

Quarterly Groundwater Monitoring Report—4<sup>th</sup> Quarter 2007

German Autocraft  
301 E. 14<sup>th</sup> Street  
San Leandro, California

Global ID No. T0600100639  
AC LOP Case # 2783

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Alameda County  
Environmental Health

Prepared For

Mr. Seung Lee  
German Autocraft  
San Leandro, CA 95070

Prepared By



Date of Report: December 31, 2007



December 31, 2007

German Autocraft  
301 E. 14<sup>th</sup> Street  
San Leandro, CA 94577

Attn: Mr. Seung Lee

Subject: Quarterly Groundwater Monitoring Report—4<sup>th</sup> Quarter 2007

German Autocraft, AC LOP Case # 2783  
Global ID No. T0600100639

Dear Mr. Lee:

GWC is pleased to attach the Fourth Quarter 2007, *Quarterly Groundwater Monitoring Report*, which includes the analytical results for groundwater samples collected in December of 2007. GWC plans to continue quarterly groundwater sampling in accordance with Alameda County Department of Environmental Health (DEH) requirements.

If you have any questions or require further information, please do not hesitate to call us at (415) 665-6181.

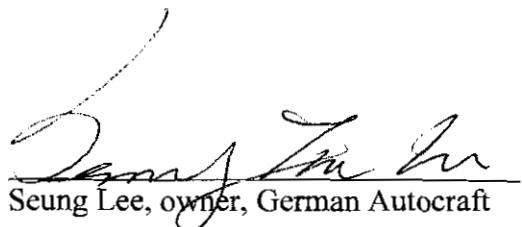
Sincerely,

Glenn Reierstad  
Project Manager

Cc: Ms. Donna Dragos, DEH  
Mr. Steven Plunkett, DEH

**Perjury Statement**

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.



Seung Lee  
Seung Lee, owner, German Autocraft

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## **1.0 Site Location and Background**

### **1.1 Site Location and Description**

The site is located at 301 E. 14<sup>th</sup> Street in San Leandro, CA, in a high-density, mixed-use neighborhood of residential and small commercial buildings. Figure 1 shows the site location. E. 14<sup>th</sup> Street is a busy thoroughfare, running approximately 25 degrees west of north-south. The site is approximately 90' x 120' with an area of about 10,800 square feet. The current site use is as an automobile repair facility.

### **1.2 Site Hydrogeologic Conditions**

The site is situated on mixed sediments about two miles east of San Francisco Bay. Site elevation is 48-50 feet above mean sea level, and groundwater elevation varies from 23-32 feet above mean sea level. Groundwater flow direction is typically W to WNW at a gradient of about 0.002 feet/ft. Figure 2 shows the general site layout and the locations of monitoring wells, both on-site and off-site.

### **1.3 Project History**

The fuel leak was discovered and the gasoline storage tank was removed in October of 1990. A site assessment, including installation of three initial monitoring wells, was performed in 1995, and further assessment work was done in July of 1998, including installation of seven additional monitoring wells. In 2001, three more monitoring wells were installed. To date, certain wells have been monitored quarterly and others monitored semi-annually or annually to maintain a record of groundwater conditions. No active remediation has taken place since removal of the gasoline storage tank. Table 1 summarizes available well construction data.

### **1.4 Field Activities**

On October 25, 2007, a file review was performed to obtain site data not available from the site owner, such as top-of-casing elevations and well logs for off-site monitoring wells. On December 5, 2007, a Corrective Action Plan was submitted to the DEH website detailing how site cleanup might be accomplished, focusing on the core area of impacts.

Only wells MW-12, -13 and -14 were scheduled for sampling this quarter, but MW-12 could not be accessed due to the presence of a parked automobile.

## **2.0     Groundwater Monitoring Results**

### **2.1     Groundwater Elevation and Gradient**

Compared with historical results, the most recent groundwater elevation was on the lower side of the normal range (see Table 3). The prevailing flow direction is shown on Figure 3; on-site wells as usual reflect a more complex local gradient. Table 2 presents groundwater elevation data for December 14, 2007, and Table 3 presents a cumulative summary of elevation data.

### **2.2     Groundwater Sample Collection and Analysis**

This quarter's wells were monitored and sampled by experienced personnel in accord with standard practices. All samples were placed on ice and transported to a State-certified analytical laboratory for analysis. Well purge water was stored on-site pending analysis and disposal. The Well Sampling Reports are attached as Appendix A.

### **2.3     Groundwater Sample Analytical Results**

Both monitoring well samples tested positive for trace amounts of Petroleum Hydrocarbons as gasoline (TPHg) or the affiliated Volatile Organic Compounds (BTEX), with highest concentrations (69 µg/L TPHg) at MW-14. The distribution of contaminant values continues to correlate with the prevailing groundwater gradient. Table 4 presents groundwater analytical data for December 14, 2007, and Table 5 summarizes the historical groundwater analytical data.

## **3.0     Conclusions and Recommendations**

### **3.1     Conclusions**

All of the monitoring data are consistent with a historic release of gasoline from the subject site's former underground tank, and/or the associated fueling system. Concentrations of gasoline-related petroleum compounds are highest near the former tank location and directly down-gradient from that point. Concentrations drop off sharply with distance perpendicular from the prevailing groundwater flow direction. Significant concentrations of hydrocarbons have been carried off-site, directly down-gradient from the release zone. The wells tested this quarter had typical contaminant concentrations compared with historical values.

In 16 years since the removal of the underground storage tank, there was some dissipation of the contaminants in the first few years, but there has been very little reduction in hydrocarbon concentrations in recent years at wells such as MW-1 and MW-4. GCI concludes that the contaminants have reached levels at which they are likely to

remain for the foreseeable future in the absence of remedial action, though there will likely continue to be seasonal fluctuations in contaminant levels.

### 3.2 Recommendations

Besides the DEH required monitoring of this case, GCI recommends a Dual-Phase Soil Vapor Extraction (SVE) test to assess the potential success of DPSVE as a remediation method for the core impact area at this site. Such a test may provide approximate cost data or may suggest the need to consider other technologies to remediate contaminants at the site. A five-day test is standard for such an assessment. GCI submitted a Corrective Action Plan including such a test plus a more extensive operation that would likely reduce the mass of persisting contaminants at the site. Off-site wells have significant access issues and would be unlikely to be viable for meaningful contaminant mass removal.

## 4.0 Quality Assurance and Professional Certification

### 4.1 Quality Assurance

All sampling was performed by a staff technician, skilled and experienced with groundwater monitoring well sampling procedures. Samples were stored on ice and sent promptly to a State-certified analytical laboratory. The laboratory is audited by the State certification program for maintaining quality control procedures and for record keeping. The chain-of-custody records and certified laboratory analytical reports are attached as Appendix B.

### 4.2 Professional Certification

We declare, under penalty of perjury, that to the best of our knowledge, everything presented in this report is true and correct.

Should you have any questions or require supplemental information, please do not hesitate to contact us at (415) 665-6181.

Sincerely,

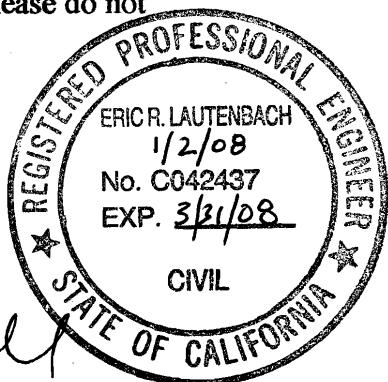


Glenn Reierstad, P.E.  
Project Manager, Groundwater Cleaners, Inc.



L-2 (tl)

Eric R. Lautenbach, P.E.  
V.P. Engineering



## Tables



**Table 1**  
**Summary of Well Construction Details**  
German Autocraft, 301 E. 14<sup>th</sup> Street, San Leandro, California

Well Number	Date Installed	Casing Diameter (inches)	Total Depth (feet)	Screened Interval (feet)	Relative Location	TOC Elevation
<b>MW-1</b>	1/6/95	2	32.10	20-40 ft	Onsite	49.40
<b>MW-2</b>	1/6/95	2	33.05	unknown	Onsite	50.02
<b>MW-3</b>	1/6/95	2	34.80	unknown	Onsite	49.32
<b>MW-4</b>	12/30/98	2	34.30	unknown	Onsite	49.61
<b>MW-5</b>	12/30/98	2	21.15	conflict	Onsite	49.57
<b>MW-6</b>	12/30/98	2	33.10	20-35 ft	Off-site	48.06
<b>MW-8</b>	12/30/98	2	34.20	20-30 ft	Off-site	49.35
<b>MW-9</b>	12/30/98	2	33.70	20-35 ft	Off-site	48.77
<b>MW-10</b>	12/30/98	2	37.50	20-40 ft	Off-site	49.93
<b>MW-11</b>	12/30/98	2	36.90	20-35 ft	Off-site	47.93
<b>MW-12</b>	3/20/01	2	38.22	23-38 ft	Off-site	unknown
<b>MW-13</b>	3/20/01	2	37.47	23-38 ft	Off-site	unknown
<b>MW-14</b>	3/20/01	2	30.43	20-30 ft	Off-site	unknown
<b>MW-1A</b>	5/30/97	2	33.88	unknown	Off-site	48.24
<b>141</b> <b>Farrelly</b>	4/6/96	10	33.88	unknown	Off-site	48.76

**Table 2**  
**Current Quarter Groundwater Elevations**  
German Autocraft, 301 E. 14<sup>th</sup> Street, San Leandro, California

Well Number	Date Recorded	Depth to Groundwater (feet)	TOC Elevation (feet)	Groundwater Elevation (feet)
<b>MW-1</b>	12/14/07	26.22	49.40	23.18
<b>MW-2</b>	12/14/07	26.58	50.02	23.44
<b>MW-3</b>	12/14/07	25.96	49.32	23.36
<b>MW-4</b>	12/14/07	26.39	49.61	23.22
<b>MW-6</b>	12/14/07	24.88	48.06	23.18
<b>MW-8</b>	12/14/07	26.35	49.35	23.00
<b>MW-9</b>	12/14/07	25.83	48.77	22.94
<b>MW-10</b>	12/14/07	27.14	49.93	22.79
<b>MW-11</b>	12/14/07	25.00	47.93	22.93
<b>MW-12</b>	12/14/07	25.77	48.76	22.99
<b>MW-13</b>	12/14/07	27.11	unknown	nc

<b>MW-14</b>	12/14/07	26.80	unknown	nc
<b>MW-1A</b>	12/14/07	25.43	48.24	22.81

nc = not calculated as TOC elevation is unknown

**Table 3**  
**Cumulative Summary of Groundwater Elevations**  
German Autocraft, 301 E. 14<sup>th</sup> Street, San Leandro, California

