

# <u>Streamborn</u>

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Casimiro Damele 3750 Victor Avenue Oakland CA 94619 Alameda County Environmental Health

9 January 2009

Project No. P257

# Letter Report Groundwater Monitoring Conducted 15 December 2008 4401 Market Street Oakland CA Fuel Leak Case No. RO 0000132

#### Dear Mr. Damele (hardcopy):

This letter report documents the results of groundwater monitoring conducted 15 December 2008 for six monitoring wells (MW1, MW2, MW3, MW4, MW5, and MW6) at/near the subject site. Streamborn attempted to obtain permission to access well MW7; however, the property owner of 903 44<sup>th</sup> Street (where well MW7 is located) did not return our inquiries.

On 21 November 2008, prior to groundwater monitoring, wells MW1, MW2, MW3, MW4, MW5, and MW6 were developed by surging with a surge block and pumping with a submersible pump. Well development was mandated by Alameda County Environmental Health Services. Blaine Tech Services (San Jose CA) performed the work.

The results of our work are summarized in the following:

- Table 1 provides a chronology of environmental activities.
- Table 2 provides a bibliography.
- Table 3 summarizes groundwater level and gradient data.
- Table 4 summarizes groundwater purging and sampling information.
   Purge water generated during sampling was containerized onsite in labeled drums.
- Table 5 summarizes the groundwater analytical data from the monitoring wells.
- Table 6 summarizes free product monitoring in selected monitoring wells. Free product was not detected in the monitoring wells.
- Figure 1 provides a location map.
- Figure 2 shows the exploration locations.
- Figure 3 shows the most recent groundwater levels and gradient (15 December 2008).

Mail: PO Box 8330, Berkeley CA 94707-8330 Office: 900 Santa Fe Avenue, Albany CA 94706

- Figure 4 provides a plot of TPH-gasoline versus time for wells MW1, MW2, MW4, MW5, and MW6.
- Attachment 1 contains the well development forms.
- Attachment 2 contains the groundwater sampling forms.
- Attachment 3 contains the laboratory report and chain-of-custody form.

Unexpectedly elevated concentrations of TPH-gasoline and/or BTEX were measured in wells MW2 and MW5. The remaining wells exhibited concentrations of TPH-gasoline and BTEX below the applicable detection limits or below applicable water quality criteria. Existing data are not sufficient to determine the cause of the elevated concentrations.

In light of the elevated concentrations measured in December 2008, we recommend that followon groundwater monitoring be conducted circa March/April 2009 and September/October 2009.

We have postponed the soilgas survey until April 2009 (after the end of the rainy season). The soilgas survey report will be submitted circa May 2009.

Please contact us with any questions or comments.

Sincerely,

**STREAMBORN** 

Juli A. Brady, PE

**Environmental Engineer** 

Attachments

Paresh Khatri/Alameda County Health Care Services Agency, Alameda CA (ecopy)

This report was uploaded to the Alameda County Server. This report was uploaded to Geotracer (geotracker.swrcb.ca.gov)



# **Table 1 (Page 1 of 2)**

# **Environmental Chronology**

## 4401 Market Street, Oakland CA

Date	Activities Performed By	Description
Unknown	Unknown	• Four underground gasoline tanks (one 1,000-gallon and three 500-gallon tanks) were installed.
		• W.A. Craig reported that the structure at 4401 Market Street was constructed in 1943 and used as a gasoline station until the 1970s.
22 June 1990	Environmental Bio-Systems	• The 4 underground gasoline tanks were removed. Removal of the fuel dispensers, product piping, and pump island was not documented. Soil excavated during tank removal was reused to backfill the excavations.
		• Soil samples were collected from below the tanks. Samples of the excavated soil were also collected. Soil samples were analyzed for TPH-gasoline and BTEX. Soil sampling indicated a release of gasoline.
6 September 1990	W.A. Craig	• Two trenches were excavated to depths of approximately 5 feet in the vicinity of the former dispenser island.
		Contaminated soil was observed during excavation but no laboratory analyses were performed. The excavated soil was reused to backfill the trenches.
27 and 28 October 1994	W.A. Craig	• Seven borings were drilled to depths of approximately 25 feet at and near 4401 Market Street (SB1, SB2, SB3, SB4, MW1, MW2, and MW3); three of the borings were completed as monitoring wells (MW1, MW2, and MW3). Soil samples were collected during drilling.
		• Free product, presumably gasoline, was observed in boring SB2, located near the southwest corner of 4401 Market Street.
		Soil samples were analyzed for TPH-gasoline and BTEX.
8 November 1994	W.A. Craig	Groundwater monitoring was conducted for wells MW1, MW2, and MW3.
		Samples were analyzed for TPH-gasoline and BTEX.
14 February 1995	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3.
		Samples were analyzed for TPH-gasoline and BTEX.
7 June 1995	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3.
		Samples were analyzed for TPH-gasoline and BTEX.
29 August 1995	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3.
		Samples were analyzed for TPH-gasoline and BTEX.
8 December 1995	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3.
		Samples were analyzed for TPH-gasoline and BTEX.
7 March 1996	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3.
10.1 1006	WA C	Samples were analyzed for TPH-gasoline, BTEX, and MtBE.      Samples were analyzed for TPH-gasoline, BTEX, and MtBE.
19 June 1996	W.A. Craig	Groundwater monitoring was conducted for wells MW1, MW2, and MW3.  Savada a season and season of a TDH and line DTEX and MADE.
20 December 1996	W A Craic	<ul> <li>Samples were analyzed for TPH-gasoline, BTEX, and MtBE.</li> <li>Groundwater monitoring was conducted for wells MW1, MW2, and MW3.</li> </ul>
20 December 1996	W.A. Craig	<ul> <li>Groundwater monitoring was conducted for wells MW1, MW2, and MW3.</li> <li>Samples were analyzed for TPH-gasoline, BTEX, and MtBE.</li> </ul>
12 June 1997	W.A. Craig	<ul> <li>Groundwater monitoring was conducted for wells MW1, MW2, and MW3.</li> </ul>
12 June 1997	W.M. Claig	<ul> <li>Samples were analyzed for TPH-gasoline, BTEX, and MtBE.</li> </ul>
31 March 1999	Streamborn	• Groundwater levels measured in wells MW1, MW2, and MW3.
April and July 1999	Streamborn	<ul> <li>Nine borings were drilled to depths of approximately 20 feet near 4401 Market Street</li> </ul>
April and July 1999	Streamoorn	(B8 through B16). Free product, presumably gasoline, was observed in boring B10, located on the south side of 44th Street, adjacent to 903 44th Street. Soil samples were collected during drilling. Groundwater samples were collected from temporary casings installed in the borings. The borings were grouted upon completion of groundwater sampling.
		• Soil samples and groundwater samples were analyzed for TPH-gasoline, BTEX, and fuel oxygenates.
4-5 January 2001	Streamborn	<ul> <li>Four monitoring wells (MW4, MW5, MW6, and MW7) were installed to depths of approximately 25 feet near 4401 Market Street. Soil samples were collected during drilling.</li> </ul>
		• Soil samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates.
		An elevation survey was performed for the newly-installed monitoring wells.

## Table 1 (Page 2 of 2)

# **Environmental Chronology**

## 4401 Market Street, Oakland CA

Date	Activities Performed By	Description
1 February 2001	Streamborn	Wells MW4, MW5, MW6, and MW7 were developed.
		• Groundwater samples were collected from wells MW1, MW3, MW4, MW5, MW6, and MW7. Samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates.
		• Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7.
		• Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
9 March 2001	Streamborn	• Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7.
		• Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
23 April 2001	Streamborn	• Water levels were measured in MW1, MW2, MW3, MW4, MW5, MW6, and MW7.
		• Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
30 May 2001	Streamborn	• Groundwater samples were collected from wells MW1, MW3, MW4, MW5, MW6 and MW7. Samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates.
		• Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7.
		• Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
19 June 2001	Streamborn	• Water levels were measured in MW1, MW2, MW3, MW4, MW5, MW6, and MW7.
		• Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
19 July 2001	Streamborn	• Water levels were measured in MW1, MW2, MW3, MW4, MW5, MW6, and MW7.
		• Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
22 August 2001	Streamborn	• Groundwater samples were collected from wells MW1, MW3, MW4, MW5, MW6 and MW7. Samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates.
		• Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7.
		• Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
29 November 2001	Streamborn	• Groundwater samples were collected from wells MW1, MW3, MW4, MW5, MW6 and MW7. Samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates.
		• Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7.
29 September 2003	Streamborn	• Groundwater samples were collected from wells MW1, MW3, MW4, MW5, MW6 and MW7. Samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates.
		• Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7.
		• Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
21 November 2008	Streamborn	• Wells MW1, MW2, MW3, MW4, MW5, and MW6 were redeveloped by surging with a surge block and pumping with a submersible pump.
		• We could not contact the property owner of 903 44 <sup>th</sup> Street and obtain permission to access well MW7.
15 December 2008	Streamborn	Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, and MW6.
		• Groundwater samples were collected from wells MW1, MW2, MW3, MW4, MW5, and MW6. Samples were analyzed for TPH-Gasoline/BTEX/fuel oxygenates (EPA Method 8260).
		• We could not contact the property owner of 903 44 <sup>th</sup> Street and obtain permission to access well MW7.

## General Note

 $(a) \quad TPH = total \ petroleum \ hydrocarbons. \ BTEX = benzene, \ toluene, \ ethylbenzene, \ and \ xylenes. \ MtBE = methyl \ tert-butyl \ ether.$ 

#### **Table 2 (Page 1 of 2)**

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# Table 2 (Page 2 of 2) Bibliography

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Table 3
Groundwater Level and Gradient Data Since 2001
4401 Market Street, Oakland CA

