LIESCH
HYDROGEOLOGISTS ■ ENGINEERS ■ ENVIRONMENTAL SCIENTISTS

August 14, 2007

Mr. Hank Kuehling
WDNR
3911 Fish Hatchery Road
Fitchburg, WI 53711

RE: **Annual Operation and Maintenance Report (July 2006 – June 2007)**
Refuse Hideaway Landfill, Town of Middleton, Dane County, Wisconsin
BRRTS #02-13-000849

Dear Mr. Kuehling:

The purpose of this letter report is to summarize operation and maintenance (O&M) activities performed by Liesch Environmental Services, Inc. (Liesch) at the Refuse Hideaway Landfill (RHL) from July 2006 through June 2007. As monthly O&M reports were previously submitted, this Annual Report provides ranges for operating parameters and highlights changing trends or operating conditions.

SUMMARY

Highlights of O&M activities completed by Liesch during the 2006 – 2007 O&M year included:

- The Blower/Flare System ran approximately 96% of the operating year.
- The Leachate Collection System ran for approximately 89% of the operating year.

BACKGROUND

Liesch began routine monitoring of RHL systems on July 1, 2003. Prior to Liesch, SCS Field Services and Environmental Sampling Corporation monitored the landfill from July 1, 1997.

LFG Recovery System

The LFG Recovery System at RHL became operational in 1991. The LFG Recovery System consists of:

- Blower/Flare Station
- Collection System
- Monitoring Locations

The Blower/Flare Station includes one centrifugal LFG blower, an enclosed flare, a candlestick flare (previously used as a backup combustion unit but now out of service), and associated controls and appurtenances. The Collection System consists of 13 extractions wells, four drip legs, and associated gas and pneumatic header piping. The Monitoring Locations include 11 wells located throughout the site and ambient air monitoring within nearby Speedway buildings. Proper operation of the Collection System is verified through testing of the extraction wells. LFG withdrawal rates at individual well are adjusted based on test results. Testing for subsurface gas migration is done at the monitoring locations. Operation of the Blower/Flare Station provides vacuum necessary to withdraw the gas from the landfill, which helps control surface emissions and subsurface migration. Odors and emissions are controlled by combustion of the gas at the flare.

Leachate Collection System

The current leachate collection system was installed in 1996 and is comprised of pneumatic pumps installed in nine of the existing LFG extraction wells (eight wells until GW-10 was added in 2006). A compressor located at the Blower/Flare Station supplies compressed air for the pneumatic pumps. The collected leachate is stored onsite in a 25,000-gallon underground storage tank. Leachate is removed from the tank by a subcontractor and transported to the Madison Metropolitan Sewerage District (MMSD) for treatment and ultimate discharge.

TESTING EQUIPMENT

A Landfill Monitoring Systems (LMS) Multi-gas analyzer Model LMS 40 is utilized at the site to measure methane, carbon dioxide, and oxygen as percent by volume.

Pressure testing is measured in inches of water using Dwyer magnehelic gauges. LFG flow and temperature are measured with an Extech Model 407123 Hot Wire Thermo-Anemometer. Combustion temperatures were obtained from flare control panel instrumentation.

Leachate level was measured in one of two ways:

- For the gas extraction wells that have a leachate extraction pump, leachate levels were obtained indirectly using a bubbler tube.
- For the gas extractions wells that do not contain a leachate extraction pump, leachate levels were measured using an electric water level meter.

ON-SITE ACTIVITIES

Site/system activities generally consisted of inspecting, monitoring, maintaining, and/or recording data at or from various valves, meters, or sampling ports.

Weekly activities were performed at the following locations:

- Blower/Flare Control Panel
- Blower/Flare Station
- Leachate Tank
- Branch Monitoring Stations
- Flare Inlet Pipe
- Blower Inlet Pipe

Monthly activities were performed at the following locations:

- Extraction Wells
- Gas Probes
- Well Pumps/Controls
- Branch Monitoring Stations
- Flare Inlet Pipe
- Buried Control Valves
- Compressor (oil change)
- Pneumatic System (check for leaks)
- Blower Drive Belts (inspect/tighten)
- Landfill Surface (inspect)
- Monthly Report (including summary tables of system operation)

Quarterly activities were performed at the following locations:

