II - D

2ND QUARTER REPORT - 2011

QUARTERLY PROGRESS REPORT – 2nd QUARTER 2011
Operation, Maintenance and Long-term Monitoring Activities

PROJECT NAME: *Pollution Abatement Services Site*
Oswego, New York

PERIOD COVERED: April – June (2nd Quarter) 2011

ACTIONS TAKEN DURING QUARTER:

- Leachate removal and site maintenance and monitoring activities were conducted at the Pollution Abatement Services (PAS) site (Site), in Oswego, New York by O'Brien & Gere Operations LLC, (O'Brien & Gere) consistent with the PAS Site Operation, Maintenance and Long-term Monitoring Plan (Work Plan).

- A total of 30,035 gallons of leachate were removed during the period of April 2011 thru June 2011. Specific quantities of leachate removed during each month, along with historical leachate removal documentation, are described in this progress report.

- Leachate was pumped from the Site and discharged into the City of Oswego sanitary sewer system. Leachate discharged into the Oswego sewer system was treated and disposed in Oswego's Eastside Wastewater Treatment Facility located at 71 Mercer St. in Oswego.

- Monthly pre-pumping ground water elevation monitoring was performed at the Site on April 6, May 3, and June 8, 2011. Monthly ground-water elevation monitoring results for the SWW-series monitoring wells (SWW-1 through SWW-12), and leachate collection wells (LCW-1 through LCW- 4) were recorded on the groundwater elevation monitoring log.

- On May 3, 2011, quarterly groundwater elevation monitoring was performed at the Site. Quarterly groundwater elevation monitoring results for the M-series wells M-21 thru M-23, the LR-series wells LR-2, -3, -6 and -8, the LD-series wells LD-3, -4, -5, -6, and -8, along with wells OS-1 and -3, OI-1, OD-3 and LS-6 were recorded onto the groundwater elevation monitoring log.

- The semi-annual ground water sampling was conducted on May 4, 2011 at long-term monitoring wells LR-6, LR-8 and M-21, and at leachate collection wells LCW-2 and LCW-4. Sampling activities for long-term monitoring well were conducted using low-flow sampling protocols described in the Work Plan.

- Mowed grass from slurry wall cap and removed vegetation from the two concrete drainage troughs.

- Site inspection and maintenance activities were conducted monthly, in combination with each leachate removal event. In addition, quarterly site inspection and maintenance activities were

completed on June 20, 2011. Inspection and maintenance activities at this site included the following:

- Visually inspected the slurry wall containment vegetated cap for signs of burrowing vermin or surface anomalies. No discrepancies were reported.

- Visually inspected the leachate collection system pumping equipment to verify proper operation. The field technician inspected each pump control panel to ensure control systems were generally free of rodents and insects, and where properly operating. The leachate holding tank was visually inspected for integrity, as were the leachate tank steel protective roof, and wood structure. No discrepancies were reported.

- Visually inspected the utility shed and leachate pumping equipment, including leachate discharge pump, flow meter, suction hose, pump oil levels, heat trace power panel, interior lighting, exterior and interior shed structure, and main power distribution panel. No discrepancies were reported.

- The sites single french drainage system and two concrete troughs were inspected. No discrepancies were reported.

- The perimeter security fence was inspected on June 20, 2011 to ensure the integrity and the security of the site is maintained. Security fencing was inspected for the presence of any fallen tree limbs or overgrown vegetation. The field technician removed shallow rooted vegetation (brush) or other similar vegetation that had grown up along the security fence, or had fallen onto the fence from the sites bordering woodlands.

- The "Inspection Checklist Form" was utilized to document any comments pertaining to site conditions referenced above.

- On April 6, May 5, and June 8, 2011, an O'Brien & Gere field technician performed the monthly pre-pumping collection system inspection of leachate collection wells LCW-1, 2, & 4, along with inspection of the leachate discharge pumping system. The leachate pumping system consists of one electrically powered leachate discharge pump, flow totalizer and leachate sampling port located within the on-site utility shed. In advance of each leachate removal event, O'Brien & Gere contacted the City of Oswego Eastside Wastewater Treatment Facility official to inform the City of the date leachate is planned to be discharged into the City of Oswego sanitary sewer system. The date of each leachate pumping event was acknowledged by the City of Oswego, prior to the commencement of each discharge event.

- Upon completing the monthly leachate collection well inspection, the technician manually energized three leachate collection pumps, identified as LCW-1, LCW-2 and LCW-4, in order to pump the planned volume of leachate into the leachate collection tank. The run time from each leachate collection pump, along with the leachate tank level taken upon completion of well pumping, was recorded on the Leachate Disposal Checklist.

- During the months of April, May and June 2011, O'Brien & Gere pumped a total of 30,035 gallons of leachate from the leachate collection tank into the City of Oswego sanitary sewer system. The amount of leachate discharged during each removal event, along with flow totalizer, pH and temperature readings, were recorded on the Leachate Disposal Checklist completed for each removal event. The level of leachate remaining in the leachate collection tank after each leachate discharge pumping event was also recorded on the Leachate Disposal Checklist. Each monthly leachate discharge was performed using the same discharge protocols.

- The semi-annual leachate discharge composite sample collected by O'Brien & Gere on March 2, 2011 was analyzed by Life Sciences Laboratory as required by the City of Oswego wastewater discharge permit.

- Upon completing each monthly removal event, the leachate discharge system was drained of residual leachate and prepared for storage. Residual leachate removed was disposed into the leachate collection tank. The leachate collection tank enclosure door was locked and secured. During cold weather operations, the discharge piping heat trace system was verified to be on, and the utility shed was secured prior to leaving the site, O'Brien & Gere closed and secured the chain lock at the main entrance gate.

DOCUMENTATION OF REMOVAL ACTIVITIES DURING QUARTER:

- The completed groundwater elevation monitoring logs for the monitoring events performed on April 6, May 3, and June 8, 2011 are attached. (See Pre-Pumping Monitoring Well Levels – Attachment D-1)

- The completed Site Inspection Checklist forms for the monthly removal events of April 6, May 3, and June 8, 2011 are attached (See Site Inspection Checklist – Attachment D-2).

- The completed Leachate Disposal Checklist forms for the monthly removal events of April 6, May 4, and June 8, 2011 are attached. (See Leachate Disposal Checklist – Attachment D-2)

- A copy of the PAS Oswego Site quarterly discharge report (2nd quarter 2011) submitted to the City of Oswego on July 25, 2011 is attached. (See Attachment D-3). The date of the leachate discharge events, along with the discharge flow totalizer, pH and temperature readings are recorded on the Leachate Disposal Checklist forms included herein.

