R0291

LETTER OF TRANSMITTAL

BLYMYER ENGINEERS, INC.

1829 Clement Avenue

Alameda, California 94501-1396

(510) 521-3773 FAX: (510) 865-2594

DATE December 27, 2004	BEI Job No. 94015
ATTENTION: John Kawahara	
SUBJECT: Kawahara Nursery	
16550 Ashland Avenue	
San Lorenzo, California	
Site # 4403	

Kawahara Nursery

698 Burnett Avenue

Morgan Hill, CA 95037

We are sending you
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☐ Copy of letter
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1			Blymyer Engineers; Final Report; *Semiannual Groundwater Monitoring Report*
			Fall2004

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REMARKS: For your files. The results are decent, with groundwater concentrations hovering around the low end of historic concentrations. Let me know if you have any questions.

This report has been forwarded as indicated below.

COPY TO: File
Ms. Eva Chu, Alameda County Health Care Services Agency

SIGNED: Mark Detterman

If enclosures are not as noted, kindly notify Blymyer Engineers, Inc. at once

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Semiannual Groundwater Monitoring Report
Fall 2004

Kawahara Nursery
16550 Ashland Avenue
San Lorenzo, California
Site # 4403

December 27, 2004 BEI Job No. 94015

Prepared by:

Blymyer Engineers, Inc.
1829 Clement Avenue
Alameda, CA 94501

Client:

Kawahara Nursery, Inc.
16550 Ashland Avenue
San Lorenzo, CA 94508

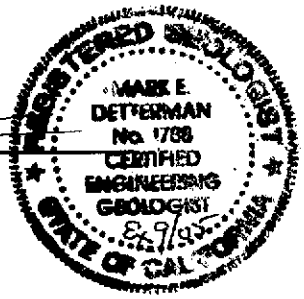
Limitations

Services performed by Blymyer Engineers, Inc. have been provided in accordance with generally accepted professional practices for the nature and conditions of similar work completed in the same or similar localities, at the time the work was performed. The scope of work for the project was conducted within the limitations prescribed by the client. This report is not meant to represent a legal opinion. No other warranty, expressed or implied, is made. This report was prepared for the sole use of Kawahara Nursery, Inc.

Blymyer Engineers, Inc.

By: _____

Mark E. Detterman C.E.G.
Senior Geologist



And: _____

Michael S. Lewis
Vice President, Technical Services

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1.0 Introduction

1.1 Previous Work

1.1.1 Underground Storage Tank Removal

On December 1, 1992, one steel 5,000-gallon underground storage tank (UST) was removed from the property owned by Kawahara Nursery, located at 16550 Ashland Avenue, San Lorenzo, California, (Figure 1). The UST, used to store diesel, was reported to be in good condition at the time of removal with no visible evidence of holes. However, soil samples collected from the UST excavation contained Total Petroleum Hydrocarbons (TPH) as diesel, suggesting that a release had occurred. The results of the UST closure were described in the *Underground Storage Tank Closure Report*, prepared by Tank Protect Engineering.

According to information obtained from Kawahara Nursery, a 1,000-gallon gasoline UST was previously located in the vicinity of the lath house on the north side of the property (Figure 2). The UST was reportedly removed from the site shortly after Kawahara Nursery occupied the property in 1954.

1.1.2 Phase I Site Investigation

In a letter dated January 27, 1993, the Alameda County Health Care Services Agency (ACHCSA) requested that a preliminary subsurface investigation be completed to ascertain the extent of soil and groundwater contamination at the site. On June 10, 1993, Blymyer Engineers supervised the installation of three groundwater monitoring wells (MW-1, MW-2, and MW-3) and one soil bore (SB-1). Minor concentrations of petroleum hydrocarbons were detected in the soil samples collected from soil bores MW-1 and MW-2, and higher concentrations were detected in the samples collected near the water-bearing zone in soil bore MW-3. The groundwater sample collected from monitoring well MW-3, located adjacent to an on-site irrigation well, contained TPH as gasoline and benzene, toluene, ethylbenzene, and xylenes (BTEX).

1.1.3 Phase II Site Investigation

In response to Blymyer Engineers' *Preliminary Site Assessment, Phase I Subsurface Investigation* report and *Subsurface Investigation Status Report*, the ACHCSA requested full delineation of the extent of petroleum hydrocarbons in groundwater at the site and in the soil adjacent to the diesel UST excavation. In 1994, Blymyer Engineers conducted a second phase of investigation at the site consisting of:

- A review of records at the ACHCSA and the Regional Water Quality Control Board to determine if any toxic chemical or fuel leaks reported within a ¼-mile radius may have impacted the site
- A review of historical aerial photographs
- Field tests to assess whether pumping of the on-site irrigation well would influence the shallow water-bearing zone
- A 16-point soil gas survey
- Installation of two additional groundwater monitoring wells (MW-4 and MW-5)
- Collection of groundwater samples from all five monitoring wells during the first three quarters of 1995

Results of the second phase of investigation were presented in Blymyer Engineers' *Subsurface Investigation Letter Report*, dated December 16, 1994, and in quarterly groundwater monitoring reports submitted in 1995.

No potential upgradient sources of contamination were identified during the review of the local regulatory agency records and aerial photographs. On the basis of the limited field tests, pumping of the irrigation well did not have a significant influence on shallow groundwater beneath the site. Furthermore, petroleum hydrocarbons were not detected in the groundwater samples collected from the irrigation well, which is apparently screened from 45 to 60 feet below ground surface (bgs).

Slightly elevated concentrations of petroleum hydrocarbons were detected in the soil gas samples collected from the northeastern corner of the barn and near the northernmost lath house. Groundwater samples from MW-3, located between the lath house and the barn, contained up to 120,000 micrograms per liter (µg/L) TPH as gasoline, 4,800 µg/L of benzene, 8,400 µg/L of toluene, 3,000 µg/L of ethylbenzene, and 27,000 µg/L of total xylenes. The presence of TPH as gasoline in groundwater samples from MW-3 suggested that there was another source of petroleum hydrocarbons at the site, in addition to the diesel UST that was removed in 1992.

TPH as diesel was detected in the MW-5 groundwater sample only during the March 1995 sampling event. TPH as gasoline, TPH as diesel, and BTEX were not detected in groundwater samples collected from monitoring wells MW-1, MW-2, or MW-4. The direction of groundwater flow in September 1995 was estimated to be northwest with an average gradient of 0.004 feet/foot.

On the basis of the *Subsurface Investigation Letter Report* and quarterly groundwater monitoring reports, the ACHCSA requested (in a letter dated May 31, 1995) that Kawahara Nursery conduct additional work at the site. Specifically, they requested submittal of a workplan to identify the source and extent of contamination in soil and groundwater in the vicinity of monitoring well MW-3.

On June 3, 1997, Blymyer Engineers submitted the *Workplan for Additional Site Characterization and Site Risk Classification* (Workplan) to the ACHCSA. In a letter dated June 6, 1997, the ACHCSA requested that several additional tasks be included in the Workplan. On June 12, 1997, Blymyer Engineers submitted the *Revised Workplan for Additional Site Characterization* (Revised Workplan), which addressed the additional ACHCSA requirements.

The Revised Workplan included the following tasks:

- Resume quarterly groundwater monitoring and sampling of MW-3, MW-4, and MW-5
- Generate a geophysical survey in an attempt to locate the gasoline UST or its former basin in the vicinity of the lath house on the north side of the site
- Perform an additional investigation in the vicinity of the former gasoline UST by advancing approximately 6 direct-push soil bores
- Decommission monitoring wells MW-1 and MW-2, as approved by the ACHCSA
- Analyze soil and groundwater samples to evaluate the potential for natural attenuation (aerobic and anaerobic biodegradation)
- Determine if the site can be classified in the "low risk groundwater" category as defined by the San Francisco Bay Regional Water Quality Control Board (SFRWQCB)
- If appropriate, evaluate the risk to human health and the environment

On March 4, 1999, Blymyer Engineers resumed quarterly groundwater monitoring and sampling of MW-3, MW-4, and MW-5, and submitted the *Quarterly Groundwater Monitoring Report, First Quarter 1999 (January through March)*, dated April 13, 1999.

In June 1999, prior to implementation of the Revised Workplan, Mr. Amir Gholami of the ACHCSA requested (June 2, 1999) the addition of the following tasks to the above scope of work (see Blymyer Engineers' *Proposed Soil Bore Locations*, dated June 21, 1999):

- Drill two additional soil bores on the west side and east side of monitoring well MW-3

- Drill additional soil bores around the perimeter of the former diesel UST and in the vicinity of geophysical anomalies

- Collect soil samples at 5-foot intervals and collect one grab groundwater sample from each soil bore

1.1.4 Additional Subsurface Investigation

On September 2, 1999, Blymyer Engineers submitted the *Results of Additional Subsurface Investigation and Quarterly Groundwater Monitoring, Second Quarter 1999*. This report presented the results the geophysical survey, additional soil bore sampling, well decommissioning, and groundwater monitoring for the second quarter, 1999. In addition to decommissioning monitoring wells MW-1 and MW-2, as approved by the ACHCSA, the following conclusions were made:

- The direction of groundwater flow is toward the northwest

- On the basis of the geophysical survey, buried metal objects appear to be present in two locations near the west end of the lath house

- Soil and grab groundwater samples collected from SB-4 and SB-5, located downgradient of one magnetic anomaly, contained very high concentrations of petroleum hydrocarbons

- A petroleum sheen was observed on SB-4 and SB-5 water samples, and free product was observed in the soil samples

- Groundwater samples from MW-3, located between the barn and the northernmost lath house, contained significant concentrations of TPH as gasoline and benzene

- The soil samples and grab groundwater sample collected downgradient of the former diesel UST (removed in 1992) indicated that this area is not a significant source of groundwater contamination

On the basis of the investigation, it appears that there may be free product present in soil and groundwater in the vicinity of the lath house (downgradient of one magnetic anomaly). The site could not, therefore, be classified as "low risk groundwater".

Furthermore, the concentrations of benzene were compared to the Tier 1 table of Risk-Based Screening Levels (RBSLs) as described in the ASTM E 1739-95 *Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites* (RBCA). A California-modified toxicity and exposure table was used. Benzene concentrations in groundwater samples from SB-4, SB-5, and MW-3 exceed the target levels for an exposure pathway of groundwater volatilization to indoor residential air. Because there is a residence immediately downgradient of the apparent gasoline source, closure of this site could not be recommended on the basis of a low risk to human health.

Blymyer Engineers recommended that a Tier 2 RBCA evaluation be generated to evaluate site-specific target levels (SSTLs) for both soil and groundwater. When the SSTLs are generated, it was recommended that the remaining petroleum hydrocarbon sources be removed from the site, using the SSTLs as cleanup goals. Blymyer Engineers submitted the *Health Risk Assessment Workplan*, dated January 20, 2000, to the ACHCSA. The workplan was approved by the ACHCSA in a December 14, 2000 letter.

Due to the relative stability of the groundwater analytical data over an extended period of time, Blymyer Engineers recommended, and the ACHCSA approved, that the site move to semi-annual groundwater monitoring. This is the seventh semi-annual sampling event at the site.

A *Remedial Action Plan*, dated September 10, 2001, was forwarded to the ACHCSA. In a letter dated September 18, 2001, the ACHCSA accepted the proposed remedial actions.

In October 2002, the *ASTM RBCA Health Risk Assessment* report (Blymyer Engineers, October 11, 2002) was completed and forwarded to the ACHCSA. The analysis indicated that, from a health risk perspective, only benzene in soil was of concern (the SSTL exceeded the Calculated Representative Concentration [CRC] present at the site). The CRCs for all other chemical components of petroleum hydrocarbons (TPH, toluene, ethylbenzene, and total xylenes) were found not to exceed the SSTL in both soil and groundwater. However, from a nuisance perspective (odor and color), the SFRWQCB has set a lower threshold for TPH in soil than either the SSTL or the CRC. A similar situation was encountered for TPH in groundwater. The report recommended that the SFRWQCB nuisance threshold for soil and groundwater be followed for TPH, and that the SSTL for benzene in soil be used to guide remedial actions. The ACHCSA accepted the risk assessment, in conjunction with the previously submitted Remedial Action Plan, in a letter entitled *Workplan Approval*, dated March 25, 2003.

