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KELLY-MOORE PAINT COMPANY, INC.

ENVIRONMENTAL PROTECTION
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February 3, 2000

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

Re.: 969 San Pablo Avenue, Albany California
ProTech Project #107-OH99

Dear Ms. Shin,

Please accept this letter as acknowledgement that I have read the enclosed report, dated January 2000, and agree with the recommendations as stated in section 3-2.

Please do not hesitate to contact me with any questions or concerns regarding the above.

Sincerely,

W. E. Berry

W. E. Berry
Real Estate Manager
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email bberry@kellymoore.com

cc: Woody Lovejoy

Pro Tech

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

JANUARY 2000

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JANUARY 2000

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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).

Initially, chemicals of concern included: [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.

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

[1] Personal communication with Susan Hugo, June 1998.

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-6contained 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). 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).

1.4 - PRESENT CONCERNS

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

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).

The second quarter of groundwater monitoring was performed on 16 June 1999. During reconnaissance and setup for sampling the four wells (MW-3, MW-4, MW-5, and MW-6) we discovered well MW-2. It had been buried under the planter along the north end of the building. We sampled all five wells. Well MW-2 did not contain any of the compounds tested for. The other four wells (MW-3, MW-4, MW-5, and MW-6) contained 1,1-DCA, and PCE, while wells MW-5 and

[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.

MW-6 also contained chloroform, and TCE. Well MW-4 also contained 1,1-DCE, cis-1,2-DCE, and vinyl chloride. California MCLs continue to be exceeded in well MW-4 for 1,1-DCA, cis-1,2-DCE , PCE, TCE and vinyl chloride, and in well MW-5 for 1,1-DCA. Well MW-2 was surveyed for TOC elevation. ProTech requested verbally that SVOCs be removed from the analyte list for quarterly monitoring since they had not been detected in previous monitoring events (ProTech, 1999c).

The County reviewed the ProTech QMR, including a proposed risk management assessment to close the site, and prepared a comment letter (ACHA, 1999c). In this letter they expressed concern:

- that a "risk management plan (RMP) may essentially allow for a reduced frequency in groundwater monitoring, however it would not include closure for the site" based on fact that concentrations of VOCs continue to exceed California MCLs.
- that "analysis for SVOCs may be discontinued due to Non Detect results from past sampling event. It appears that you have already taken the initiative to discontinue the analysis for SVOCs, based on the fact that this monitoring event did not include the analysis for these constituents";
- "future groundwater monitoring reports, and any additional reports or workplans, shall include an attached cover letter, signed by a representative of your company (Kelly-Moore) acknowledging that the company has read the report and agrees to any recommendations or proposals; and
- that future groundwater monitoring reports include copies of field data sheets showing levels of turbidity, noting odors, percent recharge in wells hen samples were collected, pH, temperature, etc."

The third quarter of groundwater monitoring was performed on 15 September1999. We sampled all five wells. Well MW-2 did not contain any of the compounds tested for. The other four wells (MW-3, MW-4, MW-5, and MW-6) contained 1,1-DCA, PCE, and TCE, while MW-4 also contained 1,1-DCE, cis-1,2-DCE, and vinyl chloride. California MCLs continue to be exceeded in well MW-4 for 1,1-DCA, cis-1,2-DCE , PCE, and vinyl chloride, while in well MW-5 1,1-DCA is above its MCL, and in well MW-6 PCE is above its MCL (ProTech, 1999d).

This report presents the results of the fourth quarter of groundwater monitoring (15 December 1999) as requested by County. ProTech has modified its program to follow the requests made by the County.

2.0 - SCOPE-OF-WORK

2.1 - INTRODUCTION

On 15 December 1999, ProTech performed the third 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.

2.2 - GROUNDWATER MEASUREMENTS

On 15 December 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 the monitor wells were the same as those previously measured (September 1999).

On 15 December 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 be 0.037. 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 0.508 feet (0.89 feet for MW-2, 0.37 feet for MW-3, 0.23 feet for MW-4, 0.0.34 feet for MW-5, and 0.71 feet for MW-6). This rise in elevation is related to recent rainfall in the area, the dirt driveway condition that still exists prior to renovation completion, expected in March 2000, and the shallow water table.

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. These wells are very low producers and removal of more than two 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, while clarity or turbidity of water was observed. They were monitored at the commencement of pumping, after the well had dewatered.[4] The parameter testing results are shown on Table 3. ProTech continued to compare the parameter testing from all monitoring 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 1.24 and 2.32 wellbore volumes).[5] The field data sheets are included in Appendix 1.

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

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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.

4 Once the well has dewatered, it is allowed to recover for approximately 1 minute to allow sufficient water to enter the well for collection for parameter testing.

5 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.

and associated electrical cord were decontaminated in a triple rinse setup[6] between wells and new tubing was used in each well.[7] 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.

As a check to confirm our cleaning technique, an equipment blank was collected following the decontamination of the purge pump after the purging of monitor well MW-5. The equipment blank sample was analyzed for the same compounds as the groundwater samples.

2.3.1 - Monitor Well MW-2

Approximately 5 gallons (1.24 wellbore volumes) was removed from this well during purging. The pump was turned on and left running until the well dewatered. At the time the pump was started some fine sand was removed, but it cleared up in less than one minute. 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, dedicated Teflon bailer.[8] 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, Inc. of Pleasanton, California, a California-certified laboratory (ChromaLab) for analysis.

2.3.2 - Monitor Well MW-3

Approximately 6 gallons (1.52 wellbore volumes) was removed from this well during purging. The pump was turned on and left running until the well dewatered. At the time the pump was started some fine sand was removed, but it cleared up in less than one minute. The purgewater was collected in a 55 gallon drum on-site for temporary storage pending disposal.

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6 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.

7 The tubing for each well is decontaminated using the triple rinse setup and then bagged for re-use in the designated well during future quarterly sampling.

8 The bailer for each well is decontaminated using the triple rinse setup and then bagged for re-use in the designated well during future quarterly sampling.

Once purged and allowed to recover to approximately 80% of its static water level, the groundwater was sampled using a 3 foot, dedicated 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 5 gallons (1.34 wellbore volumes) was removed from this well during purging. The pump was turned on and left running until the well dewatered. At the time the pump was started some fine sand was removed, but it cleared up in less than one minute. 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, dedicated 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 17 gallons (2.32 wellbore volumes) was removed from this well during purging. The pump was turned on and left running until the well dewatered. At the time the pump was started some fine sand was removed, but it cleared up in less than one minute. 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, dedicated 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 13.5 gallons (1.91 wellbore volumes) was removed from this well during purging. The pump was turned on and left running until the well dewatered. At the time the pump was started some fine sand was removed, but it cleared up in less than one minute. 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, dedicated 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 December 1999 for analysis. The groundwater samples were analyzed for VOCs. 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. The laboratory results and chain-of-custody (COC) forms are included as Appendix 2.

2.4.1 - Monitor Well MW-2

All compounds tested for were below their respective MDLs (ranging between 0.5 ppb and 50 ppb depending on compound) 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 0.97 ppb (MDL of 0.5 ppb), PCE was detected at 1.0 ppb (MDL of 0.5 ppb), and TCE was detected at 0.98 ppb (MDL of 0.5 ppb). All other compounds tested for were below their MDLs (ranging between 0.5 ppb and 50 ppb depending on compound).

2.4.3 - Monitor Well MW-4

The results of the VOCs analyses indicated that 1,1-DCA was detected at 37 ppb (MDL of 0.5 ppb), cis-1,2-DCE was detected at 11 ppb (MDL of 0.5 ppb), PCE was detected at 5.7 ppb (0.5 ppb), and TCE was detected at 4.4 ppb (0.5 ppb). All other compounds tested for were below their MDLs (ranging between 0.5 ppb and 50 ppb depending on compound).

2.4.4 - Monitor Well MW-5

The results of the VOCs analyses indicated that 1,1-DCA was detected at 6.7 ppb (MDL of 0.5 ppb), PCE was detected at 1.5 ppb (MDL of 0.5 ppb), and TCE was detected at 1.4 ppb (MDL of 0.5 ppb). All other compounds tested for were below their MDLs (ranging between 0.5 ppb and 50 ppb depending on compound).

2.4.5 - Monitor Well MW-6

The results of the VOCs analyses indicated that 1,1-DCA was detected at 1.2 ppb (MDL of 0.5 ppb), PCE was detected at 4.8 ppb (MDL of 0.5 ppb), and TCE was detected at 0.56 ppb (MDL of 0.5 ppb). All other compounds tested for were below their MDLs (ranging between 0.5 ppb and 50 ppb depending on compound).

2.4.6 - Equipment Blank

All compounds tested for were below their respective MDLs (ranging between 0.5 ppb and 50 ppb depending on compound) during this sampling and analysis effort.

3.0 - OBSERVATIONS AND RECOMMENDATIONS

3.1 - OBSERVATIONS

Groundwater elevations have risen since September. All wells rose with the average increase calculated at 0.508 ft.

Groundwater flow direction continues to be to the southwest, and its calculated gradient has flattened slightly from September to approximately 0.037.

The amount of sand removed from the wells was reduced by not surging them and the low-flow nature of the wells has kept the amount of water to be managed off-site low for each given event.

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 to be 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 patterns develop.

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. 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 a continuing downward trend in concentrations from the previous groundwater monitoring (June and September 1999) to now (except for 1,1-DCA in MW-5 which has an opposite trend). All results were within the same order-of-magnitude as September 1999, and virtually all dropped within that magnitude.

