geo - logic *geotechnical and environmental consulting services*

1140 - 5th Avenue, Crockett, CA 94525 (510) 593-5382 - Fax (510) 787-1457

May 14, 2010

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

RE: Report of Monitoring Well Installation and May 2010 Sampling
Allied Engineering Co., 2421 Blanding Avenue, Alameda, CA
Fuel Leak Case No. RO0002601

Dear Mr. Plunkett:

This report documents the installation of three monitoring wells at the above-referenced site, and the first sampling. This work was completed in accordance with Geo-Logic's work plan dated December 22, 2008, as requested in a letter from Alameda County Environmental Health (ACEH) dated November 13, 2008.

SITE DESCRIPTION

The subject site is located on the northeastern side of Blanding Avenue, southeast of Park Street, on the eastern perimeter of Alameda, Alameda County, California. The site is located adjacent to the tidal canal of Alameda Harbor. At the site, a 2,000-gallon gasoline tank, dispenser and the related product piping were removed. A Site Plan (Figure 1) showing the location of these features is attached to this report.

PREVIOUS FIELD ACTIVITIES

On January 7, 2004, one 2,000-gasoline tank was removed. Mr. Bill Oyas, Fire Inspector with the City of Alameda, and Mr. Rob Weston of Alameda County Environmental Health (ACEH) witnessed the tank removal. Mr. Weston also directed the soil and groundwater sampling.

The tank was constructed of single wall steel, and appeared to have been covered with a tar paper that was largely dissolved. The tank, which measured approximately six feet in diameter and ten feet in length, appeared to be in good condition and no holes were observed. The fill port for the tank was located on the eastern end of the tank, and had consisted of a "T" fitting that was plumbed to a remote fill location and a fill port directly over the tank. The tank was transported under manifest to ECI in Richmond, California.

Odors of hydrocarbons were detected in the excavated soils and sidewalls, and in the groundwater. Groundwater collected in the tank pit excavation at approximately nine feet below grade.

The tank pit backfill material appeared to be a silty fine-grained sand which was stained dark gray to black. The native material in the sidewalls, beneath about 1.5 feet of fill material, appeared to be clayey silt and silty clay, which was dark brown to about five feet below grade, where the color changed to olive green.

Following tank removal, a "grab" groundwater sample was collected from the tank pit excavation. The sample was collected using a disposable teflon bailer. Some oily product appeared to have collected on the surface of the water, which may have been the result of the dissolving of the tar paper that was originally on the tank. The groundwater sample had a moderate odor of weathered fuel.

One soil sample, designated as TP-W (7.25'), was collected from the sidewall of the western end of the tank pit excavation at the depth indicated. The soil at this location consisted of dark gray to black silty sand backfill with a moderate odor of weathered fuel. A second sample, designated as TP-N (8'), was collected from the northern sidewall of the excavation. The soil at this location consisted of green clayey silt/silty clay, which also had a moderate odor of weathered fuel. The locations of the sample points are shown on Figure 1.

One soil sample, designated as P1 (3.5'), was collected at a 90 degree elbow location in the product piping trench, approximately 1.5 foot below the excavation bottom. No odors of hydrocarbons were observed at this location. Another soil sample, designated as Disp. (3.5'), was collected from beneath the former dispenser location. A moderate odor of weathered fuel was observed on this sample. The materials at these locations consisted of native dark gray clayey silt/silty clay. The locations of these sample points are shown on Figure 1.

The soil and groundwater samples were analyzed for TPH as gasoline, benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA method 8020, and for total lead. All of the soil and groundwater samples were also analyzed for the eight fuel oxygenates by EPA Method 8260. The groundwater sample was also analyzed for organic lead.

Elevated concentrations of TPH as gasoline and BTEX were detected in the soil and groundwater samples. MTBE and the eight fuel oxygenates were non-detectable. 8.4 parts per billion of 1,2-dichloroethane was detected in the grab groundwater sample. Total Lead was detected in the samples at what appears to be naturally-occurring background concentrations. Organic Lead was non-detectable in the grab ground water sample.

On March 8, 2007, one four-part composite sample was collected from approximately 100 cubic yards of soil that had remained on site since the tank removal. The soil was underlain by plastic tarps. The stockpile sample was analyzed for TPH as gasoline, BTEX, and MTBE by EPA method 8020, and for total lead and STLC lead. The soil was profiled for disposal and was later removed from the site and transported to the Altamont Landfill in Livermore, California.

Based on letters from the ACEH dated September 22, 2006 and March 28, 2005, Geo-Logic prepared a work plan dated March 16, 2007 for a soil and groundwater investigation. The work plan was reviewed by ACEH and revisions were requested in a letter dated April 10, 2007. The revisions to the work plan were prepared and submitted on April 23, 2007, and were conditionally approved by the ACEH in a letter dated May 24, 2007.

On June 27, 2007, six of the eight proposed borings were completed to groundwater, and other shallow borings were completed. Borings B1, B5, B6 and B8 were completed at the proposed locations. Due to access limitations (the presence of concrete near the bank and trees overhead), boring B2 was not completed at the proposed location and B3 was relocated midway between the originally proposed locations of B2 and B3. Boring B4 could not be completed with the drilling rig due to the presence of trees. Two attempts were made using a hand auger. The first attempt, designated as B4A, encountered sheet metal at about one foot, proximal to a sheet metal building. The second attempt, designated as B4B, encountered metal shavings at about one foot below grade, and the hole was terminated due to refusal.

Boring 7 was attempted three times at or near the original location with the drill rig but encountered concrete about one foot below grade. As it was observed that there was an active storm drain that outletted to the estuary underlying this area, the boring was relocated and completed to the northwest. This location was desirable to provide delineation both of the hydrocarbons in water, and possible metal debris near the bank.

The borings were completed using a geoprobe rig provided by Vironex of Pacheco, California, a state-licensed driller. The locations of the borings are shown on Figure 1. The borings were continuously cored and the subsurface soils were examined for evidence of contamination. A photo-ionization detector (PID) was also used to screen the soil for contamination. Samples were selected from about five feet below grade, at the capillary fringe (about 7.5 feet below grade), and at about 12.5 feet and 15 feet below grade. The 12.5 foot samples generally corresponded to the last part of a layer of low permeability soils that appeared to contain hydrocarbons in many of the holes. The sample at the total depth (about 15 feet below grade) was generally in higher permeability water-bearing sandy soils and no odor of hydrocarbons was apparent.

All of the soil and groundwater samples were analyzed for TPH as gasoline, BTEX, and MTBE by EPA Methods 8015 and 8020. The ground water samples were analyzed for the fuel oxygenates and lead scavengers by EPA Method 8260. Selected soil samples from B3, B7B and B7C from a depth of four to 4.5 feet below grade, and the groundwater samples from B3 and B7C, were analyzed for the CAM 17 metals. The soil from B7B and B7C at that interval had visible metal debris in it. Mr. Steven Plunkett of ACDEH witnessed most of the drilling and sampling.

The analytical results of the soil samples indicated predominantly non-detectable results for petroleum hydrocarbons, except at the capillary fringe (about 7.5 feet below grade). The samples from B3, which was about 1.5 foot higher in elevation than the tank pit borings, had an elevated TPH as gasoline concentration at 12.5 feet below grade and non-detectable results at 7.5 feet below grade. The sample from 4.5 feet below grade near the former dispenser location at B5 also had elevated concentrations of hydrocarbons.

The analytical results of the grab groundwater samples indicated dissolved concentrations of hydrocarbons in groundwater in all of the borings except B7C, which was non-detectable. The concentrations of benzene in groundwater attenuated to very low (2.4 ppb in B3) to non-detectable to the north and east. The concentrations were not defined below about 100 to 160 ppb to the west and south.

The analytical results for the CAM 17 metals in B3 at 4.5 feet below grade, which appeared to be native soil, did not indicate any metals above the ESLs. The sample from B7B at four feet below grade, which contained abundant metal debris, had concentrations of nine of the CAM 17 metals above the ESLs. This sample, which contained the highest concentration of chromium of the soil samples analyzed, was also analyzed for hexavalent chromium by method E218.6m, which indicated a concentration of hexavalent chromium of 500 ppm. Arsenic and chromium concentrations exceeded their respective ESLs in the soil sample from B7C at 4.5 feet below grade, which also appeared to be historical fill material similar to the sample from B7B.