In the Fall 2002 Groundwater Monitoring Report, Blymyer Engineers recommended that monitoring for Natural Attenuation parameters be stopped. The reasoning was based on the accumulation of data from 11 quarterly or semiannual groundwater monitoring events. It was judged that adequate data already existed to document microbial activity is present and contributing to the degradation of contaminants present in groundwater beneath the site. It was reasoned that the generation of additional data would not significantly increase our knowledge of degradation processes at the site.

On March 8, 2004, a letter entitled *Modification of Remedial Action Plan* was submitted to the ACHCSA. The letter proposed a modification of the planned remedial excavation at the southern (former) diesel UST area. An apparently small wedge of soil had been documented to be impacted over the remedial goal of 100 milligrams per kilogram (or parts per million) at this location; however, due to the very likely possibility of undermining the adjacent pole barn, Blymyer Engineers proposed that a Soil Management Plan be developed and accompanied with a deed notification for the residual concentrations at this former UST location. It was proposed that appropriate additional actions could be taken at the time of property redevelopment. The modification was accepted by Ms. Eva Chu of the ACHCSA in an email dated March 24, 2004. Pending preapproval of costs by the UST Cleanup Fund, remedial actions will proceed. At the present time, the remedial contractor has been selected and contracting is pending.

2.0 Data

On November 23, 2004, Blaine Tech Services, Inc. (Blaine) conducted groundwater gauging and sampling at the Kawahara Nursery under contract to Blymyer Engineers. The Blaine *Standard Operating Procedures* for groundwater gauging and sampling are included in Appendix A.

2.1 Groundwater Gauging

Blaine personnel measured the depth to groundwater in wells MW-3, MW-4, and MW-5 (Figure 3). The groundwater was gauged with an accuracy of 0.01 feet from the top of casing using an oil-water interface probe. Groundwater measurements are presented in Table I and Figure 3, and are included on the Well Gauging and Well Monitoring Data Sheets presented in Appendix B.

2.2 Groundwater Sampling and Analysis

Blaine collected groundwater samples from wells MW-3, MW-4, and MW-5. Each well was purged by removing a minimum of three well casing volumes of groundwater. The temperature, pH, turbidity, and conductivity of the purge water were measured after each well volume had been removed. The amount of groundwater purged from each well was considered sufficient when the parameters appeared to be stable.

Groundwater samples were collected from each monitoring well, then decanted into the appropriate containers. The samples were labeled and placed in a cooler with ice for transport to Curtis & Tompkins, Ltd., of Berkeley, California, under chain-of-custody documentation. All purged groundwater was placed in labeled, 55-gallon capacity, Department of Transportation-approved steel drums. The samples were analyzed for the following compounds:

- TPH as gasoline (EPA Method 8015M)
- TPH as diesel (EPA Method 8015M)
- BTEX (EPA Method 8021B)
- Methyl *tert*-butyl ether (MTBE; EPA Method 8021B)

Based on an accumulation of data from 11 quarterly or semiannual groundwater monitoring events, Blymyer Engineers ceased monitoring for Natural Attenuation parameters. Ample data currently exist to document the presence of microbial activity beneath the site and its contribution to the degradation of hydrocarbon contaminants present in groundwater beneath the site. It was judged that the generation of additional analytical data would not significantly increase the level of knowledge or understanding of the degradation processes at the site.

3.0 Results

3.1 Groundwater Elevations and Gradient

Table I and Figure 3 present groundwater gauging data collected on November 23, 2004. The depth to groundwater ranged from 8.90 feet below the top of casing (BTOC) in monitoring well MW-5 to 10.94 feet BTOC in MW-4. The depth to groundwater has increased an average of 1.11 feet since the previous monitoring event. The average groundwater gradient was 0.002 feet/foot. The direction of groundwater flow could not be conclusively determined based on the linear configuration of the wells. However, the gradient is likely to be directed toward the northwest based on the consistent historic flow direction documented at the site.

3.2 Groundwater Sample Analytical Results

The results of groundwater analyses are found in Appendix C, and are summarized in Table II, Table III, and Table IV.

During the August 2000 monitoring event, MTBE and all other fuel oxygenates (*tert*-Butyl Alcohol [TBE], Isopropyl Ether [DIPE], Ethyl *tert*-Butyl Ether [ETBE], and Methyl *tert*-Amyl Ether [TAME]) were not detected in well MW-3 at the site using EPA Method 8260 (run on a one-time basis). EPA Methods 8020 or 8021B can give false MTBE positives as MTBE will coelute with 3-methyl-pentane, another gasoline compound. EPA Method 8260 is a GC/MS method and is capable of distinguishing between 3-methyl-pentane and MTBE. As a consequence of the results of the analytical testing with EPA Method 8260, all detections of MTBE at the site are considered to be 3-methyl-pentane and not MTBE. During this sampling event, MTBE (3-methyl-pentane) was present in well MW-5 at a concentration of 3.9 µg/L, slightly above the limit of detection (Table II).

For the tenth consecutive monitoring event upgradient well MW-4 contained no detectable concentrations of the petroleum hydrocarbon analytes (excluding sporadic trace detections of MTBE / 3-methyl-pentane in well MW-4 in several events; Table II).

In the initial laboratory analysis well MW-5 contained a very high concentration (7,900 µg/L) of a mid-range petroleum hydrocarbon quantified as TPH as diesel. The laboratory included a note that the chromatographic pattern did not resemble the hydrocarbon standard and consisted of an unknown one or more peaks. A rerun of the initial extraction yielded a similar result. As a consequence, Blymyer Engineers requested that the sample be re-extracted. The resultant analysis yielded a nondetectable concentration at a detection limit of 58 µg/L, 3 days past the allowable 14-day hold period. Although outside the acceptable hold period, Blymyer Engineers judges the result reasonable based on 10 years of historic analytical data, and lack of field observations of an odor or sheen on the groundwater samples, or the lack of surface infiltration from water in the well box, or of down well casing staining, etc. (Blaine Tech field notes and personal communication, December 9, 2004).

Groundwater from MW-3 contained moderate concentrations of TPH as gasoline (840 µg/L) and TPH as diesel (190 µg/L); each at concentrations that are historically on the lower edge of the respective concentration ranges seen at the site. BTEX were again detectable in well MW-3, and the concentrations are roughly comparable to concentrations present in groundwater in May 2004. The concentrations detected remain significantly below historic concentrations. For each of these chemical compounds, the detected concentrations still represent significant decreases from the November 2002 sampling event, which was the first sampling event to document an increase in contaminant trends in two years (since the November 2000 sampling event). Since the November 2002 sampling event, groundwater concentrations in well MW-3 have been relatively low and relatively consistent with slight seasonal fluctuations.

The laboratory again included copies of the diesel and gasoline chromatograms for the TPH analysis for well MW-3. The laboratory has again noted that hydrocarbons in the groundwater sample from MW-3 were lighter than diesel range-hydrocarbon compounds. Additionally, the laboratory again

noted that the chromatographic pattern for TPH as diesel was not typical for diesel fuel in well MW-3. When this occurred previously, Blymyer Engineers requested the laboratory to review the TPH as diesel chromatogram. At the time, the laboratory verbally confirmed that the TPH as diesel detected was overlap from the TPH as gasoline chromatogram, that the chromatogram suggested that a single hydrocarbon pattern was present, and that the set of data likely indicated aged gasoline was present, and that a second source of diesel was not present. Because TPH as diesel is not present as a separate release in the northern portion of the site, Blymyer Engineers has previously recommended that TPH as diesel be dropped from the analytical suite for future monitoring events. However, the ACHCSA has requested continued analysis for TPH as diesel.

Although again not collected during this monitoring event, Table III presents the analytical results of all previously collected remediation by natural attenuation (RNA) indicator parameters. In general microbial use of petroleum hydrocarbons as a food source is affected by the concentration of a number of chemical compounds dissolved in groundwater at a site. RNA monitoring parameters were established by research conducted by the Air Force Center for Environmental Excellence. The research results were used to develop a technical protocol for documenting RNA in groundwater at petroleum hydrocarbon release sites (Wiedemeier, Patrick Haas, 1995, *Technical Protocol for Implementing the Intrinsic Remediation with Long Term Monitoring for Natural Attenuation of Fuel Contamination Dissolved in Groundwater, Volumes I and II*, U.S. Air Force Center for Environmental Excellence, Brooks Air Force Base, Texas). The protocol focuses on documenting both aerobic and anaerobic degradation processes whereby indigenous subsurface bacteria use various dissolved electron acceptors to degrade dissolved petroleum hydrocarbons.

In the order of preference, the following electron acceptors and metabolic by-products are used and generated, respectively, by the subsurface microbes to degrade petroleum hydrocarbons: oxygen to carbon dioxide, nitrate to nitrogen and carbon dioxide, manganese (Mn^{4+} to Mn^{2+}), ferric iron (Fe^{3+}) to ferrous iron (Fe^{2+}), sulfate to hydrogen sulfide, and carbon dioxide to methane. With the exception of oxygen, the use of all other electron acceptor pathways indicates anaerobic degradation.

Investigation of each of these electron acceptor pathways, with the exception of the manganese and

carbon dioxide to methane pathways, has previously been conducted at the site as part of the evaluation of RNA chemical parameters. RNA parameters were not collected during this event due to the ample documentation of microbial activity beneath the site, as well as their contribution to the hydrocarbon degradation process at the site. For further information on these data at the site, please consult previous groundwater sampling reports for the site.

4.0 Conclusions and Recommendations

The following conclusions can be made from the on-going groundwater monitoring events:

- Since the May 2003 monitoring and sampling event, contaminant concentrations have been fluctuating at the lower edge of the historic range of concentrations. In general, excluding the November 2002 groundwater monitoring event, decreasing contaminant concentrations have been present at this site since the November 2000 sampling event. Groundwater concentrations rose significantly during the November 2002 sampling event.

- During the present monitoring and sampling event, groundwater from well MW-4 did not yield detectable concentrations of contaminants and groundwater from well MW-3 contained contaminants at relatively similar concentrations to the previous monitoring and sampling event conducted in May 2004.

- In the initial laboratory analysis well MW-5 contained a very high concentration (7,900 µg/L) of a mid-range petroleum hydrocarbon quantified as TPH as diesel. The laboratory included a note that the chromatographic pattern did not resemble the hydrocarbon standard and consisted of an unknown one or more peaks. A rerun of the initial extraction yielded a similar result. As a consequence, Blymyer Engineers requested that the sample be re-extracted. The resultant analysis yielded a nondetectable concentration at a detection limit of 58 µg/L, 3 days past the allowable 14-day hold period. Although outside the acceptable hold period, Blymyer Engineers judges the result reasonable based on 10 years of historic analytical data, and lack of field observations of an odor or sheen on the groundwater samples, or the lack of surface infiltration from water in the well box, or of down well casing staining, etc. (Blaine Tech field notes and personal communication, December 9, 2004).

- The analytical laboratory has continued to indicate with the use of chromatograms that TPH as diesel is not present in any of the groundwater samples. This has not varied in ten

consecutive monitoring events. Blymyer continues to recommend elimination of the laboratory analysis for TPH as diesel at the site.

- During several previous monitoring events, upgradient monitoring well MW-4 has contained trace concentrations of petroleum hydrocarbons at the limit of reporting, suggestive of a possible upgradient source. This was not the case during this event.

- During a previous monitoring event, a one-time analysis for fuel oxygenates by EPA Method 8260 found that there are no fuel oxygenates in the groundwater sample collected from well MW-3. Specifically, MTBE was not detected by this method. Thus, all reported concentrations of MTBE are considered to be 3-methyl-pentane.

- The direction of groundwater flow is likely to the northwest based on previously generated data.

- Previous evaluations of RNA chemical parameters present at the site appear to indicate that the site is largely under aerobic conditions; however, anaerobic conditions are present in the core of the contaminant plume, and are seasonally present over a larger area at the site. In general, aerobic conditions appear to be undergoing reestablishment prior to flow of the groundwater beneath the onsite residential dwelling.

- As approved by the ACHCSA, the site will continue with semiannual (twice a year) monitoring and sampling. The next monitoring event is scheduled for May 2005.

