

September 12, 2000

**THIRD QUARTER GROUNDWATER MONITORING REPORT
AUGUST 23, 2000**

00 SEP 19 PM 2:52
ENVIRONMENTAL
PROTECTION

Morris F. Donnelly
Jeffrey W. Kerry
Kerry & Associates
151 Callan Avenue, Suite 202
San Leandro, CA 94577

RE: Palace Garage, 14336 Washington Avenue, San Leandro, CA 94578

Dear Messrs. Donnelly and Kerry:

Thank you for contracting with ALLCAL Environmental (ALLCAL) to sample groundwater monitoring wells MW-1, MW-2, and MW-3 at the above referenced property. The sampling event was conducted pursuant to a July 10, 2000, letter (attached) from the Alameda County Health Care Services Agency (ACHCSA) requiring quarterly monitoring until a year's worth of well sampling and monitoring data have been collected. Prior to contracting with ALLCAL, you received PRE-APPROVAL OF CORRECTIVE ACTION COSTS from the State Water Resources Control Board [August 4, 2000, letter (attached)] to conduct four quarterly events of groundwater monitoring. The following documents the sampling event and presents results of gradient measurement and chemical analyses.

See Attachments A, B, C, and D for ALLCAL's procedures with regard to groundwater sampling, sample handling, quality assurance and quality control, and waste handling and decontamination procedures.

DOCUMENTATION AND SAMPLING RESULTS

Wells MW-1, MW-2, and MW-3 were sampled on August 23, 2000. Prior to sampling, the depth to groundwater and total well depth were measured from each well's top-of-casing with an electronic water level meter. These measurements were used to calculate the volume of water in each well and the minimum number of well volumes (three) to purge, prior to sampling. The depth to groundwater, when subtracted from the elevation of each top-of-casing, provides the groundwater elevation which was used to determine the groundwater gradient on the date measured. The following table documents depths to groundwater and groundwater elevations.

GROUNDWATER ELEVATION

| Well Name | Top of Casing Elevation (ft MSL) | Date | Depth to Groundwater From Top of Casing (ft) | Groundwater Elevation (ft) | Gradient ft./ft. |
|-----------|----------------------------------|---------|--|----------------------------|------------------|
| MW-1 | 37.47 | 5/19/00 | 12.47 | 25.00 | SSW/0.0031 |
| | | 8/23/00 | 13.88 | 23.59 | SSW/0.0036 |
| MW-2 | 36.99 | 5/19/00 | 12.30 | 24.69 | |
| | | 8/23/00 | 13.76 | 23.23 | |
| MW-3 | 36.88 | 5/19/00 | 12.23 | 24.65 | |
| | | 8/23/00 | 13.69 | 23.19 | |

Groundwater Gradient

Based on the above groundwater elevations, groundwater flow direction on August 23, 2000, was south-southwesterly at a gradient of about 0.0036 feet per feet (see the attached SITE PLAN). The direction of groundwater flow and gradient are consistent with the previous monitoring event of May 19, 2000.

Average depth to groundwater has increased about 1.44 feet since last quarter's monitoring event.

Groundwater Sampling and Analytical Methodology

Before collecting water samples, each well was purged with a new, dedicated, disposable bailer. Each well was purged about a minimum of three well volumes and until the parameters of temperature, pH, and electrical conductivity (measured with a Hydac meter) stabilized (see attached Records of Water Sampling). Purge water is stored on site in a labeled 55-gallon drum.

After each well was purged, a groundwater sample was collected with the dedicated bailer and decanted into two, 40-milliliter, VOA bottles having Teflon-lined caps and septa. The bottles were labeled to show site address, sample and sampler name, date and time sampled, and placed in an iced-cooler for delivery, under chain-of-custody (attached), to California Department of Health Services certified McCampbell Analytical Inc. (McCampbell) laboratory located in Pacheco, California. A trip blank sample was also stored as above and delivered to McCampbell for analysis as a test for cross-contamination during the collection of samples and during their analyses. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHG); benzene, toluene, ethylbenzene, and xylenes (BTEX); and methyl tert-butyl ether (MTBE) by the United States Environmental Protection Agency (EPA) Methods GCFID modified 5030/8015, 8020, and 8020, respectively.

