


To: Juliet shin - ACHA-DEH

Date: 19 August 1999

From: Woody Lovejoy - ProTech 

cc: B. Berry - K-M
Project File

Re: Quarterly Monitoring Report (2nd Quarter)
Kelly-Moore Store
969 San Pablo Avenue, Albany
ProTech Project #107-OH99

Juliet:

I am forwarding you one copy of our report for above-referenced project.

Please review the information and let me know if you have any questions (650.569.4020).



CONSULTING & ENGINEERING

ENVIRONMENTAL SERVICES

QUARTERLY GROUNDWATER MONITORING REPORT

CONDUCTED AT

**KELLY-MOORE PAINT STORE
969 SAN PABLO AVENUE
ALBANY, CALIFORNIA**

PREPARED FOR

**MR. W. E. BERRY
KELLY-MOORE PAINT COMPANY
987 COMMERCIAL STREET
SAN CARLOS, CALIFORNIA 94070**

JULY 1999


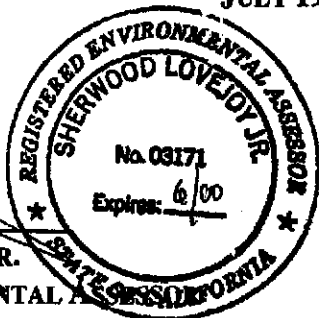
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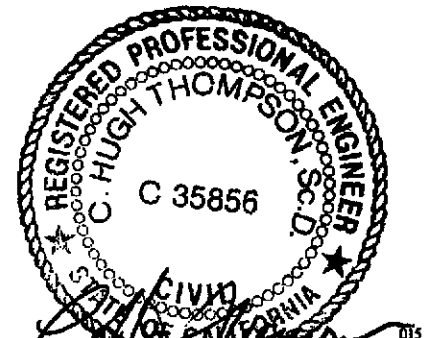
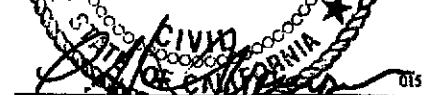
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JULY 1999



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1.0 - PROJECT BACKGROUND

1.1 - INTRODUCTION

ProTech Consulting & Engineering, Inc. (ProTech) was retained by Kelly-Moore Paint Company (K/M) to perform quarterly groundwater monitoring and reporting at 969 San Pablo Avenue, Albany, California (site). ProTech has performed multiple tasks on this site, including: Phase I - Environmental Site Assessment, hydraulic lift removal, soil boring and groundwater monitor well installation, and groundwater monitoring. The last groundwater monitoring was performed in March 1999. The work reported here was required and/or approved by the Alameda County Health Agency (ACHA).

1.2 - SITE DESCRIPTION

The site is located in Albany, at the junction of San Pablo Avenue and Buchanan Street (Figure 1). It is a commercial building that will be converted from a vehicle maintenance operation to a retail paint store. The site consists of one building that is L-shaped and parking lots both in front and behind the building (Figure 2). The existing groundwater monitor wells are located along the east side of the building (front) and on the north side of the building, along San Pablo Avenue (Figures 2 and 3).

1.3 - SITE BACKGROUND

The site is a former vehicle repair facility which was operated by Firestone Tire and Rubber until the early 1990 when it was sold to Super Shops, Inc. that operated it as vehicle repair and modification shop. Firestone operated a waste oil tank on the site until they removed it in May 1990 (ERM, 1990a).

Chemicals of concern: [total extractible petroleum hydrocarbons, characterized as diesel (TEPH-d); oil and grease (O&G); benzene, toluene, ethyl-benzene, and xylenes (BTEX); 1,2-dichloroethane (1,2-DCA), 1,1-dichloroethane (1,1-DCA), 1,1,1-trichloroethane (1,1,1-TCA), and tetrachloroethylene (PCE); chromium Cr), lead (Pb), and nickel (Ni)] were found during the tank removal (ERM, 1990a).

Four groundwater monitor wells (MW-1, MW-2, MW-3, and MW-4) were installed to monitor groundwater conditions. The soil samples from the boring for MW-1 contained TEPH-d in the three samples collected (Table 1) between 5.5 ft and 10.5 ft below grade (fbg). The 10.5 fbg sample also contained benzene, xylenes, 1,1-DCA, 1,2-DCA, 1,1,1-TCA, and PCE. The soil sample collected 16 fbg in the boring for MW-2 contained ethyl-benzene and xylenes. Soil samples from the other two soil borings for monitor wells MW-3 and MW-4 were below method detection limits (MDLs) for the compounds tested for (Table 2). The groundwater sample from monitor well MW-1 contained benzene, 1,1-DCA, 1,1,1-TCA, trichloroethylene (TCE), and PCE, while the groundwater samples from MW-2 and MW-3 were below method detection limits (MDLs) for all compounds tested for. The groundwater sample from monitor well MW-4 contained TCE (ERM, 1990a). ERM reported a apparent mounding of groundwater in the vicinity of the former tankpit. They attributed this mounding to infiltration of surface water through the tankpit backfill.

Based on the results of soil sampling and groundwater results, Firestone decided to remove additional soil from the excavation in an attempt to remove the source. During this removal, monitor well MW-1 was destroyed. Results of confirmatory soil sampling indicated that TEPH-d was only detected in one of the sidewall samples (CS-3) at 8 fbg at 3.8 ppm (ERM, 1990b).

Recommendations were made to perform quarterly groundwater monitoring for one year and then to re-evaluate the site conditions (ERM, 1990b). According to County personnel (Susan Hugo)¹ this work was never done.

¹ Personal communication with Susan Hugo, June 1998.

ProTech performed a Phase I - Environmental Site Assessment (Phase I) in April 1998 on the property for K/M prior to their purchase of the property. During this task, ProTech located two of the three remaining groundwater monitor wells (MW-3 and MW-4), while well MW-2 was not evident during site reconnaissance activities. ProTech also identified 5 hydraulic lifts (Figure 2) that were present in the garage portion of the building (ProTech, 1998a).

After review of the Phase I report, K/M instructed ProTech to develop and sample the two groundwater monitor wells (MW-3 and MW-4). In April 1998, ProTech developed the two groundwater monitor wells and collected groundwater samples for analysis for total petroleum hydrocarbons, characterized as gasoline (TPH-g), TEPH-d, TEPH, characterized as kerosene (TEPH-k), TEPH, characterized as motor oil (TEPH-mo), BTEX, O&G, and volatile organic compounds (VOCs). Results of the groundwater analyses (Figure 3) indicated that monitor well MW-3 was below MDLs for the compounds tested for, while monitor well MW-4 contained 1,1-DCA, cis-1,2-dichloroethylene (cis-1,2-DCE), and PCE (ProTech, 1998b) at levels of interest. With the Phase I report and these groundwater results in-hand, K/M purchased the property.

In September 1998, K/M began removal of the 5 hydraulic lifts. ProTech witnessed the removal of all 5 lifts and collected soil samples from three of the pits (Pit #s 1, 4, and 5) where the rams were compromised and/or soil staining was evident. The soil samples were collected after soil was excavated to a point where contamination was no longer evident. The analyses, which were specified by ACHA, were for total extractable petroleum hydrocarbons, characterized as hydraulic oil (TEPH-ho), VOCs, and LUFT Manual metals. Results from two of the pits (Pit #s 4, and 5) were below the MDLs of the analyses or present below regulated concentrations. Results from the third pit (Pit #1) indicated that TEPH-ho was detected at 500 ppm. Additional soil was excavated from this pit (approximately 3 ft below the groundwater table) and a second soil sample was collected for analysis. Results (Figure 2) indicated that TEPH-ho was still present at 1,400 ppm (ProTech, 1998c).

Results of soil samples were collected from "likely dirty" stockpiled soil indicated that petroleum hydrocarbons (TEPH-ho) required regulated disposal. This stockpiled soil was disposed of as a Class II - designated waste at Forward Landfill (ProTech, 1998c).

The County agreed that the "likely clean" soil, which came from the upper 3 feet of material in each pit and exhibited no evidence of contamination, could be re-used on-site as backfill above the water table. They further agreed that further assessment of the site would be through groundwater monitoring and the installation of two additional groundwater monitor wells (ACHA, 1999).

ProTech prepared a Workplan for the installation of the two additional groundwater monitor wells that the County requested plus a survey for top-of-casing (TOC) elevations of the new and existing wells (ProTech, 1999a).

Two groundwater monitor wells (MW-5 and MW-6) were installed March 1999. Soil samples were collected from the two soil borings for analysis for petroleum products, aromatic hydrocarbons, the fuel additive: methyl tert-butyl ether (MTBE), volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). The results indicated that only the soil samples from the boring for well MW-6 contained any compounds analyzed for above their method detection limits (MDLs). The only compound found was TEPH-d at 1.9 ppm (8 fbg) and 3.8 ppm (18 fbg) ProTech, 1999b). The two new wells (MW-5 and MW-6) were developed and purged, and the existing two wells (MW-3 and MW-4) were purged prior to collecting groundwater samples. The results of groundwater sampling indicate that none of the wells contain measurable petroleum hydrocarbons (TPH-g or TEPH-d), aromatic hydrocarbons (BTEX), MTBE, or SVOCs. All four wells contained 1,1-DCA, and PCE, while wells MW-5 and MW-6 also contained chloroform, and TCE, and well MW-4 also contained 1,1-DCE, cis-1,2-DCE, and vinyl chloride.² California maximum contaminant levels (MCLs) have been exceeded for 1,1-DCA, cis-1,2-DCE, PCE, and vinyl chloride. The four monitor wells (MW3 through MW-6) were surveyed TOC elevations. Monitor well MW-2 was not located during this field effort. ProTech recommended that the TPH-g, TEPH-d, BTEX, and MTBE, be removed from the analyte list for quarterly monitoring (ProTech, 1999b).