- A copy of this report has been forwarded to:

  Alameda County Health Care Services Agency
  Environmental Protection Division
  1131 Harbor Bay Parkway, Suite 250
  Alameda, CA 94502-6577
  Attention: Eva Chu

Tables

Table 1, Summary of Groundwater Elevation Measurements
BEI Job No. 94015, Kawahara Nursery Inc.
16550 Ashland Avenue, San Lorenzo, California

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Water Surface Elevation (feet)
MW-1	6/16/93	100	10.7	89.3
	3/24/94		11.11	88.89
	3/28/94		11.26	88.74
	11/22/94		12.04	87.96
	3/29/95		7.26	92.74
	6/7/95		8.67	91.33
	9/7/95		10.56	89.44
	3/4/99		Not Measured	Not Measured
	6/29/99		8.81	91.19
	11/15/99		Destroyed	Destroyed
	5/22/00		Destroyed	Destroyed
	8/16/00		Destroyed	Destroyed
	11/16/00		Destroyed	Destroyed
	2/21/01		Destroyed	Destroyed
	5/31/01		Destroyed	Destroyed
	11/28/01		Destroyed	Destroyed
	5/28/02		Destroyed	Destroyed
	11/14/02		Destroyed	Destroyed
	5/23/03		Destroyed	Destroyed
	11/24/03		Destroyed	Destroyed
	5/13/04		Destroyed	Destroyed
	11/23/04		Destroyed	Destroyed

Table 1. Summary of Groundwater Elevation Measurements
BEI Job No. 94015, Kawahara Nursery Inc.
16550 Ashland Avenue, San Lorenzo, California

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Water Surface Elevation (feet)
MW-2	6/16/93	99.27	10.24	89.03
	3/24/94		10.65	88.62
	3/28/94		10.79	88.48
	11/22/94		11.58	87.69
	3/29/95		6.93	92.34
	6/7/95		8.36	90.91
	9/7/95		10.18	89.09
	3/4/99		6.95	92.32
	6/29/99		8.52	90.75
	11/15/99		Destroyed	Destroyed
	5/22/00		Destroyed	Destroyed
	8/16/00		Destroyed	Destroyed
	11/16/00		Destroyed	Destroyed
	2/21/01		Destroyed	Destroyed
	5/31/01		Destroyed	Destroyed
	11/28/01		Destroyed	Destroyed
	5/28/02		Destroyed	Destroyed
	11/14/02		Destroyed	Destroyed
	5/23/03		Destroyed	Destroyed
	11/24/03		Destroyed	Destroyed
	5/13/04		Destroyed	Destroyed
	11/23/04		Destroyed	Destroyed

Table 1. Summary of Groundwater Elevation Measurements
BEI Job No. 94015, Kavanagh Nursery, Inc.
16550 Ashland Avenue, San Lorenzo, California

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Water Surface Elevation (feet)
MW-3	6/16/93	99.52	10.46	89.06
	3/24/94		10.81	88.71
	3/28/94		10.96	88.56
	11/22/94		11.68	87.84
	3/29/95		6.95	92.57
	6/7/95		8.48	91.04
	9/7/95		10.30	89.22
	3/4/99		7.98	91.54
	6/29/99		8.49	91.03
	11/15/99		10.35	89.17
	5/22/00		7.65	91.87
	8/16/00		9.44	90.08
	11/16/00		9.86	89.66
	2/21/01		8.65	90.87
	5/31/01		9.56	89.96
	11/28/01		11.04	88.48
	5/28/02		9.17	90.35
	11/14/02		10.23	89.29
	5/23/03		8.73	90.79
	11/24/03		11.05	88.47
	5/13/04		9.11	90.41
	11/23/04		10.28	89.24

Table 1: Summary of Groundwater Elevation Measurements
BEI Job No: 94015; Kawahara Nursery, Inc.
16550 Ashland Avenue, San Lorenzo, California

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Water Surface Elevation (feet)
MW-4	11/22/94	100.46	12.34	88.12
	3/29/95		7.49	92.97
	6/7/95		8.95	91.51
	9/7/95		10.88	89.58
	3/4/99		8.03	92.43
	6/29/99		9.04	91.42
	11/15/99		11.00	89.46
	5/22/00		8.28	92.18
	8/16/00		10.04	90.42
	11/16/00		10.50	89.96
	2/21/01		9.42	91.04
	5/31/01		10.20	90.26
	11/28/01		11.67	88.79
	5/28/02		9.68	90.78
	11/14/02		10.92	89.54
	5/23/03		9.10	91.36
	11/24/03		11.57	88.89
	5/13/04		9.63	90.83
	11/23/04		10.94	89.52

Table 1: Summary of Groundwater Elevation Measurements
BEI Job No. 9401S, Kawahara Nursery, Inc.
16550 Ashland Avenue, San Lorenzo, California

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Water Surface Elevation (feet)
MW-5	3/29/95	98.14	5.76	92.38
	6/7/95		7.33	90.81
	9/7/95		9.11	89.03
	3/4/99		6.63	91.51
	6/29/99		7.41	90.73
	11/15/99		9.18	88.96
	5/22/00		6.68	91.46
	8/16/00		8.27	89.87
	11/16/00		8.68	89.46
	2/21/01		7.51	90.63
	5/31/01		8.40	89.74
	11/28/01		9.79	88.35
	5/28/02		8.05	90.09
	11/14/02		9.03	89.11
	5/23/03		7.90	90.24
	11/24/03		9.94	88.20
	5/13/04		8.05	90.09
	11/23/04		8.90	89.24

Notes: TOC = Top of casing
Elevations in feet above mean sea level

Table 1: Summary of Groundwater Sample Hydrocarbon Analytical Results
BEI Job No: 94015; Kawahara Nursery
16550 Ashland Avenue, San Lorenzo, California

Sample ID	Date	Modified EPA Method 8015 (μg/L)		EPA Method 8020 or 8021B (μg/L)					EPA Method 8260 (μg/L)
		TPH as Gasoline	TPH as Diesel	B	T	E	X	MTBE	MTBE
MW-1	6/16/93	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	3/28/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	11/8/94	NS	NS	NS	NS	NS	NS	NS	NS
	3/29/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	6/7/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	9/7/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	3/4/99	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/99	NS	NS	NS	NS	NS	NS	NS	NS
	11/15/99	NS	NS	NS	NS	NS	NS	NS	NS
	5/22/00	NS	NS	NS	NS	NS	NS	NS	NS
	8/16/00	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/00	NS	NS	NS	NS	NS	NS	NS	NS
	2/21/01	NS	NS	NS	NS	NS	NS	NS	NS
	5/31/01	NS	NS	NS	NS	NS	NS	NS	NS
	11/28/01	NS	NS	NS	NS	NS	NS	NS	NS
	5/28/02	NS	NS	NS	NS	NS	NS	NS	NS
	11/14/02	NS	NS	NS	NS	NS	NS	NS	NS
	5/23/03	NS	NS	NS	NS	NS	NS	NS	NS
	11/24/03	NS	NS	NS	NS	NS	NS	NS	NS
	5/13/04	NS	NS	NS	NS	NS	NS	NS	NS
	11/23/04	NS	NS	NS	NS	NS	NS	NS	NS

Table 1: Summary of Groundwater Sample Hydrocarbon Analytical Results
BEI Job No. 9401S, Kawahara Nursery
16550 Ashland Avenue, San Lorenzo, California

Sample ID	Date	Modified EPA Method 8015 (µg/L)		EPA Method 8020 or 8021B (µg/L)					EPA Method 8260 (µg/L)
		TPH as Gasoline	TPH as Diesel	B	T	E	X	MTBE	MTBE
MW-2	6/16/93	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	3/28/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	11/8/94	NS	NS	NS	NS	NS	NS	NS	NS
	3/29/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	5/7/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	9/7/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	3/4/99	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/99	NS	NS	NS	NS	NS	NS	NS	NS
	11/15/99	NS	NS	NS	NS	NS	NS	NS	NS
	5/22/00	NS	NS	NS	NS	NS	NS	NS	NS
	8/16/00	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/00	NS	NS	NS	NS	NS	NS	NS	NS
	2/21/01	NS	NS	NS	NS	NS	NS	NS	NS
	5/31/01	NS	NS	NS	NS	NS	NS	NS	NS
	11/28/01	NS	NS	NS	NS	NS	NS	NS	NS
	5/28/02	NS	NS	NS	NS	NS	NS	NS	NS
	11/14/02	NS	NS	NS	NS	NS	NS	NS	NS
	5/23/03	NS	NS	NS	NS	NS	NS	NS	NS
	11/24/03	NS	NS	NS	NS	NS	NS	NS	NS
	5/13/04	NS	NS	NS	NS	NS	NS	NS	NS
	11/23/04	NS	NS	NS	NS	NS	NS	NS	NS

Table 1: Summary of Groundwater Sample Hydrocarbon Analytical Results
BEI Job No: 94015, Kawahara Nursery
16550 Ashland Avenue, San Lorenzo, California

Sample ID	Date	Modified EPA Method 8015 (µg/L)		EPA Method 8020 or 8021B (µg/L)					EPA Method 8260 (µg/L)
		TPH as Gasoline	TPH as Diesel	B	T	E	X	MTBE	MTBE
MW-3	6/16/93	**120,000**	**170,000**	**4,600**	**8,400**	**2,100**	**27,000**	NS	NS
	3/28/94	**23,000**	**94,000**	**4,800**	**6,500**	**3,000**	**15,000**	NS	NS
	11/8/94	**35,000**	**27,000**	**3,600**	**4,100**	**2,700**	**18,000**	NS	NS
	3/29/95	**18,000**	<50*	**1,600**	**1,400**	**780**	**6,200**	NS	NS
	6/7/95	**20,000**	<50	**1,700**	**1,400**	**750**	**6,800**	NS	NS
	9/7/95	**17,000**	<50	**1,100**	**800**	**570**	**4,800**	NS	NS
	3/4/99	**1,300**	<50	**33**	<0.5	**1.2**	**17**	**5.3** [e]	NS
	6/29/99	**8,000**	<1,000	**98**	**34**	**3.7**	**1,200**	**37** [e]	NS
	11/15/99	**4,200**	**2,000** [a]	**63**	**25**	**65**	**590**	**33** [e]	NS
	5/22/00	**5,800**	**1,480**	**53**	**29**	**58**	**490**	**4.9** [e]	NS
	8/16/00	**2,400**	**530** [c, *]	**18**	**5.8** [b]	**18**	**182**	**12** [b, e]	**ND** [e]
	11/16/00	**9,000**	**3,700** [c, *]	**35**	**27**	**88**	**719**	**<10** [e]	NS
	2/21/01	**2,400**	**880** [c, *]	**28**	**12**	**46**	**276**	**<2.0**	NS
	5/31/01	**2,900**	**680** [c, *]	**5.3**	**33** [b]	**17**	**144**	**<2.0**	NS
	11/28/01	**1,700**	**430** [c, *]	**23**	**3.0**	**37**	**184**	**4.2** [e]	NS
	5/28/02	**870**	**570** [c, *]	**6.3**	**2.2**	**12**	**70**	**2.3** [e]	NS
	11/14/02	**3,300** [f, g]	**910** [c, g]	**27**	**3.6**	**52**	**206**	<2.0 [e]	NS
	5/23/03	**760** [f]	**360** [c, g]	**3.0**	**1.0**	**5.2**	**30**	<2.0 [e]	NS
	11/24/03	<50	**170**	<0.50	<0.50	<0.50	<0.50	<2.0 [e]	NS
	5/13/04	**830** [f, g]	**330** [c, g]	**1.6**	**0.54**	**6.5**	**41.2**	**2.3** [e]	NS
	11/23/04	**840**	**190** [c, *]	**2.7**	**1.0**	**7.7**	**39.8**	<2.0	NS

Table II: Summary of Groundwater Sample Hydrocarbon Analytical Results
BEI Job No. 94015, Kawahara Nursery
16550 Ashland Avenue, San Lorenzo, California