Location	M	W1	M	W2	M	W3	M	W4	M	W5	M	W6	M	W7		
Casing Diameter (inches)	,	2	2	2	,	2		2	,	2		2		2		
Ground Surface	Elev =	998.74	Elev =	998.07	Elev =	999.64	Elev =	998.18	Elev =	997.78	Elev =	998.02	Elev =	999.12		dwater
Measuring Point		N Side, 998.22	TOC N Elev =	N Side, 997.73		N Side, 998.90		N Side, 997.87		N Side, 997.33		N Side, 997.50		N Side, 998.69	Gra	dient
	Depth	Elev	Depth	Elev	Depth	Elev	Depth	Elev	Depth	Elev	Depth	Elev	Depth	Elev		
Intercepted Interval	19 to 25.5	972.9 to 979.7	19 to 27.5	970.6 to 979.1	19 to 27.5	972.1 to 980.6	9 to 25	973.2 to 989.2	9 to 25	972.8 to 988.8	9 to 25	973.0 to 989.0	9 to 25	974.1 to 990.1	Direction	Magnitude
1 February 2001	13.77	984.45	13.21	984.52	14.01	984.89	13.22	984.65	13.14	984.19	13.31	984.19	14.76	983.93		
9 March 2001	12.54	985.68	12.30	985.43	13.32	985.58	12.28	985.59	11.70	985.63	12.54	984.96	13.94	984.75		
23 April 2001	14.01	984.21	13.36	984.37	14.15	984.75	13.05	984.82	13.30	984.03	13.39	984.11	14.63	984.06		
30 May 2001	14.74	983.48	NM	NM	14.67	984.23	13.93	983.94	14.14	983.19	14.17	983.33	15.79	982.90	N 138° W	0.01
19 June 2001	14.83	983.39	13.93	983.80	14.67	984.23	15.47	982.40	14.29	983.04	14.34	983.16	15.87	982.82		
19 July 2001	15.04	983.18	14.51	983.22	14.84	984.06	14.73	983.45	14.48	982.85	14.47	983.03	15.99	982.70		
22 August 2001	15.03	983.19	14.48	983.25	14.83	984.07	14.63	983.24	14.58	982.75	14.57	982.93	16.15	982.54	N 143° W	0.01
29 November 2001	12.59	985.63	12.01	985.72	12.66	986.24	12.78	985.09	11.05	986.28	11.42	986.08	12.94	985.75		
29 September 2003	15.05	983.17	14.50	983.23	14.94	983.96	14.53	983.34	14.53	982.80	14.52	982.98	16.19	982.50	N 131° W	0.01
15 December 2008	13.12	985.10	12.25	985.48	13.05	985.85	12.39	985.48	12.24	985.09	12.05	985.45	NM	NM	N 88° W	0.01
Total Depth (last measurement)	24.6		24.6		24.6		24.5		24.9		24.8		24.6		Ave = N 125° W	Ave = 0.01

#### General Notes

- (a) Measurements are cited in units of feet, referenced to a site-specific datum (NOT Mean Sea Level).
- (b) TOC = top of PVC casing. N = north. Measuring points are the top of PVC casing, north side.
- (c) The depth to water and total depth were measured relative to the top of PVC casing.
- (d) The depth of the intercepted interval was measured relative to the ground surface and corresponds to the sand pack interval.

Table 4
Groundwater Purging and Sampling Information Since 2001
4401 Market Street, Oakland CA

Location	Sample Date	Sample Type	Dissolved Oxygen (mg/L)	рН	Specific Conductance (µS/cm)	Temper- ature (°C)	ORP (mV)	Turbidity and Color	Purge Method	Purge Duration (minutes)	Volume Purged (gallons)	Purged Dry ?	Standing Water Casing Volumes Removed
MW1	1 Feb 2001	GB	3.1	6.7	530	18.3	-210	Clear, none	SP	9	±5	Yes	±3
	30 May 2001	GB	1.0	6.8	560	24.2	30	Clear, none	SP	40	±5	Yes	±3
	22 Aug 2001	GB	3.0	6.9	510	20.4	50	Clear, none	SP	8	±5	Yes	±3
	29 Nov 2001	GB	NM	6.7	480	20.9	-170	Clear, none	SP	15	<u>±</u> 4	Yes	±2
	29 Sep 2003	GB	1.6	6.3	520	21.5	130	Clear, none	SP	15	±5	Yes	±3
	15 Dec 2008	GB	1.0	6.6	410	18.0	80	Clear, none	SP	9	±6	no	±3
MW2	29 Sep 2003	GB	1.6	6.6	560	21.9	-80	Clear, none	SP	20	±5	no	±3
	15 Dec 2008	GB	1.1	6.6	590	18.5	-60	Clear, none	SP	11	±6	no	3
MW3	1 Feb 2001	GB	5.0	6.7	370	17.4	-230	Clear, none	SP	4	±5	no	±3
	30 May 2001	GB	5.8	7.0	390	23.6	60	Clear, none	SP	26	±5	Yes	±3
	22 Aug 2001	GB	4.5	7.1	370	21.5	90	Cloudy, brown	SP	6	±5	Yes	±3
	29 Nov 2001	GB	NM	6.8	330	19.3	20	Clear, none	SP	10	±6	Yes	±3
	29 Sep 2003	GB	4.5	6.6	370	19.6	190	Clear, none	SP	10	±5	Yes	±3
	15 Dec 2008	GB	3.0	6.6	390	17.6	100	Clear, none	SP	9	±6	no	±3
MW4	1 Feb 2001	GB	5.2	6.8	580	18.2	-210	Cloudy, gray	SP	47	±15	Yes	±9
	30 May 2001	GB	1.5	6.8	700	22.8	20	Clear, none	SP	23	±6	Yes	±3
	22 Aug 2001	GB	2.1	6.9	540	21.2	-20	Clear, none	SP	5	±5	no	±3
	29 Nov 2001	GB	NM	6.7	550	19.5	-170	Clear, none	SP	16	±5	Yes	±3
	29 Sep 2003	GB	1.5	6.5	560	22.4	30	Clear, none	SP	10	±5	no	±3
	15 Dec 2008	GB	1.0	6.6	500	18.8	-20	Clear, none	SP	9	±6	no	±3
MW5	1 Feb 2001	GB	0.8	6.7	640	18.1	-250	Turbid, brown	SP	18	±20	no	±10
	30 May 2001	GB	1.2	7.0	630	19.6	20	Clear, none	SP	4	±6	no	±3
	22 Aug 2001	GB	2.2	7.0	600	20.0	-40	Clear, none	SP	5	±5	no	±3
	29 Nov 2001	GB	NM	6.9	610	19.6	-170	Clear, none	SP	8	±7	no	±3
	29 Sep 2003	GB	1.6	6.7	560	21.9	-60	Clear, none	SP	10	±5	no	±3
	15 Dec 2008	GB	0.8	6.7	690	18.5	-50	Translucent, gray	SP	6	±6	no	±3
MW6	1 Feb 2001	GB	2.8	6.7	510	18.7	-360	Opaque, brown	SP	23	±20	no	±11
	30 May 2001	GB	2.9	6.8	470	24.2	80	Turbid, brown	SP	5	±6	no	±3
	22 Aug 2001	GB	2.6	6.9	400	21.0	30	Turbid, green	SP	5	±5	no	±3
	29 Nov 2001	GB	NM	6.8	390	19.5	-160	Clear, none	SP	8	±7	no	±3
	29 Sep 2003	GB	2.1	6.6	470	25.5	180	Clear, none	SP	10	±5	no	±3
	15 Dec 2008	GB	2.0	6.6	440	18.9	140	Translucent, brown	SP	6	±6	no	±3
MW7	1 Feb 2001	GB	3.0	6.8	430	16.1	-200	Cloudy, brown	SP	25	±17	no	±11
	30 May 2001	GB	3.1	6.8	500	23.6	60	Clear, none	SP	5	±5	no	±3
	22 Aug 2001	GB	4.6	6.9	420	19.3	20	Turbid, gray	SP	5	±5	no	±3
	29 Nov 2001	GB	NM	6.7	400	19.2	0	Clear, none	SP	6	±6	no	±3
	29 Sep 2003	GB	2.4	6.3	410	19.0	180	Clear, none	SP	10	±4	no	±3

# General Notes

- (a) ORP = oxidation/reduction potential.
- (b) NM = not measured.
- (c) Entries in this table correspond to the end of purging (time of sampling).
- (d) SP = submersible purge pump.
- (e) GB = grab sample collected using a Teflon bailer fitted with a bottom-emptying device.

# Table 5 (Page 1 of 2) Groundwater Analytical Data from Monitoring Wells 4401 Market Street, Oakland CA

Location	Sample Date	Sampled By	TPH- Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	Methyl Tert-Butyl Ether (µg/L)	Tert-Butyl- Alcohol (µg/L)	Other Fuel Oxygenates (µg/L)
MW1	8 Nov 1994	W.A. Craig	54	< 0.5	< 0.5	< 0.5	1.2	NA	NA	NA
	14 Feb 1995	W.A. Craig	71	< 0.5	< 0.5	< 0.5	0.97	NA	NA	NA
	7 Jun 1995	W.A. Craig	540	0.6	<0.5	1.7	1.3	NA	NA	NA
	29 Aug 1995	W.A. Craig	440	< 0.5	<0.5	1.3	1.1	NA	NA	NA
	8 Dec 1995	W.A. Craig	<50	< 0.5	<0.5	< 0.5	< 0.5	NA	NA	NA
	7 Mar 1996	W.A. Craig	77	< 0.5	<0.5	<0.5	< 0.5	44	NA	NA
	19 Jun 1996	W.A. Craig	500	< 0.5	<0.5	0.85	0.36	84	NA	NA
	20 Dec 1996	W.A. Craig	< 50	< 0.5	<0.5	< 0.5	< 0.5	28	NA	NA
	12 Jun 1997	W.A. Craig	190	< 0.5	<0.5	< 0.5	< 0.5	12	NA	NA
	1 Feb 2001	Streamborn	< 50	< 0.5	< 0.5	< 0.5	1.1	< 5.0	<5.0	<5.0 to <10
	30 May 2001	Streamborn	<50	< 0.5	<0.5	< 0.5	< 0.5	<5.0	<5.0	<5.0
	22 Aug 2001	Streamborn	< 50	< 0.5	<0.5	< 0.5	< 0.5	< 5.0	100	<5.0 to <10
	29 Nov 2001	Streamborn	<50	< 0.5	<0.5	<0.5	<0.5	< 5.0	<5.0	<5.0 to <10
	29 Sep 2003	Streamborn	<50	<0.5	<0.5	<0.5	<1.0	< 0.5	<5.0	<0.5 to <1.0
	15 Dec 2008	Streamborn	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<20	<0.5 to <100
MW2	8 Nov 1994	W.A. Craig	20,000	1,400	960	980	4,600	NA	NA	NA
141 44 2	14 Feb 1995	W.A. Craig	8,600	380	210	410	2,000	NA	NA	NA
	7 Jun 1995	W.A. Craig	6,200	500	78	270	1,200	NA	NA	NA
	29 Aug 1995	W.A. Craig	4,100	330	61	210	980	NA	NA	NA
	8 Dec 1995	W.A. Craig	9,400	360	190	440	2,000	NA	NA	NA
	7 Mar 1996	W.A. Craig	12,000	790	170	440	2,000	18	NA	NA
	19 Jun 1996	W.A. Craig	9,000	520	82	350	1,500	<5.0	NA	NA
	20 Dec 1996	W.A. Craig	13,000	830	180	410	2,200	<16	NA	NA
	12 Jun 1997	W.A. Craig	5,100	320	32	190	880	<36	NA	NA
	29 Sep 2003	Streamborn	220	5.5	<0.5	2.1	9.1	<0.5	24	DIPE = 1.3
							,,,			Others = $<0.5$
	15 Dec 2008	Streamborn	1,600	43	< 0.5	53	150	< 0.5	<20	<0.5 to <100
MW3	8 Nov 1994	W.A. Craig	< 50	0.71	0.84	1.2	5.8	NA	NA	NA
	14 Feb 1995	W.A. Craig	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA	NA
	7 Jun 1995	W.A. Craig	< 50	< 0.5	< 0.5	< 0.5	1.6	NA	NA	NA
	29 Aug 1995	W.A. Craig	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA	NA
	8 Dec 1995	W.A. Craig	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA	NA
	7 Mar 1996	W.A. Craig	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	NA	NA
	19 Jun 1996	W.A. Craig	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	NA	NA
	20 Dec 1996	W.A. Craig	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	NA	NA
	12 Jun 1997	W.A. Craig	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	NA	NA
	1 Feb 2001	Streamborn	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	<5.0	<5.0 to <10
	30 May 2001	Streamborn	< 50	< 0.5	<0.5	< 0.5	< 0.5	< 5.0	<5.0	<5.0 to <10
	22 Aug 2001	Streamborn	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	14	<5.0 to <10
	29 Nov 2001	Streamborn	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	<5.0 to <10
	29 Sep 2003	Streamborn	< 50	< 0.5	< 0.5	< 0.5	<1.0	< 0.5	< 5.0	<0.5 to <1.0
	15 Dec 2008	Streamborn	< 50	< 0.5	< 0.5	< 0.5	<1.0	< 0.5	<20	<0.5 to <100
MW4	1 Feb 2001	Streamborn	1,500	58	1.3	83	320	< 5.0	16	<5.0 to <10
	30 May 2001	Streamborn	1,000	19	< 0.5	50	3.4	< 5.0	23	<5.0 to <10
	22 Aug 2001	Streamborn	220	< 0.5	< 0.5	3.2	2.7	< 5.0	8.8	<5.0 to <10
	29 Nov 2001	Streamborn	3,100	110	<5.0	120	410	< 5.0	<5.0	<5.0 to <10
	29 Sep 2003	Streamborn	140	< 0.5	< 0.5	< 0.5	<1.0	< 0.5	<5.0	<0.5 to <1.0
	15 Dec 2008	Streamborn	70	1.1	< 0.5	2.8	4.4	< 0.5	<20	<0.5 to <100
MW5	1 Feb 2001	Streamborn	1,200	57	1.8	45	160	< 5.0	<5.0	<5.0 to <10
	30 May 2001	Streamborn	570	20	< 0.5	26	22	< 5.0	<5.0	<5.0 to <10
	22 Aug 2001	Streamborn	380	19	0.67	31	17	< 5.0	<5.0	<5.0 to <10
	29 Nov 2001	Streamborn	1,600	73	2.1	78	180	< 5.0	<5.0	<5.0 to <10
	29 Sep 2003	Streamborn	460	2.6	< 0.5	0.69	<1.0	< 0.5	< 5.0	<0.5 to <1.0