Results of Chemical Analyses**Chemical analyses detected analytes only in the water samples from wells MW-1 and MW-2.**

In well MW-1, TPHG was detected at a concentration of 44,000 parts per billion (ppb) and benzene, toluene, ethylbenzene, and xylenes at concentrations of 1,800 ppb, 4,100 ppb, 1,500 ppb, and 8,600 ppb, respectively.

In well MW-2, TPHG was detected at a concentration of 9,300 ppb and benzene, toluene, ethylbenzene, and xylenes at concentrations of 1,500 ppb, 54 ppb, 280 ppb, and 130 ppb, respectively.

In both the above samples, the laboratory noted that the TPH chromatograms indicated unmodified or weakly modified gasoline is significant.

No MTBE was detected in the above wells at a the elevated Reporting Limit of <200 ppb and no analytes were detected in the sample from well MW-3 and the trip blank.

See attached certified analytical report and chain-of-custody for documentation and detailed analytical results.

The following table summarizes all groundwater monitoring well analytical results to date.

**SUMMARY OF GROUNDWATER CHEMICAL ANALYSES
(ppb)**

| Well | Date | Depth to Water(ft) | TPHG | MTBE | Benzene | Toluene | Ethyl-benzene | Xylenes |
|------|---------|--------------------|---------|------|---------|---------|---------------|---------|
| MW-1 | 5/19/00 | 12.47 | 52000,a | <200 | 1600 | 3300 | 1600 | 7900 |
| | 8/23/00 | 13.88 | 44000,a | <200 | 1800 | 4100 | 1500 | 8600 |
| MW-2 | 5/19/00 | 12.30 | 7500,a | <20 | 1400 | 55 | 440 | 270 |
| | 8/23/00 | 13.76 | 9300,a | <200 | 1500 | 54 | 280 | 130 |
| MW-3 | 5/19/00 | 12.23 | <50 | <5.0 | <0.5 | <0.5 | <0.5 | <0.5 |
| | 8/23/00 | 13.69 | <50 | <5.0 | <0.5 | <0.5 | <0.5 | <0.5 |

a = The laboratory interprets the TPH chromatogram to indicate that unmodified or weakly modified gasoline is significant.

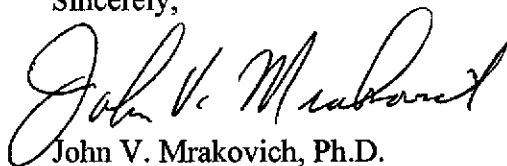
COMMENTS

A review of the above table, **SUMMARY OF GROUNDWATER CHEMICAL ANALYSES**, indicates the following changes since the previous monitoring event of May 19, 2000:

- The depth to groundwater has increased an average of 1.44 feet.
- The concentration of TPHG in well MW-1 has slightly decreased, however, the concentration of BTEX chemicals has slightly increased.
- The concentration of TPHG in well MW-1 has slightly increased, however, except for benzene, the concentration of BTEX chemicals has slightly decreased.

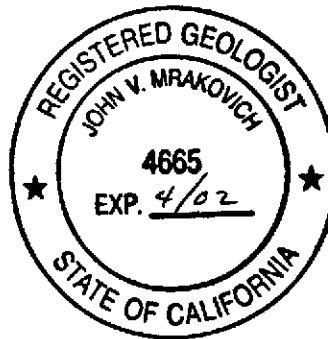
If you have any questions, please call me at (510) 581-2320.

Sincerely,



John V. Mrakovich, Ph.D.
Registered Geologist No. 4665

attachments



ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



July 10, 2000

STID 2355

Morris F. Donnelly
Jeffrey W. Kerry
Kerry & Associates
151 Callahan Avenue, Ste. 202
San Leandro, CA 94577

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

RE: Palace Garage, 14336 Washington Avenue, San Leandro

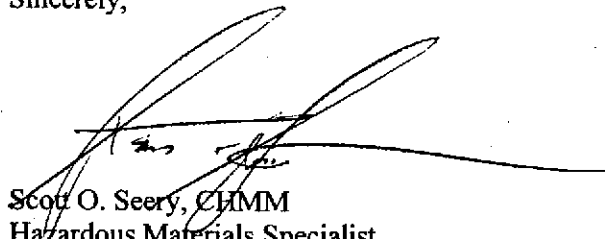
Dear Messrs. Donnelly and Kerry:

Thank you for our receipt of the June 23, 2000 All Cal Property Service, Inc. (All Cal) report documenting the recent well installations at your site.