<b>Well Number</b>	<b>Date Recorded</b>	<b>Depth to Groundwater (feet)</b>	<b>TOC Elevation (feet)</b>	<b>Groundwater Elevation (feet)</b>
<b>MW-1</b>	12/21/90	30.25	49.40	19.15
	2/10/95	19.81	49.40	29.59
	7/7/95	22.77	49.40	26.63
	8/10/95	23.82	49.40	25.58
	9/11/95	24.72	49.40	24.68
	10/2/95	25.28	49.40	24.12
	11/7/95	26.04	49.40	23.36
	12/8/95	18.77	49.40	22.77
	1/12/96	25.05	49.40	24.35
	2/12/96	20.36	49.40	29.04
	3/12/96	17.65	49.40	31.75
	4/13/96	19.97	49.40	29.43
	5/14/96	21.51	49.40	27.89
	6/20/96	22.21	49.40	27.19
	7/26/96	23.45	49.40	25.95
	8/19/96	24.24	49.40	25.16
	9/17/96	24.96	49.40	24.44
	10/21/96	25.77	49.40	23.63
	11/27/96	25.12	49.40	24.28
	12/27/96	21.17	49.40	28.23
	1/28/97	16.38	49.40	33.02
	4/25/97	22.26	49.40	27.14
	7/17/97	24.85	49.40	24.55
	10/21/97	26.55	49.40	22.85
	3/10/98	15.05	49.40	34.35
	6/6/98	18.71	49.40	30.69
	9/30/98	23.45	49.40	25.95
	12/30/98	24.27	49.40	25.13
	3/13/99	19.42	49.40	29.98

	9/29/99	25.01	49.40	24.39
	12/29/99	25.65	49.40	23.75
	3/18/00	17.48	49.40	31.92
	7/18/00	23.19	49.40	26.21
	9/26/00	24.39	49.40	25.01
	12/28/00	24.77	49.40	24.63
	3/30/01	21.93	49.40	27.47
	10/5/01	25.58	49.40	23.82
	3/28/02	20.74	49.40	28.66
	3/31/03	22.72	49.40	26.68
	6/19/03	23.17	49.40	26.23
	9/30/03	25.35	49.40	24.05
	2/10/04	22.44	49.40	26.96
	6/30/04	24.67	49.40	24.73
	9/14/04	27.89	49.40	21.51
	3/29/06	18.84	49.40	30.56
	6/24/06	20.57	49.40	28.83
	9/30/06	23.53	49.40	25.87
	12/11/06	22.78	49.40	26.29
	03/16/07	nm	49.40	nm
	06/10/07	24.36	49.40	25.04
	09/14/07	25.92	49.40	23.48
	12/14/07	26.22	49.40	23.18

Well Number	Date Recorded	Depth to Groundwater (feet)	TOC Elevation (feet)	Groundwater Elevation (feet)
MW-2	2/10/95	---	50.02	29.62
	7/7/95	---	50.02	26.47
	8/10/95	---	50.02	25.40
	9/11/95	---	50.02	24.49
	10/2/95	---	50.02	23.94
	11/7/95	---	50.02	23.13
	12/8/95	---	50.02	22.55
	1/12/96	---	50.02	24.20
	2/12/96	---	50.02	29.03
	3/12/96	---	50.02	31.60
	4/13/96	---	50.02	29.25
	5/14/96	---	50.02	27.68
	6/20/96	---	50.02	26.97
	7/26/96	---	50.02	25.74
	8/19/96	---	50.02	24.97
	9/17/96	---	50.02	24.22
	10/21/96	---	50.02	23.43
	11/27/96	---	50.02	24.09

	12/27/96	---	50.02	28.03
	1/28/97	---	50.02	32.71
	4/25/97	---	50.02	26.88
	7/17/97	---	50.02	24.31
	10/21/97	---	50.02	22.69
	3/10/98	---	50.02	34.20
	6/6/98	---	50.02	30.41
	9/30/98	---	50.02	25.68
	12/30/98	---	50.02	24.93
	3/13/99	---	50.02	29.80
	9/29/99	---	50.02	24.12
	12/29/99	---	50.02	23.52
	3/18/00	---	50.02	31.87
	7/18/00	---	50.02	26.01
	9/26/00	---	50.02	24.69
	12/28/00	---	50.02	24.39
	3/30/01	---	50.02	27.31
	10/5/01	---	50.02	23.64
	3/28/02	---	50.02	28.43
	9/30/02	---	50.02	24.18
	3/31/03	---	50.02	26.39
	6/19/03	---	50.02	26.04
	9/30/03	---	50.02	23.83
	2/10/04	---	50.02	26.75
	6/30/04	---	50.02	24.57
	9/14/04	---	50.02	23.32
	3/29/06	19.61	50.02	30.41
	6/24/06	21.41	50.02	28.61
	9/30/06	24.37	50.02	25.65
	12/11/06	23.92	50.02	26.10
	03/16/07	22.78	50.02	27.24
	06/10/07	25.12	50.02	24.90
	09/14/07	26.63	50.02	23.39
	12/14/07	26.58	50.02	23.44

Well Number	Date Recorded	Depth to Groundwater (feet)	TOC Elevation (feet)	Groundwater Elevation (feet)
<b>MW-3</b>	2/10/95	---	49.32	29.57
	7/7/95	---	49.32	26.50
	8/10/95	---	49.32	25.44
	9/11/95	---	49.32	24.54
	10/2/95	---	49.32	24.00
	11/7/95	---	49.32	23.21

	12/8/95	---	49.32	22.62
	1/12/96	---	49.32	24.25
	2/12/96	---	49.32	29.00
	3/12/96	---	49.32	31.67
	4/13/96	---	49.32	29.26
	5/14/96	---	49.32	27.71
	6/20/96	---	49.32	27.00
	7/26/96	---	49.32	25.67
	8/19/96	---	49.32	25.01
	9/17/96	---	49.32	24.27
	10/21/96	---	49.32	23.48
	11/27/96	---	49.32	24.13
	12/27/96	---	49.32	28.11
	1/28/97	---	49.32	32.78
	4/25/97	---	49.32	26.94
	7/17/97	---	49.32	24.37
	10/21/97	---	49.32	22.73
	3/10/98	---	49.32	34.13
	6/6/98	---	49.32	30.47
	9/30/98	---	49.32	25.75
	12/30/98	---	49.32	24.99
	3/13/99	---	49.32	29.83
	9/29/99	---	49.32	24.20
	12/29/99	---	49.32	23.60
	3/18/00	---	49.32	31.82
	7/18/00	---	49.32	26.04
	9/26/00	---	49.32	24.80
	12/28/00	---	49.32	24.45
	3/30/01	---	49.32	27.39
	10/5/01	---	49.32	23.70
	3/28/02	---	49.32	28.49
	9/30/02	---	49.32	24.12
	3/31/03	---	49.32	26.50
	6/19/03	---	49.32	26.03
	9/30/03	---	49.32	23.82
	2/10/04	---	49.32	26.79
	6/30/04	---	49.32	24.59
	9/14/04	---	49.32	21.39
	3/29/06	18.87	49.32	30.45
	6/24/06	22.65	49.32	26.67
	9/30/06	24.49	49.32	24.83
	12/11/06	23.03	49.32	26.29
	03/16/07	21.97	49.32	27.35
	06/10/07	24.28	49.32	25.04
	09/14/07	25.75	49.32	23.57

	12/14/07	25.96	49.32	23.36
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Well Number	Date Recorded	Depth to Groundwater (feet)	TOC Elevation (feet)	Groundwater Elevation (feet)
<b>MW-4</b>	12/30/98	---	49.61	25.05
	3/13/99	---	49.61	29.89
	9/29/99	---	49.61	24.27
	12/29/99	---	49.61	23.64
	3/18/00	---	49.61	31.85
	12/28/00	---	49.61	24.52
	3/30/01	---	49.61	27.40
	10/5/01	---	49.61	23.77
	3/28/02	---	49.61	28.58
	9/30/02	---	49.61	24.32
	3/31/03	---	49.61	26.59
	6/19/03	---	49.61	26.16
	9/30/03	---	49.61	23.96
	9/14/04	---	49.61	21.45
	3/29/06	19.87	49.61	29.74
	6/24/06	22.86	49.61	26.75
	9/30/06	23.94	49.61	25.67
	12/11/06	23.36	49.61	26.25
	03/16/07	22.26	49.61	27.35
	06/10/07	24.60	49.61	25.01
	09/14/07	26.11	49.61	23.50
	12/14/07	26.39	49.61	23.22

Well Number	Date Recorded	Depth to Groundwater (feet)	TOC Elevation (feet)	Groundwater Elevation (feet)
<b>MW-5</b>	12/30/98	---	49.57	25.06
	3/13/99	---	49.57	29.93
	9/29/99	---	49.57	24.26
	3/18/00	---	49.57	23.64
	3/28/02	---	49.57	31.94
	09/14/07	Dry	49.57	
	12/14/07	Dry	49.57	

<b>Well Number</b>	<b>Date Recorded</b>	<b>Depth to Groundwater (feet)</b>	<b>TOC Elevation (feet)</b>	<b>Groundwater Elevation (feet)</b>
<b>MW-6</b>	12/30/98	---	48.06	25.14
	3/13/99	---	48.06	29.97
	9/29/99	---	48.06	24.38
	12/29/99	---	48.06	23.75
	3/18/00	---	48.06	31.86
	7/18/00	---	48.06	26.22
	9/26/00	---	48.06	24.95
	12/28/00	---	48.06	24.61
	3/30/01	---	48.06	27.41
	10/5/01	---	48.06	23.82
	3/28/02	---	48.06	28.65
	9/30/02	---	48.06	24.41
	9/30/06	22.33	48.06	25.73
	09/14/07	24.58	48.06	23.48
	12/14/07	24.88	48.06	23.18

<b>Well Number</b>	<b>Date Recorded</b>	<b>Depth to Groundwater (feet)</b>	<b>TOC Elevation (feet)</b>	<b>Groundwater Elevation (feet)</b>
<b>MW-8</b>	12/30/98	---	49.35	25.14
	3/13/99	---	49.35	---
	9/29/99	---	49.35	---
	12/29/99	---	49.35	---
	3/18/00	---	49.35	---
	7/18/00	---	49.35	---
	9/26/00	---	49.35	---
	12/28/00	---	49.35	---
	3/30/01	---	49.35	---
	10/5/01	---	49.35	---
	3/28/02	---	49.35	---
	9/30/06	24.07	49.35	25.28
	09/14/07	26.12	49.35	23.23
	12/14/07	26.35	49.35	23.00