CUMULATIVE REMOVAL QUANTITIES

Cumulative gallons removed during 2nd quarter 2011 Under OMM Plan – April 6, May 3, and June 8, 2011	**30,035**

HISTORICAL SUMMARY OF LEACHATE REMOVAL ACTIVITIES

Order/Decree	*Disposal Facility/Period*	*Quantities*
1991 IGR Order (2/92 - 10/94)	***Dupont:***	
	1992 (2/98 -12/98)	221,808
	1993	337,619
	1994 (1/94-10/94)	254,898
	Subtotal	814,325
1994 IGR Order (10/94 - 10/98)	***DuPont:***	
	1994 (From 10/94)	50,683
	1995	279,164
	1996 (To 5/96)	119,901
	Subtotal (To 5/96)	449,748
	BFI/CECOS:	
	1996	163,446
	1997	269,371
	1998 (1/98-10/98	207,541
	Subtotal	640,358
	94 IGR Order Total	1,090,106
Final IGR Total		**1,904,431**
OMM Consent Decree (Beginning 11/98)	***BFI/CECOS:***	
	1998 (11/98-12/98)	18,423
	1999	177,710
	2000	196,613
	2001	130,212
	2002	118,592
	2003	120,583
	2004	123,423
	2005	10,472
	OMM Subtotal	896,028

	Clean Harbors	
OMM	*2005*	110,194
Consent Decree	*2006*	117,750
(Beginning 3/05)	*2007*	97,133
	2008	54,420
	OP-TECH Environmental Services	
(Beginning 7/08)	***(Transportation to City of Auburn NY, POTW)***	
	2008	62,865
	2009	216,512
	2010	97,956
	City of Oswego	
(Beginning	***(Discharged to the City of Oswego, NY, POTW)***	
10/10)	*2010*	60,000
	2011	60,045
	OMM Subtotal	846,840
OMM Consent Decree (Subtotal thru 6/30/2011)		1,772,903
GRAND TOTAL		**3,677,334**

ATTACHMENT D-1

GROUND-WATER ELEVATION DATA

O'Brien [illegible] Operation
[illegible] Site
Oswego, New York
Pre-Pumping Monitoring Well Levels

April 6, 2011
8:00 AM

Well	Ground	Riser		April 2010				Within Range?			Ground-Water
Number	Elevation	Elevation		Reading 1	Reading 2	Reading 3	Average	Low	High	Y / N	Elevation
SWW1	286.20	289.33		8.82	8.82	8.82	8.45	7.82	9.49	Yes	280.51
SWW2	286.30	289.37		14.74	14.74	14.74	15.13	14.72	15.58	Yes	274.63
SWW3	286.00	286.50		16.58	16.58	16.58	16.53	16.28	16.80	Yes	269.92
SWW4	282.90	283.60		14.16	14.16	14.16	13.34	11.86	15.15	Yes	269.44
SWW5	275.90	277.02		12.52	12.52	12.52	12.61	11.60	13.16	Yes	264.50
SWW6	270.90	273.06		8.10	8.10	8.10	8.16	7.43	8.57	Yes	264.96
SWW7	273.30	277.93		7.46	7.46	7.46	7.55	7.06	7.88	Yes	270.47
SWW8	275.70	278.24		3.56	3.56	3.56	3.83	3.29	4.23	Yes	274.68
SWW9	283.30	285.55		16.12	16.12	16.12	16.34	15.73	16.96	Yes	269.43
SWW10	279.30	280.43		9.85	9.85	9.85	9.84	8.66	11.57	Yes	270.58
SWW11	271.00	273.50		8.36	8.36	8.36	8.60	7.70	9.22	Yes	265.14
SWW12	270.20	272.82		8.02	8.02	8.02	8.35	7.59	8.80	Yes	264.80
LCW-1	271.40	272.21		7.60	7.60	7.60	7.67	7.23	8.48	Yes	264.61
LCW-2	272.60	274.44		9.82	9.82	9.82	9.90	9.46	10.72	Yes	264.62
LCW-3	283.30	284.36		17.50	17.50	17.50	17.60	17.34	17.94	Yes	266.86
LCW-4	283.80	285.70		17.90	17.90	17.90	17.97	17.50	18.72	Yes	267.80
OS-1	269.63	272.10									
OI-1	269.14	272.00									
OS-3	274.63	277.89									
OD-3	274.96	277.85									
LD-3	275.80	278.62									
LD-4	276.30	279.25									
LD-5	270.02	272.94									
LS-6	271.40	274.14									
LD-6	270.09	274.03									
LD-8	269.90	272.83									
LR-2	287.50	289.85									
LR-3	275.50	278.06									
LR-6	270.90	274.39									
LR-8	270.00	273.42									
M-21	270.28	272.32									
M-22	270.40	273.88									
M-23	267.98	270.49									

O'Brien [illegible] Operation
F[illegible] Site
Oswego, New York
Pre-Pumping Monitoring Well Levels

May 3, 2011
8:45 AM

Well	Ground	Riser		May 2010				Within Range?			Ground-Water
Number	Elevation	Elevation	Reading 1	Reading 2	Reading 3	Average	Low	High	Y / N	Elevation
SWW1	286.20	289.33	8.22	8.22	8.22	9.18	8.78	10.00	No	281.11
SWW2	286.30	289.37	14.48	14.48	14.48	15.03	14.91	15.42	No	274.89
SWW3	286.00	286.50	16.24	16.24	16.24	16.59	16.35	17.00	No	270.26
SWW4	282.90	283.60	12.62	12.62	12.62	14.71	13.60	15.94	No	270.98
SWW5	275.90	277.02	12.14	12.14	12.14	12.61	11.74	13.28	Yes	264.88
SWW6	270.90	273.06	7.58	7.58	7.58	8.64	8.22	9.21	No	265.48
SWW7	273.30	277.93	7.16	7.16	7.16	7.57	7.20	7.90	No	270.77
SWW8	275.70	278.24	3.40	3.40	3.40	4.08	3.84	4.54	No	274.84
SWW9	283.30	285.55	15.68	15.68	15.68	16.33	15.92	17.02	No	269.87
SWW10	279.30	280.43	8.50	8.50	8.50	11.12	9.48	12.62	No	271.93
SWW11	271.00	273.50	8.05	8.05	8.05	8.48	7.50	9.17	Yes	265.45
SWW12	270.20	272.82	7.58	7.58	7.58	8.69	8.43	9.23	No	265.24
LCW-1	271.40	272.21	7.40	7.40	7.40	7.58	7.04	8.30	Yes	264.81
LCW-2	272.60	274.44	9.65	9.65	9.65	9.82	9.27	10.55	Yes	264.79
LCW-3	283.30	284.36	17.24	17.24	17.24	17.60	17.38	18.05	No	267.12
LCW-4	283.80	285.70	17.65	17.65	17.65	17.87	17.36	18.56	Yes	268.05
OS-1	269.63	272.10	6.40	6.40	6.40	8.57	7.88	11.40	No	265.70
OI-1	269.14	272.00	10.14	10.14	10.14	11.12	11.02	12.28	No	261.86
OS-3	274.63	277.89	11.70	11.70	11.70	13.84	13.95	15.30	No	266.19
OD-3	274.96	277.85	11.58	11.58	11.58	13.69	13.78	15.12	No	266.27
LD-3	275.80	278.62	3.78	3.78	3.78	4.21	4.21	4.56	No	274.84
LD-4	276.30	279.25	8.68	8.68	8.68	10.42	10.50	11.79	No	270.57
LD-5	270.02	272.94	7.84	7.84	7.84	8.65	8.69	9.34	No	265.10
LS-6	271.40	274.14	7.95	7.95	7.95	9.51	9.55	10.74	No	266.19
LD-6	270.09	274.03	9.32	9.32	9.32	9.90	9.72	10.65	No	264.71
LD-8	269.90	272.83	6.08	6.08	6.08	7.15	7.04	8.30	No	266.75
LR-2	287.50	289.85	12.98	12.98	12.98	13.20	13.20	13.36	No	276.87
LR-3	275.50	278.06	7.10	7.10	7.10	7.81	7.88	8.36	No	270.96
LR-6	270.90	274.39	9.44	9.44	9.44	10.08	10.06	10.66	No	264.95
LR-8	270.00	273.42	9.04	9.04	9.04	9.75	9.81	10.30	No	264.38
M-21	270.28	272.32	8.75	8.75	8.75	9.43	9.50	9.94	No	263.57
M-22	270.40	273.88	9.38	9.38	9.38	10.04	10.02	10.62	No	264.50
M-23	267.98	270.49	11.02	11.02	11.02	12.17	12.34	12.88	No	259.47