The County reviewed the ProTech report and prepared a comment letter. In this letter they expressed

² 1,1-DCA was improperly reported as 1,2-DCA in the April 1999 well installation report. All data tables have been corrected for this report. 1,2-DCA has not been detected by ProTech in its three sampling efforts, while 1,1-DCA has.

concern about:

- the concentrations of the VOCs that exceed California MCLs.
- the status of well MW-2, and
- the limits of the former waste oil tank excavation with regard to wells MW-5 and MW-6.

They directed K/M to:

- continue quarterly groundwater monitoring, with approval to remove TPH-g, TEPH-d, BTEX, and MTBE from the analyte list;
- locate MW-2 or its remnants prior to resurfacing of the parking lot; and
- plot the limits of the excavation on the site plan (ACHA, 1999b).

is VOCs!

ProTech requested in a letter that the drill cuttings be used on-site as fill material due to the lack of compounds of concern (ProTech, 1999c). The County agreed to allow this re-use of soil cuttings (ACHA, 1999b).

2.0 - SCOPE-OF-WORK

2.1 - INTRODUCTION

On 16 June 1999, ProTech performed the second quarter quarterly monitoring at the site. The scope-of-work performed is outlined below:

1. Measure the depth-to-groundwater (DTW) in each of the groundwater monitor wells;
2. Purge each well prior to collecting a groundwater sample for analysis;
3. Analyze each of the groundwater samples for VOCs; and
4. Prepare a quarterly groundwater monitoring report that includes the results of groundwater DTW measurements, and groundwater sample analysis. The report will include:
 - Tables showing tabulated DTW, development and purge parameters, groundwater elevations, and analytical results;
 - Figures illustrating groundwater flow direction and analytical results; and
 - Appendices including laboratory reports and chain-of-custody forms.

The fieldwork and laboratory analysis tasks are complete. This document represents the report task of the project.

Prior to beginning fieldwork we found the missing well MW-2. The well was found buried under 8 inches of soil and vegetation in the planter bed along the north end of the building (Figure 2). The well was found to be in good condition and accessible for measurements, purging and sampling. This well was surveyed for TOC elevation on 16 June 1999.

2.2 - GROUNDWATER MEASUREMENTS

On 16 June 1999, we measured the total depth (TD) of each of the wells to determine their status

prior to purging for analysis. Monitor well MW-2 measured a TD of 14.53 feet below grade (fbg), MW-3 measured a TD of 14.43 fbg, MW-4 measured a TD of 14.68, MW-5 measured a TD of 20.08 fbg, and MW-6 measured a TD of 19.84. The TDs for monitor wells MW-3 through MW-6 were within 0.02 feet of the previously measured TDs (March 1999), while the TD for monitor MW-2 could not be compared to a previous measurement since it was just found. These TD differences can be attributed to measurement variability.

On 16 June 1999, ProTech also measured the depth-to-water (DTW) in each of the groundwater monitor wells (MW-2 through, MW-6). The results of these measurements are tabulated on Table 1, along with the converted groundwater elevations. The groundwater gradient was calculated to range from 0.04 to 0.02, depending on position relative to the wells. Figure 3 illustrates the current groundwater elevations and estimated flow direction, while Figure 4 illustrates the historical groundwater elevations over time in each of the wells.³ The groundwater elevations rose an average of 1.5 feet (2.35 feet for MW-3, 1.23 feet for MW-4, 0.77 feet for MW-5, and 1.51 feet for MW-6), with MW-2 not part of this calculation.

2.3 - WELL PURGING AND SAMPLING

The total wellbore water volume was calculated using the DTW and TD measurements to calculate the wellbore volume of each well so we could determine the volume of groundwater that would need to be removed. Usually it is between 3 and 10 wellbore volumes. These calculations are shown on Table 2. The wells are very low producers and removal of more than three wellbore volumes is very difficult, as shown on Table 2..

The wells were purged by using either a downhole submersible pump (MW-2, MW-5, and MW-6) or a peristaltic pump (MW-3 and MW-4). During purging, the parameters: pH, conductivity, and temperature were monitored. They were monitored at the commencement of pumping, after the well

³ Graphs of historical groundwater levels and historical chemical data are drawn to show trends and patterns, and they are used as a tool to explain anomalies in data.

had dewatered, and after a second dewatering. The parameter testing results are shown on Table 3. Since this was the second sampling that ProTech performed we decided to compare the parameter testing from both events. This comparison, which is shown on Table 4, indicates that the measured parameters are not stabilizing during purging, most likely due to the low-flow nature of the wells and the small amount of groundwater removed during purging (between 1.5 and 4.25 wellbore volumes).⁴

While presented in ascending numerical order below, the wells were purged in order from historically cleanest to historically dirtiest to reduce the potential of cross-contamination. The submersible pump and associated electrical cord were decontaminated in a triple rinse setup⁵ between wells and new tubing was used in each well.⁶ The peristaltic pump does not come directly in contact with the groundwater so only the tubing was changed. The order of submersible pump purging and sampling was MW-2, MW-6, and MW-5. The order of peristaltic pump purging was MW-3, and MW-4.

2.3.1 - Monitor Well MW-2

Approximately 10 gallons (2.48 wellbore volumes) was removed from this well during purging. The pump was turned on and off two times after the well dewatered. Each time the pump was restarted some fine sand was removed at restart, but this cleared up within one minute of restarting. The purgewater was collected in a 55 gallon drum on-site for temporary storage pending disposal.

Once purged and allowed to recover to approximately 80% of its static water level, the groundwater was sampled using a 3 foot, Teflon bailer. The water collected in the bailer was transferred to the

⁴ Very little study has been performed on low-flow wells and parameter measurements. Current industry practice calls for either the removal of between 3 and 10 wellbore volumes or the measurement and stabilization of pH, conductivity, and temperature, but this is for wells capable of producing sufficient water to avoid dewatering. For low-flow wells that dewater, industry practice is purging the well dry and allowing groundwater to recover to approximately 80% of its initial or static water level.

⁵ A triple rinse setup is three buckets, the first with water and TSP, the second with water, and the third with DI water. The pump is soaked and scrubbed with a scrub brush in the first bucket to remove contaminants. It is then rinsed vigorously in the second bucket, and rinsed again in the third bucket. The buckets are rinsed and refilled after each decontamination event.

⁶ The tubing for each well has been bagged for re-use at the designated well during future quarterly sampling.

appropriate sample containers (3 40-mil VOA vials). The containers were sealed, checked for air bubbles, labeled, and placed on ice pending transport to ChromaLab, Inc. of Pleasanton, California, a California-certified laboratory (ChromaLab) for analysis.

2.3.2 - Monitor Well MW-3

Approximately 7 gallons (1.66 wellbore volumes) was removed from this well during purging. The pump was turned on and off two times after the well dewatered. Each time the pump was restarted some fine sand was removed at restart, but this cleared up within one minute of restarting. The purgewater was collected in a 55 gallon drum on-site for temporary storage pending disposal.

Once purged and allowed to recover to approximately 80% of its static water level, the groundwater was sampled using a 3 foot, Teflon bailer. The water collected in the bailer was transferred to the appropriate sample containers (3 40-mil VOA vials). The containers were sealed, checked for air bubbles, labeled, and placed on ice pending transport to ChromaLab for analysis.

2.3.3 - Monitor Well MW-4

Approximately 6 gallons (1.55 wellbore volumes) was removed from this well during purging. The pump was turned on and off two times after the well dewatered. Each time the pump was restarted some fine sand was removed at restart, but this cleared up within one minute of restarting. The purgewater was collected in a 55 gallon drum on-site for temporary storage pending disposal.

Once purged and allowed to recover to approximately 80% of its static water level, the groundwater was sampled using a 3 foot, Teflon bailer. The water collected in the bailer was transferred to the appropriate sample containers (3 40-mil VOA vials). The containers were sealed, checked for air bubbles, labeled, and placed on ice pending transport to ChromaLab for analysis.

2.3.4 - Monitor Well MW-5

Approximately 31 gallons (4.25 wellbore volumes) was removed from this well during purging. The pump was turned on and off three times after the well dewatered. Each time the pump was restarted some fine sand was removed at restart, but this cleared up within one minute of restarting. The purgewater was collected in a 55 gallon drum on-site for temporary storage pending disposal.

Once purged and allowed to recover to approximately 80% of its static water level, the groundwater was sampled using a 3 foot, Teflon bailer. The water collected in the bailer was transferred to the appropriate sample containers (3 40-mil VOA vials). The containers were sealed, checked for air bubbles, labeled, and placed on ice pending transport to ChromaLab for analysis.

2.3.5 - Monitor Well MW-6

Approximately 29 gallons (4.2 wellbore volumes) was removed from this well during purging. The pump was turned on and off two times after the well dewatered. Each time the pump was restarted some fine sand was removed at restart, but this cleared up within one minute of restarting. The purgewater was collected in a 55 gallon drum on-site for temporary storage pending disposal.

Once purged and allowed to recover to approximately 80% of its static water level, the groundwater was sampled using a 3 foot, Teflon bailer. The water collected in the bailer was transferred to the appropriate sample containers (3 40-mil VOA vials). The containers were sealed, checked for air bubbles, labeled, and placed on ice pending transport to ChromaLab for analysis.

2.4 - ANALYTICAL RESULTS

The groundwater samples were transported to ChromaLab by a ChromaLab courier on 16 June 1999

for analysis. The groundwater samples were analyzed for VOCs.⁷ The results are discussed below, and tabulated in Table 1. Figures 5 through 8 illustrate the historical results for monitor wells MW-3 through MW-6, respectively. No figures have been prepared for MW-2 since it was below method detection limits (MDLs) for the compounds tested for.

2.4.1 - Monitor Well MW-2

All compounds tested for were below their respective MDLs during this sampling and analysis effort.

2.4.2 - Monitor Well MW-3

The results of the VOCs analyses indicated that 1,1-DCA was detected at 1.3 ppb, PCE was detected at 1.7 ppb, and TCE was detected at 2.3 ppb. All other compounds tested for were below their MDLs.

2.4.3 - Monitor Well MW-4

The results of the VOCs analyses indicated that 1,1-DCA was detected at 76 ppb, 1,1-DCE was detected at 1.3 ppb, cis-1,2-DCE was detected at 23 ppb, PCE was detected at 20 ppb, TCE was detected at 6.4 ppb, and vinyl chloride was detected at 2.4 ppb. All other compounds tested for were below their MDLs.