<b>Well Number</b>	<b>Date Recorded</b>	<b>Depth to Groundwater (feet)</b>	<b>TOC Elevation (feet)</b>	<b>Groundwater Elevation (feet)</b>
<b>MW-9</b>	12/30/98	---	48.77	24.79
	3/13/99	---	48.77	29.58
	9/29/99	---	48.77	24.05
	12/29/99	---	48.77	23.45

	3/18/00	---	48.77	31.46
	7/18/00	---	48.77	25.83
	9/26/00	---	48.77	24.61
	12/28/00	---	48.77	24.29
	3/30/01	---	48.77	27.12
	10/5/01	---	48.77	23.54
	3/28/02	---	48.77	28.32
	9/30/02	---	48.77	24.11
	3/31/03	---	48.77	26.33
	6/19/03	---	48.77	25.90
	9/30/03	---	48.77	23.77
	2/10/04	---	48.77	26.64
	6/30/04	---	48.77	24.22
	9/14/04	---	48.77	23.08
	3/29/06	16.74	48.77	32.03
	6/24/06	22.43	48.77	26.34
	9/30/06	23.40	48.77	25.37
	12/11/06	22.78	48.77	25.99
	03/16/07	21.76	48.77	27.01
	09/14/07	25.50	48.77	23.27
	12/14/07	25.83	48.77	22.94

Well Number	Date Recorded	Depth to Groundwater (feet)	TOC Elevation (feet)	Groundwater Elevation (feet)
<b>MW-10</b>	12/30/98	---	49.93	24.78
	3/13/99	---	49.93	29.31
	9/29/99	---	49.93	23.80
	12/29/99	---	49.93	23.23
	3/18/00	---	49.93	31.26
	7/18/00	---	49.93	25.55
	9/26/00	---	49.93	24.34
	12/28/00	---	49.93	24.03
	3/30/01	---	49.93	26.79
	10/5/01	---	49.93	23.33
	3/28/02	---	49.93	28.06
	9/30/02	---	49.93	23.88
	3/31/03	---	49.93	26.06
	6/19/03	---	49.93	25.65
	9/30/03	---	49.93	23.56
	2/10/04	---	49.93	26.39
	6/30/04	---	49.93	24.22
	9/14/04	---	49.93	23.08
	3/29/06	20.18	49.93	29.75
	6/24/06	23.87	49.93	26.06

	9/30/06	24.80	49.93	25.13
	03/16/07	23.09	49.93	26.84
	09/14/07	26.87	49.93	23.06
	12/14/07	27.14	49.93	22.79

Well Number	Date Recorded	Depth to Groundwater (feet)	TOC Elevation (feet)	Groundwater Elevation (feet)
<b>MW-11</b>	12/30/98	---	47.93	24.78
	3/13/99	---	47.93	29.56
	9/29/99	---	47.93	24.03
	12/29/99	---	47.93	23.43
	3/18/00	---	47.93	31.38
	7/18/00	---	47.93	25.81
	9/26/00	---	47.93	24.58
	12/28/00	---	47.93	24.26
	3/30/01	---	47.93	27.03
	10/5/01	---	47.93	23.52
	3/28/02	---	47.93	28.31
	9/30/02	---	47.93	24.09
	9/30/06	22.58	47.93	25.35
	09/14/07	24.72	47.93	25.21
	12/14/07	25.00	47.93	22.93

Well Number	Date Recorded	Depth to Groundwater (feet)	TOC Elevation (feet)	Groundwater Elevation (feet)
<b>MW-12</b>	12/30/98	---	48.76	24.78
	3/13/99	---	48.76	29.56
	9/29/99	---	48.76	24.03
	12/29/99	---	48.76	23.43
	3/18/00	---	48.76	31.38
	7/18/00	---	48.76	25.81
	9/26/00	---	48.76	24.58
	12/28/00	---	48.76	24.26
	3/30/01	---	48.76	27.03
	10/5/01	---	48.76	23.52
	3/28/02	---	48.76	28.31
	9/30/02	---	48.76	24.09
	9/30/06	22.58	48.76	26.18
	12/11/06	23.88	48.76	24.88
	03/16/07	21.77	48.76	26.99
	06/10/07	24.06	48.76	24.70
	09/14/07	Not available	48.76	nc

	12/14/07	25.77	48.76	22.99
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Well Number	Date Recorded	Depth to Groundwater (feet)	TOC Elevation (feet)	Groundwater Elevation (feet)
<b>MW-13</b>	12/30/98	---	unknown	24.78
	3/13/99	---	---	29.56
	9/29/99	---	---	24.03
	12/29/99	---	---	23.43
	3/18/00	---	---	31.38
	7/18/00	---	---	25.81
	9/26/00	---	---	24.58
	12/28/00	---	---	24.26
	3/30/01	---	---	27.03
	10/5/01	---	---	23.52
	3/28/02	---	---	28.31
	9/30/02	---	---	24.09
	9/30/06	22.58	---	---
	12/11/06	25.33	---	---
	03/16/07	23.00	---	---
	06/10/07	25.50	---	---
	09/14/07	26.85	nm	nc
	12/14/07	27.11	unknown	nc

Well Number	Date Recorded	Depth to Groundwater (feet)	TOC Elevation (feet)	Groundwater Elevation (feet)
<b>MW-14</b>	12/30/98	---	unknown	24.78
	3/13/99	---	---	29.56
	9/29/99	---	---	24.03
	12/29/99	---	---	23.43
	3/18/00	---	---	31.38
	7/18/00	---	---	25.81
	9/26/00	---	---	24.58
	12/28/00	---	---	24.26
	3/30/01	---	---	27.03
	10/5/01	---	---	23.52
	3/28/02	---	--	28.31
	9/30/02	---	---	24.09
	9/30/06	22.58	---	---
	12/11/06	24.90	---	---
	03/16/07	22.67	---	---
	06/10/07	25.11	---	---
	09/14/07	26.56	nm	nc
	12/14/07	26.80	unknown	nc

<b>Well Number</b>	<b>Date Recorded</b>	<b>Depth to Groundwater (feet)</b>	<b>TOC Elevation (feet)</b>	<b>Groundwater Elevation (feet)</b>
<b>MW-1A</b>	12/30/98	---	48.24	24.64
	3/13/99	---	48.24	29.39
	9/29/99	---	48.24	23.89
	12/29/99	---	48.24	23.29
	3/18/00	---	48.24	31.25
	7/18/00	---	48.24	25.64
	9/26/00	---	48.24	24.48
	12/28/00	---	48.24	24.13
	3/30/01	---	48.24	27.02
	10/5/01	---	48.24	23.38
	3/28/02	---	48.24	28.14
	9/30/02	---	48.24	23.96
	9/30/06	23.03	48.24	25.21
	09/14/07	25.13	48.24	23.11
	12/14/07	25.43	48.24	22.81

<b>Well Number</b>	<b>Date Recorded</b>	<b>Depth to Groundwater (feet)</b>	<b>TOC Elevation (feet)</b>	<b>Groundwater Elevation (feet)</b>
<b>141 Farrelly</b>	03/18/00	17.90	48.76	30.86
	09/26/00	24.66	48.76	24.10
	03/30/01	22.25	48.76	26.51
	09/30/02	25.34	48.76	23.42
	12/21/02	20.07	48.76	28.69
	06/19/03	23.55	48.76	25.21
	09/14/04	26.12	48.76	22.64
	03/16/07	22.28	48.76	26.48
	09/14/07	25.98	48.76	22.78

**Table 4**  
**Current Quarter Groundwater Analytical Data**  
**December 14, 2007**

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)	MtBE (µg/l)
MW-13	12/14/07	ND<50	0.76	ND<0.5	2.3	2.6	ND<5
MW-14	12/14/07	69	1.1	0.57	3.5	4.5	ND<5

**Table 5**  
**Cumulative Summary of Groundwater Analytical Data**

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)
<b>MW-1</b>	12/31/90	51,000	2,200	1,200	<0.5	760
	1/6/95	110,000	13,000	15,000	4,800	13,000
	1/6/95	580,000	29,000	41,000	17,000	43,000
	7/6/95	49,000	8,000	17,000	1,900	9,700
	10/2/95	120,000	16,000	36,000	3,300	17,000
	10/2/95	160,000	20,000	47,000	5,000	23,000
	1/12/96	1,100,000	11,000	18,000	15,000	51,000
	1/12/96	98,000	2,100	4,600	2,500	10,000
	4/13/96	53,000	1,300	2,900	2,100	10,000
	4/13/96	58,000	820	3,600	2,800	12,000
	7/26/96	91,000	2,600	7,200	2,900	14,000
	7/26/96	67,000	2,300	5,500	2,500	11,000
	10/21/96	210,000	4,800	17,000	2,300	15,000
	10/21/96	210,000	5,400	18,000	2,600	11,000
	1/28/97	120,000	5,600	15,000	2,100	11,000
	1/28/97	130,000	5,500	15,000	2,300	12,000
	4/25/97	180,000	6,900	20,000	2,600	13,000
	4/25/97	170,000	6,500	20,000	2,500	13,000
	7/17/97	220,000	8,300	41,000	2,700	16,000
	10/21/97	240,000	9,400	33,000	3,300	22,000
	3/10/98	120,000	11,000	46,000	3,700	21,000
	6/6/98	110,000	7,600	32,000	4,800	23,000
	9/30/98	140,000	5,800	29,000	3,500	18,000
	12/30/98	78,000	5,200	24,000	3,200	19,000
	3/23/99	250,000	8,000	43,000	5,200	27,000

	9/29/99	140,000	6,100	35,000	5,400	27,000
	3/18/00	120,000	5,100	33,000	4,600	24,000
	3/20/01	100,000	3,600	41,000	4,700	25,000
	3/28/02	100,000	2,800	24,000	5,400	28,900
	3/31/03	100,000	2,200	19,000	4,900	21,000
	3/31/04	100,000	2,100	21,000	6,200	36,000
	9/14/04	160,000	1,800	16,000	5,500	30,000
	3/29/06	69,000	1,400	16,000	4,900	28,000
	09/30/06	120,000	1,400	13,000	5,200	29,000
	09/14/07	92,000	1,000	9,400	4,300	23,000