At this time, please adhere to a quarterly schedule of well sampling, monitoring and reporting. You are requested to initiate these scheduled tasks during the current quarter (3rd quarter, July – September) of 2000, and continuing until a year's worth of well sampling and monitoring data have been collected. Reports are due for submittal to this agency within 60 days of the completion of field activities for each quarterly event. This case will be tracked over this period of time, and the direction or scope of the project revised based on the nature of the data submitted.

Please call me at (510) 567-6783 should you have any questions.

Sincerely,



Scott O. Seery, CHMM
Hazardous Materials Specialist

cc: Chuck Headlee, RWQCB
Mike Bakaldin, San Leandro Hazardous Materials Program
✓ John Mrakovich, All Cal Property Services, Inc.
27973 High Country Dr., Hayward, CA 94542-2530



Winston H. Hickox
Secretary for
Environmental
Protection

State Water Resources Control Board

Division of Clean Water Programs

2014 T Street • Sacramento, California 95814 • (916) 227-7748
Mailing Address: P.O. Box 944212 • Sacramento, California • 94244-2120
FAX (916) 227-4530 • Internet Address: <http://www.swrcb.ca.gov/cwphome/ustcf>



Gray Davis
Governor

August 4, 2000

Morris Donnelly
Donnelly & Kerry
463 Elsie Ave
San Leandro, CA 94577

PRE-APPROVAL OF CORRECTIVE ACTION COSTS, CLAIM NO. 014228, SITE ADDRESS: 14336 WASHINGTON AVE, SAN LEANDRO, CA 94578

I have reviewed your request, received on July 21, 2000, for pre-approval of corrective action costs; I will place these documents in your file for future reference. I have included a copy of the "Cost Pre-Approval Request" form; please use this form in the future for requesting pre-approval of corrective action costs.

With the following provisions, the total cost pre-approved as eligible for reimbursement for completing the July 13, 2000, ALLCAL Environmental proposal/workplan requested by the Alameda County EHD (County) in their July 10, 2000 letter, is \$ 5,588; see the table below for a breakdown of costs.

Be aware that this pre-approval does not constitute a decision on reimbursement: necessary (as determined by the Fund) corrective action costs for corrective action work directed and approved by the County will be eligible for reimbursement at costs consistent with those pre-approved in this letter. However, depending on what happens in the field, some costs may not actually be necessary. If the Fund agrees that they were in fact necessary, the Fund will reimburse at reasonable rates (rates consistent with those pre-approved.)

In an effort to expedite future reimbursement requests associated with the implementation of these pre-approved tasks, we request that the attached 'Pre-Approval Specific Reimbursement Request Spreadsheet' be completed/updated and submitted with the relevant supporting documentation.

In order for future costs for corrective action to be part of the expedited reimbursement processes they must be pre-approved in writing by Fund staff and must meet the requirements of Article 11, Chapter 16, Underground Storage Tank Regulations.

COST PRE-APPROVAL BREAKDOWN

| # | Task* | Amount Pre-Approved | Comments |
|---------------------------|---------------------------------|---------------------|---|
| 1 | Purge and Sample three 2" wells | \$2,100 | Geologist (7 hrs. @ \$75/hr. for 4 events) |
| 2 | Chemical Analysis | \$ 828 | 3 samples for TPHg, BTEX and MTBE (3 @ \$51.75/ ea. for 4 events) |
| 3 | Supplies | \$ 280 | Drums, Bailers, String, etc. (\$70 pevent for 4 events) |
| 4 | Report | \$2,380 | Geologist (7 hrs. @ \$85/hr. for 4 events) |
| TOTAL PRE-APPROVED | | \$ 5,588 | |

* Task descriptions are the same as those identified in ALLCAL Environmental's July 13, 2000 Cost Estimate