- CV1, CV2, Branch Valves
- Well Valves, Compressor Valves
- Manual Valve (ground flare)
- Compressed Air Filter (inspect)
- Air Dryer Desiccant (inspect)
- Blower

Annual activities were performed at the following locations:

- Well pumps
- Leachate Lines, Driplegs
- Cleanouts
- Tank Loadout Station
- Padlocks

System statistics for the operating year are summarized in **Table 1** and further detailed in **Table 2** through **Table 5**:

- The average methane level at the blower was 31.6%.
- The average oxygen level at the blower was 2.1%.
- 419,089 gallons of leachate were removed from the landfill using the Leachate Collection System.
    - Laboratory analysis of leachate samples indicated that all analyzed metal compounds were below permitted discharge levels (see **Table 6**).
    - Laboratory reports were submitted to Madison Metropolitan Sewerage District per permit requirements.

With respect to scheduled repairs and improvements, implementation of recommendations were made and completed during this O&M contract. Included in this scope was the following:

1) The hose lines for pump GW-13 were removed; however the pump itself was not able to be removed. GW-13 was attempted to be removed by the use of a backhoe, but the pump cable connection was stripped due to its cheap construction. The pump remains at the bottom of the well.

2) All of the air control valves at the individual well heads were replaced due to most having become inoperable. Balancing the gas extraction system is again possible due to being able to fine tune gas flow at each well head. Broken air sampling ports were also replaced as needed.

3) The five non-working leachate pumps were sent to the manufacturer to determine the viability of repair or replacing them with new pumps.

4) Replacements of leachate pumps for seven wells (GW-4, GW-5, GW-8, GW-9, GW-11, GW-12, and GW-13) were ordered. Additional prep work was needed once the five pumps from Geotech (3.5" Auto-Reclaimer, 36" length) arrived as the barb fittings on the pumps were not usable with the existing tubing lines at the wells despite giving those tubing dimensions to Geotech. On November 14, the installation of GW-11 went smoothly, tested fine, and is now operational. At GW-9, there were great difficulties from blockage (lime-like deposits) of both the discharge and exhaust lines at multiple places. Eventually, after snaking the lines, using citrus cleaner and other efforts, we were able to bring the pump online on November 15, 2006. Smaller pumps from QED (Short AP2 bottom loading, 33" length, 1.75" diameter) were installed at GW-12 and GW-13. Also on November 15 new pumps at GW-8 and GW-5 were installed. The installation of the last replacement pump at GW-4 was started on

November 15 but the discharge line there also had blockage (more of a brown color) and was completed on November 17. The other six wells with replacement pump installations were checked—four were currently pumping (GW-9, GW-12, GW-13 apparently continuously since installed based on the counter readings while GW-5, GW-8, and GW-11 had apparently pumped down far enough to no longer be pumping continuously).

5) On January 11, 2007, the leachate pumps at GW-4 and GW-5 were turned off and a submersible pump was lowered down the GW-5 header pipe and 200 gallons of leachate was pumped out. This enabled gas flow to be restored at GW-4 and GW-5 via the central branch. It appeared that the cause of the pooling may have been an obstruction (i.e. scale deposits) rather than a low spot in this particular area. Therefore, on January 25, 2007, 15 gallons of citrus cleaner were poured down the GW-5 header piping. On February 1, 2007 the GW-4 pump was turned back on and normal negative air pressures were maintained at GW-4 and GW-5 indicating typical gas extraction. On March 22, 2007 the header line at GW-5 was snaked. A lot of water was encountered but no obvious blockage was encountered throughout the 30 feet that the snake was able to be advanced before being overcome by friction. The air to the pneumatic leachate pump was turned back on for the GW-5 pump but the pump has not yet pumped, apparently due to leachate levels not being high enough.

The following non-scheduled repairs were made during the O&M year:

1) The broken well gas sampling port at GW-13 was replaced.

2) The flare chart recorder was adjusted so that correct operation was restored.

3) The broken cleanout riser of CO 5 was shortened and a PVC slip cap was installed.

4) The compressor motor starter overload circuits malfunctioned causing the compressor to shut down. The compressor continually would kick off and run for only very short periods of time. This malfunction happened after a new motor starter was installed on the compressor. Davis Electric inspected the compressor on May 4, 2007 and determined one of the overload circuits on the new motor starter had been tripped, which means the motor is drawing more amps than what the motor starter would allow. Davis Electric installed new larger overload circuits in the motor starter. The new overload circuits appeared to solve the problem because the compressor was running when it was checked on the morning of May 7, 2007.

