PHONE (925) 284-4208
FAX (925) 871-3617
EMAIL:
suttongeo@sbcglobal.net

THE SUTTON GROUP

SOILS, FOUNDATIONS, DRAINAGE, SLOPES, CONTAINMENTS
CIVIL, GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

3708 Mount Diablo Blvd
Suite 215
Lafayette, CA, 94549

August 31, 2008
Revised November 9, 2008

RECEIVED

10:58 am, Nov 21, 2008

Alameda County
Environmental Health

Mr. Jason Warner
Oro Loma Sanitary District
2655 Grant Avenue
San Lorenzo, 94580

Results of 24th Quarterly Sampling Round of Ground Water Monitoring Wells
Site of the Former Gasoline Tank
2655 Grant Ave., San Lorenzo, CA[1]
OLSD PO No. 4911, LOP Site No. RO0000288 ST ID 1996

Dear Mr. Warner:

We attach results for the most recent round of quarterly sampling of the ground water monitoring wells in the area of the former gasoline tank, conducted on July 17th, 2008. The revision reflects data for the newly installed MW-6 and the groundwater gradient after the subsequent wellhead survey.

This work has been performed in accordance with the Work Plan that was approved by Alameda County Health Care Agency's Environmental Protection Division (ACEP) in their letter dated April 18, 2003, as amended.

Subsequent to the 2nd Quarter, 2008 sampling, Well MW4 was abandoned, Soil was excavated from an area of the subject site, and Well MW6 was installed in accordance with the District's ICAP Work Plan dated August 28, 2007 and approved by the Agency in its letter dated November 5, 2007. The soil removal project is being reported in a separate, forthcoming document.

Figure 1 is a plan of the District's facilities at the foot of Grant Avenue in San Lorenzo. It shows the relative locations of the former gasoline tank to the District's offices and adjacent sewage treatment plant. Figure 2 is a plan of the engineering offices and maintenance area, showing the monitoring well locations.

We have electronically uploaded this report to Alameda County's own electronic database. This data will also be up-loaded to the State Water Resources Control Board's Geotracker computer database, as required by law.

[1] Please note that we have changed the street address of the District's offices, and thus that of the tank location (at the request of the Post Office) from 2600 to 2655 Grant Avenue.

Groundwater Monitoring

Review of groundwater level measurements around the former gasoline tank site indicates as much as 1.4 feet decrease of ground water elevations on site over the quarter, and 2.5 feet since the previous year, reflective of the very dry spring season this year. These may possibly reflect the disruption to the regime caused by the soil excavation and installation of the recovery trenches. Subsequent to surveying of the wells, after the parking lot was re-paved, and survey of Well MW6 we have revised the report to include gradient calculations. Table 1 shows the ground water readings and also a cumulative tabulation of historic groundwater level data.

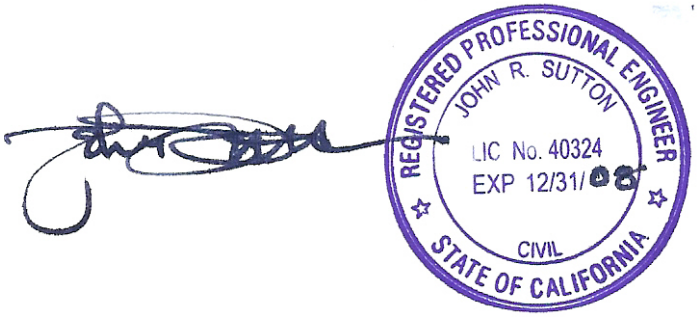
Sampling Results

On July 17th, 2008 water samples were collected from wells MW 1-3, 5 and 6 in n. The samples were collected by bailing. Each sample was analyzed for gasoline, BTEX and MTBE. Table 2 is a summary of the results of the current round of analytical results for hydrocarbons. Table 2A is a compilation of all test results for gasoline-related hydrocarbon constituents in the gasoline tank area since well sampling began in 1999. Laboratory certificates and field sampling logs are also attached.

The initial sampling of MW6 indicated an unexpectedly elevated level of petroleum hydrocrbons. Subsequently, MW6 was subjected to surging. Resampling is expected to show a lower level as the groundwater regime stabilizes.

We appreciate the opportunity to be of continued service to The District. Please call me if you have questions or if I can assist you in any other way.