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)
<b>MW-2</b>	1/6/95	980,000	9,400	5,600	19,000	42,000
	7/6/95	71,000	5,300	1,800	6,100	9,000
	10/2/95	40,000	2,900	200	2,800	3,600
	1/12/96	260,000	2,600	2,200	6,300	7,800
	4/13/96	30,000	1,900	370	2,300	2,400
	7/26/96	180,000	1,400	640	2,100	5,000
	10/21/96	62,000	2,100	<0.5	2,100	2,700
	1/28/97	46,000	1,500	94	1,800	2,000
	4/25/97	23,000	790	26	820	730
	7/17/97	95,000	2,200	<0.5	3,100	4,300
	10/21/97	31,000	2,000	<0.5	2,100	1,900
	3/10/98	19,000	730	44	820	1,000
	6/6/98	16,000	670	1,100	510	1,200
	9/30/98	24,000	600	77	680	580
	12/30/98	9,300	510	96	450	480
	3/23/99	5,700	580	9.4	400	280
	9/29/99	17,000	880	240	830	1,000
	12/29/99	11,000	800	11	860	780
	3/18/00	11,000	790	14	520	450
	7/18/00	10,000	560	27	630	530
	9/26/00	6,800	450	7.4	290	200
	12/28/00	12,000	540	30	420	330
	3/20/01	3,500	230	<10	<10	<10
	3/28/02	7,000	570	16	170	71
	3/31/03	5,000	620	<12.5	71	<25
	3/31/04	8,200	500	<12.5	65	<25

	9/14/04	9,000	560	<13	57	<25
	3/29/06	5,200	1,400	<20	52	<20
	9/30/06	4,800	900	64	22	110
	09/14/07	11,000	2,200	53	72	150

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)
<b>MW-3</b>	1/6/95	740,000	11,000	2,300	8,300	28,000
	7/6/95	86,000	12,000	8,600	4,900	19,000
	10/2/95	100,000	15,000	11,000	6,000	20,000
	1/12/96	84,000	6,500	4,100	3,200	12,000
	4/13/96	48,000	7,600	3,600	2,800	9,400
	7/26/96	62,000	6,400	3,100	3,000	11,000
	10/21/96	110,000	5,400	2,400	2,500	9,800
	1/28/97	130,000	5,500	15,000	2,300	12,000
	4/25/97	180,000	6,900	20,000	2,600	13,000
	7/17/97	69,000	5,100	1,100	1,800	8,600
	10/21/97	58,000	4,300	1,300	2,100	8,000
	3/10/98	25,000	3,000	1,300	1,100	3,700
	6/6/98	52,000	4,400	1,900	2,300	6,900
	9/30/98	42,000	4,300	1,400	1,800	6,600
	12/30/98	34,000	4,200	770	2,300	9,000
	3/23/99	44,000	3,500	1,000	1,700	5,200
	9/29/99	39,000	6,000	840	2,400	8,100
	12/29/99	39,000	4,600	790	2,400	8,100
	3/18/00	21,000	3,100	550	1,400	4,100
	7/18/00	30,000	5,000	950	2,000	5,700
	9/26/00	36,000	5,300	640	2,400	9,900
	12/28/00	33,000	4,700	450	2,100	6,400
	3/20/01	21,000	2,000	260	570	3,000
	3/31/03	25,000	3,200	280	1,600	4,200
	3/31/04	11,000	1,000	940	550	1,900
	9/14/04	42,000	3,600	190	2,200	4,800
	3/29/06	7,200	180	17	460	680
	9/30/06	7,100	130	94	500	820
	09/14/07	6,700	16	44	200	400

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)
<b>MW-4</b>	12/30/98	12,000	1,200	1,100	290	1,400

	3/23/99	89,000	5,900	8,700	2,000	9,200
	9/29/99	48,000	5,300	6,800	1,700	7,700
	3/18/00	44,000	4,500	7,500	2,200	11,000
	3/20/01	10,000	700	620	<10	1,900
	3/28/02	30,000	3,700	3,100	1,100	4,100
	3/31/03	25,000	2,000	2,100	820	2,900
	3/31/04	24,000	2,500	200	1,400	2,800
	9/14/04	14,000	760	550	430	1,600
	3/29/06	17,000	2,000	1,200	910	2,400
	9/30/06	4,000	440	120	240	360
	9/14/07	10,000	1,300	96	440	560

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)
<b>MW-5</b>	12/30/98	170	1.1	<0.5	<0.5	4.8
	3/22/99	470	3.8	0.51	2.0	<0.5
	9/29/99	1,200	13	4.2	2.7	4.2
	3/18/00	660	5.5	0.62	1.6	1.7
	3/29/06	190	<0.5	<0.5	<0.5	<0.5
	9/30/06	Dry	---	---	---	---
	9/14/07	Dry	---	---	---	---

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)
<b>MW-6</b>	12/30/98	400	1.0	<0.5	<0.5	4.8
	3/22/99	390	<0.5	<0.5	<0.5	<0.5
	9/30/99	330	1.8	1.4	1.5	<0.5
	3/18/00	200	1.3	<0.5	<0.5	<0.5
	9/26/00	240	1.5	<0.5	<0.5	<0.5
	3/20/01	160	<0.5	<0.5	<0.5	<0.5
	3/28/02	88	.89	<0.5	<0.5	<0.5
	3/29/06	NS	NS	NS	NS	NS
	9/30/06	280	5.5	24	14	69
	9/14/07	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)

MW-8						
	12/30/98	2,200	70	0.94	26	15
	3/23/99	2,300	34	1.1	15	13
	9/30/99	8,800	140	<50	53	<50
	12/29/99	1,900	64	1.0	22	23
	3/18/00	1,400	36	<0.5	12	9.3
	7/18/00	3,000	67	9.8	38	38
	9/26/00	1,200	24	3.0	24	15
	12/28/00	1,200	47	3.7	17	18
	3/20/01	1,300	7.8	<2.5	<2.5	14
	10/5/01	1,800	28	<2.5	20	23
	3/28/02	1,100	12	1.7	11	10.8
	9/30/02	1,400	15	24	32	22
	9/30/06	760	4.9	31	13	64
	03/16/07	370	<0.5	8.1	0.52	0.94
	09/14/07	1,300	1.3	20	3.0	1.6

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)
MW-9	12/30/98	25,000	23	<10	180	620
	3/23/99	27,000	35	<20	600	920
	9/30/99	42,000	140	130	1,000	1,700
	12/29/99	1,100,000	1,200	1,300	4,300	8,700
	3/18/00	17,000	89	46	10	600
	7/18/00	12,000	39	8.2	540	760
	9/26/00	11,000	19	<5	470	610
	12/28/00	22,000	100	<100	610	770
	3/20/01	8,200	40	<10	14	210
	10/5/01	77,000	<100	110	780	850
	3/28/02	11,000	34	6.1	220	180
	9/30/02	34,000	<125	140	240	370
	3/31/03	6,200	<12.5	<12.5	130	87
	9/30/03	9,700	52	<25	160	87
	9/14/04	9,500	48	<25	93	<50
	3/29/06	6,200	<0.5	<0.5	57	11
	9/30/06	2,200	3.7	31	37	40
	3/16/07	3,200	2.2	37	18	2.9
	9/14/07	2,600	1.4	28	13	3.2

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)
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<b>MW-10</b>						
	12/30/98	6,900	130	19	140	210
	3/23/99	6,600	150	33	240	170
	9/30/99	9,300	60	38	280	150
	12/29/99	5,800	87	10	420	180
	3/18/00	3,800	180	11	220	120
	7/18/00	9,100	120	33	210	130
	9/26/00	4,500	22	8.8	1.3	18
	12/28/00	3,900	55	13	98	38
	3/20/01	4,500	48	6.0	<5	23
	10/5/01	5,200	70	28	41	30
	3/28/02	7,400	45	20	210	66
	9/30/02	670	54	5.9	76	23
	3/31/03	5,700	31	38	67	27
	9/30/03	7,400	61	<50	<50	<100
	9/14/04	9,100	47	<25	51	<50
	3/29/06	6,800	140	18	270	160
	9/30/06	5,700	61	30	78	120
	3/16/07	10,000	71	15	46	25
	9/14/07	5,800	55	18	22	15

<b>Well Number</b>	<b>Date Sampled</b>	<b>TPHg (µg/l)</b>	<b>Benzene (µg/l)</b>	<b>Toluene (µg/l)</b>	<b>Ethyl-Benzene (µg/l)</b>	<b>Total Xylenes (µg/l)</b>
<b>MW-11</b>	12/30/98	80	<0.5	<0.5	0.93	1.6
	3/23/99	<50	<0.5	<0.5	<0.5	<0.5
	9/30/99	94	<0.5	<0.5	<0.5	<0.5
	3/18/00	<50	<0.5	<0.5	<0.5	<0.5
	9/26/00	<50	<0.5	<0.5	<0.5	<0.5
	3/20/01	<50	<0.5	<0.5	<0.5	<0.5
	3/28/02	<50	<0.5	<0.5	<0.5	<1.5
	9/30/06	160	1.8	12	7.6	40
	9/14/07	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5

<b>Well Number</b>	<b>Date Sampled</b>	<b>TPHg (µg/l)</b>	<b>Benzene (µg/l)</b>	<b>Toluene (µg/l)</b>	<b>Ethyl-Benzene (µg/l)</b>	<b>Total Xylenes (µg/l)</b>
<b>MW-12</b>	3/20/01	4,100	28	6.2	<5	16
	6/29/01	4,200	26	25	19	29
	12/21/01	5,300	9.7	<2.5	41	14
	3/28/02	4,900	20	<2.5	69	23

	6/28/02	2,600	29	<12.5	30	<25
	9/30/02	700	16	4.9	19	9.8
	09/30/06	2,100	6.2	15	16	38
	12/11/06	5,500	13	24	16	23
	3/16/07	4,900	11	24	16	8.5
	6/10/07	2,600	<2.5	<2.5	13	9.5
	9/14/07	not	available			

Well Number	Date Sampled	TPHg ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethyl-Benzene ( $\mu\text{g/l}$ )	Total Xylenes ( $\mu\text{g/l}$ )
<b>MW-13</b>	3/20/01	<50	<0.5	<0.5	<0.5	<0.5
	6/29/01	<50	<0.5	<0.5	<0.5	<0.5
	10/5/01	<50	<0.5	<0.5	<0.5	<0.5
	12/21/01	<50	<0.5	<0.5	<0.5	<0.5
	3/28/02	<50	<0.5	<0.5	<0.5	<1.5
	6/28/02	<50	<0.5	<0.5	<0.5	<1.0
	9/30/02	<50	<0.5	<0.5	<0.5	<1.0
	12/21/02	<50	<0.5	<0.5	<0.5	<1.0
	09/30/06	170	2.1	13	8.1	43
	12/11/06	110	4.6	6.5	4.6	17
	3/16/07	<50	<0.5	<0.5	<0.5	<0.5
	6/10/07	54	0.80	0.84	1.3	5.4
	9/14/07	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	12/14/07	ND<50	0.76	ND<0.5	2.3	2.6

