

1829 Clement Avenue

	Alameda, Californ	nia 94501-13	396		SUBJECT:	Dolan Property	
(51	0) 521-3773 FA	AX: (510) 86	5-2594	:		Scarlett Ct.	
						Dublin, CA	
Alame	da County Health	Care Services	Agency				No. RO0000210
	nmental Protection						
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Alame	da, CA 94502-657	7				% »	
We are sending you ☐ Invoice ☐ Copy of letter			□ Report □ Prints □ Plans	ts   Change Order		nmental Healt    Specificati	
Copies	Date	Number			Descript	ion	
1	7/28/05		Blymyer l	Engineers; Final; Sec	ond <i>Quarter 2</i> 0	005 Groundwater M	Sonitoring Event
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REMARKS	S: The attached 1	report has bee	en distribute	d as noted below. D	iscontinuation of	of the Remediation I	by Natural
Attenuation	ı (RNA) analytical	parameters h	as been reco	ommended based on	consistency of 1	the data, and that the	e existing
degradation	process is appare	ntly oxygen li	imited. The	next quarterly event	is scheduled to	occur in September	r 2005.
If you have	questions, please	contact me.					

COPY TO:

File

Mr. Michael Fitzpatrick, Trustee Mr. Peter MacDonald, Esquire

SIGNED: Mark Detterman

LETTER OF TRANSMITTAL

Ms. Donna Drogos

DATE August 4, 2005

ATTENTION:

BEI Job No. 202016

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

### Estate of Michael Dolan

Mr. Michael Fitzpatrick, Trustee P.O. Box 31654 Walnut Creek, CA 94598

**Alameda County** 

AUG 0 5 2005

**Environmental Health** 

Mr. Robert Schultz

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

Re:

Perjury Statement

Dolan Property, 6393 Scarlett Court, Dublin, California; RO-210

Dear Mr. Schultz,

"I declare under penalty of perjury, that the information and / or recommendations contained in the attached proposal or report is true and correct to the best of my knowledge."

c.

Mr. Peter MacDonald, Esq.



July 27, 2005 BEI Job No. 202016

### **Alameda County**

AUG 0 5 2005

Mr. Michael Fitzpatrick, Trustee Estate of Michael Dolan P.O. Box 31654 Walnut Creek, CA 94598

**Environmental Health** 

Subject:

Second Quarter 2005 Groundwater Monitoring Event

Dolan Property 6393 Scarlett Court Dublin, California

ACHCSA Fuel Leak Case No. RO0000210

Dear Mr. Fitzpatrick:

This letter documents the Second Quarter 2005 groundwater monitoring event at the subject site (Figure 1). This is the sixth groundwater monitoring event conducted by Blymyer Engineers, Inc. at the Dolan Property in Dublin, California.

### 1.0 Background

A 600-gallon underground storage tank (UST) was removed in February 1990 from the subject site (Figure 2). Although the UST had reportedly stored diesel more recently, soil and groundwater samples collected for laboratory analysis indicated that the contaminant of concern at the site was gasoline. Files maintained by the Alameda County Health Care Service Agency (ACHCSA) do not contain waste manifests for the disposal of soil, although a Uniform Hazardous Waste Manifest is present documenting the disposal of a 600-gallon UST. This suggests that contaminated soil may not have been removed from the site. In October 1990, five soil bores were installed at the site, and soil and grab groundwater samples were collected. Additional delineation work was conducted in November 1991, when groundwater monitoring wells MW-1 through MW-4 were installed to a depth of 20 feet below grade surface (bgs). Soil and groundwater samples were collected. In November 1992, 14 additional soil bores were installed, and soil and grab groundwater samples were collected from selected bore locations. Although there were several data gaps in the perimeter zone of soil and groundwater delineation, the soil and groundwater plumes were largely defined as a result of this investigation. The groundwater plume did not appear to extend offsite; however, a thin free-phase layer was present immediately adjacent to the former UST basin, and at a location approximately 40 feet to the east. Additional wells were proposed to fill the existing data gaps and to monitor the lateral extent of impacted groundwater and free-phase. As a consequence, in March 1995, wells MW-5 and MW-6 were installed to a depth of 10 feet bgs. Intermittent groundwater sample collection or groundwater monitoring has occurred at the facility since 1991. In an August 1998 letter, the ACHCSA suggested that a health risk analysis or the installation of an oxygen

Mr. Michael Fitzpatrick July 27, 2005 Page 2

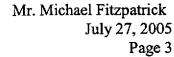
releasing compound (ORC) might be appropriate for the site. Also in the August 1998 letter, the ACHCSA stated that groundwater sampling of wells MW-1, MW-3, MW-5, and MW-6 could be discontinued, stated that the sampling interval could be decreased to a semiannual basis, and requested resumption of groundwater monitoring.

In May 2002, Blymyer Engineers was retained by Mr. Michael Fitzpatrick, on behalf of Mr. Michael Dolan, to conduct semiannual groundwater sampling of wells MW-2 and MW-4, and to conduct a file review to help determine the next appropriate step at the site.

In May 2002, Blymyer Engineers located and rehabilitated the wells at the site. Well MW-5 required the most extensive rehabilitation work, and will require resurveying due to a change in well casing elevation. In June 2002, wells MW-2 and MW-4 were sampled, while depth to groundwater was measured all of the wells. Except for a slight increase in benzene in groundwater from well MW-4, the concentration of all analytes in the two wells decreased from the August 1997 sampling event. Based upon a review of the results, the ACHCSA recommended that well MW-5 be incorporated into the sampling program and that quarterly groundwater monitoring resume in order that contaminant concentrations and contaminant trends could be quickly generated for the recommended health risk assessment.

Two additional quarters were completed prior to the death of Mr. Dolan. Groundwater monitoring was on hold after January 2003 due to the Estate becoming established. During the groundwater monitoring event in December 2002, analysis for the fuel oxygenates was conducted by EPA Method 8260B. All fuel oxygenates were found to be non-detectable at good limits of detection. Consequently, all sporadic occurrences of methyl tert-butyl ether (MTBE) previously detected at the site have been attributed to 3-methyl-pentane, another gasoline related compound. This suggests that the release predates the use of MTBE and other fuel oxygenates as gasoline additives. All previously available data from the site has been tabulated on Tables I through III.

On June 13, 2003, a workplan was submitted to the ACHCSA in order to allow further subsurface delineation of impacted soil at the site. In a telephone conversation on June 16, 2003, Mr. Scott Seery mentioned that it was unlikely that he would be able to respond in a timely manner due to the work load at the ACHCSA, and noted that if a response was not issued 60 days after receipt, regulations stated that the workplan should be considered approved. Consequently, field work commenced on September 13, 2003. Nine Geoprobe soil bores were installed at the site to augment existing soil data. The data indicated that the lateral and vertical extent of impacted soil at the site had been adequately delineated to relatively low concentrations, and the limits further refined for the purposes of determining appropriate remedial actions (Geoprobe Subsurface Investigation, dated October 10, 2003).

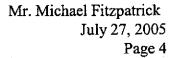


Based on these data, and a lack of further comments by the ACHCSA, a Remedial Action Plan (RAP), dated April 6, 2004, was issued. The plan detailed overexcavation and construction dewatering, as the principal method of remedial action. Introduction of ORC into the resulting excavation as an additional measure of insurance, should residual contamination be intentionally or unintentionally left in place, was also proposed. Use of ORC was proposed based on general knowledge that biodegradation of petroleum hydrocarbons is generally an oxygen limited process. A Request for Proposal (RFP) was generated in early May 2004 for contractor bidding purposes; however, it was not released due to a change in the timeline for sale closure. On September 2, 2004, Blymyer Engineers contacted Mr. Seery in order to determine the status of the RAP review. At that time, Mr. Seery notified Blymyer Engineers that Mr. Robert Schultz was the new case manager for the site. Mr. Schultz required time to review and become familiar with the file. On November 15, 2004, the ACHCSA issued a 5 page response letter (Fuel Leak Case No. RO0000210) requesting extensive further work and containing several deadlines. A December 31, 2004 deadline was established for a workplan for additional site characterization. The Workplan for Additional Investigation and Letter Report, dated December 23, 2004, was submitted to the ACHCSA on January 3, 2005.

In a letter dated January 24, 2005, the ACHCSA approved the workplan provided four conditions were met:

- A pilot hole was to be used to identify lithology prior to collection of a groundwater sample from a deeper water-bearing zone,
- Should additional groundwater wells be required, the ACHCSA would be consulted regarding well construction details,
- Should additional soil or groundwater samples be required, the ACHCSA would be kept informed of planned changes and consistent dynamic investigation procedures, and
- A 72-hour written advanced warning would be provided.

On February 18, 2005, Blymyer Engineers mobilized to the site to install two to three dual-tube direct-push soil bores in an attempt to collect the approved soil and groundwater samples. As a precursor to the mobilization, a conduit survey was conducted. However, due to poor soil recovery an additional mobilization to the site was required. After notifying, and obtaining approval from, the ACHCSA 72 hours in advance, a Cone Penetrometer Test (CPT) direct-push rig was mobilized to the site on March 28, 2005. These activities will be documented under separate cover. Prior to the March 28, 2005 mobilization, the ACHCSA approved a reduction in the quarterly analytical program, based on historical analytical trends. Specifically, hydrocarbon analysis of groundwater samples from wells MW-1, MW-3, and MW-6 was eliminated.





On April 13, 2005, CCS Environmental resurveyed all wells at the site. A copy of the report, generated under the license of a professional engineer, will be incorporated into a separate report. As of April 30, 2005, all tenant operations at the site ceased. This includes the batch plant used by Dublin Concrete.

On May 10, 2005, Blymyer Engineers submitted the Additional Site Investigation Data Transmittal to the ACHCSA providing a brief summary of the results of the CPT bore installations. Based on the detection of hydrocarbon compounds in groundwater between 30 and 40 feet bgs, the letter proposed the installation of groundwater well MW-7 across a deeper water-bearing zone in a downgradient position. Shortly thereafter, the ACHCSA reported that Mr. Schultz had left the employ of the agency and that the case had not been assigned to a new case worker yet. The ACHCSA was apprised that due to the sale of the parcel, work would proceed, pending agency review.

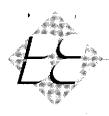
As a part of another related project, Blymyer Engineers oversaw the permitted destruction of two old water production wells between May 16 and May 24, 2005. According to Zone 7, both wells appear to have dated from the 1940s or 1950s. Well "3S/1E 6F 1", located on the subject parcel was constructed of 8-inch-diameter steel casing and was 95 feet in total depth. Well "3S/1E 6F 2" was located on the adjacent parcel, also owned by Dolan Properties, and was constructed of 13-inch-diameter riveted steel casing and was 38 feet in total depth. All Zone 7 permit conditions were observed; however, the upper 6 to 7.5 feet of each well casing was removed by excavation seven days after it had been filled to the surface with cement grout. An approximately 6 to 12 inch thick concrete mushroom cap was placed over and around the remaining casing at depths of 6 and 7.5 feet bgs, respectively (where the casing broke during removal). The excavation was backfilled with native soil, and track rolled.

On July 5 and July 8, 2005 Blymyer Engineers oversaw the installation of downgradient groundwater monitoring well MW-7 (Figure 2). The well was installed into the second water bearing zone beneath the site due to the detection of hydrocarbon contamination in groundwater in both CPT bores at depths of approximately 30 to 40 feet bgs. A conductor casing was installed to a depth of 30 feet in order to exclude upper water-bearing zones, and to prevent cross contamination of deeper water-bearing zones. A 2-inch diameter PVC casing was installed through the conductor casing and the well was screened between 30 and 40 feet bgs. The results of the work will be reported under separate cover.

#### 2.0 Well Survey

At the request of the ACHCSA, Blymyer Engineers contacted the Zone 7 Water Agency (Zone 7) in October 2002 and requested a 1/4-mile-radius well survey be conducted for the site. A copy of the well survey is attached as Appendix A. Five water supply wells were originally located within the 1/4-mile radius and a sixth was located east of the site, but outside the search radius. These wells

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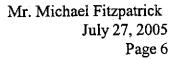
are indicated by solid (functioning) or open (destroyed) triangles on the figure in Appendix A. According to Zone 7 (Mr. Wyman Hong, personal communication, October 2002), these wells are screened in a lower water bearing zone than site wells. Additionally, approximately eight contamination investigation sites were located in the vicinity of the site (one was located just outside the search radius). Monitoring wells at these sites are indicated by filled (functioning wells) or open (destroyed wells) diamonds. One of these sites is the subject site. Additional wells, in a miscellaneous or unknown category, were located by the Zone 7 search. These wells are indicated by a filled circle on the figure in Appendix A. These wells can include cathodic protection anode installations according to Mr. Hong.