Yours truly,
THE SUTTON GROUP



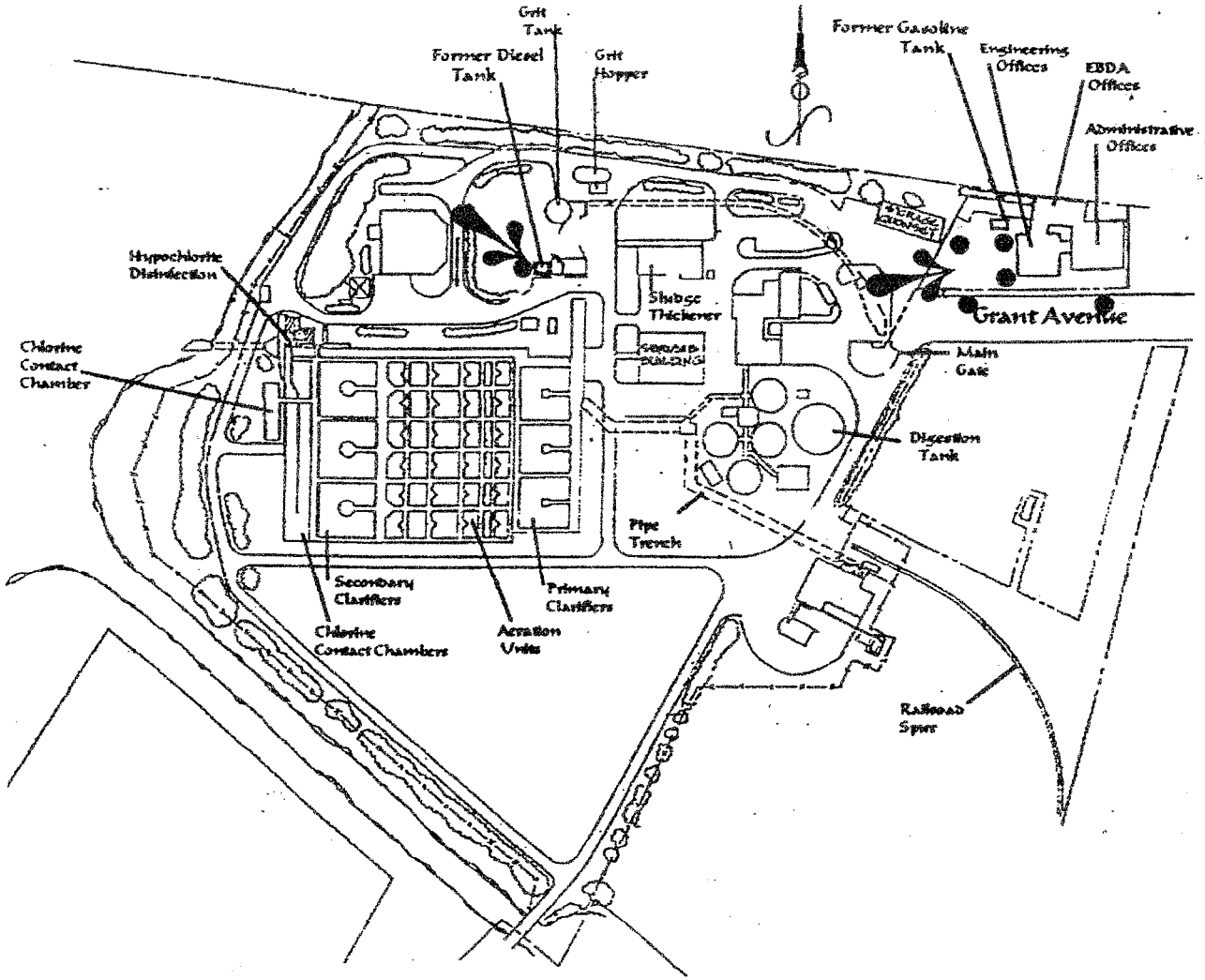
John R. Sutton, PE
RCE 40324, exp 12/31/2008

Attachments:

Figure 1	Site Plan
Figure 2	Well Location Plan, Former Gasoline Tank Area
Table 1	Ground Water Elevations, Former Gasoline Tank Area
Table 2	Summary of Current Water Sample Analyses for Gasoline and constituents, Former Gasoline Tank Area

Table 2A Cumulative Summary of Water Sample Analyses, Gas Tank Area
Analytical Laboratory Reports (McCampbell)
Field sampling Reports (Blaine Tech)

Copy uploaded to Alameda Co web site. Data uploaded to Geotracker database.
Copy with attachments in pdf and MSExcel formats sent by email to Mr. Steven Plunkett at Alameda County Health Dept.