O'Brien [illegible] Operation
P[illegible]site
Oswego, New York
Pre-Pumping Monitoring Well Levels

June 8, 2011
7:00 AM

Well	Ground	Riser	June 2010			Within Range?				Ground-Water
Number	Elevation	Elevation	Reading 1	Reading 2	Reading 3	Average	Low	High	Y / N	Elevation
SWW1	286.20	289.33	9.60	9.60	9.60	9.92	9.02	10.44	Yes	279.73
SWW2	286.30	289.37	14.60	14.60	14.60	15.20	14.93	15.78	No	274.77
SWW3	286.00	286.50	16.42	16.42	16.42	16.71	16.46	17.34	No	270.08
SWW4	282.90	283.60	15.70	15.70	15.70	15.79	14.35	16.42	Yes	267.90
SWW5	275.90	277.02	12.00	12.00	12.00	12.60	11.81	13.65	Yes	265.02
SWW6	270.90	273.06	9.08	9.08	9.08	9.14	8.52	9.55	Yes	263.98
SWW7	273.30	277.93	7.21	7.21	7.21	7.69	7.50	7.95	No	270.72
SWW8	275.70	278.24	4.30	4.30	4.30	4.52	3.98	5.42	Yes	273.94
SWW9	283.30	285.55	15.98	15.98	15.98	16.60	16.30	17.44	No	269.57
SWW10	279.30	280.43	12.20	12.20	12.20	12.66	10.24	13.81	Yes	268.23
SWW11	271.00	273.50	7.88	7.88	7.88	8.45	7.58	9.40	Yes	265.62
SWW12	270.20	272.82	9.58	9.58	9.58	9.84	8.78	11.11	Yes	263.24
LCW-1	271.40	272.21	7.14	7.14	7.14	7.45	6.90	8.12	Yes	265.07
LCW-2	272.60	274.44	9.38	9.38	9.38	9.70	9.15	10.37	Yes	265.06
LCW-3	283.30	284.36	17.52	17.52	17.52	17.78	17.40	18.16	Yes	266.84
LCW-4	283.80	285.70	17.24	17.24	17.24	17.72	17.20	18.32	Yes	268.46
OS-1	269.63	272.10								
OI-1	269.14	272.00								
OS-3	274.63	277.89								
OD-3	274.96	277.85								
LD-3	275.80	278.62								
LD-4	276.30	279.25								
LD-5	270.02	272.94								
LS-6	271.40	274.14								
LD-6	270.09	274.03								
LD-8	269.90	272.83								
LR-2	287.50	289.85								
LR-3	275.50	278.06								
LR-6	270.90	274.39								
LR-8	270.00	273.42								
M-21	270.28	272.32								
M-22	270.40	273.88								
M-23	267.98	270.49								

ATTACHMENT D-2

SITE INSPECTION CHECKLIST
AND LEACHATE DISPOSAL CHECKLIST

O'BRIEN & GERE

Site Inspection Checklist (Appendix "G")

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date 6-8-11 Time 7:00

Field Technician MARTIN Koennecke Weather Conditions SUNNY 70°

Check √ (tasks completed in each event)

Inspection Features	Monthly	Quarterly	Remarks (indicate accomplishment of each maintenance task)
Land Cap			
Signs of burrowing vermin	✓		NONE VISABLE
Land cap irregularities (note anomaly)	✓		OK
French drainage system clear and function able	✓		OK
Concrete trough clear and function able		✓	GROWN IN VEG, MAINTENANCE ON JUNE 20TH
Leachate Discharge System			
City of Oswego sanitary discharge valve positioned "Open"	✓		Yes
Discharge Pump inspected & operational	✓		Yes
Discharge pump oil level verified prior to use.	✓		OK
Discharge pump drained of residual water (drained upon completion of use)	✓		Yes
Heat trace system operational & verified in the "ON" position (during wintertime periods)	✓		off
Flow totalizer operational. Flow readings recorded onto "Leachate Discharge Form"	✓		Yes
Leachate Collection System			
Leachate holding tank visually inspected for structural integrity	✓		OK
Leachate holding tank metal roof inspected for structural integrity	✓		OK

Leachate tank access doors locked (post pumpout)	✓		Yes
Pump power panel(s) secured	✓		Yes
Monitoring Wells (MW)			
Locks installed	✓		Yes
MW's marked & identifiable	✓		Yes
General Site Condition			
Trees & brush cleared off security fence		✓	Avg, Repairs
Perimeter security fence intact & free of damage		✓	Avg Repairs
Site access driveway inspected	✓		OK
Security access gates function able	✓		Yes
Site gate signage intact	✓		Need Sign
Interior & exterior of utility storage shed inspected for damage & secure with locks	✓		Yes
Fire extinguisher serviceable, inspected, and inspection recorded	✓		Yes
Spill control material inspected & adequate	✓		Stocked
PPE available and utilized as required	✓		Stocked
Emergency contact information posted within shed	✓		Yes

Additional remarks (use separate sheet is required)

Monthly well Levels, Pump LCW wells To TANK Then Pump To City of Oswego SANITARY.
Trimmed Around Shed & TANK

O'BRIEN & GERE

Site Inspection Checklist (Appendix "G")

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date 5-3-11 Time 8:45

Field Technician MARTIN Koenecke Weather Conditions RAIN 40°

Check √ (tasks completed in each event)

Inspection Features	Monthly	Quarterly	Remarks (indicate accomplishment of each maintenance task)
Land Cap			
Signs of burrowing vermin	√		NO
Land cap irregularities (note anomaly)	√		NO
French drainage system clear and function able	√		OK
Concrete trough clear and function able	√		OK
Leachate Discharge System			
City of Oswego sanitary discharge valve positioned "Open"	√		Yes
Discharge Pump inspected & operational	√		Yes
Discharge pump oil level verified prior to use.	√		Yes
Discharge pump drained of residual water (drained upon completion of use)	√		Yes
Heat trace system operational & verified in the "ON" position (during wintertime periods)	√		TURNED off
Flow totalizer operational. Flow readings recorded onto "Leachate Discharge Form"	√		Yes
Leachate Collection System			
Leachate holding tank visually inspected for structural integrity	√		OK
Leachate holding tank metal roof inspected for structural integrity	√		OK

Leachate tank access doors locked (post pumpout)	✓		Yes
Pump power panel(s) secured	✓		Yes
Monitoring Wells (MW)			
Locks installed	✓		Yes
MW's marked & identifiable	✓		Yes
General Site Condition			
Trees & brush cleared off security fence	—		NA
Perimeter security fence intact & free of damage	✓		Down in swamp area
Site access driveway inspected	✓		OK
Security access gates function able	✓		Yes
Site gate signage intact	✓		Need new signage
Interior & exterior of utility storage shed inspected for damage & secure with locks	✓		Yes
Fire extinguisher serviceable, inspected, and inspection recorded	✓		OK
Spill control material inspected & adequate	✓		Stocked
PPE available and utilized as required	✓		Stocked
Emergency contact information posted within shed	✓		Yes

Additional remarks (use separate sheet is required)