2.4.4 - Monitor Well MW-5

The results of the VOCs analyses indicated that 1,1-DCA was detected at 4.8 ppb, PCE was detected at 1.5 ppb, and TCE was detected at 1.8 ppb. All other compounds tested for were below their MDLs.

⁷ SVOCs have not been found historically, and they were analyzed for during this sampling effort. ProTech has informed the County of this and received their verbal approval.

2.4.5 - Monitor Well MW-6

The results of the VOCs analyses indicated that 1,1-DCA was detected at 1.4 ppb, PCE was detected at 5.3 ppb, and TCE was detected at 0.8 ppb. All other compounds tested for were below their MDLs.

3.0 - OBSERVATIONS AND RECOMMENDATIONS

3.1 - OBSERVATIONS

This missing well MW-2 was found prior to sampling after K/M razed the planter bed at the north end of the building. It was included in this sampling effort.

The limits of the former waste oil tank excavation (Figure 2) were used to determine that the newly installed wells, MW-5 and MW-6, were not installed in backfill materials. A review of the boring logs for wells MW-3 through MW-6 further confirmed this.

During purging, small amounts of sediment are drawn from the wells in the water stream. These sediments are a fine-grained sand that is typically seen during well purging activities due to the suction placed on the well screen and the formation. Given the nature of sand, there is no reason to be concerned that its removal during purging would affect the results of groundwater analyses by sorption of chemicals onto the sand grains. }?

The parameters of pH, temperature, and conductivity that are checked during well purging are not stabilizing most probably due to the low-flow nature of the wells. This does not appear uncommon in low-flow wells (Nielsen, 1991), but little study has been performed and no clear scientific protocol has been established for developing low-flow wells other than purging dry and sampling when water levels rise to approximately 80% of static conditions. ProTech will continue to monitor these parameters during purging to see if any pattern develop.

Groundwater flow direction has shifted from southeast to south-southwest with groundwater elevation rising in all the wells. Flow direction appears to shift as it crosses the site - a southerly direction at the north, near MW-2 and MW-3, and southeasterly near MW-4, MW-5, and MW-6. MW-5 and MW-6 had virtually the same groundwater elevation during this sampling effort, with MW-4 being 0.38 feet lower which creates the shift in flow direction. The calculated gradient ranged

from 0.04, near MW-2 and MW-3, to 0.02 in the vicinity of MW-4, MW-5, and MW-6.

Results of groundwater sample analysis indicate that 1,1-DCA, PCE and TCE continue to be detected above their MDLs in wells MW-3 through MW-6. Chloroform was again detected in well MW-5, but not in MW-6, while 1,1-DCE, cis-1,2-DCE, and vinyl chloride continue to be detected in well MW-4.

The concentrations seen during this groundwater monitoring effort indicate that there is no relative change in concentrations from the previous groundwater monitoring (March 1999) to now. All results were within the same order-of-magnitude as March 1999, and virtually all dropped within that magnitude.

1,1-DCA (76 ppb), cis-1,2-DCE (23 ppb), PCE (20 ppb), TCE (6.4 ppb), and vinyl chloride (2.4 ppb) were again detected above their California MCLs (1,1-DCA - 5 ppb, cis-1,2-DCE - 6 ppb, PCE - 5 ppb, TCE - 5 ppb, and vinyl chloride - 0.5 ppb) in MW-4, while PCE was continues to be detected above its California MCL in MW-6.

Given the continued groundwater results, the former waste oil tank appears to be the source of VOCs into the subsurface. While the tank was removed, potential residual VOC contamination bound in soil in the vicinity of the former excavation continues to show up in the groundwater.

3.2 - RECOMMENDATIONS

We concur with the recommendation of the County for continued quarterly monitoring, with re-evaluation, including a risk assessment performed on the data, at that time. It is our recommendation that the significance of the groundwater quality data be evaluated after two additional quarters of monitoring (end of 1999), and that this evaluation be presented in a risk management plan if the review warrants.

We further recommend that K/M request from ACHA that analysis for SVOCs be officially eliminated

from the analyte list as they have not been historically detected in soil or groundwater.

The next quarterly monitoring is tentatively scheduled for the week of 13 September 1999.

This report should be sent to:

Juliet Shin, HazMat Specialist
Alameda County Health Agency - Department of Environmental Health
1131 Harbor Bay Parkway, 2nd floor
Alameda, CA 94502

4.0 - REFERENCES

Alameda County Health Agency, 1999a, *Workplan Approval Letter*, 2 March 1999.

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Table 1 - Groundwater Elevation Measurement and Analytical Results

Kelly-Moore Paint Company
 969 San Pablo Avenue, Albany, CA
 ProTech Project #107-OH99

WELL #	DATE	TOC	DTW	GW-ELEV	Chlfrm	1,1-DCA	1,1-DCE	c1,2-DCE	PCE	TCE	VC
MW-2	16-Jun-99	42.14	8.36	33.78	ND	ND	ND	ND	ND	ND	ND
MW-3	21-Apr-98	41.49	7.33	34.16	ND	ND	ND	ND	ND	ND	ND
	29-Mar-99	41.49	5.60	35.89	ND	1.20	ND	ND	1.70	1.60	ND
	16-Jun-99	41.49	7.95	33.54	ND	1.30	ND	ND	1.70	2.30	ND
MW-4	21-Apr-98	41.15	7.52	33.63	ND	34.00	ND	5.30	3.60	ND	ND
	29-Mar-99	41.15	7.50	33.65	ND	84.00	1.50	25.00	18.00	6.50	3.10
	16-Jun-99	41.15	8.73	32.42	ND	76.00	1.30	23.00	28.00	6.40	2.40
MW-5	29-Mar-99	41.71	8.14	33.57	0.97	5.30	ND	ND	1.60	1.60	ND
	16-Jun-99	41.71	8.91	32.80	0.63	4.80	ND	ND	1.50	1.80	ND
MW-6	29-Mar-99	42.04	7.74	34.30	0.78	1.40	ND	ND	6.80	0.80	ND
	16-Jun-99	42.04	9.25	32.79	ND	1.40	ND	ND	5.30	0.80	ND

Notes: TOC = top of casing elevation (ft above mean sea level - [ft-amsl])
 DTW = depth to water (ft below TOC)
 GW-ELEV = groundwater elevation (ft-amsl)
 All results reported in parts-per-billion (ppb)
 MDL = method detection limit
 MCL = maximum contaminant level (EPA and California cited)
 Chlfrm = Chloroform (MDL-0.5 ppb) (MCL-80 ppb)
 1,1-DCA = 1,1-dichloroethane (MDL-0.5 ppb) (MCL-5 ppb [California])
 1,1-DCE = 1,1-dichloroethylene (MDL-0.5 ppb) (MCL-7 ppb [EPA] 6 ppb [California])
 c1,2-DCE = cis 1,2-dichloroethylene (MDL-0.5 ppb) (MCL-70 ppb [EPA] 6 ppb [California])
 PCE = tetrachloroethylene (MDL-0.5 ppb) (MCL-5 ppb [EPA & California])
 TCE = trichloroethylene (MDL-0.5 ppb) (MCL-5 ppb [EPA & California])
 VC = vinyl chloride (MDL-0.5 ppb) (MCL-2 ppb [EPA] 0.5 ppb [California])
 NA = not analyzed for
 ND = not detected above method detection limit
Bold = greater than California MCL

Table 2 - Wellbore Volume Calculations

Kelly-Moore Paint company

969 San Pablo Avenue, Albany, CA

ProTech Project #107-OH99

Sampling Date: 6/16/99

Well #	DTW	TD	ΔH	Well R	Well R ²	WV (ft ³)	WV (gal)	VR (g)	TWV
MW-2	8.36	14.53	6.17	0.17	0.03	0.54	4.03	10.00	2.48
MW-3	7.95	14.43	6.48	0.17	0.03	0.57	4.23	7.00	1.66
MW-4	8.73	14.68	5.95	0.17	0.03	0.52	3.88	6.00	1.55
MW-5	8.91	20.08	11.17	0.17	0.03	0.97	7.29	31.00	4.25
MW-6	9.25	19.84	10.59	0.17	0.03	0.92	6.91	29.00	4.20

Notes: Wellbore volume formula used - $\pi R^2 H$; where H is ΔH
DTW = depth-to water (ft below grade)
TD = total depth of well
 ΔH = water column thickness (ft)
Well R = well radius (ft)
Well R² = well radius squared (ft²)
WV (ft³) = wellbore volume (ft³)
WV (gal) = wellbore volume (gallons); where 1 ft³ = 7.48 gallons
VR (gal) = volume removed during purging (gallons)
TWV = total wellbore volumes removed during purging

Table 3 - Parameter Testing Results

Kelly-Moore Paint company
969 San Pablo Avenue, Albany, CA
ProTech Project #107-OH99
Sampling Date: 6/16/99

Well #	Interval	~Gals	pH	Cond	Temp
MW-2	Start	0	6.88	1.26	62.30
	Middle	5	6.94	1.28	63.00
	End	6	6.78	1.30	62.30
MW-3	Start	0	6.68	1.27	62.80
	Middle	5	6.88	1.37	63.90
	End	7	6.96	1.35	64.00
MW-4	Start	0	6.34	1.26	62.00
	Middle	5	6.54	1.27	63.40
	End	6	6.39	1.28	64.20
MW-5	Start	0	7.14	1.27	61.50
	Middle	17	6.85	1.44	62.30
	Middle	25	6.86	1.31	62.90
	End	31	6.84	1.32	62.60
MW-6	Start	0	7.29	1.28	62.20
	Middle	14	7.55	1.26	61.80
	End	29	7.48	1.29	63.00

Notes: ~Gals = approximate gallons removed at time of measurement
pH in standard units
Cond = Conductivity ($\mu\text{mho/cm}$)
Temp = temperature ($^{\circ}\text{F}$)