- The actual costs and scope of work performed must be consistent with the pre-approval for it to remain valid. Only the tasks/costs reflected on the above table are pre-approved at this time. The Fund will review any tasks/costs that go beyond the pre-approved amount to determine if the additional tasks and costs are necessary and reasonable. Unfortunately, if costs exceed the pre-approval amounts, Fund staff will be unable to expedite your reimbursement request associated with this pre-approval.
- The work products must be acceptable to the County and the Regional Water Quality Control Board.
- The Fund regulations require three bids for corrective action work unless three bids are unnecessary, unreasonable or impossible under the particular circumstances. Because the proposed costs appear reasonable, it is unnecessary to obtain three bids for the proposed corrective action efforts; the Fund's three bid requirement is waived for this scope of work only. Any future scopes of work are subject to the three bid requirement unless a wavier of the bidding requirements is received.
- If a different scope of work becomes necessary, then you must request pre-approval of costs on the new scope of work.
- Although I have referred to ALLCAL Environmental proposal in my pre-approval above, please be aware that you will be entering into a private contract: the State of California cannot compel you to sign any specific contract. This letter **pre-approves the costs** as presented in the proposal dated July 13, 2000 by ALLCAL Environmental for implementing the July 13, 2000, ALLCAL Environmental workplan.

August 4, 2000

If you need assistance in procuring contractor and consultant services, don't hesitate to call me. Please remember that it is still necessary to submit the actual costs of the work as explained in the Reimbursement Request Instructions to confirm that the costs are consistent with this pre-approval before you will be reimbursed. ***Please insure that your consultant prepares their invoices to include the required break down of costs on a time and materials basis, that invoiced tasks are consistent with the original proposal, and that reasonable explanations are provided for any changes made in the scope of work or increases in the costs. When the invoices are submitted you must include copies of all:***

- *subcontractor invoices,*
- *technical reports, when available, and*
- *applicable correspondence from the County.*

Please call if you have any questions; I can be reached at (916) 227-7748.