SITE PLAN

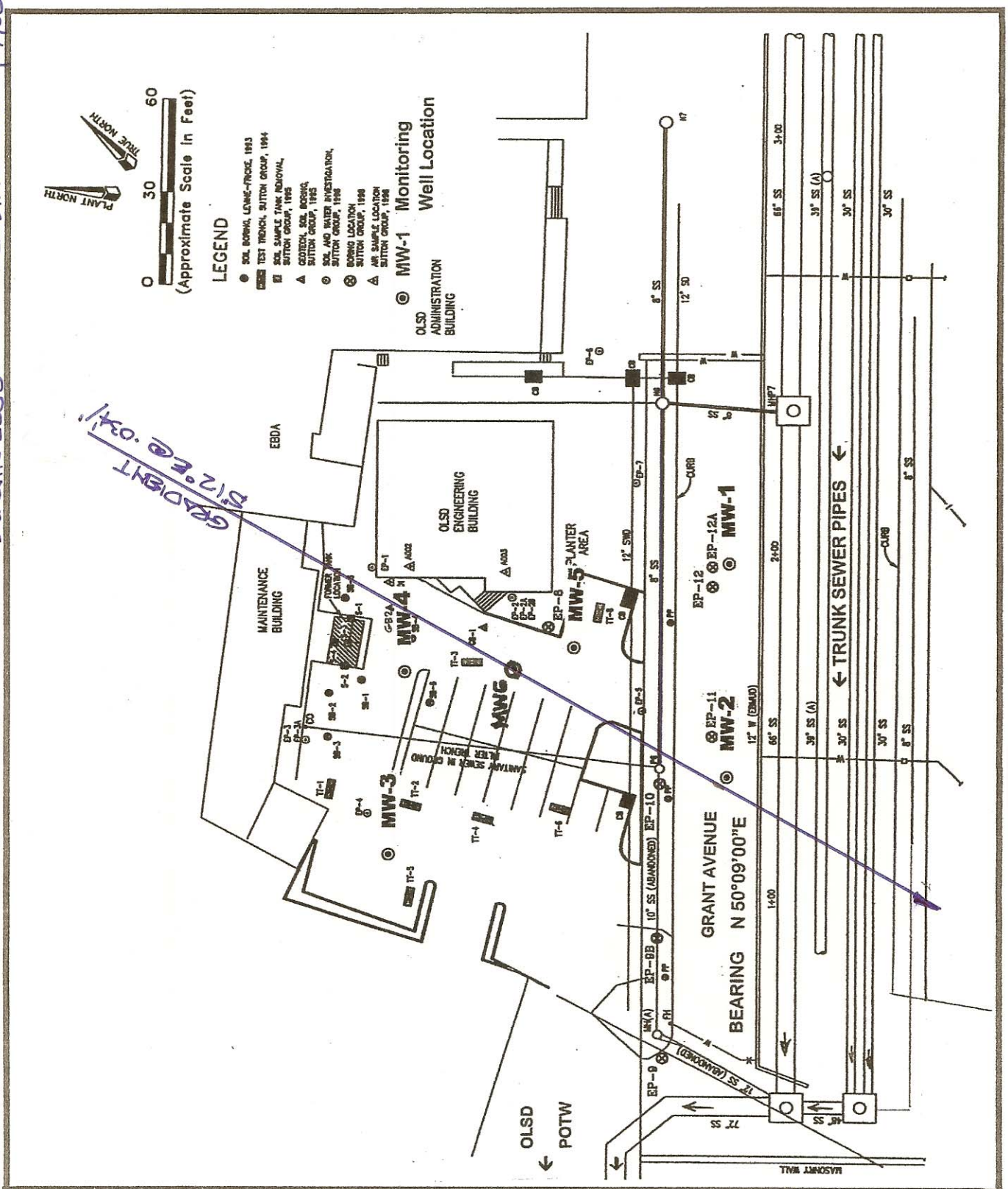
● Monitoring Well Location

SCALE 1 IN. TO 250 FEET, APPROX

THE SUTTON GROUP. 3708 Mount Diablo Blvd, Ste 215 Lafayette, CA, 94549 925 284-4208	SITE PLAN ORO LOMA SANITARY DISTRICT San Lorenzo, California	PROJECT No3022.10 **FIGURE 1** 5/21/03

READING ON 7/17/08

3rd QTR 2008



THE SUTTON GROUP
Engineering and Environmental Services
3708 Mount Diablo Blvd, Suite 215
Lafayette, California, 94549
Phone: (925).284-4208
Fax: (925).284-4189