The analytical results for the CAM 17 metals in groundwater indicated concentrations of 14 metals above their respective ESLs in B3, and eleven metals above their respective ESLs in B7C. Except for lead and molybdenum, the concentrations of metals in the groundwater sample from B7C are significantly lower than the concentrations in B3. The collection of the sample in B7C was difficult and the rods were retracted three times, making it possible that metal debris from shallower depth affected the water sample analyses.

This work is summarized in Geo-Logic's "Report of Soil and Groundwater Investigation" dated July 18, 2007.

RECENT FIELD ACTIVITIES – WELL INSTALLATION

On April 19, 2010, three monitoring wells, designated as MW1 through MW3 on the attached Figure 3, were installed at the site. The wells were completed using a hollow stem auger drilling rig operated by Vironex, a state-licensed driller. Prior to drilling, the site was marked for Underground Service Alert and drilling permits were obtained from Alameda County Public Works. Also, a health and safety plan was prepared.

Well MW1 was located in the vicinity of previous boring B1, on the northeast side of the former tank pit, within the warehouse. Well MW2 was located adjacent to previous boring B5, at the former dispenser location. Well MW3 was located adjacent to previous boring B3, near the top of the estuary bank. Due to the previous logging and sampling, soil samples were not collected from the borings for these wells, however, the drill cuttings were examined for lithology and evidence of contamination. Boring logs showing the lithology encountered and the well construction details for all three wells are attached to this report.Odors of hydrocarbons were encountered beginning at approximately 6 feet (capillary fringe) in MW1, and at approximately two feet in MW2, in the former dispenser area.

Cuttings generated during well installation and decontamination water was placed in DOT-approved 55-gallon drums pending analysis and proper disposal. A composite sample of the drill cuttings was collected by filling a liner directly from the drums. The soil sample was covered with teflon tape and plastic caps, labeled, placed in an ice chest, and entered on a chain of custody form prior to same day delivery to the laboratory

Well Construction: The well casing consisted of two-inch diameter schedule 40 PVC with flush threaded joints and 0.010 inch factory slots. Based on previous conditions encountered in exploratory borings, the wells were screened between approximately 5 and 20 feet below grade with 0.010 inch screen. #2/12 sand was used for the filter pack and was placed from approximately 4.5 to 20 feet below grade, starting approximately 1/2 foot above the perforated interval. A 0.5-foot thick bentonite seal was placed in the annular space on top of the sand pack. Neat cement grout was placed on top of the bentonite seal to the surface. Ms. Vicky Hamlin of Alameda County Public Works witnessed part of the well installation activities.

The well casings were secured with waterproof caps and padlocks. Round, watertight, flush-mounted well covers were concreted in place over the tops of the casings. The elevations of the well casings were surveyed by a licensed land surveyor (Virgil Chavez Surveying of Vallejo, CA) to Mean Sea Level and to a vertical accuracy of 0.01 feet. A copy of the survey data is attached to this report. As required, Well Completion Reports were sent to Alameda County Public Works.

Well Development: The wells seals were allowed to set over 72 hours after well completion. Prior to development, the wells were checked for total depth and depth to the water table using an electronic sounder. After recording the monitoring data, on April 26 (MW1 and MW3) and April 27 (MW2), 2010, the wells were developed by the use of a surge block and a pump. During purging operations, the field parameters pH, temperature, and electrical conductivity were recorded after each 1/2 casing volume of groundwater was removed. The well purging was terminated when successive parameter measurements varied by less than 10%. The field data sheets for the well development are attached to this report. Effluent generated during well development was contained in DOT-approved drums prior to analysis and proper disposal.

RECENT FIELD ACTIVITIES –GROUNDWATER SAMPLING

On May 4, 2010, samples were obtained from the three wells, and the wells were monitored. The groundwater samples were collected as follows: prior to sampling, the wells were checked for depth to water and the presence of free product and sheen. No free product or sheen was noted in the wells.

The wells were bailed until the volume of water withdrawn was equal to at least three casing volumes. To assure that a representative groundwater sample was collected, periodic measurements of the temperature, pH and specific conductance were made. The samples were collected only when the temperature, pH, and/or specific conductance reached relatively constant values.

Water samples were collected using disposable bailers. An effort was made to minimize exposure of the samples to air. The samples were decanted into clean VOA vials that were then sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to the laboratory. The containers for CAM 17 metals analyses were filtered using 0.45 micron disposable filters. Excess water resulting from the purging and cleaning procedures was collected and contained in a drum.

On May 4, 2010, the measured depth to groundwater in wells MW1 through MW3 varied between approximately 6.76 to 10.49 feet below the tops of the well casings. As shown on Figure 2, the estimated hydraulic gradient is to the north at approximately 0.24 feet per foot, apparently under strong tidal influence. There was a difference of 1.64 feet between well MW2 and well MW3.

The groundwater elevation data is summarized in Table 1 and on Figure 2. . Copies of the field data sheets are attached to this report.

ANALYTICAL RESULTS

The soil and groundwater samples were analyzed by McCampbell Analytical Laboratory in Pittsburg, California, a state-certified laboratory. The groundwater samples were analyzed for TPH as gasoline, BTEX, and MTBE and the fuel oxygenates and lead scavengers by EPA Method 8260 B, and for the CAM 17 metals. A sample of the drill cuttings, designated as "Drum Sample", was analyzed for TPH as gasoline, BTEX, and MTBE by EPA Methods 8015 and 8020, and for Total Lead. .

The analytical results of the groundwater samples collected from the three monitoring wells indicated concentrations ranging from predominantly non-detectable in MW3 to up to 2,300 parts per billion (ppb) of TPH as gasoline and up to 210 ppb of benzene in MW2, at the former dispenser area. At MW3, the only detected analyte was MTBE, at a concentration of 1.6 ppb. Toluene and xylenes were also detected in MW2 at concentrations of 5.8 and 130 ppb, respectively. At MW1, adjacent to the former tank pit, TPH as gasoline, benzene, toluene, xylenes and t-Butyl Alcohol were detected at concentrations of 380, 22, 0.77, 1.2 and 2.4 ppb, respectively. The concentrations of TPH as gasoline (2,300 ppb), benzene (210 ppb), and xylenes (130 ppb) are in excess of their respective Environmental Screening Levels (Table F-1b).

For the CAM 17 metals, six metals (beryllium, chromium, mercury, selenium, silver, and thallium) were non-detectable. Of the other eleven metals, cadmium, cobalt, copper, lead and nickel were detected in excess of their respective ESLs. Nickel concentrations were particularly elevated (ranging up to 190 ppb in MW2, in excess of the ESL of 8.2 ppb).

The analysis of the drum sample yielded non-detectable concentrations of petroleum hydrocarbons and a concentration of total lead of 2.6 parts per million (ppm).

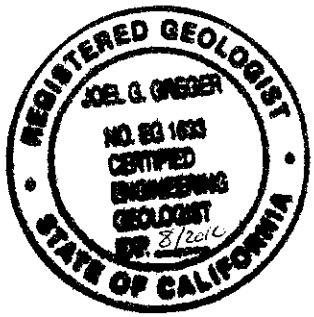
The analytical data is summarized in Tables 2 and 3 and Figure 3. Copies of the laboratory analyses data sheets and chain of custody are attached to this report.

RECOMMENDATIONS

This report will be uploaded to the Geotracker database in addition to the ACEH database. The next sampling is tentatively scheduled for fall 2010. After review of the additional data, additional recommendations will be made, as warranted. Geo-Logic is in the process of uploading this report to Geotracker.

Should you have any questions regarding this report, please do not hesitate to call me at (510) 593-5382.