Table 4 - Comparison of Parameter Testing Results

Kelly-Moore Paint company
 969 San Pablo Avenue, Albany, CA
 ProTech Project #107-OH99

Well #	GR	Date	pH	ΔpH	Cond	ΔCond	Temp	ΔTemp
MW-2	0	16-Jun-99	6.88		1.26		62.30	
	5		6.94	0.06	1.28	0.02	63.00	0.70
	6		6.78	0.16	1.30	0.02	62.30	0.70
MW-3	0	29-Mar-99	6.97		1.32		58.40	
	5		6.95	0.02	1.33	0.01	57.40	1.00
	7		6.81	0.14	1.34	0.01	58.00	0.60
	0	16-Jun-99	6.68		1.27		62.80	
	5		6.88	0.20	1.37	0.10	63.90	1.10
	7		6.96	0.08	1.35	0.02	64.00	0.10
MW-4	0	29-Mar-99	6.40		1.35		58.40	
	5		6.41	0.01	1.34	0.01	59.40	1.00
	6		6.38	0.03	1.34	0.00	60.00	0.60
	0	16-Jun-99	6.34		1.26		62.00	
	5		6.54	0.20	1.27	0.01	63.40	1.40
	6		6.39	0.15	1.28	0.01	64.20	0.80
MW-5	0	29-Mar-99	6.89		1.38		62.50	
	8		6.90	0.01	1.30	0.08	66.00	3.50
	15		6.70	0.20	1.39	0.09	66.40	0.40
	25		6.75	0.05	1.38	0.01	66.70	0.30
	0	16-Jun-99	7.14		1.27		61.50	
	17		6.85	0.29	1.44	0.17	62.30	0.80
	25		6.86	0.01	1.31	0.13	62.90	0.60
	31		6.84	0.02	1.32	0.01	62.60	0.30
MW-6	0	29-Mar-99	7.24		1.19		66.40	
	8		7.32	0.08	1.30	0.11	63.80	2.60
	17		7.31	0.01	1.27	0.03	63.20	0.60
	28		7.36	0.05	1.26	0.01	63.60	0.40
	0	16-Jun-99	7.29		1.28		62.20	
	14		7.55	0.26	1.26	0.02	61.80	0.40
	29		7.48	0.07	1.29	0.03	63.00	1.20

Notes: GR = approximate gallons removed at time of measurement
 pH in standard units
 Cond = Conductivity (μmho/cm)
 Temp = temperature (° F)



0 1000 FEET 0 500 m 1000 m
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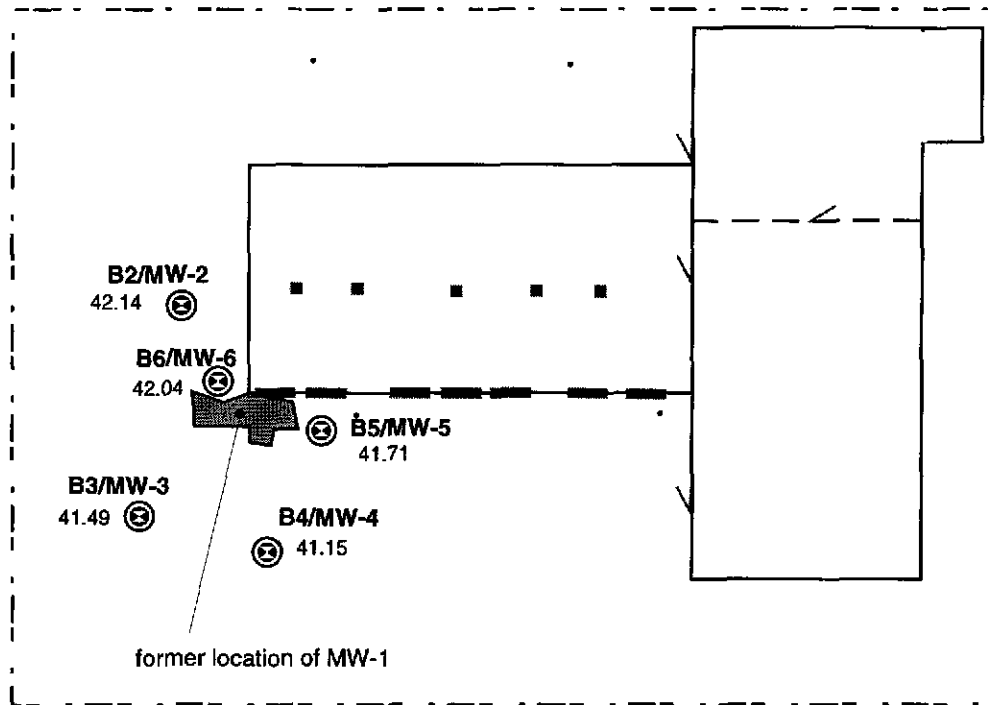
ProTech Consulting & Engineering

Job No.	990103		
Date	23 April 1999		
Drawn by	WL		
Rev	WL	Apprvd	WL

Site Location Map
 Groundwater Sampling Program
 Kelly-Moore Paint Company
 969 San Pablo Avenue, Albany, CA



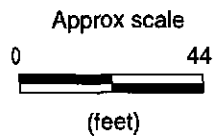
Figure
1



Legend

- Property Boundary
- Boring/Groundwater Monitoring Well ID# w/TOC elevation (ft-AMSL)
- Doorway
- Sewer Cleanout
- Garage Doors
- Former hydraulic Lifts
- Former waste oil tank excavation limits

San Pablo Avenue



ProTech Consulting & Engineering

Job No.	990103	
Date	16 June 1999	
Drawn by	WL	
Rev	WL	Apprvd WL

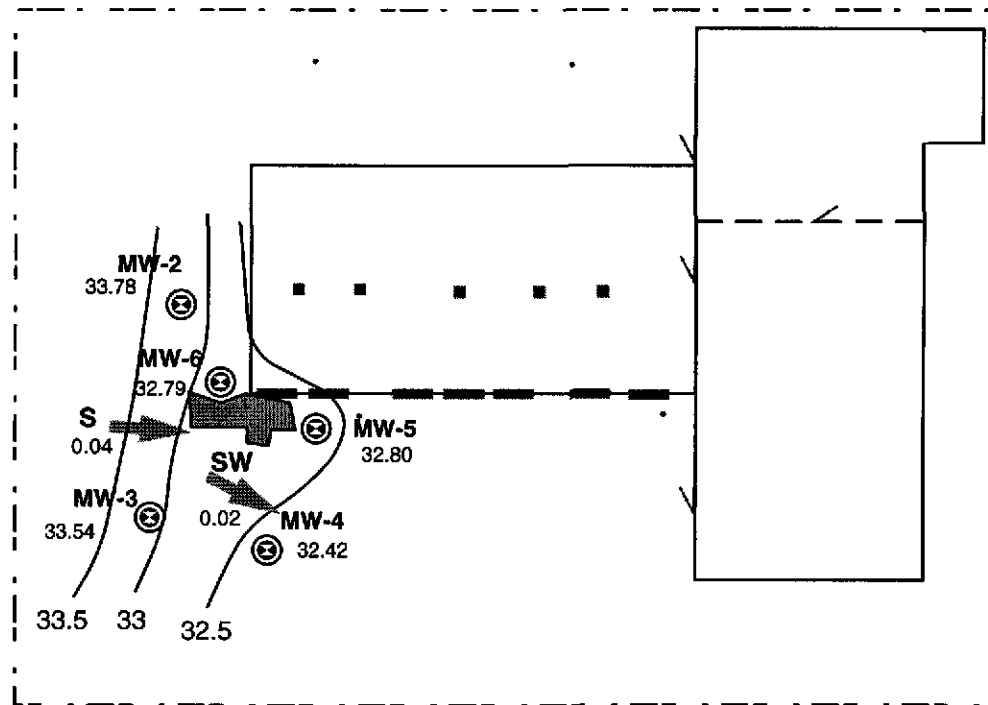
Site Plan w/ Well Locations
 Groundwater Sampling Program
 Kelly-Moore Paint Company
 969 San Pablo Avenue, Albany, California

Project

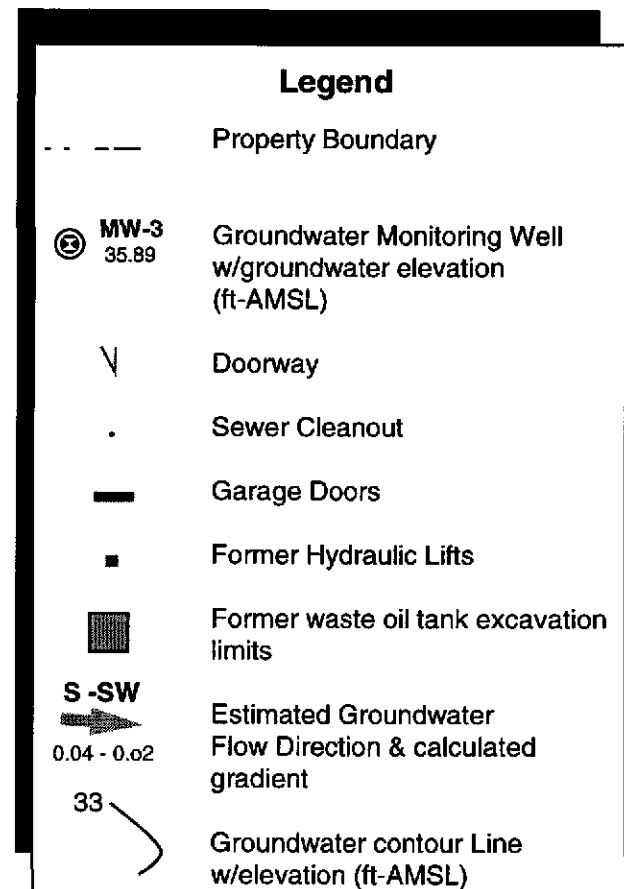


Figure

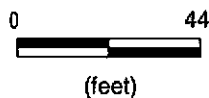
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San Pablo Avenue