1,1-DCA (37 ppb), cis-1,2-DCE (11 ppb), and PCE (5.7 ppb), were again detected above their California MCLs (1,1-DCA - 5 ppb, cis-1,2-DCE - 6 ppb, PCE - 5 ppb, and TCE - 5 ppb,) in MW-4, while 1,1-DCA continues to be detected above its California MCL in MW-5.

3.2 - RECOMMENDATIONS

While the concentrations appear to be declining in the wells, there is a potential that the low-flow nature of the wells and the inherent cascading effect on groundwater in low-flow, dewatered wells may be volatilizing some of the contaminants prior to sampling.

If the County has this concern, we could change in sampling methodology. This change could include a no-purge effort, provided the water levels at the time of sampling are no higher than the well screen (no submerged well screens). Samples from the wells that meet this criteria could be collected without purging. Samples from the wells that do not meet this criteria could be collected after purging no more than one well bore volume, and not dewatering the well (peristaltic pump on low-flow setting). The results from this sampling effort would be compared with those of previous efforts to see if there a difference in concentrations that can be attributed to purging methods.

The next quarterly monitoring is tentatively scheduled for the week of 13 Mach 2000.

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.

_____, 1999b, *Groundwater Well Installation Report Comment Letter*, 27 May 1999.

_____, 1999c, *Quarterly Groundwater Monitoring Report Comment Letter*, 16 September 1999.

California Code of Regulations, Title 8; Department of Industrial Relations - California Occupational Safety and Health Regulations (Title 8).

California Code of Regulations, Title 22: Social Security; Division 4: Environmental Health and Division 4.5: Chapter 11: Identification of Hazardous Waste; article 3: Characterization of Hazardous Waste (Title 22).

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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
	15-Sep-99	42.14	9.25	32.89	ND	ND	ND	ND	ND	ND	ND
	15-Dec-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
	15-Sep-99	41.49	8.73	32.76	ND	1.40	ND	ND	1.60	1.90	ND
	15-Dec-99	41.49	8.36	33.13	ND	0.97	ND	ND	1.00	0.98	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**	**20.00**	**6.40**	**2.40**
	15-Sep-99	41.15	9.18	31.97	ND	**61.00**	0.74	**18.00**	**16.00**	4.40	**0.91**
	15-Dec-99	41.15	8.95	32.20	ND	**37.00**	ND	**11.00**	**5.70**	2.50	ND
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
	15-Sep-99	41.71	9.20	32.51	ND	**6.40**	ND	ND	1.80	1.80	ND
	15-Dec-99	41.71	8.86	32.85	ND	**6.70**	ND	ND	1.50	1.40	ND

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-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
	15-Sep-99	42.04	9.71	32.33	ND	1.80	ND	ND	**6.20**	0.87	ND
	15-Dec-99	42.04	9.00	33.04	ND	1.20	ND	ND	4.80	0.56	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: 12/15/99

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	5.00	1.24
MW-3	8.36	14.43	6.07	0.17	0.03	0.53	3.96	6.00	1.52
MW-4	8.95	14.68	5.73	0.17	0.03	0.50	3.74	5.00	1.34
MW-5	8.86	20.08	11.22	0.17	0.03	0.98	7.32	17.00	2.32
MW-6	9	19.84	10.84	0.17	0.03	0.95	7.07	13.50	1.91

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 R^2 = well radius squared (ft^2)
WV (ft^3) = wellbore volume (ft^3)
WV (gal) = wellbore volume (gallons); where 1 ft^3 = 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: 12/15/99

Well #	Interval[(1)]	~Gals	pH	Cond	Temp
MW-2	Start	0.00	7.66	1.27	60.10
	End	4.00	7.58	1.29	59.90
		(dewatered @ 5 gallons)			
MW-3	Start	0.00	7.79	1.22	56.90
	End	4.00	7.55	1.29	61.10
		(dewatered @ 6 gallons)			
MW-4	Start	0.00	6.81	1.57	57.60
	End	4.00	6.75	1.67	58.00
		(dewatered @ 5 gallons)			
MW-5	Start	0.00	7.47	2.00	58.10
	Middle	7.00	7.54	1.52	61.60
	End	15.00	7.46	1.54	62.20
		(dewatered @ 17 gallons)			
MW-6	Start	0.00	7.59	1.69	57.80
	Middle	7.00	7.51	1.60	60.80
	End	13.00	7.47	1.34	61.00
		(dewatered @ 13.5 gallons)			

Notes: ~Gals = approximate gallons removed at time of measurement
pH in standard units
Cond = Conductivity (µmho/cm)
Temp = temperature (º F)
(1) = wells dewatered during pumping, were then allowed to recover for sampling

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	0.00	16-Jun-1999	6.88		1.26		62.30	
	5.00		6.94	0.06	1.28	0.02	63.00	0.70
	6.00		6.78	0.16	1.30	0.02	62.30	0.70
	0.00	15-Sep-1999	7.56		1.44		63.50	
	4.00		7.52	0.04	1.44	0.00	63.00	0.50
	0.00	15-Dec-1999	7.66		1.27		60.10	
	4.00		7.58	0.08	1.29	0.02	59.90	0.20
MW-3	0.00	29-Mar-1999	6.97		1.32		58.40	
	5.00		6.95	0.02	1.33	0.01	57.40	1.00
	7.00		6.81	0.14	1.34	0.01	58.00	0.60
	0.00	16-Jun-1999	6.68		1.27		62.80	
	5.00		6.88	0.20	1.37	0.10	63.90	1.10
	7.00		6.96	0.08	1.35	0.02	64.00	0.10
	0.00	15-Sep-1999	7.88		1.43		64.90	
	4.50		7.34	0.54	1.40	0.03	65.00	0.10
	0.00	15-Dec-1999	7.79		1.22		56.90	
	4.00		7.55	0.24	1.29	0.07	61.10	4.20
MW-4	0.00	29-Mar-1999	6.40		1.35		58.40	
	5.00		6.41	0.01	1.34	0.01	59.40	1.00
	6.00		6.38	0.03	1.34	0.00	60.00	0.60
	0.00	16-Jun-1999	6.34		1.26		62.00	
	5.00		6.54	0.20	1.27	0.01	63.40	1.40
	6.00		6.39	0.15	1.28	0.01	64.20	0.80

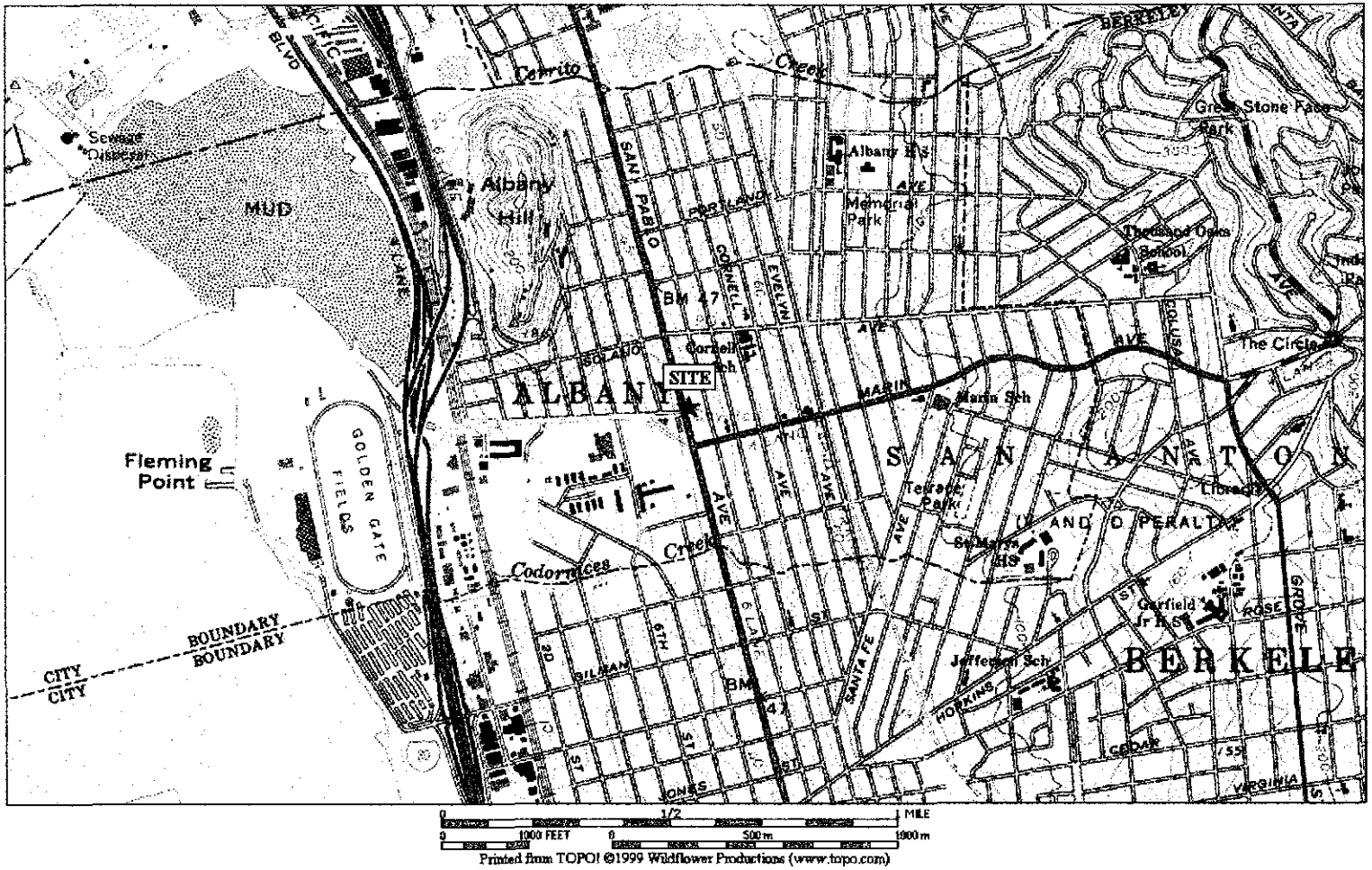
Table 4 - Comparison of Parameter Testing Results
Kelly-Moore Paint company
969 San Pablo Avenue, Albany, CA
ProTech Project #107-OH99