Sincerely,
Geo-Logic



Joel G. Greger
Certified Engineering Geologist
Registered Environmental Assessor
CEG # EG1633, REA # 07079

cc: Mr. Dave Belcher, Allied Engineering

Attachments: Tables 1 through 3
Figures 1 through 3
Boring Logs
Laboratory Analytical Data
Field Data Sheets
Survey Data

TABLES

2421 Blanding Avenue
Alameda, California

May 2010

TABLE 1
GROUNDWATER MONITORING DATA
2421 Blanding Ave., Alameda, CA

Well No.	Date	Groundwater Elevation	Top of casing Elevation	Depth to Water	Well Depth	Product Thickness	Sheen	Water purged (gallons)
MW1	4/26/2010	2.37	8.27	5.90	20.13	0	No	25
	5/4/2010	-0.30		8.57	20.18	0	No	7
MW2	4/27/2010	2.60	7.24	4.64	18.90	0	No	28
	5/4/2010	0.48		6.76	19.18	0	No	8.5
MW3	4/26/2010	2.36	9.33	6.97	20.02	0	No	25
	5/4/2010	-1.16		10.49	20.04	0	No	5.75

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - HYDROCARBONS
2421 Blanding Ave., Alameda, CA

Well No.	Date	TPH-g (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TBA (ppb)
MW1	5/4/2010	380	22	0.77	<0.5	1.2	<0.5	2.4
MW2	5/4/2010	**2,300**	**210**	5.8	<5.0	**130**	<5.0	<20
MW3	5/4/2010	<50	<0.5	<0.5	<0.5	<0.5	1.6	<2.0
ESL		100/500	1.0/46	40/130	30/290	13/13	5.0/1,800	12/18,000

EXPLANATION:
ppb = parts per billion
TPH =Total Petroleum Hydrocarbons as gasoline.
TBA = t-Butyl alcohol
ESL - Environmental Screening Level, Tables F-1a/F-1b (groundwater is/is not a potential drinking water source).

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - CAM 17 METALS
2421 Blanding Avenue, Alameda, CA

Well No.	Antimony (ppb)	Arsenic (ppb)	Barium (ppb)	Cadmium (ppb)	Cobalt (ppb)	Copper (ppb)	Lead (ppb)	Molybdenum (ppb)	Nickel (ppb)	Vanadium (ppb)	Zinc (ppb)
MW1	<0.5	17	130	**0.29**	**6.2**	<0.5	2.1	4.8	**120**	6.0	5.9
MW2	<0.5	4.1	84	**1.0**	**7.9**	1.7	**4.0**	2.4	**190**	8.0	14
MW3	0.65	2.7	180	**2.1**	**5.9**	**6.4**	**14**	20	**85**	4.4	7.0
ESL - Table F-1a	6.0	36	1000	0.25	3.0	3.1	2.5	35	8.2	15	81
ESL - Table F-1b	3.0	36	1000	0.25	3.0	3.1	2.5	240	8.2	19	81

EXPLANATION:

ESL = Environmental Screening Level, RWQCB, May 2008. Table F-1a, groundwater is a potential drinking water source, Table F-1b, groundwater is not a potential drinking water source.

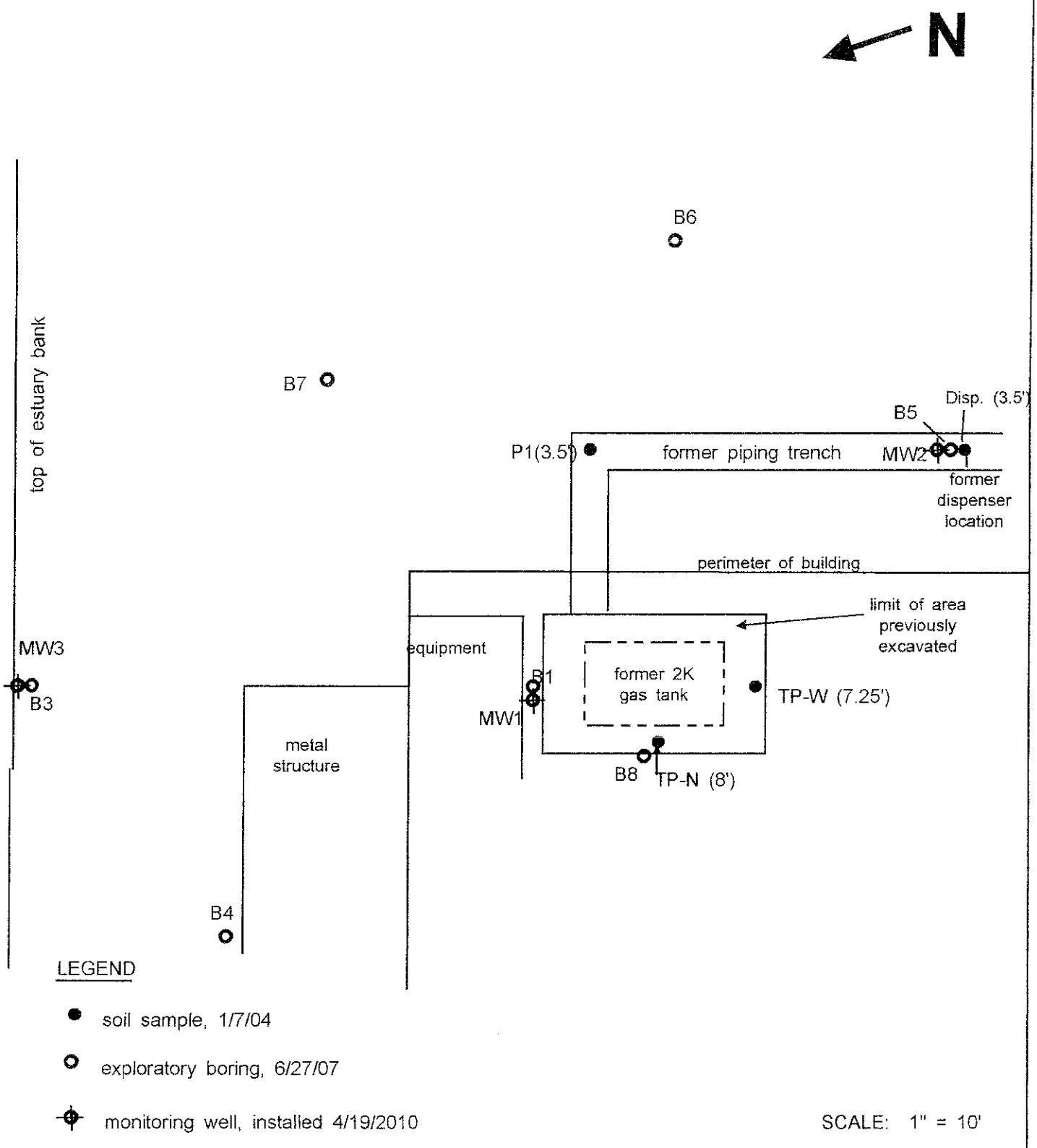
All other CAM 17 metals were non-detectable.