Approx scale



ProTech Consulting & Engineering

Job No.	990103
Date	16 June 1999
Drawn by	WL
Rev	WL
Apprvd	WL

Site Plan w/ Groundwater Elevations

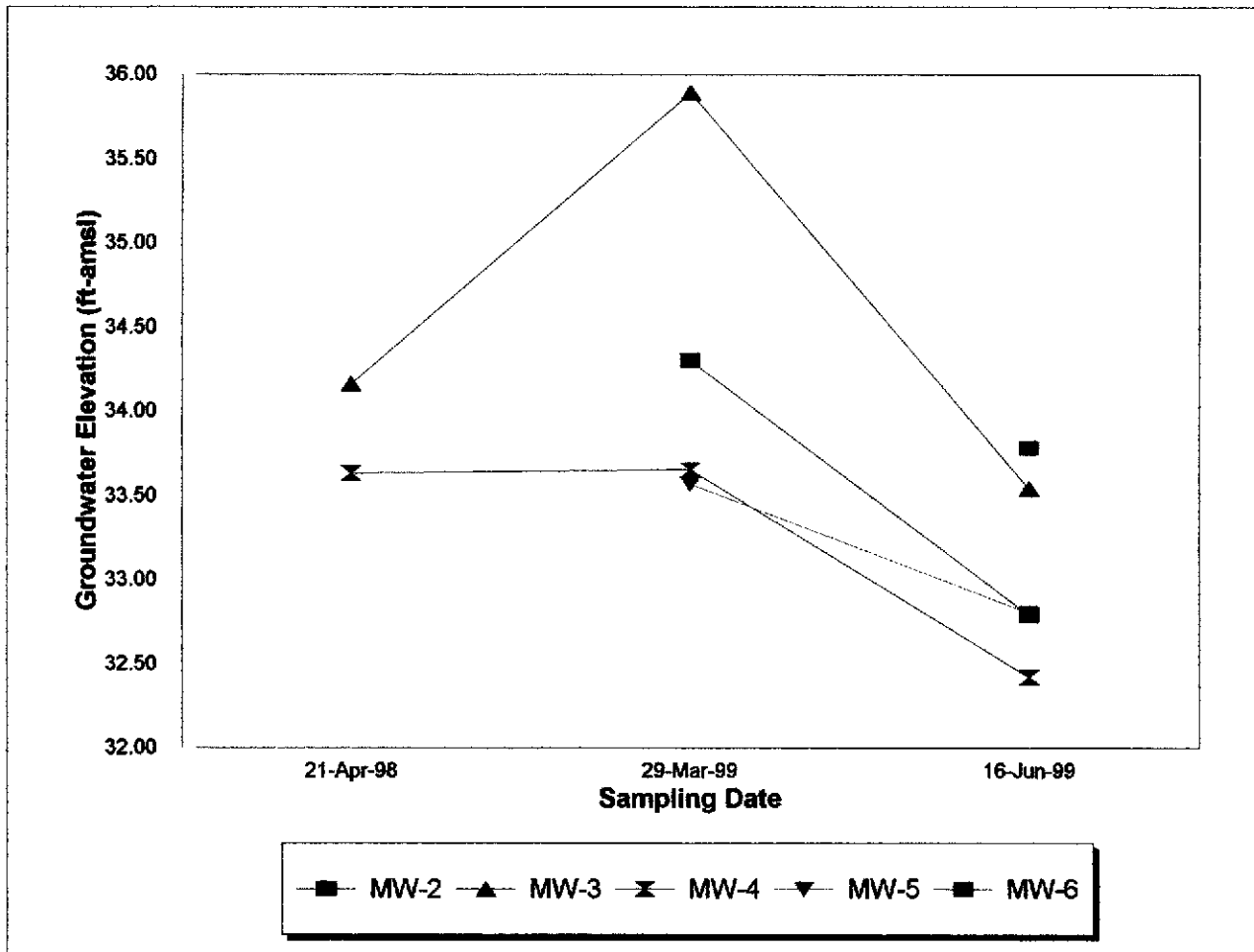
Groundwater Sampling Program
Kelly-Moore Paint Company
969 San Pablo Avenue, Albany, California

Project



Figure

3



ProTech Consulting & Engineering

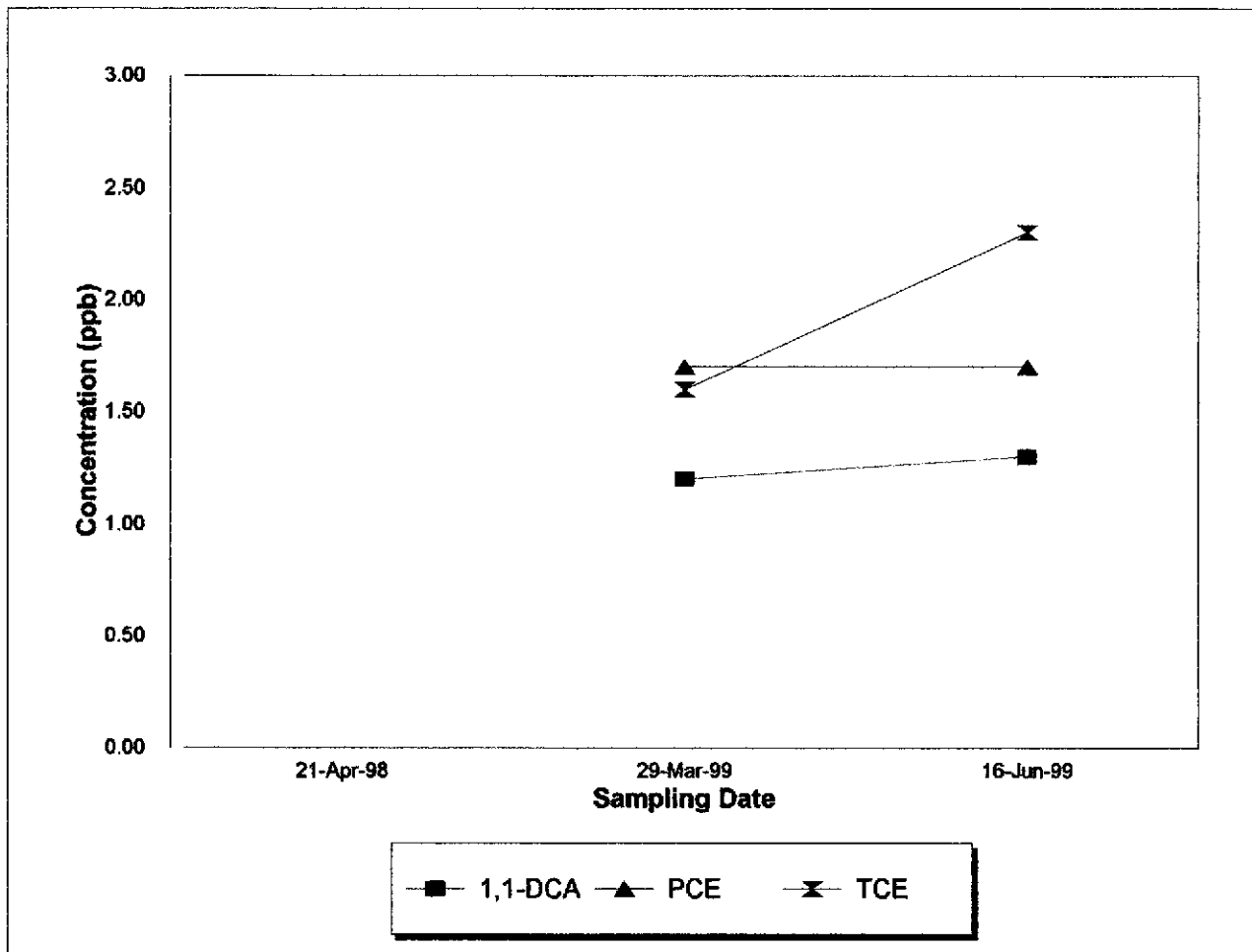
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Date	16 June 1999
Drawn by	WL
Rev	WL
Apprvd	WL

Historic Groundwater Elevations
 Groundwater Sampling Program
 Kelly-Moore Paint Company
 969 San Pablo Avenue, Albany, California