In November 2002, the ACHCSA requested that copies of the water supply well bore logs be forwarded to the ACHCSA to verify the screening interval reported by Zone 7. Due to restrictions placed on the dissemination of private well information by state laws, the bore logs can only be forwarded directly to ACHCSA. However, pertinent data for the wells, as reported verbally by Zone 7, has been assembled in Table A-1, attached in Appendix A. Table A-1 has also been updated to reflect the destruction of the two water supply wells mentioned above.

#### 3.0 Groundwater Sample Collection and Analytical Methods

Groundwater samples were collected from all monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6) on June 22, 2005. The groundwater samples were collected by Blaine Tech Services, Inc. (Blaine) in accordance with Blaine Standard Operating Procedures for groundwater gauging, purging, and sampling. A copy is included as Appendix B. As previously requested by the ACHCSA, a flow cell was utilized to obtain dissolved oxygen (DO) readings and purging and sampling was conducted using a low-flow positive air displacement pump in order to minimize entrainment of oxygen into the groundwater sample. Blaine utilized a YSI 556 Flow Cell to obtain the Remediation by Natural Attenuation (RNA) values. Depth to groundwater was measured in all wells at the site. Temperature, pH, conductivity, and turbidity were measured initially, and then after removal of each purge volume. The flow rate varied between 200 and 400 ml per minute. Besides DO, Oxidation Reduction Potential (ORP) was additionally monitored after each purge volume. Ferrous iron was monitored post-purge. The groundwater depth measurements and details of the monitoring well purging and sampling are presented on the Well Monitoring Data Sheets and Well Gauging Data sheet generated by Blaine and included as Appendix C. Depth-to-groundwater measurements are presented in Table I. All purge and decontamination water was temporarily stored in Department of Transportation-approved 55-gallon drums for future disposal by the owner.

The groundwater samples were analyzed by McCampbell Analytical, Inc., a California-certified laboratory, on a 5-day turnaround time. Groundwater samples from wells MW-2, MW-4, and MW-5 were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline and as diesel by Modified EPA Method 8015; and benzene, toluene, ethylbenzene, and total xylenes (BTEX) and MTBE by EPA Method 8021B. Groundwater samples from all wells were analyzed for Carbon Dioxide by





Standard Method 5310B; Nitrate and Sulfate by Standard Method E300.1; and Methane by Method RSK 174. Tables II to V summarize current and previous analytical results for groundwater samples. The laboratory analytical report for the current sampling event is included as Appendix D.

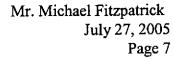
### 4.0 Petroleum Hydrocarbon Groundwater Sample Analytical Results

Hydrocarbon analysis of groundwater samples from perimeter wells MW-1, MW-3, and MW-6 was not conducted during the current sampling event due to the lack of detectable results during the December 2004 quarterly event. These data were consistent with all previous analytical data over an 11 to 13 year period for those wells. Except for the detection of MTBE at a concentration of 31  $\mu$ g/L in well MW-5, this perimeter well also yielded a nondetectable concentration of petroleum hydrocarbons, consistent with the majority of historic groundwater analytical results at this location.

Only wells MW-2 and MW-4 have generally yielded consistent concentrations of petroleum hydrocarbons previously. During the current event, well MW-4 contained petroleum hydrocarbons at relatively low concentrations (180  $\mu$ g/L TPH as gasoline, 1.7  $\mu$ g/L benzene and 7.5  $\mu$ g/L toluene). These concentrations are slightly higher than the March 2005 quarterly event. Plume core well MW-2 yielded concentrations of all analytes at significantly lower concentrations in comparison to the previous groundwater sampling event conducted in March 2005. This may be the result of the change in purge techniques, although the micropurge technique is generally accepted to yield higher analyte concentrations in comparison to standard purge techniques. A copy of the groundwater petroleum hydrocarbon analytical results can be found in Appendix D, and the results are summarized in Table II and Table III.

Analysis for MTBE was not conducted by EPA Method 8260B this quarter. Because EPA Method 8021B produces false MTBE positives due to the coelution of MTBE with 3-methyl-pentane, another gasoline compound, EPA Method 8260B is required to distinguish between the two chemicals. MTBE has previously been confirmed in well MW-5 with Method 8260B and that analysis yielded results very consistent with the results produced by EPA Method 8021B. It was detected in well MW-5 again this quarter at a concentration of 31  $\mu$ g/L, a slight increase since the previous quarterly event.

Last quarter, well MW-2 also yielded a detectable concentration of 1, 2-DCA ( $5.4 \mu g/L$ ). All other oxygenates and lead scavengers were not detected, sometimes at elevated limits of detection due to the dilutions required because of the elevated hydrocarbon compound concentrations in the sample. However, the lack of MTBE in groundwater collected from well MW-2 at that time, at good limits of detection, is consistent with previous analysis for fuel oxygenates conducted in December 2002. These results again suggest that there may be potentially two separate releases at the site, a non-MTBE-bearing release as detected in well MW-2 (screened between 5 and 20 feet bgs) and a MTBE-bearing release detected in well MW-5 (screened between 3 and 10 feet bgs). Of note is that EDB, 1, 2-DCA, ethanol, and methanol were not detected at good limits of detection in well MW-5.





This suggests that portions of the release predate the use of fuel oxygenates as gasoline fuel additives.

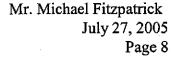
The laboratory has previously included a note that the hydrocarbon quantified as TPH as diesel in wells MW-2 and MW-5 was present in the requested quantitation range (diesel), but that it did not resemble the fuel pattern requested. A review of the chromatograms from wells during the September 2002 quarter indicated that the hydrocarbon detected in the diesel range in groundwater from well MW-2 is associated with the heavy end of gasoline (carbon range C4 to C12) which overlaps into the typical carbon range occupied by diesel (carbon range C10 to C22). However, the compound previously detected in well MW-5 suggests that it may be an aged diesel product as the smooth curve lay between carbon ranges C10 to C22.

#### 5.0 Intrinsic Bioremediation Groundwater Sample Analytical Results

Tables IV and V present the analytical results of the RNA indicator parameters. 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, Wilson, Kampbell, Miller and Hansen, 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. A copy of the results of groundwater intrinsic bioremediation analyses is included in Appendix D.

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, manganese (Mn<sup>4+</sup> to Mn<sup>2+</sup>), ferric iron (Fe<sup>3+</sup>) to ferrous iron (Fe<sup>2+</sup>), sulfate to hydrogen sulfide, and carbon dioxide to methane. With the exception of oxygen, use of all other electron acceptor pathways indicate anaerobic degradation. Investigation of each of these electron acceptor pathways, with the exception of the manganese pathway, was conducted at the site as part of the evaluation of RNA chemical parameters.

Microbial use of petroleum hydrocarbons as a food source is principally affected by the concentration of dissolved oxygen (DO) in the groundwater present at a site; it is the preferred electron acceptor for the biodegradation of hydrocarbons. Both pre-purge and post-purge values were recorded. DO was present in pre-purge groundwater in concentrations ranging from 0.23 milligrams per liter (mg/L) in well MW-4 to 1.49 mg/L in the groundwater sample from downgradient well MW-3. Post-purge DO results were scattered, but general trends appear to be





discernable. Post-purge DO concentrations decreased most in plume core well MW-2, and the least in downgradient wells MW-3 and MW-6. Wells MW-1, MW-4, and MW-5 underwent approximately 50% reductions in their respective DO concentrations. In general it appears that oxygen may be an RNA limiting reaction. This is consistent with data generated during the last two quarters.

ORP is another measure of the supply and use of oxygen at a site. The higher the reading in millivolts (mV), the more oxygenated the subsurface environment is, and the lower the readings, the more anaerobic or reducing the subsurface environment is. These data are generally consistent with data collected during the previous groundwater monitoring event in March 2005. Well MW-1 yielded significantly more negative ORP readings than previously; however, the ORP results for the well are also reflected in the DO readings this quarter as well, providing good cross correlation of the two data sets. Plume core well MW-2 yielded the most negative post-purge ORP value. Downgradient well MW-3 yielded the highest (most positive) pre- and post-purge ORP readings. Most other pre-purge readings yielded negative ORP values. Of interest wells MW-4 and MW-6, historically generally downgradient of the release location, contained slightly negative ORP readings, suggesting that background ORP values may be undergoing re-establishment.

One of the by-products of microbial hydrocarbon degradation is the conversion of oxygen to carbon dioxide, and is presumed to be indicative of low microbial activity up- and down-gradient of the release. Reviewing the generated data, plume core well MW-2, and well MW-5 contained the highest concentrations of carbon dioxide, while downgradient well MW-3 contained the lowest. Wells MW-4 and MW-6, closer to the plume core than well MW-3 contained similar, moderate concentrations of carbon dioxide, perhaps reflective of reestablishment of background carbon dioxide concentrations. Upgradient well MW-1 again contained intermediate carbon dioxide concentrations, similar to wells MW-4 and MW-6. In general, the concentration of carbon dioxide increases in close proximity to the release location, and thus is presumed to represent microbial activity in groundwater in the vicinity of the release. Well MW-2, located in the plume core, again contains the second highest concentration of carbon dioxide at the site. The higher concentration of carbon dioxide in groundwater obtained from well MW-5 again appears to be a bit unusual; however, in conjunction with the lower ORP value obtained from groundwater from well MW-5, microbial activity in well MW-5 is again suggested.

McCampbell Analytical reported an error in the reporting of the March 2005 carbon dioxide quarterly data on July 6, 2005, and provided a revised laboratory sheet on July 7, 2005. Consequently carbon dioxide data for that quarter has been revised in Table V. No significant observational changes were noted. A copy of the revised laboratory report is included in Appendix D.

Should oxygen be in insufficient supply in groundwater, the next preferred electron acceptor is nitrate, which creates denitrifying conditions. In denitrifying conditions, nitrate concentrations

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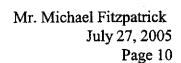


decrease in the contaminant plume over background nitrate concentrations. Groundwater nitrate concentrations are all relatively uniform and a decrease in nitrate concentrations is not readily apparent. The highest concentration is in downgradient well MW-3. This may suggest that sufficient oxygen may be present in groundwater without forcing the microbes to resort using nitrate as an electron acceptor. This can also indicate an area of naturally low nitrate concentrations, and is consistent with previous quarterly data.

Following the continuing trend of electron acceptors at the site, ferrous iron concentrations were evaluated at the site. Ferrous iron concentrations are expected to rise as subsurface microbes convert ferric iron to ferrous iron. Ferric iron concentrations were not quantified, however ferrous iron concentrations were highest in plume interior well MW-2 (1.0 mg/L), and in well MW-4 (1.2 mg/L), which historically is a downgradient well. Ferrous iron concentrations were very low (0.1 to 0.3 mg/L) in all other wells. This indicates that microbes are utilizing iron to degrade contaminants in this area of the site. This suggests that groundwater beneath the site is naturally low in nitrate, as the microbes also appear to be using ferric iron as an electron acceptor. Wells furthest upgradient and downgradient (MW-1 and MW-3, respectively) contained very low concentrations of ferrous iron. Shallower wells (MW-5 and MW-6) also contained very low concentrations of ferrous iron. This appears to indicate that any microbial degradation of contaminants in wells MW-5 and MW-6 ceases prior to the conversion of ferric iron to ferrous iron.

Continuing the trend of electron acceptors at the site, sulfate concentrations were also evaluated as part of the evaluation of RNA chemical parameters. If utilized by the microbes, sulfate concentrations, like nitrate concentrations, decrease in the contaminant plume over background sulfate concentrations. This is the trend seen at the site. The highest concentrations of sulfate are again found in wells MW-1 and MW-5, as well as downgradient MW-3. These are taken to represent background, or natural sulfate concentrations in the site vicinity. As would be expected in this scenario, the lowest concentration of sulfate is found in well MW-2, in the plume core. This indicates that highly sulfate-reducing conditions are present at the site in the plume core. It is interesting to note that moderate-level sulfate concentrations are again present in wells MW-4 and MW-6. Since these wells have previously predominantly been located in the downgradient direction, these concentrations are taken to indicate that a modest recovery to background sulfate concentrations is underway at these well locations. Conversion of the sulfate to hydrogen sulfide can influence the pH of the groundwater (lower pH values with higher hydrogen sulfide concentrations). As in previous quarters, this was not clearly observed at the site.

Further along the trend of electron acceptors, the conversion of carbon dioxide to methane was investigated at the site. The presence of methane in groundwater can be attributed to fermentation of natural organic matter as well as petroleum hydrocarbons. However, if utilized by the microbes, methane would increase relative to carbon dioxide. This is the trend observed at the site. Up- and downgradient wells (MW-1 and MW-3, respectively) again contained the lowest concentrations of methane, and is presumed to represent the degradation of natural organic matter, while plume core





well MW-2 contained a significant concentration of methane. Groundwater from wells MW-4, MW-5, and MW-6 yielded relatively moderate concentrations of methane, and may indicate the beginning of the re-establishment of background methane concentrations. An analysis of groundwater from upgradient well MW-1, with high sulfate concentrations, very low methane concentrations, and "background" carbon dioxide concentrations, appears to indicate, as expected, that groundwater at well MW-1 is not impacted, that microbial activity is minimal, and microbial activity is at background levels.