Well #	GR	Date	pH	ΔpH	Cond	ΔCond	Temp	ΔTemp
	0.00	15-Sep-1999	7.45		1.41		64.20	
	5.00		7.42	0.03	1.38	0.03	64.60	0.40
	0.00	15-Dec-1999	6.81		1.57		57.60	
	4.00		6.75	0.06	1.67	0.10	58.00	0.40
MW-5	0.00	29-Mar-1999	6.89		1.38		62.50	
	8.00		6.90	0.01	1.30	0.08	66.00	3.50
	15.00		6.70	0.20	1.39	0.09	66.40	0.40
	25.00		6.75	0.05	1.38	0.01	66.70	0.30
	0.00	16-Jun-1999	7.14		1.27		61.50	
	17.00		6.85	0.29	1.44	0.17	62.30	0.80
	25.00		6.86	0.01	1.31	0.13	62.90	0.60
	31.00		6.84	0.02	1.32	0.01	62.60	0.30
	0.00	15-Sep-1999	7.35		1.41		65.80	
	12.00		7.24	0.11	1.42	0.01	65.70	0.10
	0.00	15-Dec-1999	7.47		2.00		58.10	
	7.00		7.54	0.07	1.52	0.48	61.60	3.50
	15.00		7.46	0.08	1.54	0.02	62.20	0.60
MW-6	0.00	29-Mar-1999	7.24		1.19		66.40	
	8.00		7.32	0.08	1.30	0.11	63.80	2.60
	17.00		7.31	0.01	1.27	0.03	63.20	0.60
	28.00		7.36	0.05	1.26	0.01	63.60	0.40
	0.00	16-Jun-1999	7.29		1.28		62.20	
	14.00		7.55	0.26	1.26	0.02	61.80	0.40
	29.00		7.48	0.07	1.29	0.03	63.00	1.20

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
	0.00	15-Sep-1999	7.40		1.34		63.40	
	13.00		7.73	0.33	1.31	0.03	64.20	0.80
	0.00	15-Dec-1999	7.59		1.69		57.80	
	7.00		7.51	0.08	1.60	0.09	60.80	3.00
	13.00		7.47	0.04	1.34	0.26	61.00	0.20

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



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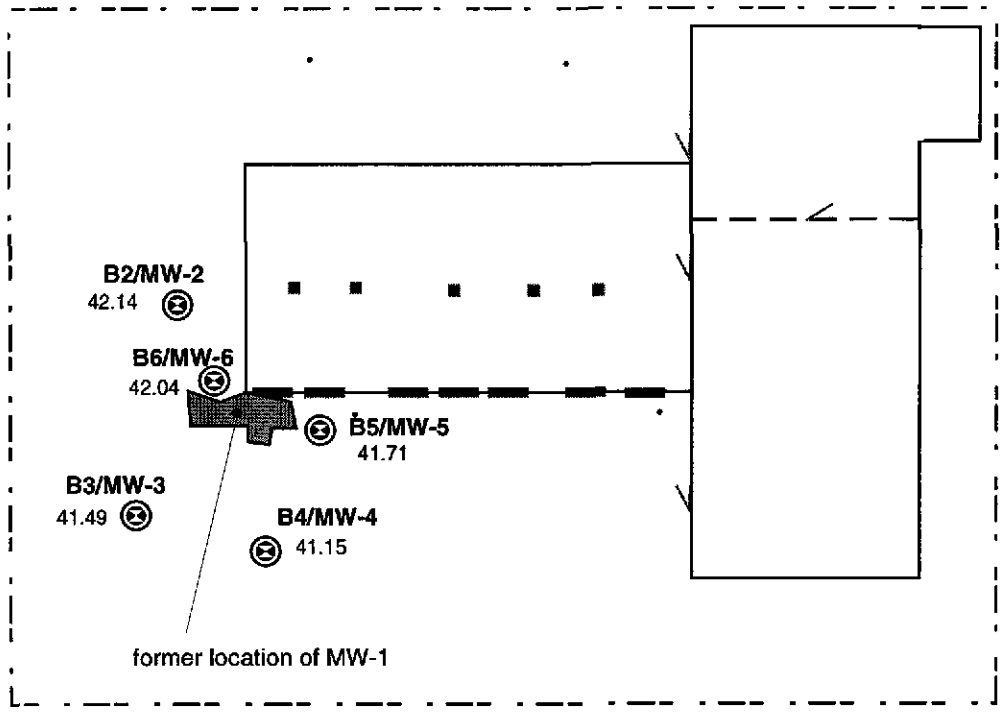
ProTech Consulting & Engineering	Job No. 990103		**Site Location Map**	N	Figure 1
	Date 23 April 1999		Groundwater Sampling Program		
	Drawn by WL		Kelly-Moore Paint Company		
	Rev CHT	Apprvd WL	969 San Pablo Avenue, Albany, CA		



San Pablo Avenue

Legend

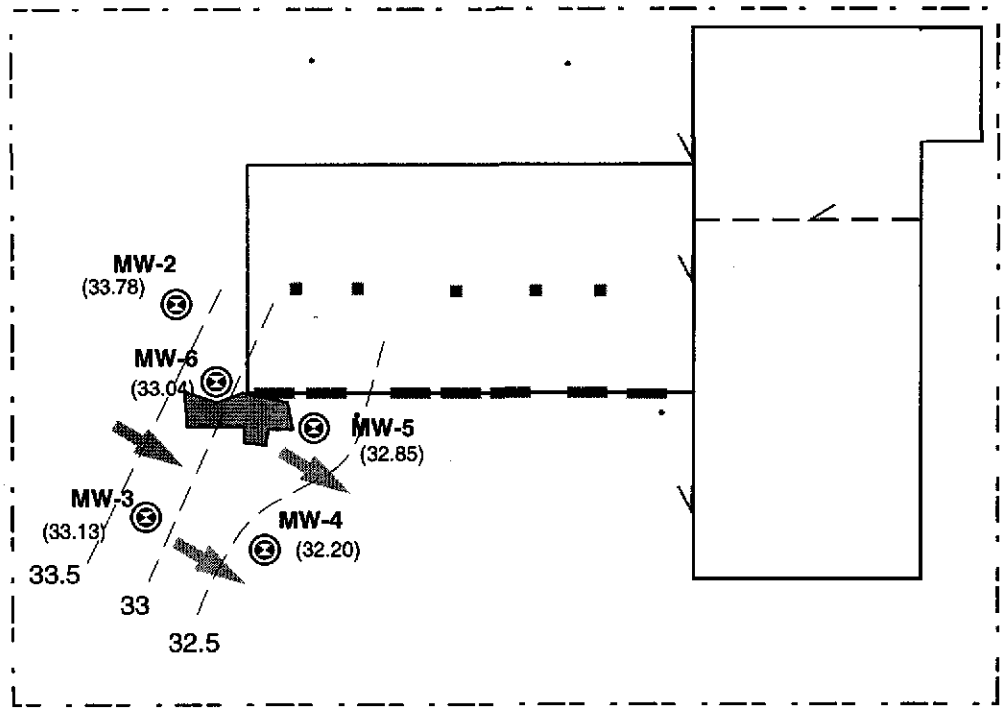
- Property Boundary
- B3/MW-3 41.49 — Boring/Groundwater Monitoring Well ID# w/TOC elevation (ft-AMSL)
- Doorway
- Sewer Cleanout
- Garage Doors
- Former hydraulic Lifts
- Former waste oil tank excavation limits

Approx scale

0 44

(feet)

ProTech Consulting & Engineering	Job No. 990103 Date 15 Sept 1999 Drawn by WL Rev CHT Apprvd WL	Project **Site Plan w/ Well Locations** Groundwater Sampling Program Kelly-Moore Paint Company 969 San Pablo Avenue, Albany, California	N	Figure **2**



San Pablo Avenue

Legend

- Property Boundary
- MW-3 35.89 — Groundwater Monitoring Well w/groundwater elevation (ft-AMSL)
- Doorway
- Sewer Cleanout
- Garage Doors
- Former Hydraulic Lifts
- Former waste oil tank excavation limits
- 0.037 — Estimated Groundwater Flow Direction & Estimated Gradient
- 33 — Groundwater contour Line w/elevation (ft-AMSL)

Approx scale

0 44

(feet)

