the highest concentration was observed in well OW-7. TPH-G was detected in three of the five monitoring wells sampled for TPH-G. The highest concentration of TPH-G was also observed in monitoring well OW-7, located in the northern (most upgradient) corner of the site.

Table 3.1 Petroleum Hydrocarbons in Groundwater, in mg/L

Well	TPH-D	TPH-G
OW - 1	1.900	0.860
OW - 4	1.000	ND
OW - 5	0.630	ND
OW - 6	1.300	0.110
OW - 7	2.600	1.000

Notes:

1) ND = Not Detected at or above the method Reporting Limits (RL)
2) TPH-D = Extractable Petroleum Hydrocarbons, Diesel Range, LUFT Manual, October 1989; RL = 0.05 mg/L.
3) TPH-G = Total Petroleum Hydrocarbons by California DHS Method LUFT Manual, October 1989; RL = 0.05 mg/L.
4) NA = Not Analyzed.

Figures 3.1 and 3.2 illustrate the historical concentrations of TPH-D in the monitored wells. For samples which reported TPH-D as not detected, one half of the detection limit was used in preparing these figures. The data from monitoring wells OW-3 and OW-6 are combined since OW-6 was installed to replace OW-3 following its destruction.

Figures 3.1 and 3.2 show that TPH-D concentrations were generally higher around the time of, or soon after, the remedial excavation in November 1991 in the wells in the remediation vicinity: OW-4, OW-6, and OW-7. Compared to the previous sampling event (December 1997), this quarter's results show an increase in TPH-D concentrations in wells OW-1, OW-4, OW-6, and OW-7. It was noted in the February 1992 tank cluster area remediation report that there is an apparent off-site source of contamination upgradient of the PG&E yard. The persistence of moderate TPH following remediation in this area is believed to be the result of this upgradient contamination.

Historically, TPH-D concentrations in monitoring well OW-5, located near the northwest property line, have fluctuated around 1,000 µg/L. The most recent sampling event yielded a concentration

of 630 µg/L. Monitoring well OW-1 had TPH-D concentrations over 2000 µg/L in 1993, averaging near 1,250 µg/L in 1994, 1,000 µg/L in 1995, 1850 µg/L in 1996, and 1100 µg/L in 1997. Monitoring well OW-6 had a concentration of 1,300 µg/L in the most recent event, showing a small increase from 1,200 µg/L in the December 1997 event.

TPH-G has been consistently below 500 µg/L in all wells except upgradient wells OW-1, and OW-7. Historically, OW-7 has had concentrations ranging from 650 to 1,800 µg/L. The current TPH-G concentrations for OW-1 and OW-7 are 860 µg/L and 1,000 µg/L respectively. Figures 3.3 and 3.4 illustrate the historical concentrations of TPH-G. Between January 1991 and March 1992 the analyses were not performed. Monitoring of TPH-G concentrations in OW-2 is no longer performed due to non-detections in these wells. Relative to the previous sampling results, TPH-G concentrations have increased in OW-1, decreased steady in OW-7, and decreased in OW-5 and OW-6. Current sampling results were non-detect for well OW-4.

3.2 LEAD

Table 3.2 presents the results of this quarter's groundwater analyses for lead. The state MCL for lead in drinking water is 50 µg/L. Samples were collected and analyzed for dissolved lead (filtered) in June of 1998. During this quarter's event, lead was not detected in the monitoring wells that were sampled for lead. Historically, all samples show concentrations below the 50 µg/L drinking water MCL. The highest historical concentration of lead was 27 µg/L in OW-8, sampled in April 1993.

Table 3.2 Lead in Groundwater, in µg/L

Well Number	State MCL	Reporting Limit	Dissolved Lead
OW-2	50	3.0	ND
OW-5	50	3.0	ND
OW-8	50	3.0	ND

Notes:
MCL = Maximum Contaminate Level for drinking water.
ND = Not Detected at or above the method Reporting Limits (RL)
NA = Not Analyzed
Dissolved Lead analyses performed by EPA Method 6010A

3.3 VOLATILE ORGANIC COMPOUNDS

Historical results of VOC monitoring are presented in Appendix B. Table 3.3 presents the recent analytical results for VOCs in groundwater. The state MCLs for drinking water were exceeded for: 1,4-Dichlorobenzene (1,4-DCB) in monitoring wells OW-6 and OW-7 at concentrations of 84 µg/L and 450 µg/L respectively.

VOCs detected at concentrations below their MCLs include:

- 1,1-Dichloroethane in wells OW-5, OW-6, and OW-7;
- 1,1,1-Trichloroethane (TCA) in well OW-7.
- Chlorobenzene in wells OW-6 and OW-7;
- 1,3-Dichlorobenzene (1,3-DCB) in wells OW-6 and OW-7;
- 1,2-Dichlorobenzene (1,2-DCB) in wells OW-6 and OW-7;
- Benzene in well OW-7.

Figures 3.5 and 3.6 show the historical concentrations of total VOCs in the on-site monitoring wells. Figure 3.5 shows the concentrations of total VOCs in wells OW-1, OW-2 and OW-4. Of these wells, only OW-1 is presently monitored for VOCs, and these include only the BTEX fraction. From January 1994 to before the December 1997 sampling event, no BTEX was detected in well OW-1. Benzene, Ethyl Benzene and Xylene were detected in the December 1997 sample at concentrations of 0.66, 2.3, and 1.1 µg/L, respectively. In the June 1998 sample, only Toluene was detected in Well OW-1 at a concentration of 0.67. However, the results of the method blank sample, shown on the right-most column in table 3.3, shows a reading of 0.73 µg/L for Toluene. This reading suggests that the results obtained for Toluene for sample OW-1 may be in error.

Figure 3.6 shows the concentrations of total VOCs in wells OW-5, OW-6, and OW-7, located at the upgradient edges of the site. The total VOC concentrations detected this quarter in wells OW-5, OW-6, and OW-7 were 1.0 µg/L, 129.4 µg/L, and 877.66 µg/L, respectively. Total VOC concentrations in each of these wells decreased relative to the previous sampling event in the fourth quarter of 1997. These three wells lie within ten feet of the northeast and/or northwest property lines of the site. Groundwater elevation monitoring consistently indicates that the groundwater flow direction is (from the north (SE) or northeast) from neighboring properties onto the PG&E site. This demonstrates that VOCs are migrating onto the PG&E site from an upgradient source.

Table 3.3 Volatile Organic Compounds in Groundwater, in ug/l

PURGEABLE HALOCARBONS	MCL	Well Number OW-1	OW-4	OW-5	OW-6	OW-7	MB
Chloromethane		NA	NA	ND	ND	ND	ND
Bromomethane		NA	NA	ND	ND	ND	ND
Vinyl chloride	0.5	NA	NA	ND	ND	ND	ND
Chloroethane		NA	NA	ND	ND	ND	ND
Methylene Chloride	5#	NA	NA	ND	ND	ND	ND
Trichlorofluoromethane	150	NA	NA	ND	ND	ND	ND
1,1-Dichloroethene	6	NA	NA	ND	ND	ND	ND
1,1-Dichloroethane	5	NA	NA	1	3.3	4.1	ND
cis-1,2-Dichloroethene	6	NA	NA	ND	ND	ND	ND
trans-1,2-Dichloroethene	10	NA	NA	ND	ND	ND	ND
Chloroform	100#*	NA	NA	ND	ND	ND	ND
Freon 113	1200	NA	NA	ND	ND	ND	ND
1,2-Dichloroethane	0.5	NA	NA	ND	ND	ND	ND
1,1,1-Trichloroethane	200	NA	NA	ND	ND	5.9	ND
Carbon Tetrachloride	0.5	NA	NA	ND	ND	ND	ND
Bromodichloromethane	100#*	NA	NA	ND	ND	ND	ND
1,2-Dichloropropane	5	NA	NA	ND	ND	ND	ND
cis-1,3-Dichloropropene	5***	NA	NA	ND	ND	ND	ND
Trichloroethylene	5	NA	NA	ND	ND	ND	ND
1,1,2-Trichloroethane	32	NA	NA	ND	ND	ND	ND
trans-1,3-Dichloropropene	5***	NA	NA	ND	ND	ND	ND
Dibromochloromethane	100#*	NA	NA	ND	ND	ND	ND
2-Chloroethylvinyl Ether		NA	NA	NA	NA	NA	NA
Bromoform	100#*	NA	NA	ND	ND	ND	ND
Tetrachloroethylene	5	NA	NA	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	1	NA	NA	ND	ND	ND	ND
Chlorobenzene	30	NA	NA	ND	9.1	27	ND
1,3-Dichlorobenzene	600#	NA	NA	ND	30	340	ND
1,2-Dichlorobenzene	600#	NA	NA	ND	3	50	ND
1,4-Dichlorobenzene	5	NA	NA	ND	84	450	ND
PURGEABLE AROMATICS							
Benzene	1	ND	ND	ND	ND	0.66	ND
Toluene	1000#	0.67	ND	ND	ND	ND	0.73
Ethylbenzene	680	ND	ND	ND	ND	ND	ND
Total Xylenes	1750**	ND	ND	ND	ND	ND	ND

Notes:

1) MCL = Maximum Contaminant Level in drinking water (State MCL, if not noted otherwise)
2) # = EPA MCL
3) * = MCL for sum of four compounds
4) ** = MCL for sum of all xylene isomers
5) *** = MCL for sum of trans- and cis-1,3-Dichloropropene
6) ND = Not Detected at or above MDL
7) Purgeable Halocarbons (EPA method 8010)
8) Purgeable Aromatics (EPA method 8020)
Exceeded MCL
9) NA = Not Tested
10) MB = Method Blank

4.0 GROUNDWATER FLOW DIRECTION

Water level measurements in the site monitoring wells were collected on June 29, 1998, prior to groundwater sampling. Groundwater elevations are shown in relation to a site specific coordinate system reported in previous reports. The top of casing (TOC) elevations for each of the wells are based upon an assumed TOC elevation of 10 feet at OW-1.

The groundwater elevations measured on June 29, 1998 and the resulting gradient direction, are presented in Figure 4.1. Historical groundwater elevations along with TOC elevations for each well are presented as a graph in Figure 4.2. The groundwater flow direction was calculated from groundwater elevations in OW-1, OW-2, OW-4, OW-5, OW-6, OW-7, and OW-8 and indicates the local groundwater flow direction on this date was 0.006 ft/ft due south. This flow direction is consistent with those observed since monitoring began in 1988. The lead mitigation cap now limits direct precipitative recharge in the area between wells OW-2 and OW-5, and OW-8. The majority of the remaining site area has also been paved.

5.0 CAP INSPECTION

The cap will be inspected again by CET prior to the next semi-annual report.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

The following conclusions are made based upon the results of analyses performed on groundwater samples collected on June 29, 1998 from monitoring wells OW-1, OW-2, OW-4, OW-5, OW-6, OW-7 and OW-8, and from prior semi-annual sampling results.

- The groundwater beneath the site appears to flow to the south, consistent with the historical flow direction. The groundwater gradient of 0.006 ft/ft is also consistent with historical data.

- TPH-D was detected in wells OW-1, OW-4, OW-5, OW-6 and OW-7 above the reporting limit of 50 µg/L. The highest concentration was found in well OW-7 at 2,600 µg/L. Moderate TPH-D concentrations in groundwater have persisted in wells located in the northeastern portion of the property. Since remedial action had removed known sources of contaminants within the site, the presence of TPH-D is likely to be caused by upgradient, off-site source. TPH-D in groundwater has no regulatory action limits but is being assessed on a case-by-case basis by the regulators.

- TPH-D was detected in well OW-1 at 1900 µg/L, a sharp rise from the 700 µg/L detected in the previous sampling but still below the maximum historical concentration of 3,900 µg/L observed in July of 1992. OW-1 is downgradient of a former diesel tank location.

- Monitoring wells OW-1, OW-6 and OW-7 had TPH-G concentrations of 860, 110, and 1000 µg/L, respectively. TPH-G was not detected in wells OW-4 and OW-5. The upgradient well OW-7 continues to have the highest concentration of TPH-G. The presence of TPH-G is likely to be caused by an upgradient, off-site source.

- Soluble lead concentrations were not detected in monitoring wells OW-2, OW-5 and OW-8. The MCL for lead in drinking water is 50 µg/L.

- Wells OW-5, OW-6 and OW-7 lie at the upgradient portion of the site and historically have had the highest concentrations of TPH-G and VOCs. The total VOC concentration is particularly elevated in OW-7, averaging near 1,000 µg/L. This indicates an upgradient, off-site source of fuel and solvent contamination located north of the subject site. The concentration of total VOCs in each of these wells decreased this quarter relative to the previous sampling event.

- The following VOCs were detected below their MCL:

  Benzene in monitoring well OW-7;
  1,1-Dichloroethane in monitoring wells OW-5, OW-6, and OW-7;
  1,1,1-Trichloroethane in monitoring well OW-7;
  Chlorobenzene and 1,2-Dichlorobenzene in monitoring wells OW-6, OW-7.

- 1,4-Dichlorobenzene was detected in monitoring wells OW-6 and OW-7 above its MCL.

- No Methylene Chloride was detected at the site in the most recent monitoring event.

6.2 RECOMMENDATIONS

- Continue monitoring in conformance with the revised ACHCSA schedule.

- An unidentified upgradient source of TPH-D, TPH-G and VOCs north of the subject property is clearly indicated by the groundwater monitoring data. Based on this finding it is recommended that PG&E enter into discussions with the involved regulatory agencies to investigate and pursue those responsible for the groundwater contaminants entering the PG&E property.

APPENDIX A

Sample Collection Records
Certified Laboratory Results

FIELD ACTIVITY DAILY REPORT

Sheet 1 of 1

Project: PG&E Job No.: 3932-000

Subject: Groundwater Monitoring Date: June 29, 1998

Site Location/Address: 4930 Coliseum Way, Oakland

TIME	ACTIVITY
11:10	Arrive onsite. Meet with John Robinson. Locate wells and drums — prepare to purge. Hydac calibrated to 7.0 and 4.0 pH.
14:35	Purged and Sampled OW-1, -2, -4, -6, -7, -5 and -8. Collected field blank.
15:00	Pack samples, leave site
15:35	Arrive @ lab, drop samples.
16:00	Arrive @ office, unload.