Quarterly well Levels, Semi Annual well Sampling
Leachate Pump out on 5-4-11

O'BRIEN & GERE

PAS Oswego
Oswego, NY

Site Inspection Checklist

Date 4-6-11 Time 8:00

Field Technician MARTIN Koennecke Weather Conditions Sunny 35°

Inspection Features	Check √	Remarks
Land Cap		
Signs of burrowing vermin	✓	NONE VISABLE
Land cap irregularities (note anomaly)	✓	OK
French drainage system clear and function able	✓	OK
Concrete trough clear and function able	✓	LOWER END NEED CLEARING OUT
Leachate Discharge System		
City of Oswego sanitary discharge valve positioned "Open"	✓	Yes
Discharge Pump inspected & operational	✓	Yes
Discharge pump oil level verified prior to use.	✓	OK
Discharge pump drained of residual water (drained upon completion of use)	✓	Yes
Heat trace system operational & verified in the "ON" position (during wintertime periods)	✓	ON
Flow totalizer operational. Flow readings recorded onto "Leachate Discharge Form"	✓	Yes
Leachate Collection System		
Leachate holding tank visually inspected for structural integrity	✓	Yes
Leachate holding tank metal roof inspected for structural integrity	✓	OK
Leachate tank access doors locked	✓	Yes
(post pumpout)	✓	Yes
Pump power panel(s) secured	✓	Yes
Monitoring Wells (MW)		
Locks installed	✓	OK

4-6-11

MW's marked & identifiable	✓	OK
General Site Condition		
Trees & brush cleared off security fence	✓	WORK IN PROGRESS
Perimeter security fence intact & free of damage	✓	NE SECTION IN SWAMP NEEDS REPAIR
Site access driveway inspected	✓	OK
Security access gates function able	✓	OK
Site gate signage intact	✓	SIGNS TO BE REPLACED
Interior & exterior of utility storage shed inspected for damage & secure with locks	✓	OK
Fire extinguisher serviceable, inspected, and inspection recorded	✓	REPLACED WITH CURRENT INSPECTED ONE
Spill control material inspected & adequate	✓	STOCKED
PPE available and utilized as required	✓	STOCKED
Emergency contact information posted within shed	✓	YES

Additional remarks (use separate sheet is required)

MONTHLY WELL LEVELS, PUMP LEACHATE TO TANK THEN TO CITY OF OSWEGO

O'BRIEN & GERE

Leachate Disposal Checklist (Appendix "H")

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date: 6-8-11 Time: 7:00

Field Technician Martin Koennecke Weather Conditions Sunny 70°

Beginning Leachate Hold Tank Elevation (Inches)	Pre-Discharge Well Pumping					
	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank (Gallons)
13.25"	LCW-1	8:10	9:10	42.25"	148 Gpm	8845
	LCW-2	8:10	9:10			
	LCW-3	8:10	8:15			
	LCW-4	8:10	9:10			
					Total	8845

Discharge #	Monthly Leachate Discharge Pumping (To the City of Oswego)						
	Start Time	Stop Time	pH	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	9:15	11:28	7.08	52°F	110040	120045	10,005
Pump Info	**Flow Rate (GPM)**	**Prime Time**	**Pump Pressure**	**Pump Vacuum**			
	85 Gpm	15 min	Ø	10"			

	Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit)					
	Date	Sample Location	Sample Volume	Sample Time	pH	Temperature
Sample #1						

O'BRIEN & GERE

Leachate Disposal Checklist (Appendix "H")

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date: 5-4-11 Time: 5:45

Field Technician MARTIN KOENNECKE Weather Conditions RAIN SHOWERS

Beginning Leachate Hold Tank Elevation (Inches)	Pre-Discharge Well Pumping					
	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank (Gallons)
10.5"	LCW-1	11:10	12:15	46"	166 GPM	
	LCW-2	11:10	12:15			
	LCW-3	11:10	11:15			
	LCW-4	11:10	12:15			
					Total	19827

Discharge #	Monthly Leachate Discharge Pumping (To the City of Oswego)						
	Start Time	Stop Time	pH	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	12:42	14:42	6.8	46°F	100020	110040	10020
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
POST. TANK LEVEL-13.25	83.5	12 MIN	0	6"			

	Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit)					
	Date	Sample Location	Sample Volume	Sample Time	pH	Temperature
Sample #1						

O'BRIEN & GERE

PAS Site
Oswego, New York

Leachate Discharge Form

Date: 4-6-11 Time: 8:00

Field Technician MARTIN Koennecke Weather Conditions Sunny 35°

Well Pump	*Pre-Discharge Well Pumping*				
	Pump Start Time	**Pump Stop Time**	**Tank Elevation**	**Flow Rate (est)**	**Gallons Pumped (est)**
LCW-1	9:30	10 30	START - 10,25"		
LCW-2	9:30	10 30		31,75" =	9684 ÷ 60 = 161 GPM
LCW-3	9:30	9:40			
LCW-4	9:30	10 30	STOP - 42"		
			END pump out = 9.25" Total		

Pumped 32.75" X 305 = 9988.75 gal

Discharge #	*Leachate Discharge Pumping(Monthly)*						
	Start Time	**Stop Time**	**pH**	**Temp**	**Totalizer Flow Total (Start)**	**Totalizer Flow Total (End)**	**Gallons Discharge**
Discharge #1	10:50	12:50	6.3	43°	90,010	100,020	10,010
Discharge #2							
Total							

	Leachate Discharge Sampling (Semi-Annually)					
	Date	**Sample Location**	**Sample Volume**	**Sample Time**	**pH**	**Temperature**
Sample #1						
Sample #2 (if required)						

ATTACHMENT D-3

CITY OF OSWEGO DISCHARGE REPORT
2ND QUARTER 2011

Via electronic mail

de maximis, inc.

2975 Bee Ridge Road
Suite C
Sarasota, FL 34239
(941) 926-7929

July 25, 2011

Mr. Anthony A. Leotta, P.E.
City Engineer
City Hall
Oswego, New York 13126

Re: Quarterly Discharge Report – 2nd Quarter 2011
Pollution Abatement Services Site – Oswego, New York
City of Oswego Wastewater Discharge Permit 6-2010-13

Dear Mr. Leotta:

This quarterly report is submitted in accordance with the City of Oswego Wastewater Discharge Permit 6-2010-13 (Permit) for discharge of leachate from the Pollution Abatement Services (PAS) Site into the City of Oswego's Eastside Wastewater Treatment Facility. This report covers the reporting period from April 2011 through June 2011.

The total gallons of leachate discharged during the second quarter of 2011 totals 30,035 gallons. The amount of leachate discharged during each monthly removal event is summarized in Table 1. A completed Leachate Discharge Form documenting the quantity of leachate discharged during each leachate removal event is included in Attachment I. The flow totalizer readings documenting quantities discharged, as well as date and time of each discharge event is provided on this form. Measurements for pH and temperature during each removal event are also recorded in the Leachate Discharge Form.

If you need additional information please call me at (941) 926-7929.

Sincerely,

Mark Valentine

Attachments

cc: Michael Coffey – City of Oswego
PAS Oswego Site Management Committee

TABLE 1 - PAS OSWEGO SITE QUARTERLY REPORT FOR CITY OF OSWEGO (JULY 2011)
LEACHATE DISCHARGE TO OSWEGO EASTSIDE WASTEWATER TREATMENT FACILITY
(Oswego SIU Wastwater Discharge Permit No.6-2010-13)

4Q 2010		1Q 2011		2Q 2011		3Q 2011		4Q 2011	
Date Discharged (temp/pH)	**Gallons Discharged**	**Date Discharged** (temp/pH)	**Gallons Discharged**	**Date Discharged** (temp/pH)	**Gallons Discharged**	**Date Discharged** (temp/pH)	**Gallons Discharged**	**Date Discharged** (temp/pH)	**Gallons Discharged**
10/28/2010	20,000	1/5/2011	10,000	4/6/2011	10,010				
52/6.2		45/6.8		43/6.3					
11/2/2010	20,000	2/9/2011	10,010	5/4/2011	10,020				
50/6.4		42/6.8		46/6.8					
12/6/2010	20,000	3/2/2011	10,000	6/8/2011	10,005				
50/6.7		42/6.4		52/7.1					
Total Discharged	60,000		30,010		30,035		0		0
Date Sampled*	10/28/11		3/2/11		Not sampled				
Analytes	mg/L		mg/L		mg/L		mg/L		mg/L
Cyanide	ND		ND						
Cadmium	ND		ND						
Chromium (total)	0.015		0.014						
Copper	ND		0.011						
Lead	ND		ND						
Nickel	0.58		0.65						
Silver	ND		ND						
Zinc	ND		ND						
Mercury	ND		ND						
BOD 5	13		32						
TSS	9		93						
Phenolics	0.14		0.11						
pH	7.2		6.4						