Sample ID	Date	Modified EPA Method 8015 (μg/L)		EPA Method 8020 or 8021B (μg/L)					EPA Method 8260 (μg/L)
		TPH as Gasoline	TPH as Diesel	B	T	E	X	MTBE	MTBE
MW-4	6/16/93	NS	NS	NS	NS	NS	NS	NS	NS
	3/28/94	NS	NS	NS	NS	NS	NS	NS	NS
	11/8/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	3/29/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	6/7/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	9/7/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	3/4/99	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0 [e]	NS
	6/29/99	**130**	<50	<0.5	<0.5	<0.5	<0.5	<5.0 [e]	NS
	11/15/99	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0 [e]	NS
	5/22/00	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	8/16/00	<50	**56** [*, d]	<0.5	<0.5	<0.5	**0.51**	**2.3** [e]	NS
	11/16/00	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	2/21/01	<50	<50	<0.5	<0.5	<0.5	<0.5	**2.6** [e]	NS
	5/31/01	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	11/28/01	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	5/28/02	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	11/14/02	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	5/23/03	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	11/24/03	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	5/13/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	11/23/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS

Table 1: Summary of Groundwater Sample Hydrocarbon Analytical Results
BEI Job No: 94015, Kayahara Nursery
16550 Ashland Avenue, San Lorenzo, California

Sample ID	Date	Modified EPA Method 8015 (µg/L)		EPA Method 8020 or 8021B (µg/L)					EPA Method 8260 (µg/L)
		TPH as Gasoline	TPH as Diesel	B	T	E	X	MTBE	MTBE
MW-5	6/16/93	NS	NS	NS	NS	NS	NS	NS	NS
	3/28/94	NS	NS	NS	NS	NS	NS	NS	NS
	11/8/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	3/29/95	<50	**64**	<0.5	<0.5	<0.5	<0.5	NS	NS
	6/7/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	9/7/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS
	3/4/99	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0 [e]	NS
	6/29/99	**160**	<50	<0.5	<0.5	<0.5	<0.5	<5.0 [e]	NS
	11/15/99	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0 [e]	NS
	5/22/00	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	8/16/00	<50	<50	<0.5	<0.5	<0.5	<0.5	**3.5** [e]	NS
	11/16/00	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	2/21/01	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	5/31/01	<50	<50	<0.5	<0.5	<0.5	<0.5	**2.8** [e]	NS
	11/28/01	<50	<50	<0.5	<0.5	<0.5	<0.5	**4.2** [e]	NS
	5/28/02	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	11/14/02	<50	<50	<0.5	<0.5	<0.5	<0.5	**3.1** [e]	NS
	5/23/03	<50	<50	<0.5	<0.5	<0.5	<0.5	**2.4** [e]	NS
	11/24/03	<50	<50	<0.5	<0.5	<0.5	<0.5	**2.2** [e]	NS
	5/13/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0 [e]	NS
	11/23/04	<50	<58 [h]	<0.5	<0.5	<0.5	<0.5	**3.9** [e]	NS

Table II continued, Summary of Groundwater Sample Hydrocarbon Analytical Results

Notes:

µg/L	=	Micrograms per liter
TPH	=	Total Petroleum Hydrocarbons
B	=	Benzene
T	=	Toluene
E	=	Ethylbenzene
X	=	Total Xylenes
MTBE	=	Methyl *tert*-butyl ether
NS	=	Not Sampled
<x	=	Less than the analytical detection limit (x)
EPA	=	Environmental Protection Agency
*	=	Laboratory reported the presence of petroleum hydrocarbons with a chromatograph pattern uncharacteristic of diesel fuel
a	=	Laboratory note indicates the result is within the quantitation range, but that the chromatographi pattern is not typical of fuel
b	=	Laboratory note indicates that confirmation of the result differed by more than a factor of two
c	=	Laboratory note indicates lighter hydrocarbons contributed to the quantification
d	=	Laboratory note indicates the sample has an unknown single peak or peaks
e	=	Detection of MTBE by EPA Method 8021B is regarded as erroneous; likely chemical detected i 3-methyl-pentane. See text and Table IV.
f	=	Laboratory notes that heavier hydrocarbons contributed to the quantitation
g	=	Laboratory notes that the sample exhibits a fuel pattern that does not resemble the standard
h	=	Initially reported at 7,900 µg/L by laboratory; re-extracted 3 days outside of 14-day hold period yielding this revised result.

Table III: Summary of Groundwater Sample Natural Attenuation Analytes
BEL Job No. 94015, Kawahara Nursery
16550 Ashland Avenue, San Lorenzo, California

Sample ID	Date	Field	EPA Method 310.1	EPA Method 353.3	Method AM20GAX	Standard Method 3500	EPA Method 310.1	EPA Method 375.4
		Dissolved Oxygen (mg/L)	Carbon Dioxide (mg/L)	Nitrate/ Nitrogen (mg/L)	Methane (μg/L)	Ferrous Iron (mg/L)	Alkalinity (mg/L)	Sulfate (mg/L)
MW-1	3/4/99	NS	NS	NS	NS	NS	NS	NS
	6/29/99	NS	NS	NS	NS	NS	NS	NS
	11/15/99	NS	NS	NS	NS	NS	NS	NS
	5/22/00	NS	NS	NS	NS	NS	NS	NS
	8/16/00	NS	NS	NS	NS	NS	NS	NS
	11/16/00	NS	NS	NS	NS	NS	NS	NS
	2/21/01	NS	NS	NS	NS	NS	NS	NS
	5/31/01	NS	NS	NS	NS	NS	NS	NS
	11/28/01	NS	NS	NS	NS	NS	NS	NS
	5/28/02	NS	NS	NS	NS	NS	NS	NS
	11/14/02	NS	NS	NS	NS	NS	NS	NS
	5/23/03	NS	NS	NS	NS	NS	NS	NS
	11/24/03	NS	NS	NS	NS	NS	NS	NS
	5/13/04	NS	NS	NS	NS	NS	NS	NS
	11/23/04	NS	NS	NS	NS	NS	NS	NS

Table 1B: Summary of Groundwater Sample Natural Attenuation Analytical Results
BFI Job No. 940154, Kawahara Nursery
16550 Ashland Avenue, San Lorenzo, California

Sample ID	Date	Field	EPA Method 310.1	EPA Method 353.3	Method AM20GAX	Standard Method 3500	EPA Method 310.1	EPA Method 375.4
		Dissolved Oxygen (mg/L)	Carbon Dioxide (mg/L)	Nitrate/ Nitrogen (mg/L)	Methane (μg/L)	Ferrous Iron (mg/L)	Alkalinity (mg/L)	Sulfate (mg/L)
MW-2	3/4/99	NS	NS	NS	NS	NS	NS	NS
	6/29/99	NS	NS	NS	NS	NS	NS	NS
	11/15/99	NS	NS	NS	NS	NS	NS	NS
	5/22/00	NS	NS	NS	NS	NS	NS	NS
	8/16/00	NS	NS	NS	NS	NS	NS	NS
	11/16/00	NS	NS	NS	NS	NS	NS	NS
	2/21/01	NS	NS	NS	NS	NS	NS	NS
	5/31/01	NS	NS	NS	NS	NS	NS	NS
	11/28/01	NS	NS	NS	NS	NS	NS	NS
	5/28/02	NS	NS	NS	NS	NS	NS	NS
	11/14/02	NS	NS	NS	NS	NS	NS	NS
	5/23/03	NS	NS	NS	NS	NS	NS	NS
	11/24/03	NS	NS	NS	NS	NS	NS	NS
	5/13/04	NS	NS	NS	NS	NS	NS	NS
	11/23/04	NS	NS	NS	NS	NS	NS	NS

Table 1B: Summary of Groundwater Sample Natural Attenuation Analytical Results
BEI Job No: 94015; Kawahara Nursery
16550 Ashland Avenue, San Lorenzo, California

Sample ID	Date	Field	EPA Method 310.1	EPA Method 353.3	Method AM20GAX	Standard Method 3500	EPA Method 310.1	EPA Method 375.4
		Dissolved Oxygen (mg/L)	Carbon Dioxide (mg/L)	Nitrate/ Nitrogen (mg/L)	Methane (μg/L)	Ferrous Iron (mg/L)	Alkalinity (mg/L)	Sulfate (mg/L)
MW-3	3/4/99 3/8/99	1.2	4.4	26	NS	<0.01	520	1,000
	6/29/99	0.4	3.5	10	NS	<0.10	500	73
	11/15/99	0.5	48	5.7	NS	<0.01	530	110
	5/22/00	0.04	63.3	18	NS	<0.10	460	63
	8/16/00	1.0	59.8	13	NS	0.54	450	62
	11/16/00	1.2	63.5	8.9	NS	2.2	470	52
	2/21/01	1.2	63	12	NS	0.41	430	50
	5/31/01	1.8	50	14	NS	0.49	410	49
	11/28/01	0.8	47	7.7	2.9	0.54	450	43
	5/28/02	0.7	63	11	NS	<0.10	440	50
	11/14/02	0.6	75	4.1	NS	1.2	540	41
	5/23/03	NS	NS	NS	NS	NS	NS	NS
	11/24/03	NS	NS	NS	NS	NS	NS	NS
	5/13/04	NS	NS	NS	NS	NS	NS	NS
	11/23/04	NS	NS	NS	NS	NS	NS	NS

Table 1: Summary of Groundwater Sample Natural Attenuation Analytes
BEI Job No: 9401 - Kawahara Nursery
16550 Ashland Avenue, San Lorenzo, California

Sample ID	Date	Field	EPA Method 310.1	EPA Method 353.3	Method AM20GAX	Standard Method 3500	EPA Method 310.1	EPA Method 375.4
		Dissolved Oxygen (mg/L)	Carbon Dioxide (mg/L)	Nitrate/ Nitrogen (mg/L)	Methane (μg/L)	Ferrous Iron (mg/L)	Alkalinity (mg/L)	Sulfate (mg/L)
MW-4	3/4/99 3/8/99	2.1	2.3	13	NS	<0.01	320	390
	6/29/99	1.2	21	12	NS	<0.10	360	46
	11/15/99	1.4	22	8.9	NS	<0.01	370	140
	5/22/00	1.6	35.6	19	NS	<0.10	340	49
	8/16/00	2.9	42.2	14	NS	0.10	350	51
	11/16/00	3.7	34.4	12	NS	<0.10	390	53
	2/21/01	1.9	40	13	NS	0.16	310	55
	5/31/01	1.4	32	14	NS	<0.10	350	56
	11/28/01	4.2	36	13	2.0	<0.10	370	60
	5/28/02	0.8	34	12	NS	<0.10	380	70
	11/14/02	0.7	51	15	NS	<0.10	370	66
	5/23/03	NS	NS	NS	NS	NS	NS	NS
	11/24/03	NS	NS	NS	NS	NS	NS	NS
	5/13/04	NS	NS	NS	NS	NS	NS	NS
	11/23/04	NS	NS	NS	NS	NS	NS	NS

Table II: Summary of Groundwater Sample Natural Attenuation Analytes
BEI Job No: 9401S; Kawasaki Survey
16550 Ashland Avenue, San Lorenzo, California

Sample ID	Date	Field	EPA Method 310.1	EPA Method 353.3	Method AM20GAX	Standard Method 3500	EPA Method 310.1	EPA Method 375.4
		Dissolved Oxygen (mg/L)	Carbon Dioxide (mg/L)	Nitrate/ Nitrogen (mg/L)	Methane (μg/L)	Ferrous Iron (mg/L)	Alkalinity (mg/L)	Sulfate (mg/L)
MW-5	3/4/99 3/8/99	1.8	2.1	140	NS	<0.01	370	500
	6/29/99	0.9	7.0	14	NS	<0.10	360	46
	11/15/99	0.9	6.0	11	NS	<0.01	370	150
	5/22/00	0.4	35.1*	11	NS	<0.10	360	50
	8/16/00	0.8	38.25*	12	NS	0.13	360	47
	11/16/00	2.4	34.3	12	NS	<0.10	380	48
	2/21/01	2.7	38	11	NS	0.23	350	49
	5/31/01	2.1	30	11	NS	<0.10	360	48
	11/28/01	3.5	32	12	2.0	<0.10	360	47
	5/28/02	0.8	30	12	NS	<0.10	370	47
	11/14/02	0.7	42	14	NS	<0.10	340	45
	5/23/03	NS	NS	NS	NS	NS	NS	NS
	11/24/03	NS	NS	NS	NS	NS	NS	NS
	5/13/04	NS	NS	NS	NS	NS	NS	NS
	11/23/04	NS	NS	NS	NS	NS	NS	NS