Davis Electric tested the compressor motor and the motor was drawing approximately 18.5

amps and the overload circuits allowed a maximum draw of 19 amps. However when the motor starts up after the pump lines have been pressurized, the motor must be drawing more amps than what the motor starter overloads will allow. The larger overloads installed have a maximum draw of about 27 amps. The larger overloads will not allow the motor to overwork and cause damage to the motor. The name plate for the compressor states an amperage for the compressor of about 18 amps. This value was used to size the new motor starter and the overload circuits. The new motor starter installed was sized correctly; however the system is causing the motor to draw more amperage than what the compressor name plate specifies.

5) On November 20 a call was received from A-1 Sewer Service that the leachate tank had overflowed. Liesch personnel went to the Site to observe while A-1 pumped down the tank. The overflow was limited to the relatively small area between the loadout pad and the Speedway warehouse. It appeared that some leachate made its way to the nearby ditch on the south side of the warehouse but apparently not in great quantity. The ditch leads to the detention/settling pond. The pond was at a typical water level, well below the outflow elevation. Based upon the recent VOC and metal analysis results of the leachate, concentrations are so low as to not be of concern. A pump out request was made to A-1 on November 17 but with all nine leachate pumps working, the tank filled up prior to their arrival. Note that the overflow alarm on the tank did not function.

6) The pump cycle counter at GW-7 was replaced on January 18, 2007 with the counter that had been installed in GW-5. The counter was replaced because it was observed to be recording cycles only sporadically. When the counter was checked a week later it appeared to be functioning properly. Both the older and newer counters were operational in GW-4, so the newer counter was removed from GW-4 and installed in GW-5. The older counter at GW-4 has been utilized for measurements there.

7) The compressor air line on GW-13 was discovered to be broken on May 11, 2007 and replaced that same day. The broken air line had caused the compressor to trip off as a result of being overloaded from not being able to maintain pressure in the pneumatic air lines.

The following items were also noted throughout the operating year:

1) Inconsistent flows and/or gas concentrations can fool the flame signal eye resulting in false flame failure alarms. With low gas concentrations (especially those below 20%), the auto-dialer alarm is activated up to four times a day even though the flare typically does not go out.

2) The flare re-start sequence is complicated by a continuously alarming high pilot gas pressure transducer. To restart the flare system, the transducer has to be jumped/bypassed to allow the start-up sequence to proceed.

3) The air compressor is slightly undersized for the environment and workload. However, a technician from Energetics has said that regular oil changes should allow the compressor to operate as needed for the foreseeable future.

4) Visual inspections of the landfill surface did not reveal significant erosion concerns or stressed vegetation, other than the persistent low growth zone along the ridge in the southern portion of the landfill in the vicinity of GW-1, GW-2, and GW-3.

5) Methane detected in the G-1, G-2, and G-11 well nests depended heavily on the time of year. The highest readings were during the summer months with little to no methane detected during the winter months.

CONCLUSIONS / RECOMMENDATIONS

An evaluation of repairs and improvements needed for effectively operating the Blower/Flare System and Leachate Collection System was completed in June 2006 and was successfully implemented during the past operating year. In addition, numerous non-scheduled repairs were made in order to maintain the remedial systems at the landfill. After addressing two remaining issues, the remedial systems should be poised for many additional years of useful life.

First, a permanent solution is needed to restore flow to all south branch wells. This will involve excavating and re-grading gas header piping from GW-4 to GW-1 at a minimum (in order to pull gas via the central branch). Restoring flow via the south branch as originally designed would also involve repairing the line from GW-1 to DL-1.

Second, the south branch should be jetted at GW-5 to attempt to restore some flow through the south branch. To my knowledge the south branch has never been jetted because of the lack of a cleanout. The 3"x6" reducer between the above-grade piping (3") and the header piping (6") is located at grade for GW-5 instead of the normal below grade elsewhere. This should act as a cleanout and allow normal line jetting equipment to be used.

Feel free to call me at (608) 223-1532, extension 22, if you have any questions.