Attachments: Signature: O'Bonnell

FIELD FORM DISK/FADR.FRM

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-29-98 Sample I.D.: OW1 Job No.: 3932-000

Site Location: PG&E / Oakland

No. of Containers: 2amber/3VOA/ (Check one): X Well Samples;

_____ Duplicates from well _____; _____ Travel Blanks; _____ Field Blanks;

_____ Other (explain) _____

W.L. (1/100'): 3.68 Date: 6/29/98 Time: 11:15 B.O.W.(1/2'): 18'

Method: X Electric Well Sounder; _____ Other/_____

Meters Calibrated: Date: 6/29/98 By: CB

Calculated Purge Volume (~~4~~ 3 casing volumes): 7.30 Gallons

Purging Method: X Disposable Bailer; _____ Teflon Bailer;

_____ Whale SuperSub 920 submersible pump; _____ Other/Specify_____

Time Start Purging (24 hr): 11:20, Product: Y / (N), Sheen: Y / (N)

Odor: Y / (N) Vapor: _____ ppm / %LEL , Color: _____

Time Stop Purging (24 hr): _____, Product: Y / N , Sheen: Y / N ,

Odor: Y / N , Vapor: _____ ppm / %LEL , Color: _____

Time (24 hr)	H_2O (gal)	Temp. (F)	pH	Cond. (uS)	TDS (ppm)	Turbid. (NTU)	D.O. (ppm)
11:25	2	70.3	6.86	1346		clear	
11:28	4.5	70.6	6.67	802		"	
11:32	~~4~~ 7.5	69.9	6.59	806		"	
:							
:							

Sample Collection Time (24 hr): 11:35

Notes: _____

Collected By (signature): CBarnett

SPLFRM.MW

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-29-98 Sample I.D.: OW2 Job No.: 3932-000

Site Location: PG&E/Oakland

No. of Containers: ____ / (Check one): ____ Well Samples;

____ Duplicates from well ____; ____ Travel Blanks; ____ Field Blanks;

____ Other (explain) ____

W.L. (1/100'): 4.36 Date: 6/29/98 Time: 14:00 B.O.W.(1/2'): 17'

Method: ____ Electric Well Sounder; X Other/ ____

Meters Calibrated: Date: ____ By: ____

Calculated Purge Volume (4 casing volumes): ____ Gallons

Purging Method: ____ Disposable Bailer; X Teflon Bailer;

____ Whale SuperSub 920 submersible pump; ____ Other/Specify ____

Time Start Purging (24 hr): ____, Product: Y / N , Sheen: Y / N ,

Odor: Y / N , Vapor: ____ ppm / %LEL , Color: ____

Time Stop Purging (24 hr): ____, Product: Y / N , Sheen: Y / N ,

Odor: Y / N , Vapor: ____ ppm / %LEL , Color: ____

Time (24 hr)	H_2O (gal)	Temp. (C)	pH	Cond. (uS)	TDS (ppm)	Turbid. (NTU)	D.O. (ppm)
14:07	2	72.7	6.93	1543		Clear	
14:10	4	70.3	7.05	1540		"	
14:14	6.5	71.1	7.09	1551		"	
:__							
:__							

Sample Collection Time (24 hr): 14:15

Notes: ____

Collected By (signature): O Barnett

SPLFRM.MW

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-29-98 Sample I.D.: OW4 Job No.: 3932-000

Site Location: PG&E/Oakland

No. of Containers: ____ / (Check one): ____ Well Samples;

____ Duplicates from well ____; ____ Travel Blanks; ____ Field Blanks;

____ Other (explain) ____

W.L. (1/100'): 3.16 Date: 6/29/98 Time: 11:50 B.O.W.(1/2'): 19.9

Method: ____ Electric Well Sounder; X Other/____

Meters Calibrated: Date: ____ By: ____

Calculated Purge Volume (3 casing volumes): 8.53 Gallons

Purging Method: ____ Disposable Bailer; X Teflon Bailer;

____ Whale SuperSub 920 submersible pump; ____ Other/Specify____

Time Start Purging (24 hr): ____, Product: Y / N , Sheen: Y / N ,

Odor: Y / N , Vapor: ____ ppm / %LEL , Color: ____

Time Stop Purging (24 hr): ____, Product: Y / N , Sheen: Y / N ,

Odor: Y / N , Vapor: ____ ppm / %LEL , Color: ____

Time (24 hr)	H_2O (gal)	Temp. (C)	pH	Cond. (uS)	TDS (ppm)	Turbid. (NTU)	D.O. (ppm)
11:51	3	67.0	7.60	470		clear	
11:55	6	67.4	7.07	660		"	
11:59	9	68.0	7.00	720		"	
:__							
:__							

Sample Collection Time (24 hr): 12:05

Notes: ____

Collected By (signature): [signature]

SPLFRM.MW

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-29-98 Sample I.D.: MW5 Job No.: 3932-000

Site Location: PG&E / Oakland

No. of Containers: _____ / (Check one): _____ Well Samples;

_____ Duplicates from well _____; _____ Travel Blanks; _____ Field Blanks;

_____ Other (explain) _____

W.L. (1/100'): 4.00 Date: _____ Time: _____ B.O.W.(1/2'): 19'

Method: _____ Electric Well Sounder; X Other/ _____

Meters Calibrated: Date: _____ By: _____

Calculated Purge Volume (3/4 casing volumes): 7.65 Gallons

Purging Method: _____ Disposable Bailer; X Teflon Bailer;

_____ Whale SuperSub 920 submersible pump; _____ Other/Specify _____

Time Start Purging (24 hr): _____, Product: Y / (N) Sheen: Y / (N),

Odor: Y / (N), Vapor: _____ ppm / %LEL , Color: _____

Time Stop Purging (24 hr): _____, Product: Y / N , Sheen: Y / N ,

Odor: Y / N , Vapor: _____ ppm / %LEL , Color: _____

Time (24 hr)	H_2O (gal)	Temp. (C)	pH	Cond. (uS)	TDS (ppm)	Turbid. (NTU)	D.O. (ppm)
13:45	2.5	70.9	7.47	412		Clay	
13:49	5	71.5	6.89	380		"	
13:53	7.5	70.7	6.78	382		"	
:__							
:__							

Sample Collection Time (24 hr): 13:55

Notes: _____

Collected By (signature): _____

SPLFRM.MW

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-29-98 Sample I.D.: GW6 Job No.: 3932-000

Site Location: PG&E/Oakland

No. of Containers: ____ / (Check one): ____ Well Samples;

____ Duplicates from well ____; ____ Travel Blanks; ____ Field Blanks;

____ Other (explain) ____

W.L. (1/100'): 4.31 Date: ____ Time: ____ B.O.W.(1/2'): 19' 17'

Method: ____ Electric Well Sounder; X Other/ ____

Meters Calibrated: Date: ____ By: ____

Calculated Purge Volume (3/4 casing volumes): ~~7.49~~ 6.47 (CB) Gallons

Purging Method: ____ Disposable Bailer; X Teflon Bailer;

____ Whale SuperSub 920 submersible pump; ____ Other/Specify ____

Time Start Purging (24 hr): ____, Product: Y / (N), Sheen: Y / (N)

Odor: (Y) (slight) / N, Vapor: ____ ppm / %LEL, Color: ____

Time Stop Purging (24 hr): ____, Product: Y / N, Sheen: Y / N,

Odor: Y / N, Vapor: ____ ppm / %LEL, Color: ____

Time (24 hr)	H_2O (gal)	Temp. (C)	pH	Cond. (uS)	TDS (ppm)	Turbid. (NTU)	D.O. (ppm)
12:33	2.5	67.7	7.62	736		lt. brn/rust	
12:37	5	65.5	7.55	722		clear	
12:40	7.5	67.9	7.53	700		"	
:__							
:__							

Sample Collection Time (24 hr): 1245

Notes: Extra purge volume due to calculation for wrong Well.

Collected By (signature): DBarnett

SPLFRM.MW

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-29-98 Sample I.D.: MW-7 Job No.: 3932-000

Site Location: PG&E / Oakland

No. of Containers: ____ / (Check one): ____ Well Samples;

____ Duplicates from well ____; ____ Travel Blanks; ____ Field Blanks;

____ Other (explain) ____

W.L. (1/100'): 5.73 Date: ____ Time: ____ B.O.W.(1/2'): 18.50

Method: ____ Electric Well Sounder; X Other/ ____

Meters Calibrated: Date: ____ By: ____

Calculated Purge Volume (3 casing volumes): 6.50 Gallons

Purging Method: ____ Disposable Bailer; X Teflon Bailer;

____ Whale SuperSub 920 submersible pump; ____ Other/Specify ____

Time Start Purging (24 hr): ____, Product: Y / (N), Sheen: Y / (N)

Odor: Y / (N), Vapor: ____ ppm / %LEL, Color: ____

Time Stop Purging (24 hr): ____, Product: Y / N, Sheen: Y / N,

Odor: Y / N, Vapor: ____ ppm / %LEL, Color: ____

Time (24 hr)	H_2O (gal)	Temp. (C)	pH	Cond. (uS)	TDS (ppm)	Turbid. (NTU)	D.O. (ppm)
13:07	2	69.9	7.28	610		DARK YELLOW/RUST	
13:10	4	70.3	7.05	600		"	
13:14	6.5	70.0	6.87	7.17		LT. YELLOW/ CLEAR	
:__							
:__							

Sample Collection Time (24 hr): 13:15

Notes: Need to replace one bolt in well box lid - Removed due to severe bend in shank.

Collected By (signature): O Barnett

SPLFRM.MW

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-29-98 Sample I.D.: OW8 Job No.: 3932-000

Site Location: PGE/Oakland

No. of Containers: ____ / (Check one): ____ Well Samples;

____ Duplicates from well ____; ____ Travel Blanks; ____ Field Blanks;

____ Other (explain) ____

W.L. (1/100'): 3.42 Date: ____ Time: ____ B.O.W.(1/2'): 16'

Method: ____ Electric Well Sounder; X Other/ ____

Meters Calibrated: Date: ____ By: ____

Calculated Purge Volume (3 / 4 casing volumes): 6.41 3.42 Gallons

Purging Method: ____ Disposable Bailer; X Teflon Bailer;

____ Whale SuperSub 920 submersible pump; ____ Other/Specify ____

Time Start Purging (24 hr): ____, Product: Y / N Sheen: Y / N

Odor: Y / N, Vapor: ____ ppm / %LEL, Color: ____

Time Stop Purging (24 hr): ____, Product: Y / N, Sheen: Y / N,

Odor: Y / N, Vapor: ____ ppm / %LEL, Color: ____

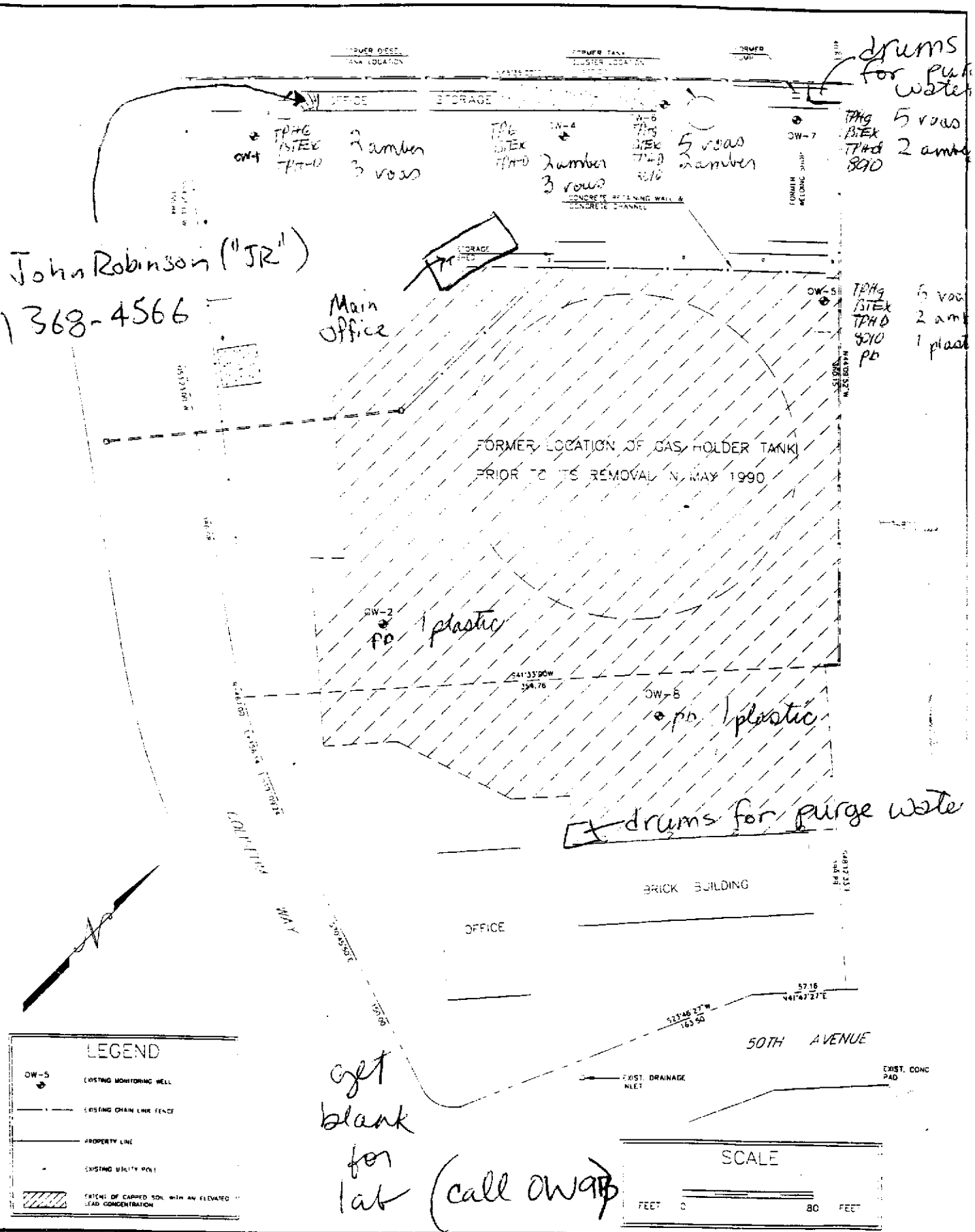
Time (24 hr)	H_2O (gal)	Temp. (C)	pH	Cond. (uS)	TDS (ppm)	Turbid. (NTU)	D.O. (ppm)
13:30	2	69.2	8.85	962		clear	
13:33	4	69.2	7.97	682		"	
13:38	6.5	69.5	7.83	629		"	
:__							
:__							

Sample Collection Time (24 hr): 13:40

Notes: ____

Collected By (signature): O Barrett

SPLFRM.MW



CET Environmental Services, Inc.