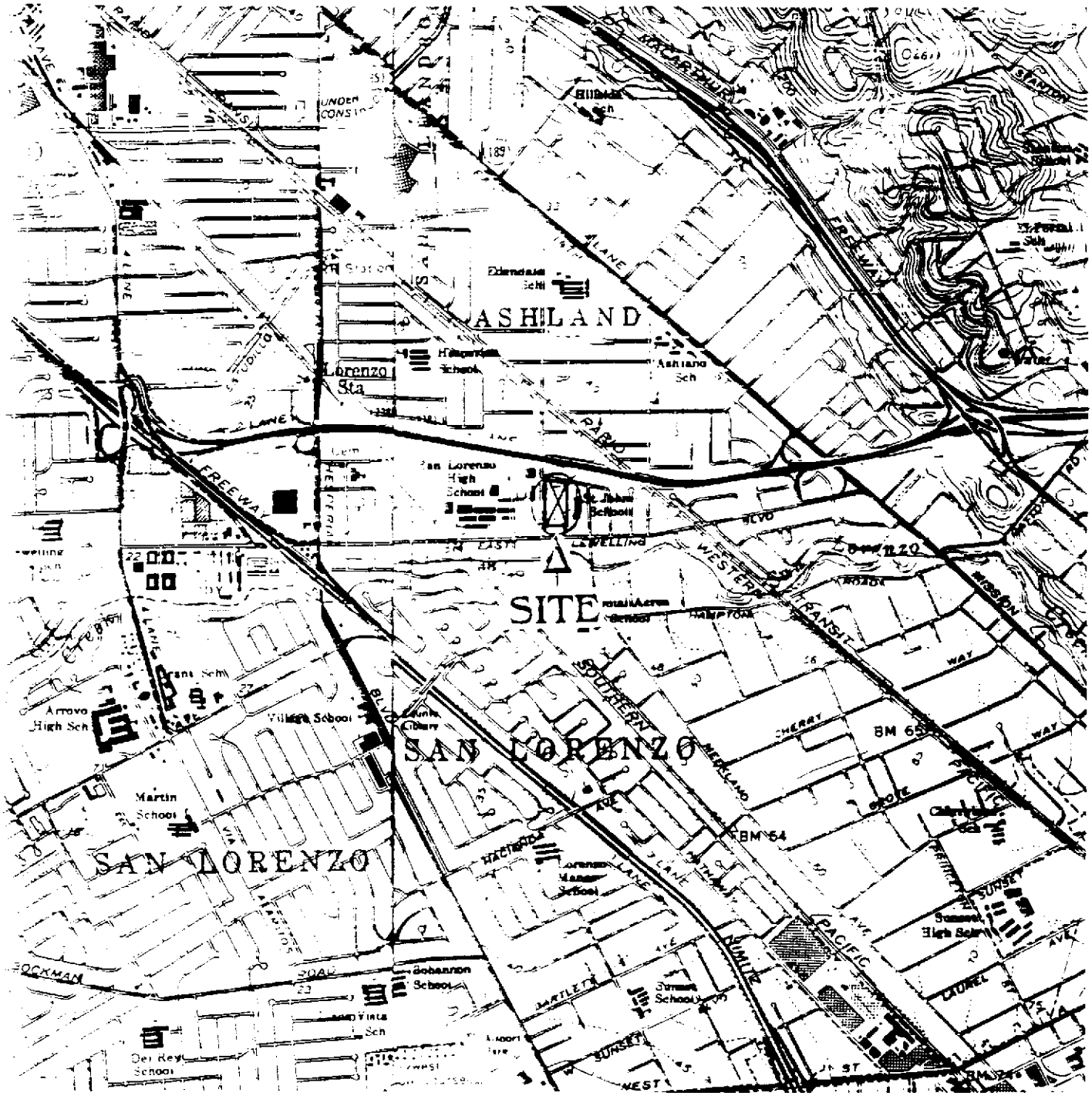
Notes: NS = Not sampled
Field = Field instruments used for measurement of parameter
mg/L = Milligrams per liter
* = Average value

Table IV, Summary of Groundwater Sample Fuel Oxygenates Analytical Results
BEI Job No: 94015, Kawahara Nursery
16550 Ashland Avenue, San Lorenzo, California

Sample ID	Date	EPA Method 8260				
		TBE (μg/L)	MTBE (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)
MW-3	8/16/00	<20	<0.50	<0.50	<0.50	<0.50

Notes: TBE = *tert*-Butyl Alcohol
MTBE = Methyl *tert*-butyl ether
DIPE = Isopropyl Ether
ETBE = Ethyl *tert*-Butyl Ether
TAME = Methyl *tert*-Amyl Ether
(μg/L) = Milligrams per liter

Figures



UNITED STATES GEOLOGICAL SURVEY 7.5' QUADS: SAN LEANDRO, CA AND HAYWARD, CA; BOTH ED. 1959, PHOTOREVISED 1980.

QUADRANGLE LOCATION

BLYMYER ENGINEERS INC.

0 2000 4000

SCALE IN FEET

N

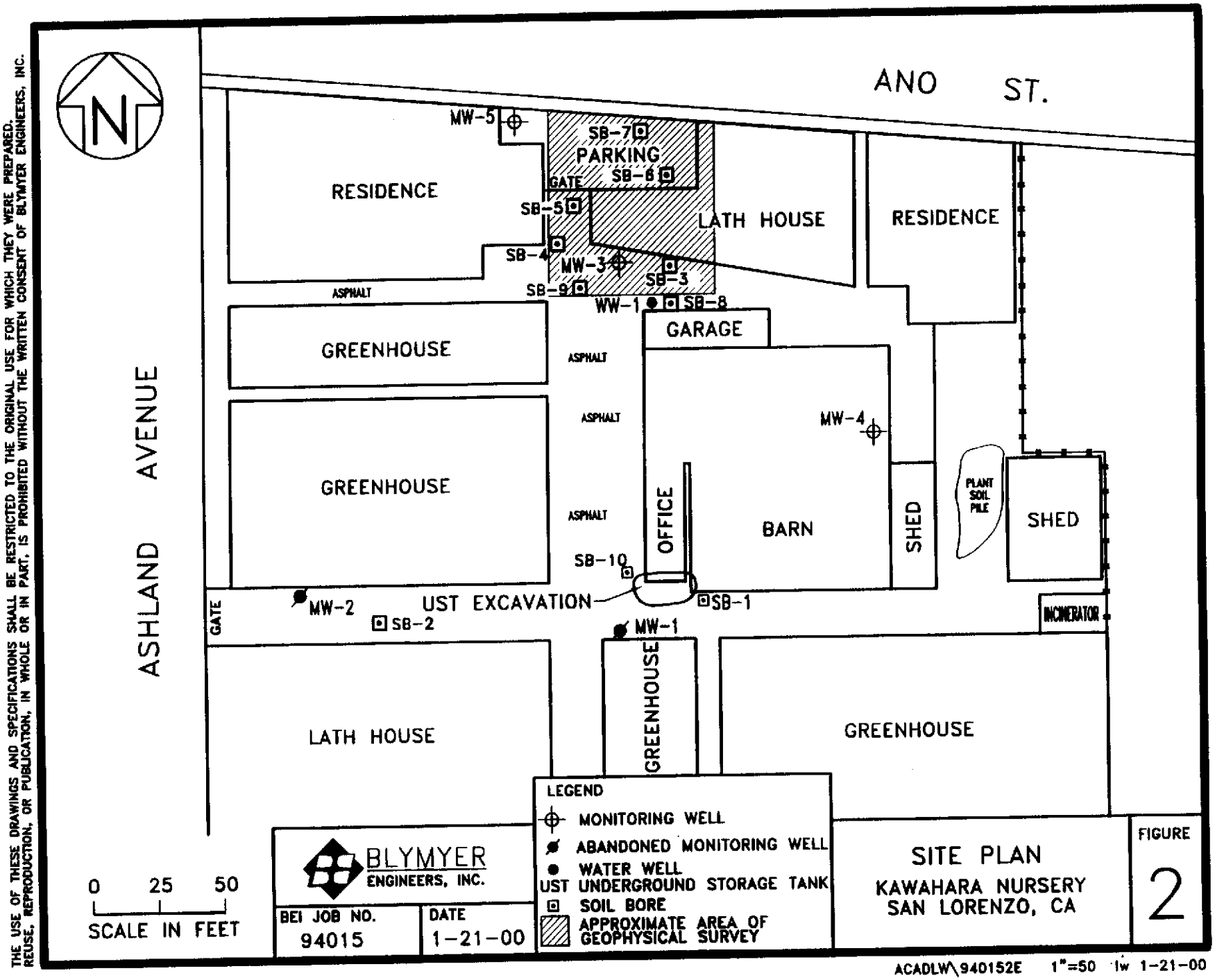
SITE LOCATION MAP

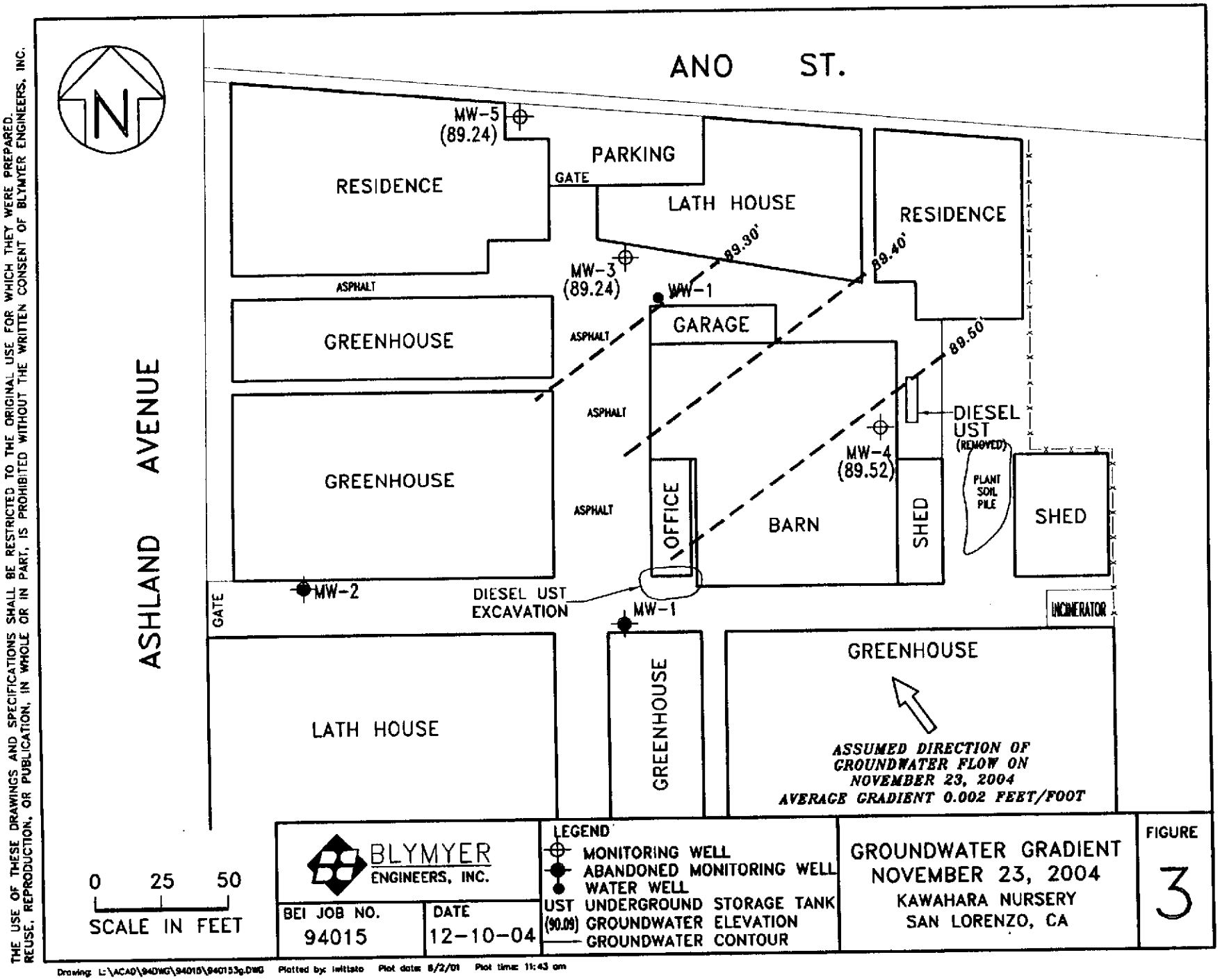
KAWAHARA NURSERY
16550 ASHLAND AVE.
SAN LORENZO, CA

FIGURE 1

BEI JOB NO. 94015

DATE 4-9-99





Drawing: L:\ACAD\94DWG\94015\940153g.DWG Plotted by: lwittste Plot date: 8/2/01 Plot time: 11:43 am

Appendix A

Standard Operating Procedures
Blaine Tech Services, Inc.