# Table 5 (Page 2 of 2) Groundwater Analytical Data from Monitoring Wells 4401 Market Street, Oakland CA

Location	Sample Date	Sampled By	TPH- Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	Methyl Tert-Butyl Ether (μg/L)	Tert-Butyl- Alcohol (µg/L)	Other Fuel Oxygenates (µg/L)
MW6	1 Feb 2001	Streamborn	260	8.0	< 0.5	22	23	< 5.0	< 5.0	<5.0 to <10
	30 May 2001	Streamborn	53	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	<5.0 to <10
	22 Aug 2001	Streamborn	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	<5.0 to <10
	29 Nov 2001	Streamborn	130	5.7	< 0.5	1.6	5.0	< 5.0	< 5.0	<5.0 to <10
	29 Sep 2003	Streamborn	< 50	< 0.5	< 0.5	< 0.5	<1.0	< 0.5	< 5.0	<0.5 to <1.0
	15 Dec 2008	Streamborn	78	< 0.5	< 0.5	< 0.5	<1.0	< 0.5	<20	<0.5 to <100
MW7	1 Feb 2001	Streamborn	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	<5.0 to <10
	30 May 2001	Streamborn	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	<5.0 to <10
	22 Aug 2001	Streamborn	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	<5.0 to <10
	29 Nov 2001	Streamborn	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	<5.0 to <10
	29 Sep 2003	Streamborn	< 50	< 0.5	< 0.5	< 0.5	<1.0	< 0.5	<5.0	<0.5 to <1.0

#### General Notes

- $(a) \quad TPH = total \ petroleum \ hydrocarbons. \ MtBE = methyl \ tert-butyl \ ether. \ DiPE = di-isopropyl \ ether.$
- (b) NA = not analyzed.

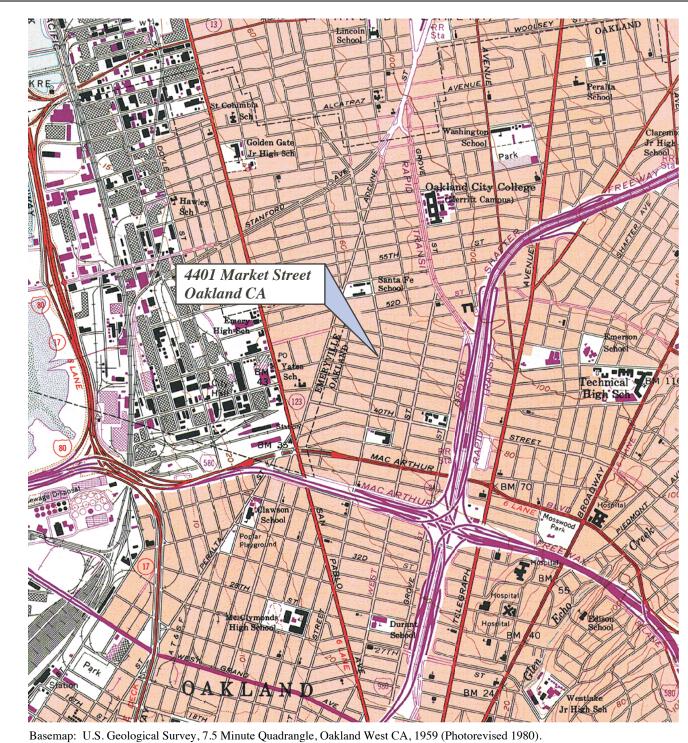
Table 6
Free Product Monitoring in Monitoring Wells MW4, MW5, and MW6
4401 Market Street, Oakland CA

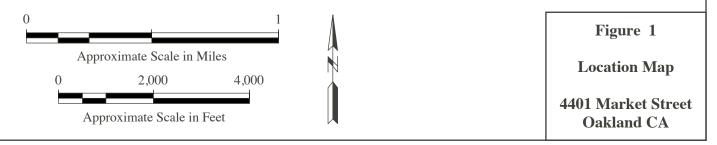
Date	MW4 (feet)	MW5 (feet)	MW6 (feet)
1 February 2001	< 0.005	< 0.005	< 0.005
9 March 2001	< 0.005	< 0.005	< 0.005
23 April 2001	< 0.005	< 0.005	< 0.005
30 May 2001	< 0.005	< 0.005	< 0.005
19 June 2001	< 0.005	< 0.005	< 0.005
19 July 2001	< 0.005	< 0.005	< 0.005
22 August 2001	< 0.005	< 0.005	< 0.005
29 November 2001	< 0.005	< 0.005	< 0.005

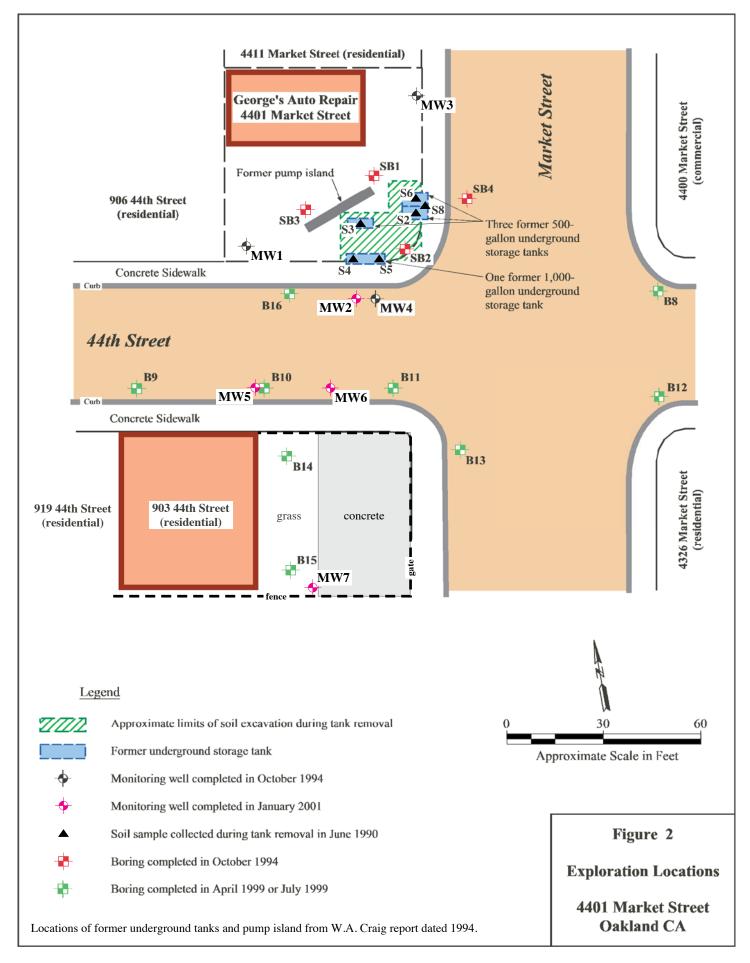
#### General Note

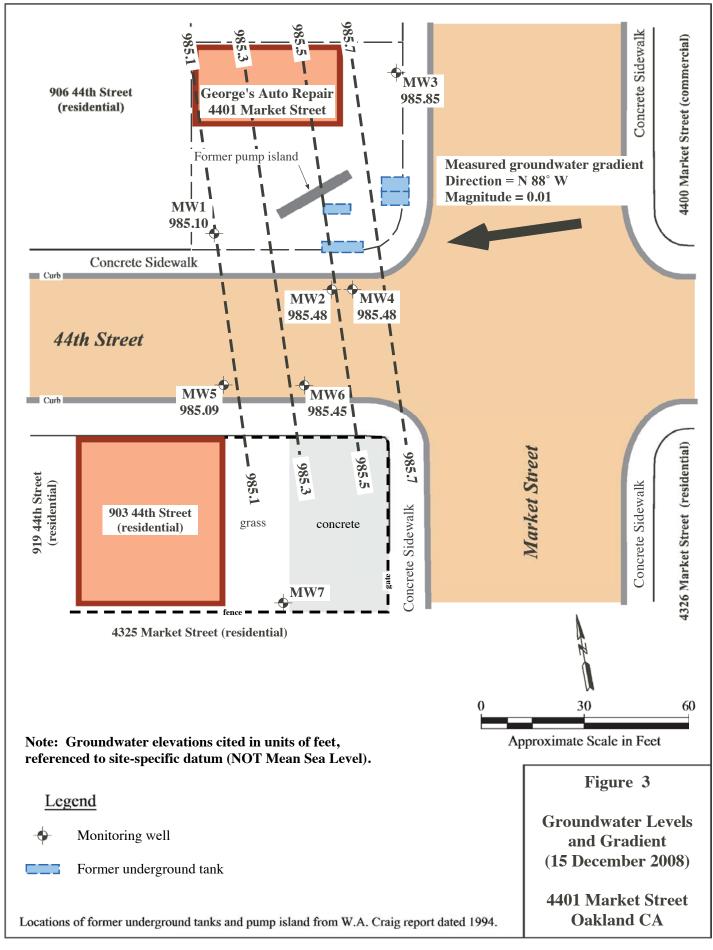
(a) Free product monitoring was performed using a Water Mark Interface meter: Model H.OIL.