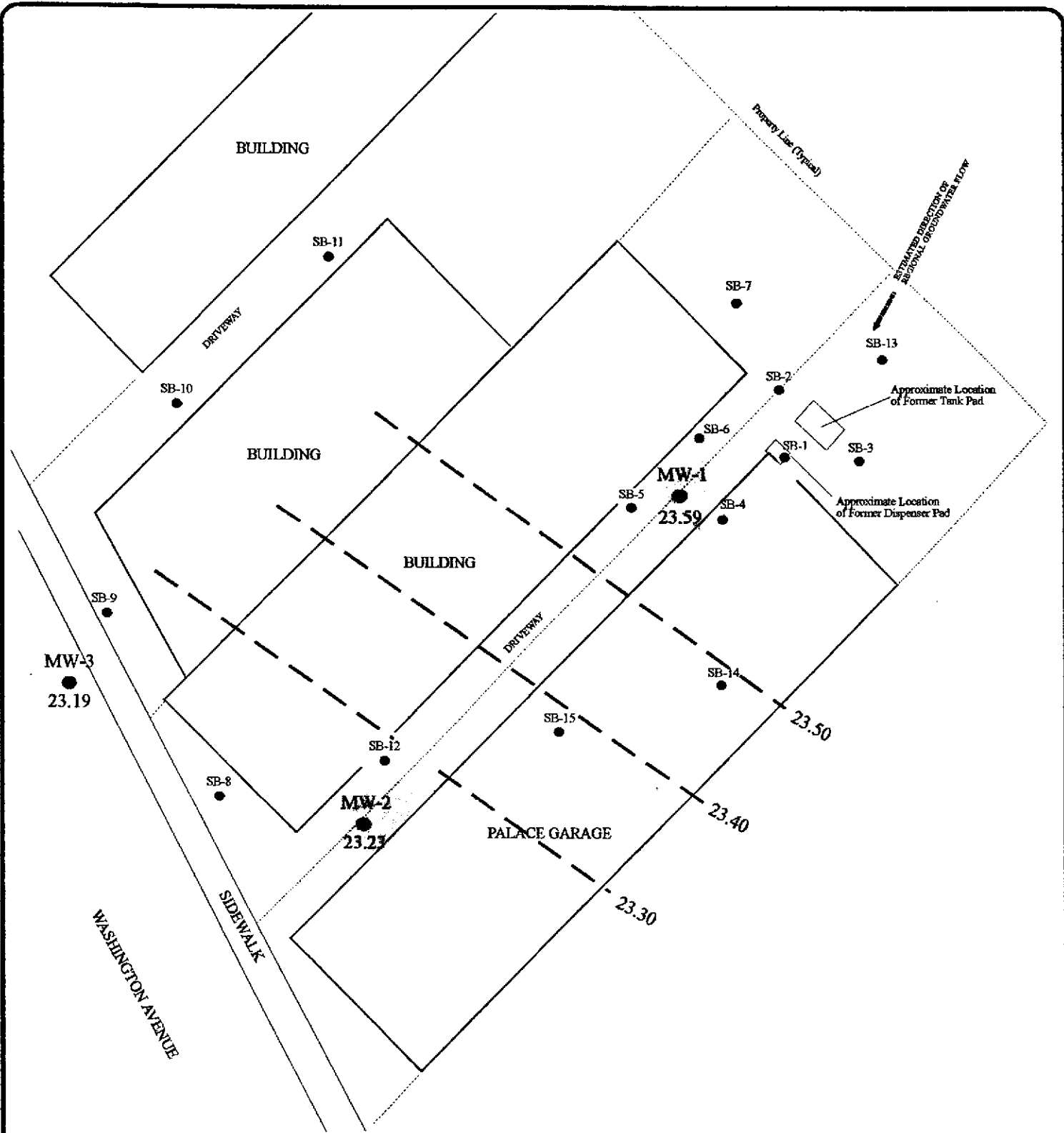
Sincerely,

Sunil Ramdass

Sunil Ramdass, Water Resources Control Engineer
Technical Review Unit
Underground Storage Tank Cleanup Fund

Enclosure

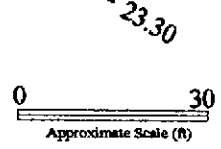
cc: Scott O Seery, CHMM
Alameda County EHD
1131 Harbor Bay Pkway, 2nd Fl.
Alameda, CA 94502-6577



- SB-1 ● Name and Location of Soil Boring
- MW-1 ● Name and Location of Groundwater Monitoring Well

Legend

— Potentiometric Contour—Feet Above Mean Sea Level



ALLCAL PROPERTY SERVICES

SITE PLAN - PALACE GARAGE
 GROUNDWATER GRADIENT-8/23/00
 14336 WASHINGTON AVENUE
 SAN LEANDRO, CA 94578



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

| | | |
|--|--|--------------------------|
| ALLCAL Environmental 27973 High Country Drive Hayward, CA 94542-2530 | Client Project ID: #135; 14336 Washington Ave, San Leandro CA | Date Sampled: 08/23/00 |
| | Client Contact: John Mrakovich | Date Received: 08/23/00 |
| | Client P.O: | Date Extracted: 08/23/00 |
| | | Date Analyzed: 08/23/00 |


08/30/00

Dear John:

Enclosed are:

- 1). the results of 4 samples from your #135; 14336 Washington Ave, San Leandro CA project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

| | | |
|--|--|--------------------------|
| ALLCAL Environmental 27973 High Country Drive Hayward, CA 94542-2530 | Client Project ID: #135; 14336 Washington Ave, San Leandro CA | Date Sampled: 08/23/00 |
| | Client Contact: John Mrakovich | Date Received: 08/23/00 |
| | Client P.O: | Date Extracted: 08/24/00 |
| | | Date Analyzed: 08/24/00 |

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*
EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

| Lab ID | Client ID | Matrix | TPH(g) ⁺ | MTBE | Benzene | Toluene | Ethylbenzene | Xylenes | % Recovery Surrogate |
|--|------------|--------|---------------------|--------|---------|---------|--------------|---------|----------------------|
| 45680 | Trip Blank | W | ND | ND | ND | ND | ND | ND | 98 |
| 45681 | MW-1 | W | 44,000,a | ND<200 | 1800 | 4100 | 1500 | 8600 | 95 |
| 45682 | MW-2 | W | 9300,a | ND<200 | 1500 | 54 | 280 | 130 | 99 |
| 45683 | MW-3 | W | ND | ND | ND | ND | ND | ND | --- |
| | | | | | | | | | |
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| | | | | | | | | | |
| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | W | | 50 ug/L | 5.0 | 0.5 | 0.5 | 0.5 | 0.5 | |
| | S | | 1.0 mg/kg | 0.05 | 0.005 | 0.005 | 0.005 | 0.005 | |

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

* cluttered chromatogram; sample peak coelutes with surrogate peak

*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.