ppb = parts per billion

FIGURES

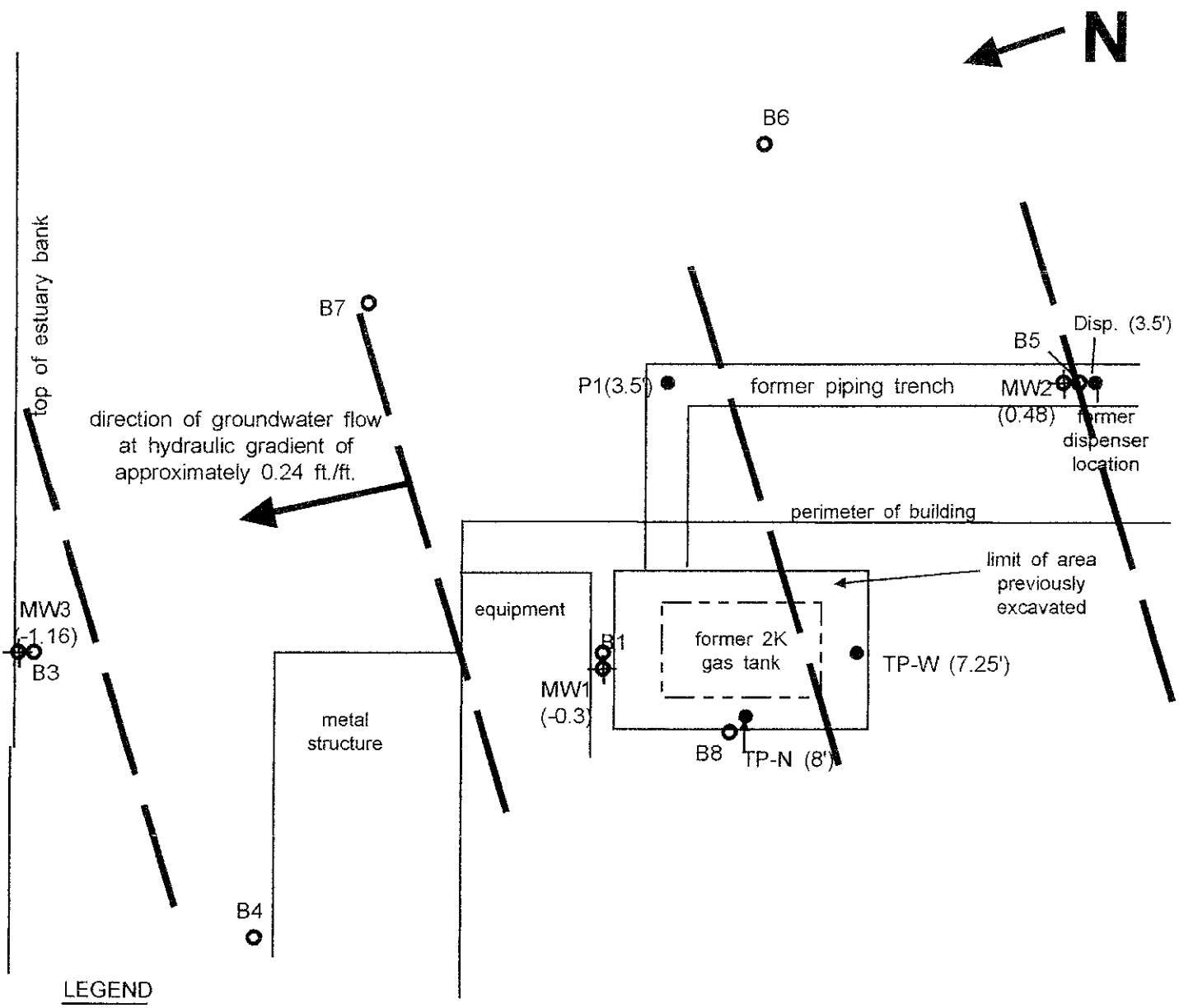
2421 Blanding Avenue
Alameda, California

May 2010



Allied Engineering & Production Co. 2421 Blanding Avenue Alameda, California	Figure No: 1	Date: May 6, 2010 Drawn By: JG/Geo-Logic

Site Plan



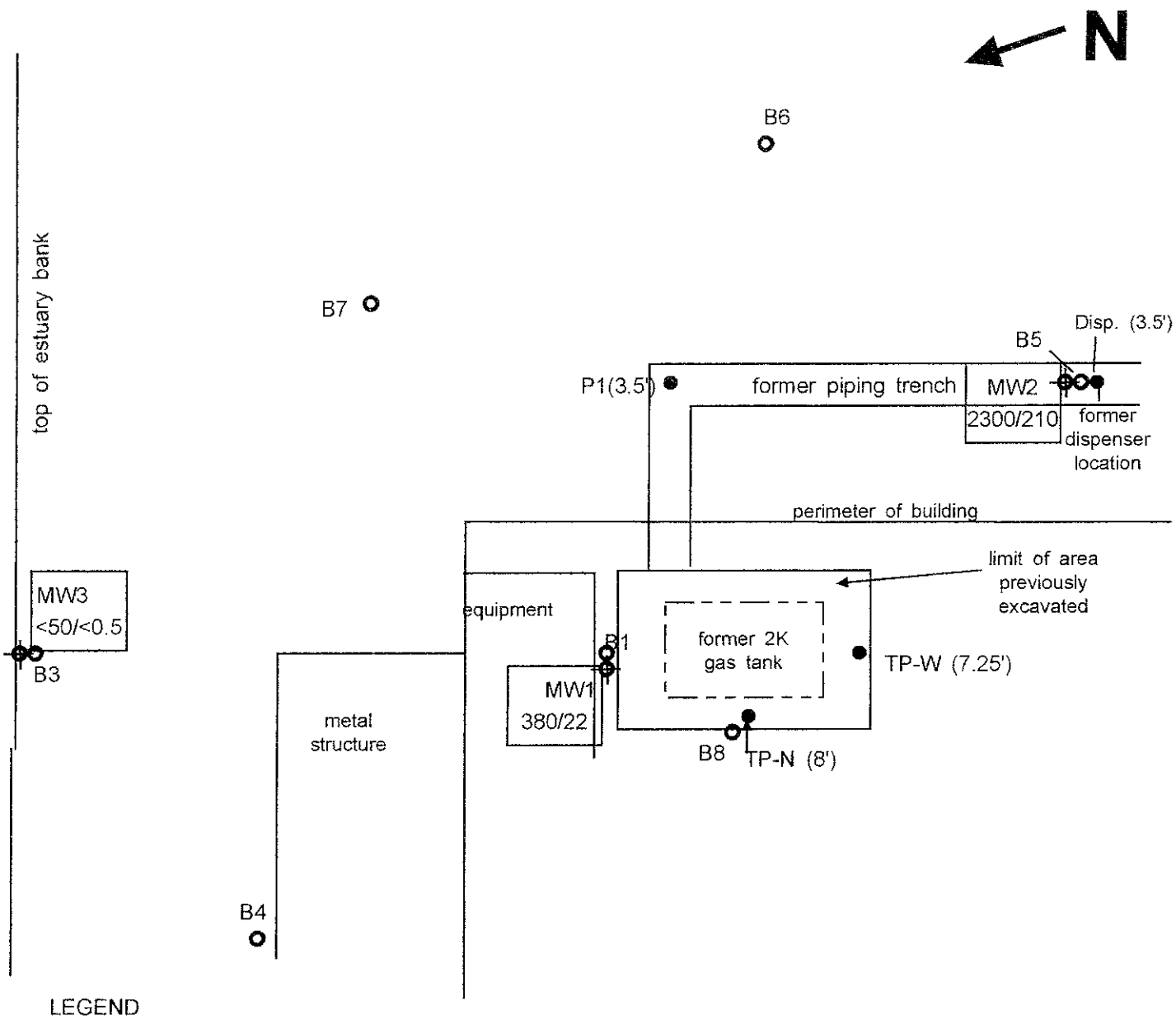
LEGEND

- soil sample, 1/7/04
- exploratory boring, 6/27/07
- monitoring well, installed 4/19/2010
- (0.48) elevation of groundwater, 5/4/2010
- contour of equal groundwater elevation, 5/4/2020

SCALE: 1" = 10'

Allied Engineering & Production Co. 2421 Blanding Avenue Alameda, California	Figure No: 2	Date: May 11, 2010 Drawn By: JG/Geo-Logic

Potentiometric Surface Map



LEGEND

- soil sample, 1/7/04
- exploratory boring, 6/27/07
- monitoring well, installed 4/19/2010

MW3 <50/<0.5 concentration of TPH-gas/benzene in ppb, 5/4/2010

SCALE: 1" = 10'

Allied Engineering & Production Co. 2421 Blanding Avenue Alameda, California	Figure No: 3	Date: May 13, 2010 Drawn By: JG/Geo-Logic