WELL LOCATION PLAN
SERVICE CENTER AREA
ORO LOMA SANITARY DISTRICT
2600 GRANT AVENUE,
SAN LORENZO, CA

PROJECT No. 3022.10

FIGURE 2

11/10/08

3022.10 Qtly Plan Fig 2

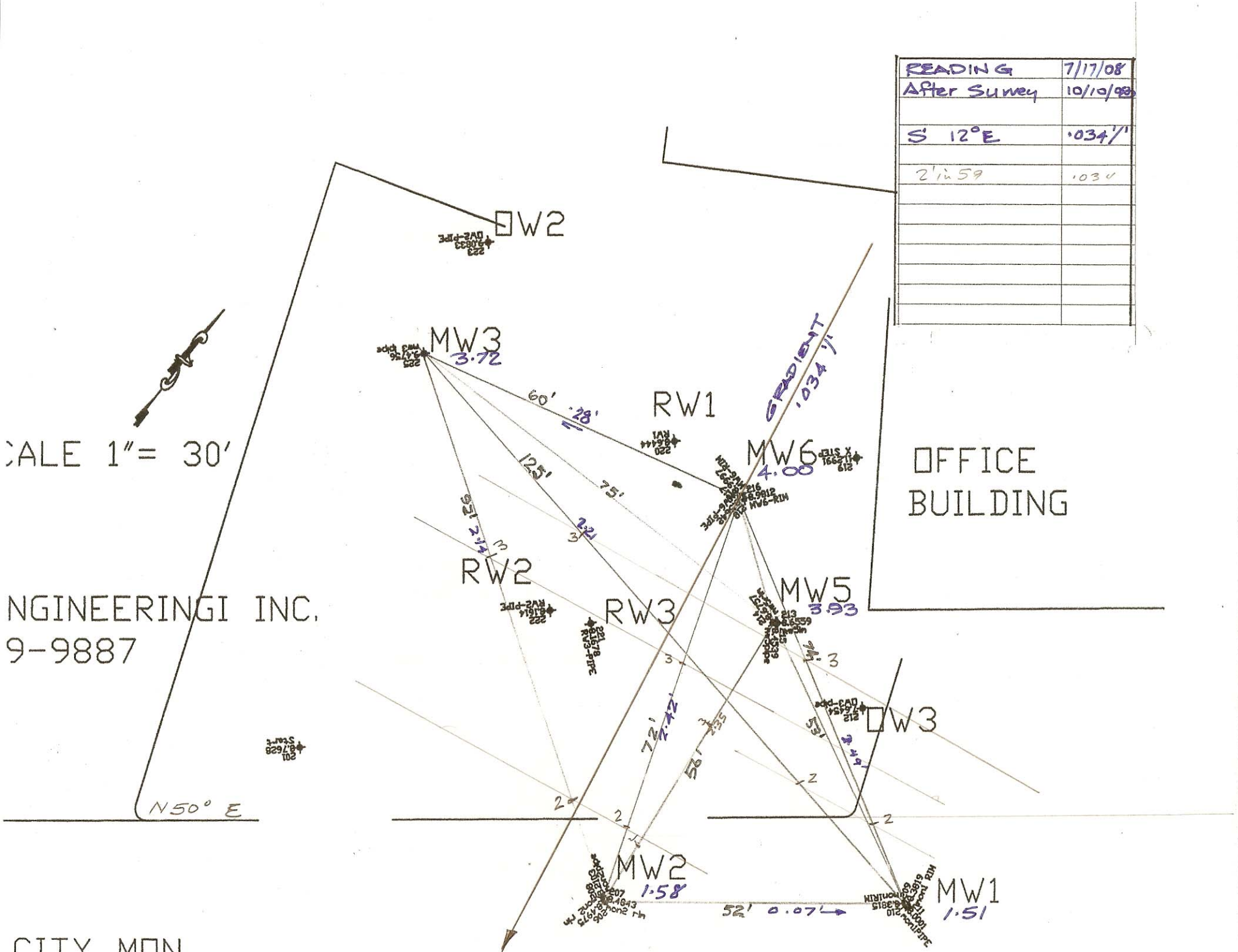

READING 7/17/08
After Survey 10/10/08
S 12°E .034'/'
2'in 59 .034
MW2
MW3
3.72
60'
28'
RW1
GRADIENT
.034 '/'
MW6
4.00
OFFICE
BUILDING
125'
75'
2.21
95'
2.74
RW2
RW3
MW5
3.93
72'
2.42
56'
2.35
MW3
MW2
1.58
52'
0.07
MW1
1.51
N50° E
CALE 1"= 30'
NGINEERINGI INC.
9-9887
CITY MON.