Blaine Tech Services, Inc.
Standard Operating Procedure

WATER LEVEL AND TOTAL WELL DEPTH MEASUREMENTS (GAUGING)

Routine Water Level Measurements

1. Establish that water or debris will not enter the well box upon removal of the cover.
2. Remove the cover using the appropriate tools.
3. Inspect the wellhead (see Wellhead Inspections).
4. Establish that water or debris will not enter the well upon removal of the well cap.
5. Unlock and remove the well cap lock (if applicable). If lock is not functional cut it off.
6. Loosen and remove the well cap. CAUTION: DO NOT PLACE YOUR FACE OR HEAD DIRECTLY OVER WELLHEAD WHEN REMOVING THE WELL CAP. WELL CAP MAY BE UNDER PRESSURE AND/OR MAY RELEASE ACCUMULATED AND POTENTIALLY HARMFULL VAPORS.
7. Verify and identify survey point as written on S.O.W.
   TOC: If survey point is listed as Top of Casing (TOC), look for the exact survey point in the form of a notch or mark on the top of the casing. If no mark is present, use the north side of the casing as the measuring point.
   TOB: If survey point is listed as Top of Box (TOB), the measuring point will be established manually. Place the inverted wellbox lid halfway across the wellbox opening and directly over the casing. The lower edge of the inverted cover directly over the casing will be the measuring point.
8. Put new Latex or Nitrile gloves on your hands.
9. Slowly lower the Water Level Meter probe into the well until it signals contact with water with a tone and/or flashing a light.
10. Gently raise the probe tip slightly above the water and hold it there. Wait momentarily to see if the meter emits a tone, signaling rising water in the casing. Gently lower the probe tip slightly below the water. Wait momentarily to see if the meter stops emitting a tone, signaling dropping water in the casing. Continue process until water level stabilizes indicating that the well has equilibrated.
11. While holding the probe at first contact with water and the tape against the measuring point, note depth. Repeat twice to verify accuracy. Write down measurement on Well Gauging Sheet under Depth to Water column.
12. Recover probe, replace and tighten well cap, replace lock (if applicable), replace well box cover and tighten hardware (if applicable)

Routine Total Well Depth Measurements

1. Lower the Water Level Meter probe into the well until it lightens in your hands, indicating that the probe is resting at the bottom of well.
2. Gently raise the tape until the weight of the probe increases, indicating that the probe has lifted off the well bottom.

3. While holding the probe at first contact with the well bottom and the tape against the well measuring point, note depth. Repeat twice to verify accuracy. Write down measurement on Well Gauging Sheet under Total Well Depth column.
4. Recover probe, replace and tighten well cap, replace lock (if applicable), replace well box cover and tighten hardware (if applicable).

Blaine Tech Services, Inc.
Standard Operating Procedure

WELL WATER EVACUATION (PURGING) WITH BTS 1.75" BLADDERLESS STAINLESS STEEL POSITIVE DISPLACEMENT PUMP

The BTS 1.75" Bladderless Stainless Steel Positive Displacement Purge Pump is modeled after the EPA approved USGS/Middleburg Positive Displacement Sampling Pump. It is suitable for purging wells with diameters greater than 2" at depths up to several hundred feet.

The pump is accuated with compressed air from an electric, oil-less air compressor mounted on the Sampling Vehicle. The air travels to the pump via a single hose. Water is pushed out of the pump and up a second hose to the surface. The rate of water removal is relatively slow and loss of volatiles is almost non-existent. There is only positive pressure on the water being purged. There is no impeller cavitation or suction acting on the water. The pump can be placed at any location in the well and can draw water from the very bottom of the well. The pump is virtually immune to the erosive effects of silt or lack of water that can destroy other types of pumps.

Purging with the BTS 1.75" Stainless Steel Positive Displacement Pump

1. Position pump hose reel over the top of the well.
2. Start the air compressor so that it can build pressure.
3. Connect the influent air hose and effluent water hose of the reel to the pump.
4. Gently unreel and lower the pump into the well to the desired depth, typically several feet off the well bottom. Use caution when contacting the well bottom.
5. Secure the hose reel.
6. Connect the effluent water line extension to the hose reel. Attach the extension to a graduated 5-gallon bucket or other receptacle.
7. Connect the control box air-line to the hose reel.
8. Turn the switch on the control box to the "on" position to commence purging.
9. Adjust water recharge duration and air pulse duration for maximum efficiency. Expect not more than 1.0 GPM when pumping from 0 – 100 feet below grade and not more than 0.5 GPM when pumping from depths greater than 100 feet below grade.
10. Upon removal of first casing volume, fill clean parameter cup with water.
11. Use the water in the cup to collect and record the required parameter measurements.
12. Continue purging until second casing volume is removed.
13. Collect parameter measurements.
14. Continue purging until third casing volume is removed.

15. Collect parameter measurements. If parameters are stable, stop purging. If parameters remain unstable, continue purging until stabilization occurs or the fifth casing volume is removed.
16. Upon completion of purging, disconnect the control box air-line and effluent water line extension from the hose reel. gently recover the pump and secure the reel. Sample the well as required.

Blaine Tech Services, Inc.
Standard Operating Procedure

SAMPLE COLLECTION FROM GROUNDWATER WELLS USING BAILERS

Sampling with a Bailer (Stainless Steel, Teflon or Disposable)

1. Put new Latex or Nitrile gloves on your hands.
2. Determine required bottle set.
3. Fill out sample labels completely and attach to bottles.
4. Arrange bottles in filling order and loosen caps (see Determine Collection Order below).
5. Attach bailer cord or string to bailer. Leave other end attached to spool.
6. Gently lower empty bailer into well until water is reached.
7. As bailer fills, cut cord from spool and tie end of cord to hand.
8. Gently raise full bailer out of well and clear of well head. Do not let the bailer or cord touch the ground. If a set of parameter measurements is required, go to step 9. If no additional measurements are required, go to step 11.
9. Fill a clean parameter cup, empty the remainder contained in the bailer into the sink, lower the bailer back into the well and secure the cord on the Sampling Vehicle. Use the water in the cup to collect and record parameter measurements.
10. Fill bailer again and carefully remove it from the well.
11. Slowly fill and cap sample bottles. Fill and cap volatile compounds first, then semi-volatile, then inorganic. Return to the well as needed for additional sample material.

    Fill 40-milliliter vials for volatile compounds as follows: Slowly pour water down the inside on the vial. Carefully pour the last drops creating a convex or positive meniscus on the surface. Gently screw the cap on eliminating any air space in the vial. Turn the vial over, tap several times and check for trapped bubbles. If bubbles are present, repeat process.

    Fill 1 liter amber bottles for semi-volatile compounds as follows: Slowly pour water into the bottle. Leave approximately 1 inch of headspace in the bottle. Cap bottle.

    Field filtering of inorganic samples using a stainless steel bailer is performed as follows: Attach filter connector to top of full stainless steel bailer. Attach 0.45 micron filter to connector. Flip bailer over and let water gravity feed through the filter and into the sample bottle. If high turbidity level of water clogs filter, repeat process with new filter until bottle is filled. Leave headspace in the bottle. Cap bottle.

    Field filtering of inorganic samples using a disposable bailer is performed as follows: Attach 0.45 micron filter to connector plug. Attach connector plug to bottom of full disposable bailer. Water will gravity feed through the filter and into the sample bottle. If high turbidity level of water clogs filter, repeat process with new filter until bottle is filled. Leave headspace in the bottle. Cap bottle.

12. Bag samples and place in ice chest.
13. Note sample collection details on well data sheet and Chain of Custody.

Appendix B

Well Monitoring Data Sheet **and** ***Well Gauging Data***
dated November 23, 2004
Blaine Tech Services, Inc.

WELL GAUGING DATA

Project # 041123-BA2 Date 11/23/04 Client Blymyer

Site Kawahara Nursery 16550 Ashland Ave, San Lorenzo

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
MW-3	2					10.28	18.90	TOC	
MW-4	2					10.94	19.57	↓	
MW-5	2					8.90	19.92	↓	

WELLHEAD INSPECTION CHECKLIST

Date 11/23/04 Client Blymyer

Address Kawahara Nursery 16550 Ashland Ave, San Lorenzo

Job Number 041123-BA2 Technician Brian Alcorn

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-3	X							
MW-4	X							
MW-5	X							

NOTES:

WELL MONITORING DATA SHEET

Project #: 041123-BA2	Client: Blymyer @ Kawahara Nursery
Sampler: Brian Alcorn	Start Date: 11/23/04
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 18.90	Depth to Water: 10.28
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

- Bailer
- (Disposable Bailer)
- Middleburg
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other ____

Sampling Method:

- Bailer
- (Disposable Bailer)
- Extraction Port
- Dedicated Tubing
- Other: ____

1.4 (Gals.) X 3 = 4.2 Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp. (°F or °C)	pH	Conductivity (mS or (µS))	Turbidity (NTU)	Gals. Removed	Observations
1147	65.5	7.1	1,023	128	1.5	clear
1150	66.5	7.1	1,011	192	3.0	"
1154	66.4	7.1	997	194	4.5	"

Did well dewater? Yes (No) Gallons actually evacuated: 4.5

Sampling Time: 1157 Sampling Date: 11/23/04

Sample I.D.: MW-3 Laboratory: C+T

Analyzed for: (TPH-G) (BTEX) (MTBE) (TPH-D) Other:

Equipment Blank I.D.: @ Time Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
ORP (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 041123-BA2	Client: Blymyer @ Kawahara Nursery
Sampler: Brian Alcon	Start Date: 11/23/04
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 19.57	Depth to Water: 10.94
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

- Bailer
- (Disposable Bailer)
- Middleburg
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other ____

Sampling Method:

- Bailer
- (Disposable Bailer)
- Extraction Port
- Dedicated Tubing
- Other: ____

1.4 (Gals.) X 3 = 4.2

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp. (°F or °C)	pH	Conductivity (mS or µS)	Turbidity (NTU)	Gals. Removed	Observations
1210	61.9	7.2	1,031	59	1.5	clear
1212	63.0	7.2	1,025	42	3.0	"
1214	63.2	7.2	1,027	40	4.5	"

Did well dewater? Yes (No) Gallons actually evacuated: 4.5

Sampling Time: 1217 Sampling Date: 11/23/04

Sample I.D.: MW-4 Laboratory: CTT

Analyzed for: (TPH-G BTEX MTBE TPH-D) Other:

Equipment Blank I.D.: @ Time Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
ORP (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 041123-BA2	Client: Blymyer @ Kawahara Nursery
Sampler: Brian Alcom	Start Date: 11/23/04
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 19.92	Depth to Water: 8.90
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

- Bailer
- (Disposable Bailer)
- Middleburg
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method: Bailer

- (Disposable Bailer)
- Extraction Port
- Dedicated Tubing
- Other: _____

1.75 (Gals.) X 3 = 5.25
Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp. (°F or °C)	pH	Conductivity (mS or (µS))	Turbidity (NTU)	Gals. Removed	Observations
1229	64.0	7.3	932	107	1.75	clear
1232	65.3	7.2	911	57	3.5	"
1235	65.9	7.2	905	62	5.25	"

Did well dewater? Yes (No) Gallons actually evacuated: 5.25

Sampling Time: 1238 Sampling Date: 11/23/04

Sample I.D.: MW-5 Laboratory: CTT

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Equipment Blank I.D.: @ Time Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
ORP (if req'd):	Pre-purge:	mV	Post-purge:	mV

Appendix C

Certified Laboratory Analytical Report
dated December 8, 2004
Curtis & Tompkins

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

A N A L Y T I C A L R E P O R T

Prepared for:

Blymyer Engineers, Inc.
1829 Clement Avenue
Alameda, CA 94501

Date: 08-DEC-04
Lab Job Number: 176276
Project ID: STANDARD
Location: Kawahara Nursery

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: _____
Project Manager

Reviewed by: _____
Operations Manager

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	176276
Client:	Blymyer Engineers, Inc.
Location:	Kawahara Nursery
Request Date:	11/24/04
Samples Received:	11/24/04

This hardcopy data package contains sample and QC results for three water samples, requested for the above referenced project on 11/24/04. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B and EPA 8021B):
No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):
No analytical problems were encountered.