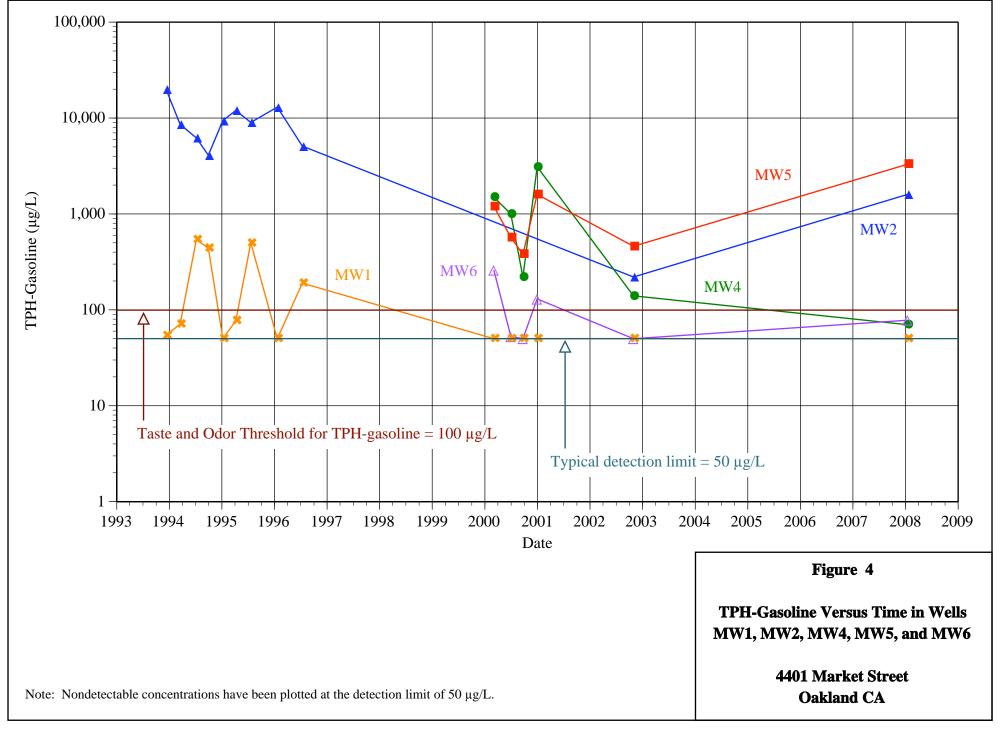


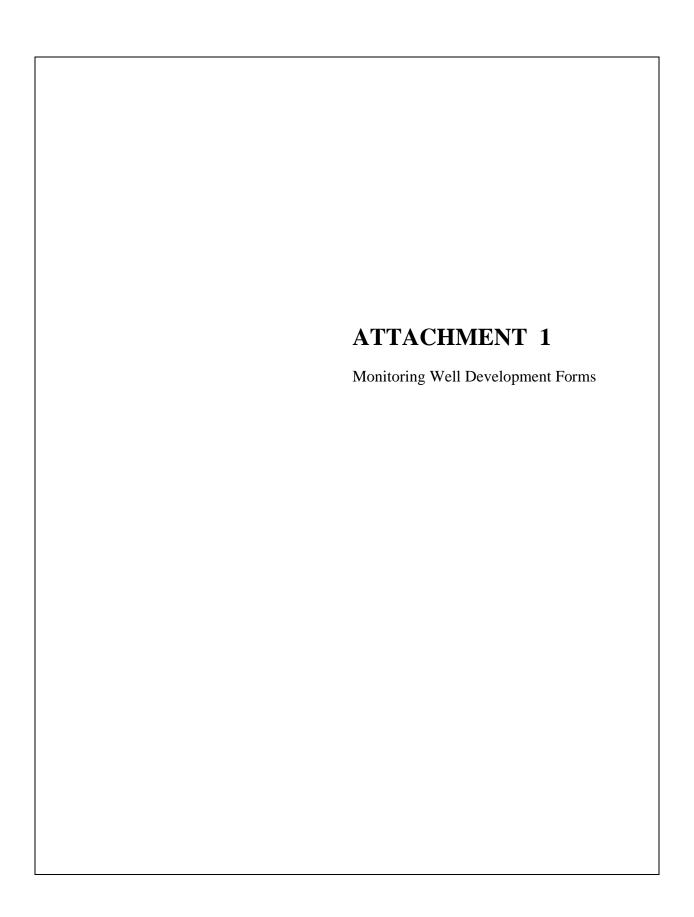












## WELL GAUGING DATA

Project # 199	1171-m+1	Date 11-21-04	Client	Stream born
Site 4401	Market St.	OAhland, OA		

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)		(ml)	Depth to water (ft.)	bottom (ft.)	Survey Point: TOB or	Notes
Mu-(		2					13:46 :	24-53	C.	
MWZ		2					13.42	24.60	The management of the latest and the	
Mw-3		7					1300.	24.60		
Mw-1 Mw-3 Mw-4 Mw-5 Mw-6	0851	2			,		13.46 : 13.42 1300 : 12.64 12.82 24.77	24.59		
MWS		2					12.82	24.93		
Mw-p		2					24.77	12.28		
MW.7	200	The second secon							4	
	į									
	·									

# WELLHEAD INSPECTION CHECKLIST

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

Date 11-1	21.0	8	Client	Stree	um bor	'N			
Site Addres	s <u>4</u>	8 1401 Ma	rhet S	t, gal	Lend				
		31121-MTI				hnician	Mid	Todi-	
Well ID		Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-1		X					-14/01		
MW-Z			1/2 B	olf 5	eripped				
MW-3		X	(		•				
MW-4		*	2/2+	abs B1	tripped burn				
MW-5		Y	/						
MW-6		X							
mu-7-	<u> </u>		Not	Acce	sable	, 			
					,				
5.44									
			,.						
NOTES:									
				/					
parties -								<u> </u>	
N			_	1.7					

# TEST EQUIPMENT CALIBRATION LOG

PROJECT NAM	/IE <del>-681</del>	4401 MANK	et 517	PROJECT NUM	MBER 08/12/	-mT1	
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	ТЕМР.	INITIALS
Difframeter	6203098	11.21.08	PH 7/2	393 4.01 10.01	Yes	16.4	nt
11.7	(1 (1	11.21.03	Con 3900	<del>28</del> 96	1105	16.6	M
turbi dimoter	28405	11-21.05	20/100	20.3/101	Ves		my
					,		
				e' .			

# WEL DEVELOPMENT DATA S. BET

Project #: 081121-MT1	Client: Stream born
Developer: MDN	Date Developed: 4/21/08
Well I.D. MW-1	Well Diameter: (circle one) 2 3 4 6
Total Well Depth:	Depth to Water:
Before 24.53 After 24.54	Before 13.46 After 15.20
Reason not developed:	If Free Product, thickness:
Additional Notations: Swab well for	15 minutes prior to development
Volume Conversion Factor (VCF): Well dia. $ \{12 \times (d^2/4) \times \pi\} / 231 $ $ 2" = $ where $ 12 = in / \text{ foot} $ $ d = \text{ diameter (in.)} $ $ 6" = $	VCF 0.16 0.37 0.65 1.47
$\pi = 3.1416$ 10" = 231 = in 3/gal 12" =	4.08 6.87
1 Case Volume X Spec	ified Volumes = gallons
Purging Device:   Bailer  Suction F	Pump Electric Submersible Pump Positive Air Displacement

Type of Installed Pump

Other equipment used 2" well Swab

TIME	TEMP (F)	pН	Cond. (mS or(\(\mu S\))	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1335	47.4	7.2	421	71000	1.8	Brown Silty (Fine)
1339	67.3	6.7	403	71000	3.6	Brown, Silty
1343	67.3	6.6	403	>1000	5.4	Brown , Cloudy Hand botton
1346	67.1	6.6	401	71000	7.2	Boxum, Cloudy
1350	67.2	6.6	401	71000	9.0	Brown , Cloudy DW - 15.25
1354	67.2	6-6	401	849	10.8	Brown, Cloudy, Clauring
1358	66.9	6.6	400	531	12.6	Brown, clovely clearing
1402	66.9	4.5	400	314	14.4	Cloudy, cleaning
1405	67.0	6.5	400	263	16.2	
1409	66.9	6.5	399	194	18.0	Slighty cloudy
	* 9					
Did Well Dewater? NO		If yes, note abo	ve.	Gallons Actuall	y Evacuated:	18:0

# WEL DEVELOPMENT DATA S. BET

	AA TJE		OTTAILINT DATE OF SET
Project #: OSU21.m	TI		Client: Streamborn
Developer: MT			Date Developed: /[·ZI·O8
Well I.D. MW-2			Well Diameter: (circle one) ② 3 4 6
Total Well Depth:			Depth to Water:
Before 24.60	After 24.7		Before 13.42 After 17.87
Reason not develope	ed:		If Free Product, thickness:
Additional Notations	S:		
Volume Conversion Factor (VCF): $\{12 \times (d^2/4) \times \pi\}$ /231 where 12 = in / foot d = diameter (in.) $\pi = 3.1416$ 231 = in 3/gal	<u>.</u>	Well dia.     VC       2" = 0.1     0.2       3" = 0.2     0.3       4" = 0.6     0.6       6" = 1.4     1.0" = 4.0       12" = 6.8	
1.7- 1 Case Volume	X	Specifie	d Volumes = gallons
Purging Device:		Bailer Suction Pum led Pump	Electric Submersible  Positive Air Displacement
	Other equipm		11 Surge Block

TIME	TEMP (F)	pН	Cond. (mS or $\widehat{\mu}$ S))	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
10:53	21.5	6.78	501.8	71000	1.7	19.40 Gray Light silt
10:56	26-0	6.40	604.7	897	34	21.12 Grey cloudy
10:59	20.7	6.34	6068	569	5.1	20.06 Grey cloudy
1107	20.6	6.22	621.4	738	6.0	21.03 ( ( oranger land
1105	20.5	6.24	604.3	873	8.5	21.42 1 9 Below pump
1/06 De	euatere	eel DHW	21.630110	7		
1121 Dt	W 6	14.68 r	covered p	nge		
11:28	22.2	6.97	594.0	71000	10.2	19.81 Croex Cloudy
1131	20.9	6.63	603.8	6007		20.32 ( 1
1134	20.90	6.45	609.1	561	13.6	20.60 4 11
1137	10.0	6.37	609.5	277	15.3	21.42 ting the Below pump
1140	20,8	6.29	608.1	198	14	21.92 11 11 11
Did Well Dew	vater?	If yes, note abov	ve.	Gallons Actuall	y Evacuated:	17