ProTech Consulting & Engineering

Job No.	990103
Date	15 Dec 1999
Drawn by	WL
Rev	CHT
Apprvd	WL

Project

Site Plan w/ Groundwater Elevations

Groundwater Sampling Program

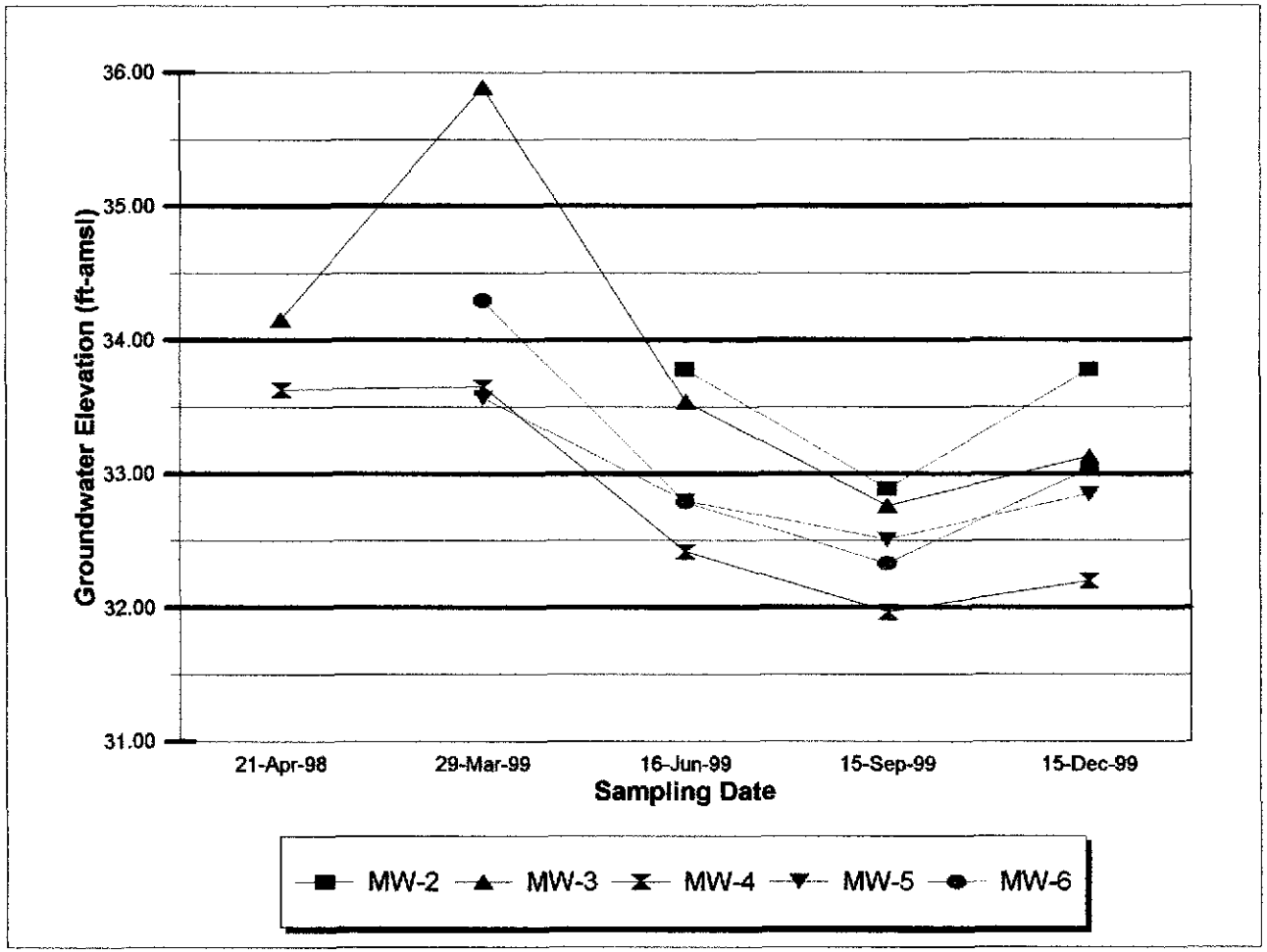
Kelly-Moore Paint Company

969 San Pablo Avenue, Albany, California

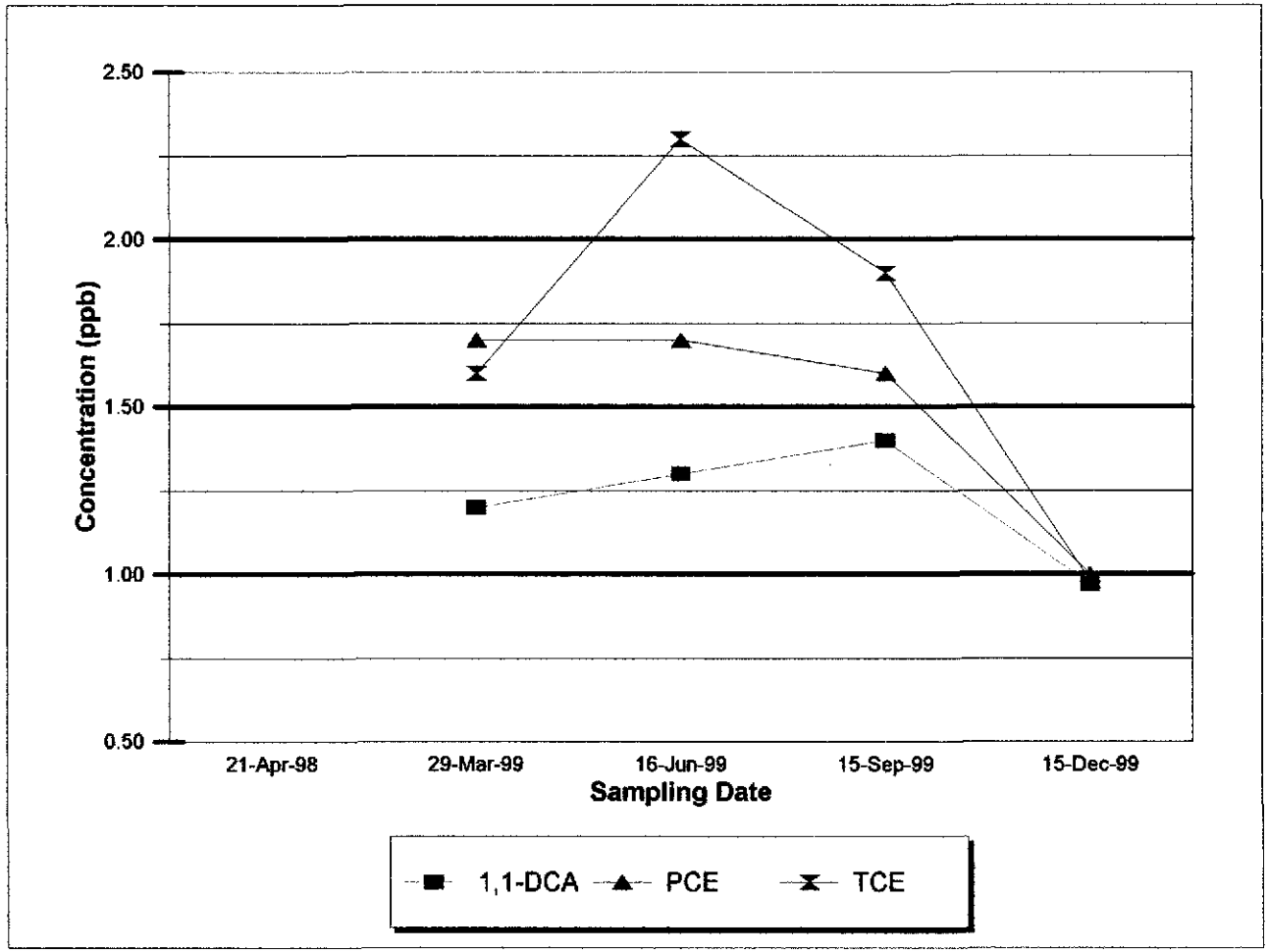
N

Figure

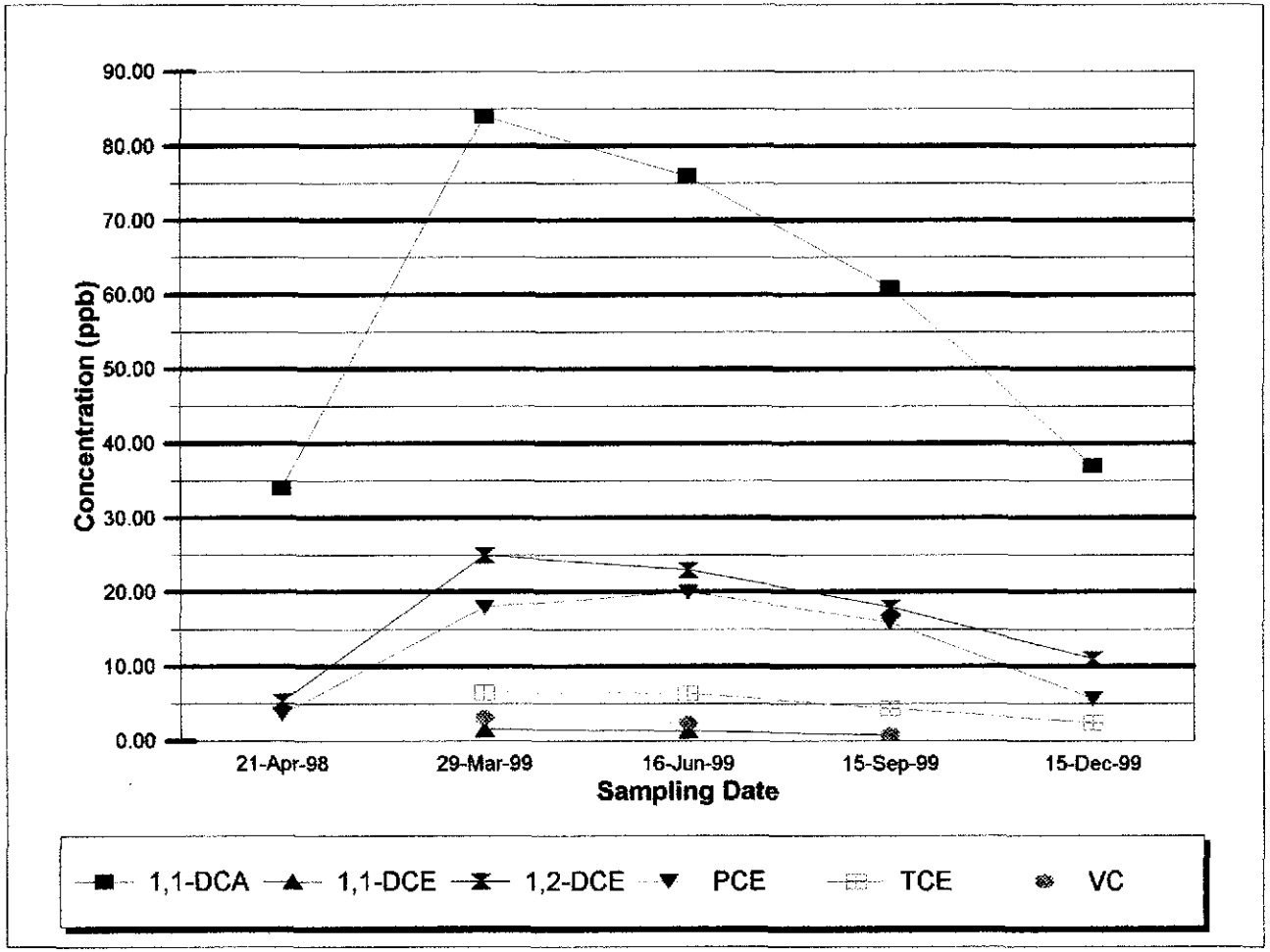
3



ProTech Consulting & Engineering	Job No. 990103 Date 15 Dec 1999 Drawn by WL Rev CHT Apprvd WL	Project **Historic Groundwater Elevations** Groundwater Sampling Program Kelly-Moore Paint Company 969 San Pablo Avenue, Albany, California		Figure **4**



ProTech Consulting & Engineering	Job No. **990103** Date **15 Dec 1999** Drawn by **WL** Rev **CHT** Apprvd **WL**	Project **Historic VOC Results - MW-3** Groundwater Sampling Program Kelly-Moore Paint Company 969 San Pablo Avenue, Albany, California	Figure **5**



ProTech Consulting & Engineering	Job No. 990103 Date 15 Dec 1999 Drawn by WL Rev CHT Apprvd WL	Project **Historic VOC Results - MW-4** Groundwater Sampling Program Kelly-Moore Paint Company 969 San Pablo Avenue, Albany, California	Figure **6**

DEPTH-TO-WATER (DTW) MONITORING SHEET

Project Name: Kelly Moore

Project #: 990103

DATE	OPERATOR	WELL #	MEASUREMENTS			NOTES
			DTW	TD	WCH	
1st	[illegible]	MW2	8.36	14.53	6.17	80% — 9.59' DTW
		MW3	8.36	14.43	6.07	80% — 9.57' DTW
		MW4	8.95	14.68	5.73	80% — 10.09' DTW
		MW5	8.86	20.08	11.22	80% — 11.10' DTW
		MW6	9.00	19.84	10.84	80% — 11.68' DTW
						All wells purged to atleast 80% of
						Static Level
Recovery		MW2	8.92			→ 90%
		MW3	8.52			→ 97%
		MW4	9.98			→ 82%
		MW5	10.36			→ 86%
		MW6	10.48			→ 86%

Notes: DTW = Depth-to-Water (ft)
TD - Total Depth of Well (ft)
WCH = Water Column Height (ft)

GROUNDWATER PARAMETERS MONITORING SHEET

Project Name: Selby Moore   Project #: 990103   Well #: MW-2

DATE	STAGE	GALLONS	PARAMETERS			NOTES
			pH	Temp	Cond	
15 Dec 99	Init	0	7.64	60.10	1.27	Cloudy @ start, cleared up in
	Final	4.00	7.58	55.90	1.25	30 seconds dewatered @ 4 gallons
						let sit for 10 mins then met be
						got Rudy's went dry right away

Notes: pH = pH (Standard Units)
Temp = temperature (°F)
Cond = conductivity (μmho/cm)

GROUNDWATER PARAMETERS MONITORING SHEET

Project Name: Kelly Moore Project #: 990103 Well #: MW5

DATE	STAGE	GALLONS	PARAMETERS			NOTES
			pH	Temp	Cond	
15Jan99	Init	0	7.47	58.1	2.00	Cloudy - Clearing up in
	middle	7	7.54	61.6	1.52	25 seconds run well until
	middle	13	7.46	62.2	1.54	went dry @ 17 gals
	End	17				Collected water @ 7 in
						15 gallons for Bailing

Notes: pH = pH (Standard Units)
Temp = temperature (°F)
Cond = conductivity (μmho/cm)

Protech Consulting
1755 E. Bayshore RD, Suite 14B
Redwood City, CA 94063

Attn.: Mr. Woody Lovejoy

Project: 107-OH99
K/M

Dear Mr. Lovejoy,

Attached is our report for your samples received on Thursday December 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 January 15, 2000 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

Gary Cook

Volatile Organic Compounds

Protech Consulting

1755 E. Bayshore RD, Suite 14B
Redwood City, CA 94063

Attn: Woody Lovejoy

Phone: (650) 569-4020 Fax: (415) 381-1741

Project #: 107-OH99

Project: K/M

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-2	Water	12/15/1999	1
MW-3	Water	12/15/1999	2
MW-4	Water	12/15/1999	3
MW-5	Water	12/15/1999	4
MW-6	Water	12/15/1999	5
EB	Water	12/15/1999	6

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID: **MW-2**
Project: 107-OH99 K/M
Sampled: 12/15/1999
Matrix: Water

Lab Sample ID: **1999-12-0289-001**
Received: 12/16/1999 11:35
Extracted: 12/20/1999 21:27
QC-Batch: 1999/12/20-01.27

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	12/20/1999 21:27	
Benzene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Bromoform	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Bromomethane	ND	1.0	ug/L	1.00	12/20/1999 21:27	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Chlorobenzene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Chloroethane	ND	1.0	ug/L	1.00	12/20/1999 21:27	
2-Butanone(MEK)	ND	50	ug/L	1.00	12/20/1999 21:27	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Chloroform	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Chloromethane	ND	1.0	ug/L	1.00	12/20/1999 21:27	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	12/20/1999 21:27	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Dibromomethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Ethylbenzene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