QC REPORT

Date: 08/24/00

Matrix: Water

Extraction: N/A

| Compound | Concentration: ug/L | | | %Recovery | | RPD |
|----------|---------------------|----|-----|---------------|----|-----|
| | Sample | MS | MSD | Amount Spiked | MS | |

SampleID: 81900

Instrument: GC-3

| | | | | | | | |
|---------------|-------|-------|-------|---------|----|----|-----|
| Surrogate1 | 0.000 | 97.0 | 98.0 | 100.00 | 97 | 98 | 1.0 |
| Xylenes | 0.000 | 281.0 | 276.0 | 300.00 | 94 | 92 | 1.8 |
| Ethyl Benzene | 0.000 | 94.0 | 93.0 | 100.00 | 94 | 93 | 1.1 |
| Toluene | 0.000 | 96.0 | 94.0 | 100.00 | 96 | 94 | 2.1 |
| Benzene | 0.000 | 98.0 | 96.0 | 100.00 | 98 | 96 | 2.1 |
| MTBE | 0.000 | 97.0 | 95.0 | 100.00 | 97 | 95 | 2.1 |
| GAS | 0.000 | 822.9 | 793.4 | 1000.00 | 82 | 79 | 3.7 |

SampleID: 81900

Instrument: GC-11 A

| | | | | | | | |
|--------------|-------|-------|-------|--------|-----|-----|-----|
| Surrogate1 | 0.000 | 118.0 | 113.0 | 100.00 | 118 | 113 | 4.3 |
| TPH (diesel) | 0.000 | 336.0 | 324.0 | 300.00 | 112 | 108 | 3.6 |

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{AmountSpiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

21631ZQC 27 doc

McCAMBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553

Telephone: (510) 798-1620

Fax: (510) 798-1622

CHAIN OF CUSTODY RECORD
TURN AROUND TIME

RUSH 24 HOUR 48 HOUR 5 DAY

Report To: JOHN MRAKOVICH Bill To: SAME
Company: ALLCAL ENVIRONMENTAL
27973 HIGH COUNTRY DRIVE
HAYWARD, CA 94542
Tele: (510) 581 2320 Fax: (510) 581 8490
Project #: 135 Project Name:
Project Location: 14336 WASHINGTON AVE, SAN LEANARD, CA
Sampler Signature: J. Mrakovich

Analysis Request

Other

Comments

| SAMPLE ID | LOCATION | SAMPLING | | # Containers | Type Containers | MATRIX | | | | | METHOD PRESERVED | | | | | | | | |
|--------------|----------|----------|------|--------------|-----------------|--------|------|-----|--------|-------|------------------|-----|------------------|-------|--|--|--|--|--|
| | | Date | Time | | | Water | Soil | Air | Sludge | Other | Ice | HCl | HNO ₃ | Other | | | | | |
| ✓ TRIP BLANK | — | 8/23/00 | 900 | 1 | 40-ML | X | | | | | | X | | | | | | | |
| + MW-1 | MW-1 | ↓ | 1055 | 2 | 40-ML | | | | | | | | X | | | | | | |
| + MW-2 | MW-2 | ↓ | 1020 | ↓ | ↓ | ↓ | | | | | | ↓ | ↓ | | | | | | |
| + MW-3 | MW-3 | ↓ | 940 | ↓ | ↓ | ↓ | | | | | | ↓ | ↓ | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|--|----------------------|---|--------------------------------------|----------------|----------------------------|----------------|---------------------------|-----------------------|----------------|--|---------------|---------------|-----------------------------|-----|--|--|--|--|--|
| BTEX & TPH as Gas (602/8020 + 8015) MTBE | TPH as Diesel (8015) | Total Petroleum Oil & Grease (5520 E&F/B&F) | Total Petroleum Hydrocarbons (418.1) | EPA 601 / 8010 | BTEX ONLY (EPA 602 / 8020) | EPA 608 / 8080 | EPA 608 / 8080 PCB's ONLY | EPA 624 / 8240 / 8260 | EPA 625 / 8270 | PAH's / PNA's by EPA 625 / 8270 / 8310 | CAM-17 Metals | LUFT 5 Metals | Lead (7240/7421/239.2/6010) | RCI | | | | | |
|--|----------------------|---|--------------------------------------|----------------|----------------------------|----------------|---------------------------|-----------------------|----------------|--|---------------|---------------|-----------------------------|-----|--|--|--|--|--|