Groundwater Contaminant Concentration Map

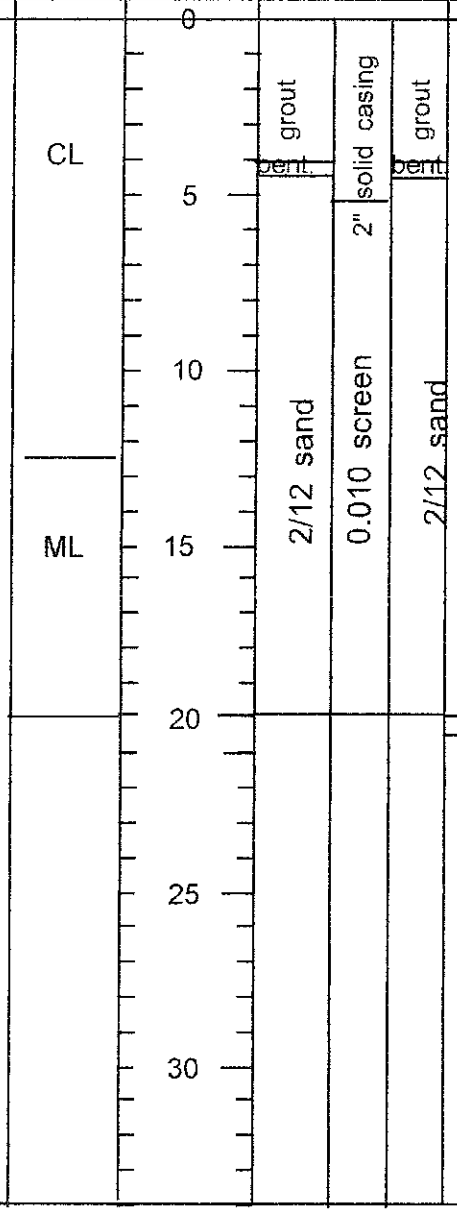
BORING LOGS

2421 Blanding Avenue
Alameda, California

May 2010

BORING LOG

Permit No. W2010-0191	Boring diameter: :8"	Logged By: Joel Greger
Project: 2421 Blanding	Elevation: 8.27 TOC	Date drilled: 4-19-2010
Well No. MW1	Drilling Method: Hollow Stem	Drilling Company: Vironex



@0' - 4" of concrete then dark gray silty clay (CL), sl. moist, stiff, no odor.

@6' - Light green silty clay (CL), moist, stiff, becoming sandy clay (CL) at 7.5 w/ moderate odor of hydrocarbons, saturated, stiff.

@7.5' - strong odor of hydrocarbons

@ 10' - No odor, sandy clay (CL), as above.

@ 13' - grades into silty sand (ML), saturated, dense, little or no odor.

Total Depth - 20'. 0.010 screen, two inch casing, 5-20'. 2/12 sand 4.5-20'. Neat cement grout 0-4.5'.

Allied Engineering 2421 Blanding Avenue Alameda, CA	Figure No: MW1	Date: 4-22-10 Drawn By: JG

BORING LOG

Permit No. W2010-0192	Boring diameter: :8"	Logged By: Joel Greger
Project: 2421 Blanding	Elevation: 7.24 TOC	Date drilled: 4-19-2010
Well No. MW2	Drilling Method: Hollow Stem	Drilling Company: Vironex

Sample intervals	USCS	Depth (ft)	Well Construction	Description
	CL	0 5 10	grout bent. 2/12 sand	@0' - 1' of concrete pavement then v. dark gray silty clay (CL), sl. moist, stiff. @2' - odor of hydrocarbons. @5.5' - Lt. green silty to sandy clay, (CL), moist, moderate odor. @8 - 10' - sandy clay (CL), saturated, stiff, moderate odor.
	ML	15 20 25 30	2" solid casing 0.010 screen grout bent 2/12 sand	@10 - 12' - light green sandy clay (CL), stiff, saturated, moderate odor, grades to clayey to silty sand (ML) at 11.3'. Sand v. fine-grained, dense, less odor. Total Depth - 20'. 0.010 screen, two inch casing, 5-20'. 2/12 sand 4.5-20'. Neat cement grout 0-4.5'.

Allied Engineering 2421 Blanding Avenue Alameda, CA	Figure No: MW2	Date: 4-22-10 Drawn By: JG

BORING LOG

Permit No. W2010-0193	Boring diameter: :8"	Logged By: Joel Greger
Project: 2421 Blanding	Elevation: 6.97 TOC	Date drilled: 4-19-2010
Well No. MW3	Drilling Method: Hollow Stem	Drilling Company: Vironex

Sample intervals	USCS	Depth (ft)	Well Construction	Description
	ML	0	grout / bent.	@0' - 3" of concrete then loose silt w/ rounded gravels to 2" diameter, voids, roots (fill).
		5	2" solid casing	@4' - Dark brown silt (ML), moist, stiff. @5' - Tan to light brown clayey silt and silt (ML), locally with roots, v. moist, stiff.
		10	2/12 sand / 0.010 screen / 2/12 sand	@8' - grades to light green clayey silt (ML) with strong odor of hydrocarbons, saturated, stiff. @10'. Grades to sandy clay (CL), saturated, stiff, sand v. fine-grained'.
	CL			
	ML	15		@13.5' - grades to silty sand (ML), saturated, little or no odor.
		20		Total Depth - 20'. 0.010 screen, two inch casing, 5-20'. 2/12 sand 4.5-20'. Neat cement grout 0-4.5'.
		25		
		30		

Allied Engineering 2421 Blanding Avenue Alameda, CA	Figure No: MW3	Date: 4-22-10 Drawn By: JG

LABORATORY ANALYTICAL DATA

2421 Blanding Avenue
Alameda, California

May 2010

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Geo-Logic	Client Project ID: Allied Engineering	Date Sampled: 05/04/10
		Date Received: 05/05/10
1140 5th Avenue	Client Contact: Joel Gregor	Date Extracted: 05/05/10
Crockett, CA 94525	Client P.O.:	Date Analyzed 05/07/10-05/12/10

CAM / CCR 17 Metals*

Lab ID	1005108-001B	1005108-002B	1005108-003B		Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	MW1	MW2	MW3			
Matrix	W	W	W		S	W
Extraction Type	DISS.	DISS.	DISS.		mg/kg	µg/L

ICP-MS Metals, Concentration*

Analytical Method: E200.8 Extraction Method: E200.8 Work Order: 1005108

Dilution Factor	1	1	1		1	1
Antimony	ND	ND	0.65		NA	0.5
Arsenic	17	4.1	2.7		NA	0.5
Barium	130	84	180		NA	5.0
Beryllium	ND	ND	ND		NA	0.5
Cadmium	0.29	1.0	2.1		NA	0.25
Chromium	ND	ND	ND		NA	0.5
Cobalt	6.2	7.9	5.9		NA	0.5
Copper	ND	1.7	6.4		NA	0.5
Lead	2.1	4.0	14		NA	0.5
Mercury	ND	ND	ND		NA	0.025
Molybdenum	4.8	2.4	20		NA	0.5
Nickel	120	190	85		NA	0.5
Selenium	ND	ND	ND		NA	0.5
Silver	ND	ND	ND		NA	0.19
Thallium	ND	ND	ND		NA	0.5
Vanadium	6.0	8.0	4.4		NA	0.5
Zinc	5.9	14	7.0		NA	5.0
%SS:	N/A	N/A	N/A			

Comments					

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Geo-Logic	Client Project ID: Allied Engineering	Date Sampled: 05/04/10
		Date Received: 05/05/10
1140 5th Avenue	Client Contact: Joel Gregor	Date Extracted: 05/06/10
Crockett, CA 94525	Client P.O.:	Date Analyzed 05/06/10

TPH(g) by Purge & Trap and GC/MS*

Extraction method SW5030B Analytical methods SW8260B Work Order: 1005108

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
001A	MW1	W	380	1	101	
002A	MW2	W	2300	10	98	b1
003A	MW3	W	ND	1	95	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

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

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Geo-Logic	Client Project ID: Allied Engineering	Date Sampled: 05/04/10
		Date Received: 05/05/10
1140 5th Avenue	Client Contact: Joel Gregor	Date Extracted: 05/06/10
Crockett, CA 94525	Client P.O.:	Date Analyzed: 05/06/10

Oxygenates, MBTEX & Lead Scavengers by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1005108