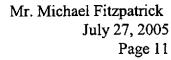
#### 6.0 Groundwater Flow Data

Recently surveyed top-of-casing (TOC) elevations were used to construct a groundwater gradient map (Figure 2). Wells MW-5 and MW-6 were not used to construct the map as the wells are screened at a shallower level than wells MW-1 through MW-4. Based on a review of the case file at the ACHCSA, groundwater elevations in wells MW-5 and MW-6 appear to have been historically consistently different than wells MW-1 through MW-4 at the site. However, as opposed to the previous quarterly event, there does not appear to be a difference in the groundwater level between the shallower and deeper well sets during this quarterly event. Groundwater depths during this monitoring event ranged between 2.58 to 4.72 feet below the top of the casings. On average, depth to groundwater increased by approximately 1.54 feet across the site since the March 2005 monitoring and sampling event. The direction of groundwater flow appears to be trending southeast to east. Historically, groundwater has generally flowed to the south to southwest at the site (see for example the Rose Diagram of historic groundwater flow directions included in the Additional Site Investigation Data Transmittal); however, in November 1993 groundwater was documented to have flowed to the east. The average groundwater gradient was calculated to range between at 0.019 to 0.037 feet/foot for this monitoring event.

#### 7.0 Conclusions and Recommendations

The following conclusions were generated from the available data discussed above:

- Hydrocarbon analysis of groundwater samples from perimeter wells MW-1, MW-3, and MW-6 was not conducted during the current sampling event due to the lack of detectable results during the December 2004 quarterly event. This is consistent with over 11 to 13 years of analytical results.
- Except for the detection of MTBE at a concentration of 31  $\mu$ g/L in well MW-5, this well again yielded nondetectable concentrations of petroleum hydrocarbons, consistent with the majority of historic groundwater analytical results from this perimeter well.





- Plume core well MW-2 yielded concentrations of all analytes at significantly lower concentrations in comparison to the previous groundwater sampling event conducted in March 2005.
- Fuel oxygenates 1, 2-DCA (well MW-2), and MTBE (well MW-5) were not confirmed by EPA Method 8260B this quarter; however, they are presumed to be present in these wells.
- RNA chemical parameters were investigated to help determine the level of biological degradation of the petroleum hydrocarbons at the site. DO, ORP, carbon dioxide, nitrate, ferrous iron, sulfate, and methane were analyzed. Microbial use of petroleum hydrocarbons as a food source appears to be principally affected by the concentration of DO in the groundwater; it is the preferred electron acceptor for the biodegradation of hydrocarbons. Because each of the other electron acceptors, in the listed order, is preferred less by microbes to degrade hydrocarbons, and because each parameter was apparently fully utilized by microbes beneath the site, it appears that biological degradation of hydrocarbons is occurring in groundwater beneath the investigation area, and that the process is oxygen-limited. This was also the conclusion generated from data collected during the December 2004 and the March 2005 events.
- Groundwater beneath the site appears to be naturally low in nitrate.
- Groundwater flow appears to be towards the south-southeast and the average groundwater gradient was calculated at 0.004 feet/foot for this monitoring event.

The following recommendations were generated from the available data discussed above:

- The next quarterly groundwater sampling event should occur in September 2005.
- The site should be incorporated into the state GeoTracker program now that site wells have been resurveyed.
- Collection of RNA indicator data can be discontinued due to the documentation of
  consistent results over three quarters of data collection. The collection of additional data
  will not significantly increase the understanding of biodegradation beneath the site.
  Collection of RNA indicator data can be resumed in the future should a need be
  documented.



A copy of this letter report should be forwarded to:

Ms. Donna Drogos Alameda County Health Care Services Agency Environmental Protection Division 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

#### 8.0 Limitations

Services performed by Blymyer Engineers have been provided in accordance with generally accepted professional practices for the nature and conditions of the 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 the client.

Please call Mark Detterman at (510) 521-3773 with any questions or comments.

Sincerely,

Blymyer Engineers, Inc.

Mark Detterman, & E

Senior Geologist

Michael S. Lewis

Vice President, Technical Services



Mr. Michael Fitzpatrick July 27, 2005 Page 13

#### Enclosures:

Table I: Summary of Groundwater Elevation Measurements

Table II: Summary of Groundwater Sample Hydrocarbon Analytical Results
Table III: Summary of Groundwater Sample Fuel Additive Analytical Results
Table IV: Summary of Groundwater Intrinsic Bioremediation Field Results

Table V: Summary of Groundwater Intrinsic Bioremediation Analytical Results

Figure 1: Site Location Map

Figure 2: Site Plan and Groundwater Gradient, June 22, 2005

Appendix A: Zone 7 Water Agency Well Search and Table A-1

Appendix B: Standard Operating Procedures, Blaine Tech Services, Inc.

Appendix C: Purge Drum Inventory Log, Wellhead Inspection Checklist, Well Gauging Data, and

Well Monitoring Data Sheets, Blaine Tech Services, Inc., Dated June 22, 2005

Appendix D: Analytical Laboratory Report, McCampbell Analytical, Inc., Dated June 30, 2005

### Table I, Summary of Groundwater Elevation Measurements BEI Job No. 202016, Dolan Rentals 6393 Scarlett Court, Dublin, California

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Water Surface Elevation (feet)
MW-1	11/27/91	326.61	4.82	321.79
	9/30/92		5.34	321.27
	4/7/94		3.38	323.23
	8/12/94		4.23	322.38
	11/29/94		3.44	323.17
	3/21/95		1.00	325.61
	5/22/95		2.20	324.41
	8/24/95		3.45	323.16
	2/12/96		1.95	324.66
	2/5/97		Data	Missing
	8/6/97		3.60	323.01
	6/6/02*		2.89	323.72
	9/23/02		3.48	323.13
	12/13/02		3.18	323.43
	12/14/04		2.76	323.85
	3/23/05		1.14	325.47
	6/22/05	329.41 1	2.58	326.83

## Table I, Summary of Groundwater Elevation Measurements BEI Job No. 202016, Dolan Rentals 6393 Scarlett Court, Dublin, California

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Water Surface Elevation (feet)
MW-2	11/27/91	326.67	4.92	321.75
	9/30/92		5.42	321.25
1	4/7/94		3.48	323.19
	8/12/94		4.18	322.49
	11/29/94		3.76	322.91
	3/21/95		1.25	325.42
	5/22/95		2.20	324.47
	8/24/95		3.57	323.10
	2/12/96		2.60	324.07
	2/5/97		1.72	324.95
	8/6/97		3.72	322.95
	6/6/02*		3.46	323.21
	9/23/02		4.14	322.53
	12/13/02		3.45	323.22
	12/14/04		2.96	323.71
	3/23/05		1.83	324.84
	6/22/05	329.46 <sup>1</sup>	3.82	325.64

### Table I, Summary of Groundwater Elevation Measurements BEI Job No. 202016, Dolan Rentals 6393 Scarlett Court, Dublin, California

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Water Surface Elevation (feet)
MW-3	11/27/91	326.58	4.96	321.62
:	9/30/92		5.46	321.12
	4/7/94		3.66	322.92
	8/12/94		4.37	322.21
	11/29/94		3.60	322.98
	3/21/95		1.62	324.96
	5/22/95		2.73	323.85
	8/24/95		3.76	322.82
	2/12/96		2.45	324.13
	2/5/97		1.99	324.59
	8/6/97		3.83	322.75
	6/6/02*		3.66	322.92
	9/23/02		4.66	321.92
	12/13/02		3.66	322.92
	12/14/04		3.52	323.06
	3/23/05		1.83	324.75
	6/22/05	329.37 1	3.99	325.38

### Table I, Summary of Groundwater Elevation Measurements BEL Job No. 202016, Dolan Rentals 6393 Scarlett Gourt, Dublin, California

\$40.40	a # (259 Ocal)	endeonal dinami	Control of the Contro	
Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Water Surface Elevation (feet)
MW-4	11/27/91	326.92	5.26	321.66
	9/30/92		5.78	321.14
	4/7/94		4.02	322.90
	8/12/94		4.81	322.11
	11/29/94		4.39	322.53
	3/21/95		1.80	325.12
	5/22/95	-	3.07	323.85
	8/24/95		4.09	322.83
	2/12/96		2.80	324.12
	2/5/97		2.32	324.60
	8/6/97		4.14	322.78
	6/6/02*		3.76	323.16
	9/23/02		4.14	322.78
,	12/13/02		3.90	323.02
	12/14/04		3.68	323.24
	3/23/05	·	1.93	324.99
	6/22/05	329.70 <sup>1</sup>	3.65	326.05

## Table I, Summary of Groundwater Elevation Measurements BEIJob No. 202016, Dolan Rentals 6393 Scarlett Court, Dublin, California

Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Water Surface Elevation (feet)
MW-5	3/21/95	326.50	2.10	324.40
	5/22/95		2.93	323.57
`	8/24/95		1.57	324.93
	2/12/96		2.78	323.72
	2/5/97		2.24	324.26
	8/6/97		3.02	323.48
	6/6/02*	**	2.79	NM
	9/23/02		3.07	NM
	12/13/02		3.14	NM
	12/14/04		2.92	NM
	3/23/05		2.39	NM
	6/22/05	329.16 <sup>1</sup>	2.99	326.17

#### Fable I. Summary of Groundwater Elevation Measurements BEL Job No. 2020 6, Dolan Remais 6393 Scarlett Court, Dublin, California Water Surface **TOC Elevation** Depth to Water Well ID Date (feet) Elevation (feet) (feet) 323.99 3.24 3/21/95 327.23 MW-6 322.53 4.70 5/22/95 4.95 322.28 8/24/95 322.73 4.50 2/12/96 3.68 323.55 2/5/97 4.79 322.44 8/6/97 322.42 6/6/02\* 4.81 5.10 322.13 9/23/02 4.88 322.35 12/13/02

Notes: TOC = Top of casing

\* = Initial data set collected under direction of Blymyer Engineers, Inc.

 $330.02^{-1}$ 

4.61

3.40

4.72

322.62

323.83

325.30

\*\* = Surveyed elevation not yet available

12/14/04

3/23/05

6/22/05

NM = Not measured

<sup>1</sup> = Resurveyed for GeoTracker database on April 13, 2005 by CSS

Environmental Services, Inc.

Elevations in feet above mean sea level

### Table II, Summary of Groundwater Sample Hydrocarbon Analytical Results BEI Job No. 202016, Dolan Rentals 6393 Scarlett Court, Dublin, California

Sample ID	Date	Modified 1	EPA Method 015 eg/L)	EPA Method 8020 or 8021B (μg/L)				
		TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ
MW-1	11/27/91	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/30/92	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	4/7/94	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	8/12/94	<50	NA	11	1	<0.3	<2	NA
	11/29/94	<50	NA	<0.5	<0.5	<0.5	<2	NA
	3/21/95	<50	NA	<0.5	<0.5	<0.5	<2	NA
	5/22/95	<50	NA	<0.5	<0.5	<0.5	<2	NA
	8/24/95	<50	NA	<0.5	<0.5	<0.5	<2	NA
	2/12/96	<50	NA	<0.5	<0.5	<0.5	<2	NA
	6/6/02*	NA	NA	NA	NA	NA	NA	NA
	9/23/02	NA	NA	NA	NA	NA	NA	NA
	12/13/02	NA	NA	NA	NA	NA NA	NA	NA
	12/14/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/23/05	NA	NA	NA	NA_	NA	NA	NA
	6/22/05	NA	NA	NA	NA	NA	NA	NA

### Table II, Summary of Groundwater Sample Hydrocarbon Analytical Results BEI Job No. 202016, Dolan Rentals 6393 Scarlett Court, Dublin, California, FA Joseph Rentals

Sample :	Date	80	EPA Method 015 g/L)	EPA Method 8020 or 8021B (μg/L)				
		TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ
MW-2	11/27/91	170,000	NA	24,000	13,000	13500	16.000	NA
	9/30/92	120,000	NA	数数据 224,000	15,000	3.800	147.000 E	NA
	4/7/94	120,000	NA	21,000	14,000	4300	21,000	NA
	8/12/94	140,000	NA	A-17,000 a	10,000	300 <b>4300 224</b>	<b>6</b> 18.000	NA
	11/29/94	90,000	NA	17,000	7,500	3,400	ເຮັດເດ	NA
	3/21/95	#383,000	NA	12417X000	8:000	3.800	7,000	NA
	5/22/95	82,000	NA	14,000	6,000	4000	16000	NA
	8/24/95	86,000	NA	1213,000 P	8,100=	<b>建筑9700</b> 重量	<b>1</b> 116.000	NA
	2/12/96	基型科科研 基礎78,000	NA	15,000	8:100	47200.18	<b>118.000</b>	· NA
	2/5/97	58,000	NA	£11,000	6,900	3,500	150008	480
	8/6/97	66,000	NA	7,000	¥9,200	3,500	1.6.000	<500
	6/6/02*	25,000 °	NA	2,900	50	2,700	2200	<250
	9/23/02	14,000 b	4,300°-	第2 <b>2.7</b> 00 章	81	2,100	<b>821,</b> 800	<250
	12/13/02	26,900	4,000°	打1.120 薄	91.0	1,480	2,370	197 <sup>d</sup>
	12/14/04	<b>#21,000</b> **	7,600 <sup>r,</sup> §	15700	120	1,600	2,400	<60
	3/23/05	27,000 e1	15,000 F B 1	5 1,400	鞋前。	1,700	2500	<170
	6/22/05	5,800 e.	1,200 <sup>#</sup>	作制 <sub>53</sub> 汇编	461	570	24 E8	<50