** Semi-annual sampling of PAS leachate discharge conducted in accordance with SIU Wastewater Discharge Permit No.6-2010-13.*

Prpared by de maximis, inc. 7/25/2011

ATTACHMENT I

PAS OSWEGO SITE

LEACHATE DISCHARGE FORMS

O'BRIEN & GERE

PAS Site
Oswego, New York

Leachate Discharge Form

Date: 4-6-11 Time: 8:00

Field Technician MARTIN Kozuweike Weather Conditions Sunny 35°

Well Pump	Pre-Discharge Well Pumping				
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	9:30	10 30	START - 10,25"		
LCW-2	9:30	1030		31,75" =	9684 : 60 = 161 GPM
LCW-3	9:30	9.40			
LCW-4	9:30	10 30	STOP - 42"		
			END Pump out = 9.25" Total		

Pumped 32.75" X 305 = 9988.75 gal

Discharge #	Leachate Discharge Pumping(Monthly)						
	Start Time	Stop Time	pH	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	10:50	12:50	6.3	43°	90,010	100,020	10,010
Discharge #2							
Total							

	Leachate Discharge Sampling (Semi-Annually)					
	Date	Sample Location	Sample Volume	Sample Time	pH	Temperature
Sample #1						
Sample #2 (if required)						

O'BRIEN & GERE

Leachate Disposal Checklist (Appendix "H")

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date: 5-4-11 Time: 5:45

Field Technician MARTIN Koennecke Weather Conditions RAIN SHOWERS

Beginning Leachate Hold Tank Elevation (Inches)	Pre-Discharge Well Pumping					
	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank (Gallons)
10,5"	LCW-1	11:10	12:15	46"	166 GPM	
	LCW-2	11:10	12:15			
	LCW-3	11:10	11:15			
	LCW-4	11:10	12:15			
					Total	10827

Discharge #	Monthly Leachate Discharge Pumping (To the City of Oswego)						
	Start Time	Stop Time	pH	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	12:40	14:42	6,8	46°F	100020	110040	10020
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
Post. Tank Level - 13.25	83.5	12min	0	6"			

	Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit)					
	Date	Sample Location	Sample Volume	Sample Time	pH	Temperature
Sample #1						

O'BRIEN & GERE

Leachate Disposal Checklist (Appendix "H")

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date: 6-8-11 Time: 7:00

Field Technician Martin Koennecke Weather Conditions Sunny 70°

Beginning Leachate Hold Tank Elevation (Inches)	Pre-Discharge Well Pumping					
	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank (Gallons)
13.25"	LCW-1	8:10	9:10	42.25"	148Gpm	8845
	LCW-2	8:10	9:10			
	LCW-3	8:10	8:15			
	LCW-4	8:10	9:10			
					Total	8845

Discharge #	Monthly Leachate Discharge Pumping (To the City of Oswego)						
	Start Time	Stop Time	pH	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	9:15	11:28	7.08	52°F	110040	120045	10,005
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
	85 Gpm	15min	Ø	10"			

	Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit)					
	Date	Sample Location	Sample Volume	Sample Time	pH	Temperature
Sample #1						

ATTACHMENT D-4

SEMI-ANNUAL LEACHATE AND GROUNDWATER MONITORING
(MAY 2011)

TO: Kevin Stone **cc:**

FROM: Karen Storne

RE: PAS Oswego Data Validation Report

FILE: 6363/47121.260.010

DATE: June 29, 2011

This report presents the results of a data validation performed for groundwater samples collected as part of the PAS Oswego Semi-Annual Ground Water Sampling event at the New York State site. Sample collection activities were conducted by O'Brien & Gere in May 2011.

The environmental samples, trip blank, field duplicate, matrix spike, matrix spike duplicate, and equipment blank collected for this investigation were analyzed by Life Science Laboratories, Inc. (LSL) of East Syracuse, New York.

LSL utilized the methods listed in the following table.

Table 1-1. *Analytical methods and references*

Parameter	Method	Reference
VOCs	USEPA Methods 5030B/8260B	1

Note:

1. United States Environmental Protection Agency (USEPA). 2004. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846,* 3rd Edition, Update IIIB. Washington D.C.

VOCs indicates volatile organic compounds.

The laboratory data packages generated by LSL contained summary forms for quality control analysis and supportive raw data.

The samples that were submitted to the laboratory for review are presented in Attachment A. Attachment B presents the specific data validation approach applied to data generated for this investigation. Attachment C presents the laboratory QA/QC analyses definitions.

Full validation was performed on the samples collected for this sampling event.

The analytical data generated for this investigation were evaluated by O'Brien & Gere using the quality assurance/quality control (QA/QC) information presented in the methods utilized by the laboratory.

Data affected by excursions from criteria presented in the method are qualified using guidance provided in the following document and professional judgment:

- USEPA. 2006a. *USEPA Region II Validating Volatile Organic Compounds by SW-846 Method 8260B, SOP HW-24* Revision 2. New York, NY.

The validation included checking the following parameters:

- Chain-of-custody records, sample shipment, and sample collection
- Holding times and sample preservation
- Blank analysis

- Calibrations
- Gas chromatography/mass spectrometry (GC/MS) instrument check
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) analysis
- Laboratory control sample (LCS) analysis
- Internal standards performance
- Field duplicate analysis
- Target analyte quantification, identification, and quantitation limits (QLs)
- Documentation completeness

The following sections of this memorandum present the result of the comparison of the analytical data to the QA/QC criteria specified the methods, the validation criteria applied to this analysis, and the qualifiers assigned to the data when the QA/QC criteria were not met. Excursions that resulted in the qualification of samples and additional observations are presented in the following sections.

CHAIN-OF-CUSTODY RECORD, SAMPLE SHIPMENT AND SAMPLE COLLECTION

A time gap was identified for the samples collected 5/3/11 and 5/4/11. The samples collected 5/3/11 and 5/4/11 were relinquished on 5/4 11 at 16:30 and the samples were received by the laboratory on 5/4/11 at 16:31. The samples were delivered to the laboratory by the sampler.

VOC DATA EVALUATION SUMMARY

Excursions from quality control criteria and additional observations are summarized below.

I. Holding times and sample preservation

The holding time and sample preservation validation criterion for VOC analysis were met.

II. Blank analysis

Trip blank, equipment blank and method blanks were analyzed to evaluate the potential for laboratory-induced concentrations, the potential for cross-contamination of samples during field sampling, and the integrity of samples during shipment.

Due to minor blank excursions, the following sample results were qualified as non-detected (U):

- Acetone and carbon disulfide in sample M-21 03May2011, LR-8 03May2011, LR-6 04May2011, LCW-2 04May2011, LCW-4 04May2011, and X-1[LR-6 04May2011].
- Chloroform in sample LCW-2 04May2011.
- Methylene chloride in sample LR-8 03May2011 and LCW-4 04May2011.

III. Calibrations

Calibration results met validation criteria.