# WEL DEVELOPMENT DATA S. ET

Project #: 081/21	Mt			Client: Stram born					
Developer: MT					Date Developed: 1(・2いか				
Well I.D. MW- 3	)				Well Dian	neter: (	circle	one) Ø 3	4 6
Total Well Depth:					Depth to	Water:			
Before 24.60	After 24.60	$\mathcal{I}$			Before	500	Afte	er 13.30	
Reason not develo	ped:				If Free Pr	oduct, t	hickn	less:	
Additional Notation	ons:								
Volume Conversion Factor (V6 { $12 \times (d^2/4) \times \pi$ } / $231$ where $12 = in / \text{ foot}$ $d = diameter (in.)$ $\pi = 3.1416$ $231 = in 3/gal$	CF): <u>v</u>	Vell dia.  2"  3"  4"  6"  10"  12"	= = = = =	VCI 0.16 0.37 0.65 1.47 4.08 6.87	6 7 5 7 8				
(9,1	X			LC				18	
1 Case Volume		S	peci	fied	l Volumes		=	gallons	
Purging Device:		Baile Suctio		umŗ	)		Á	Electric Submer Positive Air Dis	
	Type of Instal Other equipme		_		1 Surge 16	loch			

			Cond.	TURBIDITY	VOLUME	
TIME	TEMP (F)	pН	(mS or (LS)	(NTUs)	REMOVED:	NOTATIONS:
1343	18.4	7.51	409.1	71000	1.8	16.10 Orange, cloody, 51 Hx
1346	18.3	7.22	397-6	71000	3.6	16:60 4
1349	17.9	6.98	398.3	71000	5.4	17.01 ((1)
1352	18 .1	6.80	396.9	71000	7.2	17-11 Orenge, cloudy
1355	16.3	6.73	397.4	7000	.C(	17.19 () (/
1358	18.(	6.71	396.1	692	10.8	17.23 11/1
1400	17.9	6.58	394.7	450	12.6	17.27 abouty
1403	18.0	6.51	396.4	363	14.4	17.30 Cloudy
1406	18.1	6.59	396.	266	16.2	17:31 slightly dordy
1408	18.1	6.57	396.3	209	18	17.48 11 4
	^					
Did Well Dew	vater?	If yes, note abo	ve.	Gallons Actuall	y Evacuated:	18

# WEI DEVELOPMENT DATA S. BET

VV	EL DEVEL	OPMENT DATA 5. SET				
Project #: OSII21 · m + 1		Client: Streamborn				
Developer: MT		Date Developed: 11 - 21 - 0%				
Well I.D. MW-4		Well Diameter: (circle one) (2) 3 4 6				
Total Well Depth:		Depth to Water:				
Before 24.59 After 2	4.60	Before 21.83				
Reason not developed:		If Free Product, thickness:				
Additional Notations:						
Volume Conversion Factor (VCF): $\{12 \times (d^2/4) \times \pi\} / 231$ where 12 = in / foot d = diameter (in.) $\pi = 3.1416$ 231 = in 3/gal	2" = 0.1 3" = 0.2 4" = 0.6 6" = 1.4 10" = 4.6 12" = 6.8	VCF 0.16 0.37 0.65 1.47 4.08 6.87 Surged well Ismins prior to purge				
1 Case Volume	Specifie	ed Volumes = gallons				
Purging Device:  Bailer Suction Pump  Type of Installed Pump Other equipment used  Description  Electric Submersible Positive Air Displacement						
TIME TEMP (F) pH	Cond. (mS or us)	TURBIDITY VOLUME (NTUs) REMOVED: TWO NOTATIONS:				

	c		Cond.	TURBIDITY	VOLUME		
TIME	TEMP (F)	pН	(mS or uS)	(NTUs)	REMOVED:	DW	NOTATIONS:
0915	19.6	7.03	485.8	742	1.9	15.01	cloudy orange
0921	19.8	6-14	453.2	168	3.8	16.59	clear, Slight tint (orange)
0927	19.8	6-10	468.9	139	5.7	17.50	il II
0932	19.8	6.07	472.5	91-1	7.6	18.41	clear
0937	19.9	6.01	468 - 1	376	9.5	19.391	cloudy
0942	19.9	6.63	490.2	283	11.4	20.27	u 11 '
0948	19.8	6.18	4745	295	13.3	20.98	11 4
0953	19.9	6.18	971.5	328	15.2	21.40	11 4 Hit top of pump
0958	19-8	6.19	452.6	740	12.1	21.40	orangetiat, cloudy silt
1004	19.9	6.21	470.8	810	19.0	21.40	11 9
Did Well Dew	rater? NO	If yes, note above	ve. WA	Gallons Actuall	y Evacuated:	19	

# WEL DEVELOPMENT DATA S. BET

Project #: OBID - MT	_	Client: Streamborn				
Developer: MT		Date Developed: 11-21-56				
Well I.D. MW-5		Well Diameter: (circle one) (2) 3 4 6				
Total Well Depth:		Depth to Water:				
Before 24.93 After 24.95	)	Before (2.92 After /5.01				
Reason not developed:		If Free Product, thickness:				
Additional Notations:						
$ \begin{cases} 12 \times (d^2/4) \times \pi \} / 231 \\ \text{where} \\ 12 = \text{in / foot} \\ \text{d} = \text{diameter (in.)} \\ \pi = 3.1416 \\ 231 = \text{in 3/gal} \end{cases} $	dia. VC					
1 Case Volume	Specified	d Volumes = gallons				
□ Su	niler action Pum	Electric Submersible  Positive Air Displacement				
Type of Installe Other equipmen		"Surge Woch				

			Cond.	TURBIDITY	VOLUME	
TIME	TEMP (F)	pН	(mS or (LS)	(NTUs)	REMOVED:	NOTATIONS:
1233	20.3	6.73	753,3	7(000)	1.9	13.70 Milly Grey silty
1237	20-1	6.41	759.8	71000	3.8	14.46 " 11
1243	19.3	6.46	754.0	71000	5.7	14.98 Gray less silt
1248	19.5	6.45	753.5	71000	\$4.6	15.32 11 4
1252	19.2	6.44	747.3	71000	9.5	15-33 11 V
1256	19-1	6.44	744.	71000	11-4	15.37 Gray cloudy No silt
1259	19-2	G.44	739-9	7-41	13.3	15.48 11 11
1301	19-1	6.45	746.7	71000	15.2	15.63 (1 1
1303	19.3	6.44	743-2	7000	17.1	16.12 11 4
1305	19.2	6.46	740.2	71000	19.0	16.38 4 4
				_		
Did Well Dewater? If yes, note above.			Ve. Marineman	Gallons Actuall	y Evacuated:	19.0

# WEL DEVELOPMENT DATA S. BET

Project #: 08/121- M7	-/	Client: Stream born
Developer: Mod		Date Developed: 11/21/08
Well I.D. MW-6		Well Diameter: (circle one) (2) 3 4 6
Total Well Depth:		Depth to Water:
Before 24.77 Af	ter 24.80	Before 12.28 After 14.40
Reason not developed		If Free Product, thickness:
Additional Notations:	Swab well f	for 15 mutes prov to purse
Volume Conversion Factor (VCF): $\{12 \times (d^2/4) \times \pi\} / 231$ where 12 = in / foot d = diameter (in.) $\pi = 3.1416$ 231 = in 3/gal	Well dia.  2" = 3" = 4" = 6" = 10" = 12" =	VCF 0.16 0.37 0.65 1.47 4.08 6.87
1 Case Volume	X Spec	10 ZO.O gallons
Purging Device:	☐ Bailer	☐ Electric Submersible

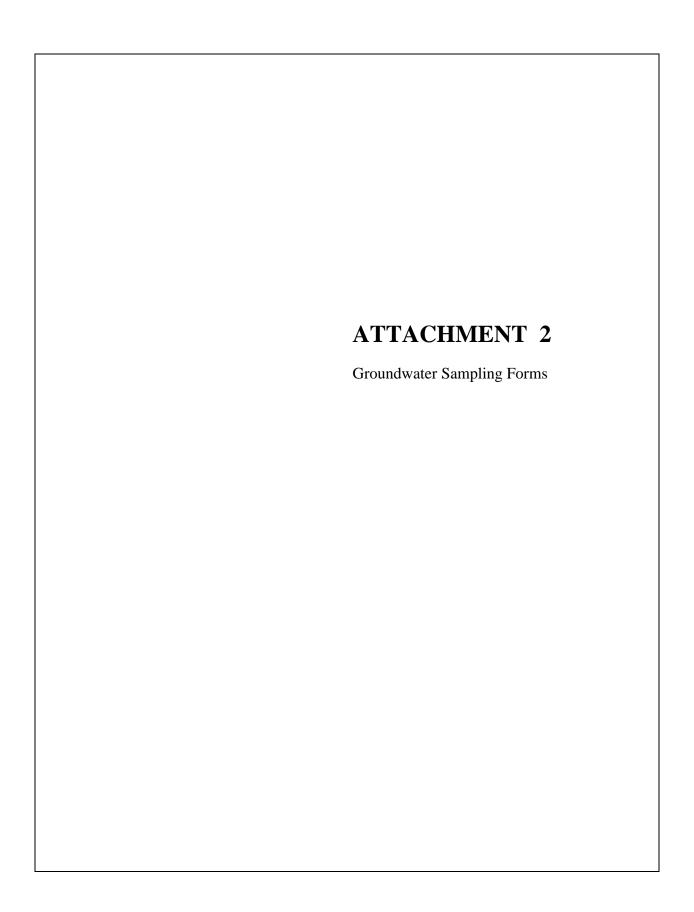
Positive Air Displacement

☐ Suction Pun	np
Type of Installed Pump	pi 14
Other equipment used	2" Well Swab

TIME	TEMP (F)	pН	Cond. (mS or (LS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1207	66.4	6.1	524	>1000	2.0	Brown, Silty (Fine)
12012	66-8	6.3	443	71000	4.0	Bown, S. /ty
1E-15	67.1	6.6	432	>1000	6.0	Brown Silty Clearing
1218.	67.3	6.5	424	71000	8.0	Brown Silly hard bottom
1221	67.3	6.5	420	71000	10.0	Brom, Cloudy
1224	67.3	6.5	422	71000	12.0	DTW = 14,27
1228	67.3	6.5	421	71000	14.0	Brown, Cloudy Clearing
1231	67.3	6.5	421	71000	16.0	Boun Couly
1235	67.4	6.5	421	71000	18.0	Boon, Cloudy
1238	67.3	6.5	420	71000	ZU. 0	Brown Cloudy Drd = 14.40
Did Well Dewater? ND		If yes, note abo	ve.	Gallons Actuall	y Evacuated:	20.0