2-Hexanone	ND	50	ug/L	1.00	12/20/1999 21:27	
Methylene chloride	ND	5.0	ug/L	1.00	12/20/1999 21:27	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	12/20/1999 21:27	
Naphthalene	ND	1.0	ug/L	1.00	12/20/1999 21:27	
Styrene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**MW-2**	Lab Sample ID:	**1999-12-0289-001**
Project:	107-OH99 K/M	Received:	12/16/1999 11:35
		Extracted:	12/20/1999 21:27
Sampled:	12/15/1999	QC-Batch:	1999/12/20-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Tetrachloroethene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Toluene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Trichloroethene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Vinyl acetate	ND	5.0	ug/L	1.00	12/20/1999 21:27	
Vinyl chloride	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Total xylenes	ND	1.0	ug/L	1.00	12/20/1999 21:27	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Carbon disulfide	ND	1.0	ug/L	1.00	12/20/1999 21:27	
Isopropylbenzene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Bromobenzene	ND	0.50	ug/L	1.00	12/20/1999 21:27	
Bromochloromethane	ND	1.0	ug/L	1.00	12/20/1999 21:27	
Trichlorofluoromethane	ND	2.0	ug/L	1.00	12/20/1999 21:27	
Surrogate(s)						
4-Bromofluorobenzene	93.2	86-115	%	1.00	12/20/1999 21:27	
1,2-Dichloroethane-d4	103.8	76-114	%	1.00	12/20/1999 21:27	
Toluene-d8	93.1	88-110	%	1.00	12/20/1999 21:27	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**MW-3**	Lab Sample ID:	**1999-12-0289-002**
Project:	107-OH99 K/M	Received:	12/16/1999 11:35
		Extracted:	12/21/1999 15:44
Sampled:	12/15/1999	QC-Batch:	1999/12/21-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	12/21/1999 15:44	
Benzene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Bromoform	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Bromomethane	ND	1.0	ug/L	1.00	12/21/1999 15:44	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Chlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Chloroethane	ND	1.0	ug/L	1.00	12/21/1999 15:44	
2-Butanone(MEK)	ND	50	ug/L	1.00	12/21/1999 15:44	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Chloroform	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Chloromethane	ND	1.0	ug/L	1.00	12/21/1999 15:44	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/21/1999 15:44	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	12/21/1999 15:44	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Dibromomethane	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	12/21/1999 15:44	
1,1-Dichloroethane	0.97	0.50	ug/L	1.00	12/21/1999 15:44	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/21/1999 15:44	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/21/1999 15:44	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Ethylbenzene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
2-Hexanone	ND	50	ug/L	1.00	12/21/1999 15:44	
Methylene chloride	ND	5.0	ug/L	1.00	12/21/1999 15:44	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	12/21/1999 15:44	
Naphthalene	ND	1.0	ug/L	1.00	12/21/1999 15:44	
Styrene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/21/1999 15:44	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**MW-3**	Lab Sample ID:	**1999-12-0289-002**
Project:	107-OH99 K/M	Received:	12/16/1999 11:35
		Extracted:	12/21/1999 15:44
Sampled:	12/15/1999	QC-Batch:	1999/12/21-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Tetrachloroethene	1.0	0.50	ug/L	1.00	12/21/1999 15:44	
Toluene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	12/21/1999 15:44	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Trichloroethene	0.98	0.50	ug/L	1.00	12/21/1999 15:44	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Vinyl acetate	ND	5.0	ug/L	1.00	12/21/1999 15:44	
Vinyl chloride	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Total xylenes	ND	1.0	ug/L	1.00	12/21/1999 15:44	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Carbon disulfide	ND	1.0	ug/L	1.00	12/21/1999 15:44	
Isopropylbenzene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Bromobenzene	ND	0.50	ug/L	1.00	12/21/1999 15:44	
Bromochloromethane	ND	1.0	ug/L	1.00	12/21/1999 15:44	
Trichlorofluoromethane	ND	2.0	ug/L	1.00	12/21/1999 15:44	
Surrogate(s)						
4-Bromofluorobenzene	100.0	86-115	%	1.00	12/21/1999 15:44	
1,2-Dichloroethane-d4	103.5	76-114	%	1.00	12/21/1999 15:44	
Toluene-d8	96.3	88-110	%	1.00	12/21/1999 15:44	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-12-0289