Project

Figure

4



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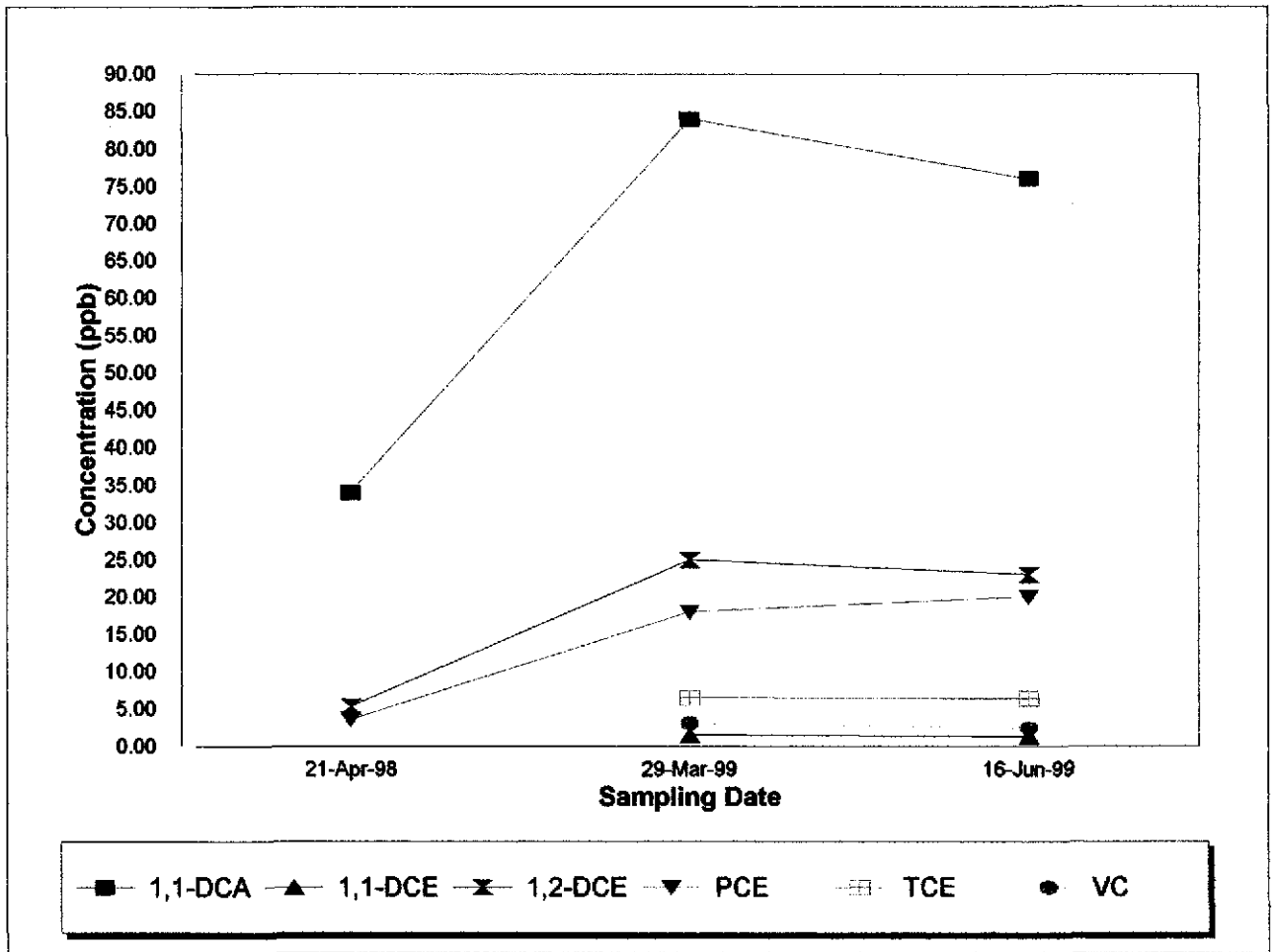
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Date	16 June 1999
Drawn by	WL
Rev	WL
Apprvd	WL

Historic VOC Results - MW-3
 Groundwater Sampling Program
 Kelly-Moore Paint Company
 969 San Pablo Avenue, Albany, California

Project

Figure

5



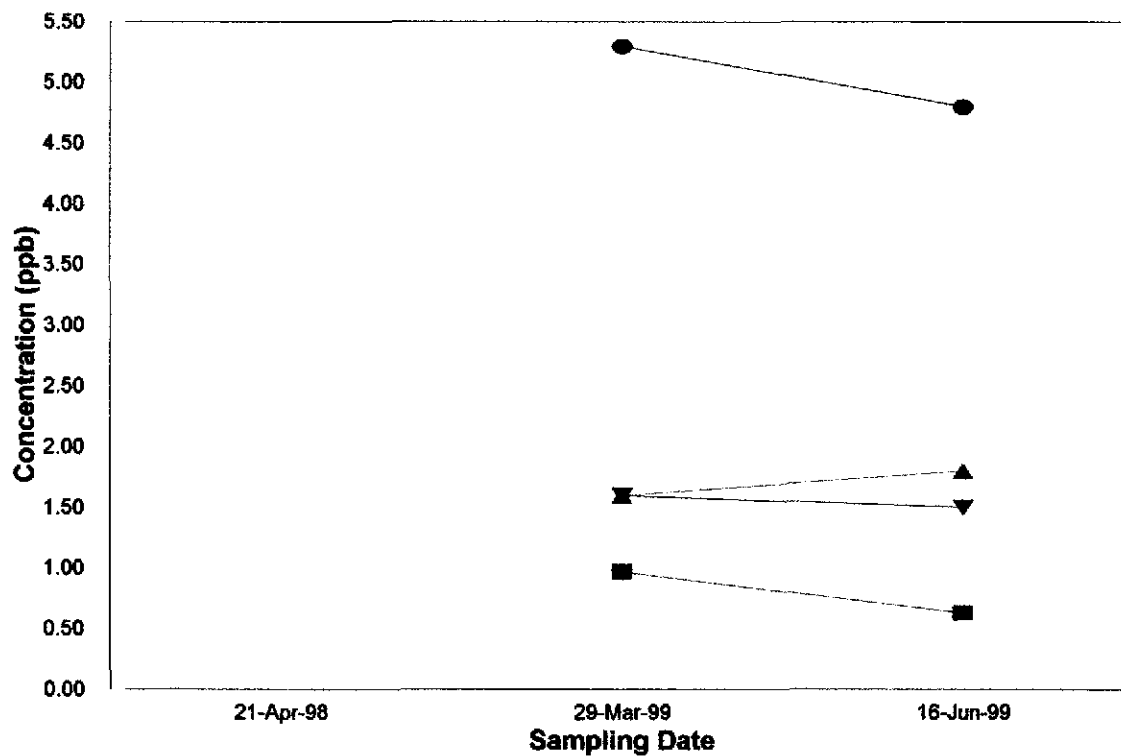
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Date	16 June 1999
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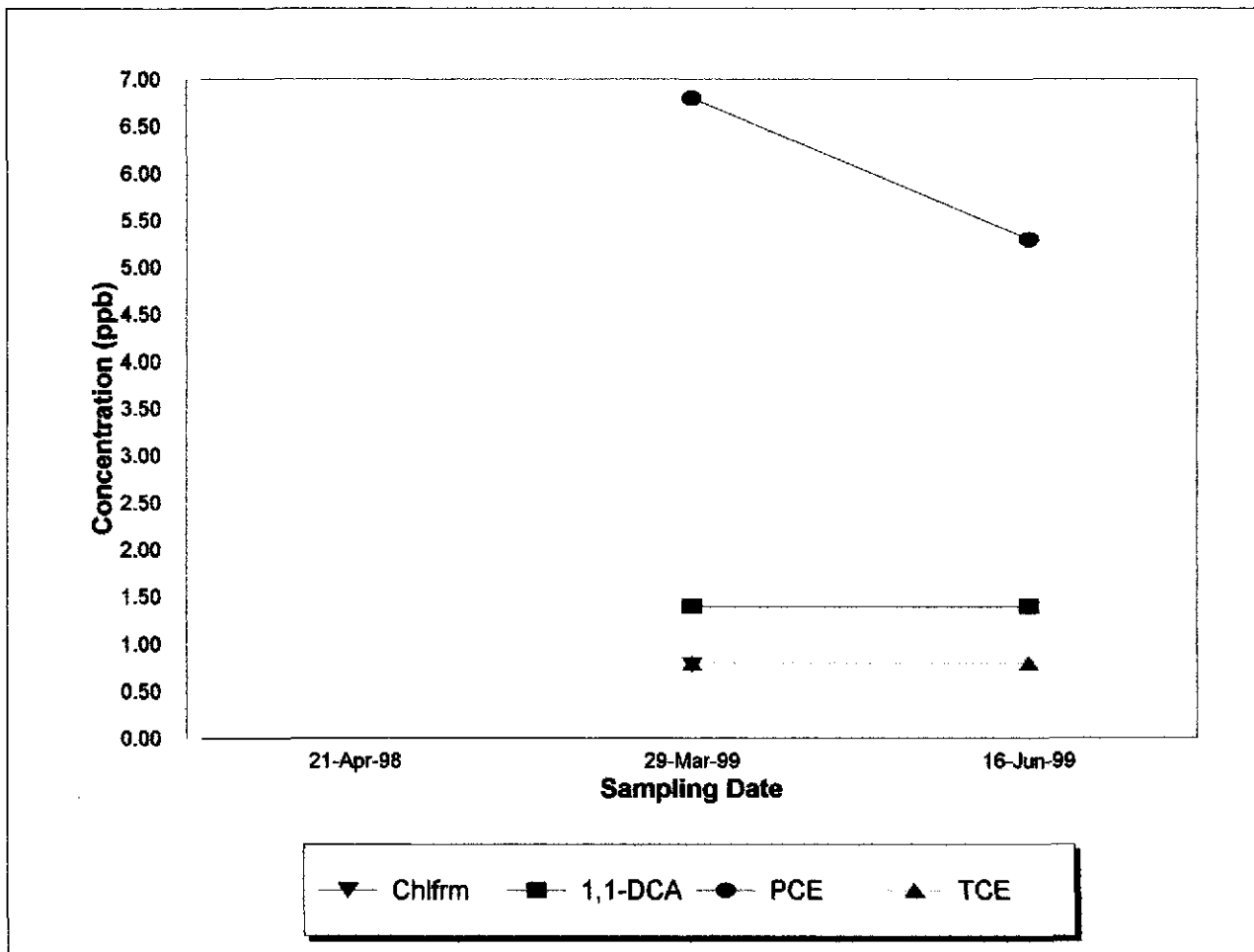
Historic VOC Results - MW-4
 Groundwater Sampling Program
 Kelly-Moore Paint Company
 969 San Pablo Avenue, Albany, California

Project

Figure
6



ProTech Consulting & Engineering	Job No. 990103	Historic VOC Results - MW-5 Groundwater Sampling Program Kelly-Moore Paint Company 969 San Pablo Avenue, Albany, California	Project	Figure 7
	Date 16 June 1999			
	Drawn by WL			
	Rev WL Apprvd WL			



ProTech Consulting & Engineering

Job No.	990103
Date	16 June 1999
Drawn by	WL
Rev	WL
Apprvd	WL

Historic VOC Results - MW-6
 Groundwater Sampling Program
 Kelly-Moore Paint Company
 969 San Pablo Avenue, Albany, California

Project

Figure

8

TCG

394 Cecilia Way

Tiburon, CA 94920-2105

Attn.: Mr. Woody Lovejoy

Project: 990103

K/M - Albany


Dear Woody,

Attached is our report for your samples received on Wednesday June 16, 1999.