TABLE 1

GROUND WATER ELEVATIONS

LOP Site No. RO0000288

All measurements are in feet

Monitoring Well ID	**MW1**	**MW2**	**MW3**	**MW4**	**MW5**	**MW6**	***Estimated Net***	
Well Cover Rim Elevn*	**8.37**	**8.48**	**10.10**	**9.40**	**8.66**	8.98	***Flow Direction, Gradient ft/ft***	
Groundwater Elevation								
Initial Sampling 10/21/02	1.72	2.04	3.21	3.58	2.84		S21°E	0.016
2nd Quarterly 1/28/03	2.23	2.65	4.94	5.35	4.42		S23°E	0.033
3rd Quarterly 4/28/03	Not Measured	3.18	Not Meas.	5.80	5.20		S22½°W	0.042
4th Quarterly 7/25/03	0.45	2.35	3.44	3.58	3.52		S18°W	0.027
5th Quarterly 10/30/03	1.82	2.75	3.61	4.18	4.09		S26°E	0.014
6th Quarterly 1/23/04	2.20	3.27	5.27	5.47	5.17		S35°E	0.053
7th Quarterly 4/27/2004	2.35	3.55	4.99	5.08	4.92		S17°E	0.017
8th Quarterly 7/29/2004	1.55	2.43	3.77	4.11	4.14		S52°W	0.006
9th Quarterly 10/28/2004	-0.08	0.98	4.17	4.50	4.69		S63°E	0.087
Special Sampling 12/8/2004	-0.74	-0.83	Not Meas.	Not Meas.	Not Meas.		Not Meas.	Not Meas.
10th Quarterly 1/24/2005	0.79	2.75	5.64	5.83	4.74		S27°E	0.03
11th Quarterly 4/28/2005	1.37	3.02	5.15	5.19	4.52		S40°E	0.023
12th Quarterly 7/19/2005	1.18	2.37	4.31	4.48	4.32		S59°E	0.063
13th Quarterly 10/26/2005	0.79	1.72	3.69	4.10	4.20		S64°E	0.065
14th Quarterly 1/30/2006	1.72	3.17	4.85	4.92	4.24		S73°E	0.05
15th Quarterly 4/18/2006	2.17	3.44	5.94	5.09	4.25		S78°E	0.025
16th Quarterly 7/19/2006	1.55	2.88	4.41	4.57	4.13		S69E	0.048
17th Quarterly 10/26/2006	1.17	2.63	3.47	3.92	5.38		A: S30W @ .054	B:S76E @ .087
18th Quarterly 1/15/2007	1.35	3.20	4.84	4.73	4.37		A: S64E @ .007	B:S87E @ .055
19th Quarterly 4/19/2007	1.72	3.39	6.06	5.20	4.05		A: S70E @ .036	B:S85E @ .044
20th Quarterly 7/19/2007	1.10	1.70	3.38	3.52	3.35		A: S63E @ .074	B:S7E @~.004
21st Quarterly 10/17/2007	1.02	2.98	3.38	3.61	4.08		S76E @ .058	N72E @ .035
22 nd Quarterly 1/15/2008	1.34	3.00	4.61	4.73	4.02		S71E @ .050	S47E @ .017
23 rd Quarterly 4/15/2008	1.33	2.47	4.16	4.43	3.64		S68E @ .43	S43E @ .01
Current (24 th) reading on 7/17/2008								
Groundwater Depth	6.86	6.90	6.38	n/a	5.47	4.98		
Groundwater Elevation	***1.51***	***1.58***	***3.72***	***n/a***	***3.93***	4.00	***S12 °E***	***0.034***
Change Since 4/15/2008	0.17	-1.42	-0.89	n/a	-0.09	n/a		
Change since same Qtr, last year	-0.21	-1.81	-2.34	n/a	-0.12	n/a		

***** Wells re-surveyed 03/08/2007 based on NGS Station Loma (HT3751). New rim elevations were 0.27-0.30 feet "lower".

Elevations beginning April 2007 reflect the new elevations. Previously tabulated readings have not been changed.

MW-4 was closed/abandoned 4/17/2008. See separate report

* "Onsite gradient" is interpreted to be the natural gradient due to baylands and San Francisco Bay.