SITE PLAN
PG&E DISTRIBUTION CONSTRUCTION SITE
4930 COLISEUM WAY
OAKLAND, CA 94610

JOB NUMBER	DATE	DRAWING	BY	REVISED
3666	7/97	3666SITE	ESS	7/17

FIGURE 2

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

CET Environmental Services
3033 Richmond Parkway
Suite 300
Richmond, CA 94806

Date: 20-JUL-98
Lab Job Number: 134330
Project ID: 3932-000
Location: PG&E Colisuem Way

Reviewed by: Tracy B. Stone

Reviewed by:

CLIENT: CET Environmental Services
PROJECT ID: 3932-000
LOCATION: PG&E Colisuem Way
MATRIX: Filtrate

DATE REPORTED: 07/20/98

Metals Analytical Report

Lead									
Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
OW2	134330-002	06/29/98	06/30/98	ND	3.0	1	41797	EPA 6010A	07/08/98
OW5	134330-004	06/29/98	06/30/98	ND	3.0	1	41797	EPA 6010A	07/08/98
OW8	134330-007	06/29/98	06/30/98	ND	3.0	1	41797	EPA 6010A	07/08/98

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

Halogenated Volatile Organics
EPA 8010 Analyte List

Client:	CET Environmental Services	Analysis Method:	EPA 8260
Project#:	3932-000	Prep Method:	EPA 5030
Location:	PG&E Colisuem Way		

Field ID:	OW5	Sampled:	06/29/98
Lab ID:	134330-004	Received:	06/30/98
Matrix:	Water	Extracted:	07/06/98
Batch#:	41816	Analyzed:	07/06/98
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Chloromethane	ND	2.0
Vinyl Chloride	ND	2.0
Bromomethane	ND	2.0
Chloroethane	ND	2.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	1.0
1,1-Dichloroethene	ND	1.0
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	1.0	1.0
cis-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon Tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	ND	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	ND	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	2.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	109	85-121
Toluene-d8	99	92-110
Bromofluorobenzene	98	84-115

Halogenated Volatile Organics
EPA 8010 Analyte List

Client:	CET Environmental Services	Analysis Method:	EPA 8260
Project#:	3932-000	Prep Method:	EPA 5030
Location:	PG&E Colisuem Way		

Field ID:	OW6	Sampled:	06/29/98
Lab ID:	134330-005	Received:	06/30/98
Matrix:	Water	Extracted:	07/06/98
Batch#:	41816	Analyzed:	07/06/98
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Chloromethane	ND	2.0
Vinyl Chloride	ND	2.0
Bromomethane	ND	2.0
Chloroethane	ND	2.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	1.0
1,1-Dichloroethene	ND	1.0
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	3.3	1.0
cis-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon Tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	ND	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	ND	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	9.1	1.0
Bromoform	ND	2.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	30	1.0
1,4-Dichlorobenzene	84	1.0
1,2-Dichlorobenzene	3.0	1.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	108	85-121
Toluene-d8	99	92-110
Bromofluorobenzene	96	84-115

Halogenated Volatile Organics
EPA 8010 Analyte List

Client:	CET Environmental Services	Analysis Method:	EPA 8260
Project#:	3932-000	Prep Method:	EPA 5030
Location:	PG&E Colisuem Way		

Field ID:	OW7	Sampled:	06/29/98
Lab ID:	134330-006	Received:	06/30/98
Matrix:	Water	Extracted:	07/08/98
Batch#:	41842	Analyzed:	07/08/98
Units:	ug/L		
Diln Fac:	4		

Analyte	Result	Reporting Limit
Chloromethane	ND	8.0
Vinyl Chloride	ND	8.0
Bromomethane	ND	8.0
Chloroethane	ND	8.0
Trichlorofluoromethane	ND	4.0
Freon 113	ND	4.0
1,1-Dichloroethene	ND	4.0
Methylene Chloride	ND	80
trans-1,2-Dichloroethene	ND	4.0
1,1-Dichloroethane	4.1	4.0
cis-1,2-Dichloroethene	ND	4.0
Chloroform	ND	4.0
1,1,1-Trichloroethane	5.9	4.0
Carbon Tetrachloride	ND	4.0
1,2-Dichloroethane	ND	4.0
Trichloroethene	ND	4.0
1,2-Dichloropropane	ND	4.0
Bromodichloromethane	ND	4.0
cis-1,3-Dichloropropene	ND	4.0
trans-1,3-Dichloropropene	ND	4.0
1,1,2-Trichloroethane	ND	4.0
Tetrachloroethene	ND	4.0
Dibromochloromethane	ND	4.0
Chlorobenzene	27	4.0
Bromoform	ND	8.0
1,1,2,2-Tetrachloroethane	ND	4.0
1,3-Dichlorobenzene	340	4.0
1,4-Dichlorobenzene	450	4.0
1,2-Dichlorobenzene	50	4.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	101	85-121
Toluene-d8	99	92-110
Bromofluorobenzene	94	84-115

BTXE

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8020A
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
134330-001	OW1	41900	06/29/98	07/09/98	07/09/98	
134330-003	OW4	41900	06/29/98	07/09/98	07/09/98	
134330-004	OW5	41900	06/29/98	07/09/98	07/09/98	
134330-005	OW6	41900	06/29/98	07/09/98	07/09/98	

Matrix: Water

Analyte Diln Fac:	Units	134330-001 1	134330-003 1	134330-004 1	134330-005 1
Benzene	ug/L	<0.5	<0.5	<0.5	<0.5
Toluene	ug/L	0.67	<0.5	<0.5	<0.5
Ethylbenzene	ug/L	<0.5	<0.5	<0.5	<0.5
m,p-Xylenes	ug/L	<0.5	<0.5	<0.5	<0.5
o-Xylene	ug/L	<0.5	<0.5	<0.5	<0.5
Surrogate					
Trifluorotoluene	%REC	79	80	78	75
Bromofluorobenzene	%REC	97	82	77	80

BTXE

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8020A
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
134330-006	OW7	41900	06/29/98	07/09/98	07/09/98	
134330-008	OW9B	41900	06/29/98	07/09/98	07/09/98	

Matrix: Water

Analyte	Units	134330-006	134330-008
Diln Fac:		1	1
Benzene	ug/L	0.66	<0.5
Toluene	ug/L	<0.5	0.73
Ethylbenzene	ug/L	<0.5	<0.5
m,p-Xylenes	ug/L	<0.5	<0.5
o-Xylene	ug/L	<0.5	<0.5
Surrogate			
Trifluorotoluene	%REC	81	80
Bromofluorobenzene	%REC	97	78

TVH-Total Volatile Hydrocarbons

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
134330-001	OW1	41900	06/29/98	07/09/98	07/09/98	
134330-003	OW4	41900	06/29/98	07/09/98	07/09/98	
134330-004	OW5	41900	06/29/98	07/09/98	07/09/98	
134330-005	OW6	41900	06/29/98	07/09/98	07/09/98	

Matrix: Water

Analyte	Units	134330-001	134330-003	134330-004	134330-005
Diln Fac:		1	1	1	1
Gasoline C7-C12	ug/L	860 YZ	<50	<50	110 YZ
Surrogate					
Trifluorotoluene	%REC	112	113	110	106
Bromofluorobenzene	%REC	123	109	101	104

Y: Sample exhibits fuel pattern which does not resemble standard
Z: Sample exhibits unknown single peak or peaks

TVH-Total Volatile Hydrocarbons

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
134330-006	OW7	41900	06/29/98	07/09/98	07/09/98	
134330-008	OW9B	41900	06/29/98	07/09/98	07/09/98	

Matrix: Water

Analyte	Units	134330-006		134330-008
Diln Fac:		1		1
Gasoline C7-C12	ug/L	1000	YZ	<50
Surrogate				
Trifluorotoluene	%REC	113		112
Bromofluorobenzene	%REC	124		100

Y: Sample exhibits fuel pattern which does not resemble standard
Z: Sample exhibits unknown single peak or peaks

TEH-Tot Ext Hydrocarbons

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8015M
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
134330-001	OW1	41921	06/29/98	07/09/98	07/11/98	
134330-003	OW4	41921	06/29/98	07/09/98	07/11/98	
134330-004	OW5	41921	06/29/98	07/09/98	07/11/98	
134330-005	OW6	41921	06/29/98	07/09/98	07/11/98	

Matrix: Water

Analyte	Units	134330-001	134330-003	134330-004	134330-005
Diln Fac:		1	1	1	1
Diesel C12-C22	ug/L	1900 YH	1000 YH	630 YH	1300 YH
Surrogate					
Hexacosane	%REC	101	98	97	100

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard

TEH-Tot Ext Hydrocarbons

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8015M
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
134330-006	OW7	41921	06/29/98	07/09/98	07/11/98	

Matrix: Water

Analyte	Units	134330-006	
Diln Fac:		1	
Diesel C12-C22	ug/L	2600	YH
Surrogate			
Hexacosane	%REC	97	

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard

Curtis & Tompkins, Ltd.

CLIENT: CET Environmental Services
JOB NUMBER: 134330

DATE REPORTED: 07/20/98

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Lead	ND	3	ug/L	1	41797	EPA 6010A	07/07/98

ND = Not Detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: CET Environmental Services
JOB NUMBER: 134330

DATE REPORTED: 07/20/98

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Lead	500	541	535	ug/L	108	107	80-120	1	35	41797	EPA 6010A	07/07/98

Curtis & Tompkins, Ltd.

CLIENT: CET Environmental Services
JOB NUMBER: 134330

DATE REPORTED: 07/20/98

BATCH QC REPORT
SAMPLE DUPLICATE

Compound	Sample	Sample Result	Duplicate Result	Units	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Lead	134219-001	<3.000	<3.000	ug/L	NC	20	41797	EPA 6010A	07/07/98

NC = Not Calculable

Curtis & Tompkins, Ltd.

CLIENT: CET Environmental Services
JOB NUMBER: 134330

DATE REPORTED: 07/20/98

BATCH QC REPORT
SAMPLE SPIKE

Compound	Spike Amount	Sample	Sample Result	Spike Result	Units	Percent Rec.	Rec. Limit	QC Batch	Method	Analysis Date
Lead	500	134219-001	<3.000	517	ug/L	103	65-135	41797	EPA 6010A	07/07/98

Halogenated Volatile Organics
EPA 8010 Analyte List

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 41816
Units: ug/L
Diln Fac: 1

Prep Date: 07/06/98
Analysis Date: 07/06/98

MB Lab ID: QC74131

Analyte	Result	Reporting Limit
Chloromethane	ND	2.0
Vinyl Chloride	ND	2.0
Bromomethane	ND	2.0
Chloroethane	ND	2.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	1.0
1,1-Dichloroethene	ND	1.0
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon Tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	ND	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	ND	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	2.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	109	85-121
Toluene-d8	99	92-110
Bromofluorobenzene	99	84-115

Lab #: 134330

BATCH QC REPORT

Curtis & Tompkins, Ltd.

Halogenated Volatile Organics
EPA 8010 Analyte List

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 41842
Units: ug/L
Diln Fac: 1

Prep Date: 07/07/98
Analysis Date: 07/07/98

MB Lab ID: QC74236

Analyte	Result	Reporting Limit
Chloromethane	ND	2.0
Vinyl Chloride	ND	2.0
Bromomethane	ND	2.0
Chloroethane	ND	2.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	1.0
1,1-Dichloroethene	ND	1.0
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon Tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	ND	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	ND	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	2.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	100	85-121
Toluene-d8	99	92-110
Bromofluorobenzene	99	84-115

Lab #: 134330

BATCH QC REPORT

Curtis & Tompkins, Ltd.

Halogenated Volatile Organics
EPA 8010 Analyte List

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 41842
Units: ug/L
Diln Fac: 1

Prep Date: 07/07/98
Analysis Date: 07/07/98

MB Lab ID: QC74237

Analyte	Result	Reporting Limit
Chloromethane	ND	2.0
Vinyl Chloride	ND	2.0
Bromomethane	ND	2.0
Chloroethane	ND	2.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	1.0
1,1-Dichloroethene	ND	1.0
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon Tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	ND	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	ND	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	2.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	100	85-121
Toluene-d8	100	92-110
Bromofluorobenzene	98	84-115

BATCH QC REPORT

Curtis & Tompkins, Ltd.

Halogenated Volatile Organics

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8260
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 134365-003
Matrix: Water
Batch#: 41842
Units: ug/L
Diln Fac: 1

Sample Date: 07/01/98
Received Date: 07/02/98
Prep Date: 07/07/98
Analysis Date: 07/07/98

MS Lab ID: QC74263

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<1	45.97	92	63-126
Trichloroethene	50	<1	45.88	92	69-117
Chlorobenzene	50	<1	45.78	92	79-115

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	99	85-121
Toluene-d8	99	92-110
Bromofluorobenzene	97	84-115

MSD Lab ID: QC74264

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	44.44	89	63-126	3	10
Trichloroethene	50	44.9	90	69-117	2	10
Chlorobenzene	50	44.62	89	79-115	3	10

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	99	85-121
Toluene-d8	99	92-110
Bromofluorobenzene	97	84-115

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 3 outside limits
Spike Recovery: 0 out of 6 outside limits

Halogenated Volatile Organics

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8260
Prep Method: EPA 5030

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 41816
Units: ug/L
Diln Fac: 1

Prep Date: 07/06/98
Analysis Date: 07/06/98

BS Lab ID: QC74129

Analyte	Spike Added	BS	%Rec #	Limits
1,1-Dichloroethene	50	58.55	117	69-137
Trichloroethene	50	56.61	113	83-116
Chlorobenzene	50	54.41	109	87-117

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	106	85-121
Toluene-d8	99	92-110
Bromofluorobenzene	99	84-115

BSD Lab ID: QC74130

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	56.4	113	69-137	4	14
Trichloroethene	50	54.72	109	83-116	3	10
Chlorobenzene	50	54.36	109	87-117	0	10

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	107	85-121
Toluene-d8	98	92-110
Bromofluorobenzene	98	84-115

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 3 outside limits
Spike Recovery: 0 out of 6 outside limits

Lab #: 134330

BATCH QC REPORT

Curtis & Tompkins, Ltd.