17627B

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 041123-BA2

CLIENT: Blymyer Engineers, Inc.

SITE: Kawahara Nursery
16550 Ashland Ave
San Lorenzo, CA

C = COMPOSITE ALL CONTAINERS

CONDUCT ANALYSIS TO DETECT

LAB: Curtis & Tompkins DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
- [ ] EPA
- [ ] LIA
- [ ] OTHER
- [ ] RWQCB REGION

SPECIAL INSTRUCTIONS

Invoice and Report to : Blymyer Engineers, Inc.
Attn: Mark Detterman

	SAMPLE I.D.	DATE	TIME	MATRIX S=SOIL W=H2O	CONTAINERS TOTAL	TPH-G/BTEX/MTBE	TPH-D	ADDT'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
1	MW-3	11/23	1157	W	5	X	X				
2	MW-4	"	1217	"	"	X	X				
3	MW-5	"	1238	"	"	X	X				

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY
	11/23/04	1300	Brian Alcon

RESULTS NEEDED NO LATER THAN: As Contracted

	DATE	TIME		DATE	TIME
RELEASED BY			RECEIVED BY		
RELEASED BY	11/24/04	1117	RECEIVED BY	11/24/04	1117
RELEASED BY			RECEIVED BY		

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #

11.24.04 To 11.24.04

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	176276	Location:	Kawahara Nursery
Client:	Blymyer Engineers, Inc.	Prep:	EPA 5030B
Project#:	STANDARD		
Matrix:	Water	Sampled:	11/23/04
Units:	ug/L	Received:	11/24/04
Dil Fac:	1.000	Analyzed:	11/29/04
Batch#:	96926		

Field ID: MW-3 Lab ID: 176276-001
Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	340	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	2.7 C	0.50	EPA 8021B
Toluene	1.0 C	0.50	EPA 8021B
Ethylbenzene	7.7	0.50	EPA 8021B
m,p-Xylenes	32	0.50	EPA 8021B
o-Xylene	1.8	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	93	70-141	EPA 8015B
Bromofluorobenzene (FID)	95	80-143	EPA 8015B
Trifluorotoluene (PID)	110	59-133	EPA 8021B
Bromofluorobenzene (PID)	118	76-128	EPA 8021B

Field ID: MW-4 Lab ID: 176276-002
Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	88	70-141	EPA 8015B
Bromofluorobenzene (FID)	92	80-143	EPA 8015B
Trifluorotoluene (PID)	96	59-133	EPA 8021B
Bromofluorobenzene (PID)	103	76-128	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
ND= Not Detected
RL= Reporting Limit

Chromatogram

Sample ID: Blk
Date : 11/19/14 01:21 PM
Time of Injection: 11/19/14 01:51 PM
Low Point : 9.58 mV High Point : 201.16 mV
Plot Scale: 197.6 mV

Response [mV]

THF
C-6
C-7
TRIFLUO
C-8
BROMOF
C-10
C-12

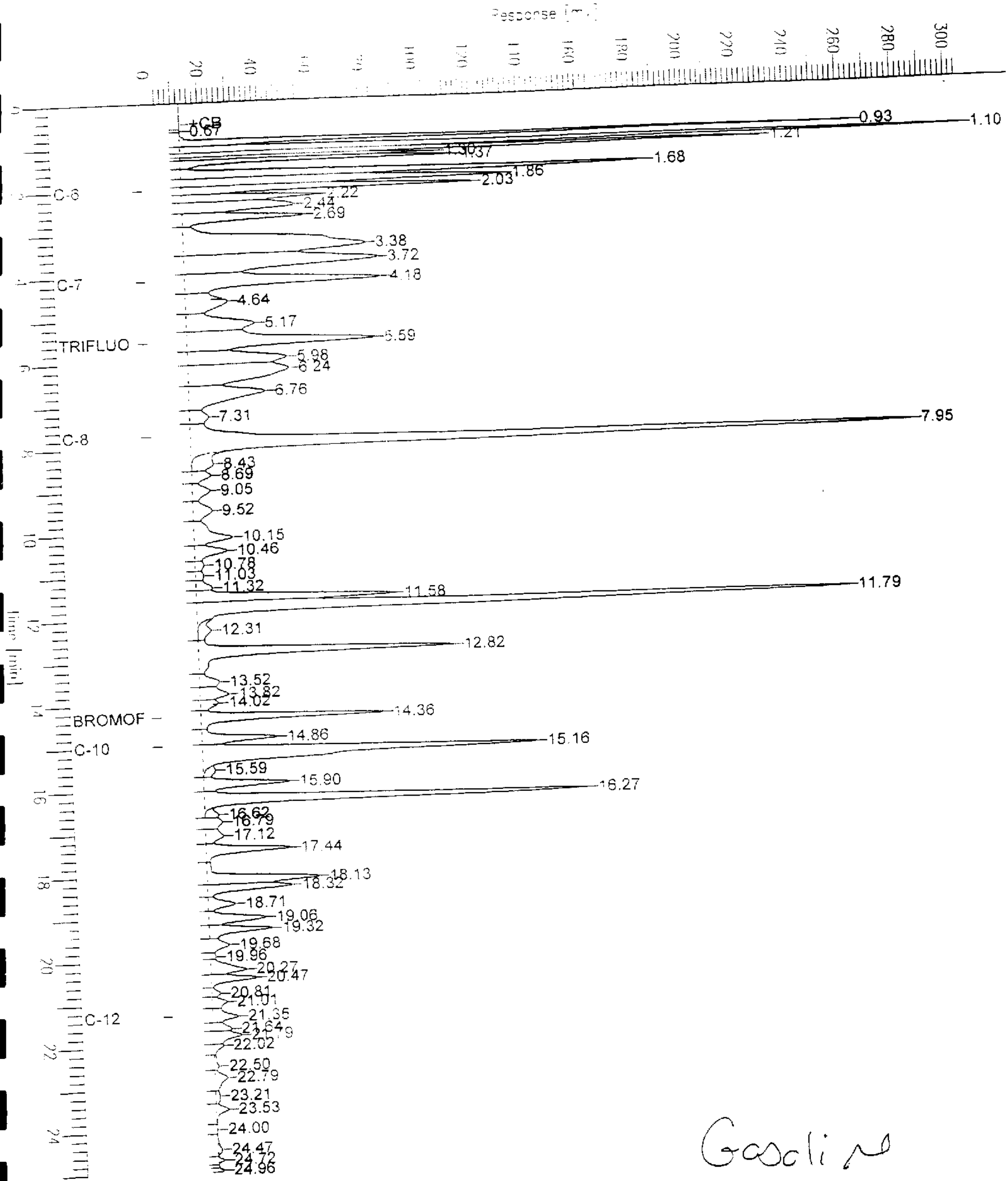
0.83, 0.94, 1.21, 1.45, 1.68, 1.85, 2.03, 2.21, 2.69, 3.39, 3.71, 4.20, 4.64, 5.33, 5.60, 5.97, 6.84, 7.33, 7.77, 7.96, 8.40, 9.10, 9.52, 10.03, 10.48, 11.06, 11.31, 11.59, 11.79, 12.27, 12.82, 13.15, 13.52, 13.84, 14.36, 14.86, 15.18, 15.30, 15.91, 16.27, 16.60, 16.77, 17.16, 17.45, 17.81, 18.14, 18.32, 18.72, 19.07, 19.33, 19.69, 20.28, 20.46, 20.81, 21.10, 21.36, 21.65, 21.80, 22.05, 22.30, 22.51, 22.78, 23.19, 23.52, 23.97, 24.51, 24.73, 24.96

Mu-3

Chromatogram

Sample Name : ccv-lcs,qc274048,96926,04ws[illegible]
FileName : D:\GC05\DATA\334G004.raw
Method : TVHBTXE
Start Time : 0.00 min   End Time : [illegible] min
Scale Factor: 1.0   Plot Offset: [illegible] mV

Sample #: [illegible]
Date : 11/29/04 [illegible] PM
Time of Injection: 11/29/04 11:53 AM
Low Point : -1.62 mV   High Point : 305.88 mV
Plot Scale: 307.5 mV



Gasoline

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	176276	Location:	Kawahara Nursery
Client:	Blymyer Engineers, Inc.	Prep:	EPA 5030B
Project#:	STANDARD		
Matrix:	Water	Sampled:	11/23/04
Units:	ug/L	Received:	11/24/04
Dil'n Fac:	1.000	Analyzed:	11/29/04
Batch#:	96926		

Field ID: MW-5 Lab ID: 176276-003
Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	3.9	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	70-141	EPA 8015B
Bromofluorobenzene (FID)	94	80-143	EPA 8015B
Trifluorotoluene (PID)	97	59-133	EPA 8021B
Bromofluorobenzene (PID)	106	76-128	EPA 8021B

Type: BLANK Lab ID: QC274046

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	96	70-141	EPA 8015B
Bromofluorobenzene (FID)	95	80-143	EPA 8015B
Trifluorotoluene (PID)	98	59-133	EPA 8021B
Bromofluorobenzene (PID)	108	76-128	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	176276	Location:	Kawanara Nursery
Client:	Blymyer Engineers, Inc.	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC274047	Batch#:	96926
Matrix:	Water	Analyzed:	11/29/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	20.35	102	67-124
Benzene	20.00	19.89	99	80-120
Toluene	20.00	19.80	99	80-120
Ethylbenzene	20.00	20.45	102	80-120
m,p-Xylenes	20.00	18.53	93	80-120
o-Xylene	20.00	20.37	102	80-120

Surrogate	%REC	Limits
Trifluorotoluene (PID)	100	59-133
Bromofluorobenzene (PID)	103	76-128

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	176276	Location:	Kawahara Nursery
Client:	Blymyer Engineers, Inc.	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC274048	Batch#:	96926
Matrix:	Water	Analyzed:	11/29/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,054	103	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	127	70-141
Bromofluorobenzene (FID)	109	80-143

4.0

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	176276	Location:	Kawahara Nursery
Client:	Blymyer Engineers, Inc.	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	96926
MSS Lab ID:	176277-003	Sampled:	11/24/04
Matrix:	Water	Received:	11/24/04
Units:	ug/L	Analyzed:	11/29/04
Dil'n Fac:	1.000		

Type: MS Lab ID: QC274134

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	19.98	2,000	1,619	80	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	115	70-141
Bromofluorobenzene (FID)	108	80-143

Type: MSD Lab ID: QC274135

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,652	82	80-120	2	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	117	70-141
Bromofluorobenzene (FID)	109	80-143

RPD= Relative Percent Difference

3.0

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	176276	Location:	Kawahara Nursery
Client:	Blymyer Engineers, Inc.	Prep:	EPA 3520C
Project:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	11/23/04
Units:	ug/L	Received:	11/24/04
Diln Fac:	1.000		

Field ID:	MW-3	Batch#:	97153
Type:	SAMPLE	Prepared:	12/05/04
Lab ID:	176276-001	Analyzed:	12/06/04

Analyte	Result	RL
Diesel C10-C24	190 L Y	50

Surrogate	%REC	Limits
Hexacosane	97	53-143

Field ID:	MW-4	Batch#:	97153
Type:	SAMPLE	Prepared:	12/05/04
Lab ID:	176276-002	Analyzed:	12/06/04

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	101	53-143

Field ID:	MW-5	Batch#:	97153
Type:	SAMPLE	Prepared:	12/05/04
Lab ID:	176276-003	Analyzed:	12/06/04