IV. GC/MS instrument check

GC/MS instrument checks met the validation criteria.

V. Surrogate recoveries

Surrogates results met the validation criteria.

VI. MS/MSD analysis

MS/MSD results met the validation criteria.

VII. LCS analysis

The LCS results met the validation criteria.

VIII. Internal standards performance

Internal standard results met the validation criteria.

IX. Field duplicate analysis

Field duplicate results met the validation criteria.

X. Target analyte quantitation, identification and QLs

The qualifier "J" was applied by the laboratory when the analyte concentration was greater than the MDL but less than the QL. This qualifier has been retained during the validation process to indicate that the result is considered to be approximate.

Dilutions were performed for samples LCW-2 04May2011 and LCW-4 04May2011 due to the presence of elevated target analytes.

XII. Document completeness

The laboratory deliverables provided for this sampling event were sufficient to complete the validation process.

DATA USABILITY

Overall data usability with respect to completeness for the sample results reported is 100 percent for the organic data. The data were identified as usable for qualitative and quantitative purposes. Based on the validation performed, the typical completeness goal of 95 percent was met for these analyses.

Table 2. *Sample cross reference list*

Laboratory	Date Collected	Laboratory ID	Client ID	Matrix	Analysis Requested
Life Science Labs	5/3/2011	K1105043-001	Equipment Blank	Aqueous	VOCs
Life Science Labs	5/3/2011	K1105043-002	M-21 03May2011, MS/MSD	Groundwater	VOCs
Life Science Labs	5/3/2011	K1105043-003	LR-8 03May2011	Groundwater	VOCs
Life Science Labs	5/4/2011	K1105043-004	LR-6 04May2011	Groundwater	VOCs
Life Science Labs	5/4/2011	K1105043-005	LCW-2 04May2011	Groundwater	VOCs
Life Science Labs	5/4/2011	K1105043-006	LCW-4 04May2011	Groundwater	VOCs
Life Science Labs	5/4/2011	K1105043-007	X-1[LR-6 04May2011]	Groundwater	VOCs
Life Science Labs	5/4/2011	K1105043-008	QC Trip Blank	Aqueous	VOCs

Notes:
Life Science Labs indicates Life Science Laboratories Inc., Syracuse, New York
VOCs indicates volatile organic compounds.
MS/MSD indicates matrix spike/ matrix spike duplicate.
The sample utilized for field duplicate location is listed in brackets.

O'Brien & Gere Data validation approach *Using USEPA Region II Data validation guidelines*	
General Validation Approach	For certain parameters, USEPA guidance for data validation indicates that professional judgment is to be utilized to identify the appropriate validation action. In these situations, the validation approach taken by O'Brien & Gere has been a conservative one; qualifiers have been applied to sample data to indicate both major and minor excursions. In this way, data associated with any type of excursion are identified to the data user. Major excursions resulted in data being rejected, indicating that the data are considered unusable for either quantitative or qualitative purposes. Minor excursions result in sample data being qualified as approximate that are otherwise usable for quantitative or qualitative purposes.
	Excursions are subdivided into excursions that are within the laboratory's control and those that are out of the laboratory's control. Excursions involving laboratory control sample recovery, calibration response, method blank excursions, low or high spike recovery due to inaccurate spiking solutions or poor instrument response, holding times, interpretation errors, and quantitation errors are within the control of the laboratory. Excursions resulting from matrix spike recovery, surrogate, and internal standard performance due to matrix interference from the matrix of the samples are examples of those excursions that are not within the laboratory's control if the laboratory has followed proper method control procedures.
Parameter Type	**Applying Data Validation Qualifiers Approach**
Sample collection information- Cooler Temperature	Results for samples submitted that are impacted by cooler temperatures of greater than 10°C are qualified as approximate (UJ, J).
Calibration Data-VOCs by USEPA Method 8260B	VOC target analytes are evaluated using the criteria of 15 percent relative standard deviation (%RSD) or correlation coefficient criteria of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 percent difference (%D) for the target analytes and a criterion of 50 %D for the remaining target analytes. Initial calibrations and calibration verifications were also evaluated using the response factor (RF) criteria described in the method for system performance check compounds, a criterion of greater than or equal to 0.010 for ketones and alcohols, and a criterion of 0.05 for the remaining target analytes.
Organic Multi-results	When two results are reported, due to re-extraction or for confirmation analyses, both sets of results are evaluated during the validation process. Based on the evaluation of the associated quality control data, the results reflecting the higher quality data are reported.
General Organic MS/MSD, LCS, Laboratory Duplicate Data	Laboratory established control limits are used to assess MS/MSD, LCS, and laboratory duplicate data.
	In the case that excursions are identified in more than one quality control sample of the same matrix within one sample delivery group, samples are batched according to sample preparation or analysis date and qualified accordingly.
General Organic MS/MSD, LCS, Laboratory Duplicate Data	If percent recoveries are less than laboratory control limits but greater than ten percent, non-detected and detected results are qualified as approximate (UJ, J) to indicate minor excursions.
	If percent recoveries are greater than laboratory control limits, detected results are qualified as approximate (J) to indicate minor excursions.
	If percent recoveries are less than ten percent, detected results are qualified as approximate (J) and non-detected results are qualified as rejected (R) to indicate major excursions.
	If RPDs for MSDs or laboratory duplicates are outside of laboratory control limits, detected results are qualified as approximate (J) to indicate minor excursions.
Organic MS/MSD Data	Qualification of organic data for MS/MSD analyses is performed only when both MS and MSD percent recoveries are outside of laboratory control limits.
	Organic data are rejected (R) to indicate major excursions in the case that both MS/MSD recoveries are less than ten percent.

O'Brien & Gere Data validation approach *Using USEPA Region II Data validation guidelines*	
	Qualification of data is not performed if MS/MSD or surrogate recoveries are outside of laboratory control limits due to sample dilution.
Organic MS/MSD and Field Duplicate Data	Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked sample or the field duplicate pair, respectively.
Internal Standard organic Data	Internal standard recoveries are evaluated using control limits of within 50% of the lower standard area and up to 100% of the upper standard area of the associated calibration verification standard. The results for target analytes associated with internal standard area recoveries 25% or greater but less than the lower standard area are qualified as approximate (J, UJ) to indicate minor internal standard recovery excursions. The non-detected results for target analytes associated with internal standard area recoveries less than 25% are rejected (R) to indicate major recovery excursions
Field Duplicate Data	Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 50 percent for aqueous samples and less than 100 percent for soils when results are greater than five times the QL. When sample results for field duplicate pairs are less than five times the QL, the data are evaluated using control limits of plus or minus two times the QL for soils. If RPDs for field duplicates are outside of laboratory control limits, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions.
Organic Blank Data	If methylene chloride, acetone or 2-butanone is detected in the sample at a concentration that is less than ten times the concentration in the associated blank, the sample result is qualified as "U".
	If other target analytes are detected in the sample at a concentration that is less than five times the concentration detected in the associated blank, the sample result is qualified as "U".
	Results greater than the MDL but less than QL and within the blank action level, are replaced with the QL and qualified as non-detected (U).
	Results greater than the QL are qualified as "U" at that concentration.
	The highest concentrations of the target analytes are used to evaluate the associated samples.
Source O'Brien & Gere	