### Table II, Summary of Groundwater Sample Hydrocarbon Analytical Results BEI Job No. 202016, Dolan Rentals 6393 Scarlett Courts Dublin, California

1 2 2	144		6393 Scarlett Court Dublin California						
Sample ID	Date	8	EPA Method 015 g/L)	EPA Method 8020 or 8021B (μg/L)					
		TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ	
MW-3	11/27/91	<50	NA	<0.3	<0.3	<0.3	<0.3	NA	
	9/30/92	<50	NA	<0.3	<0.3	<0.3	<0.3	NA	
	4/7/94	<50	NA	2.5	5.5	0.9	5.1	NA	
	8/12/94	<50	NA	<0.5	<0.5	<0.3	<2	NA	
	11/29/94	<50	NA	<0.5	<0.5	<0.5	<2	NA	
	3/21/95	<50.	NA	<0.5	<0.5	<0.5	<2	NA	
	5/22/95	<50	NA	<0.5	<0.5	<0.5	<2	NA	
	8/24/95	<50	NA	<0.5	<0.5	<0.5	<2	NA	
	2/12/96	<50	NA	<0.5	<0.5	<0.5	<2	NA	
	2/5/97	<50	NA	<0.5	<0.5	<0.5	<0.5	<5	
	6/6/02*	NA	NA	NA	NA	NA	NA	NA	
	9/23/02	. NA	NA	NA	NA	NA	NA	NA	
	12/13/02	NA	NA	NA	NA	NA	NA	NA	
	12/14/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	3/23/05	NA	NA	NA	NA	NA	NA	NA	
	6/22/05	NA	NA	NA	NA	NA	NA	NA	

# Table H. Summary of Groundwater Sample Hydrocarbon Analytical Results BEI Job No. 202016; Dolan Rentals 6393 Scarlett Court, Dublin, California

Sample ID	Date	80	Modified EPA Method 8015 (μg/L)		EPA Method 8020 or 8021B (μg/L)					
		TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE		
MW-4	11/27/91	11.000	NA	100	0.7	250		NA		
	9/30/92	380	NA	3.5	2.4	8.9	3.4	NA		
	4/7/94	1,100	NA	61	5.5	17	12	NA		
	8/12/94	434100025-	NA	3	11	8	4	NA		
	11/29/94	3,100	NA	2	<0.5	10	6	NA		
	3/21/95	1,400	NA	145200 集	5	66	E 18	NA		
:	5/22/95	0.200	NA	60	1	12	8	NA		
	8/24/95	400	NA	1	<0.5	1	·<2	NA		
	2/12/96	1,500	NA	######################################	<0.5	120	18651 F	NA		
	2/5/97	\$11,200°	NA	250	4.9	94	12	16		
	8/6/97	330	NA	1.5	<0.5	<0.5	<0.5	<5		
	6/6/02*	<50	NA	1.7	<0.5	<0.5	<0.5	<2.5		
	9/23/02	<50	<48	<0.5	1.3	<0.5	<0.5	<2.5		
	12/13/02	<50	86 °	<0.5	<0.5	<0.5	<1.5	<0.5		
	12/14/04	95 h	<50	2.6	<0.5	<0.5	<0.5	<5.0		
	3/23/05	120 h	<50	<0.5	5.0	<0.5	<0.5	<5.0		
	6/22/05	180 °	<50	1.7	7.5	<0.5	<0.5	<5.0		

# Table II. Summary of Groundwater Sample Hydrocarbon Analytical Results. BEI Job No. 202016, Dolan Rentals 6393 Scarlett Court, Dublin, California

Sample ID	Date	Modified EPA Method 8015 (μg/L)		EPA Method 8020 or 8021B (μg/L)				
	· ;	TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ
MW-5	3/21/95	<50	NA	<0.5	<0.5	<0.5	<2	NA
	5/22/95	<50	NA	<0.5	<0.5	<0.5	<2	NA
	8/24/95	<50	NA	<0.5	<0.5	<0.5	<2	NA
	2/12/96	<50	NA	<0.5	<0.5	<0.5	<2	NA
	2/5/97	<50	NA	<0.5	<0.5	<0.5	<0.5	<5
	6/6/02*	NA	NA	NA	NA	NA	NA	NA
	9/23/02	<50	310 °	<0.5	<0.5	<0.5	<0.5	<2.5
	12/13/02	<50	97 °	<0.5	<0.5	<0.5	<1.5	0.720 d
	12/14/04	<50	<50	<0.5	<0.5	<0.5	<0.5	12
	3/23/05	<50	<50	<0.5	<0.5	<0.5	<0.5	23
	6/22/05	<50	<50	<0.5	<0.5	<0.5	<0.5	31

## Table II, Summary of Groundwater Sample Hydrocarbon Analytical Results BEI Job No. 202016, Dolan Rentals 6393 Scarlett Court; Dublin, California

Sample ID	Date	Modified 3	EPA Method 015 g/L)	EPA Method 8020 or 80 (μg/L)			8021B	
		TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ
MW-6	3/21/95	<50	NA	<0.5	<0.5	<0.5	<2	NA
	5/22/95	<50	NA	<0.5	<0.5	<0.5	<2	NA
	8/24/95	<50	NA	<0.5	<0.5	<0.5	<2	NA
	2/12/96	<50	NA	<0.5	<0.5	<0.5	<2	NA
	2/5/97	<50	NA	<0.5	<0.5	<0.5	<0.5	<5
	6/6/02*	NA	NA	NA	NA	NA	NA	NA
	9/23/02	NA	NA	NA	NA	NA	NA	NA
	12/13/02	NA	NA	NA	NA	NA	NA	NA
	12/14/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/23/05	NA	NA	NA	NA	NA	NA	NA
	6/22/05	NA	NA	NA	NA	NA	NA	NA
RWQCB Groundwater ESL: Groundwater is Not a Current or Potential Drinking Water Resource (Table F-1b)		500	640	46	130	290	13	1,800

#### Table II, Continued; Summary of Groundwater Sample Hydrocarbon Analytical Results

Notes:  $\mu$ g/L = Micrograms per liter Total Petroleum Hydrocarbons TPH Methyl tert-butyl ether MTBE =Not analyzed NA Less than the analytical detection limit (x) <x **Environmental Protection Agency** EPA No value established NV Initial data set collected under direction of Blymyer Engineers, Inc. Laboratory note indicates the result is an unidentified hydrocarbon within the C6 to C10 range. Laboratory note indicates the result is gasoline within the C6 to C10 range. Laboratory note indicates the result is a hydrocarbon within the diesel range but that it does not = represent the pattern of the requested fuel. MTBE analysis by EPA Method 8260B yielded a non-detectable concentration at a detection lin of 0.50  $\mu$ g/L. See Table III. Laboratory note indicates that unmodified or weakly modified gasoline is significant. Laboratory note indicates that diesel range compounds are significant, with no recognizable patt Laboratory note indicates that gasoline range compounds are significant. Laboratory note indicates that no recognizable pattern is present. h =

Laboratory note indicates that a lighter than water immiscible sheen / product is present.

Bold results indicate detectable analyte concentrations.

i

Shaded results indicate analyte concentrations above the respective RWQCB ESL value.

Table III, Summary of Groundwater Sample Fuel Additive Analytical Results  BEL Job No. 202016, Dolan Rentals  6393 Scarlett Court, Dublin, California									
Date	EPA Method 8260B								
	ТАМЕ	ТВА	EDB	1,2-DCA	DIPE	Ethanol	ЕТВЕ	Methanol	MTBE
	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(µg/L)	(μg/L)
12/13/02	<0.50	<2,000	NA	NA	<0.50	NA	<0.50	NA	<0.50
3/23/05	<5.0	<50	<5.0	5.4	<5.0	<500	<5.0	<5,000	<5.0
12/14/04	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<0.5	<500	12
RWQCB Groundwater ESL: Groundwater is Not a Current or Potential Drinking Water Resource (Table F-1b)		18,000	160	200	NV	NV	NV	NV	1,800
	12/13/02 3/23/05 12/14/04 oundwater water is Not Potential Water	Date    TAME   (μg/L)     12/13/02   <0.50     3/23/05   <5.0     12/14/04   <0.5     oundwater water is Note Potential water water is Note Potential water water is Note Potential water is Note Pot	Date         TAME TBA         (μg/L)       (μg/L)         12/13/02       <0.50	BELJOD         G393 Scart         Date       TAME       TBA       EDB         (μg/L)       (μg/L)       (μg/L)         12/13/02       <0.50	Date   TAME   TBA   EDB   1,2-DCA	BEL Job No. 202016, Dolan Renta 6393 Scarlett Court, Dublin, Califor           Date         EPA Method           TAME         TBA         EDB         1,2-DCA         DIPE           (μg/L)         (μg/L)         (μg/L)         (μg/L)         (μg/L)           12/13/02         <0.50	Date   EPA Method 8260B     TAME   TBA   EDB   1,2-DCA   DIPE   Ethanol     (μg/L)   (μg/L)   (μg/L)   (μg/L)   (μg/L)   (μg/L)     12/13/02   <0.50   <2,000   NA   NA   <0.50   NA     3/23/05   <5.0   <50   <5.0   5.4   <5.0   <50     12/14/04   <0.5   <5.0   <0.5   <0.5   <0.5   <0.5     Oundwater Water is Not Potential Water   NV   18,000   160   200   NV   NV     NV   NV   NV   NV   NV	Date   EPA Method 8260B     TAME   TBA   EDB   1,2-DCA   DIPE   Ethanol   ETBE     (μg/L)   (μg/L)   (μg/L)   (μg/L)   (μg/L)   (μg/L)   (μg/L)   (μg/L)     12/13/02   <0.50   <2,000   NA   NA   <0.50   NA   <0.50     3/23/05   <5.0   <50   <5.0   <5.0   <5.0   <5.0   <5.0     12/14/04   <0.5   <5.0   <0.5   <0.5   <0.5   <0.5   <0.5     oundwater water is Not Potential Water   NV   18,000   160   200   NV   NV   NV     Output   NV   18,000   160   200   NV   NV   NV     Output   NV   NV   NV   NV   NV   NV   NV   N	Date   EPA Method 8260B   TAME   TBA   EDB   1,2-DCA   DIPE   Ethanol   ETBE   Methanol   (μg/L)   (μg/L)

Notes: TAME Methyl tert-Amyl Ether tert-Butyl Alcohol TBA EDB 1,2-Dibromoethane 1,2-Dichloroethane 1,2-DCA Di-isopropyl Ether DIPE = Ethyl tert-Butyl Ether ETBE = Methyl tert-butyl Ether MTBE = Micrograms per liter  $(\mu g/L)$ = Not analyzed NA ---No value NV

### Table IV, Summary of Groundwater Intrinsic Bioremediation Field Results BEL Job No. 202016, Dolan Rentals

	era filozofia	IN THE BOSYABSO	arlen Court#Dub	un-California		CA MAY TAKE
Sample ID	Sample	Field Meter	Field Meter	Field Test Kit	Field Meter	Field Meter
	Date	Dissolved Oxygen	Oxidation Reduction Potential	Ferrous Iron (Fe <sup>2+</sup> )	Field Temperature	Field pH
		mg/L	mV	mg/L	°C	pH units
MW-1	12/14/04	0.2 / 2.0	224 / 160	0.1	18.8	6.9
	3/23/05	5.1 / 0.2	105 / 102	0.0	17.3	6.9
	6/22/05	0.51 / 0.28	-208.2/-137.4	0.3	19.57	6.65
MW-2	12/14/04	0.3 / 2.0	-160 / -148	1.4	18.4	6.9
	3/23/05	0.1 / 0.1	-133 / -145	2.0	16.6	7.0
	6/22/05	0.55 / 0.11	-208.5/-229.6	1.0	22.64	6.96
MW-3	12/14/04	0.3 / 0.6	171 / 165	0.1	19.4	7.2
	3/23/05	0.1 / 0.1	81 / 79	0.0	17.7	7.2
	6/22/05	1.49/1.39	100.7/30.3	0.1	20.83	7.09
MW-4	12/14/04	0.7 / 0.1	-7 / -41	0.8	18.0	6.8
N.	3/23/05	0.1 / 0.4	-17/-19	1.2	15.9	6.9
	6/22/05	0.23 / 0.12	-28.6 / -30.9	1.2	20.05	6.70
MW-5	12/14/04	0.5 / 2.0	5 / 532	0.1	17.9	7.1
	3/23/05	0.1 / 0.9	-17/0	0.0	15.1	7.2
	6/22/05	0.52 / 0.27	14.4 / -35.3	0.1	23.75	7.03
MW-6	12/14/04	0.3 / 1.2	125 / -25	0.0	15.5	7.2
	3/23/05	0.1 / 0.8	52 / -4	0.0	13.9	7.2
	6/22/05	0.53 / 0.49	-22.3 / -18.0	0.1	22.65	7.03
H <b>i</b>				<b>利</b> 斯		