Well Number	Date Sampled	TPHg ( $\mu\text{g/l}$ )	Benzene ( $\mu\text{g/l}$ )	Toluene ( $\mu\text{g/l}$ )	Ethyl-Benzene ( $\mu\text{g/l}$ )	Total Xylenes ( $\mu\text{g/l}$ )
<b>MW-14</b>	3/20/01	200	<0.5	<0.5	<0.5	<0.5
	6/29/01	660	<0.5	<0.5	<0.5	4.6
	10/5/01	770	1.7	1.5	0.91	8.3
	12/21/01	1,500	3.1	13	1.9	22
	3/28/02	390	1.7	<0.5	<0.5	0.74
	6/28/02	120	<0.5	<0.5	<0.5	<1
	9/30/02	210	<0.5	1.7	<0.5	1.1
	12/21/02	53	<0.5	<0.5	<0.5	<1.0
	09/30/06	210	2.5	15	9.1	48
	12/11/06	190	6.7	9.9	5.4	19
	3/16/07	<50	<0.5	1.1	<0.5	<0.5
	6/10/07	73	1.1	1.3	1.8	7.2
	9/14/07	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5

	12/14/07	69	1.1	0.57	3.5	4.5
--	----------	----	-----	------	-----	-----

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)
<b>MW-1A</b>	5/30/97	12,000	18	8.7	90	540
	12/30/98	51	<0.5	<0.5	<0.5	<0.5
	3/23/99	1,800	4.0	<0.5	3.0	7.5
	3/23/99	2,200	10	0.52	3.1	7.1
	9/30/99	13,000	63	26	30	72
	3/8/00	6,100	36	<5	9.7	45
	9/26/00	11,000	14	<5	65	150
	3/20/01	4,800	30	6.0	<5	7.0
	10/5/01	15,000	76	41	36	140
	3/28/02	9,300	35	<12.5	17	32
	9/30/02	23,000	<50	63	77	230
	9/30/06	2,500	4.1	25	22	49
	3/16/07	1,800	1.8	17	6.4	4.4
	9/14/07	1,500	1.1	15	2.8	1.8

Well Number	Date Sampled	TPHg (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Total Xylenes (µg/l)
<b>141 Farrelly</b>	4/6/96	<50	<0.5	<0.5	<0.5	<0.5
	10/2/99	<50	<0.5	<0.5	<0.5	<0.5
	3/18/00	<50	<0.5	<0.5	<0.5	<0.5
	7/13/00	<50	<0.5	<0.5	<0.5	<0.5
	9/26/00	<50	<0.5	<0.5	<0.5	<0.5
	12/29/00	<50	<0.5	<0.5	<0.5	<0.5
	12/21/01	<50	<0.5	<0.5	<0.5	<0.5
	9/30/02	<50	<0.5	<0.5	<0.5	<1.0
	12/21/02	<50	<0.5	<0.5	<0.5	<1.0
	6/19/03	<50	<0.5	<0.5	<0.5	<1.0
	9/14/04	<50	<0.5	<0.5	<0.5	<1.0
	3/16/07	<50	<0.5	<0.5	<0.5	<0.5
	9/14/07	<50	<0.5	<0.5	<0.5	<0.5

## **Figures**



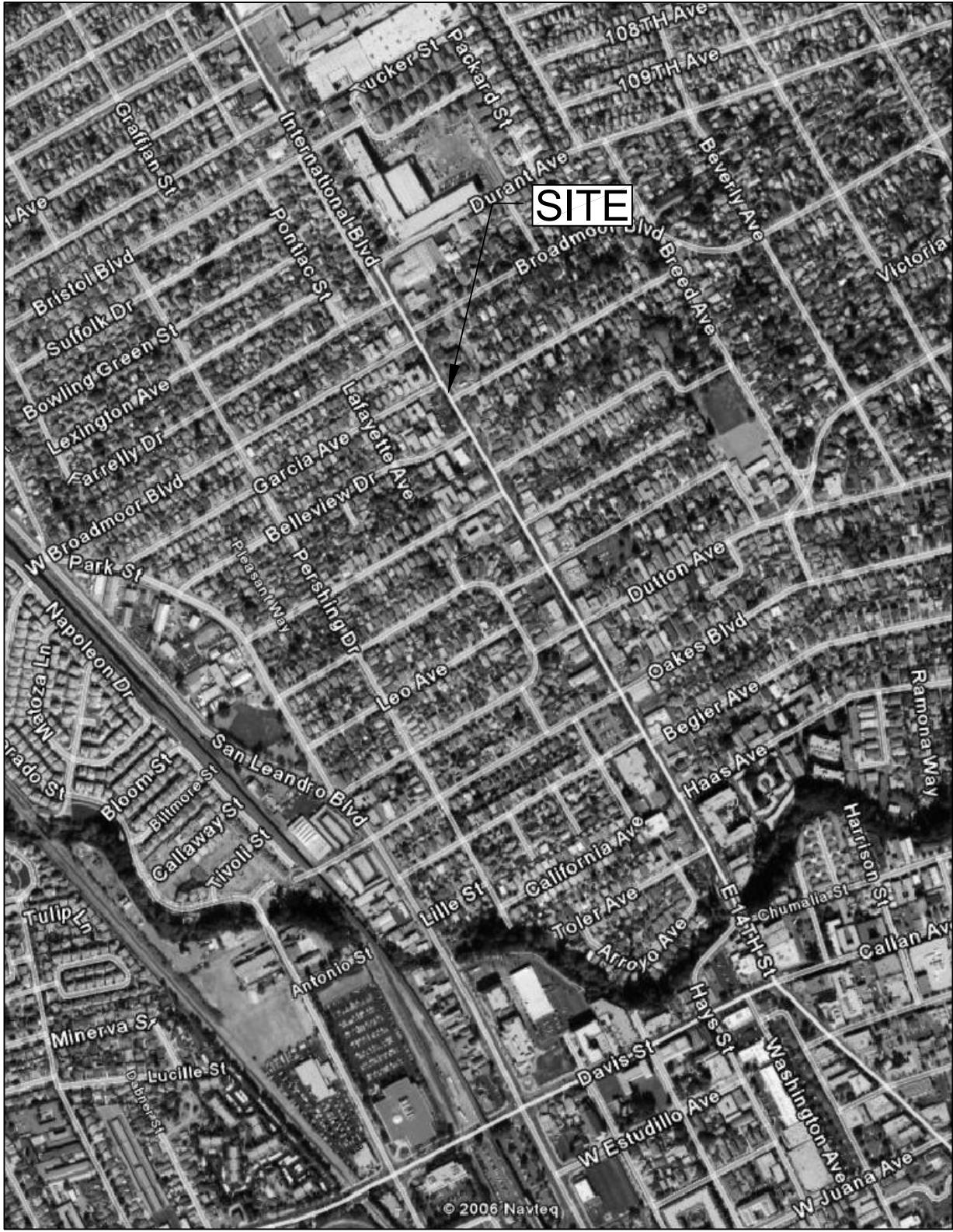
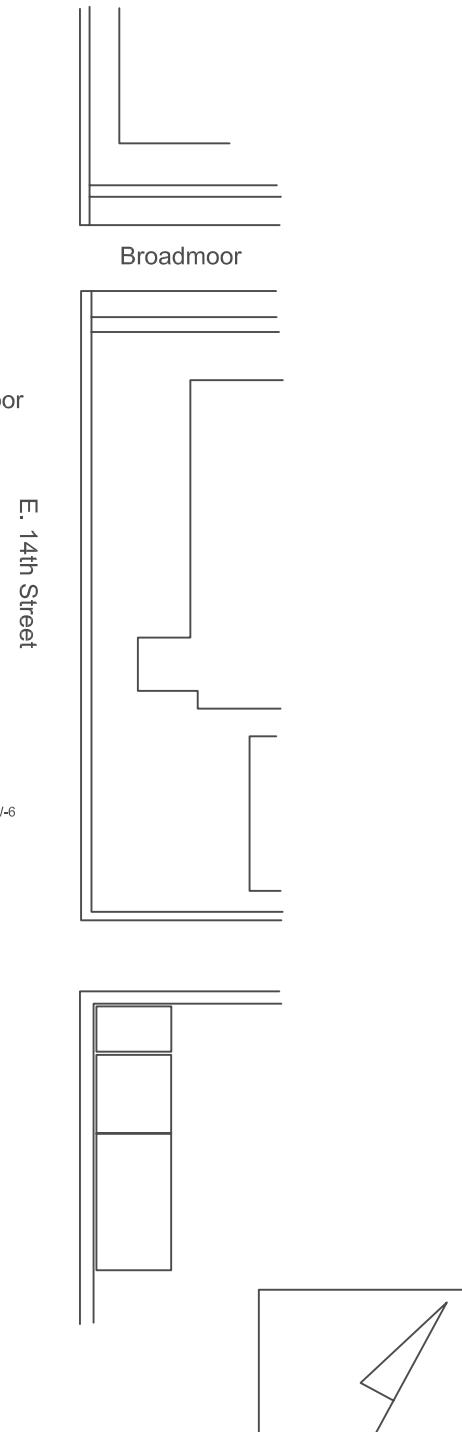
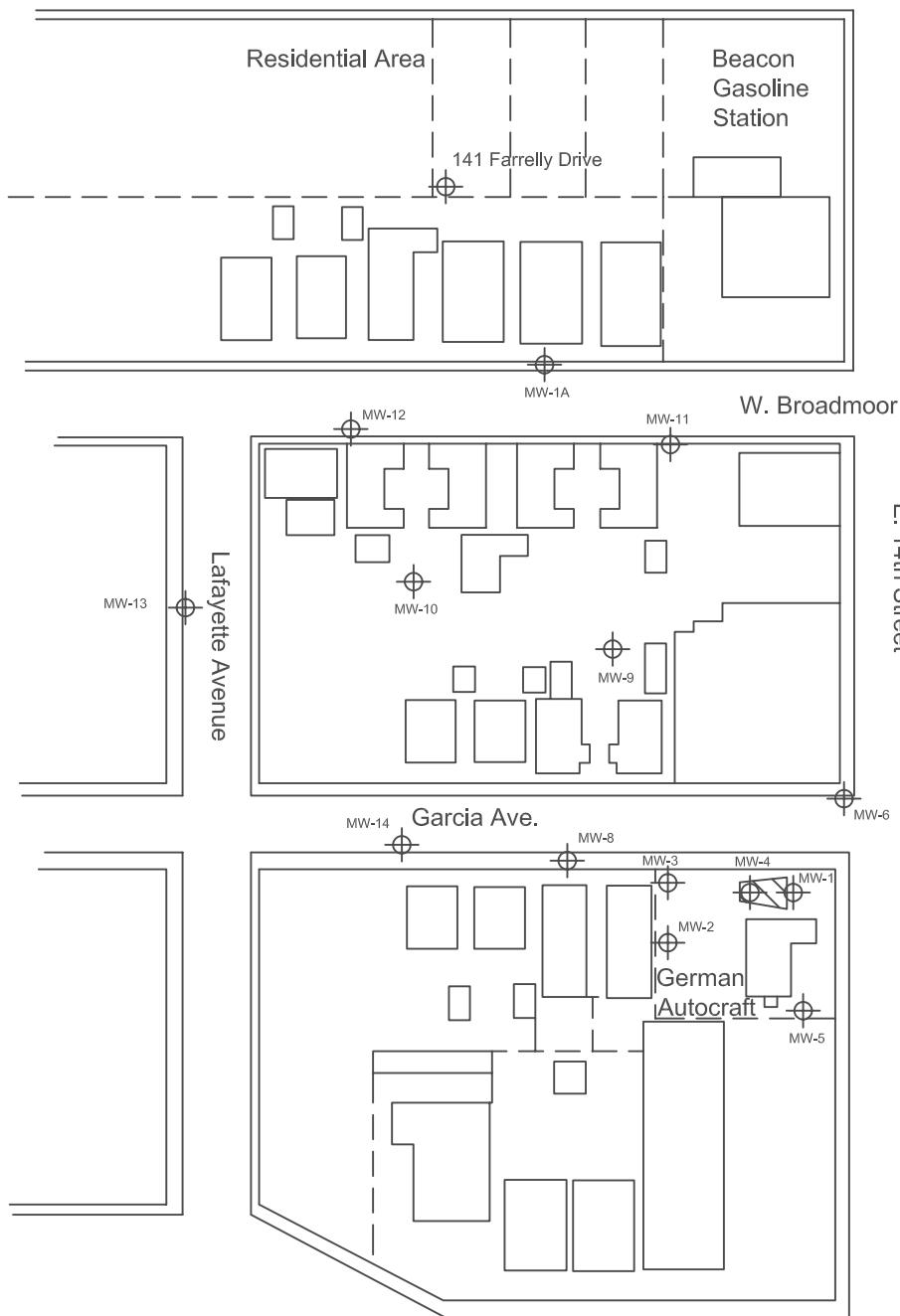