"Offsite gradient" reflects the dewatering effect of the gravel-bedded sanitary sewer trunk lines beneath Grant Avenue.

QTR 23, 4/15/2008: Two gradients calc'ed:S68E is from MW1,2 and 5 ;S43E is Gradient from MW 3,4,5. MW4 closed/abandoned on 4/ 16/2008.

MW6 installed 6/27/2008 **Revised table 11/10/2008 reflects rim elevations at MW-3, -5, -6 after parking lot repaved 6/2008**

TABLE 2

LOP Site No. RO0000288

SUMMARY OF GROUND WATER SAMPLE ANALYSES

total petroleum hydrocarbons as gasoline, btex and mtbe

EPA METHOD 8015Cm /8021

results in µg/l (ppb)

Sample Location	Sample Date	Gasoline	Benzene	Toluene	Ethyl Benzene	Xylenes (total)	MTBE	Dilution Factor
MW-1	7/17/2008	ND	ND	ND	ND	ND	ND	1
MW-2	7/17/2008	ND	ND	ND	ND	ND	ND	1
MW-3	7/17/2008	ND	ND	ND	ND	ND	32	1
MW-5	7/17/2008	21,000	8,000	30	560	1,600	ND<50	10
MW-6	7/17/2008	110,000	9,800	14,000	970	6,900	ND<500	100
Trip Blank	7/17/2008	ND	ND	ND	ND	ND	ND	1
Reporting Limits for DF=1		50	0.5	0.5	0.5	0.5	5	

NOTES:

ND	Analyte not detected at stated reporting limit
n/a	Not analyzed this round

TABLE 2A
LOP Site No. RO0000288

CUMULATIVE SUMMARY OF GROUND WATER SAMPLE ANALYSES

FORMER GASOLINE TANK AREA

total petroleum hydrocarbons as gasoline and mbtex

results in µg/l (ppb)

Sample Location	*Sample Date*	*Gasoline*	*Benzene*	*Toluene*	*Ethyl Benzene*	*Xylenes (total)*	*MTBE*
MW-1	2/19/1999	nd	nd	nd	nd	nd	nd
	5/10/1999	nd	nd	nd	nd	nd	nd
	8/30/1999	n/a	nd	nd	nd	nd	nd
	11/23/1999	nd	nd	nd	nd	nd	nd
dup	11/23/1999	nd	nd	nd	nd	nd	nd
	7/25/2003	nd	nd	nd	nd	nd	nd
	10/30/2003	n/a	n/a	n/a	n/a	n/a	n/a
	1/23/2004	nd	nd	nd	nd	nd	nd
	4/27/2004	n/a	n/a	n/a	n/a	n/a	n/a
	7/29/2004	nd	nd	nd	nd	nd	nd
MP	10/28/2004	N A	N A	N A	N A	N A	N A
	12/8/2004	nd	nd	nd	nd	nd	nd
MP	1/24/2005	nd	nd	nd	nd	nd	nd
	4/28/2005	N A	N A	N A	N A	N A	N A
	7/19/2005	nd	nd	nd	nd	nd	nd
	10/6/2005	N/A	N/A	N/A	N/A	N/A	N/A
	1/30/2006	ND	ND	ND	ND	ND	ND
	4/18/2006	N/A	N/A	N/A	N/A	N/A	N/A
	7/19/2006	ND	ND	ND	ND	ND	ND
	10/26/2006	n/a	n/a	n/a	n/a	n/a	n/a
	1/15/2007	ND	ND	ND	ND	ND	ND
	4/19/2007	NA	NA	NA	NA	NA	NA
	7/19/2007	ND	ND	ND	ND	ND	ND
	10/17/2007	n/a	n/a	n/a	n/a	n/a	n/a
	1/15/2008	ND	ND	ND	ND	ND	ND
	4/15/2008	n/a	n/a	n/a	n/a	n/a	n/a
	7/17/2008	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

MW-2	*Sample Date*	*Gasoline*	*Benzene*	*Toluene*	*EBenzene*	*Xylenes*	*MTBE*
	2/19/1999	nd	nd	nd	nd	nd	nd
	5/10/1999	nd	nd	nd	nd	nd	nd
	8/30/1999	n/a	nd	nd	nd	nd	nd
	11/23/1999	nd	nd	nd	nd	nd	nd
	7/25/2003	nd	nd	nd	nd	nd	< 1
	10/30/2003	n/a					
	1/23/2004	nd	nd	nd	nd	nd	nd
	4/27/2004	n/a	n/a	n/a	n/a	n/a	n/a
	7/29/2004	nd	nd	nd	nd	nd	nd
MP	10/28/2004	ND	ND	ND	ND	ND	ND