Sincerely,

LIESCH ENVIRONMENTAL SERVICES, INC.

Joshua D. Davenport, EIT
Project Manager

Brian Hinrichs, P.S.S.
Project Principal

Attachments: Table 1 (System Summary)
Table 2 (Methane at Wells)
Table 3 (Velocity at Wells)
Table 4 (System Hours)
Table 5 (Problematic System Components)
Table 6 (Leachate Tank Laboratory Analytical Results)

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TABLE 1
REFUSE HIDEAWAY LANDFILL

OPERATING PARAMETERS SUMMARY
July 2006 - June 2007
System Summary

	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Average	Min.	Max.
% Methane at Blower (average during month)	26.9	34.1	31.4	24.5	27.1	30.8	28.2	25.9	32.4	40.8	37.9	39.1	31.6	24.5	40.8
% Oxygen at Blower (average during month)	1.3	0.8	1.4	2.0	1.5	1.6	2.6	3.6	3.4	2.5	2.4	2.2	2.1	0.8	3.55
Leachate Collected (gallons)	24,581	19,172	19,702	24,273	48,586 *	53,684	53,683	34,471	43,859	4,781	48,651	43,647	34,924	4,781	53,684
											TOTAL Leachate		419,089		

		Average	Min.	Max.
% Methane	GW1	40.5	24.0	60.0
at Extraction Wells	GW2	25.5	0.0	61.9
	GW3	33.1	0.0	63.7
	GW4(1)	42.2	4.9	65.0
	GW5(1)	44.7	22.0	64.0
	GW6	42.3	33.5	56.0
	GW7(1)	41.4	18.5	99.9
	GW8(1)	34.0	15.0	53.0
	GW9(1)	48.7	21.0	79.1
	GW10(1)	25.1	5.5	79.3
	GW11(1)	49.8	33.5	99.9
	GW12(1)	23.5	14.0	85.7
	GW13(1)	41.4	0.0	99.9

		Average	Min.	Max.
Velocity (fpm)	GW1	441	25	2650
at Extraction Wells	GW2	474	47	2580
	GW3	412	71	1325
	GW4(1)	1464	68	5500
	GW5(1)	2186	97	5500
	GW6	3558	1090	5500
	GW7(1)	2829	226	5500
	GW8(1)	3449	149	5500
	GW9(1)	2834	121	5500
	GW10(1)	1083	107	2818
	GW11(1)	2655	230	5500
	GW12(1)	2660	296	5045
	GW13(1)	3408	148	5500
	TOTAL	27451		

	Average	Min.	Max.
Flow (cfm)	15.6	0.8	96.6
	16.8	1.6	94.0
	14.5	2.4	47.7
	53.7	2.3	205.4
	80.6	3.2	205.4
	132.1	39.2	205.4
	104.7	7.9	205.4
	128.4	5.0	205.4
	104.8	4.0	205.4
	39.0	3.6	101.4
	97.5	7.8	205.4
	98.2	10.4	188.4
	126.7	5.0	205.4
TOTAL	1012.7		

	Average	Min.	Max.
LFG Blower (%)	96	68	100
LFG Hours per month	693.2	490.0	816.5
Leachate Compressor (%)	89.2	0	100

* 9 wells with operational pumps now (previous months only 2 wells)

(1) wells with pneumatic leachate pumps installed.