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**MW-4**	Lab Sample ID:	**1999-12-0289-003**
Project:	107-OH99 K/M	Received:	12/16/1999 11:35
		Extracted:	12/21/1999 16:22
Sampled:	12/15/1999	QC-Batch:	1999/12/21-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	12/21/1999 16:22	
Benzene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Bromoform	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Bromomethane	ND	1.0	ug/L	1.00	12/21/1999 16:22	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Chlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Chloroethane	ND	1.0	ug/L	1.00	12/21/1999 16:22	
2-Butanone(MEK)	ND	50	ug/L	1.00	12/21/1999 16:22	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Chloroform	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Chloromethane	ND	1.0	ug/L	1.00	12/21/1999 16:22	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/21/1999 16:22	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	12/21/1999 16:22	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Dibromomethane	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	12/21/1999 16:22	
1,1-Dichloroethane	37	0.50	ug/L	1.00	12/21/1999 16:22	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/21/1999 16:22	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
cis-1,2-Dichloroethene	11	0.50	ug/L	1.00	12/21/1999 16:22	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/21/1999 16:22	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Ethylbenzene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
2-Hexanone	ND	50	ug/L	1.00	12/21/1999 16:22	
Methylene chloride	ND	5.0	ug/L	1.00	12/21/1999 16:22	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	12/21/1999 16:22	
Naphthalene	ND	1.0	ug/L	1.00	12/21/1999 16:22	
Styrene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/21/1999 16:22	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**MW-4**	Lab Sample ID:	**1999-12-0289-003**
Project:	107-OH99 K/M	Received:	12/16/1999 11:35
		Extracted:	12/21/1999 16:22
Sampled:	12/15/1999	QC-Batch:	1999/12/21-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Tetrachloroethene	5.7	0.50	ug/L	1.00	12/21/1999 16:22	
Toluene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	12/21/1999 16:22	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Trichloroethene	2.5	0.50	ug/L	1.00	12/21/1999 16:22	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Vinyl acetate	ND	5.0	ug/L	1.00	12/21/1999 16:22	
Vinyl chloride	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Total xylenes	ND	1.0	ug/L	1.00	12/21/1999 16:22	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Carbon disulfide	ND	1.0	ug/L	1.00	12/21/1999 16:22	
Isopropylbenzene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Bromobenzene	ND	0.50	ug/L	1.00	12/21/1999 16:22	
Bromochloromethane	ND	1.0	ug/L	1.00	12/21/1999 16:22	
Trichlorofluoromethane	ND	2.0	ug/L	1.00	12/21/1999 16:22	
Surrogate(s)						
4-Bromofluorobenzene	96.1	86-115	%	1.00	12/21/1999 16:22	
1,2-Dichloroethane-d4	110.5	76-114	%	1.00	12/21/1999 16:22	
Toluene-d8	95.7	88-110	%	1.00	12/21/1999 16:22	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID: **MW-5**
Project: 107-OH99 K/M
Sampled: 12/15/1999
Matrix: Water

Lab Sample ID: **1999-12-0289-004**
Received: 12/16/1999 11:35
Extracted: 12/21/1999 17:00
QC-Batch: 1999/12/21-01.27

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	12/21/1999 17:00	
Benzene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Bromoform	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Bromomethane	ND	1.0	ug/L	1.00	12/21/1999 17:00	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Chlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Chloroethane	ND	1.0	ug/L	1.00	12/21/1999 17:00	
2-Butanone(MEK)	ND	50	ug/L	1.00	12/21/1999 17:00	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Chloroform	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Chloromethane	ND	1.0	ug/L	1.00	12/21/1999 17:00	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/21/1999 17:00	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	12/21/1999 17:00	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Dibromomethane	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	12/21/1999 17:00	
1,1-Dichloroethane	6.7	0.50	ug/L	1.00	12/21/1999 17:00	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/21/1999 17:00	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/21/1999 17:00	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Ethylbenzene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
2-Hexanone	ND	50	ug/L	1.00	12/21/1999 17:00	
Methylene chloride	ND	5.0	ug/L	1.00	12/21/1999 17:00	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	12/21/1999 17:00	
Naphthalene	ND	1.0	ug/L	1.00	12/21/1999 17:00	
Styrene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/21/1999 17:00	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**MW-5**	Lab Sample ID:	**1999-12-0289-004**
Project:	107-OH99 K/M	Received:	12/16/1999 11:35
		Extracted:	12/21/1999 17:00
Sampled:	12/15/1999	QC-Batch:	1999/12/21-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Tetrachloroethene	1.5	0.50	ug/L	1.00	12/21/1999 17:00	
Toluene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	12/21/1999 17:00	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Trichloroethene	1.4	0.50	ug/L	1.00	12/21/1999 17:00	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Vinyl acetate	ND	5.0	ug/L	1.00	12/21/1999 17:00	
Vinyl chloride	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Total xylenes	ND	1.0	ug/L	1.00	12/21/1999 17:00	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Carbon disulfide	ND	1.0	ug/L	1.00	12/21/1999 17:00	
Isopropylbenzene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Bromobenzene	ND	0.50	ug/L	1.00	12/21/1999 17:00	
Bromochloromethane	ND	1.0	ug/L	1.00	12/21/1999 17:00	
Trichlorofluoromethane	ND	2.0	ug/L	1.00	12/21/1999 17:00	
Surrogate(s)						
4-Bromofluorobenzene	101.1	86-115	%	1.00	12/21/1999 17:00	
1,2-Dichloroethane-d4	106.3	76-114	%	1.00	12/21/1999 17:00	
Toluene-d8	92.4	88-110	%	1.00	12/21/1999 17:00	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID: **MW-6**
Project: 107-OH99 K/M
Sampled: 12/15/1999
Matrix: Water

Lab Sample ID: **1999-12-0289-005**
Received: 12/16/1999 11:35
Extracted: 12/21/1999 17:38
QC-Batch: 1999/12/21-01.27