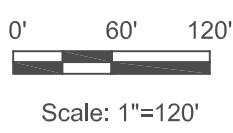
Image from Google ©2006

 <b>Groundwater Cleaners Inc.</b> <i>Cleaning California from the Groundwater Up</i> 347 Frederick Street, San Francisco, California, 94117 (415) 665-6181	<b>German Autocraft</b> 301 East 14th Street San Leandro, California	<b>Figure 1</b> <b>Rev. B</b>
	<b>Site Area Map</b>	10.01.06

### Farrelly Drive



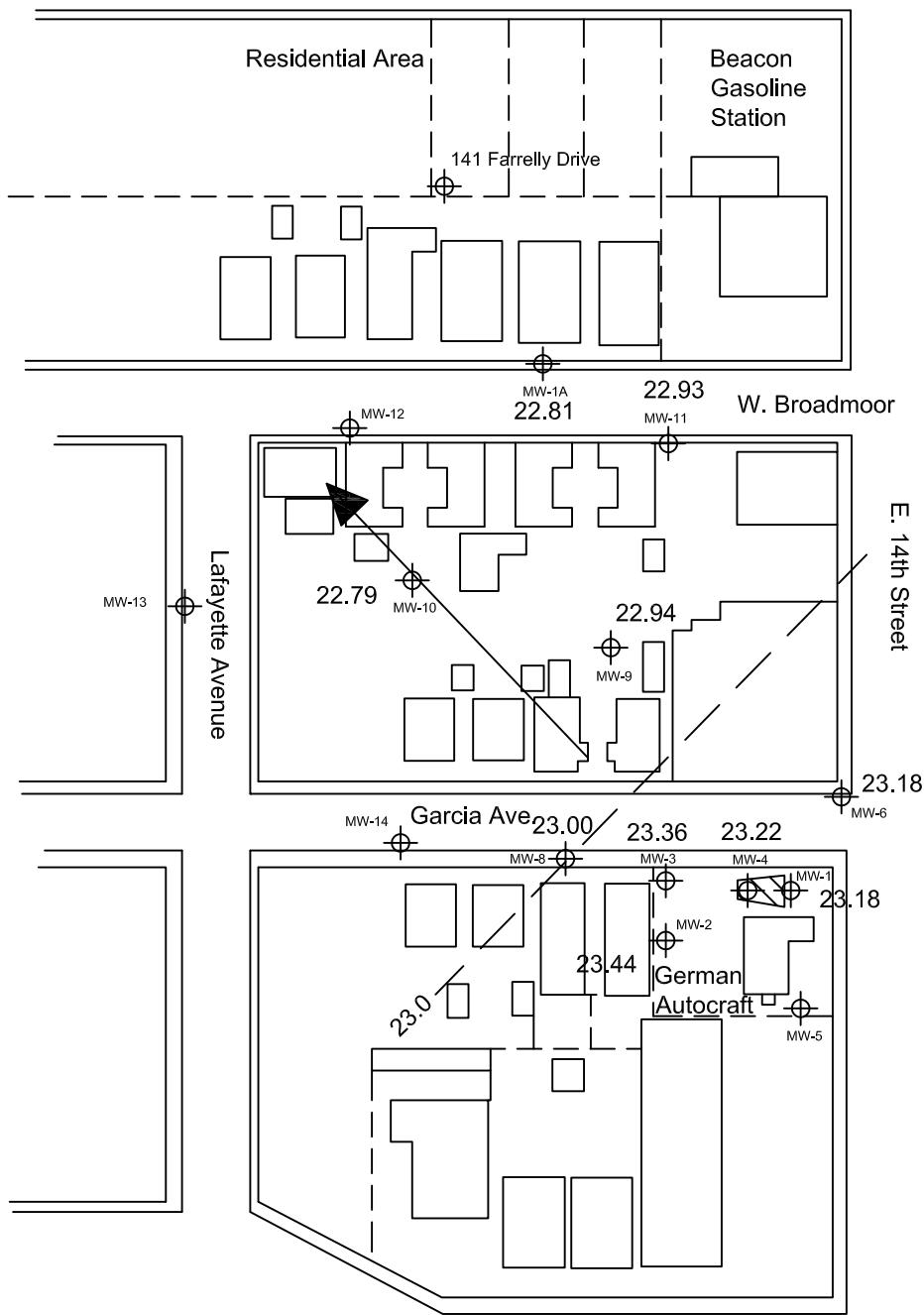
#### EXPLANATION:



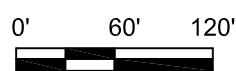
- Streets/Buildings
- Groundwater Monitoring Well
- ▨ Former Tank Pit Areas
- Buildings



Farrelly Drive



Notes:



Scale: 1"=120'

- Streets/Buildings
- ⊕ Groundwater Monitoring Well
- ▨ Former Tank Pit Areas
- Buildings

Wells with no elevations have not been surveyed.



Groundwater  Cleaners Inc.

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(415) 665-6181

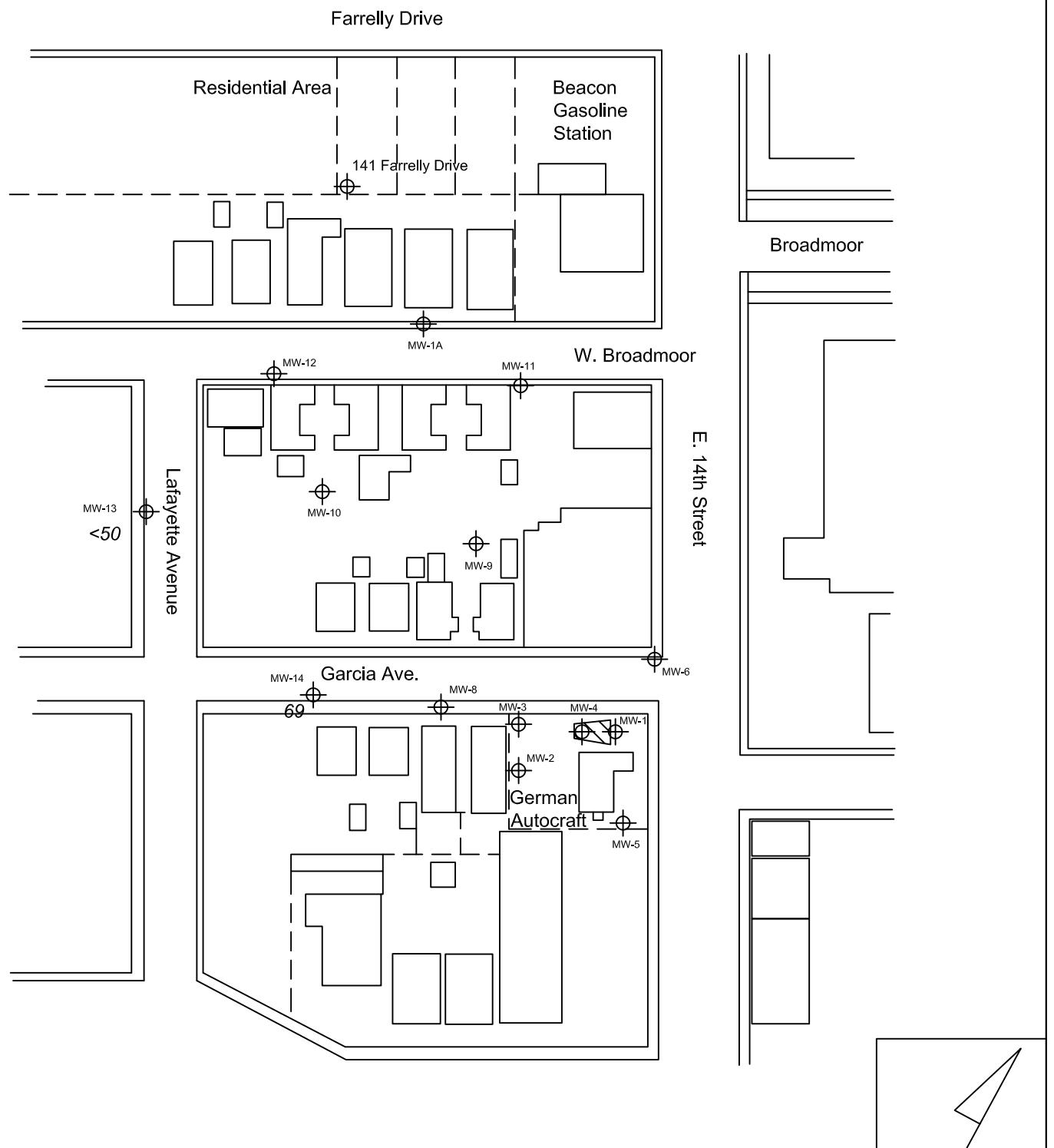
German Autocraft  
301 East 14th Street  
San Leandro, California