Analyte	Result	RL
Diesel C10-C24	7,900 Y Z	50

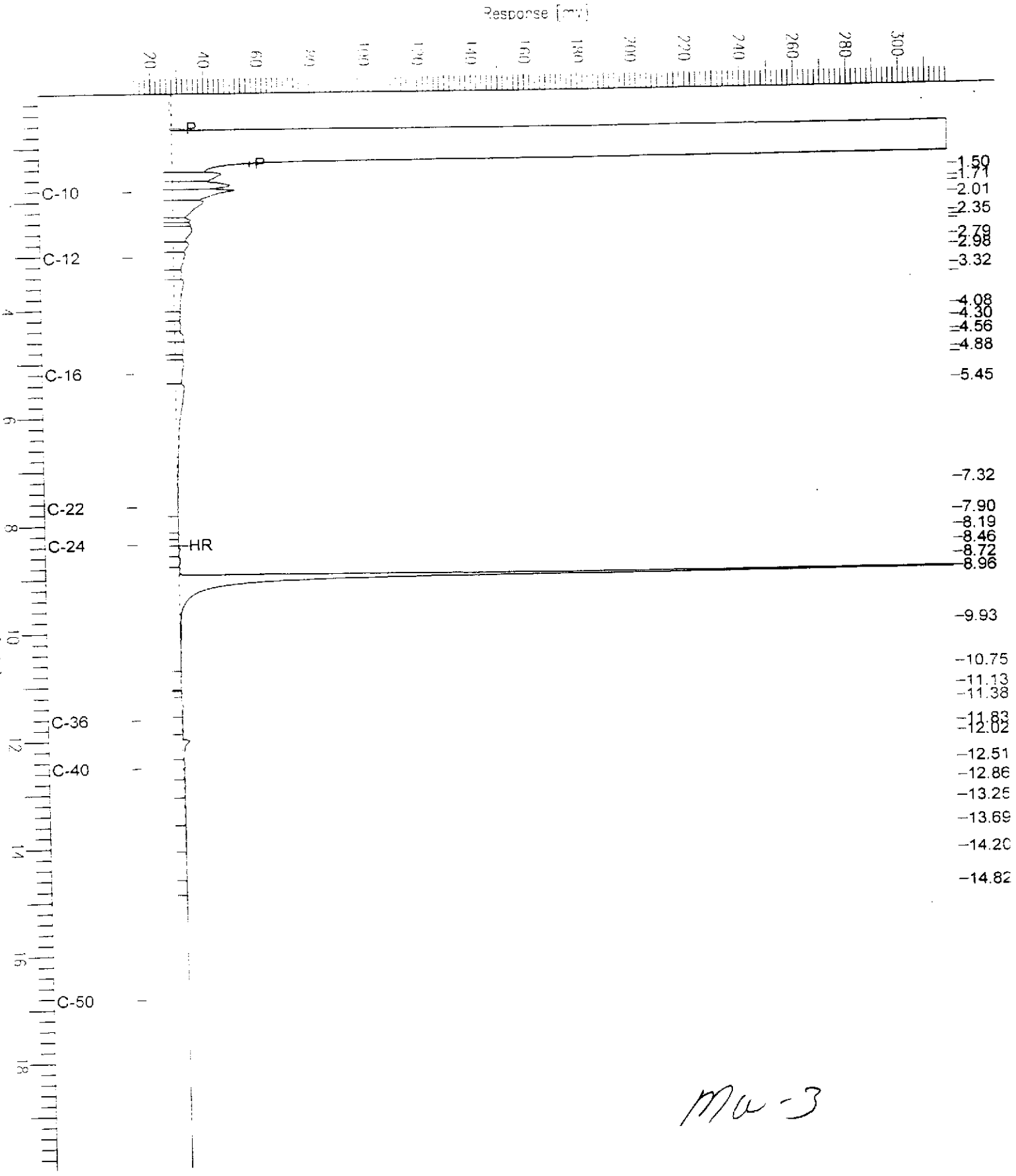
Surrogate	%REC	Limits
Hexacosane	104	53-143

L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
D= See narrative
ND= Not Detected
RL= Reporting Limit

Chromatogram

Sample Name : 176276-001,97153
FileName : B:\GC17\CHA\341A012.PAW
Method : ATEH336.MTH
Start Time : 0.01 min End Time : 16.99 min
Scale Factor: 1.0 Plot Offset: 11 mV

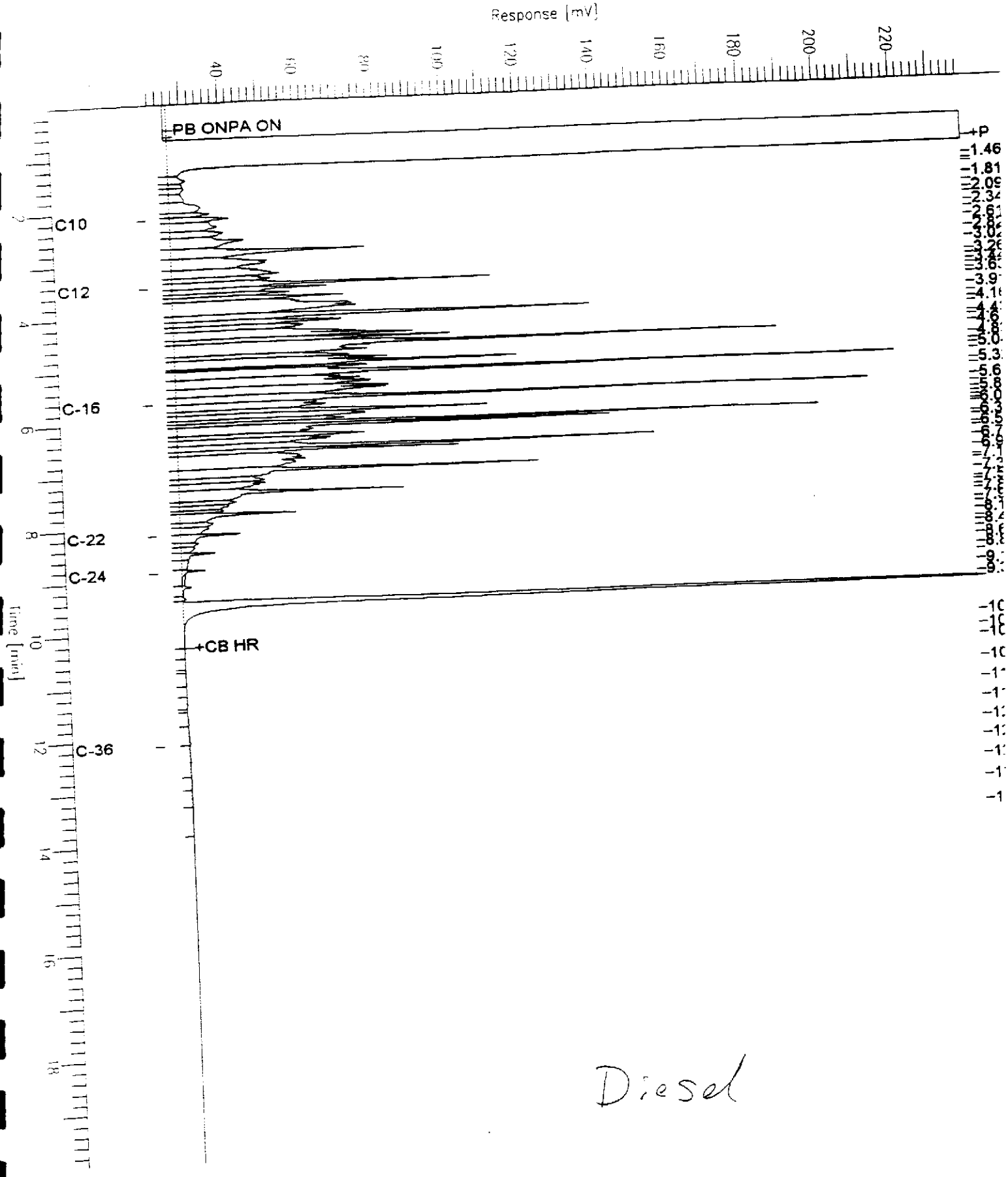
Sample #: 97153
Date : 12/7/04 10:08 AM
Time of Injection: 12/6/04 05:59 PM
Low Point : 10.37 mV High Point : 318.13 mV
Plot Scale: 305.8 mV



Mu-3

Sample Name : ccv,04ws2215,asl
FileName : G:\GC15\CHB\341B003.RAW
Method : BTEH335S.MTH
Start Time : 0.01 min End Time : 19.99 min
Size Factor: 1.0 Plot Offset: 21 mV

Sample #: 500mg/L
Date : 12/6/04 11:27 AM
Time of Injection: 12/6/04 10:53 AM
Low Point : 20.80 mV High Point : 238.74 mV
Plot Scale: 217.9 mV



Diesel

Chromatogram

Sample Name : 176276-003,97153
FileName : G:\GC17\CHA\341A014.RAW
Method : ATEH336.MTH
Start Time : 0.00 min End Time : 19.99 min
Scale Factor: 1.0 Plot Offset: -35 mV

Sample #: 97153 Page 1 of 1
Date : 12/7/04 10:10 AM
Time of Injection: 12/6/04 16:52 PM
Low Point : -35.38 mV High Point : 1024.00 mV
Plot Scale: 1049.4 mV

Response [mV]

0 100 200 300 400 500 600 700 800 900 1000

PA ON

C-10
C-12
C-16
C-22
C-24
HR
C-36
C-40
C-50

-1.54
-3.09
-3.40
-3.68
-4.08
-4.25
-4.59
-5.16
-6.35
-6.54
-6.84
-7.18
-7.52
-8.11
-8.43
-8.62
-8.80
-9.80
-10.07
-10.33
-10.53
-10.78
-11.06
-11.29
-11.82
-12.40
-12.85
-13.24
-13.68
-14.19
-14.81
-15.60

MW-5

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	176276	Location:	Kawanara Nursery
Client:	Blymyer Engineers, Inc.	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	11/23/04
Units:	ug/L	Received:	11/24/04
Diln Fac:	1.000		

Field ID:	MW-5-RE	Batch#:	97319
Type:	SAMPLE	Prepared:	12/09/04
Lab ID:	176276-004	Analyzed:	12/10/04

Analyte	Result	RL
Diesel C10-C24	ND b	58

Surrogate	%REC	Limits
Hexacosane	93 b	53-143

Type:	BLANK	Prepared:	12/05/04
Lab ID:	QC274958	Analyzed:	12/06/04
Batch#:	97153	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	76	53-143

Type:	BLANK	Prepared:	12/09/04
Lab ID:	QC275660	Analyzed:	12/10/04
Batch#:	97319		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	103	53-143

L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
J= Sample exhibits unknown single peak or peaks
b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	176276	Location:	Kawahara Nursery
Client:	Blymyer Engineers, Inc.	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	97153
Units:	ug/L	Prepared:	12/05/04
Dil Fac:	1.000	Analyzed:	12/07/04

Type: BS
Lab ID: QC274959

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,180	87	51-131

Surrogate	%REC	Limits
Hexacosane	107	53-143

Type: BSD
Lab ID: QC274960

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,893	76	51-131	14	42

Surrogate	%REC	Limits
Hexacosane	80	53-143

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	176276	Location:	Kawahara Nursery
Client:	Blymyer Engineers, Inc.	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC275661	Batch#:	97319
Matrix:	Water	Prepared:	12/09/04
Units:	ug/L	Analyzed:	12/10/04

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,645	106	51-131

Surrogate	%REC	Limits
Hexacosane	104	83-143

9.0

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	176276	Location:	Kawahara Nursery
Client:	Blymyer Engineers, Inc.	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	97319
MSS Lab ID:	176383-010	Sampled:	12/02/04
Matrix:	Water	Received:	12/02/04
Units:	ug/L	Prepared:	12/09/04
Diln Fac:	1.000	Analyzed:	12/10/04

Type: MS Lab ID: QC275662

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	<33.00	2,500	2,556	102	38-128

Surrogate	%REC	Limits
Hexacosane	99	53-143

Type: MSD Lab ID: QC275663

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,782	111	38-128	8	45

Surrogate	%REC	Limits
Hexacosane	112	53-143

RPD= Relative Percent Difference

10.3