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	12/21/1999 17:38	
Benzene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Bromoform	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Bromomethane	ND	1.0	ug/L	1.00	12/21/1999 17:38	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Chlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Chloroethane	ND	1.0	ug/L	1.00	12/21/1999 17:38	
2-Butanone(MEK)	ND	50	ug/L	1.00	12/21/1999 17:38	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Chloroform	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Chloromethane	ND	1.0	ug/L	1.00	12/21/1999 17:38	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/21/1999 17:38	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	12/21/1999 17:38	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Dibromomethane	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	12/21/1999 17:38	
1,1-Dichloroethane	1.2	0.50	ug/L	1.00	12/21/1999 17:38	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/21/1999 17:38	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/21/1999 17:38	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Ethylbenzene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
2-Hexanone	ND	50	ug/L	1.00	12/21/1999 17:38	
Methylene chloride	ND	5.0	ug/L	1.00	12/21/1999 17:38	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	12/21/1999 17:38	
Naphthalene	ND	1.0	ug/L	1.00	12/21/1999 17:38	
Styrene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/21/1999 17:38	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**MW-6**	Lab Sample ID:	**1999-12-0289-005**
Project:	107-OH99 K/M	Received:	12/16/1999 11:35
		Extracted:	12/21/1999 17:38
Sampled:	12/15/1999	QC-Batch:	1999/12/21-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Tetrachloroethene	4.8	0.50	ug/L	1.00	12/21/1999 17:38	
Toluene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	12/21/1999 17:38	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Trichloroethene	0.56	0.50	ug/L	1.00	12/21/1999 17:38	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Vinyl acetate	ND	5.0	ug/L	1.00	12/21/1999 17:38	
Vinyl chloride	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Total xylenes	ND	1.0	ug/L	1.00	12/21/1999 17:38	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Carbon disulfide	ND	1.0	ug/L	1.00	12/21/1999 17:38	
Isopropylbenzene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Bromobenzene	ND	0.50	ug/L	1.00	12/21/1999 17:38	
Bromochloromethane	ND	1.0	ug/L	1.00	12/21/1999 17:38	
Trichlorofluoromethane	ND	2.0	ug/L	1.00	12/21/1999 17:38	
Surrogate(s)						
4-Bromofluorobenzene	102.5	86-115	%	1.00	12/21/1999 17:38	
1,2-Dichloroethane-d4	101.7	76-114	%	1.00	12/21/1999 17:38	
Toluene-d8	95.2	88-110	%	1.00	12/21/1999 17:38	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**EB**	Lab Sample ID:	**1999-12-0289-006**
Project:	107-OH99 K/M	Received:	12/16/1999 11:35
		Extracted:	12/21/1999 20:09
Sampled:	12/15/1999	QC-Batch:	1999/12/21-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	50	ug/L	1.00	12/21/1999 20:09	
Benzene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Bromodichloromethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Bromoform	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Bromomethane	ND	1.0	ug/L	1.00	12/21/1999 20:09	
Carbon tetrachloride	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Chlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Chloroethane	ND	1.0	ug/L	1.00	12/21/1999 20:09	
2-Butanone(MEK)	ND	50	ug/L	1.00	12/21/1999 20:09	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Chloroform	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Chloromethane	ND	1.0	ug/L	1.00	12/21/1999 20:09	
Dibromochloromethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1.00	12/21/1999 20:09	
1,2-Dibromoethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Dibromomethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Dichlorodifluoromethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Ethylbenzene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
2-Hexanone	ND	50	ug/L	1.00	12/21/1999 20:09	
Methylene chloride	ND	5.0	ug/L	1.00	12/21/1999 20:09	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	12/21/1999 20:09	
Naphthalene	ND	1.0	ug/L	1.00	12/21/1999 20:09	
Styrene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**EB**	Lab Sample ID:	**1999-12-0289-006**
Project:	107-OH99 K/M	Received:	12/16/1999 11:35
		Extracted:	12/21/1999 20:09
Sampled:	12/15/1999	QC-Batch:	1999/12/21-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Tetrachloroethene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Toluene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Trichloroethene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Vinyl acetate	ND	5.0	ug/L	1.00	12/21/1999 20:09	
Vinyl chloride	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Total xylenes	ND	1.0	ug/L	1.00	12/21/1999 20:09	
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Carbon disulfide	ND	1.0	ug/L	1.00	12/21/1999 20:09	
Isopropylbenzene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Bromobenzene	ND	0.50	ug/L	1.00	12/21/1999 20:09	
Bromochloromethane	ND	1.0	ug/L	1.00	12/21/1999 20:09	
Trichlorofluoromethane	ND	2.0	ug/L	1.00	12/21/1999 20:09	
Surrogate(s)						
4-Bromofluorobenzene	99.5	86-115	%	1.00	12/21/1999 20:09	
1,2-Dichloroethane-d4	81.4	76-114	%	1.00	12/21/1999 20:09	
Toluene-d8	92.3	88-110	%	1.00	12/21/1999 20:09	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Batch QC Report
Volatile Organic Compounds

Method Blank **Water** **QC Batch # 1999/12/20-01.27**

MB: 1999/12/20-01.27-001 Date Extracted: 12/20/1999 14:16

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Acetone	ND	50	ug/L	12/20/1999 14:16	
Benzene	ND	0.5	ug/L	12/20/1999 14:16	
Bromodichloromethane	ND	0.5	ug/L	12/20/1999 14:16	
Bromoform	ND	0.5	ug/L	12/20/1999 14:16	
Bromomethane	ND	1.0	ug/L	12/20/1999 14:16	
Carbon tetrachloride	ND	0.5	ug/L	12/20/1999 14:16	
Chlorobenzene	ND	0.5	ug/L	12/20/1999 14:16	
Chloroethane	ND	1.0	ug/L	12/20/1999 14:16	
2-Butanone(MEK)	ND	50	ug/L	12/20/1999 14:16	
2-Chloroethylvinyl ether	ND	0.5	ug/L	12/20/1999 14:16	
Chloroform	ND	0.5	ug/L	12/20/1999 14:16	
Chloromethane	ND	1.0	ug/L	12/20/1999 14:16	
Dibromochloromethane	ND	0.5	ug/L	12/20/1999 14:16	
1,2-Dichlorobenzene	ND	0.5	ug/L	12/20/1999 14:16	
1,3-Dichlorobenzene	ND	0.5	ug/L	12/20/1999 14:16	
1,4-Dichlorobenzene	ND	0.5	ug/L	12/20/1999 14:16	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	12/20/1999 14:16	
1,2-Dibromoethane	ND	0.5	ug/L	12/20/1999 14:16	
Dibromomethane	ND	0.5	ug/L	12/20/1999 14:16	
Dichlorodifluoromethane	ND	0.5	ug/L	12/20/1999 14:16	
1,1-Dichloroethane	ND	0.5	ug/L	12/20/1999 14:16	
1,2-Dichloroethane	ND	0.5	ug/L	12/20/1999 14:16	
1,1-Dichloroethene	ND	0.5	ug/L	12/20/1999 14:16	
cis-1,2-Dichloroethene	ND	0.5	ug/L	12/20/1999 14:16	
trans-1,2-Dichloroethene	ND	0.5	ug/L	12/20/1999 14:16	
1,2-Dichloropropane	ND	0.5	ug/L	12/20/1999 14:16	
cis-1,3-Dichloropropene	ND	0.5	ug/L	12/20/1999 14:16	
trans-1,3-Dichloropropene	ND	0.5	ug/L	12/20/1999 14:16	
Ethylbenzene	ND	0.5	ug/L	12/20/1999 14:16	
2-Hexanone	ND	50	ug/L	12/20/1999 14:16	
Methylene chloride	ND	5.0	ug/L	12/20/1999 14:16	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	12/20/1999 14:16	
Naphthalene	ND	1.0	ug/L	12/20/1999 14:16	
Styrene	ND	0.5	ug/L	12/20/1999 14:16	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	12/20/1999 14:16	
Tetrachloroethene	ND	0.5	ug/L	12/20/1999 14:16	
Toluene	ND	0.5	ug/L	12/20/1999 14:16	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Batch QC Report

Volatile Organic Compounds

Method Blank **Water** **QC Batch # 1999/12/20-01.27**

MB: 1999/12/20-01.27-001 Date Extracted: 12/20/1999 14:16

Compound	Result	Rep.Limit	Units	Analyzed	Flag
1,1,1-Trichloroethane	ND	0.5	ug/L	12/20/1999 14:16	
1,1,2-Trichloroethane	ND	0.5	ug/L	12/20/1999 14:16	
Trichloroethene	ND	0.5	ug/L	12/20/1999 14:16	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	12/20/1999 14:16	
Vinyl acetate	ND	5.0	ug/L	12/20/1999 14:16	
Vinyl chloride	ND	0.5	ug/L	12/20/1999 14:16	
Total xylenes	ND	1.0	ug/L	12/20/1999 14:16	
Trichlorotrifluoroethane	ND	0.5	ug/L	12/20/1999 14:16	
Carbon disulfide	ND	1.0	ug/L	12/20/1999 14:16	
Isopropylbenzene	ND	0.5	ug/L	12/20/1999 14:16	
Bromobenzene	ND	0.5	ug/L	12/20/1999 14:16	
Bromochloromethane	ND	1.0	ug/L	12/20/1999 14:16	
Trichlorofluoromethane	ND	2.0	ug/L	12/20/1999 14:16	
Surrogate(s)					
4-Bromofluorobenzene	97.6	86-115	%	12/20/1999 14:16	
1,2-Dichloroethane-d4	100.0	76-114	%	12/20/1999 14:16	
Toluene-d8	90.0	88-110	%	12/20/1999 14:16	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Batch QC Report