Halogenated Volatile Organics

Client:	CET Environmental Services	Analysis Method:	EPA 8260
Project#:	3932-000	Prep Method:	EPA 5030
Location:	PG&E Colisuem Way		

LABORATORY CONTROL SAMPLE

Matrix:	Water	Prep Date:	07/07/98
Batch#:	41842	Analysis Date:	07/07/98
Units:	ug/L		
Diln Fac:	1		

LCS Lab ID: QC74242

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	48.19	50	96	69-137
Trichloroethene	47.97	50	96	83-116
Chlorobenzene	48.11	50	96	87-117

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	98	85-121
Toluene-d8	99	92-110
Bromofluorobenzene	101	84-115

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 3 outside limits

Lab #: 134330

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client:	CET Environmental Services	Analysis Method:	EPA 8015M
Project#:	3932-000	Prep Method:	EPA 5030
Location:	PG&E Colisuem Way		

METHOD BLANK

Matrix:	Water	Prep Date:	07/09/98
Batch#:	41900	Analysis Date:	07/09/98
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC74457

Analyte	Result
Gasoline C7-C12	<50

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	106	59-162
Bromofluorobenzene	98	59-162

Lab #: 134330

BATCH QC REPORT

Curtis & Tompkins, Ltd.

BTXE

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8020A
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 41900
Units: ug/L
Diln Fac: 1

Prep Date: 07/09/98
Analysis Date: 07/09/98

MB Lab ID: QC74457

Analyte	Result
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylenes	<0.5
o-Xylene	<0.5

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	75	53-124
Bromofluorobenzene	73	41-142

BTXE

Client: CET Environmental Services
Project#: 3932-000
Location: PG&E Colisuem Way

Analysis Method: EPA 8020A
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 41900
Units: ug/Kg
Diln Fac: 1

Prep Date: 07/09/98
Analysis Date: 07/09/98

LCS Lab ID: QC74456

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	15.43	20	77	69-109
Toluene	17.82	20	89	72-116
Ethylbenzene	16.93	20	85	67-120
m,p-Xylenes	37.05	20	93	69-117
o-Xylene	18.25	20	91	75-122

Surrogate	%Rec	Limits
Trifluorotoluene	76	53-124
Bromofluorobenzene	76	41-142

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

TVH-Total Volatile Hydrocarbons

Client:	CET Environmental Services	Analysis Method:	EPA 8015M
Project#:	3932-000	Prep Method:	EPA 5030
Location:	PG&E Colisuem Way		

LABORATORY CONTROL SAMPLE

Matrix:	Water	Prep Date:	07/09/98
Batch#:	41900	Analysis Date:	07/09/98
Units:	ug/L		
Diln Fac:	1		

LCS Lab ID: QC74455

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	2138	2000	107	80-119

Surrogate	%Rec	Limits
Trifluorotoluene	143	59-162
Bromofluorobenzene	103	59-162

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Lab #: 134330 BATCH QC REPORT Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client:	CET Environmental Services	Analysis Method:	EPA 8015M
Project#:	3932-000	Prep Method:	EPA 5030
Location:	PG&E Colisuem Way		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID:	ZZZZZZ	Sample Date:	06/30/98
Lab ID:	134335-001	Received Date:	06/30/98
Matrix:	Water	Prep Date:	07/10/98
Batch#:	41900	Analysis Date:	07/10/98
Units:	ug/L		
Diln Fac:	1		

MS Lab ID: QC74458

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline C7-C12	2000	<50	2162	108	71-131

Surrogate	%Rec	Limits
Trifluorotoluene	152	59-162
Bromofluorobenzene	117	59-162

MSD Lab ID: QC74459

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline C7-C12	2000	2168	108	71-131	0	26

Surrogate	%Rec	Limits
Trifluorotoluene	152	59-162
Bromofluorobenzene	119	59-162

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

TEH-Tot Ext Hydrocarbons

Client:	CET Environmental Services	Analysis Method:	EPA 8015M
Project#:	3932-000	Prep Method:	EPA 3520
Location:	PG&E Colisuem Way		

METHOD BLANK

Matrix:	Water	Prep Date:	07/09/98
Batch#:	41921	Analysis Date:	07/10/98
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC74543

Analyte	Result
Diesel C12-C22	<50

Surrogate	%Rec	Recovery Limits
Hexacosane	103	53-136

Lab #: 134330 BATCH QC REPORT Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client:	CET Environmental Services	Analysis Method:	EPA 8015M
Project#:	3932-000	Prep Method:	EPA 3520
Location:	PG&E Colisuem Way		

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix:	Water	Prep Date:	07/09/98
Batch#:	41921	Analysis Date:	07/11/98
Units:	ug/L		
Diln Fac:	1		

BS Lab ID: QC74544

Analyte	Spike Added	BS	%Rec	#	Limits
Diesel C12-C22	2475	1999	81		58-110

Surrogate	%Rec	Limits
Hexacosane	97	53-136

BSD Lab ID: QC74545

Analyte	Spike Added	BSD	%Rec	#	Limits	RPD	#	Limit
Diesel C12-C22	2475	2099	85		58-110	5		21

Surrogate	%Rec	Limits
Hexacosane	98	53-136

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

Halogenated Volatile Organics
EPA 8010 Analyte List

Client:	CET Environmental Services	Analysis Method:	EPA 8260
Project#:	3932-000	Prep Method:	EPA 5030
Location:	PG&E Colisuem Way		

Field ID:	OW9B	Sampled:	06/29/98
Lab ID:	134330-008	Received:	06/30/98
Matrix:	Water	Extracted:	07/06/98
Batch#:	41816	Analyzed:	07/06/98
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Chloromethane	ND	2.0
Vinyl Chloride	ND	2.0
Bromomethane	ND	2.0
Chloroethane	ND	2.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	1.0
1,1-Dichloroethene	ND	1.0
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon Tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Trichloroethene	ND	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethene	ND	1.0
Dibromochloromethane	ND	1.0
Chlorobenzene	ND	1.0
Bromoform	ND	2.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	110	85-121
Toluene-d8	98	92-110
Bromofluorobenzene	98	84-115

CET ENVIRONMENTAL SERVICES INC.

LABORATORY ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

C - 6506

Page 1 Of 1

Project Name: PG&E Coliseum Way

Site Address/Location: PG&E @ Coliseum Way

Project No./P.O. No.: 3932.1000

Project Manager: Aaron Stessman

Sampler (Printed Name): ~~Vicky Atkinson~~

Sampler Signature:

G=glass jar AG = amber glass jar V=glass VOA P=plastic S=stainless or brass sleeve

S=soil W=water SL=sludge O=other

1=none 2=HCl 3=HNO_3 4=H_2SO_4 0=other

ANALYSES REQUESTED

	SAMPLE ID	LOCATION DESCRIPTION	DATE	TIME	Comp.	Grab	No. Of Containers	Container Type	Matrix	Pres.	8015-g TPH-gasoline	8015-d TPH-diesel	8020 BTEX	8015 Full Range Carbon Speciation	Lead - filter first	8010 Metals						Turnaround Time - R=Rush N=Normal O=Other	SAMPLE REMARKS INSTRUCTIONS
1	1	OW1		6/29/98 1135		X	5	V, AG	water		X	X	X									N	
2	2	OW2		" 1215			1	P	"						X							N	filter lead sample
3	3	OW4		" 1205			5	V, AG	"		X	X	X									N	
4	4	OW5		" 1355			8	V, AG P	"		X	X	X		X	X						N	filter lead sample
5	5	OW6		" 1245			7	V, AG	"		X	X	X			X						N	
6	6	OW7		" 1315			11	V, AG	"		X	X	X			X						N	
7	7	OW8		" 1340			1	P	"						X							N	filter lead sample
8	8	OW9B		" 1405		~~X~~	2	V, AG P	"		X	[redacted]	X	[redacted]		X						AL	~~filter lead sample~~
	9																						
	10																						
	11																						
	12																						

	Printed Name:	Company:	Date:	Time:
Relinquished By: (Signature) C. Barnett	C. Barnett	CET	6/29/98	15:36
Received By: (Signature)	J. GUERRERO	C-T	6-29-98	15:36
Relinquished By: (Signature)				
Received By (Signature)				

Sample Conditions

Received on Ice Yes No

COC Seal Yes No

Received Intact Yes No

Special Remarks:

Send Results To:

CET Environmental Services, Inc.
3033 Richmond Parkway
Suite 300
Richmond, CA 94806
Ph (510) 243-9500
Fx (510) 243-9501

Attn: Vicky Atkinson

APPENDIX B

Historical Monitoring Data

Well ID	MCL	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1	OW-1
Date	ug/L	Apr-88	Oct-89	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	Apr-91	Jul-91	Dec-91	Mar-92	Jul-92	Oct-92	Jan-93	Apr-93	Jul-93	Oct-93	Jan-94	Jul-94	Jun-95	Nov-95	Jun-96	Oct-96	Apr,Jun-97	Dec-97	Jun-98
PURGEABLE HALOCARBONS																											
Chloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	5#	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	5	ND	5	4	4	2	2	1	2.6	4.6	ND	ND	ND	1	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Freon 113	1200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	0.5	ND	ND	ND	ND	ND	ND	ND	0.63	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene		NA	NA	1	4	4	1	3	1.8	2.9	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600#	NA	NA	ND	ND	ND	ND	ND	0.58	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	5	4	11	5	13	11	6	3	6.7	14	3.2	ND	4	3	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PURGEABLE AROMATICS																											
Benzene	1	ND	ND	3.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	NA	ND	ND	ND	ND	0.66	ND
Toluene	1000#	ND	ND	2.3	0.4	ND	ND	ND	ND	ND	ND	ND	0.7	ND	ND	NA	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	0.67
Ethylbenzene	680	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	0.6	NA	ND	NA	ND	ND	NA	ND	ND	ND	ND	2.3	ND
Total Xylenes	1750**		ND	2.6	2.4	ND	ND	ND	ND	ND	ND	3.2	9	1.7	1.9	NA	ND	NA	2.5	ND	NA	ND	ND	ND	ND	1.1	ND
TOTAL VOCs		4	16	18.1	23.8	17	9	7	13.41	21.5	3.2	3.2	15.7	5.7	8.5	NA	NA	NA	2.5	NA	NA	NA	NA	NA	NA	4.06	0.67
HYDROCARBONS																											
TVH-g		NA	NA	< 50	82	< 50	< 50	< 500	NA	NA	NA	100	320	< 50	70	NA	NA	NA	80	60	400	230	500	830	590	420	860
TEPH-d		< 1000	< 1000	190	300	200	200	90	< 200	< 50	1600	3100	3900	1000	2000	NA	2300	NA	1000	1500	740	1000	2300	1400	1500	700	1900
O&G		< 5000	16000	NA	NA	NA	NA	NA	NA	< 5000	< 5000	< 5000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH (418.1)		NA	NA	< 5000	< 5000	< 5000	< 5000	< 5000	< 500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS																											
Lead	50	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA

Notes:

1) MCL = Maximum Contaminant Level in drinking water (State MCL if not noted otherwise)
2) # = EPA MCL
3) * = MCL for sum of four compounds
4) ** = MCL for sum of all xylene isomers
5) *** = MCL for sum of trans- and cis-1,3-Dichloropropene
6) ND = Not Detected at or above MDL
7) Purgeable Halocarbons (EPA method 8010)
8) Purgeable Aromatics (EPA method 8020)
9) NA = Not Tested

Well ID	MCL	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2	OW-2
Date	ug/L	Apr-88	Oct-89	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	Apr-91	Jul-91	Dec-91	Mar-92	Jul-92	Oct-92	Jan-93	Apr-93	Jul-93	Oct-93	Jan-94	Apr-94	Jul-94	Jun-95	Nov-95	Jun-96	Oct-96	Apr,Jun-97	Dec-97	Jun-98
PURGEABLE HALOCARBONS																											
Chloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	5#	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	6	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Freon 113	1200	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	0.53	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene		NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600#	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PURGEABLE AROMATICS																											
Benzene	1	ND	ND	0.4	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	1000#	ND	ND	0.4	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	680	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes	1750**		ND	0.4	0.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL VOCs		NA	NA	1.2	1.4	NA	NA	NA	0.53	NA	NA	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HYDROCARBONS																											
TVH-g		NA	NA	< 50	< 50	< 50	< 50	< 50	NA	NA	NA	< 50	< 50	< 50	< 50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEPH-d		< 1000	< 1000	130	140	68	90	< 50	< 200	< 50	650	670	410	410	620	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O&G		16000	16000	NA	NA	NA	NA	NA	NA	< 5000	< 5000	< 5000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH (418.1)		NA	NA	< 5000	< 5000	< 5000	< 5000	< 5000	< 500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS																											
Lead	50	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	8	ND	4.1	ND	ND	ND	ND	ND	ND

Notes:
1) MCL = Maximum Contaminant Level in drinking water (State MCL if not noted otherwise)
2) # = EPA MCL
3) * = MCL for sum of four compounds
4) ** = MCL for sum of all xylene isomers
5) *** = MCL for sum of trans- and cis-1,3-Dichloropropene
6) ND = Not Detected at or above MDL
7) Purgeable Halocarbons (EPA method 8010)
8) Purgeable Aromatics (EPA method 8020)
9) NA = Not Tested