# Si . or Purge Water Drum Lo.

Client:	(MeAn	Born		<u> </u>			
Site Address:	4401	M Arus	st orce	Aro. CA			
STATUS OF DR	UM(S) UPON	ARRIVAL			The state of the s		
Specifical and all the control of th	Date	11/21/08				,	
Number of drum(s)	empty:	1 Rusher					
Number of drum(s)							
Number of drum(s)	1/2 full:						
Number of drum(s)	3/4 full:						
Number of drum(s)	full:						
Total drum(s) on sit	e:						
Are the drum(s) pro	perly labeled?	,					
Drum ID & Contents		EMPTY/ PLUSTED					
If any drum(s) are p				,			
filled, what is the fire		the state of the s		and an analysis of the state of			en dine a mende ser manere ne ancie de como mente de como mende de como
- If you add any SPH to		,		· ·	J	ter or DI Wate	r.
-If drum contains SPH, t -All BTS drums MUST I			ed with the ap	propriate labe	l		
STATUS OF DR	CALIFORNIA DE LA LA LA LINE LEGIS MALIENTA	makan tikak kecalan dipinak di sebagai Persagai Persagai Persagai Persagai Persagai Persagai Persagai Persagai	IPE				
	Date	11/21/28					
Number of drums e		1					
Number of drum(s)		,					
Number of drum(s)							
Number of drum(s)							
Number of drum(s)	full:	2					
Total drum(s) on sit	te:	4					
Are the drum(s) pro	perly labeled?	ý					
Drum ID & Contents	s:	Purliwhere					
LOCATION OF	DRUM(S)						
Describe location of	f drum(s):			w		Company of the Compan	
FINAL STATUS							
Number of new dru		3					
this event						,	
Date of inspection:		11/21/08					
Drum(s) labelled pr	operly:	ay a					
Logged by BTS Fie		MT					
Office reviewed by:		/ //					



Project Name/Number: 4401 Market Street/P257	Logged By: Darcy Hinkley
Property Location: 4401 Market Street, Oakland CA	Date: 15 December 2008
Well Number: MW1	Sample Type: Grab
Purging Equipment: Submersible Pump	Depth to Water (ft): 13.12
Sampling Equipment: Bailer with Bottom-Emptying Device	Total Depth (ft): 24, 4
Measuring Point: Top of casing, north side	Casing Diameter (in): 2
Free Product:	Odor: None
Comments:	Sample Number: MW1

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	-	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well	=	Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.6	-	13.12	х	0.16	H	1-8	x 3	5.4

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	pН	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	1455	1.70	7.08		15.1	56.9	trans	brown	~ &	Start purge
ス	1458	1.42	6.65		16.6	70.3	Clar	الماد، م	20	
4	1501	1.05	6.64		17.5	87.2	Clear	None	2	
le	1504	0.95	کیا. یا	409	18.0	833	clear	NONE	10:0	
										Collect Sample

Project Name/Number:	4401 Market Street/P257	Logged By:	Darcy Hinkley
Property Location:	4401 Market Street, Oakland CA	Date:	15 December 2008
Well Number:	MW2	Sample Type:	Grab
Purging Equipment:	Submersible Pump	Depth to Water (ft):	12.25
Sampling Equipment:	Bailer with Bottom-Emptying Device	Total Depth (ft):	24.6
Measuring Point:	Top of casing, north side	Casing Diameter (in):	2
Free Product:		Odor:	Slight
Comments:		Sample Number:	MW2

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	-	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well		Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.6	-	12.25	х	0.16	=	2	x 3	Ļ

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	рН	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	1659	0.94	6.62		17.5	-28.4	trans	Gray	10	Start purge
Z	1702	1-17	6.63		18.7	-43.6	clear	None	<i>\\</i> 0	
4	1705	0.89	6.63		1	-51.0	cleas	None	NO	
6	1710	1.07	6,64	586	18.5	-55.2	Clear	10006	NO	
										Collect Sample

Project Name/Number: 4401 Market Street/P257	Logged By: Darcy Hinkley
Property Location: 4401 Market Street, Oakland CA	Date: 15 December 2008
Well Number: MW3	Sample Type: Grab
Purging Equipment: Submersible Pump	Depth to Water (ft): 13, 05
Sampling Equipment: Bailer with Bottom-Emptying Device	Total Depth (ft): ついし
Measuring Point: Top of casing, north side	Casing Diameter (in): 2
Free Product:	Odor: None
Comments:	Sample Number: MW3

Note obstructions, well damage, or other compromising features under comments.

Tota Dep	h _		Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well	=	Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.1	- این	!	3.05	х	0.16	=	1.8	x 3	5.4

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	рН	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	1405	3.28	5.95		16.6	63.4	+10005	bioun	NO	Start purge
7	1407	3.28	6.30		17.4	62.6	trans	61000	20	
4	1410	3.07	6.30		17.7	74.6	clear	None	೧೦೮	
له	1414	2.99	6.56	390	17.6	98.6	clear	None	NO	
										Collect Sample

Project Name/Number:	4401 Market Street/P257	Logged By:	Darcy Hinkley
Property Location:	4401 Market Street, Oakland CA	Date:	15 December 2008
Well Number:	MW4	Sample Type:	Grab
Purging Equipment:	Submersible Pump	Depth to Water (ft):	12.39
Sampling Equipment:	Bailer with Bottom-Emptying Device	Total Depth (ft):	24.5
Measuring Point:	Top of casing, north side	Casing Diameter (in):	2
Free Product:		Odor:	Slight
Comments:		Sample Number:	MW4

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	-	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well		Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.5	-	12.39	x	0.16	=	1-9	x 3	5.7 *

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	pН	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	1635	1.03	6.62		16.2	-72.7	trans	brown	NO	Start purge
2	1637	0.97	6.58		18,3	-10.8	cleur	None	No	
L	1640	0.86	6.59		189	1-7	Clear	N3~ €	No @	;
له	1644	60.	6.59	496e	18.8	-15.7	clear	None	NO	
				<u> </u>						
	_									
		17		,				3		Collect Sample

Project Name/Number:	4401 Market Street/P257	Logged By:	Darcy Hinkley
Property Location:	4401 Market Street, Oakland CA	Date:	15 December 2008
Well Number:	MW5	Sample Type:	Grab
Purging Equipment:	Submersible Pump	Depth to Water (ft):	12.74
Sampling Equipment:	Bailer with Bottom-Emptying Device	Total Depth (ft):	24.9
Measuring Point:	Top of casing, north side	Casing Diameter (in):	2
Free Product:		Odor:	Y = 5
Comments:		Sample Number:	MW5

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	-	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well		Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.9	-	12.24	x	0.16	11	7	x 3	( <sub>e</sub>

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	pН	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	1557	0,91	b.ble		16-9	-43.1	trans	gray	20	Start purge
み	1559	- · · · · ·	6.70		17,7	-44.2	trans	army	NO	
4	1601	0.85	6.73		18.5	- 38.9	trans	9004	NO	
6	1403	0.75	6.67	<u>L</u> e90	18.5	-50.9	trans	9544	NO	
								7		
										Collect Sample

Project Name/Number:	4401 Market Street/P257	Logged By:	Darcy Hinkley
Property Location:	4401 Market Street, Oakland CA	Date:	15 December 2008
Well Number:	MW6	Sample Type:	Grab
Purging Equipment:	Submersible Pump	Depth to Water (ft):	12.05
Sampling Equipment:	Bailer with Bottom-Emptying Device	Total Depth (ft):	34.8
Measuring Point:	Top of casing, north side	Casing Diameter (in):	2
Free Product:		Odor:	None
Comments:		Sample Number:	MW6

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	_	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well	=	Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.8	-	12.05	х	0.16	=	ス	x 3	لو

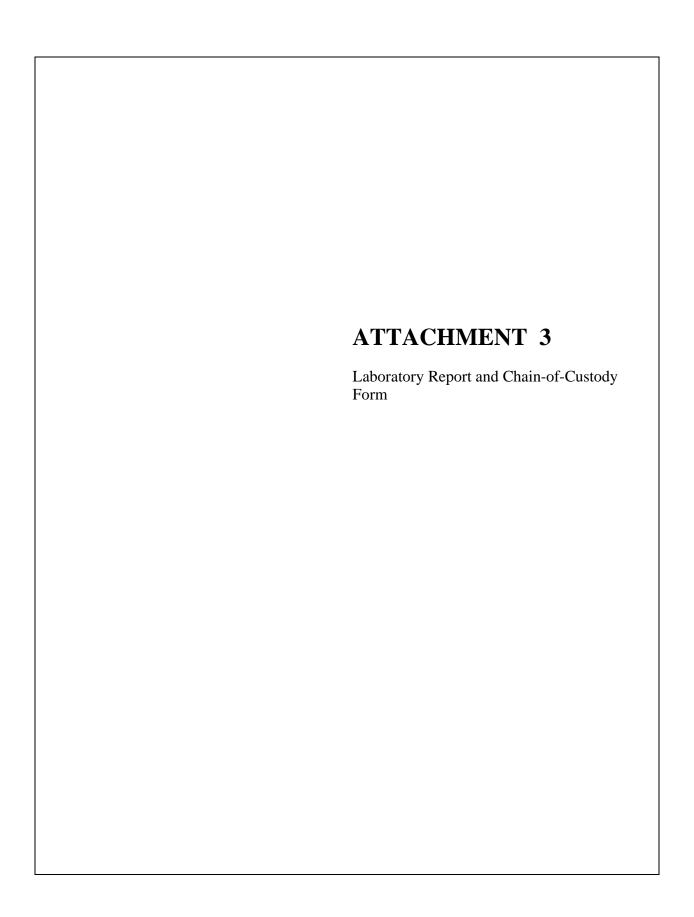
Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	pН	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	1529	2.91	6.58		14.9	142,41	trans	brown	NO	Start purge
2	1531	2.35	6.59		178	156.4	trans	6:000	720	
4	1533	1-97	6.59		18.4	152.5	+1000	brown	<b>√</b> 0	
ل لو	1535	1.97	6.40	442	18.9	143.6	trans	brown	NO	
_									-	Collect Sample

Project Name/Number: 4401 Market Street/P257	Logged By: Darcy Hinkley
Property Location: 4401 Market Street, Oakland CA	Date: 15 December 2008
Well Number: MW7	Sample Type: Grab
Purging Equipment: Submersible Pump	Depth to Water (ft):
Sampling Equipment: Bailer with Bottom-Emptying Device	Total Depth (ft):
Measuring Point: Top of casing, north side	Casing Diameter (in): 2
Free Product:	Odor:
Comments: No Access	Sample Number: MW7

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	-	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well	=	Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
	-		х	0.16	=		x 3	

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	pН	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0										Start purge
										Collect Sample





Wednesday, December 31, 2008 10:18:01AM

Information at Streamborn Streamborn PO Box 8330 Berkeley, CA 94707-8330

RE: NEW PROFILE 4401 Market Street

Work Order: MRL0459

Enclosed are the results of analyses for samples received by the laboratory on 12/16/08 15:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jan A

Tim Costello Client Services Manager

CA ELAP Certificate # 2705

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

The report shall not be reproduced except in full, without the written approval of the laboratory. The client, by accepting this report, also agrees not to alter any reports whether in the hard copy or electronic format and to use reasonable efforts to preserve the reports in the form and substance originally provided by TestAmerica.