	12/8/2004	ND	ND	ND	ND	ND	1.5
MP	1/24/2005	ND	ND	ND	ND	ND	9
	4/28/2005	n a	n a	n a	n a	n a	n a
	7/19/2005	nd	nd	nd	nd	nd	nd
	10/6/2005	N/A	N/A	N/A	N/A	N/A	N/A
	1/30/2006	ND	ND	ND	ND	ND	ND
	4/18/2006	N/A	N/A	N/A	N/A	N/A	N/A
	7/19/2006	ND	ND	ND	ND	ND	ND
	10/26/2006	n/a	n/a	n/a	n/a	n/a	n/a
	1/15/2007	ND	ND	ND	ND	ND	ND
	4/19/2007	NA	NA	NA	NA	NA	NA
	7/19/2007	ND	ND	ND	ND	ND	ND
	10/17/2007	n/a	n/a	n/a	n/a	n/a	n/a
	1/15/2008	ND	ND	1.3	ND	ND	ND
	4/15/2008	n/a	n/a	n/a	n/a	n/a	n/a
	7/17/2008	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

MW-3	***Sample Date***	***Gasoline***	***Benzene***	***Toluene***	***Ebenzene***	***Xylenes***	***MTBE***	
	2/19/1999	nd	nd	nd	nd	nd	1.5	*1
dup	2/19/1999	nd	nd	nd	nd	nd	n/a	
	5/10/1999	nd	nd	nd	nd	nd	1.5	*2
	8/30/1999	n/a	nd	nd	nd	nd	nd	
	11/23/1999	nd	nd	[.69]*	[.58]*	[1.3]*	nd	*3
	1/6/2000	nd	nd	nd	nd	nd	3.14	*4
Dup	1/6/2000	nd	nd	nd	nd	nd	2.64	*4
Trip Blank	2/10-22/99	ND	ND	ND	ND	ND	N/A	
	5/8-20/99	n/a	n/a	n/a	n/a	n/a	n/a	
	8/27-31/99	n/a	n/a	n/a	n/a	n/a	n/a	
	7/25/2003	nd	nd	nd	nd	nd	1.1	
	10/30/2003	n/a	n/a	n/a	n/a	n/a	n/a	
	1/23/2004	n/a	n/a	n/a	n/a	n/a	n/a	
	4/27/2004	n/a	n/a	n/a	n/a	n/a	n/a	
	7/29/2004	ND	6.4	ND	ND	ND	8.8	
MP	10/28/2004	390	170	0.7	nd	2.4	57	
	12/8/2004	N/A	N/A	N/A	N/A	N/A	N/A	
MP	1/24/2005	520	260	0.53	nd	1.9	89	
	4/28/2005	220	110	ND	ND	0.63	54	
	7/19/2005	760	370	0.68	ND	2.6	92	
	10/6/2005	190	71	ND	ND	ND	49	
	1/30/2006	300	130	0.74	ND	2.5	71	
	4/18/2006	380	190	1.0	nd	4.0	66	
	7/19/2006	140	61	ND	0.57	0.89	44	
	10/26/2006	91	20	nd	0.55	3.5	46	
	1/15/2007	ND	3.8	ND	ND	ND	32	
	4/19/2007	52	2.9	ND	ND	ND	57	
	7/19/2007	ND	2.6	ND	ND	ND	47	
	10/17/2007	55	1.5	ND	ND	1.3	42	
	1/15/2008	ND	ND	ND	ND	ND	40	
	4/15/2008	n/a	n/a	n/a	n/a	n/a	n/a	
	7/17/2008	***ND***	***ND***	***ND***	***ND***	***ND***	***32***	