Well ID	MCL	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4	OW-4
Date	ug/L	Jun-88	Oct-89	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	Apr-91	Jul-91	Dec-91	Mar-92	Jul-92	Oct-92	Jan-93	Apr-93	Jul-93	Oct-93	Jan-94	Jul-94	Jun-95	Nov-95	Jun-96	Oct-96	Apr,Jun-97	Dec-97	Jul-98
PURGEABLE HALOCARBONS																											
Chloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	5#	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	3	6.1	9.4	ND	7	4	4	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	6	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Freon 113	1200	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	0.5	ND	ND	ND	ND	ND	ND	ND	0.49	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600#	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PURGEABLE AROMATICS																											
Benzene	1	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Toluene	1000#	ND	ND	ND	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Ethylbenzene	680	ND	ND	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Total Xylenes	1750**	ND	ND	0.6	2	ND	ND	ND	ND	ND	ND	0.7	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
TOTAL VOCs		NA	NA	0.6	3.4	NA	NA	3	6.59	9.4	NA	7.7	4	4	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HYDROCARBONS																											
TVH-g		NA	NA	<50	<50	<50	<50	<50	NA	NA	NA	< 50	< 50	< 50	< 50	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
TEPH-d		< 1000	< 1000	150	210	150	150	<50	580	< 50	2000	2100	820	1300	2100	NA	1500	NA	NA	NA	1600	630	1100	840	980	NA	1000
O&G		< 5000	< 5000	NA	NA	NA	NA	NA	NA	< 5000	< 5000	< 5000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH (418.1)		NA	NA	< 5000	< 5000	< 5000	< 5000	< 5000	< 500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS																											
Lead	50	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	5	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) MCL = Maximum Contaminant Level in drinking water (State MCL if not noted otherwise)
2) # = EPA MCL
3) * = MCL for sum of four compounds
4) ** = MCL for sum of all xylene isomers
5) *** = MCL for sum of trans- and cis-1,3-Dichloropropene
6) ND = Not Detected at or above MDL
7) Purgeable Halocarbons (EPA method 8010)
8) Purgeable Aromatics (EPA method 8020)
9) NA = Not Tested

Well ID	MCL	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5	OW-5
Date	ug/L	Apr-91	Jul-91	Dec-91	Mar-92	Jul-92	Oct-92	Jan-93	Jul-93	Oct-93	Jan-94	Apr-94	Jul-94	Jun-95	Nov95	Jun-96	Oct-96	Apr,Jun-97	Dec-97	Jun-98
PURGEABLE HALOCARBONS																				
Chloromethane		ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	0.5	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5#	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	67	ND	ND	ND	ND	ND
Trichlorofluoromethane	150	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	6	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	1.8	7.2	ND	4	6	13	5	6	NA	2	NA	4	3.2	7.9	2.5	6.9	5.3	2.9	1
cis-1,2-Dichloroethene	6	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	10	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	100#*	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	1200	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.5	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	200	6	26	18	12	25	28	7	7	NA	2	NA	3	1.3	2.1	ND	1.3	ND	ND	ND
Carbon Tetrachloride	0.5	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	100#*	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	0.75	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	32	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	100#*	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA
Bromoform	100#*	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	0.7	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	30	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	600#	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
PURGEABLE AROMATICS																				
Benzene	1	14	20	11	15	11	13	26	14	NA	21	NA	11		11	15	18	3.8	15	ND
Toluene	1000#	0.54	ND	ND	1.1	ND	ND	ND	ND	NA	ND	NA	ND		ND	ND	ND	ND	ND	ND
Ethylbenzene	680	0.58	ND	ND	0.6	ND	ND	0.7	ND	NA	0.7	NA	0.6		ND	ND	ND	ND	ND	ND
Total Xylenes	1750**	5.6	4	6.9	5.1	6	3.6	13	2.4	NA	9.2	NA	1.3		ND	ND	ND	ND	2.74	ND
TOTAL VOCs		29.97	57.2	35.9	37.8	50	57.6	51.7	29.4	NA	34.9	NA	19.9	4.5	88	17.5	26.2	9.1	20.64	1
HYDROCARBONS																				
TVH-g		NA	NA	NA	120	270	160	350	140	NA	370	NA	110	ND	ND	ND	ND	ND	83	ND
TEPH-d		600	1500	1200	840	650	1000	1000	1600	NA	510	NA	1300	510	1600	830	870	740	630	630
O&G		NA	< 5000	< 5000	< 5000	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA
TPH (418.1)		< 500	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA
METALS																				
Lead	50	ND	NA	NA	ND	ND	ND	ND	ND	ND	7.3	7.4	5	ND	ND	ND	ND	5	ND	ND

Notes:
1) MCL = Maximum Contaminant Level in drinking water (State MCL if not noted otherwise)
2) # = EPA MCL
3) * = MCL for sum of four compounds
4) ** = MCL for sum of all xylene isomers
5) *** = MCL for sum of trans- and cis-1,3-Dichloropropene
6) ND = Not Detected at or above MDL
7) Purgeable Halocarbons (EPA method 8010)
8) Purgeable Aromatics (EPA method 8020)
9) NA = Not Tested

Well ID	MCL	OW-3	OW-3	OW-3	OW-3	OW-3	OW-3	OW-3	OW-3	OW-3	OW-3	OW-6	OW-6	OW-6	OW-6	OW-6	OW-6	OW-6	OW-6	OW-6	OW-6	OW-6	OW-6	OW-6	OW-6	OW-6	OW-6
Date	ug/L	Apr-88	Jun-88	Oct-89	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	Apr-91	Jul-91	Dec-91	Mar-92	Jul-92	Oct-92	Jan-93	Jul-93	Oct-93	Jan-94	Jul-94	Jun-95	Nov-95	Jun-96	Oct-96	Apr,Jun-97	Dec-97	Jun-98
PURGEABLE HALOCARBONS																											
Chloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5#	ND	ND	ND	ND	9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	49	ND	ND	ND	ND	ND
Trichlorofluoromethane	150	ND	ND	ND	ND	ND	ND	ND	ND	0.82	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	4	5	28	29	14	17	17	15	16	41	ND	1	2	2	10	23	NA	7	17	31	8.8	10	5.4	7	7.7	3.3
cis-1,2-Dichloroethene	6	NA	NA	ND	ND	33	ND	1	1	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	10	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	100#*	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	1200	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.5	ND	ND	ND	ND	ND	ND	ND	ND	0.55	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	200	ND	ND	ND	ND	ND	ND	ND	ND	2.5	ND	ND	ND	ND	ND	10	18	NA	ND	ND	3.9	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	NA	NA
Bromoform	100#*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	30	ND	1	ND	ND	ND	ND	ND	1	2.3	2	5.7	ND	ND	ND	ND	ND	NA	ND	2	4.5	ND	5.2	1	4.5	26	9.1
1,3-Dichlorobenzene		NA	NA	NA	3	ND	2	2	1	3.3	ND	15	ND	ND	ND	ND	ND	NA	ND	ND	11	7.4	20	10	25	46	30
1,2-Dichlorobenzene	600#	NA	NA	NA	2	ND	1	1	1	2.3	ND	5.8	ND	ND	ND	ND	ND	NA	ND	ND	23	ND	2.4	ND	2.1	6.3	3
1,4-Dichlorobenzene	5	NA	NA	NA	2	ND	ND	2	1	3.1	ND	23	ND	ND	ND	ND	ND	NA	ND	ND	2.9	16	46	26	65	140	84
PURGEABLE AROMATICS																											
Benzene	1	ND	ND	ND	0.5	ND	ND	ND	ND	0.54	ND	ND	ND	ND	ND	ND	0.6	NA	ND	ND	ND	ND	ND	ND	ND	0.5	ND
Toluene	1000#	ND	ND	ND	0.4	0.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	680	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	NA	ND	ND	ND	ND	ND	ND	ND	35	ND
Total Xylenes	1750**			ND	0.7	2.1	ND	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs		6	8	28	37.6	59.4	20	23	20	32.81	43	51.5	1	2	2	20	42.7	NA	7	19	76.3	81.2	83.6	42.4	103.6	261.5	129.4
HYDROCARBONS																											
TVH-g		NA	NA	NA	< 50	52	< 50	< 50	< 50	NA	NA	NA	< 50	< 50	< 50	< 50	< 50	NA	70	<50	ND	ND	61	ND	83	160	110
TEPH-d		< 1000	< 1000	< 1000	440	470	450	130	1310	700	< 50	5500	4900	3500	3900	5300	3500	NA	2200	2500	1300	2400	2000	2400	1300	1200	1300
O&G		< 5000	< 5000	5000	NA	NA	NA	NA	NA	NA	< 5000	< 5000	< 5000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH (418.1)		NA	NA	NA	< 5000	< 5000	< 5000	< 5000	< 5000	< 500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS																											
Lead	50	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) MCL = Maximum Contaminant Level in drinking water (State MCL if not noted otherwise)
2) # = EPA MCL
3) * = MCL for sum of four compounds
4) ** = MCL for sum of all xylene isomers
5) *** = MCL for sum of trans- and cis-1,3-Dichloropropene
6) ND = Not Detected at or above MDL
7) Purgeable Halocarbons (EPA method 8010)
8) Purgeable Aromatics (EPA method 8020)
9) NA = Not Tested

Well ID	MCL	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7	OW-7
Date	ug/L	Dec-91	Mar-92	Jul-92	Oct-92	Jan-93	Apr-93	Jul-93	Oct-93	Jan-94	Jul-94	Jun-95	Nov-95	Jun-96	Oct-96	Apr,Jun-97	Dec-97	Jun-98
PURGEABLE HALOCARBONS																		
Chloromethane		ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane		ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	0.5	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5#	14	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	570	ND	ND	ND	ND	ND
Trichlorofluoromethane	150	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	6	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	16	ND	ND	25	NA	14	NA	8	ND	5.5	25	6.5	6.6	4.3	9.8	4.1
cis-1,2-Dichloroethene	6	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	10	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	100#*	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	1200	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.5	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	200	10	460	29	80	530	NA	73	NA	76	28	33	41	18	6.6	7.9	31	5.9
Carbon Tetrachloride	0.5	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	100#*	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	5	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	32	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	5***	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	100#*	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	NA	NA
Bromoform	100#*	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	1	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	30	10	ND	ND	8	ND	NA	29	NA	21	24	12	34	25	31	25	46	27
1,3-Dichlorobenzene		460	130	420	330	170	NA	540	NA	450	570	270	400	380	440	290	360	340
1,2-Dichlorobenzene	600#	120	22	95	77	33	NA	470	NA	78	100	290	61	62	74	47	57	50
1,4-Dichlorobenzene	5	440	120	400	290	160	NA	110	NA	410	540	51	480	500	580	410	530	450
PURGEABLE AROMATICS																		
Benzene	1	ND	0.8	1	1.4	0.6	NA	1.5	NA	1.6	1.2		1.1	ND	ND	0.56	1.6	0.66
Toluene	1000#	ND	0.6	0.5	ND	ND	NA	ND	NA	ND	ND		ND	ND	ND	ND	ND	ND
Ethylbenzene	680	ND	ND	0.5	ND	ND	NA	ND	NA	ND	ND		ND	ND	ND	ND	70	ND
Total Xylenes	1750**	ND	2.1	5	ND	ND	NA	ND	NA	4.2	ND		ND	ND	ND	ND	1.1	ND
TOTAL VOCs		1054	751.5	951	786.4	918.6	NA	1237.5	NA	1048.8	1263.2	661.5	1612.1	991.5	1118.2	784.76	1106.5	877.66
HYDROCARBONS																		
TVH-g		NA	700	1300	1400	720	NA	1500	NA	1400	1800	650	980	1200	1500	1100	1100	1000
TEPH-d		7100	4400	2800	3900	2300	NA	4900	NA	4500	4800	1600	4400	4600	4800	2600	2100	2600
O&G		< 5000	< 5000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH (418.1)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS																		
Lead	50	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) MCL = Maximum Contaminant Level in drinking water (State MCL if not noted otherwise)
2) # = EPA MCL
3) * = MCL for sum of four compounds
4) ** = MCL for sum of all xylene isomers
5) *** = MCL for sum of trans- and cis-1,3-Dichloropropene
6) ND = Not Detected at or above MDL
7) Purgeable Halocarbons (EPA method 8010)
8) Purgeable Aromatics (EPA method 8020)
9) NA = Not Tested

Well ID	OW-8	OW-8	OW-8	OW-8	OW-8	OW-8	OW-8	OW-8	OW-8	OW-8	OW-8	OW-8	OW-8
Date	Apr-93	Jul-93	Oct-93	Jan-94	Apr-94	Jul-94	Jun-95	Nov-95	Jun-96	Oct-96	Apr,Jun-97	Dec-97	Jun-97
PURGEABLE HALOCARBONS													
Chloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Freon 113	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroethylvinyl Ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PURGEABLE AROMATICS													
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL VOCs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HYDROCARBONS													
TVH-g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEPH-d	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O&G	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH (418.1)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS													
Lead	27	17	ND	25	12	24	3.2	ND	ND	ND	ND	ND	ND

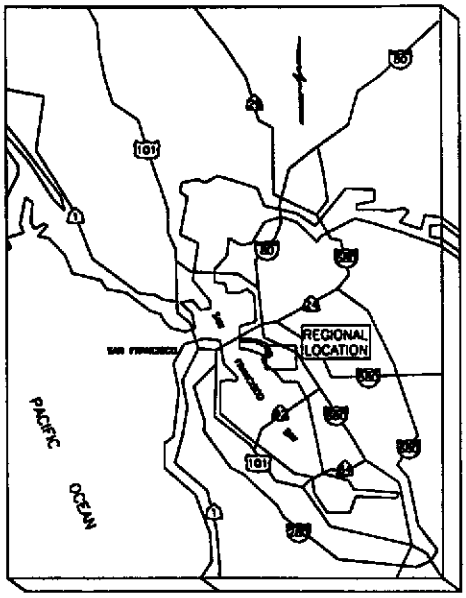
Notes:
1) MCL = Maximum Contaminant Level in drinking water (State MCL if not noted otherwise)
2) # = EPA MCL
3) * = MCL for sum of four compounds
4) ** = MCL for sum of all xylene isomers
5) *** = MCL for sum of trans- and cis-1,3-Dichloropropene
6) ND = Not Detected at or above MDL
7) Purgeable Halocarbons (EPA method 8010)
8) Purgeable Aromatics (EPA method 8020)
9) NA = Not Tested