Volatile Organic Compounds

Method Blank | **Water** | **QC Batch # 1999/12/21-01.27**

MB: 1999/12/21-01.27-001

Date Extracted: 12/21/1999 13:43

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Acetone	ND	50	ug/L	12/21/1999 13:43	
Benzene	ND	0.5	ug/L	12/21/1999 13:43	
Bromodichloromethane	ND	0.5	ug/L	12/21/1999 13:43	
Bromoform	ND	0.5	ug/L	12/21/1999 13:43	
Bromomethane	ND	1.0	ug/L	12/21/1999 13:43	
Carbon tetrachloride	ND	0.5	ug/L	12/21/1999 13:43	
Chlorobenzene	ND	0.5	ug/L	12/21/1999 13:43	
Chloroethane	ND	1.0	ug/L	12/21/1999 13:43	
2-Butanone(MEK)	ND	50	ug/L	12/21/1999 13:43	
2-Chloroethylvinyl ether	ND	0.5	ug/L	12/21/1999 13:43	
Chloroform	ND	0.5	ug/L	12/21/1999 13:43	
Chloromethane	ND	1.0	ug/L	12/21/1999 13:43	
Dibromochloromethane	ND	0.5	ug/L	12/21/1999 13:43	
1,2-Dichlorobenzene	ND	0.5	ug/L	12/21/1999 13:43	
1,3-Dichlorobenzene	ND	0.5	ug/L	12/21/1999 13:43	
1,4-Dichlorobenzene	ND	0.5	ug/L	12/21/1999 13:43	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	12/21/1999 13:43	
1,2-Dibromoethane	ND	0.5	ug/L	12/21/1999 13:43	
Dibromomethane	ND	0.5	ug/L	12/21/1999 13:43	
Dichlorodifluoromethane	ND	0.5	ug/L	12/21/1999 13:43	
1,1-Dichloroethane	ND	0.5	ug/L	12/21/1999 13:43	
1,2-Dichloroethane	ND	0.5	ug/L	12/21/1999 13:43	
1,1-Dichloroethene	ND	0.5	ug/L	12/21/1999 13:43	
cis-1,2-Dichloroethene	ND	0.5	ug/L	12/21/1999 13:43	
trans-1,2-Dichloroethene	ND	0.5	ug/L	12/21/1999 13:43	
1,2-Dichloropropane	ND	0.5	ug/L	12/21/1999 13:43	
cis-1,3-Dichloropropene	ND	0.5	ug/L	12/21/1999 13:43	
trans-1,3-Dichloropropene	ND	0.5	ug/L	12/21/1999 13:43	
Ethylbenzene	ND	0.5	ug/L	12/21/1999 13:43	
2-Hexanone	ND	50	ug/L	12/21/1999 13:43	
Methylene chloride	ND	5.0	ug/L	12/21/1999 13:43	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	12/21/1999 13:43	
Naphthalene	ND	1.0	ug/L	12/21/1999 13:43	
Styrene	ND	0.5	ug/L	12/21/1999 13:43	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	12/21/1999 13:43	
Tetrachloroethene	ND	0.5	ug/L	12/21/1999 13:43	
Toluene	ND	0.5	ug/L	12/21/1999 13:43	

To: **Protech Consulting**
Attn.: Woody Lovejoy

Test Method: 8260A
Prep Method: 5030

Batch QC Report
Volatile Organic Compounds

Method Blank | **Water** | **QC Batch # 1999/12/21-01.27**

MB: 1999/12/21-01.27-001 | Date Extracted: 12/21/1999 13:43

Compound	Result	Rep.Limit	Units	Analyzed	Flag
1,1,1-Trichloroethane	ND	0.5	ug/L	12/21/1999 13:43	
1,1,2-Trichloroethane	ND	0.5	ug/L	12/21/1999 13:43	
Trichloroethene	ND	0.5	ug/L	12/21/1999 13:43	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	12/21/1999 13:43	
Vinyl acetate	ND	5.0	ug/L	12/21/1999 13:43	
Vinyl chloride	ND	0.5	ug/L	12/21/1999 13:43	
Total xylenes	ND	1.0	ug/L	12/21/1999 13:43	
Trichlorotrifluoroethane	ND	0.5	ug/L	12/21/1999 13:43	
Carbon disulfide	ND	1.0	ug/L	12/21/1999 13:43	
Isopropylbenzene	ND	0.5	ug/L	12/21/1999 13:43	
Bromobenzene	ND	0.5	ug/L	12/21/1999 13:43	
Bromochloromethane	ND	1.0	ug/L	12/21/1999 13:43	
Trichlorofluoromethane	ND	2.0	ug/L	12/21/1999 13:43	
Surrogate(s)					
4-Bromofluorobenzene	100.6	86-115	%	12/21/1999 13:43	
1,2-Dichloroethane-d4	105.8	76-114	%	12/21/1999 13:43	
Toluene-d8	94.4	88-110	%	12/21/1999 13:43	

To: **Protech Consulting**

Attn: Woody Lovejoy

Test Method: 8260A

Prep Method: 5030

Batch QC Report

Volatile Organic Compounds

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/12/20-01.27**

LCS: 1999/12/20-01.27-002 Extracted: 12/20/1999 13:38 Analyzed: 12/20/1999 13:38

LCSD: 1999/12/20-01.27-003 Extracted: 12/20/1999 15:32 Analyzed: 12/20/1999 15:32

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	44.1	42.6	50.0	50.0	88.2	85.2	3.5	69-129	20		
Chlorobenzene	54.0	51.9	50.0	50.0	108.0	103.8	4.0	61-121	20		
1,1-Dichloroethene	44.5	43.5	50.0	50.0	89.0	87.0	2.3	65-125	20		
Toluene	43.5	43.2	50.0	50.0	87.0	86.4	0.7	70-130	20		
Trichloroethene	41.0	41.2	50.0	50.0	82.0	82.4	0.5	74-134	20		
Surrogate(s)											
4-Bromofluorobenzene	481	495	500	500	96.2	99.0		86-115			
1,2-Dichloroethane-d4	517	519	500	500	103.4	103.8		76-114			
Toluene-d8	466	465	500	500	93.2	93.0		88-110			

To: **Protech Consulting**

Attn: Woody Lovejoy

Test Method: 8260A

Prep Method: 5030

Batch QC Report

Volatile Organic Compounds

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/12/21-01.27**

LCS: 1999/12/21-01.27-002 Extracted: 12/21/1999 12:11 Analyzed: 12/21/1999 12:11

LCSD: 1999/12/21-01.27-003 Extracted: 12/21/1999 13:05 Analyzed: 12/21/1999 13:05

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	43.1	43.4	50.0	50.0	86.2	86.8	0.7	69-129	20		
Chlorobenzene	51.9	55.9	50.0	50.0	103.8	111.8	7.4	61-121	20		
1,1-Dichloroethene	46.2	45.4	50.0	50.0	92.4	90.8	1.7	65-125	20		
Toluene	43.1	43.1	50.0	50.0	86.2	86.2	0.0	70-130	20		
Trichloroethene	41.9	41.7	50.0	50.0	83.8	83.4	0.5	74-134	20		
Surrogate(s)											
4-Bromofluorobenzene	498	498	500	500	99.6	99.6		86-115			
1,2-Dichloroethane-d4	459	545	500	500	91.8	109.0		76-114			
Toluene-d8	458	461	500	500	91.6	92.2		88-110			

99-72-0289

Reference #:

CHROMALAB, INC.

Environmental Services (SDB) (DOHS 1094)

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

Chain of Custody

DATE 15 Dec 99 PAGE 1 OF 1

PROJ MGR Woody Lovejoy
COMPANY ProTech Consulting Engineers
ADDRESS 1755 E. Bayshore Rd #14B
Redwood City CA

SAMPLERS (SIGNATURE)

(PHONE NO.) 650-569-4080
(FAX NO.) 650-569-4023

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH-(EPA 8015,8020) ☐ Gas w/ ☐ BTEX Only	PURGEABLE AROMATICS BTEX (EPA 8020)	TPH-Diesel (EPA 8015M)	TEPH (EPA 8015M) ☐Kerosene, ☐Diesel, ☐M.O.	PURGEABLE HALOCARBONS (EDCs) (EPA 8010)	VOLATILE ORGANICS (VOCs) (EPA 8260)	SEMIVOLATILES (EPA 8270)	TOTAL OIL AND GREASE (SM 5520 B+F, E+F)		☐ PESTICIDES(EPA 8080) ☐ PCB'S (EPA 8080)	PNA's by ☐ 8270 ☐ 8310	☐ Spec Cond. ☐ TSS ☐ TDS	LUFT METALS: Cd, Cr, Pb, Ni, Zn	CAM 17 METALS (EPA 6010/7470/7471)	TOTAL LEAD	☐ W.E.T. (STLC) ☐ TCLP	☐ Reservoir Corrosion ☐ pH (24 hr hold time for H20)				NUMBER OF CONTAINERS
MW-2	15 Dec		Liquid							X															3
MW-3	"		"							X															3
MW-4	"		"							X															3
MW-5	"		"							X															3
MW-6	"		"							X															3
EB	"		"							X															2

PROJECT INFORMATION

PROJECT NAME: B/M
PROJECT NUMBER: 107-0H99
P.O. #:

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS: 18
HEAD SPACE:
TEMPERATURE: 5.0°C
CONFORMS TO RECORD:

TAT: STANDARD 5-DAY | 24 | 48 | 72 | OTHER

Report: (1) Routine (2) Level 2 (3) Level 3 (4) Level 4 (5) Electronic Report

SPECIAL INSTRUCTIONS/COMMENTS:
B,11 ProTech
Send Results to Woody Lovejoy

RELINQUISHED BY 1.	RELINQUISHED BY 2	RELINQUISHED BY 3
(SIGNATURE)	(SIGNATURE) 1135 (TIME)	(SIGNATURE) (TIME)
S. Lovejoy 16 Dec 99 (PRINTED NAME) (DATE)	Nick Buckmaster 12/16/99 (PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
ProTech (COMPANY)	World Courier (COMPANY)	(COMPANY)
RECEIVED BY 1.	**RECEIVED BY 2**	**RECEIVED BY (LABORATORY) 3**
(SIGNATURE) 0900 (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) Denise Harrington (DATE)
N Buckmaster 12/16/99 (PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	D. Harrington 1135 (PRINTED NAME) (DATE)
World Courier (COMPANY)	(COMPANY)	Chromalab 12/16/99 (LAB)

Revised 8/98