Notes:

mV

Millivolt

mg/L

milligrams per liter

°C

degrees Centigrade

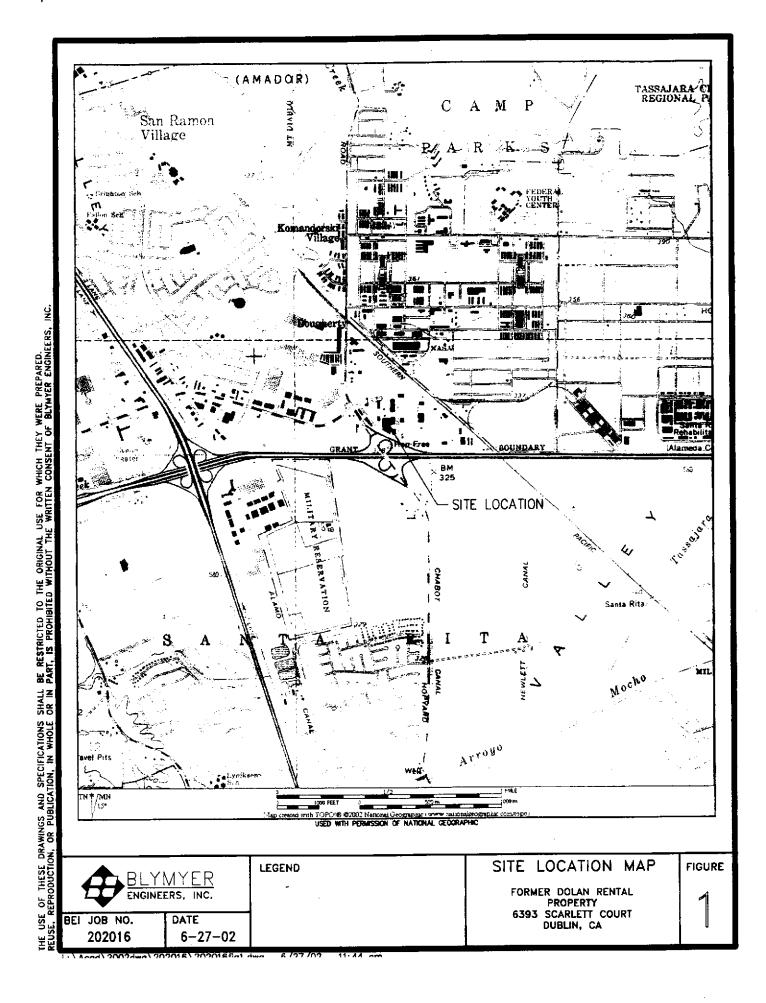
2.6 / 2.2

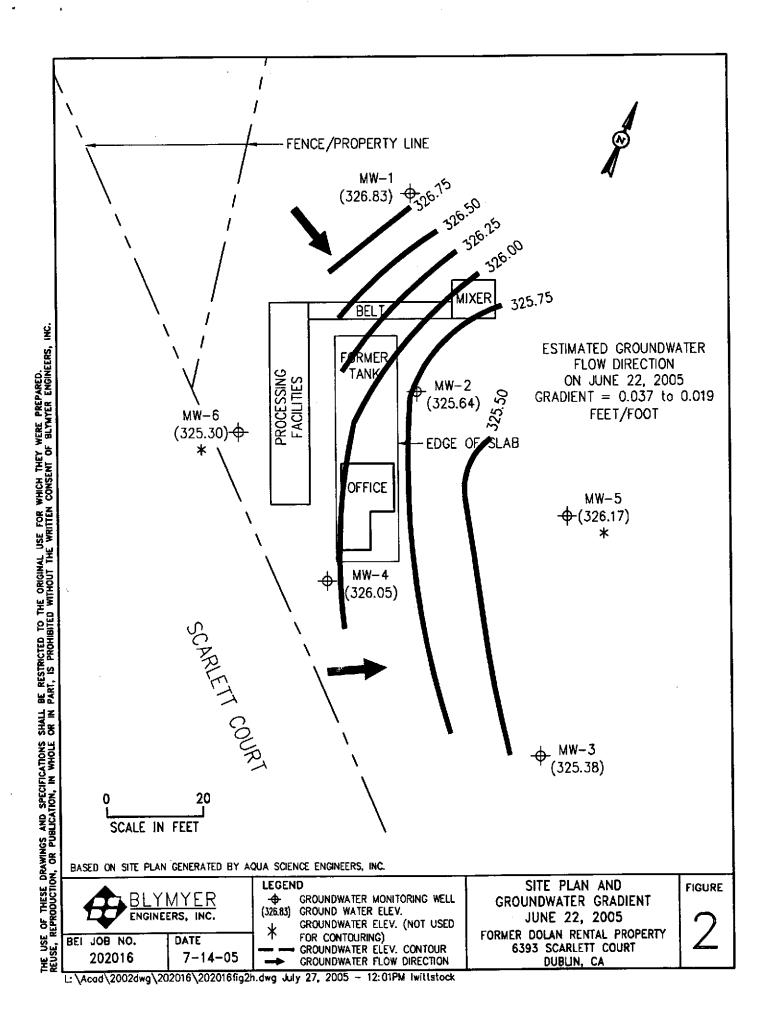
Initial reading (pre-purge) / Final reading (post-purge)

	V. Summary of C		trinsic Bioremedi († 6, Dolan Rental rt, Dublin, Califor		
ID	Date	SM Method 5310B E300.1			Method RSK 174
			Nitrate (as N)	Sulfate	Methane
			μg/L		
MW-1	12/14/04	580	<20	1,100	2.2
	3/23/05	660	0.41	620	<0.5
	6/22/05	660	<0.1	580	0.91
MW-2	12/14/04	940	<5.0	220	4,700
	3/23/05	1,100	0.34	180	3,700
	6/22/05	990	<0.1	290	1,800
MW-3	12/14/04	610	<20	780	<0.5
	3/23/05	590	0.20	560	<0.5
	6/22/05	320	1.3	540	<0.5
MW-4	12/14/04	680	<10	760	170
	3/23/05	700	0.30	430	24
A.	6/22/05	700	<0.1	480	71
MW-5	12/14/04	1,400	<20	1,200	120
	3/23/05	1,400	0.66	640	57
	6/22/05	1,500	<0.1	590	1.5
MW-6	12/14/04	790	<10	460	180
	3/23/05	770	0.12	380	60
	6/22/05	770	<0.1	400	36
包含溶料中毒		Terry being 1974 Terry Being 1984			

Notes: SM = Standard Method mg/L = Milligrams per liter $\mu g/L = Micrograms per liter$ 

 $CO_2$  = Carbon dioxide





Appendix A
Water Supply Well Details
Zone 7 Water Agency

Table A-1, Summary of Available Water Supply Well Bore Data.  BEI Job No. 202016, Dolan Rentals  6393 Scarlett Court, Dublin, California									
Well ID.	Status	Screened Interval (feet bgs)	Notes						
3S/1E 6E1	Destroyed	NA							
3S/1E 6F2	Not relocated in 1977; presumed destroyed until relocated in November 2002; destroyed May 2005.	NA	1st report 1959; drilled prior						
3S/1E 6F1	Not relocated in 1977; presumed destroyed until relocated in November 2002; destroyed May 2005.	NA	1st report 1959; drilled prior						
3S/1E 6G4	Present	180 - 186							
3S/1E 6G6	Present	285 - 292							
3S/1E 6G5	Present	103 - 106 and 173 - 178	400 feet east of 3S/1E 6G6; outside 1/4- mile radius						
		TOTAL TOTAL BUILDING							

Notes: bgs NA

below grade surface Not available

Appendix B
Standard Operating Procedures Blaine Tech Services, Inc.

# Blaine Tech Services, Inc. Standard Operating Procedure FLOW CELL PURGING AND SAMPLING

Flow Cell purging provides the user with a constant stream of real time, highly accurate water quality information during the purge process. Typically, this equipment is utilized as part of the Low-Flow sampling process, where parameter stabilization is the most important prerequisite prior to sample collection and/or when very accurate Dissolved Oxygen measurements are required.

The Flow Cell system consists a flow cell, a sonde, a display unit and various hose lines. Flow cell system brands commonly used by BLAINE include YSI, HORIBA and QED. A separate pump must be used to supply the flow of water to the Flow Cell. The pump must be capable of purging water at rates that are variable and low. The most common purge pump used is the Grunfos Redi-Flo II variable speed electric submersible pump. Both peristaltic and pneumatic bladder pumps are common alternatives.

As the Low-Flow methodology stipulates sampling through the purge tube (as opposed to a bailer) to minimize disturbance to the water column, dedicated, small-diameter tubing is typically used.

#### Flow cell purging and sampling using dedicated, in-place, pump

- 1. Plug the display unit into the sonde.
- 2. Calibrate the sonde for all parameters using the supplied calibration fluids, following the manufacturer's instruction manual.
- 3. Connect the flow cell to the sonde.
- 4. Without disturbing the water column in the well, connect the water line from the inplace pump to the lower end of the flow cell.
- 5. Connect a water discharge line to the upper end of the flow cell.
- 6. Without disturbing the water column, connect the power source (electricity, compressed air, etc.) to the in-place pump.
- 7. Lower an electronic water level indicator (sounder) slowly into the well until it hits the water surface.
- 8. While monitoring the sounder, commence pumping at a rate that does not induce draw-down in the well.
- 9. Collect parameter measurements from the display unit as per job specifications (ie. every 1 minute, every 3 minutes, etc.).
- 10. Monitor flow cell to make sure it remains free of air bubbles.
- 11. Once parameters have stabilized, adjust the pump rate to the lowest technically feasible setting.
- 12. Disconnect the water line from the lower end of the flow cell.
- 13. Fill the appropriate sample containers.
- 14. Remove power supply and sounder from well.

Purge Drum Inventory Log, Wellhead Inspection Checklist, Well Gauging Data, and Well Monitoring Data Sheets Dated June 22, 2005 Blaine Tech Services, Inc.

# WELLHEAD INSPECTION CHECKLIST

Page \_\_\_\_ of \_\_\_\_

Date to zzlos	· · · · · · · · · · · · · · · · · · ·	_ Client	suell						
Site Address 63					**************************************		·······		
Job Number 051		,		Tec	hnician	P.COTMICH			
Well ID	Well inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Olher Action Taken (explain below)	Well Not Inspected (explain below)	
MUI	,								
MU-2	1	ĸ							
MU-3	a								
M N-4	4					,			
MU-5 MU-6		4	A	T-W-1,					
MU-6			۸.						
		ļ							
						<u>.</u>			
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<u> </u>	<u>                                     </u>			<u> </u>					
NOTES:							· · · · · · · · · · · · · · · · · · ·	, .*	
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						· · · · · · · · · · · · · · · · · · ·	<u> </u>		
						·			

#### WELL GAUGING DATA

Project # 050622-961 Date 4/2216	Client Blywer
	2
Site Public Concrete (Polan Rentals),	Dubling

	*** ***		70.11	Thickness	Volume of		<del></del>	•	
	Well Size	Sheen /	Depth to Immiscible			Depth to water	Depth to well	Survey Point: TOB	:
Well ID	(in.)	Odor	Liquid (ft.)	Liquid (ft.)	(ml)	(ft.)	bottom (ft.)	or FOS	
MWH	2			: 		2.58	19.37	700	
MM-5	2					3.82	19.80		
MU-3	2					3994/2	18.49		
MU-4	2		,			3,65	(8,62		
MU-5	Ζ					299	9.82		
mW-6	2					4.72	9.90		
		·							
`							,		
							·	,	
							2		

Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573-0555

	2011	LION WE	ATALITY TATOLIA	THE OWNER OF THE	JUAIA	SALLI	
050622							<del></del>
			Start Date	: 6/22/0	5		
: MW-(			Well Dian	neter: 🞾	3 4	6 8	
ll Depth:	9.37		Depth to V	Vater	Pre: 2 .	Post:	
Project #: Sold 22-R( Sampler: C  Well I.D.: MU-{ Total Well Depth: 19.37- Depth to Free Product: Referenced to: Grace Purge Method: Purge Method: Dedicated Tubing Flow Rate: Hoo Minim  Temp. Cone (Mor °F) pH (mS or °B)  B36 1902 6.68 4212  B39 19.53 6.63 420  B48 19.53 6.63 420  B48 19.53 6.65 420				of Free P			<del></del> -
ed to:	QQe)	Grade					
ethod:	Dedicated	Tubing		Peristaltic I New Tubin	Pump g	Bladder Pump Other	
_					1		(FL)
	pН	Cond. (mS or $\mu$	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed	Observations
1902	6.68	4212	397	2001		1200	299
19.31	6.5B	4205	220	0.45	1822R 046	2400	299
19.51	6-61	4209	૧૫	0.35	162.1		299
19.53	6-63	4206	65	0.30	145.1		299
19.57	6-65	4205	48	0.28	1374	6000	298
<del></del>			Post P	wice fr	z :	2.3 mall	
							,
lewater?	Yes	<u>@</u>		Amount a	actually e	vacuated: 61	
Time: 6	56	·					
D.: nIW-\							<del></del>
for:	ТРН-G	втех мтв					·
t Blank I.l	D.:	@ Time		Duplicate			
	In the content of t	Sold 22-R1   C   C   C   C   C   C   C   C   C	C   C   C   C   C   C   C   C   C   C	Client: Start Date  Start Date  Well Dian  Il Depth: 19.37  Free Product:  Thickness  ed to:  Od:  P2" Grundfos Pump  ethod:  Dedicated Tubing  400 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Client: Start Date: 6/zele  Start Date: 6/zele  Well Diameter: Co  Well Diameter: Co  Well Diameter: Co  Il Depth: 19.37  Perpoduct:  Thickness of Free Product:  Peristaltic In New Tubing  Pump Depth  Temp.  Goro Product:  Turbidity (NTUs)  Pump Depth  Top.  19.02 6.68 4212 397  19.31 6.58 4205 220 045  19.51 6.61 4209  19.52 6.63 4205 4205  19.53 6.63 4205 48 0.30  19.54 6.65 4205  Post Proge Formation  Rewater? Yes  Time: 656 Sampling  D.: MW-1  Laborator  Top.  Laborator  Thickness of Free Product:  Top Product:  Turbidity (NTUs) (mg/L)  O.551  O.452  O.454  O	Client: Start Date: 6/22/05  Start Date: 6/22/05  Well Diameter: © 3 4  Il Depth: 19.37  Pere Product:  Thickness of Free Product (feed to: 600 Grade Flow Cell Type: 155 156  Dedicated Tubing Peristaltic Pump Peristaltic Pump Pump Depth: 1854  Temp. Cond. (MS or 160 (NTUs) (mgL) (mV)  19.02 (6.68 42/2 397 2052 2052 2052 2052 2052 2052 2052 205	Start Date: 6 zz e5

			2011 112	322 IVI ()1 ()	CT CTATE	DUIT		
Project #	: 050622·	PCI		Client: B	(mer			
Sampler:				Start Date	6/22/0	5		
Well I.D.	: MW-Z	·		Well Dian			6 8	
Total We	ll Depth:	19.80		Depth to V	Vater	Pre: 3-8	Post:	
Depth to	Free Prod	uct:		Thickness	of Free P			λ
Referenc	ed to:	eve	Grade	Flow Cell				
Purge Meth Sampling M Flow Rate:		©" Grundf Bedicated			Peristaltic I New Tubin Pump Dept	g .	Bladder Pump Other_	
Time	Temp.	pН	Cond. (mS or ps)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed	(FE) DTW: Observations
1154	2093	6.95	3580	77	<u>ass</u>	- <i>20</i> 35	900	40
1157	21-83	6.95	3592	100	0-16	-2225		410
1200	22.05	6.96	3589	64	0.11	-231.5	2700	4.12
1203	22.29	696	3590	52	0.11	-233-3	3600	4.11
1206	22-64	10.96	3589	52	0.11	229.6	4500	4.12
				Post Purge	Fe L <sup>+</sup> =	10 mg	L	
=							, <u> </u>	
Did well	dewater?	Yes (	1Ñ)		Amount a	actually e	vacuated: U	7
Sampling	Time: 12	17.			Sampling	Date:		· · · · · · · · · · · · · · · · · · ·
Sample I.	D.: MW-Z						McCampbell	
Analyzed	for:	ТРН-G	втех мте			Other: See	-	· · · · · · · · · · · · · · · · · · ·
Equipmen	nt Blank I.	D.:	@ Time		Duplicate		<del></del>	

			2011 111	<u> </u>	T OWN I	DUIU	SILELI	
Project #	<u>0</u> 50622	-Pci		Client: 2	auer			
Sampler:				Start Date	10/22/09	5		
Well I.D.	: MW-3			Well Dian			6 8	· n. = n ·
Total We	ll Depth:	<b>છ</b> .		Depth to V			<del></del>	
Depth to	Free Produ	ıct:		Thickness				
Reference	ed to:	જ્ય	Grade	Flow Cell	Type: 45	J 556		
Sampling M		Dedicated	•		Peristaltic I New Tubin	g	Bladder Pump Other	)
Flow Rate:	400 m	[min			Pump Dept	h: <u>17.6°</u>		<del></del>
Time	Temp.	рН	Cond. (mS or 🎉)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mi)	(Ft) DTW: Observations
913	20.23	7-09	31.33	309	1.49	1007	1200	3,49
916	20.46	708	3132	139	144	79.8	2400	349
919	20.59	708	3120	69	1.49	54.4	3600	3.49
922	20.75	7.09	3116	46_	1.44	30-4	4800	3.49
925	20.83	709	3116	44	1.39	30.3	6000	3:49
		<del></del>						
				PostPuc	e Fe2+:	0.1 mg	L	
	:					J		
Did well	dewater?	Yes	<b>ලි</b>		Amount a	actually e	vacuated: 6.L	<u> </u>
Sampling	Time: q	50			Sampling	D-4	122108	· · · · · · · · · · · · · · · · · · ·
Sample I.	D.: M W-3	<b>)</b> _			Laborato		amphell	· · · · · · · · · · · · · · · · · · ·
Analyzed	for:	TPH-G	втех мте	ве трн-D	· · · · · ·	Other: 86	,	
Equipmer	nt Blank I.	D.:	@ Time		Duplicate			

					TOILLIC	, 101111	JIE I			
Project #	: 0500ZZ.	pcl		Client: B	lymer					
Sampler:				Start Date	: 6/22/=	,₹				
Well I.D.	· MU-4	· 		Well Dian			6 8	-		
	ell Depth:	18-82		Depth to V	Vater	Pre: 3-6	. Post:			
	Free Prod			Thickness	of Free P					
Referenc	ed to:	<b>6</b>	Grade	Flow Cell Type: YSI 556						
Purge Meth Sampling M	•	2" Grundf Dedicated	-		Peristaltic I	•	Bladder Pump Other			
Flow Rate:	300 -	al min			Pump Dept	h: (7.5		:		
Time	Temp.	pН	Cond. (mS or 🔊)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (1))	(FL) DTD: Observations		
1108	19.72	6-73	3534	71000	0.23	-28.6	900	402		
Ш	19.71	6.66	3535	ال	0.15	-31-4	1800	4.04		
1114	19-72	6-60	3545	296	0.19	-29.7		4.04		
1117	19.88	6.68	355>	73	0.13	-30.8	<b>ે</b>	4.04		
1120	20.05	6-70	3552	68	0.12	- <sup>7</sup> ⁄ <sub>2</sub> .9	4,500	<b>૫.</b> ૦૬		
			Post	urge Fezt	= 12 mg	L				
							·			
								4		
Did well	dewater?	Yes	<b>6</b>		Amount a	actually e	vacuated: 4.5			
Sampling	Time:	0			Sampling	Б.	122108			
Sample I.	D.: MW-1	٠			Laborato		ampbell			
Analyzed	for:	TPH-G	втех мте	ЗЕ ТРН-D		<b>.</b>	coeca			
Equipme	nt Blank I.	D.:	@ Time		Duplicate			·		

Project #:	050622	PC\		Client:	Client: Blyner					
Sampler:				Start Date:	: 6/22/01	 {				
Well I.D.	:พพ.ร			Well Diam	neter: ②	3 4	6 8			
Total We	ll Depth:q	.82		Depth to V	Depth to Water Pre: 2.99 Post:					
Depth to	Free Produ	ıct:		Thickness	of Free Pr	roduct (fe	eet):	,		
Reference	ed to:	<del>200</del> 2	Grade	Flow Cell						
Purge Metho Sampling M	lethod:	2" Grundfo Dedicated	•	,	Peristaltic P	g	Bladder Pump Other_			
Flow Rate: _	200m	1 (min			Pump Depth	h: <u>8-5</u>				
Time	Temp.	pН	Cond. (mS or 🊱)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed	Observations		
1025	21.27	7-02	4013	59	0.52	14.4	600	3.60		
1658	21.60	7.00	4 <u>0</u> 13	39	0-39	10.5	1200	3.60		
1631	22.17	7.01	4031	39	0.31	-2.3	1800	3.60		
1034	27.90	7-04	4023	28	0.26	-23.4	Zhoo	3.62		
1037	83,28	7.83	4015	22	0.27	-31-8	3000	3.64		
1040	23.75	7-05	3997	21	6.27	35.3	3600	3.64		
				PostPurge	Fe 2*=	2.1 mg/1				
				•		Οί	l 			
`		,						ų		
Did well o	dewater?	Yes (	<u></u>		Amount a	actually e	vacuated: 3.6	L		
Sampling	Time: 10	50			Sampling					
Sample I.	D.: MW-5	)			Laborator					
Analyzed	for:	TPH-G	BTEX MTE	) ic (A M CEII						
Equipmen	nt Blank I.l	D.:	@ Time		Duplicate					

Project #:	05062Z·P	cl		Client:	lymer			<del></del>			
Sampler:	Pe			Start Date:	•	5					
Well I.D.	: MW.6			Well Diam			6 8				
Total We	ll Depth:	9.90		Depth to V	Depth to Water Pre: 4.72 Post:						
Depth to	Free Produ	ıct:		Thickness							
Reference	ed to:	€V@	Grade	Flow Cell	Flow Cell Type: 451 556						
Purge Metho Sampling M	ethod:	♥" Grundfe Dedicated	-	•	Peristaltic Pump  New Tubing  Other						
riow Kate:	200 m	ri min		1.	Pump Depti	h: <u>18-8</u>		- <u></u> -			
Time	Temp.	pН	Cond. (mS or 🔊)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or	He) DTW: Observations			
949	21.04	7.05	4162 2104 r	51	0.53	-22.3	600	493			
952	21.02	7.02	4175	46	0.41	-26.1	1200	<b>५</b> ९३			
955	2210	7.02	4169	37	0.52	-26.9	1800	4.93			
958	2240	7.02	4172	25	0.5z	~288	2400	4.93			
1001	22.52	7.02	417-2	18	0.5U	-18.6	3000	4.92			
1004	22.65	7:03	4172	18	0.49	-180	<i>360</i> ℃	4.92			
				-							
			Post Pur	e rooms	0.	mall					
						14.00					
								-d			
Did well	dewater?	Yes	20		Amount a	actually e	vacuated: 31	,L			
Sampling	Time: 10	10			Sampling						
Sample I.	D.: MW-(	,			Laborato		ampboll				
Analyzed	for:	TPH-G	BTEX MT	BE TPH-D		Other: 50	• .	A.			
Equipmen	nt Blank I.	D.:	@ Time		Duplicate	e I.D.:					

BLAINE TECH SERVICES  POLY Drom has thet Black Production It? Abt Production It? Abt Purge Drum Inventory Log
CLIENT Blymer Engineers Inc
SITE ADDRESS 6393 Scarlett Ct. Dublin, CA

STATUS OF DRUM(S)  UPON ARRIVAL							
Number of drum(s) empty:							
Number of drum(s) 1/4 full:		-,					
Number of drum(s) 1/2 full:	<del></del>		1				
Number of drum(s) 3/4 full:			•	1 24	/		
Number of drum(s) full:				1	Z	4	
Total drum(s) on site:	0	i		2	3	ч	
STATUS OF DRUM(S)							
AT DEPARTURE							
Number of drum(s) empty:					·		
Number of drum(s) 1/4 full:	ı				-	•	•
Number of drum(s) 1/2 full:		1				ì	
Number of drum(s) 3/4 full:				2,	1		
Number of drum(s) full:			1	1	3	4	
Total drum(s) on site:	1	1	1	3	4.	5	
LOCATION OF DRUM(S)							
Is/Are drum(s) at wellhead(s)?	NO	No	Nο	No	No		-00
Describe location if drum(s) is/are located elsewhere:	on s	, side	ef w	arehous	(C acro	ss from	Kiosk
	li:	٠.	· p	uge (spi			
Label drum(s) properly:		Yes	Yes	195 (3)	Yes	4	
FINAL STATUS							
Number of new BTS drum(s) left on site this event:	i	0	ø	1	}	1	
Date of inspection:	6/6/02	9/23/02	12/13/0	1214/04	3/23/05		
Logged by BTS Field Technician:	01%.	38	BB	wh.	34	PC	
Office Review by:			<u> </u>		M	16	