Well ID	MCL	OW-9B
Date	ug/L	Jun-98
PURGEABLE HALOCARBONS		
Chloromethane		ND
Bromomethane		ND
Vinyl chloride	0.5	ND
Chloroethane		ND
Methylene Chloride	5#	ND
Trichlorofluoromethane	150	ND
1,1-Dichloroethene	6	ND
1,1-Dichloroethane	5	ND
cis-1,2-Dichloroethene	6	ND
trans-1,2-Dichloroethene	10	ND
Chloroform	100#*	ND
Freon 113	1200	ND
1,2-Dichloroethane	0.5	ND
1,1,1-Trichloroethane	200	ND
Carbon Tetrachloride	0.5	ND
Bromodichloromethane	100#*	ND
1,2-Dichloropropane	5	ND
cis-1,3-Dichloropropene	5***	ND
Trichloroethene	5	ND
1,1,2-Trichloroethane	32	ND
trans-1,3-Dichloropropene	5***	ND
Dibromochloromethane	100#*	ND
2-Chloroethylvinyl Ether		NA
Bromoform	100#*	ND
Tetrachloroethene	5	ND
1,1,2,2-Tetrachloroethane	1	ND
Chlorobenzene	30	ND
1,3-Dichlorobenzene		ND
1,2-Dichlorobenzene	600#	ND
1,4-Dichlorobenzene	5	ND
PURGEABLE AROMATICS		
Benzene	1	ND
Toluene	1000#	0.73
Ethylbenzene	680	ND
Total Xylenes	1750**	ND
TOTAL VOCs		0.73
HYDROCARBONS		
TVH-g		ND
TEPH-d		NA
O&G		NA
TPH (418.1)		NA
METALS		
Lead	50	NA

Notes:
1) MCL = Maximum Contaminant Level in drinking water (State MCL if not noted otherwise)
2) # = EPA MCL
3) * = MCL for sum of four compounds
4) ** = MCL for sum of all xylene isomers
5) *** = MCL for sum of trans- and cis-1,3-Dichloropropene
6) ND = Not Detected at or above MDL
7) Purgeable Halocarbons (EPA method 8010)
8) Purgeable Aromatics (EPA method 8020)
9) NA = Not Tested

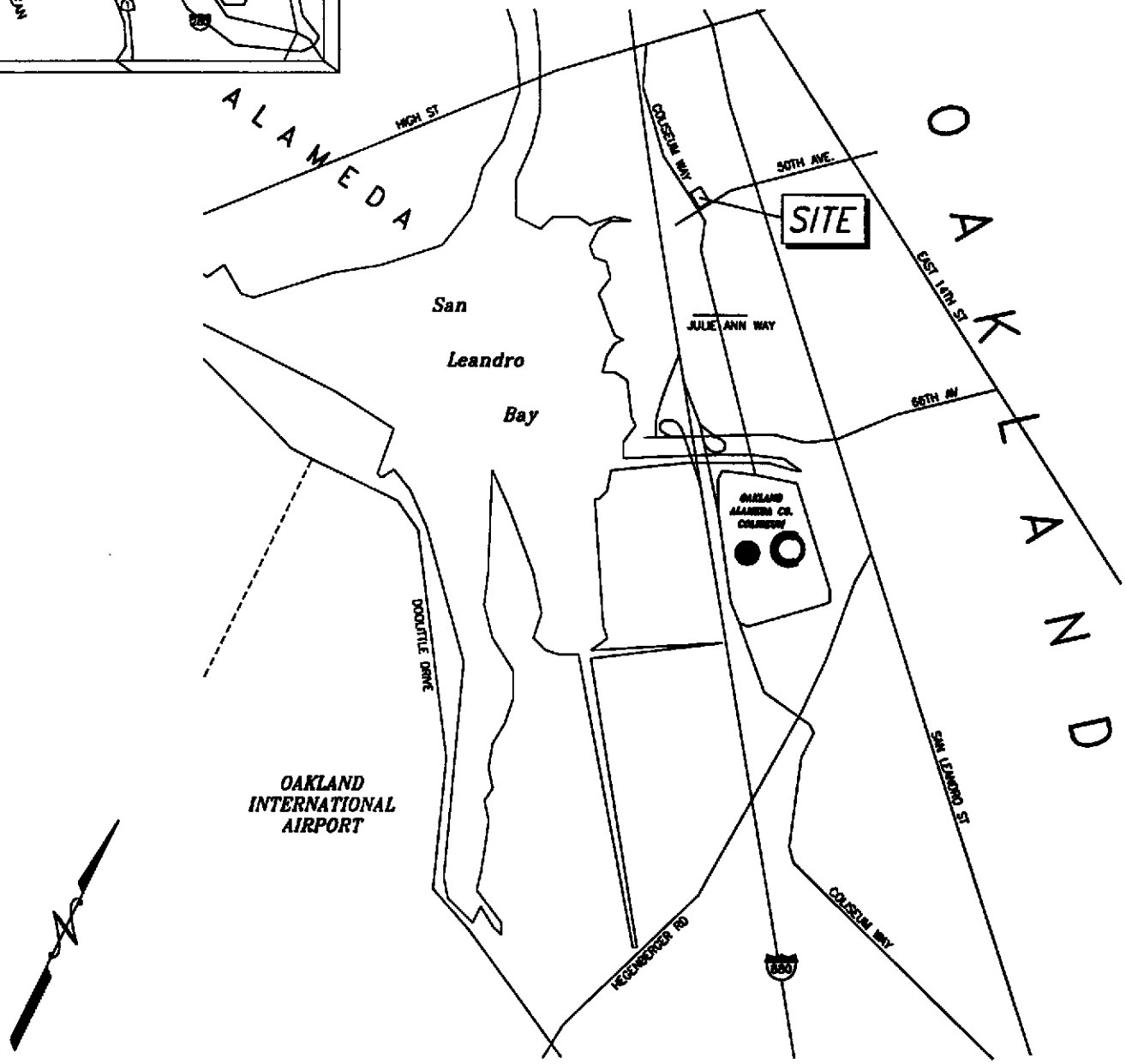
APPENDIX C

Figures

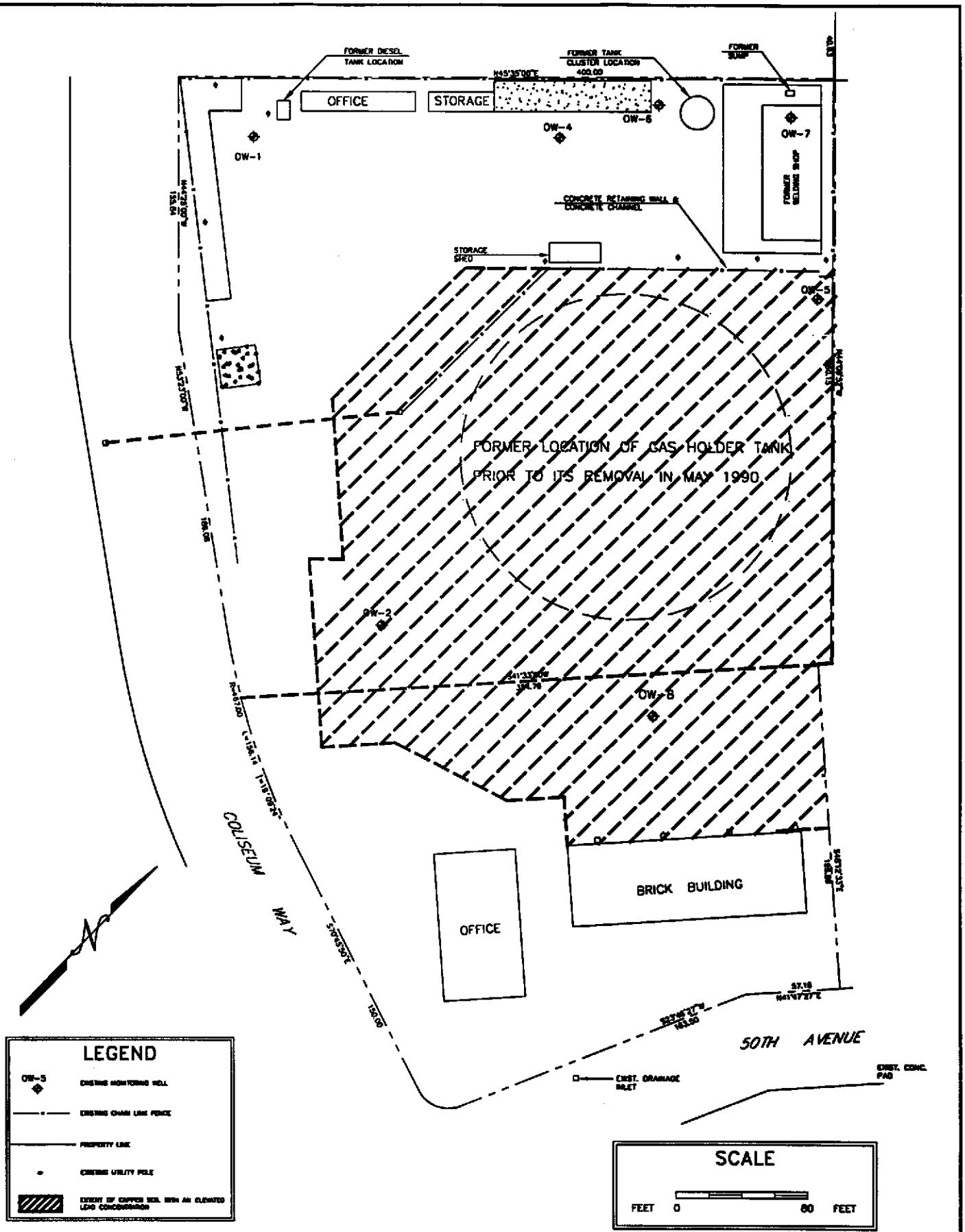


SCALE

MILE 0 1 MILE



CET Environmental Services, Inc.	SITE LOCATION MAP PG & E DISTRIBUTION CONSTRUCTION SITE 4930 COLISEUM WAY OAKLAND, CA 94610				FIGURE
	JOB NUMBER	DATE	DRAWING	BY	REVISED
	3666	07/95	3666LOC	LONG	07/19
					1



CET Environmental Services, Inc.