Groundwater Elevations

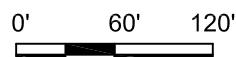
Figure 3

Rev. A

12.14.07



**EXPLANATION:**



Scale: 1"=120'

- Streets/Buildings
- Groundwater Monitoring Well
- ▨ Former Tank Pit Areas
- Buildings

**Notes:**  
Only MW-13 & MW-14 tested this quarter.

Data in  $\mu\text{g/L}$  (micrograms per Liter)



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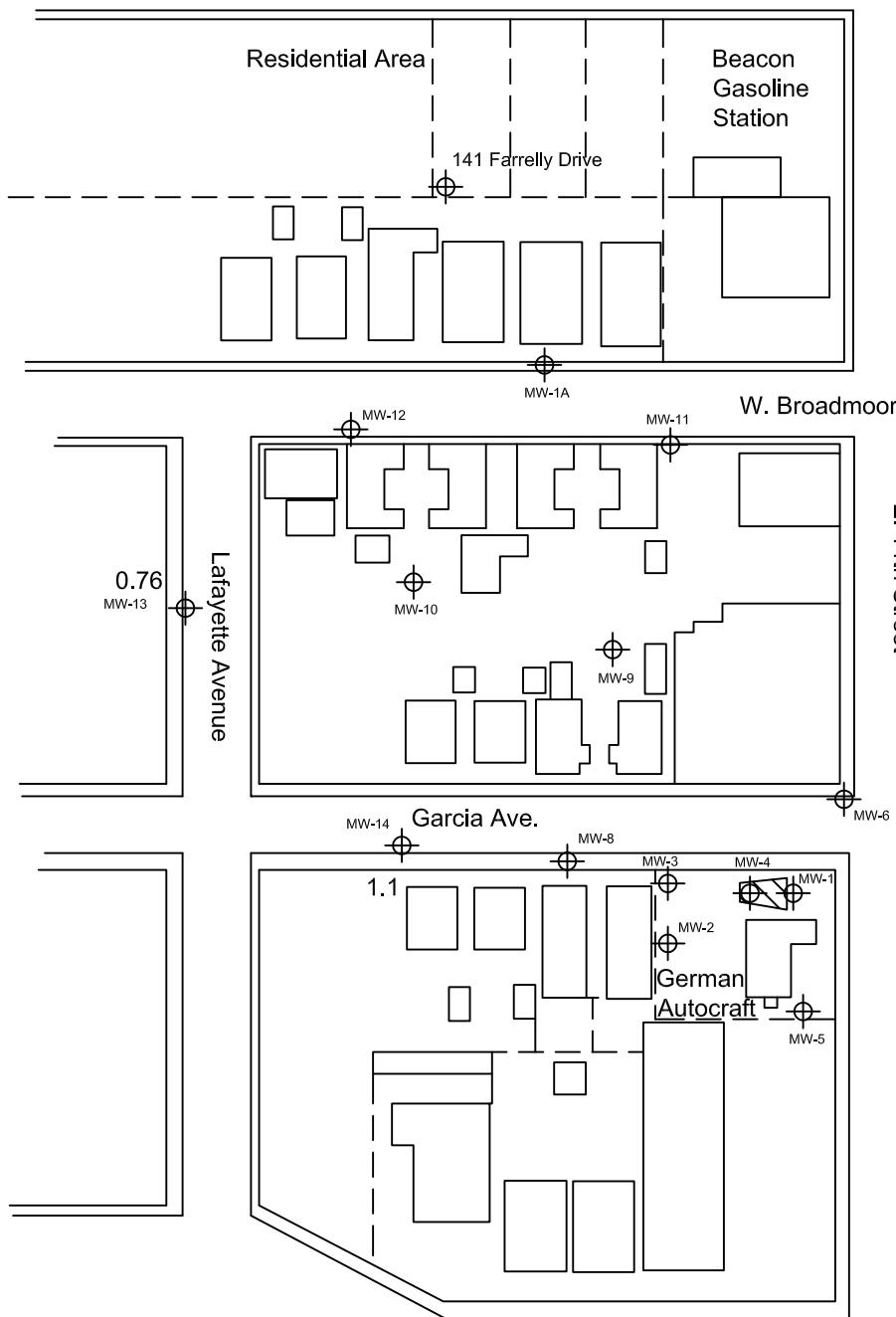
**TPHg in Groundwater**

**Figure 4**

**Rev. A**

12.14.07

Farrelly Drive



EXPLANATION:

0' 60' 120'



Scale: 1"=120'

— Streets/Buildings

○ Groundwater Monitoring Well

▨ Former Tank Pit Areas

□ Buildings

Notes:

Only MW-13 & MW-14 tested this quarter.

Data in  $\mu\text{g/L}$  (micrograms per Liter)



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San Leandro, California

Figure 5

Rev. A

Benzene in Groundwater ( $\mu\text{g/L}$ )

12.14.07

## **Well Sampling Reports**



### Well Sampling Data (12/14/07)

301 E. 14th Street

San Leandro, CA

---

**WELL: MW-1**

Well Purge Method: Submersible Pump  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 26.24

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	32.44	ft btoc
Depth to Water:	26.22	ft btoc
Height of Water:	6.22	ft
Three Well Volumes:	3.17	gal

Notes: Definite petroleum odor

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
12/14/07	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	%	Depth [ft]
	0	Pre-Purge	nm	nm	nm	nm	nm	26.22		na
	1	Purging	nm	nm	6.89	nm	57.2	nm		na
	2	Purging	nm	nm	6.84	nm	56.6	nm		na
	4	Purging	nm	nm	6.82	nm	56.6	nm		na
	Total 4.0	Collect Sample	nm	nm	nm	nm	nm	26.24	99.69%	na

---

**WELL: MW-2**

Well Purge Method: Submersible pump  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 26.62

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	33.25	ft btoc
Depth to Water:	26.58	ft btoc
Height of Water:	6.67	ft
Three Well Volumes:	3.38	gal

Notes: Slight petroleum odor

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
12/14/07	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	%	Depth [ft]
	0	Pre-Purge	nm	nm	nm	nm	nm	26.58		na
	1	Purging	nm	nm	6.84	nm	50.0	nm		na
	2	Purging	nm	nm	6.84	nm	50.7	nm		na
	4	Purging	nm	nm	6.84	nm	51.0	nm		na
	Total 4.0	Collect Sample	nm	nm	nm	nm	nm	26.62	99.40%	na

---

**WELL: MW-3**

Well Purge Method: Disposable Bailer  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 25.99

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	34.94	ft btoc
Depth to Water:	25.96	ft btoc
Height of Water:	8.98	ft
Three Well Volumes:	4.58	gal

Note: Strong TPH odor present

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
12/14/07	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	%	Depth [ft]
	0	Pre-Purge	nm	nm	nm	nm	nm	25.96		na
	1	Purging	nm	nm	6.92	nm	55.5	nm		na
	2	Purging	nm	nm	6.89	nm	55.2	nm		na
	4	Purging	nm	nm	6.90	nm	55.4	nm		na
	Total 4.0	Collect Sample	nm	nm	nm	nm	nm	25.99	99.67%	na

---

### Well Sampling Data (12/14/07)

301 E. 14th Street

San Leandro, CA

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**WELL: MW-4**

Well Purge Method: Disposable Bailer  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 26.42

**Note: Strong petroleum odor**

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	34.53	ft btoc
Depth to Water:	26.39	ft btoc
Height of Water:	8.14	ft
Three Well Volumes:	4.29	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	Sample Depth	Depth [ft]
12/14/2007	0- Static	Pre-Purge	nm	nm	nm	nm	nm	26.39		na
	1	Purging	nm	nm	6.94	nm	55.7	nm		na
	2	Purging	nm	nm	6.91	nm	55.2	nm		na
	4	Purging	nm	nm	6.91	nm	55.4	nm		na
	Total 4.5	Collect Sample	nm	nm	nm	nm	nm	26.42	100.12%	na

---

**WELL: MW-5**

Well Purge Method: Disposable Bailer  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 0.00

**Dry**

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	21.62	ft btoc
Depth to Water:	Dry	ft btoc
Height of Water:	n/a	ft
Three Well Volumes:	0.00	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
	Vol. [Gal]	Status	ppm	mV		uS	C	BTOC [ft]	Sample Depth	Depth [ft]
12/14/2007	0- Static	Pre-Purge	nm	nm	nm	nm	nm	Dry		na
		Purging	nm	nm	nm	nm	nm	nm		na
		Purging	nm	nm	nm	nm	nm	nm		na
		Purging	nm	nm	nm	nm	nm	nm		na
	nm	Collect Sample	nm	nm	nm	nm	nm		Dry	na

---

**WELL: MW-6**

Well Purge Method: Submersible pump  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 24.90

**Note: Strong petroleum odor**

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	31.29	ft btoc
Depth to Water:	24.88	ft btoc
Height of Water:	6.41	ft
Three Well Volumes:	3.27	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	Sample Depth	Depth [ft]
12/14/07	0	nm	nm	nm	nm		nm	24.58		
	1	nm	nm	nm	7.43	nm	61.5	nm		
	2	nm	nm	nm	7.26	nm	61.1	nm		
	4	nm	nm	nm	6.96	nm	60.8	nm		
	Total 4.0	nm	nm	nm	nm	nm	nm	24.90	99.70%	

---

### Well Sampling Data (12/14/07)

301 E. 14th Street

San Leandro, CA

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**WELL: MW-8**

Well Purge Method: Submersible Pump  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 26.14

**Note: No petroleum odors**

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	29.69	ft btoc
Depth to Water:	26.35	ft btoc
Height of Water:	3.34	ft
Three Well Volumes:	1.82	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
12/14/07	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	Sample Depth	Depth [ft]
	0	nm	nm	nm	nm	nm	nm	26.12	25	na
	1		nm	nm	6.80	nm	60.2	nm		na
	2		nm	nm	6.81	nm	57.7	nm		na
	4		nm	nm	6.69	nm	57.7	nm		na
	Total 4.0		nm	nm	nm	nm	nm	26.14	99.44%	na

---

**WELL: MW-9**

Well Purge Method: Disposable Bailer  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 25.84

**Well not monitored**

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	32.97	ft btoc
Depth to Water:	25.83	ft btoc
Height of Water:	7.14	ft
Three Well Volumes:	3.26	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
12/14/07	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	Sample Depth	Depth [ft]
	0	nm	nm	nm	nm	nm	nm	25.58		
	1	nm	nm	nm	6.84	nm	57.7	nm		
	2	nm	nm	nm	6.90	nm	57.9	nm		
	4	nm	nm	nm	6.91	nm	58.1	nm		
	Total 4.0	nm	nm	nm	nm	nm	nm	25.84	99.69%	