For Volatile Analysis a trip blank is required to be provided. If trip blank results are not included in the report, then either the trip blank was not submitted or requested to be analyzed.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.





### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW3	MRL0459-01	Waste Water	12/15/08 14:14	12/16/08 15:50
MW1	MRL0459-02	Waste Water	12/15/08 15:04	12/16/08 15:50
MW6	MRL0459-03	Waste Water	12/15/08 15:35	12/16/08 15:50
MW4	MRL0459-04	Waste Water	12/15/08 16:44	12/16/08 15:50
MW5	MRL0459-05	Waste Water	12/15/08 16:03	12/16/08 15:50
MW2	MRL0459-06	Waste Water	12/15/08 17:10	12/16/08 15:50





# Total Purgeable Hydrocarbons by GC/MS (CA LUFT) TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW3 (MRL0459-01) Waste Water	Sampled: 12/15/08 14:14	Received: 12	/16/08 15:50						
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	8L19003	12/19/08	12/19/08	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		111 %	75-130	)	"	"	"	"	
Surrogate: Dibromofluoromethane		105 %	80-120	)	"	"	"	"	
Surrogate: Toluene-d8		100 %	80-120	)	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99 %	70-120	)	"	"	"	"	
MW1 (MRL0459-02) Waste Water	Sampled: 12/15/08 15:04	Received: 12	/16/08 15:50						
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	8L19003	12/19/08	12/19/08	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		109 %	75-130	)	"	"	"	"	
Surrogate: Dibromofluoromethane		105 %	80-120	)	"	"	"	"	
Surrogate: Toluene-d8		100 %	80-120	)	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99 %	70-120	)	"	"	"	"	
MW6 (MRL0459-03) Waste Water	Sampled: 12/15/08 15:35	Received: 12	/16/08 15:50						
Gasoline Range Organics (C4-C12)	78	50	ug/l	1	8L19003	12/19/08	12/19/08	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		107 %	75-130	)	"	"	"	"	
Surrogate: Dibromofluoromethane		102 %	80-120	)	"	"	"	"	
Surrogate: Toluene-d8		101 %	80-120	)	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	70-120	)	"	"	"	"	
MW4 (MRL0459-04) Waste Water	Sampled: 12/15/08 16:44	Received: 12	/16/08 15:50						
Gasoline Range Organics (C4-C12)	70	50	ug/l	1	8L19003	12/19/08	12/19/08	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		110 %	75-130	)	"	"	"	"	
Surrogate: Dibromofluoromethane		104 %	80-120	)	"	"	"	"	
Surrogate: Toluene-d8		100 %	80-120	)	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	70-120	)	"	"	"	"	





# **Total Purgeable Hydrocarbons by GC/MS (CA LUFT)**

### TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW5 (MRL0459-05) Waste Water	Sampled: 12/15/08 16:03	Received: 12/	/16/08 15:50	)					
Gasoline Range Organics (C4-C12)	3300	50	ug/l	1	8L19003	12/19/08	12/19/08	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		110 %	75-1.	30	"	"	"	"	
Surrogate: Dibromofluoromethane		104 %	80-12	20	"	"	"	"	
Surrogate: Toluene-d8		103 %	80-12	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	70-12	20	"	"	"	"	
MW2 (MRL0459-06) Waste Water	Sampled: 12/15/08 17:10	Received: 12/	/16/08 15:50	)					
Gasoline Range Organics (C4-C12)	1600	50	ug/l	1	8L19003	12/19/08	12/19/08	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		110 %	75-1.	30	"	"	"	"	
Surrogate: Dibromofluoromethane		104 %	80-12	20	"	"	"	"	
Surrogate: Toluene-d8		104 %	80-12	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	70-12	20	"	"	"	"	





# Volatile Organic Compounds by EPA Method 8260B TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3 (MRL0459-01) Waste Water	Sampled: 12/15/08 14:14	Received: 12/	/16/08 15:50						
Benzene	ND	0.50	ug/l	1	8L19003	12/19/08	12/19/08	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		105 %	80-120	)	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		111 %	75-130	)	"	"	"	"	
Surrogate: Toluene-d8		100 %	80-120	)	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99 %	70-120	)	"	"	"	"	
MW1 (MRL0459-02) Waste Water	Sampled: 12/15/08 15:04	Received: 12/	/16/08 15:50						
Benzene	ND	0.50	ug/l	1	8L19003	12/19/08	12/19/08	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		105 %	80-120	)	"	"	"	"	
		109 %	75-130	)	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		109 %	/3-130	,					
Surrogate: 1,2-Dichloroethane-d4 Surrogate: Toluene-d8		109 % 100 %	80-120		"	"	"	"	





# Volatile Organic Compounds by EPA Method 8260B TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW6 (MRL0459-03) Waste Water	Sampled: 12/15/08 15:35	Received: 12	/16/08 15:50						
Benzene	ND	0.50	ug/l	1	8L19003	12/19/08	12/19/08	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		102 %	80-12	0	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		107 %	75-13	0	"	"	"	"	
Surrogate: Toluene-d8		101 %	80-12	0	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	70-12	0	"	"	"	"	
MW4 (MRL0459-04) Waste Water	Sampled: 12/15/08 16:44	Received: 12	/16/08 15:50						
Benzene	1.1	0.50	ug/l	1	8L19003	12/19/08	12/19/08	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	2.8	0.50	"	"	"	"	"	"	
Xylenes (total)	4.4	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
	ND	100	"	"	"	"	"	"	
Ethanol	ND								
Ethanol Surrogate: Dibromofluoromethane	ND	104 %	80-12	0	"	"	"	"	
	ND	104 % 110 %	80-12 75-13		"	"	"	"	
Surrogate: Dibromofluoromethane	ND			0					





# Volatile Organic Compounds by EPA Method 8260B TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW5 (MRL0459-05) Waste Water	Sampled: 12/15/08 16:03	Received: 12/	/16/08 15:50						
Benzene	53	0.50	ug/l	1	8L19003	12/19/08	12/19/08	EPA 8260B	
Toluene	1.1	0.50	"	"	"	"	"	"	
Ethylbenzene	58	0.50	"	"	"	"	"	"	
Xylenes (total)	110	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		104 %	80-120	)	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		110 %	75-130	)	"	"	"	"	
Surrogate: Toluene-d8		103 %	80-120	)	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	70-120	)	"	"	"	"	
MW2 (MRL0459-06) Waste Water	Sampled: 12/15/08 17:10	Received: 12/	/16/08 15:50						
Benzene	43	0.50	ug/l	1	8L19003	12/19/08	12/19/08	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	53	0.50	"	"	"	"	"	"	
Xylenes (total)	150	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		104 %	80-120	)	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		110 %	75-130	)	"	"	"	"	
Surroguie. 1,2-Dichiordeinune-u4									
Surrogate: Toluene-d8		104 %	80-120	)	"	"	"	"	





# Total Purgeable Hydrocarbons by GC/MS (CA LUFT) - Quality Control TestAmerica Morgan Hill

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 8L19003 - EPA 5030B P/T / L	UFT GCMS									

Blank (8L19003-BLK1)				Prepared &	Analyzed:	12/19/08				
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	8.17		"	7.50		109	75-130			
Surrogate: Dibromofluoromethane	7.86		"	7.50		105	80-120			
Surrogate: Toluene-d8	7.50		"	7.50		100	80-120			
Surrogate: 4-Bromofluorobenzene	7.27		"	7.50		97	70-120			
Laboratory Control Sample (8L19003-BS2)				Prepared &	Analyzed:	12/19/08				
Gasoline Range Organics (C4-C12)	436	50	ug/l	500		87	65-140			
Surrogate: 1,2-Dichloroethane-d4	7.98		"	7.50		106	75-130			
Surrogate: Dibromofluoromethane	7.56		"	7.50		101	80-120			
Surrogate: Toluene-d8	7.59		"	7.50		101	80-120			
Surrogate: 4-Bromofluorobenzene	7.62		"	7.50		102	70-120			
Laboratory Control Sample Dup (8L19003-BS	SD2)			Prepared &	Analyzed:	12/19/08				
Gasoline Range Organics (C4-C12)	430	50	ug/l	500		86	65-140	1	20	
Surrogate: 1,2-Dichloroethane-d4	8.22		"	7.50		110	75-130			
Surrogate: Dibromofluoromethane	7.59		"	7.50		101	80-120			
Surrogate: Toluene-d8	7.50		"	7.50		100	80-120			
Surrogate: 4-Bromofluorobenzene	7.56		"	7.50		101	70-120			
Matrix Spike (8L19003-MS1)	Source: MRL	0459-01		Prepared &	Analyzed:	12/19/08				
Gasoline Range Organics (C4-C12)	934	50	ug/l	800	ND	117	45-150			
Surrogate: 1,2-Dichloroethane-d4	7.80		"	7.50		104	75-130			
Surrogate: Dibromofluoromethane	8.06		"	7.50		107	80-120			
Surrogate: Toluene-d8	7.59		"	7.50		101	80-120			
Surrogate: 4-Bromofluorobenzene	7.86		"	7.50		105	70-120			
Matrix Spike Dup (8L19003-MSD1)	Source: MRL	0459-01		Prepared &	Analyzed:	12/19/08				
Gasoline Range Organics (C4-C12)	581	50	ug/l	800	ND	73	45-150	47	20	R2
Surrogate: 1,2-Dichloroethane-d4	7.65		"	7.50		102	75-130			
Surrogate: Dibromofluoromethane	7.86		"	7.50		105	80-120			
Surrogate: Toluene-d8	7.50		"	7.50		100	80-120			
Surrogate: 4-Bromofluorobenzene	7.68		"	7.50		102	70-120			





# Volatile Organic Compounds by EPA Method 8260B - Quality Control

### **TestAmerica Morgan Hill**

		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

Batch 8L19003 - EPA 5030B P/T / EPA 8260B	tch 8L19003 - EPA 5	030B P/T /	EPA 8260B
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Blank (8L19003-BLK1)				Prepared & Anal	yzed: 12/19/08		
Benzene	ND	0.50	ug/l				
Toluene	ND	0.50	"				
Ethylbenzene	ND	0.50	"				
Xylenes (total)	ND	0.50	"				
Methyl tert-butyl ether	ND	0.50	"				
Di-isopropyl ether	ND	0.50	"				
Ethyl tert-butyl ether	ND	0.50	"				
tert-Amyl methyl ether	ND	0.50	"				
tert-Butyl alcohol	ND	20	"				
1,2-Dichloroethane	ND	0.50	"				
1,2-Dibromoethane (EDB)	ND	0.50	"				
Ethanol	ND	100	"				
Surrogate: Dibromofluoromethane	7.86		"	7.50	105	80-120	
Surrogate: 1,2-Dichloroethane-d4	8.17		"	7.50	109	75-130	
Surrogate: Toluene-d8	7.50		"	7.50	100	80-120	
Surrogate: 4-Bromofluorobenzene	7.27		"	7.50	97	70-120	
Laboratory Control Sample (8L19003-BS1)				Prepared & Anal	yzed: 12/19/08		
Benzene	10.3	0.50	ug/l	10.0	103	80-120	
Toluene	9.83	0.50	"	10.0	98	80-125	
Ethylbenzene	10.9	0.50	"	10.0	109	80-130	
Xylenes (total)	33.7	0.50	"	30.0	112	80-130	
Methyl tert-butyl ether	10.9	0.50	"	10.0	109	80-130	
Di-isopropyl ether	10.4	0.50	"	10.0	104	70-130	
Ethyl tert-butyl ether	10.4	0.50	"	10.0	104	75-130	
tert-Amyl methyl ether	10.7	0.50	"	10.0	107	75-125	
tert-Butyl alcohol	203	20	"	200	102	80-120	
1,2-Dichloroethane	11.2	0.50	"	10.0	112	80-125	
1,2-Dibromoethane (EDB)	11.0	0.50	"	10.0	110	80-125	
Ethanol	190	100	"	200	95	50-150	
Surrogate: Dibromofluoromethane	7.79		"	7.50	104	80-120	
Surrogate: 1,2-Dichloroethane-d4	7.84		"	7.50	105	75-130	
Surrogate: Toluene-d8	7.58		"	7.50	101	80-120	
Surrogate: 4-Bromofluorobenzene	7.75		"	7.50	103	70-120	