45680
45681
45682
45683

Relinquished By: J. Mrakovich Date: 8/23 Time: 13:20 Received By: B. Butts
Relinquished By: B. Butts Date: 8/23 Time: 2:30 Received By: Mana Venegas
Relinquished By: _____ Date: _____ Time: _____ Received By: _____

Remarks: ICE/GOOD CONDITION HEAD SPACE ABSENT
 PRESERVATION APPROPRIATE CONTAINERS
VOAS ORG METALS OTHER

TB. W

ATTACHMENT A GROUNDWATER SAMPLING PROCEDURES

Groundwater monitoring wells will not be sampled until at least 48 hours after well development. Groundwater samples will be obtained using either a bladder pump, clear Teflon bailer, or polyethylene bailer. Prior to sampling, sampling equipment will be thoroughly decontaminated to prevent introduction of contaminants into the well and to avoid cross-contamination. Monitoring wells will be sampled after three to five wetted casing volumes of groundwater have been evacuated and after the ALLCAL sampling team leader determines that water representative of the formation is being obtained. The well will be purged until conductivity has been stabilized (three consecutive conductivity reading within 15% of one another). If the well is emptied before four to ten well volumes are removed, the sample shall be taken when the water level in the well recovers to 80% of its initial water level or better.

ALLCAL will also measure the thickness of any floating product in the monitoring wells using a probe or clear Teflon bailer. The floating product will be measured after well development but prior to the collection of groundwater samples. If floating product is present in the well, ALLCAL will recommend to the client that product removal be commenced immediately and reported to the appropriate regulatory agency.

Unless specifically waived or changed by the local, prevailing regulatory agency, water samples shall be handled and preserved according to the latest EPA methods as described in the Federal Register (Volume 44, No.233, Page 69544, Table II) for the type of analysis to be performed.

MEASUREMENTS

Purged Water Parameter: During purging, discharged water will be measured for the following parameters.

| <u>Parameter</u> | <u>Units of Measurement</u> |
|----------------------------|-----------------------------|
| pH | Units |
| Electrical conductivity | Umhos |
| Temperature | Degrees F or C |
| Depth to Water | Feet/Tenths |
| Volume of Water Discharged | Liters |

Documentation: All parameter measurements shall be documented in writing on ALLCAL development logs.

ATTACHMENT B SAMPLE HANDLING PROCEDURES

Soil and groundwater samples will be packaged carefully to avoid breakage or contamination and will be delivered to the laboratory in an iced-cooler. Sample bottle/sleeve lids will not be mixed. All sample lids will stay with the original containers.

Samples will be stored in iced-coolers to maintain custody, control temperature, and prevent breakage during transportation to the laboratory. Ice, blue ice, or dry ice (dry ice will be used for preserving soil samples collected for the Alameda County Water District) will be used to cool samples during transport to the laboratory. Water samples will be cooled with crushed ice. In the Alameda County Water District, water samples will be buried in the crushed ice with a thermometer, and the laboratory will be requested to record thermometer temperature at the time of receipt.

Each sample will be identified by affixing a label on the container(s). This label will contain the site identification, sample identification number, date and time of sample collection, and the collector's initials.

Soil samples collected in brass or stainless-steel tubes will be preserved by covering the ends with Teflon tape and capping with plastic end-caps. The tubes will be labeled, sealed in quart-size bags, and placed in an iced-cooler for transport to the laboratory.

All groundwater sample containers will be pre-cleaned and will be obtained from a State Department of Health Services certified analytical laboratory.

A chain-of-custody form will be completed for all samples and accompany the sample cooler to the laboratory. All sample transfers will be documented in the chain-of-custody. All field personnel are personally responsible for sample collection and the care and custody of collected samples until the samples are transferred or properly dispatched.

The custody record will be completed by the field technician or professional who has been designated as being responsible for sample shipment to the appropriate laboratory. The custody record will include the following information: site identification, name of person collecting the sample(s), date and time sample(s) were collected, type of sampling conducted (composite/grab), location of sampling station, number and type of containers used, and signature of the person relinquishing samples to another person with the date and time of transfer noted.