SITE PLAN
PG&E DISTRIBUTION CONSTRUCTION SITE
4930 COLISEUM WAY
OAKLAND, CA 94610

FIGURE 2

JOB NUMBER	DATE	DRAWING	BY	REVISED
3666	11/96	3666SITE	ESS	11/05

FIGURE 3.1
TPH-DIESEL in OW - 1, 2, & 5

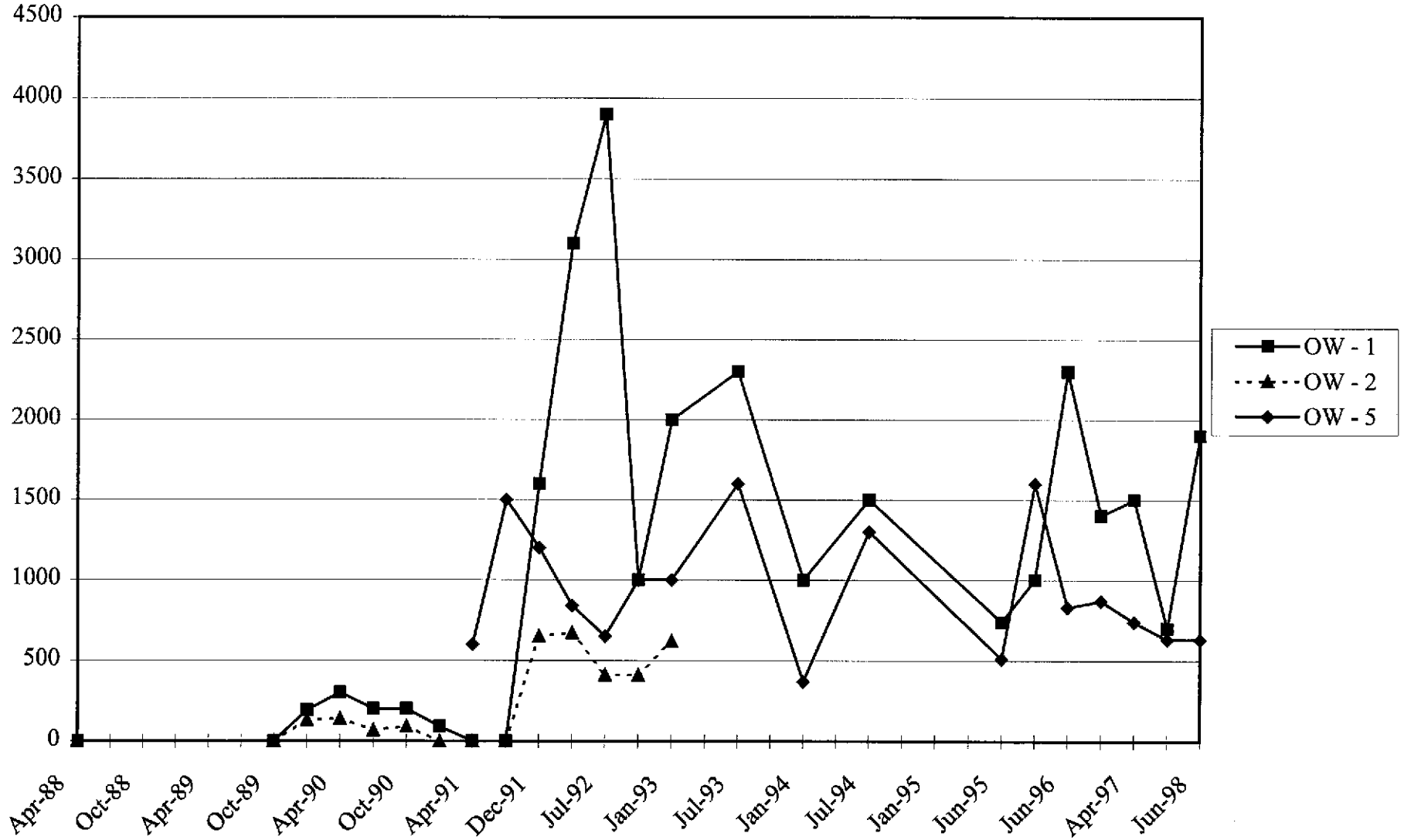


FIGURE 3.2
TPH-DIESEL in OW - 4, 3/6, & 7

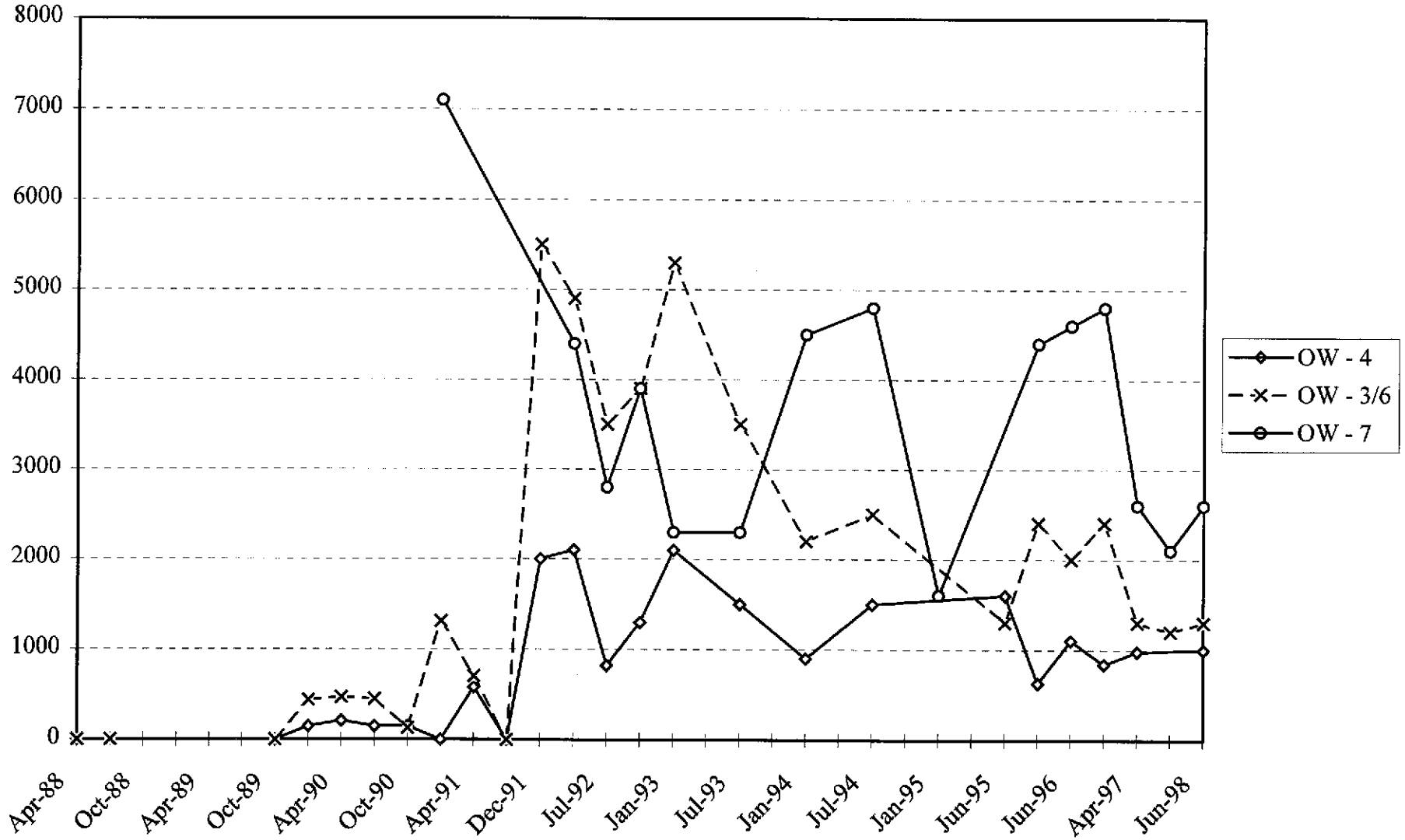


FIGURE 3.3
TPH-GASOLINE in OW - 1 & 7

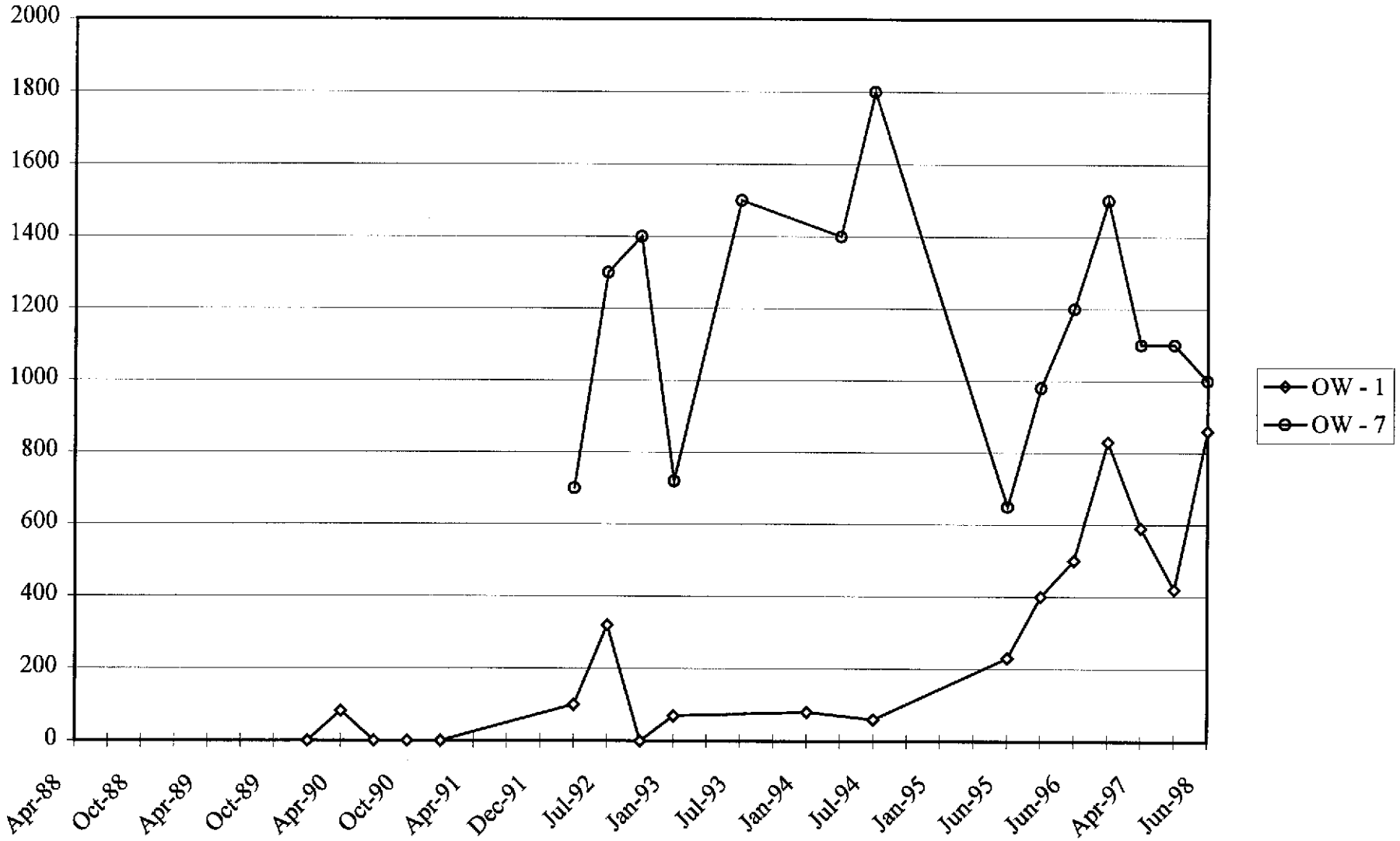
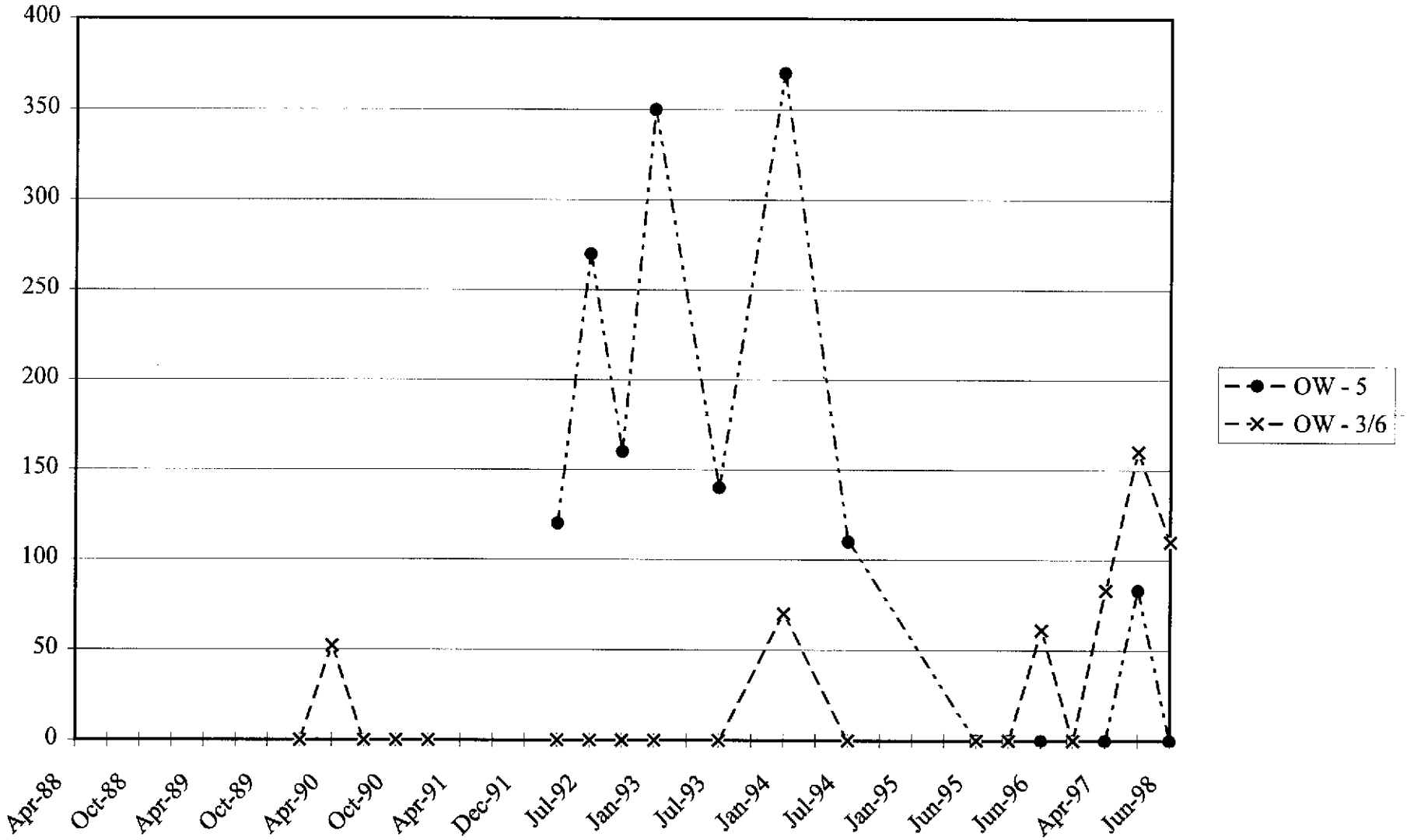
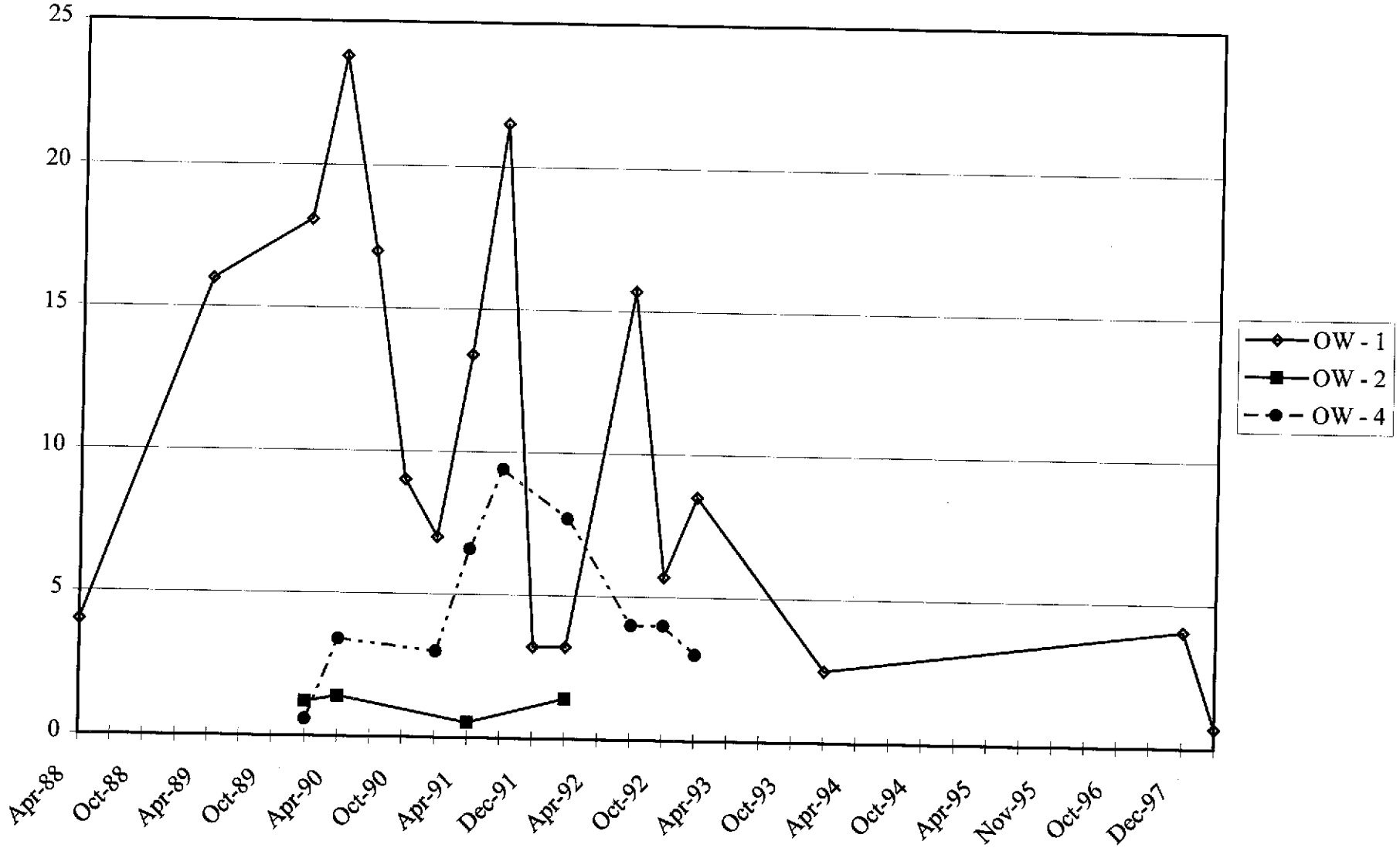