Lab ID	1005108-001A	1005108-002A	1005108-003A		Reporting Limit for DF =1	
Client ID	MW1	MW2	MW3			
Matrix	W	W	W			
DF	1	10	1		S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND<5.0	ND		NA	0.5
Benzene	22	210	ND		NA	0.5
t-Butyl alcohol (TBA)	2.4	ND<20	ND		NA	2.0
1,2-Dibromoethane (EDB)	ND	ND<5.0	ND		NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND<5.0	ND		NA	0.5
Diisopropyl ether (DIPE)	ND	ND<5.0	ND		NA	0.5
Ethylbenzene	0.95	34	ND		NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND<5.0	ND		NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND<5.0	1.6		NA	0.5
Toluene	0.77	5.8	ND		NA	0.5
Xylenes	1.2	130	ND		NA	0.5
Surrogate Recoveries (%)						
%SS1:	87	86	88			
%SS2:	96	98	98			
Comments		b1				

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

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR E200.8

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 50398 WorkOrder 1005108

EPA Method E200.8 **Extraction E200.8** **Spiked Sample ID: 1005001-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Antimony	ND	10	104	103	0.190	96.4	101	4.46	70 - 130	20	85 - 115	20
Arsenic	2.3	10	103	101	2.00	94.7	99.2	4.64	70 - 130	20	85 - 115	20
Barium	72	100	95.4	95	0.239	99.2	102	3.17	70 - 130	20	85 - 115	20
Beryllium	ND	10	104	102	1.75	100	103	2.27	70 - 130	20	85 - 115	20
Cadmium	ND	10	100	99.2	0.793	94.6	99.4	4.97	70 - 130	20	85 - 115	20
Chromium	ND	10	98.6	96.8	1.91	96.6	98.9	2.37	70 - 130	20	85 - 115	20
Cobalt	ND	10	91.8	90	1.97	92.8	97.2	4.60	70 - 130	20	85 - 115	20
Copper	8.2	10	96.1	95.1	0.564	101	104	2.37	70 - 130	20	85 - 115	20
Lead	ND	10	98	97.8	0.152	94.7	97.4	2.88	70 - 130	20	85 - 115	20
Mercury	ND	0.25	86.5	84.4	2.53	94.8	97.1	2.38	70 - 130	20	85 - 115	20
Molybdenum	3.4	10	100	99.5	0.749	92.3	97.3	5.31	70 - 130	20	85 - 115	20
Nickel	0.67	10	93.9	93.2	0.758	93.4	96.3	3.00	70 - 130	20	85 - 115	20
Selenium	0.59	10	97.1	100	3.06	94.7	98.5	3.95	70 - 130	20	85 - 115	20
Silver	ND	10	97.5	96.5	1.03	95.9	99.9	4.11	70 - 130	20	85 - 115	20
Thallium	ND	10	96.5	96.4	0.176	92	94.4	2.53	70 - 130	20	85 - 115	20
Vanadium	3.0	10	101	99	1.92	97.2	101	3.30	70 - 130	20	85 - 115	20
Zinc	ND	100	99.1	98.6	0.475	92.1	95.5	3.45	70 - 130	20	85 - 115	20
%SS:	109	750	110	109	0.304	97	100	3.08	70 - 130	20	70 - 130	20

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

BATCH 50398 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1005108-001B	05/04/10 12:54 PM	05/05/10	05/07/10 4:45 PM	1005108-001B	05/04/10 12:54 PM	05/05/10	05/12/10 3:48 AM
1005108-002B	05/04/10 12:18 PM	05/05/10	05/07/10 5:20 PM	1005108-002B	05/04/10 12:18 PM	05/05/10	05/12/10 3:54 AM
1005108-003B	05/04/10 11:40 AM	05/05/10	05/07/10 5:29 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 = matrix interference and/or 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.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 50458 WorkOrder 1005108

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 1005108-003A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	96.3	92.4	4.11	83.2	85.1	2.25	70 - 130	30	70 - 130	30
Benzene	ND	10	103	97	6.18	96.7	95.9	0.814	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	99.8	104	4.49	81.9	85.9	4.71	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	103	104	0.878	93.5	93.7	0.241	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	102	100	2.26	94.1	94.1	0	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	114	108	5.33	104	104	0	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	104	101	3.63	94.3	95.2	0.885	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	1.6	10	115	114	1.29	99.3	103	3.38	70 - 130	30	70 - 130	30
Toluene	ND	10	92.2	87.3	5.24	94.5	94.4	0.0801	70 - 130	30	70 - 130	30
%SS1:	88	25	88	87	0.817	84	86	2.26	70 - 130	30	70 - 130	30
%SS2:	98	25	98	99	0.452	105	105	0	70 - 130	30	70 - 130	30

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

BATCH 50458 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1005108-001A	05/04/10 12:54 PM	05/06/10	05/06/10 5:17 PM	1005108-001A	05/04/10 12:54 PM	05/06/10	05/06/10 5:17 PM
1005108-002A	05/04/10 12:18 PM	05/06/10	05/06/10 4:34 PM	1005108-002A	05/04/10 12:18 PM	05/06/10	05/06/10 4:34 PM
1005108-003A	05/04/10 11:40 AM	05/06/10	05/06/10 3:08 PM	1005108-003A	05/04/10 11:40 AM	05/06/10	05/06/10 3:08 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 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.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

1105109

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

☒ GeoTracker EDF ☒ PDF ☐ Excel ☐ Write On (DW)

Report To: Joel Greger Bill To: Geo-Logic
Company: Geo-Logic
1140-5th Ave
Crockett CA 94525 E-Mail: cage2usa@aol.com
Tele: (510) 59-35382 Fax: (510) 787-1457
Project #: Project Name: Allied Engineering
Project Location: 2421 Blanding Ave. Alameda
Sampler Signature: [signature]

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)	MTBE / BTEX ONLY (EPA 602 / 8021)	TPH as Diesel / Motor Oil (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs) 8260 BTEX [illegible]	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020) Dissolved	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	Other	Comments
MW1		5/4/10	1254	5	[illegible]	X					X	X	X	X											X			X				Filter Samples for Metals analysis: ~~Yes~~/No — SAMPLES FILTERED AND ACIDIFIED IN FIELD
MW2		↓	1218	5	[illegible]	X					X	X	X	X											X			X				
MW3		↓	1140	5	[illegible]	X					X	X	X	X											X			X				

Relinquished By:	Date:	Time:	Received By:
[signature]	5/4/10	1430	[signature]
[signature]	5/4/10	0536	[signature]
[signature]	5/5/10	[illegible]	[signature]

ICE/t° [illegible]
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

PRESERVATION ✓ VOAS O&G METALS ✓ OTHER pH<2

COMMENTS:
Provided 3 x 1L AL NP (LOW VOLUME)
— 1 x 2 [illegible] AL [illegible]
(FILTERED) WITH 0.45 MICRON FILTER AND ACIDIFIED IN FIELD
— 3 VOAS w/HCL 2
[illegible] 5/5/10 [illegible]

FIELD DATA SHEETS

2421 Blanding Avenue
Alameda, California

May 2010

Dysert Environmental, Inc.

FLUID-LEVEL MONITORING DATA

Project Name: WELL DEVELOPMENT Date: 4-26-10 & 4-27-10

Project/Site Location: 2421 BLANDING AVE ALAMEDA CA

Technician: R. VASQUEZ/M. TORO Method: ELECTRONIC

	Boring/ Well	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (feet)	Total Well Depth (feet)	Comments
4-26	MW3	6.97	DETECTED NONE	DETECTED NONE	20.02	(A) 1300
4-27	MW2	4.64	↓	↓	18.90	(B) 1229 H2O IN WELL BOX BELOW T.O.C.
4-26	MW1	5.90	↓	↓	20.13	(B) 1313

Measurements referenced to top of well casing. NORTH SHARPIE MARK.

Well ID: MW 1 WELL DEVELOPMENT

DYSERT ENVIRONMENTAL, INC.
WELL PURGING / SAMPLING DATA

Dysert Environmental, Inc.