# Volatile Organic Compounds by EPA Method 8260B - Quality Control TestAmerica Morgan Hill

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 8L19003	- EPA	5030B	<b>P/T</b> /	EPA	8260B

Matrix Spike (8L19003-MS1)	Source: MRL	0459-01		Prepared &	Analyzed:	12/19/08				
Benzene	10.5	0.50	ug/l	10.0	ND	105	75-125			
Toluene	9.98	0.50	"	10.0	ND	100	80-130			
Ethylbenzene	10.8	0.50	"	10.0	ND	108	75-135			
Xylenes (total)	33.0	0.50	"	30.0	0.200	109	80-140			
Methyl tert-butyl ether	11.2	0.50	"	10.0	ND	112	75-145			
Di-isopropyl ether	11.0	0.50	"	10.0	ND	110	75-135			
Ethyl tert-butyl ether	11.0	0.50	"	10.0	ND	110	80-135			
tert-Amyl methyl ether	11.1	0.50	"	10.0	ND	111	75-140			
tert-Butyl alcohol	208	20	"	200	3.18	103	80-125			
1,2-Dichloroethane	11.4	0.50	"	10.0	ND	114	80-140			
1,2-Dibromoethane (EDB)	11.5	0.50	"	10.0	ND	115	80-135			
Ethanol	230	100	"	200	ND	115	50-150			
Surrogate: Dibromofluoromethane	8.06		"	7.50		107	80-120			
Surrogate: 1,2-Dichloroethane-d4	7.80		"	7.50		104	75-130			
Surrogate: Toluene-d8	7.59		"	7.50		101	80-120			
Surrogate: 4-Bromofluorobenzene	7.86		"	7.50		105	70-120			
Matrix Spike Dup (8L19003-MSD1)	Source: MRL	0459-01		Prepared &	Analyzed:	12/19/08				
Benzene	10.4	0.50	ug/l	10.0	ND	104	75-125	1	20	
Toluene	9.82	0.50	"	10.0	ND	98	80-130	2	25	
Ethylbenzene	10.8	0.50	"	10.0	ND	108	75-135	0	20	
Xylenes (total)	32.3	0.50	"	30.0	0.200	107	80-140	2	20	
Methyl tert-butyl ether	10.6	0.50	"	10.0	ND	106	75-145	5	25	
Di-isopropyl ether	10.6	0.50	"	10.0	ND	106	75-135	4	25	
Ethyl tert-butyl ether	10.3	0.50	"	10.0	ND	103	80-135	6	25	
tert-Amyl methyl ether	10.5	0.50	"	10.0	ND	105	75-140	6	25	
tert-Butyl alcohol	207	20	"	200	3.18	102	80-125	0.9	25	
1,2-Dichloroethane	10.8	0.50	"	10.0	ND	108	80-140	5	25	
1,2-Dibromoethane (EDB)	10.8	0.50	"	10.0	ND	108	80-135	6	30	
Ethanol	226	100	"	200	ND	113	50-150	2	25	
Surrogate: Dibromofluoromethane	7.86		"	7.50		105	80-120			
			"	7.50		102	75-130			
Surrogate: 1,2-Dichloroethane-d4	7.65			7.50						
Surrogate: 1,2-Dichloroethane-d4 Surrogate: Toluene-d8	7.65 7.50		"	7.50		100	80-120			





### **Notes and Definitions**

R2 The RPD exceeded the acceptance limit.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

MRL0459

### STREAMBORN

### Chain-of-Custody Form

-Dec-2008 1	Time		Water	Vapor	Grab	Composite		Laboratory:			Tu	rnaro		T I	Analyses		Lab	oratory Number	
-Dec-2008 1	Time							Containers	ve n to ice)	ou	Tu			T I	Analyses				
-Dec-2008 1	Time	Soil	Water	Vapor	ab	nposite	tity		ve n to ice)	on		ys	ş	EX/					
-Dec-2008	71 161			-	Ö	Ö	Quantity	Type	Preservative (in addition to ice)	Field Filtration	48-Hour	5- Working Days	10-Working Days	TPH-gasoline/BTEX/ fuel oxygenates (EPA Method 8260)				Sampler Comments	Laborator Comment
<del></del>	71 161	[	Α.		X	$\vdash$	3	40 mL VOA	HCI	None	ļ		<del>-</del> x	X					
	414		x		х		3	40 mL VOA	HCL	None			х	x			1		
-Dec-2008 15	504		x		x		3	40 mL VOA	HCL	None			×	T x			_	***************************************	
-Dec-2008 1 5	535		х		х		3	40 mL VOA	HCL	None			$\frac{1}{x}$	x		_		***************************************	
-Dec-2008	644		х		х		3	40 mL VOA	HCL	None			x	x			<b>-</b>	·····	
-Dec-2008	603		х		х		3	40 mL VOA	HCL	None			x	x		+			
-Dec-2008 \7	710		х		х		3	40 mL VOA	HCL	None			x	x		_			
																_			
-Dec- -Dec-	2008	2008 1603 2008 1710	2008 1603 2008 1710	2008 1603 x 2008 1710 x	2008 1603 x 2008 1710 x	2008 1603 x x 2008 1710 x x to observe preservative, condition, integral	2008 1410 x x  to observe preservative, condition, integrity, c	2008 1603 x x 3 2008 1710 x x 3 to observe preservative, condition, integrity, etc. of	2008 1603 x x 3 40 mL VOA 2008 1710 x x 3 40 mL VOA	2008 1603 x x 3 40 mL VOA HCL 2008 1710 x x 3 40 mL VOA HCL to observe preservative, condition, integrity, etc. of samples and record (under "Co")	2008 603 x x 3 40 mL VOA HCL None 2008 710 x x 3 40 mL VOA HCL None to observe preservative, condition, integrity, etc. of samples and record (under "Comments")	2008 1603 x x 3 40 mL VOA HCL None 2008 1710 x x 3 40 mL VOA HCL None to observe preservative, condition, integrity, etc. of samples and record (under "Comments") any expressions are conditionally as a second sample of the condition of the cond	2008 1603 x x 3 40 mL VOA HCL None  2008 1710 x x 3 40 mL VOA HCL None  to observe preservative, condition, integrity, etc. of samples and record (under "Comments") any excepti	2008 1603 x x 3 40 mL VOA HCL None x 2008 1710 x x 3 40 mL VOA HCL None x to observe preservative, condition, integrity, etc. of samples and record (under "Comments") any exceptions from	2008 1603 x x 3 40 mL VOA HCL None x x 2008 1710 x x 3 40 mL VOA HCL None x x 4 to observe preservative, condition, integrity, etc. of samples and record (under "Comments") any exceptions from standard protocols.	2008 140 X X 3 40 mL VOA HCL None X X X 3 40 mL VOA HCL None X X X 10 mL VOA HCL None X X X 10 mL VOA HCL None X X X X 10 mL VOA HCL None X X X X 10 mL VOA HCL None X X X X X X X X X X X X X X X X X X X	2008 120	2008 120	2008 1603 x x 3 40 mL VOA HCL None x x x 2 2008 1710 x x 3 40 mL VOA HCL None x x x x 2 2008 1710 x x 6 3 40 mL VOA HCL None x x 6 7 2008 1710 x 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

STREAMBORN Mail: PO Box 8330, Berkeley CA 94707-8330 Office: 900 Santa Fe Ave, Albany CA 94706 510-528-4234 Fax: 528-2613

Report results to information@streamborn.com

Prepare EDF for Geotracker Upload? Yes	Streamborn Logcode: SBA	C1.1 170 7000000000
<b>1</b>	Streamborn Logcode: SBA	Global ID: T0600100430

### TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: STREAM BORN REC. BY (PRINT) WORKORDER: MRL0459		DATE REC'D AT LAB: TIME REC'D AT LAB: DATE LOGGED IN:	12/16/08	•			× WAS	KING V	VATER
CIRCLE THE APPROPRIATE RESPONS	LAB SAMPLE#	CLIENT ID	CONTAINER DESCRIPTION	PRESER VATIVE	рН**	SAMPLE MATRIX	DATE SAMPLED	Temp. >6°C	REMARKS: CONDITION
1. Custody Seal(s) Present Absent	-		-					7	
Intact / Broken*									
2. Chain-of-Custody Present / Absent*	ļ	•			ļ				
3. Traffic Reports or					<u> </u>		8-/		
Packing List: Present / Absent					<u> </u>				
4. Airbill / Sticker - Present / Absent						0	4/		
Tracking #	ļ	<u> </u>			ļ				
5. Sample Condition: max/Leaking*/Broken*									
6. Samples labeled (65) No*						*			
7. Sample ID's listed on COC (Test No*	<u> </u>			***************************************	1 2	/			
8. Does information on COC and sample labels agree? (Yes) No*					BY		·		
labels agree? Yes No*  9. Sample received within				· 3/	_				
hold time: Ges/ No*					<u> </u>				
10. Adequate sample volume					<del> </del>				
received (es) No*			-		<u> </u>	-			*****
11. Proper preservatives used Ves / No*			July -						
12. Trip Blank / Temp Blank Received?			69		<del>                                     </del>				
(circle which if yes) Yes /(No)					<b>_</b>				
13. Thermometer Used : IR-1 (1R-3 / Backup		100							*******
14. Cooler RT*** CF*** CT***		1,01							
1 70° -10 60°									
2				***************************************					· · · · · · · · · · · · · · · · · · ·
3	^	22							
4		all -							
5	77	X	•	¥					
15. Is/Are corrected temp 0-6°C? Yes / No*									
**Exception (if any): Metals / Perchlorate /									
W/in 24hrs of sampling-on ice / Problem COC									

\*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION

\*\*CHECK SAMPLE PREP LOG IF NOT INDICATED

\*\*\* Read Temperature/Correction Factor/Corrected Temperature

SAMPLERECEIPTLOG Revision 12 (08/07/08)

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