TABLE 2
REFUSE HIDEAWAY LANDFILL

OPERATING PARAMETERS SUMMARY
July 2006 - June 2007
Methane (%) at Wells

	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Average	Min	Max
GW1	30.0	60.0	34.5	25.5	32.0	24.0	42.5	47.5	34.0	49.0	51.0	55.6	40.5	24.0	60.0
GW2	5.2	61.9	29.5	27.0	30.0	28.0	41.5	43.0	1.8	3.7	0.0	33.8	25.5	0.0	61.9
GW3	29.5	63.7	0.0	17.0	0.9	1.2	56.0	59.0	3.4	59.0	57.0	49.9	33.1	0.0	63.7
GW4 (1)	12.0	64.2	35.0	19.5	25.0	63.0	65.0	4.9	40.0	63.0	51.0	63.8	42.2	4.9	65.0
GW5 (1)	50.0	44.0	39.0	22.0	50.0	61.0	64.0	37.5	29.0	41.0	45.0	54.1	44.7	22.0	64.0
GW6	33.5	51.5	36.0	35.0	35.5	35.0	42.0	35.0	42.0	56.0	56.0	50.1	42.3	33.5	56.0
GW7 (1)	34.5	99.9	41.0	25.0	37.5	26.0	36.0	21.0	18.5	55.0	51.0	51.6	41.4	18.5	99.9
GW8 (1)	45.0	49.4	25.0	15.0	26.0	31.0	27.0	20.0	37.0	36.0	53.0	44.0	34.0	15.0	53.0
GW9 (1)	21.0	79.1	46.0	52.0	52.0	54.0	53.0	44.0	42.0	55.0	45.0	41.4	48.7	21.0	79.1
GW10 (1)	12.0	79.3	42.0	12.5	5.5	12.0	12.5	14.5	18.0	26.0	30.0	36.6	25.1	5.5	79.3
GW11 (1)	45.0	99.9	53.0	52.0	36.5	45.0	54.0	46.0	44.5	46.0	33.5	42.5	49.8	33.5	99.9
GW12 (1)	15.0	85.7	19.5	15.5	14.0	18.5	19.5	15.5	22.0	20.5	16.5	19.2	23.5	14.0	85.7
GW13 (1)	0.0	99.9	35.0	33.0	38.5	45.0	45.5	0.0	45.0	49.0	54.0	52.0	41.4	0.0	99.9

(1) wells with pneumatic leachate pumps installed.

TABLE 3
REFUSE HIDEAWAY LANDFILL

OPERATING PARAMETERS SUMMARY
July 2006 - June 2007
Velocity (fpm) and Flow (cfm) at Wells

VELOCITY	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Average	Min	Max
	**	**	**	**	**	**	**	**	**	**	**	**			
GW1	2650	133	430	226	202	670	306	156	392	25	42	58	441	25	2650
GW2	2580	126	260	342	212	350	1097	146	402	72	54	47	474	47	2580
GW3	655	71	386	380	160	631	387	639	1325	84	146	75	412	71	1325
GW4 (1)	1150	1088	715	2052	1180	101	4332	5500	873	68	426	81	1464	68	5500
GW5 (1)	1219	1250	1176	2650	2550	97	5500	5500	5500	344	332	111	2186	97	5500
GW6	4325	4300	3360	4250	3036	5500	5500	3530	5500	1177	1090	1130	3558	1090	5500
GW7 (1)	4128	2915	2481	3503	4650	3201	4292	5500	2233	453	226	361	2829	226	5500
GW8 (1)	3950	4850	2483	5500	3380	5500	5500	4250	5500	170	149	155	3449	149	5500
GW9 (1)	5500	4638	2394	2650	1421	2833	2866	5500	5500	208	377	121	2834	121	5500
GW10 (1)	2818	184	164	2241	2238	1326	1296	1304	1027	156	135	107	1083	107	2818
GW11 (1)	4540	3710	2180	2543	1464	4083	2702	5500	3430	520	958	230	2655	230	5500
GW12 (1)	5045	3096	2806	3540	4200	1729	2327	4280	3248	577	296	773	2660	296	5045
GW13 (1)	5500	1606	2850	4371	4280	3270	4146	5500	5500	148	312	>	3408	148	5500
TOTAL	**44,060**	**27,967**	**21,685**	**34,248**	**28,973**	**29,291**	**40,251**	**47,305**	**40,430**	**4,002**	**4,543**	**3,249**			