ATTACHMENT C QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES

The overall objectives of the field sampling program include generation of reliable data that will support development of a remedial action plan. Sample quality will be checked by the use of proper sampling, handling, and testing methods. Additional sample quality control methods may include the use of background samples, equipment rinsate samples, and trip and field blanks. Chain-of-custody forms, use of a qualified laboratory, acceptable detection limits, and proper sample preservation and holding times also provide assurance of accurate analytical data.

A quality assurance and quality control (QA/QC) program may be conducted in the field to ensure that all samples collected and field measurements taken are representative of actual field and environmental conditions and that data obtained are accurate and reproducible. These activities and laboratory QA/QC procedures are described below.

Field Samples: Additional samples may be taken in the field to evaluate both sampling and analytical methods. Three basic categories of QA/QC samples that may be collected are trip blanks, field blanks, and duplicate samples.

Trip blanks are a check for cross-contamination during sample collection, shipment, and laboratory analysis. They are water samples that remain with the collected samples during transportation and are analyzed along with the field samples to check for residual contamination. Analytically confirmed organic-free water will be used for organic parameters and deionized water for metal parameters. Blanks will be prepared by the laboratory supplying the sample containers. The blanks will be numbered, packaged, and sealed in the same manner as the other samples. One trip blank will be used for each sample set of less than 20 samples. At least 5% blanks will be used for sets greater than 20 samples. The trip blank is not to be opened by either the sample collectors or the handlers.

The field blank is a water sample that is taken into the field and is opened and exposed at the sampling point to detect contamination from air exposure. The water sample is poured into appropriate containers to simulate actual sampling conditions. Contamination due to air exposure can vary considerably from site to site.

The laboratory will not be informed about the presence of trip and field blanks, and false identifying numbers will be put on the labels.

Duplicate samples are identical sample pairs (collected in the same place and at the same time), placed in identical containers. For soils, adjacent sample liners will be analyzed. For the purpose of data reporting, one is arbitrarily designated the sample, and the other is designated as a duplicate sample. Both sets of results are reported to give an indication of the precision of sampling and analytical methods.

The laboratory's precision will be assessed without the laboratory's knowledge by labeling one of the duplicates with false identifying information. Data quality will be evaluated on the basis of the duplicate results.

Laboratory QA/QC: Execution of a strict QA/QC program is an essential ingredient in high-quality analytical results. By using accredited laboratory techniques and analytical procedures, estimates of the experimental values can be very close to the actual value of the environmental sample. The experimental value is monitored for its precision and accuracy by performing QC tests designed to measure the amount of random and systematic errors and to signal when correction of these errors is needed.

The QA/QC program describes methods for performing QC tests. These methods involve analyzing method blanks, calibration standards, check standards (both independent and the United States Environmental Protection Agency-certified standards), duplicates, replicates, and sample spikes. Internal QC also requires adherence to written methods, procedural documentation, and the observance of good laboratory practices.

ATTACHMENT D

WASTE HANDLING AND DECONTAMINATION PROCEDURES

Decontamination: Any drilling, sampling, or field equipment that comes into contact with soil or groundwater will be decontaminated prior to its use at the site and after each incident of contact with the soil or groundwater being investigated. Decontamination is essential to obtain samples that are representative of environmental conditions and to accurately characterize the extent of soil and groundwater contamination. Hollow-stem auger flights, the drill bit, and all other soil boring devices will be steam-cleaned between the drilling of each boring.

All sample equipment, including the split-spoon sampler and brass or stainless-steel tubes, will be cleaned by washing with trisodium phosphate or Alconox detergent, followed by rinsing with tap water. Where required by specific regulatory guidelines, a nonphosphate detergent will be used.

Waste Handling: Waste materials generated during site characterization activities will be handled and stored as hazardous waste and will be stored on site in appropriately labeled containers. Waste materials anticipated include: excavated soil, drill cuttings, development and purge water, water generated during aquifer testing, water generated during decontamination, and used personnel protection equipment such as gloves and Tyvek. The site owner will be responsible for providing the storage containers and will be responsible for the disposal of the waste materials. Drill cuttings from individual borings will be stored separately in drums or covered by plastic sheeting, and the appropriate disposal procedure will be determined by the site owner following receipt of the soil sample analytical results. Storage containers will be labeled to show material stored, known or suspected contaminant, date stored, expected removal date, company name, contact, and telephone number.