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after July 16, 1999 unless you have requested otherwise. We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

Sincerely,



Gary Cook

Volatile Organic Compounds

TCG	✉ 394 Cecilia Way Tiburon, CA 94920-2105
Attn: Woody Lovejoy	Phone: (415) 381-2560 Fax: (415) 381-1741
Project #: 990103	Project: K/M - Albany

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW2	Water	06/16/1999	1
MW3	Water	06/16/1999	2
MW4	Water	06/16/1999	3
MW5	Water	06/16/1999	4
MW6	Water	06/16/1999	5

Environmental Services (SDB)

To: TCG
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID: MW2	Lab Sample ID: 1999-06-0232-001
Project: 990103 K/M - Albany	Received: 06/16/1999 16:47
Sampled: 06/16/1999	Extracted: 06/22/1999 16:40
Matrix: Water	QC-Batch: 1999/06/22-01.09

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	06/22/1999 16:40	
Benzene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Bromodichloromethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Bromoform	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Bromomethane	ND	1.0	ug/L	1.00	06/22/1999 16:40	
Carbon tetrachloride	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Chlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Chloroethane	ND	1.0	ug/L	1.00	06/22/1999 16:40	
2-Butanone(MEK)	ND	50	ug/L	1.00	06/22/1999 16:40	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Chloroform	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Chloromethane	ND	1.0	ug/L	1.00	06/22/1999 16:40	
Dibromochloromethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	06/22/1999 16:40	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Dibromomethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,2-Dichloroethene (cis)	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,2-Dichloroethene (trans)	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Ethylbenzene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
2-Hexanone	ND	50	ug/L	1.00	06/22/1999 16:40	
Methylene chloride	ND	5.0	ug/L	1.00	06/22/1999 16:40	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	06/22/1999 16:40	
Naphthalene	ND	1.0	ug/L	1.00	06/22/1999 16:40	
Styrene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	

1220 Quarry Lane * Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

Environmental Services (SDB)

To: TCG
 Attn.: Woody Lovejoy

Test Method: 8260A
 Prep Method: 5030

Volatile Organic Compounds

Sample ID: MW2	Lab Sample ID: 1999-06-0232-001
Project: 990103 K/M - Albany	Received: 06/16/1999 16:47
Sampled: 06/16/1999	Extracted: 06/22/1999 16:40
Matrix: Water	QC-Batch: 1999/06/22-01.09

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Tetrachloroethene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Toluene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Trichloroethene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Vinyl acetate	ND	5.0	ug/L	1.00	06/22/1999 16:40	
Vinyl chloride	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Total xylenes	ND	1.0	ug/L	1.00	06/22/1999 16:40	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Carbon disulfide	ND	1.0	ug/L	1.00	06/22/1999 16:40	
Isopropylbenzene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Bromobenzene	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Bromochloromethane	ND	1.0	ug/L	1.00	06/22/1999 16:40	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	06/22/1999 16:40	
Surrogate(s)						
4-Bromofluorobenzene	95.4	86-115	%	1.00	06/22/1999 16:40	
1,2-Dichloroethane-d4	164.3	76-114	%	1.00	06/22/1999 16:40	sh
Toluene-d8	101.1	88-110	%	1.00	06/22/1999 16:40	

1220 Quarry Lane * Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

Environmental Services (SDB)

To: TCG
Attn: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID: MW3	Lab Sample ID: 1999-06-0232-002
Project: 990103 K/M - Albany	Received: 06/16/1999 16:47
Sampled: 06/16/1999	Extracted: 06/22/1999 18:51
Matrix: Water	QC-Batch: 1999/06/22-01.09

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	06/22/1999 18:51	
Benzene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Bromodichloromethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Bromoform	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Bromomethane	ND	1.0	ug/L	1.00	06/22/1999 18:51	
Carbon tetrachloride	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Chlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Chloroethane	ND	1.0	ug/L	1.00	06/22/1999 18:51	
2-Butanone(MEK)	ND	50	ug/L	1.00	06/22/1999 18:51	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Chloroform	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Chloromethane	ND	1.0	ug/L	1.00	06/22/1999 18:51	
Dibromochloromethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	06/22/1999 18:51	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Dibromomethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,1-Dichloroethane	1.3	0.50	ug/L	1.00	06/22/1999 18:51	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,2-Dichloroethene (cis)	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,2-Dichloroethene (trans)	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Ethylbenzene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
2-Hexanone	ND	50	ug/L	1.00	06/22/1999 18:51	
Methylene chloride	ND	5.0	ug/L	1.00	06/22/1999 18:51	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	06/22/1999 18:51	
Naphthalene	ND	1.0	ug/L	1.00	06/22/1999 18:51	
Styrene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	

1220 Quarry Lane * Pleasanton, CA 94566-4756

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Environmental Services (SDB)

To: TCG
Attn: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID: MW3	Lab Sample ID: 1999-06-0232-002
Project: 990103 K/M - Albany	Received: 06/16/1999 16:47
Sampled: 06/16/1999	Extracted: 06/22/1999 18:51
Matrix: Water	QC-Batch: 1999/06/22-01.09

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Tetrachloroethene	1.7	0.50	ug/L	1.00	06/22/1999 18:51	
Toluene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Trichloroethene	2.3	0.50	ug/L	1.00	06/22/1999 18:51	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Vinyl acetate	ND	5.0	ug/L	1.00	06/22/1999 18:51	
Vinyl chloride	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Total xylenes	ND	1.0	ug/L	1.00	06/22/1999 18:51	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Carbon disulfide	ND	1.0	ug/L	1.00	06/22/1999 18:51	
Isopropylbenzene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Bromobenzene	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Bromochloromethane	ND	1.0	ug/L	1.00	06/22/1999 18:51	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	06/22/1999 18:51	
Surrogate(s)						
4-Bromofluorobenzene	92.6	86-115	%	1.00	06/22/1999 18:51	
1,2-Dichloroethane-d4	89.5	76-114	%	1.00	06/22/1999 18:51	
Toluene-d8	101.7	88-110	%	1.00	06/22/1999 18:51	

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Environmental Services (SDB)

To: TCG
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID: MW4	Lab Sample ID: 1999-06-0232-003
Project: 990103 K/M - Albany	Received: 06/16/1999 16:47
Sampled: 06/16/1999	Extracted: 06/22/1999 19:30
Matrix: Water	QC-Batch: 1999/06/22-01.09

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	06/22/1999 19:30	
Benzene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Bromodichloromethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Bromoform	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Bromomethane	ND	1.0	ug/L	1.00	06/22/1999 19:30	
Carbon tetrachloride	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Chlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Chloroethane	ND	1.0	ug/L	1.00	06/22/1999 19:30	
2-Butanone(MEK)	ND	50	ug/L	1.00	06/22/1999 19:30	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Chloroform	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Chloromethane	ND	1.0	ug/L	1.00	06/22/1999 19:30	
Dibromochloromethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	06/22/1999 19:30	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Dibromomethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
1,1-Dichloroethane	76	0.50	ug/L	1.00	06/22/1999 19:30	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
1,1-Dichloroethene	1.3	0.50	ug/L	1.00	06/22/1999 19:30	
1,2-Dichloroethene (cis)	23	0.50	ug/L	1.00	06/22/1999 19:30	
1,2-Dichloroethene (trans)	ND	0.50	ug/L	1.00	06/22/1999 19:30	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Ethylbenzene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
2-Hexanone	ND	50	ug/L	1.00	06/22/1999 19:30	
Methylene chloride	ND	5.0	ug/L	1.00	06/22/1999 19:30	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	06/22/1999 19:30	
Naphthalene	ND	1.0	ug/L	1.00	06/22/1999 19:30	
Styrene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	

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Environmental Services (SDB)

To: **TCG**
 Attn.: Woody Lovejoy

Test Method: 8260A
 Prep Method: 5030

Volatile Organic Compounds

Sample ID: MW4	Lab Sample ID: 1999-06-0232-003
Project: 990103 K/M - Albany	Received: 06/16/1999 16:47
Sampled: 06/16/1999	Extracted: 06/22/1999 19:30
Matrix: Water	QC-Batch: 1999/06/22-01.09

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Tetrachloroethene	20	0.50	ug/L	1.00	06/22/1999 19:30	
Toluene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Trichloroethene	6.4	0.50	ug/L	1.00	06/22/1999 19:30	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Vinyl acetate	ND	5.0	ug/L	1.00	06/22/1999 19:30	
Vinyl chloride	2.4	0.50	ug/L	1.00	06/22/1999 19:30	
Total xylenes	ND	1.0	ug/L	1.00	06/22/1999 19:30	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Carbon disulfide	ND	1.0	ug/L	1.00	06/22/1999 19:30	
Isopropylbenzene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Bromobenzene	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Bromochloromethane	ND	1.0	ug/L	1.00	06/22/1999 19:30	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	06/22/1999 19:30	
Surrogate(s)						
4-Bromofluorobenzene	93.8	86-115	%	1.00	06/22/1999 19:30	
1,2-Dichloroethane-d4	85.7	76-114	%	1.00	06/22/1999 19:30	
Toluene-d8	102.8	88-110	%	1.00	06/22/1999 19:30	

Environmental Services (SDB)

To: TCG
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID: MW5	Lab Sample ID: 1999-06-0232-004
Project: 990103 K/M - Albany	Received: 06/16/1999 16:47
Sampled: 06/16/1999	Extracted: 06/22/1999 20:09
Matrix: Water	QC-Batch: 1999/06/22-01.09

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	06/22/1999 20:09	
Benzene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Bromodichloromethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Bromoform	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Bromomethane	ND	1.0	ug/L	1.00	06/22/1999 20:09	
Carbon tetrachloride	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Chlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Chloroethane	ND	1.0	ug/L	1.00	06/22/1999 20:09	
2-Butanone(MEK)	ND	50	ug/L	1.00	06/22/1999 20:09	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Chloroform	0.63	0.50	ug/L	1.00	06/22/1999 20:09	
Chloromethane	ND	1.0	ug/L	1.00	06/22/1999 20:09	
Dibromochloromethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	06/22/1999 20:09	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Dibromomethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,1-Dichloroethane	4.8	0.50	ug/L	1.00	06/22/1999 20:09	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,2-Dichloroethene (cis)	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,2-Dichloroethene (trans)	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Ethylbenzene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
2-Hexanone	ND	50	ug/L	1.00	06/22/1999 20:09	
Methylene chloride	ND	5.0	ug/L	1.00	06/22/1999 20:09	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	06/22/1999 20:09	
Naphthalene	ND	1.0	ug/L	1.00	06/22/1999 20:09	
Styrene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	