FLOW	(Calculated)														
GW1	96.6	4.4	14.9	7.6	6.8	23.8	10.5	5.3	13.6	0.8	1.4	1.9	15.6	0.8	96.6
GW2	94.0	4.2	8.9	11.7	7.2	12.1	39.5	4.9	13.9	2.4	1.8	1.6	16.8	1.6	94.0
GW3	23.3	2.4	13.4	13.2	5.4	22.1	13.4	22.4	47.7	2.8	4.9	2.5	14.5	2.4	47.7
GW4 (1)	41.4	39.2	25.4	74.8	42.5	3.4	161.8	205.4	31.4	2.3	14.2	2.7	53.7	2.3	205.4
GW5 (1)	43.9	45.0	42.3	96.6	92.9	3.2	205.4	205.4	205.4	11.8	11.4	3.7	80.6	3.2	205.4
GW6	161.5	160.6	124.0	158.7	112.0	205.4	205.4	130.3	205.4	42.4	39.2	40.7	132.1	39.2	205.4
GW7 (1)	154.2	107.6	90.4	129.3	173.7	118.1	160.3	205.4	81.4	15.8	7.9	12.4	104.7	7.9	205.4
GW8 (1)	147.5	181.1	90.5	205.4	124.7	205.4	205.4	158.7	205.4	5.7	5.0	5.2	128.4	5.0	205.4
GW9 (1)	205.4	173.2	87.3	96.6	51.2	103.3	105.8	205.4	205.4	7.0	12.7	4.0	104.8	4.0	205.4
GW10 (1)	101.4	6.1	5.5	81.7	81.6	47.7	46.7	46.9	37.0	5.2	4.5	3.6	39.0	3.6	101.4
GW11 (1)	165.5	136.9	79.5	92.7	53.4	152.5	98.5	205.4	126.6	18.3	33.6	7.8	97.5	7.8	205.4
GW12 (1)	188.4	114.2	102.3	130.6	156.9	63.0	84.8	159.9	119.9	20.3	10.4	27.7	98.2	10.4	188.4
GW13 (1)	205.4	58.5	105.2	163.3	159.9	120.7	154.9	205.4	205.4	5.0	10.5	>	126.7	5.0	205.4
TOTAL	**1629**	**1034**	**790**	**1262**	**1068**	**1081**	**1492**	**1761**	**1499**	**140**	**158**	**114**	**1002**		

(1) Wells with pneumatic leachate pumps installed
*Average velocity (manually with meter)
**Centerpoint velocity
Boxed value indicates minimum (capacity of meter)

TABLE 4
REFUSE HIDEAWAY LANDFILL

OPERATING PARAMETERS SUMMARY
July 2006 - June 2007
System Hours

	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Average	Min	Max
LFG Blower (%)	100	68	100	100	100	100	100	97	85	100	100	98	95.7	68	100
Blower Counter end	10984.9	11474.9	12142.9	12815.2	13588.7	14302.8	14998.8	15648.3	16350.4	17021.5	17838.0	18514.8			
Blower Hours	788.6	490.0	668.0	672.3	773.5	714.1	696.0	649.5	702.1	671.1	816.5	676.8	693.2	490.0	816.5
Leachate Compressor (%)	100	100	100	100	100	100	100	100	95	0	75	100	89.2	0	100
Compressor Counter end	1306.5	1457.0	1569.0	1690.8	1836.3	1962.5	2095.2	0.0 malfunct	233.5 malfunct	233.5 malfunct	85.9	227.0			
Compressor Hours	171.2	150.5	112.0	121.8	145.5	126.2	132.7	166.1 to 2/16	233.5 from 3/1	0.0	264.2	141.1	147.1	0.0	264.2

Table 6
Leachate Tank Laboratory Analytical Results
Refuse Hideaway Landfill
Town of Middleton, Wisconsin

	PARAMETER										
DATE	Cadmium (ug/L)	Total Chromium (ug/L)	Hexavalent Chromium (ug/L)	Copper (ug/L)	Lead (ug/L)	Mercury (ug/L)	Nickel (ug/L)	Selenium (ug/L)	Silver (ug/L)	Zinc (ug/L)	Cyanide (ug/L)
Permitted Levels	**250**	**10000**	**500**	**1500**	**5000**	**20**	**2000**	**300**	**3000**	**8000**	**100**
8/28/2006	<1.00	19.2*	<40	5.10*	2.96*	<0.070	32.7	28.0	<1.00	36.6	6*
11/8/2006	<1.00	11.6*	<20	<3.00	<1.50	<0.070	55.2	28.0	5.81*	10.9*	15*
2/21/2007	<1.00	19.1*	<40	20.8	1.59*	<0.070	50.4	51.8	6.30*	<10	12*
6/6/2007	<1.00	10.6*	<40	<3.00	2.92*	<0.070	41.3	10.2	6.77*	17.2*	7*

Notes

Results in **bold** indicate levels above permit limitations.
Blank cell indicates parameter not analyzed.
ug/l = micrograms per liter
* = Analyte detected between limit of detection and limit of quantitation.