PROJECT: 2421 Blanding Avenue **DATE:** 4-26-10
SITE LOCATION: 2421 Blanding Avenue

CITY: Alameda **STATE: CA**

PURGE DEVICE

circle one submersible pump peristaltic pump bladder pump disposable bailer

SAMPLING DEVICE

circle one bladder pump peristaltic pump disposable bailer discrete sampler other N/A

casing diameter (inches)	*circle one*	0.75	1	1.5	2	4	6
casing volumes (gallons)	*circle one*	0.02	0.05	0.15	0.2	0.7	1.52

WELL DATA

SAMPLER/S: R. VASQUEZ / MA. TORO
WELL NUMBER / FIELD POINT ID: MW 1
A. TOTAL WELL DEPTH: 20.13
B. DEPTH TO WATER: 5.90
C. WATER HEIGHT (A-B): 14.23
D. WELL CASING DIAMETER: 2
E. CASING VOLUME: 0.2
F. SINGLE CASE VOLUME (CxE): 2.85
G. CASE VOLUME (s) (CxEx 10): 28.50
H: 80% RECHARGE LEVEL (F+B): 6.75

PURGE DATA

START TIME: 1426
FINISH TIME: 1449

RECHARGE / SAMPLE TIME N/A

DEPTH TO WATER: N/A **TIME MEASURED:** N/A
GREATER THAN OR EQUAL TO 80% RECHARGE LEVEL (H): *circle one* YES NO N/A
SAMPLE TIME: N/A **DEPTH TO WATER:**
SAMPLE APPEARANCE / ODOR: ~~CLEAR~~ CLOUDY WHITE / STRONG ODOR FUEL
TOTAL GALLONS PURGED: 25 GALLON

WELL FLUID PARAMETERS

CASE VOLUME	3	4	5	6	7	8	9	10
pH	8.13	7.84	7.77	7.75	7.51	7.58	7.47	
TEMP in °C	18.8	18.3	18.6	19.0	18.3	18.1	18.0	
COND / SC	1288	1320	1042	1033	1041	1006	1019	
DTW	18.63	18.14	18.74	18.02	19.03	19.37	18.97	
Pump Depth	6 TO 20	20 FT	→	→	→	→	→	
Pump Rate	8.5L p. min	→	→	→	→	→	→	

NOTES:

DTW-9.79 @ 1454

TWD-20.18 @ 1454

Well ID: MW 2 WELL DEVELOPMENT

DYSERT ENVIRONMENTAL, INC.
WELL PURGING / SAMPLING DATA

Dysert Environmental, Inc.

PROJECT: 2421 Blanding Avenue **DATE: 4-27-10**
SITE LOCATION: 2421 Blanding Avenue

CITY: Alameda **STATE: CA**

PURGE DEVICE

circle one (submersible pump) (peristaltic pump) bladder pump disposable bailer

SAMPLING DEVICE

circle one	bladder pump	peristaltic pump	disposable bailer	discrete sampler	other (n/a)

casing diameter (inches)	*circle one*	0.75	1	1.5	(2)	4	6
casing volumes (gallons)	*circle one*	0.02	0.05	0.15	(0.2)	0.7	1.52

WELL DATA

SAMPLER/S: M. TORO / R. VASQUEZ
WELL NUMBER / FIELD POINT ID: MW-2
A. TOTAL WELL DEPTH: 18.90
B. DEPTH TO WATER: 4.64
C. WATER HEIGHT (A-B): 14.26
D. WELL CASING DIAMETER: 2
E. CASING VOLUME: 0.2
F. SINGLE CASE VOLUME (CxE): 2.85
G. CASE VOLUME (s) (CxEx 10): 28.50
H: 80% RECHARGE LEVEL (F+B): 7.49

PURGE DATA

START TIME: ~~1235~~ 1321
FINISH TIME: 1347

RECHARGE / SAMPLE TIME N/A

DEPTH TO WATER: N/A **TIME MEASURED:** N/A
GREATER THAN OR EQUAL TO 80% RECHARGE LEVEL (H): *circle one* YES NO (N/A)
SAMPLE TIME: N/A **DEPTH TO WATER:**
SAMPLE APPEARANCE / ODOR: CLOUDY WHITE / MINOR FUEL ODOR
TOTAL GALLONS PURGED: ~~28~~ GALONS

WELL FLUID PARAMETERS

CASE VOLUME	3	4	5	6	7	8	9	10
pH	7.11	7.38	7.68	7.97	7.61	7.50	7.74	7.57
TEMP in °C	19.4°	19.3°	19.5°	19.6°	19.4°	19.1°	19.5°	19.1°
COND / SC	1425	882	779	687	668	683	656	607
DTW	~~12.00~~ 5.50	13.50	15.08	12.61	13.64	13.49	12.43	16.04
Pump Depth	18.90			16 FT	16FT	16FT	19FT	19FT
Pump Rate	85L/min							

NOTES:

DTW 8.66

TWD 19.18

Well ID: MW3 WELL DEVELOPMENT

DYSERT ENVIRONMENTAL, INC.
WELL PURGING / SAMPLING DATA

Dysert Environmental, Inc.

PROJECT: 2421 Blanding Avenue DATE: 4-26-10
SITE LOCATION: 2421 Blanding Avenue

CITY: Alameda STATE: CA

PURGE DEVICE

circle one (submersible pump) (peristaltic pump) bladder pump disposable bailer

SAMPLING DEVICE

circle one bladder pump peristaltic pump disposable bailer discrete sampler other (N/A)

casing diameter (inches)	*circle one*	0.75	1	1.5	(2)	4	6
casing volumes (gallons)	*circle one*	0.02	0.05	0.15	(0.2)	0.7	1.52

WELL DATA

SAMPLER/S: R. VASQUEZ / M-TORO

WELL NUMBER / FIELD POINT ID: MW3

A. TOTAL WELL DEPTH: 20.02

B. DEPTH TO WATER: 6.97

C. WATER HEIGHT (A-B): 13.05

D. WELL CASING DIAMETER: 2

E. CASING VOLUME: 0.2

F. SINGLE CASE VOLUME (CxE): 2.61

G. CASE VOLUME (s) (CxEx 10): 26.10

H: 80% RECHARGE LEVEL (F+B): 9.58

PURGE DATA

START TIME: 1325

FINISH TIME: 1417

RECHARGE / SAMPLE TIME (N/A)

DEPTH TO WATER: N/A TIME MEASURED: N/A

GREATER THAN OR EQUAL TO 80% RECHARGE LEVEL (H): *circle one* YES NO (N/A)

SAMPLE TIME: N/A DEPTH TO WATER: N/A

SAMPLE APPEARANCE / ODOR: NO ODOR cloudy

TOTAL GALLONS PURGED: 25 GALLONS

WELL FLUID PARAMETERS

CASE VOLUME	3	4	5	6	7	8	9	10
pH	7.43	7.52	7.33	7.39	7.52	7.42	7.30	7.58
TEMP in °C	18.6	17.8	18.2	18.1	17.7	17.6	17.7	17.5
COND / SC	7.52	8.51	5.37	7.26	10.80	5.96	5.92	6.35
DTW	11.04	11.68	15.46	18.39	17.99	18.53	18.97	15.65
Pump Depth	7 TO 20			→	20FT			→
Pump Rate	8.5L per min							→

NOTES: DTW 11.98 @ 1421

TWD 20.04 @ 1422

Dysert Environmental, Inc.

FLUID-LEVEL MONITORING DATA

Project Name: WELL SAMPLING Date: 5-4-10

Project/Site Location: 2421 BLANDING AVE

Technician: R. VASQUEZ Method: ELECTRONIC

Boring/ Well	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (feet)	Total Well Depth (feet)	Comments
MW3	10.49	NONE DETECTED	NONE DETECTED	20.04	@ 1051
MW2	6.76	↓	↓	19.18	@ 1056
MW1	8.57	↓	↓	20.18	@ 1059

Measurements referenced to top of well casing. NORTH SHARPIE MARK

Well ID: MW 1 WELL SAMPLING

DYSERT ENVIRONMENTAL, INC.
WELL PURGING / SAMPLING DATA

Dysert Environmental, Inc.