			1	680 ROG	ERS AVENU	JE	Γ'	CON	DUCT	ANAL	YSIS 1	TO DE	TECT		LAB	McCampbell		DHS#
BLA TECH SER			·	FAX	IIA 95112-11 (408) 573-77 (408) 573-05	71				·					ALL ANALYSES MUST LIMITS SET BY CALIFO EPA	MEET SPECIF ORNIA DHS AN	ICATIONS AND	
	HAIN OF CUSTODY  BTS # 050622-PC					y,								•	LIA OTHER			
CLIENT	Blymyer	yer Engineers, Inc.			CONTAINERS		*				Time)			SPECIAL INSTRUCTION	ONS			
SITE	Dublin C				tals	È		(1B)	`			ld T			Invoice and Repo	rt to: Blyn	nyer Engine	ers, Inc.
	6393 Sca				•		5	(802	3	je Je		Hold		-	Attn: Mark Dette			
	Dublin, C						0151	BE	(8015M)	oxic		(48 hr.			EDF Format Requ	uired		
			MATRI	CON	TAINERS	COMPOSITE ALL	8	Mt	8	n Dj	ne	₩.	43		-			•
SAMPLE I.D.	DATE	TIME	S= SOIL W≃H <sub>2</sub> 0	TOTAL		C = CON	TPH-G (8015M)	BTEX/MtBE (8021B)**	ТРН-D	Carbon Dioxide	Methane	Nitrate	Sulfate		ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE#_
MU-	6/22/05		v	5						K	A	A	4					
MU-Z		1212		9			X	A	9	Q	k	x	4					
MU-3		930		5						a	4	9	4					
MW-4		1150		9			K	A	9	A	4	K	x					
1w.5		1050		9			٩	4	1	q	k	a	X					
MJ-6		1010	ļ	5		<u> </u>				0	A	a	K					
				-		-												
SAMPLING COMPLETED	DATE	TIME	SAMPL	ING RMED B	Y 0 (		]								RESULTS NEEDED NO LATER THAN	0		
RELEASED BY	6/22/06	(240	rem c		1.191	DAT	E		TIME	. <u>-</u>		REC	VED	<u>γ</u>	21	As contracte	DATE /	TIME 5 1330
الأرو	lW.					6	221	<u>05</u>		<u> </u>				W	ally	<u></u>	4/22/0	5 /330
RELEASED BY	,				•	DAT	Ē		TIME			RECE	ÍVED	BA			DATE	\$ I DAI⊏
RELEASED BY	•	v				DAT	E		TIME		1	REC	IVED	BY			DATE	TIME
SHIPPED VIA						DAT	E SEN	JT	TIME	SENT		coo	LER#					

Appendix D

Analytical Laboratory Report
Dated June 30, 2005
McCampbell Analytical, Inc.



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

Blymyer Engineers, Inc.	Client Project ID: Dublin Concrete/Dolan	Date Sampled: 06/22/05
1829 Clement Avenue	Rentals	Date Received: 06/22/05
Alameda, CA 94501-1395	Client Contact: Mark Detterman	Date Reported: 06/30/05
Alameda, CA 94301-1393	Client P.O.:	Date Completed: 06/30/05

WorkOrder: 0506421

June 30, 2005

#### Dear Mark:

#### Enclosed are:

- 1). the results of 6 analyzed samples from your Dublin Concrete/Dolan Rentals 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.

Angela Rydelius, Lab Manager



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Blymyer Engineers, Inc.	Client Project ID: Dublin Concrete/Dolan	Date Sampled: 06/22/05			
1829 Clement Avenue	Rentals	Date Received: 06/22/05			
Alameda, CA 94501-1395	Client Contact: Mark Detterman	Date Extracted: 06/26/05			
	Client P.O.:	Date Analyzed: 06/26/05			
Casoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with RTEX and MTRE*					

Extraction n	nethod: SW\$0301	В		Analytical t	methods: SW80211	3/8015Cm		Work (	Order: 05	506421
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
002D	MW-2	w	5800.a	ND<50	53	46	570	58	10	118
004D	MW-4	w	180,a	ND	1.7	7.5	ND	ND	1	116
005D	MW-5	w	ND	31	ND	ND	ND	ND	1	107

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Reporting Limit for DF =1:	W	50	5.0	0.5	0.5	0.5	0.5	1	μg/L
ND means not detected at or above the reporting limit	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

<sup>\*</sup> water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg L.

<sup>#</sup> cluttered chromatogram; sample peak coelutes with surrogate peak.

<sup>+</sup>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 (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.



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Blymyer Engineers, Inc.	Client Project ID: Dublin Concrete/Dolan	Date Sampled: 06/22/05
1829 Clement Avenue	Rentals	Date Received: 06/22/05
Alda CA 04601 1306	Client Contact: Mark Detterman	Date Extracted: 06/22/05
Alameda, CA 94501-1395	Client P.O.:	Date Analyzed: 06/25/05-06/30/05

#### Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel\*

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesei*  xtraction method: SW3510C Analytical methods: SW8015C Work Order: 05064								
extraction method: SW								
Lab ID	Client ID	Matrix	TPH(d)	DF	% SS			
0506421-002E	MW-2	: w	1200,d	l .	85			
0506421-004E	MW-4	w	ND	1	89			
0506421-005E	MW-5	w	ND	1	98			
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Reporting Limit for DF =1;	W	50	μg/L
ND means not detected at or above the reporting limit	S	NA	NA

<sup>\*</sup> water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

A

Angela Rydelius, Lab Manager

<sup>#</sup> cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

<sup>+</sup>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 diesel is significant; b) diesel range compounds are significant; no recognizable pattern: c) aged diesel? is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range/jet fuel range; i) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.



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Blymyer Engineers, Inc.	Client Project ID: Dublin Concrete/Dolan	Date Sampled: 06/22/05
1829 Clement Avenue	Rentals	Date Received: 06/22/05
11	Client Contact: Mark Detterman	Date Extracted: 06/23/05-06/24/05
Alameda, CA 94501-1395	Client P.O.:	Date Analyzed: 06/23/05-06/24/05

Inorganic	Anions	bv	IC*
IIIVI ZAIIIV	Juinis	.,	

raction method: E	300.1	Analyti	cal methods: E300.1	Work Order:	050642
Lab ID	Client ID	Matrix	Nitrate as N	DF	% SS
001C	MW-1	w	ND	1	108
002C	MW-2	W .	ND	. 1	109
003C	MW-3	w	1.3	· · · · · · · · · · · · · · · · · · ·	98
004C	MW-4	w	ND	1	110
005C	MW-5	w	ND	1	98
006C	MW-6	w	ND	1	109
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Reporting Limit for DF =1;	W	0.1	mg/L
ND means not detected at or above the reporting limit	S	NA	NA

<sup>\*</sup> water samples are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in mg/wipe, product/oil/non-aqueous liquid samples in mg/L.



<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak; N/A means surrogate not applicable to this analysis.

h) a lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted/raised due to high inorganic content/matrix interference; k) sample arrived with head space.



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Blymyer Engineers, Inc.	Client Project ID: Dublin Concrete/Dolan	Date Sampled: 06/22/05
1829 Clement Avenue	Rentals	Date Received: 06/22/05
A1	Client Contact: Mark Detterman	Date Extracted: 06/23/05-06/24/05
Alameda, CA 94501-1395	Client P.O.:	Date Analyzed: 06/23/05-06/24/05

#### Inorganic Anions by IC\*

		<del>-</del>	Anions by IC"	Work Order:	0506471
xtraction method: E3	Client ID	Matrix	at methods: E300.1 Sulfate	DF	% SS
001C	MW-1	W	580	100	108
002C	MW-2	W	290	50	109
003C	MW-3	w	540	100	98
004C	MW-4	w	480	50	110
00 <b>5C</b>	MW-5	w	590	100	98
0 <b>06</b> C	MW-6	w	400	100	109
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Reporting Limit for DF =1;	W	0.1	mg/L
ND means not detected at or above the reporting limit	S	NA	NA

<sup>\*</sup> water samples are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in mg/wipe, product/oil/non-aqueous liquid samples in mg/L.



<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak; N/A means surrogate not applicable to this analysis.

h) a lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted/raised due to high inorganic content/matrix interference; k) sample arrived with head space.



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Telephone: 925-798-1620 Fax: 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

Blymyer Eng	gineers, Inc.		ct ID: Dublin Concrete/Dolan	Date Sampled:	06/22/05		
1829 Clemen			Date Received:	06/22/05			
Manuada C	A 04501 1205	Client Conta	act: Mark Detterman	Date Extracted:	06/27/05		
Alameda, Ca	4 94301-1393	Client P.O.:		Date Analyzed:	06/27/05		
Extraction method:	RSK174				Work C	order: 1	050 <del>6</del> 421
Lab ID		Matrix	Methane		1	)F	% SS
001B	MW-1	w	0.91	· · .	. :	1	N/A
002B	MW-2	w	1800		- 14	000	N/A
003B	MW-3	w	ND			1	N/A
0 <b>04B</b>	MW-4	w	. 71		<u>;</u>	50	N/A
005B	MW-5	w	1.5			l	N/A
00 <b>6B</b>	MW-6	w	36	·		10 -	N/A
						:	
					:		
					:	:	
			···				
						:	
	ng Limit for DF =1;	w	0.5			μg	:/L
	ens not detected at or the reporting limit	S	NA			N	A
* water samples	are reported in μg/L.						



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Blymyer Engineers, In	ıc.	Client Project ID:	Dublin Co	oncrete/Dolan	Date Sampled: 06/22/0	)5
1829 Clement Avenue	<b>;</b>	Rentals			Date Received: 06/22/0	)5
		Client Contact: N	lark Dettern	nan	Date Extracted: 06/22/0	05
Alameda, CA 94501-1	1395	Client P.O.:			Date Analyzed: 06/27/9	05
		Inorg	anie Carbo	n as CO2*		
Analytical Method: SM5310	В			· · · · · · · · · · · · · · · · · · ·		Work Order: 0506421
Lab ID	Clie	nt ID	Matrix		IC as CO2	DF
0506421-001A	М	W-1	w		660	10
0506421-002A	М	W-2	w		990	10
0506421-003A	М	W-3	w	·	620	10
0506421-004A	— M	W-4	w		700	10 ·
0506421-005A	M	[W-5	w		1500	10
0506421-006A	M	[W-6	W	:	770	10
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			w		2.6 mg/L	
Reporting Limit for E abov	F = 1; ND mea e the reporting	ins not detected at or limit	S		NA NA	
* water samples are reporte	ed in mg/L, soil	/sludge/solid samples in	mg/kg.			

\* Non-Purgeable Organic Carbon=NPOC; TOC=Total Organic Carbon; DOC=Dissolved Organic Carbon; POC=Purgeable Organic Cabon; IC=Inorganic Carbon

i) liquid sample contains greater than ~1 vol. % sediment.