Laboratory QA/QC term definitions	
QA/QC Term	Definition
Quantitation limit	The level above which numerical results may be obtained with a specified degree of confidence; the minimum concentration of an analyte in a specific matrix that can be identified and quantified above the method detection limit and within specified limits of precision and bias during routine analytical operating conditions.
Method detection limit	The minimum concentration of an analyte that undergoes preparation similar to the environmental samples and can be reported with a stated level of confidence that the analyte concentration is greater than zero.
Instrument detection limit	The lowest concentration of a metal target analyte that, when directly inputted and processed on a specific analytical instrument, produces a signal/response that is statistically distinct from the signal/response arising from equipment "noise" alone.
Gas chromatography/mass spectrometry (GC/MS) instrument performance check	Performed to verify mass resolution, identification, and to some degree, instrument sensitivity. These criteria are not sample specific; conformance is determined using standard materials.
Calibration	Compliance requirements for satisfactory instrument calibration are established to verify that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of analysis and calibration verifications document satisfactory maintenance and adjustment of the instrument on a day-to-day basis.
Relative Response Factor	A measure of the relative mass spectral response of an analyte compared to its internal standard. Relative Response Factors are determined by analysis of standards and are used in the calculation of concentrations of analytes in samples.
Relative standard deviation	The standard deviation divided by the mean; a unit-free measure of variability.
Correlation coefficient	A measure of the strength of the relationship between two variables.
Relative Percent Difference	Used to compare two values; the relative percent difference is based on the mean of the two values, and is reported as an absolute value, i.e., always expressed as a positive number or zero.
Percent Difference	Used to compare two values; the percent difference indicates both the direction and the magnitude of the comparison, i.e., the percent difference may be either negative, positive, or zero.
Percent Recovery	The act of determining whether or not the methodology measures all of the target analytes contained in a sample.
Calibration blank	Consists of acids and reagent water used to prepare metal samples for analysis. This type of blank is analyzed to evaluate whether contamination is occurring during the preparation and analysis of the sample.
Method blank	A water or soil blank that undergoes the preparation procedures applied to a sample (i.e., extraction, digestion, clean-up). These samples are analyzed to examine whether sample preparation, clean-up, and analysis techniques result in sample contamination.
Field/equipment	Collected and submitted for laboratory analysis, where appropriate. Field/equipment blanks are handled in the same manner as environmental samples. Equipment/field blanks are analyzed to assess contamination introduced during field sampling procedures.
Trip blank	Consist of samples of analyte-free water that have undergone shipment from the sampling site to the laboratory in coolers with the environmental samples submitted for volatile organic compound (VOC) analysis. Trip blanks will be analyzed for VOCs to determine if contamination has taken place during sample handling and/or shipment. Trip blanks will be utilized at a frequency of one each per cooler sent to the laboratory for VOC analysis.
Internal standards performance	Compounds not found in environmental samples which are spiked into samples and quality control samples at the time of sample preparation for organic analyses. Internal standards must meet retention time and recovery criteria specified in the analytical method. Internal standards are used as the basis for quantitation of the target analytes.
Surrogate recovery	Compounds similar in nature to the target analytes but not expected to be detected in the environmental media which are spiked into environmental samples, blanks, and quality control samples prior to sample preparation for organic analyses. Surrogates are used to evaluate analytical efficiency by measuring recovery.
Laboratory control sample Matrix spike blank analyses	Standard solutions that consist of known concentrations of the target analytes spiked into laboratory analyte-free water or sand. They are prepared or purchased from a certified manufacturer from a source independent from the calibration standards to provide an independent verification of the calibration procedure. They are prepared and analyzed following the same procedures employed for environmental sample analysis to assess method accuracy independently of sample matrix effects.
Laboratory duplicate	Two or more representative portions taken from one homogeneous sample by the analyst and analyzed in the same laboratory.
Matrix	The material of which the sample is composed or the substrate containing the analyte of interest, such as drinking water, waste water, air, soil/sediment, biological material.
Matrix Spike (MS)	An aliquot of a matrix (water or soil) fortified (spiked) with known quantities of specific target analytes and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for the matrix by measuring recovery.
Matrix spike duplicate (MSD)	A second aliquot of the same matrix as the matrix spike that is spiked in order to determine the precision of the method.
Retention time	The time a target analyte is retained on a GC column before elution. The identification of a target analyte is dependent on a target compound's retention time falling within the specified retention time window established for that compound.
Relative retention time	The ratio of the retention time of a compound to that of a standard.
Source O'Brien & Gere	

O'Brien & Gere Data validation approach Using USEPA Region II Data validation guidelines	
General Validation Approach	For certain parameters, USEPA guidance for data validation indicates that professional judgment is to be utilized to identify the appropriate validation action. In these situations, the validation approach taken by O'Brien & Gere has been a conservative one; qualifiers have been applied to sample data to indicate both major and minor excursions. In this way, data associated with any type of excursion are identified to the data user. Major excursions resulted in data being rejected, indicating that the data are considered unusable for either quantitative or qualitative purposes. Minor excursions result in sample data being qualified as approximate that are otherwise usable for quantitative or qualitative purposes.
	Excursions are subdivided into excursions that are within the laboratory's control and those that are out of the laboratory's control. Excursions involving laboratory control sample recovery, calibration response, method blank excursions, low or high spike recovery due to inaccurate spiking solutions or poor instrument response, holding times, interpretation errors, and quantitation errors are within the control of the laboratory. Excursions resulting from matrix spike recovery, surrogate, and internal standard performance due to matrix interference from the matrix of the samples are examples of those excursions that are not within the laboratory's control if the laboratory has followed proper method control procedures.
Parameter Type	**Applying Data Validation Qualifiers Approach**
Sample collection information- Cooler Temperature	Results for samples submitted that are impacted by cooler temperatures of greater than 10°C are qualified as approximate (UJ, J).
Calibration Data-VOCs by USEPA Method 8260B	VOC target analytes are evaluated using the criteria of 15 percent relative standard deviation (%RSD) or correlation coefficient criteria of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 percent difference (%D) for the target analytes and a criterion of 50 %D for the remaining target analytes. Initial calibrations and calibration verifications were also evaluated using the response factor (RF) criteria described in the method for system performance check compounds, a criterion of greater than or equal to 0.010 for ketones and alcohols, and a criterion of 0.05 for the remaining target analytes.
Organic Multi-results	When two results are reported, due to re-extraction or for confirmation analyses, both sets of results are evaluated during the validation process. Based on the evaluation of the associated quality control data, the results reflecting the higher quality data are reported.
General Organic MS/MSD, LCS, Laboratory Duplicate Data	Laboratory established control limits are used to assess MS/MSD, LCS, and laboratory duplicate data.
	In the case that excursions are identified in more than one quality control sample of the same matrix within one sample delivery group, samples are batched according to sample preparation or analysis date and qualified accordingly.
General Organic MS/MSD, LCS, Laboratory Duplicate Data	If percent recoveries are less than laboratory control limits but greater than ten percent, non-detected and detected results are qualified as approximate (UJ, J) to indicate minor excursions.
	If percent recoveries are greater than laboratory control limits, detected results are qualified as approximate (J) to indicate minor excursions.
	If percent recoveries are less than ten percent, detected results are qualified as approximate (J) and non-detected results are qualified as rejected (R) to indicate major excursions.
	If RPDs for MSDs or laboratory duplicates are outside of laboratory control limits, detected results are qualified as approximate (J) to indicate minor excursions.
Organic MS/MSD Data	Qualification of organic data for MS/MSD analyses is performed only when both MS and MSD percent recoveries are outside of laboratory control limits.
	Organic data are rejected (R) to indicate major excursions in the case that both MS/MSD recoveries are less than ten percent.