PROJECT: 2421 Blanding Avenue **DATE:** 5-4-10
SITE LOCATION: 2421 Blanding Avenue

CITY: Alameda **STATE: CA**

PURGE DEVICE

circle one (submersible pump) peristaltic pump bladder pump disposable bailer

SAMPLING DEVICE

circle one bladder pump peristaltic pump (disposable bailer) discrete sampler other

casing diameter (inches)	*circle one*	0.75	1	1.5	(2)	4	6
casing volumes (gallons)	*circle one*	0.02	0.05	0.15	(0.2)	0.7	1.52

WELL DATA

SAMPLER/S: R. VASQUEZ
WELL NUMBER / FIELD POINT ID: MW 1
A. TOTAL WELL DEPTH: 20.18
B. DEPTH TO WATER: 8.57
C. WATER HEIGHT (A-B): 11.61
D. WELL CASING DIAMETER: 2
E. CASING VOLUME: 0.2
F. SINGLE CASE VOLUME (CxE): 2.32
G. CASE VOLUME (s) (CxEx 3): 6.97
H: 80% RECHARGE LEVEL (F+B): 10.89

PURGE DATA

START TIME: 1228
FINISH TIME: 1249

RECHARGE / SAMPLE TIME

DEPTH TO WATER: 9.32 **TIME MEASURED:** 1252
GREATER THAN OR EQUAL TO 80% RECHARGE LEVEL (H): *circle one* (YES) NO
SAMPLE TIME: 1254 **DEPTH TO WATER:** 9.32
SAMPLE APPEARANCE / ODOR: CLEAR STRONG FUEL ODOR.
TOTAL GALLONS PURGED: 7 GALLONS

WELL FLUID PARAMETERS

CASE VOLUME	0	0.5	1.0	1.5	2.0	2.5	3.0
pH	7.21	7.21	7.23	7.22	7.17	7.20	7.21
TEMP in °C	19.4	18.4	18.5	18.4	18.5	18.5	18.4
COND / SC (uS/cm)	1276	1251	1235	1218	1230	1222	1229
DTW	8.57	9.86	10.58	10.92	10.98	10.68	11.32
Pump Depth	12FT	→	15FT	→	18FT	→	→
Pump Rate	1000 mL/min	→	→	→	→	→	→

NOTES:

Well ID: MW2 WELL SAMPLING

DYSERT ENVIRONMENTAL, INC.
WELL PURGING / SAMPLING DATA

Dysert Environmental, Inc.

PROJECT: 2421 Blanding Avenue **DATE:** 5-4-10
SITE LOCATION: 2421 Blanding Avenue

CITY: Alameda **STATE: CA**

PURGE DEVICE

circle one (submersible pump) peristaltic pump bladder pump disposable bailer

SAMPLING DEVICE

circle one bladder pump peristaltic pump (disposable bailer) discrete sampler other

casing diameter (inches)	*circle one*	0.75	1	1.5	(2)	4	6
casing volumes (gallons)	*circle one*	0.02	0.05	0.15	(0.2)	0.7	1.52

WELL DATA

SAMPLER/S: R. VASQUEZ
WELL NUMBER / FIELD POINT ID: MW2
A. TOTAL WELL DEPTH: 19.18
B. DEPTH TO WATER: 6.76
C. WATER HEIGHT (A-B): 12.42
D. WELL CASING DIAMETER: 2
E. CASING VOLUME: 0.2
F. SINGLE CASE VOLUME (CxE): 2.48
G. CASE VOLUME (s) (CxEx 3): 7.45
H: 80% RECHARGE LEVEL (F+B): 9.24

PURGE DATA

START TIME: 1148
FINISH TIME: 1215

RECHARGE / SAMPLE TIME

DEPTH TO WATER: 8.42 **TIME MEASURED:** 1217
GREATER THAN OR EQUAL TO 80% RECHARGE LEVEL (H): *circle one* (YES) NO
SAMPLE TIME: 1218 **DEPTH TO WATER:** 8.42
SAMPLE APPEARANCE / ODOR: CLOUDY BROWN / VERY MINOR FUEL ODOR
TOTAL GALLONS PURGED: 8.5 GALLONS

WELL FLUID PARAMETERS

CASE VOLUME	0	0.5	1.0	1.5	2.0	2.5	3.0
pH	7.25	7.27	7.28	7.31	7.31	7.40	7.41
TEMP in °C	21.5	19.3	19.3	19.5	19.8	19.9	19.5
COND / SC (uS/cm)	626	627	656	644	639	624	631
DTW	6.76	8.34	9.19	9.49	9.29	8.33	8.63
Pump Depth	10 FT	15 FT	→	→	→	→	→
Pump Rate	1000mL p.min		→	→	→	→	→

NOTES:

Well ID: MW3 WELL SAMPLING

DYSERT ENVIRONMENTAL, INC.
WELL PURGING / SAMPLING DATA

Dysert Environmental, Inc.

PROJECT: 2421 Blanding Avenue **DATE:** 5-4-10
SITE LOCATION: 2421 Blanding Avenue

CITY: Alameda **STATE: CA**

PURGE DEVICE

circle one (submersible pump) peristaltic pump bladder pump disposable bailer

SAMPLING DEVICE

circle one bladder pump peristaltic pump (disposable bailer) discrete sampler other

casing diameter (inches)	*circle one*	0.75	1	1.5	2	4	6
casing volumes (gallons)	*circle one*	0.02	0.05	0.15	0.2	0.7	1.52

WELL DATA

SAMPLER/S: R. VASQUEZ
WELL NUMBER / FIELD POINT ID: MW3
A. TOTAL WELL DEPTH: 20.04
B. DEPTH TO WATER: 10.49
C. WATER HEIGHT (A-B): 9.55
D. WELL CASING DIAMETER: 2
E. CASING VOLUME: 0.2
F. SINGLE CASE VOLUME (CxE): 1.91
G. CASE VOLUME (s) (CxEx 3): 5.73
H: 80% RECHARGE LEVEL (F+B): 12.40

PURGE DATA

START TIME: 1114
FINISH TIME: 1133

RECHARGE / SAMPLE TIME

DEPTH TO WATER: 11.63 **TIME MEASURED:** 1139
GREATER THAN OR EQUAL TO 80% RECHARGE LEVEL (H): *circle one* (YES) NO
SAMPLE TIME: 1140 **DEPTH TO WATER:** 11.63
SAMPLE APPEARANCE / ODOR: CLOUDY BROWN / NO ODOR
TOTAL GALLONS PURGED: 5.75 GALLONS

WELL FLUID PARAMETERS

CASE VOLUME	0	0.5	1.0	1.5	2.0	2.5	3.0
pH	7.26	7.47	7.45	7.44	7.42	7.44	7.38
TEMP in °C	19.1	19.0	18.7	18.3	18.1	18.2	18.3
COND / SC (uS/cm)	12.99	12.20	12.55	12.25	11.88	11.20	10.6
DTW	10.49	11.43	12.18	12.89	13.36	13.67	14.02
Pump Depth	11 FT	15FT	→	17FT	→	→	→
Pump Rate	500 mL/min	1000 mL/min	→	→	→	→	→

NOTES:

SURVEY DATA

2421 Blanding Avenue
Alameda, California

May 2010

Virgil Chavez Land Surveying
721 Tuolumne Street
Vallejo, California, 94590
(707) 553-2476 • Fax (707) 553-8698

May 6, 2010
Project No.: 2849-06

Joel Greger

Subject: Monitoring Well Survey
2421 Blanding Ave.
Alameda, CA

Dear Joel:

This is to confirm that we have proceeded at your request to survey the new monitoring well at the above referenced location. The survey was completed on May 5, 2010. The benchmark for this survey was a USC&GS benchmark in the top of a catch basin at the east side of Park and north side of Otis Drive. The latitude, longitude and coordinates are for top of casings and are based on the Ca. State Coord. System, Zone III (NAD83). Benchmark Elevation = 8.14 feet (NGVD 29).

Latitude	Longitude	Northing	Easting	Elev.	Desc.
				8.68	RIM MW-1
37.7704383	-122.2352971	2107645.90	6060126.57	8.27	TOC MW-1
				7.67	RIM MW-2
37.7703516	-122.2352854	2107614.33	6060129.37	7.24	TOC MW-2
				9.53	RIM MW-3
37.7705006	-122.2352103	2107668.18	6060152.09	9.33	TOC MW-3

Sincerely,

Virgil D. Chavez, PLS 6323