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#### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0506421

EPA Method: SW8021B/	8015Cm E	xtraction:	SW5030B	BatchID: 16789			Spiked Sample ID: 0506417-002A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	Criteria (%)
Analyte μg/L	μg/L	µg/L %	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) <sup>£</sup>	ND	60	104	100	3.91	103	101	1.85	70 - 130	70 - 130
мтве	ND	10	107	105	2.23	114	102	11.4	70 - 130	70 - 130
Benzene	ND	10	105	98.5	6.25	111	98.5	11.8	70 - 130	70 - 130
Toluene	ND	10	109	97.9	10.9	113	99.4	12.9	70 - 130	70 - 130
Ethylbenzene	ND	10	104	102	1.49	114	102	10.9	70 - 130	70 - 130
Xylenes	ND	30	107	103	3.17	117	103	12.1	70 - 130	70 - 130
%SS:	102	10	104	98	6.21	97	97	0	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

#### BATCH 16789 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0506421-002D	6/22/05 12:12 PM	6/26/05	6/26/05 1:21 AM	0506421-004D	6/22/05 11:30 AM	6/26/05	6/26/05 12:51 AM
0506421-005D	6/22/05 10:50 AM	6/26/05	6/26/05 1:51 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

QA/QC Officer



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# QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0506421

EPA Method: SW8015C	E	xtraction:	SW35100	;	BatchID: 16790			Spiked Sample ID: N/A		
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	e Criteria (%)
Analyte	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	111	110	0.959	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	94	102	7.82	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

BATCH 16790 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0506421-002E	6/22/05 12:12 PM	6/22/05	6/25/05 1:37 AM	0506421-004E	6/22/05 11:30 AM	6/22/05	6/25/05 2:43 AM
0506421-005E	6/22/05 10:50 AM	6/22/05	6/30/05 2:30 AM	<u> </u>			

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

\_\_\_\_QA/QC Officer



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#### QC SUMMARY REPORT FOR E300.1

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0506421

EPA Method: E300.1		BatchID: 16795			Spiked Sample ID: N/A						
A web to	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	: Criteria (%)	
Analyte	mg/L	mg/L	mg/L % Rec. % Rec.			% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD	
Nitrate as N	N/A	1	N/A	N/A	N/A	93.2	92.2	1.08	N/A	85 - 115	
Sulfate	N/A	ı	N/A	N/A	N/A	105	98.9	5.90	N/A	85 - 115	
%SS:	N/A	0.10	N/A	N/A	N/A	101	101	0	N/A	90 - 115	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

#### **BATCH 16795 SUMMARY**

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0506421-001c	6/22/05 8:50 AM	6/22/05	6/23/05 4:32 PM	0506421-001c	6/22/05 8:50 AM	6/22/05	6/23/05 10:17 PM
0506421-002c	6/22/05 12:12 PM	6/22/05	6/23/05 7:54 AM	0506421-002c	6/22/05 12:12 PM	6/22/05	6/23/05 5:01 PM
0506421-003c	6/22/05 9:30 AM	6/22/05	6/23/05 5:30 AM	0506421-003c	6/22/05 9:30 AM	6/22/05	6/23/05 11:15 PM
0506421-004c	6/22/05 11:30 AM	6/22/05	6/23/05 5:58 PM	0506421-004c	6/22/05 11:30 AM	6/22/05	6/23/05 8:51 PM
0506421-005c	6/22/05 10:50 AM	6/22/05	6/23/05 6:27 PM	0506421-005c	6/22/05 10:50 AM	6/22/05	6/24/05 12:13 PM
0506421-006c	6/22/05 10:10 AM	6/22/05	6/23/05 6:56 PM	0506421-006c	6/22/05 10:10 AM	6/22/05	6/24/05 12:41 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fail outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

QA/QC Officer



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## QC SUMMARY REPORT FOR RSK174

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0506421

EPA Method: RSK174	E	xtraction:	RSK174		BatchID: 16794			Spiked Sample ID: N/A		
A modulo	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	Criteria (%)
Analyte	µg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
Methane	N/A	1.5	N/A	N/A	N/A	101	104	2.59	N/A	80 - 120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

BATCH 16794 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0506421-001B	6/22/05 8:50 AM	6/27/05	6/27/05 12:31 PM	0506421-002B	6/22/05 12:12 PM	6/27/05	6/27/05 3:47 PM
0506421-003B	6/22/05 9:30 AM	6/27/05	6/27/05 5:16 PM	0506421-004B	6/22/05 11:30 AM	6/27/05	6/27/05 4:16 PM
0506421-005B	6/22/05 10:50 AM	6/27/05	6/27/05 2:41 PM	0506421-006B	6/22/05 10:10 AM	6/27/05	6/27/05 4:45 PM
0300421-0030	U/22/03 10.30 AM	0/21/05	0/2/103 2:11 1:12	-			

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

QA/QC Officer



NONE

#### McCampbell Analytical, Inc.

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

#### QC SUMMARY REPORT FOR SM5310B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0506421

EPA Method: SM5310 B	E	xtraction:	SM5310B	}	Batc	hID: 1679	3	Spiked Sample ID: 0506421-001A			
Analyte	Sample	Sample Spiked M		MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
Analyte	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD	
IC as CO2	660	36.7	NR	NR	NR	107	104	2.27	80 - 120	80 - 120	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

**BATCH 16793 SUMMARY** 

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0506421-001A	6/22/05 8:50 AM	6/22/05	6/27/05 6:27 PM	0506421-002A	6/22/05 12:12 PM	6/22/05	6/27/05 6:34 PM
0506421-003A	6/22/05 9:30 AM	6/22/05	6/27/05 6:41 PM	0506421-004A	6/22/05 11:30 AM	6/22/05	6/27/05 6:48 PM
0506421-005A	6/22/05 10:50 AM	6/22/05	6/27/05 6:56 PM	0506421-006A	6/22/05 10:10 AM	6/22/05	6/27/05 7:01 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

SAA QA/QC Officer

1500421. **1680 ROGERS AVENUE** CONDUCT ANALYSIS TO DETECT McCampbell LAB **BLAINE SAN JOSE, CALIFORNIA 95112-1105** ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION FAX (408) 573-7771 LIMITS SET BY CALIFORNIA DHS AND TECH SERVICES, INC. PHONE (408) 573-0555 ☐ EPA RWQCB REGION \_\_\_\_\_ ☐ LIA CHAIN OF CUSTODY T OTHER BTS # 050622-AC1 = COMPOSITE ALL CONTAINERS Nitrate (48 hr. Hold Time) CLIENT SPECIAL INSTRUCTIONS BTEX/MtBE (8021B)\*\* Blymyer Engineers, Inc. SITE Invoice and Report to: Blymyer Engineers, Inc. Dublin Concrete/ Dolan Rentals TPH-G (8015M) TPH-D (8015M) 6393 Scarlett Ct Carbon Dioxide Attn: Mark Detterman **EDF Format Required** Dublin, CA CONTAINERS MATRIX S= SOtL W=H<sub>2</sub>0 TOTAL ADD'L INFORMATION **STATUS** CONDITION LAB SAMPLE # SAMPLE I.D. DATE TIME 6 22 05 850 9 久 1212 930 9 1150 9 1050 a. MJ-6 10/0 KEA! GOOD CONDITIO HEAD SPACE ABSENT.
DECHLORINATED IN LAB. PRESERVATIO

DHS#

SAMPLING DATE TIME SAMPLING COMPLETED 6/22/06 (240 PERFORMED BY ).(	oruish	<u> </u>	RESULTS NEEDED NO LATER THAN AS	contracted
RELEASED BY	DATE 6/22/05	TIME (3350)	RECEIVED BY	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
RELEASED BY	DATE	TIME	RECEIVED BY	DATE TIME
RELEASED BY	DATE	TIME	RECEIVED BY	DATE TIME
SHIPPED VIA	DATE SENT	TIME SENT	COOLER#	

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

110 Second Avenue South, #D7 Pacheco, CA 94553-5500 (925) 798-1620

WorkOrder: 0506421

ClientlD: BEIA

Report to:

Mark Detterman

Blymyer Engineers, Inc. 1829 Clement Avenue

Alameda, CA 94501-1395

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

ProjectNo: Dublin Concrete/Dolan Rentals

PO:

Bill to:

Blymyer Engineers, Inc.

Blymyer Engineers, Inc. 1829 Clement Avenue

Alameda, CA 94501-1395

Requested TAT:

Date Printed:

5 days

Date Received: 06/22/2005

06/23/2005

	<u> </u>	·····							Request	ted Test	s (See le	gend b	elow)					
Sample ID	ClientSampID	Matrix	Collection Date Hole	d 1	2	3	: <b>4</b>	5	6	7	8	9	10	. 11	12	13	. 14	15
0506421-001	MW-1	Water	_6/22/05 8:50:00 AM [ ]	С		A	A	В	<b>.</b>					ļ		<b></b>		1.
0506421-002	MW-2	Water	6/22/05 12:12:00	С	D	Α		В	E					L	<u></u>		ļ	4 4 4
0506421-002	MW-3	Water	6/22/05 9:30:00 AM	С	+	A		В								•	:	
0506421-004	MW-4	Water	6/22/ <b>0</b> 5 11:30:00 [ <sup>**</sup> ]	С	D	<u> </u>	<u> </u>	В	, E				· 	ļ			į	
0506421-005	MW-5	Water	6/22/05 10:50:00	С	D	Α	<u> </u>	В	E	<u> </u>			<del>-</del>	<del></del>			<u></u>	
0506421-006	MW-6	Water	6/22/05 10:10:00	С		, A	:	ј В					:	i			!	

#### Test Legend:

1	300_1_W	į <b>2</b>	G-MBTEX_W	3	IC_M	4 PREDF REP	ORT	, 5	RSK174_W
6	TPH(D)_W	. 7		8		9 :	ļ	10	
11		12		13		14 /	1	15	

Prepared by: Melissa Valles

#### Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



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

Blymyer Engineers, In	с.	Client Project ID	Dublin Co	oncrete/Dolan	Date Sampled: 03/23/0	5			
1829 Clement Avenue		Rentals			Date Received: 03/24/0	5			
.1 1 01 04601	706	Client Contact: N	Aark Dettern	nan	Date Extracted: 03/25/05				
Alameda, CA 94501-1	242	Client P.O.:			Date Analyzed: 03/30/05				
	<del></del>	Inorganic (	Carbon as C	arbon Dioxide	*				
Analytical Method: SM5310 I	3					Work Order: 0503430			
Lab ID	Clie	ent ID	Matrix		IC as CO2	DF			
0503430-001A	M	W-1	w		660	10			
0503430-002A	М	W-2	W		1300	10			
0503430-003A	M	W-3	W		590	10			
0503430-004A	М	W-4	w		700	10			
0503430-005A	М	W-5	W		1400	10			
0503430-006A	М	W-6	w		770	10			
					RECIEIL JUL BLYMYER ENGINEL				
, <del></del>						WED.			
					RIVA	2005			
		,, .,,			DLTNIYER ENGINEL	RS Wa			
i.						``' <u>9;</u>			
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		. • • • • • • • • • • • • • • • • • • •				<del></del>			
Reporting Limit for D	ns not detected at or	. W		1.0 mg/L					
Reporting Limit for DF = 1; ND mean above the reporting li			S		NA				



<sup>\*</sup> water samples are reported in mg/L, soil/sludge/solid samples in mg/kg.

<sup>\*</sup> Non-Purgeable Organic Carbon=NPOC; TOC=Total Organic Carbon; DOC=Dissolved Organic Carbon; POC=Purgeable Organic Cabon; IC=Inorganic Carbon.

i) liquid sample contains greater than ~1 vol. % sediment.

Bola

0503430

				16	80 ROGI	ERS AVENU	JE		CON	DUCT.	ANALY	YSIS T	O DE	FECT	<del></del> -		McCampbell		DHS#	
	BLA TECH SEF				FAX (	A 95112-11 408) 573-77 408) 573-05	71	·								ALL ANALYSES MUST LIMITS SET BY CALIF EPA LIA	ORNIA DHS ANI			
	CHAIN OF CU	STODY	BTS#	0503	323-	BAI	SS.						۰		150	OTHER				
	CLIENT	Blymye	r Engine	ers, Inc	).		CONTAINERS		**(				Time)		4 4/01/	Invoice and Report to: Blymyer Engineers, Inc.				
	SITE	Dublin (	Concrete	/ Dola	n Rent	als	CON	_	(8021B)*				Hold 7							
	6393 Scarlett Ct						E ALL	(8015M)	E (8(	(8015M)	xide			H. H.	TY	Attn: Mark Dette				
	CAMPLE I D	Dublin, C	CA TIME	S= SOIL W=H <sub>2</sub> 0	CON	TAINERS	C = COMPOSITE	TPH-G (80	BTEX/MtBE	TPH-D (80	Carbon Dioxide	Methane	Nitrate (48	Sulfate	۸ ا	EDF Format Req ** Analyze the sam fuel oxygenates + 82 (8260**) ADD'L INFORMATION	وأنسطه علقانين بالب	nighest MTB gers EDB & CONDITION	E result for 5 1,2-DCA.  LAB SAMPLE #	
4	SAMPLE I.D.	3/23		_	5		1	<u> </u>			X	X	×	X						
	MW-2		1220		10			X	X	X	×	X	X	X	$\geq$					
	μω-3		1020		5		ļ	<u> </u>			圣	×		X	ļ			-		
+	MW-4		كالك		10	<u> </u>		X	X	1	<del>-                                    </del>	l .	<del> </del>	×				<del> </del>		
*	MW-5	_	1145	<b>                                     </b>	10		<u> </u>	×	X	X	X	<del>                                     </del>	×	X	ļ	<del></del>				
7	MW-6	k 5	1300 1300	シ	5						×	X	<u> </u>	<u> </u>		ONHOLD	5/23/05			
							<u> </u>									GOOD CONI HEAD SPACE DECHLORIN	ADSENT ATED IN LAB	APPROPRI/ CONTAINE PRESERVE	Я	
	SAMPLING COMPLETED	DATE 323/05	TIME 1300	SAMPL PERFO		Y B2	DA		P.C.		I	<u> </u>	<del></del>			RESULTS PRESERVATION NO LATER THAN	As contracte		TIME	
	RELEASED B	EASED BY							25		20	<b>.</b>		EIVE	in Children	4		3/29	1/05 3 20	
	RELEASED BY				DA 3	24	65	TIME	15		REC	_\	$\mathcal{M}$	O Val		DATE DATE	TIME 105 6:15/			
	RELEASED B	Y	L ·				DA.	IE/		TIME	-	I	REC	EIVEI	וםי			15///2	,	
	SHIPPED VIA						DA	TE SE	NT	TIME	SEN	ſ	COC	LER	#					