MW-4	*Sample Date*	*Gasoline*	*Benzene*	*Toluene*	*EBenzene*	*Xylenes*	*MTBE*
	10/21/2002	n/a	5,800	6,200	3,500	18,000	140
	1/28/2003	n/a	7,200	3,500	2,700	15,000	130
	4/28/2003	n/a	5,700	850	ND<120	10,000	200
	7/25/2003	97,000	11,000	8,400	4,900	24,000	nd<250
	10/30/2003	77,000	12,000	9,300	3,200	16,000	nd < 200
	1/23/2004	100,000	16,000	10,000	1,100	19,000	nd < 1,200
	4/27/2004	78,000	13,000	7,800	3,200	17,000	nd < 1,000
	7/29/2004	46,000	8,300	2,100	2,000	7,900	nd<500
MP	10/28/2004	80,000	15,000	7,100	3,500	14,000	ND<1,000
	12/8/2004	n/a	N/A	N/A	N/A	N/A	n/a
MP	1/24/2005	70	9,900	850	2,500	11,000	ND<1,000
	4/28/2005	79,000	9,400	690	4000	16,000	nd<900
	7/19/2005	35,000	7,500	92	1,900	3,900	nd<500
	10/6/2005	65,000	12,000	2,100	3,200	11,000	ND<500
	1/30/2006	45,000	9,800	380	2,400	6,500	nd<130
	4/18/2006	58,000	7,100	420	3,900	13,000	nd < 500
	7/19/2006	71,000	10,000	520	4,900	18,000	ND<500
	10/26/2006	89,000	13,000	1600	4,300	19,000	nd< 800
	1/15/2007	65,000	10,000	570	3,300	13,000	nd< 250
	4/19/2007	52,000	9,400	300	3,600	8,900	ND<600
	7/19/2007	21,000	4,500	26	1,100	370	ND<240
	10/17/2007	28,000	5,900	87	1,700	1400	ND<240
	1/15/2008	46,000	9,200	220	2,600	5800	ND<250
	4/15/2008	32,000	8,300	89	1,900	2,400	ND<210
	NOTE	**MW4 was closed / abandoned 4/17/2008**					

MW-5	*Sample Date*	*Gasoline*	*Benzene*	*Toluene*	*EBenzene*	*Xylenes*	*MTBE*
	10/21/2002	65,000	12,000*	20,000*	1,600*	7,100*	ND<100
	1/28/2003	n/a	9,100	6,600	720	4,000	ND<100
	4/28/2003	n/a	12,000	8,300	ND<250	2,100	ND<250
	7/25/2003	62,000	13,000	14,000	1,300	5,200	nd<250
	10/30/2003	33,000	7,500	2,200	490	1,600	nd < 100
	1/23/2004	97,000	18,000	20,000	ND<120	7,900	nd < 1,200
	4/27/2004	39,000	12,000	11,000	920	4,300	nd < 1,000
	7/29/2004	47,000	11,000	5,500	690	2,800	nd < 1,000
MP	10/28/2004	130,000	23,000	25,000	2,000	9,700	ND<
	12/8/2004	n/a	n/a	N/A	N/A	N/A	N/A
MP	1/24/2005	150,000	22,000	25,000	2,100	12,000	nd<1,000
	4/28/2005	89,000	18,000	11,000	1,600	8,900	nd < 500
	7/19/2005	39,000	11,000	200	710	1,700	nd < 500
	10/6/2005	58,000	17,000	410	1,000	6,600	ND<500
	1/30/2006	61,000	15,000	5,500	1,100	5,600	nd < 500
	4/18/2006	36,000	13,000	490	660	3,300	nd < 500
	7/19/2006	49,000	16,000	460	ND<50	7,700	ND<500
	10/26/2006	55,000	14,000	430	1200	6,700	nd<1,000
	1/15/2007	34,000	11,000	88	720	2,600	ND<250
	4/19/2007	29,000	11,000	63	700	2,200	ND<130
	7/19/2007	25,000	8,300	36	600	1,700	ND<50
	10/17/2007	32,000	9,200	57	650	1,900	ND<100

1/15/2008	33,000	12,000	51	800	1,900	ND<250	
4/15/2008	30,000	11,000	36	690	1,700	ND<50	
7/17/2008	***21,000***	***8,000***	***30***	***560***	***1,600***	***ND<50***	

MW-6

Sample Date	***Gasoline***	***Benzene***	***Toluene***	***EBenzene***	***Xylenes***	***MTBE***	***Installed 6/27/2008***
7/17/2008	***110,000***	***9,800***	***14,000***	***970***	***6,900***	***ND<500***	

NOTES:

nd	Analyte not detected at stated reporting limit
n/a	Not analyzed
u/n	Unless otherwise noted (Reporting limit)
MP	Sampling by Micro Purge technique
*1	Analyzed by EPA method 8260B, reporting limit was 1 µg/l.
*2	Estimated value below method reporting limit of 2 µg/l.
*3	Inconsistent contaminant pattern. Sample result spurious, re-sampled
*4	Reporting limit at 2.5 µg/l.