FIGURE 3.4
TPH-GASOLINE in OW - 5 & 3/6



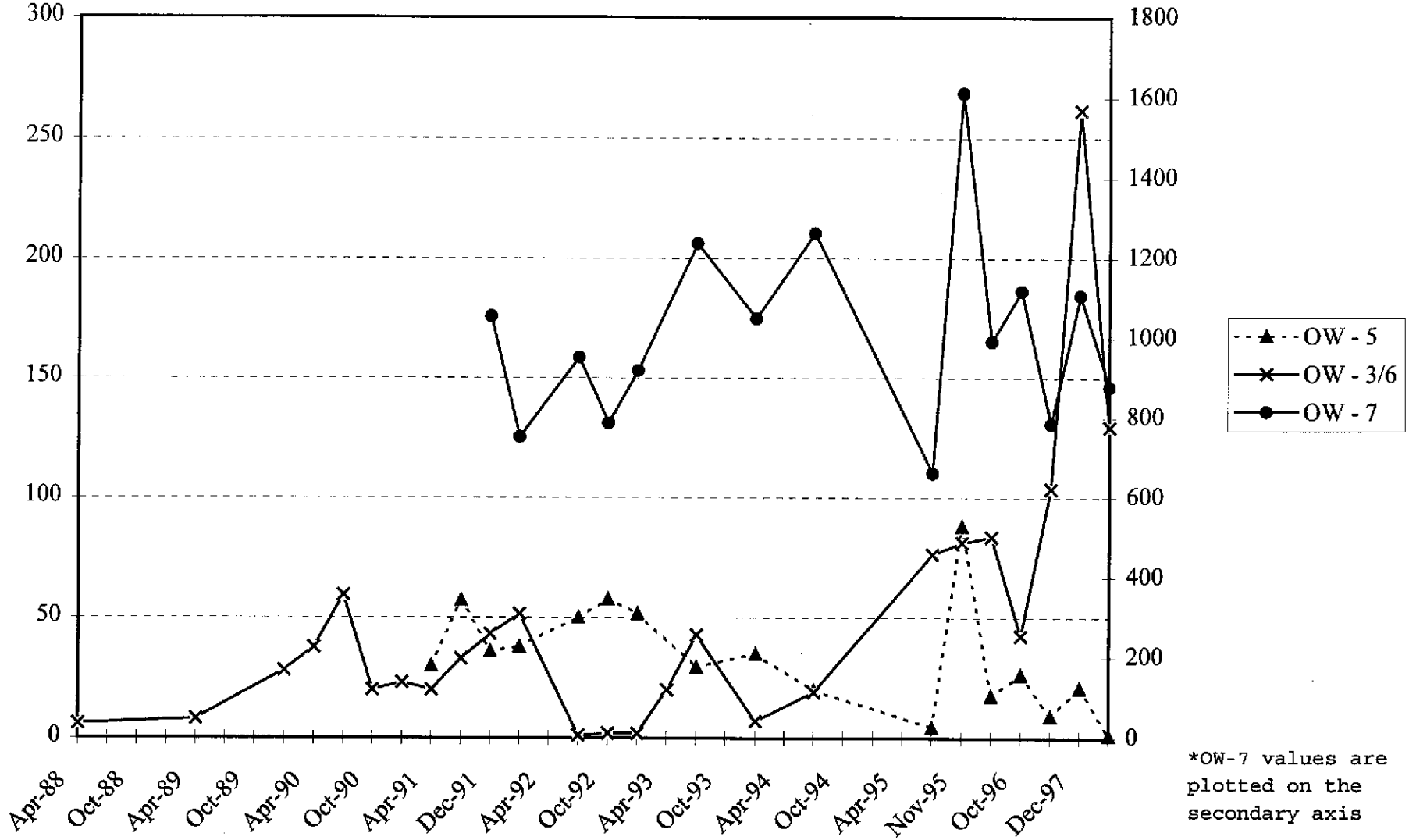
tables.xls

FIGURE 3.5
TOTAL VOCs in OW-1, 2, & 4



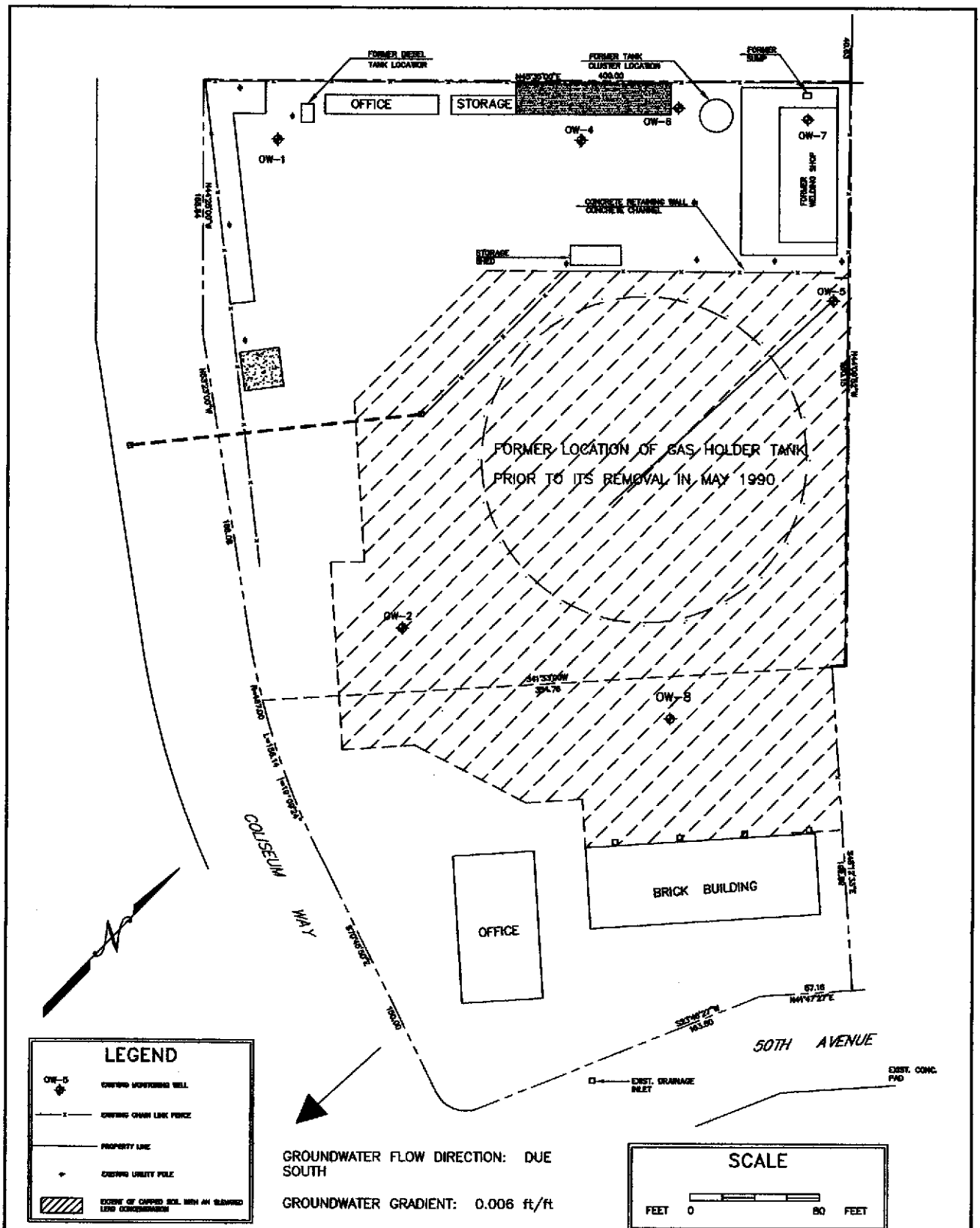
tables.xls

FIGURE 3.6
TOTAL VOCS in OW-5, 6, & 7*



*OW-7 values are plotted on the secondary axis

tables.xls



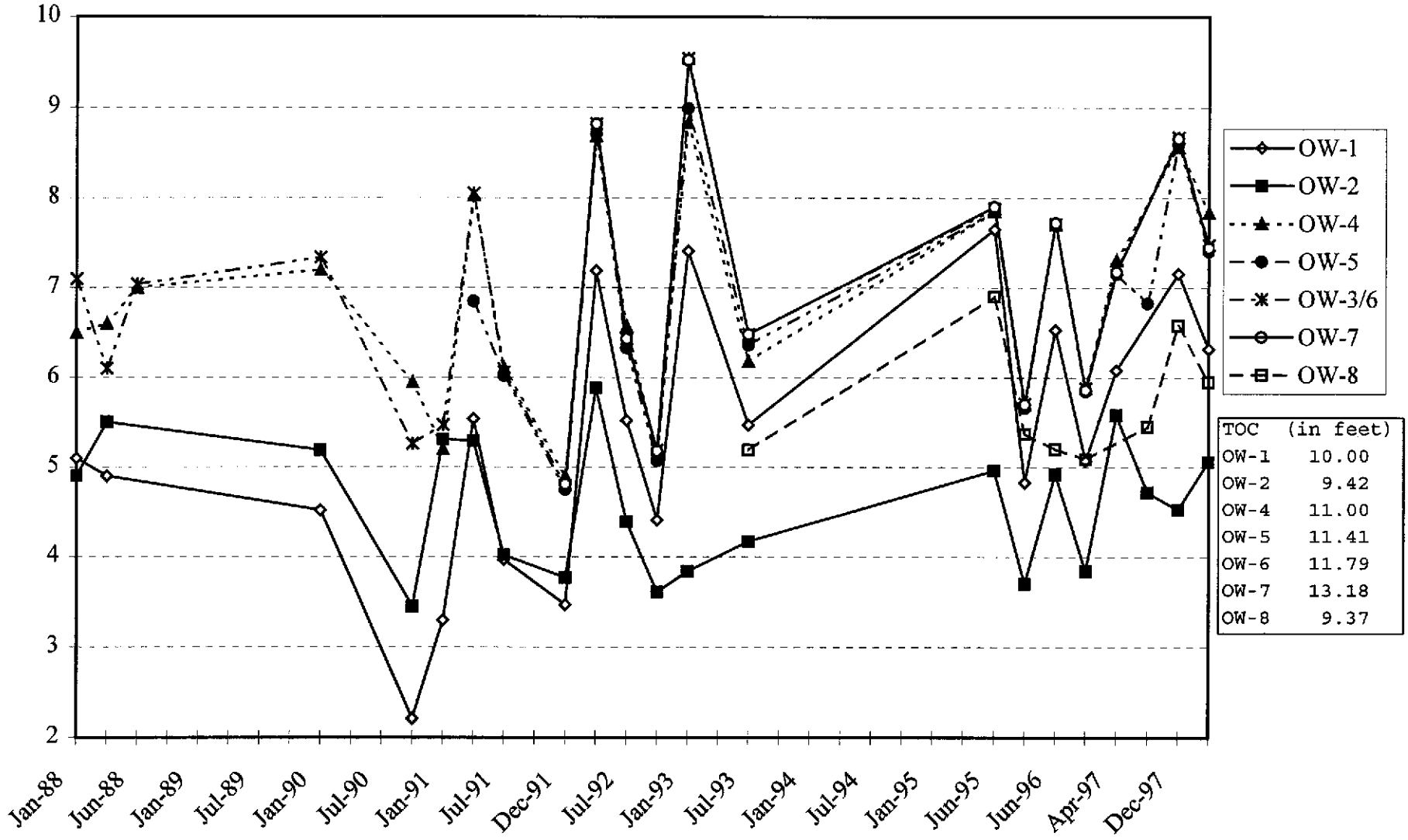
CET Environmental Services, Inc.

GROUNDWATER FLOW DIRECTION
PG&E DISTRIBUTION CONSTRUCTION SITE
4930 COLISEUM WAY
OAKLAND, CA 94610

FIGURE 4.1

JOB NUMBER	DATE	DRAWING	BY	REVISED
3666	6/98	Gwl6-98	EN	8/14

FIGURE 4.2
HISTORICAL GROUNDWATER LEVELS



TOC	(in feet)
OW-1	10.00
OW-2	9.42
OW-4	11.00
OW-5	11.41
OW-6	11.79
OW-7	13.18
OW-8	9.37

tables.xls