---

**WELL: MW-10**

Well Purge Method: Submersible pump  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 27.16

**Petroleum odor noticed**

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	37.87	ft btoc
Depth to Water:	27.14	ft btoc
Height of Water:	10.73	ft
Three Well Volumes:	5.47	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
12/14/07	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	Sample Depth	Depth [ft]
	0- Static	Pre-Purge	nm	nm	nm	nm	nm	27.14		na
	2	Purging	nm	nm	6.81	nm	58.2	nm		na
	4	Purging	nm	nm	6.75	nm	59.3	nm		na
	6	Purging	nm	nm	6.79	nm	59.5	nm		na
	Total 7.0	Collect Sample	nm	nm	6.81	nm	59.5	27.16	99.91%	na

---

### Well Sampling Data (09/14/07)

301 E. 14th Street

San Leandro, CA

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**WELL: MW-11**

Well Purge Method: Submersible pump  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 24.72

**Notes:** No petroleum odor present.

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	33.70	ft btoc
Depth to Water:	25.00	ft btoc
Height of Water:	8.70	ft
Three Well Volumes:	4.44	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	Sample Depth	Depth [ft]
12/14/2007	0- Static	Pre-Purge	nm	nm	nm	nm	nm	25.00		na
	2	Purging	nm	nm	6.92	nm	58.8	nm		na
	4	Purging	nm	nm	6.92	nm	58.8	nm		na
	6	Purging	nm	nm	6.92	nm	58.8	nm		na
	Total 6.0	Collect Sample	nm	nm	nm	nm	nm	24.72	100.00%	na

---

**WELL: MW-12**

Well Purge Method: Submersible pump  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: na

**Note: Well not accessible for sampling**

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	30.43	ft btoc
Depth to Water:	25.77	ft btoc
Height of Water:	4.66	ft
Three Well Volumes:	2.38	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	Sample Depth	Depth [ft]
12/14/2007	0- Static	Pre-Purge	nm	nm	nm	nm	nm	25.77		na
	1	Purging	nm	nm	nm	nm	nm	nm		na
	2	Purging	nm	nm	nm	nm	nm	nm		na
	4	Purging	nm	nm	nm	nm	nm	nm		na
	Total 4.0	Collect Sample	nm	nm	nm	nm	nm	26.56	100.00%	na

---

**WELL: 141 Farrelly Dr.**

Well Purge Method: Submersible pump  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 25.98

**Note: Not sampled or monitored in December**

Well Screen Interval:	-	ft bgs
Casing Diameter:	10	inches
Total Depth of Well:	33.88	ft btoc
Depth to Water:	25.98	ft btoc
Height of Water:	7.90	ft
Three Well Volumes:	100.72	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	Sample Depth	Depth [ft]
09/14/07	0		nm	nm	nm	nm	nm	21.37		na
	2		nm	nm	6.89	nm	55.9			na
	4		nm	nm	6.89	nm	55.9			na
	6		nm	nm	6.89	nm	55.9			na
	Total 6.0		nm	nm	nm	nm	nm	25.98	100.00%	na

---

### Well Sampling Data (12/14/07)

301 E. 14th Street

San Leandro, CA

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**WELL: MW-13**

Well Purge Method: Submersible pump  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 27.12

**Notes:** No petroleum odor present.

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	37.47	ft btoc
Depth to Water:	27.11	ft btoc
Height of Water:	10.37	ft
Three Well Volumes:	5.42	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	Sample Depth	Depth [ft]
12/14/2007	0- Static	Pre-Purge	nm	nm	nm	nm	nm	27.11		na
	2	Purging	nm	nm	6.75	nm	57.5	nm		na
	4	Purging	nm	nm	6.75	nm	57.2	nm		na
	6	Purging	nm	nm	6.72	nm	57.5	nm		na
	Total 6.0	Collect Sample	nm	nm	nm	nm	nm	27.12	99.45%	na

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**WELL: MW-14**

Well Purge Method: Submersible pump  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 26.80

**Notes:** No odor present.

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	30.43	ft btoc
Depth to Water:	26.80	ft btoc
Height of Water:	3.63	ft
Three Well Volumes:	1.97	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	Sample Depth	Depth [ft]
12/14/2007	0- Static	Pre-Purge	nm	nm	nm	nm	nm	26.80		na
	1	Purging	nm	nm	6.92	nm	58.6	nm		na
	2	Purging	nm	nm	6.64	nm	57.2	nm		na
	4	Purging	nm	nm	6.64	nm	57.5	nm		na
	Total 4.0	Collect Sample	nm	nm	nm	nm	nm	26.80	100.00%	na

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**WELL: MW-1A**

Well Purge Method: Submersible pump  
 Sample Collection Method: Disposable Bailer  
 Sample Collection Depth: 25.44

**Petroleum odor noted**

Well Screen Interval:	-	ft bgs
Casing Diameter:	2	inches
Total Depth of Well:	33.88	ft btoc
Depth to Water:	25.43	ft btoc
Height of Water:	8.45	ft
Three Well Volumes:	4.46	gal

Date/Time	Purge	Purge	D.O.	O.R.P.	pH	Cond.	Temp	DTW	Recovery	Pump
	Vol. [Gal]	Status	ppm	mV		uS	F	BTOC [ft]	Sample Depth	Depth [ft]
12/14/07	0		nm	nm	nm	nm	nm	21.37		na
	2		nm	nm	6.82	nm	59.3			na
	4		nm	nm	6.82	nm	59.0			na
	6		nm	nm	6.82	nm	59.1			na
	Total 6.0		nm	nm	nm	nm	nm	25.44	99.88%	na

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## **Analytical Reports**





## McCampbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: [www.mccampbell.com](http://www.mccampbell.com) E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: 877-252-9262 Fax: 925-252-9269

Groundwater Cleaners  347 Frederick Street  San Francisco, CA 94117	Client Project ID: # 301; German Autocraft	Date Sampled: 12/14/07
		Date Received: 12/19/07
	Client Contact: Glenn Reierstad	Date Reported: 12/27/07
	Client P.O.:	Date Completed: 12/27/07

**WorkOrder: 0712665**

December 27, 2007

Dear Glenn:

Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: **# 301; German Autocraft,**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice 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 or concerns, please feel free to give me a call. Thank you for choosing  
McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McCampbell Analytical, Inc.



# McCampbell Analytical, Inc.

 1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

## CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0712665

ClientID: GCF

EDF

Excel

Fax

Email

HardCopy

ThirdParty

Report to:

Glenn Reierstad  
Groundwater Cleaners  
347 Frederick Street  
San Francisco, CA 94117

Email: reierstad@msn.com  
TEL: 415-577-9383 FAX: 415-566-3556  
ProjectNo: # 301; German Autocraft  
PO:

Bill to:

Glenn Reirstad  
Groundwater Cleaners  
347 Frederick Street  
San Francisco, CA 94117

Requested TAT: 5 days

Date Received: 12/19/2007

Date Printed: 12/19/2007

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0712665-001	MW-13	Water	12/14/07	<input type="checkbox"/>	A	A										
0712665-002	MW-14	Water	12/14/07	<input type="checkbox"/>	A											

Test Legend:

1	G-MBTEX_W
6	
11	

2	PREDF REPORT
7	
12	

3	
8	

4	
9	

5	
10	

Prepared by: Kimberly Burks

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.

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## Sample Receipt Checklist

Client Name: **Groundwater Cleaners**Date and Time Received: **12/19/07 5:55:53 PM**Project Name: **# 301; German Autocraft**

Checklist completed and reviewed by: Kimberly Burks

WorkOrder N°: **0712665** Matrix WaterCarrier: Rob Pringle (MAI Courier)

### Chain of Custody (COC) Information

- |   |   |                             |
|---|---|-----------------------------|
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sample IDs noted by Client on COC?                      | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Date and Time of collection noted by Client on COC?     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sampler's name noted on COC?                            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

### Sample Receipt Information

- |  |   |                             |  |
|--|---|-----------------------------|--|
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Shipping container/cooler in good condition?       | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Samples in proper containers/bottles?              | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sample containers intact?                          | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |
| Sufficient sample volume for indicated test?       | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |  |

### Sample Preservation and Hold Time (HT) Information

- |   |   |                             |   |
|---|---|-----------------------------|---|
| All samples received within holding time?           | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| Container/Temp Blank temperature                    | Cooler Temp:                            | 9.2°C                       | NA <input type="checkbox"/>                     |
| Water - VOA vials have zero headspace / no bubbles? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | No VOA vials submitted <input type="checkbox"/> |
| Sample labels checked for correct preservation?     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| TTLC Metal - pH acceptable upon receipt (pH<2)?     | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |

-----  
Client contacted:

Date contacted:

Contacted by:

Comments:



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Telephone: 877-252-9262 Fax: 925-252-9269

Groundwater Cleaners 347 Frederick Street San Francisco, CA 94117	Client Project ID: # 301; German Autocraft	Date Sampled: 12/14/07
		Date Received: 12/19/07
	Client Contact: Glenn Reierstad	Date Extracted: 12/23/07-12/26/07
	Client P.O.:	Date Analyzed 12/23/07-12/26/07

## Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction method SW5030B

### Analytical methods SW8021B/8015Cm

Work Order: 0712665

\* 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.

# cluttered chromatogram: sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (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; p) see attached narrative.



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## QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0712665

EPA Method SW8021B/8015Cm		Extraction SW5030B				BatchID: 32693				Spiked Sample ID: 0712664-004A			
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	
TPH(btex) <sup>f</sup>	ND	60	108	126	15.4	98.5	99.4	0.902	70 - 130	30	70 - 130	30	
MTBE	ND	10	94.9	104	9.04	95.5	107	11.0	70 - 130	30	70 - 130	30	
Benzene	ND	10	96.4	96.1	0.232	93.9	98.4	4.73	70 - 130	30	70 - 130	30	
Toluene	ND	10	103	107	4.09	91.7	97.1	5.79	70 - 130	30	70 - 130	30	
Ethylbenzene	ND	10	112	112	0	104	110	5.74	70 - 130	30	70 - 130	30	
Xylenes	ND	30	120	127	5.41	100	107	6.45	70 - 130	30	70 - 130	30	
%SS:	91	10	91	94	3.32	102	95	6.29	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 32693 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0712665-001A	12/14/07	12/26/07	12/26/07 8:15 PM	0712665-002A	12/14/07	12/23/07	12/23/07 11:10 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.

<sup>f</sup> TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.