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Environmental Services (SDB)

To: **TCG**
 Attn.: Woody Lovejoy

Test Method: 8260A
 Prep Method: 5030

Volatile Organic Compounds

Sample ID: MW5	Lab Sample ID: 1999-06-0232-004
Project: 990103 K/M - Albany	Received: 06/16/1999 16:47
Sampled: 06/16/1999	Extracted: 06/22/1999 20:09
Matrix: Water	QC-Batch: 1999/06/22-01.09

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Tetrachloroethene	1.5	0.50	ug/L	1.00	06/22/1999 20:09	
Toluene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Trichloroethene	1.8	0.50	ug/L	1.00	06/22/1999 20:09	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Vinyl acetate	ND	5.0	ug/L	1.00	06/22/1999 20:09	
Vinyl chloride	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Total xylenes	ND	1.0	ug/L	1.00	06/22/1999 20:09	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Carbon disulfide	ND	1.0	ug/L	1.00	06/22/1999 20:09	
Isopropylbenzene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Bromobenzene	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Bromochloromethane	ND	1.0	ug/L	1.00	06/22/1999 20:09	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	06/22/1999 20:09	
Surrogate(s)						
4-Bromofluorobenzene	91.8	86-115	%	1.00	06/22/1999 20:09	
1,2-Dichloroethane-d4	96.9	76-114	%	1.00	06/22/1999 20:09	
Toluene-d8	96.0	88-110	%	1.00	06/22/1999 20:09	

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Environmental Services (SDB)

To: TCG
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID: MW6	Lab Sample ID: 1999-06-0232-005
Project: 990103 K/M - Albany	Received: 06/16/1999 16:47
Sampled: 06/16/1999	Extracted: 06/23/1999 17:33
Matrix: Water	QC-Batch: 1999/06/23-01.09

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	06/23/1999 17:33	
Benzene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Bromodichloromethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Bromoform	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Bromomethane	ND	1.0	ug/L	1.00	06/23/1999 17:33	
Carbon tetrachloride	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Chlorobenzene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Chloroethane	ND	1.0	ug/L	1.00	06/23/1999 17:33	
2-Butanone(MEK)	ND	50	ug/L	1.00	06/23/1999 17:33	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Chloroform	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Chloromethane	ND	1.0	ug/L	1.00	06/23/1999 17:33	
Dibromochloromethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	06/23/1999 17:33	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Dibromomethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,1-Dichloroethane	1.4	0.50	ug/L	1.00	06/23/1999 17:33	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,2-Dichloroethene (cis)	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,2-Dichloroethene (trans)	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Ethylbenzene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
2-Hexanone	ND	50	ug/L	1.00	06/23/1999 17:33	
Methylene chloride	ND	5.0	ug/L	1.00	06/23/1999 17:33	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	06/23/1999 17:33	
Naphthalene	ND	1.0	ug/L	1.00	06/23/1999 17:33	
Styrene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	

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Environmental Services (SDB)

To: TCG
Attn: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID: MW6	Lab Sample ID: 1999-06-0232-005
Project: 990103 K/M - Albany	Received: 06/16/1999 16:47
Sampled: 06/16/1999	Extracted: 06/23/1999 17:33
Matrix: Water	QC-Batch: 1999/06/23-01.09

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Tetrachloroethene	5.3	0.50	ug/L	1.00	06/23/1999 17:33	
Toluene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Trichloroethene	0.87	0.50	ug/L	1.00	06/23/1999 17:33	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Vinyl acetate	ND	5.0	ug/L	1.00	06/23/1999 17:33	
Vinyl chloride	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Total xylenes	ND	1.0	ug/L	1.00	06/23/1999 17:33	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Carbon disulfide	ND	1.0	ug/L	1.00	06/23/1999 17:33	
Isopropylbenzene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Bromobenzene	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Bromochloromethane	ND	1.0	ug/L	1.00	06/23/1999 17:33	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	06/23/1999 17:33	
Surrogate(s)						
4-Bromofluorobenzene	96.5	86-115	%	1.00	06/23/1999 17:33	
1,2-Dichloroethane-d4	117.1	76-114	%	1.00	06/23/1999 17:33	sh
Toluene-d8	99.1	88-110	%	1.00	06/23/1999 17:33	

Environmental Services (SDB)

To: TCG
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Batch QC Report
Volatile Organic Compounds

Matrix Spike (MS / MSD)	Water	QC Batch # 1999/06/22-01.09
Sample ID: MW2		Lab Sample ID: 1999-06-0232-001
MS: 1999/06/22-01.09-004	Extracted: 06/22/1999 17:33	Analyzed: 06/22/1999 17:33 Dilution: 1.0
MSD: 1999/06/22-01.09-005	Extracted: 06/22/1999 18:13	Analyzed: 06/22/1999 18:13 Dilution: 1.0

Compound	Conc. [ug/L]			Exp. Conc. [ug/L]		Recovery [%] RPD			Ctrl. Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	RPD [%]	Recovery	RPD	MS	MSD
Benzene	49.4	49.1	ND	50.0	50.0	98.8	98.2	0.6	69-129	20		
Chlorobenzene	56.1	56.9	ND	50.0	50.0	112.2	113.8	1.4	61-121	20		
1,1-Dichloroethene	37.5	38.2	ND	50.0	50.0	75.0	76.4	1.8	65-125	20		
Toluene	46.5	48.0	ND	50.0	50.0	93.0	96.0	3.2	70-130	20		
Trichloroethene	46.5	47.3	ND	50.0	50.0	93.0	94.6	1.7	74-134	20		
Surrogate(s)												
4-Bromofluorobenzene	489	488		500	500	97.8	97.6		86-115			
1,2-Dichloroethane-d4	632	728		500	500	126.4	145.6		76-114		sh	sh
Toluene-d8	524	528		500	500	104.8	105.6		88-110			

1220 Quarry Lane * Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

Environmental Services (SDB)

To: TCG
Attn: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Legend & Notes

Volatile Organic Compounds

Analyte Flags

sh

Surrogate recoveries were higher than QC limits due to matrix interference.

CHROMALAB, INC.

Environmental Services (SDB) (DOHS 1094)

Fax COC on 415-381-1741

1220 Quarry Lane • Pleasanton, California 94566-4756
510/484-1919 • Facsimile 510/484-1096

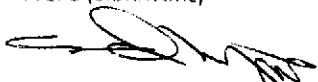
Reference #: 76511

Chain of Custody

99-06-0232

DATE 12 June 99 PAGE 1 OF 1

PROJ MGR Wendy Levey
 COMPANY TCB/Pro Tech
 ADDRESS 394 Cecilia Way
Tiburon CA 94920

SAMPLERS (SIGNATURE)  (PHONE NO.) 415-381-2566
 (FAX NO.) 415-381-1741

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.
<u>MW2</u>	<u>16 Jun 99</u>		<u>Water</u>	
<u>MW3</u>	<u>I</u>		<u>I</u>	
<u>MW4</u>				
<u>MW5</u>				
<u>MW6</u>				

ANALYSIS REPORT															NUMBER OF CONTAINERS	
TPH (EPA 8015, 8020) <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX CMTR	PURGEABLE AROMATICS BTEX (EPA 8020)	TPH-Diesel (EPA 8015M)	TEPH (EPA 8015M) Dibenzodioxane, Dibenzofuran, DMLD.	PURGEABLE HALOCARBONS, (BYOCs) (EPA 8010)	VOLATILE ORGANICS (VOCs) (EPA 8260)	SEMI-VOLATILES (EPA 8270)	TOTAL OIL AND GREASE (SM 6520 B + F, E + F)	PESTICIDES (EPA 8080) <input type="checkbox"/> PCB'S (EPA 8080)	PNA's by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	<input type="checkbox"/> Spec. Cond. <input type="checkbox"/> TSS <input type="checkbox"/> TDS	LUFT METALS: Cd, Cr, Pb, Ni, Zn	CAM 17 METALS (EPA 8010/7470/7471)	TOTAL LEAD	<input type="checkbox"/> W.E.T. (STLC) <input type="checkbox"/> TCLP		<input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> pH (24 hr hold time for H2O)
					<u>X</u>											<u>W</u>
					<u>X</u>											<u>W</u>
					<u>X</u>											<u>W</u>
					<u>X</u>											<u>W</u>
					<u>X</u>											<u>W</u>

PROJECT INFORMATION

PROJECT NAME B/W - Albany
 PROJECT NUMBER 990103
 P.O. # _____

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS _____
 HEAD SPACE _____
 TEMPERATURE _____
 CONFORMS TO RECORD _____

TA1 STANDARD 3-DAY 24 48 72 OTHER

Report: Routine Level 2 Level 3 Level 4 Electronic Report

SPECIAL INSTRUCTIONS/COMMENTS:
B.H. Protect
Send Results to Wendy Levey
415-381-1741

RELINQUISHED BY 1. Wendy Levey 12/5
 (SIGNATURE) (TIME)
S. Levey 16 Jun 99
 (PRINTED NAME) (DATE)
TCB/Pro Tech
 (COMPANY)

RELINQUISHED BY 2. P. Modeste 4/16
 (SIGNATURE) (TIME)
P. Modeste 4/16
 (PRINTED NAME) (DATE)
etc
 (COMPANY)

RECEIVED BY 1. P. Modeste 6/16
 (SIGNATURE) (TIME)
P. Modeste 6/16
 (PRINTED NAME) (DATE)
etc
 (COMPANY)

RECEIVED BY (LABORATORY) 3. CRIFUSA 6/16
 (SIGNATURE) (TIME)
CRIFUSA 6/16
 (PRINTED NAME) (DATE)
CRIFUSA
 (LAB)