O'Brien & Gere Data validation approach *Using USEPA Region II Data validation guidelines*	
	Qualification of data is not performed if MS/MSD or surrogate recoveries are outside of laboratory control limits due to sample dilution.
Organic MS/MSD and Field Duplicate Data	Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked sample or the field duplicate pair, respectively.
Internal Standard organic Data	Internal standard recoveries are evaluated using control limits of within 50% of the lower standard area and up to 100% of the upper standard area of the associated calibration verification standard. The results for target analytes associated with internal standard area recoveries 25% or greater but less than the lower standard area are qualified as approximate (J, UJ) to indicate minor internal standard recovery excursions. The non-detected results for target analytes associated with internal standard area recoveries less than 25% are rejected (R) to indicate major recovery excursions
Field Duplicate Data	Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 50 percent for aqueous samples and less than 100 percent for soils when results are greater than five times the QL. When sample results for field duplicate pairs are less than five times the QL, the data are evaluated using control limits of plus or minus two times the QL for soils. If RPDs for field duplicates are outside of laboratory control limits, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions.
Organic Blank Data	If methylene chloride, acetone or 2-butanone is detected in the sample at a concentration that is less than ten times the concentration in the associated blank, the sample result is qualified as "U".
	If other target analytes are detected in the sample at a concentration that is less than five times the concentration detected in the associated blank, the sample result is qualified as "U".
	Results greater than the MDL but less than QL and within the blank action level, are replaced with the QL and qualified as non-detected (U).
	Results greater than the QL are qualified as "U" at that concentration.
	The highest concentrations of the target analytes are used to evaluate the associated samples.
Source O'Brien & Gere	

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East Syracuse, NY 13057 (315) 445-1105

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-001A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*Equipment Blank*
W Order:	K1105043	**Collection Date:**	05/03/11 10:00
Matrix:	WATER Q	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R21872
Revision:	05/17/11 13:44 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-R8151.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dichlorodifluoromethane	ND		1.00	0.10	µg/L	1	05/09/11 15:41
Chloromethane	ND		1.00	0.33	µg/L	1	05/09/11 15:41
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/09/11 15:41
Bromomethane	ND		1.00	0.33	µg/L	1	05/09/11 15:41
Chloroethane	ND		1.00	0.33	µg/L	1	05/09/11 15:41
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/09/11 15:41
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/09/11 15:41
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/09/11 15:41
Acetone	7.44	J	10.0	1.00	µg/L	1	05/09/11 15:41
Carbon disulfide	0.15	J	0.50	0.11	µg/L	1	05/09/11 15:41
Methyl acetate	ND		5.00	1.00	µg/L	1	05/09/11 15:41
Methylene chloride	ND		2.00	0.16	µg/L	1	05/09/11 15:41
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/09/11 15:41
1,1-Dichloroethane	ND		0.50	0.10	µg/L	1	05/09/11 15:41
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
2-Butanone	1.26	J	10.0	1.00	µg/L	1	05/09/11 15:41
Chloroform	0.19	J	0.50	0.10	µg/L	1	05/09/11 15:41
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/09/11 15:41
Cyclohexane	ND		0.50	0.10	µg/L	1	05/09/11 15:41
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/09/11 15:41
Benzene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/09/11 15:41
Trichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
Methylcyclohexane	ND		0.50	0.10	µg/L	1	05/09/11 15:41
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/09/11 15:41
Bromodichloromethane	0.10	J	0.50	0.10	µg/L	1	05/09/11 15:41
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/11 15:41
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/09/11 15:41
Toluene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/11 15:41
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/09/11 15:41
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
2-Hexanone	ND		5.00	1.00	µg/L	1	05/09/11 15:41

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value exceeds the instrument calibration range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below the PQL
- ND Not Detected at the Practical Quantitation Limit (PQL)
- P Prim./Conf. column %D or RPD exceeds limit
- S Spike Recovery outside accepted recovery limits

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-001A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*Equipment Blank*
W Order:	K1105043	**Collection Date:**	05/03/11 10:00
Matrix:	WATER Q	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R21872
Revision:	05/17/11 13:44	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-R8151.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND		0.50	0.10	µg/L	1	05/09/11 15:41
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/09/11 15:41
Chlorobenzene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/09/11 15:41
Styrene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
Bromoform	ND		1.00	0.33	µg/L	1	05/09/11 15:41
Isopropylbenzene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
1,1,2,2-Tetrachloroethane	ND		0.50	0.10	µg/L	1	05/09/11 15:41
1,3-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
1,4-Dichlorobenzene	ND		0.50	0.16	µg/L	1	05/09/11 15:41
1,2-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/11 15:41
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/09/11 15:41
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/09/11 15:41
Surr: 1,2-Dichloroethane-d4	111		75-128	0.16	%REC	1	05/09/11 15:41
Surr: Toluene-d8	111		75-125	0.10	%REC	1	05/09/11 15:41
Surr: 4-Bromofluorobenzene	102		75-125	0.10	%REC	1	05/09/11 15:41

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- J Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Practical Quantitation Limit (PQL)
- S Spike Recovery outside accepted recovery limits

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-002A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*M-21 03May2011*
W Order:	K1105043	**Collection Date:**	05/03/11 11:20
Matrix:	WATER	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R21872
Revision:	05/17/11 13:44	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-R8152.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dichlorodifluoromethane	ND		1.00	0.10	µg/L	1	05/09/11 16:13
Chloromethane	ND		1.00	0.33	µg/L	1	05/09/11 16:13
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/09/11 16:13
Bromomethane	ND		1.00	0.33	µg/L	1	05/09/11 16:13
Chloroethane	3.01		1.00	0.33	µg/L	1	05/09/11 16:13
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/09/11 16:13
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/09/11 16:13
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/09/11 16:13
Acetone	10U ~~3.61J~~		10.0 ✓	1.00	µg/L	1	05/09/11 16:13
Carbon disulfide	0.50U ~~0.29J~~		0.50 ✓	0.11	µg/L	1	05/09/11 16:13
Methyl acetate	ND		5.00	1.00	µg/L	1	05/09/11 16:13
Methylene chloride	ND		2.00	0.16	µg/L	1	05/09/11 16:13
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 16:13
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/09/11 16:13
1,1-Dichloroethane	0.11	J	0.50	0.10	µg/L	1	05/09/11 16:13
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 16:13
2-Butanone	ND		10.0	1.00	µg/L	1	05/09/11 16:13
Chloroform	ND		0.50	0.10	µg/L	1	05/09/11 16:13
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/09/11 16:13
Cyclohexane	1.66		0.50	0.10	µg/L	1	05/09/11 16:13
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/09/11 16:13
Benzene	0.22	J	0.50	0.10	µg/L	1	05/09/11 16:13
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/09/11 16:13
Trichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 16:13
Methylcyclohexane	0.18	J	0.50	0.10	µg/L	1	05/09/11 16:13
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/09/11 16:13
Bromodichloromethane	ND		0.50	0.10	µg/L	1	05/09/11 16:13
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/11 16:13
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/09/11 16:13
Toluene	0.37	J	0.50	0.10	µg/L	1	05/09/11 16:13
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/11 16:13
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/09/11 16:13
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/09/11 16:13
2-Hexanone	ND		5.00	1.00	µg/L	1	05/09/11 16:13

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- J Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the *Practical Quantitation Limit* (PQL)
- S Spike Recovery outside accepted recovery limits

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East Syracuse, NY 13057 (315) 445-1105

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-002A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*M-21 03May2011*
W Order:	K1105043	**Collection Date:**	05/03/11 11:20
Matrix:	WATER	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R21872
Revision:	05/17/11 13:44	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-R8152.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND		0.50	0.10	µg/L	1	05/09/11 16:13
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/09/11 16:13
Chlorobenzene	8.08		0.50	0.10	µg/L	1	05/09/11 16:13
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/09/11 16:13
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/09/11 16:13
Styrene	ND		0.50	0.10	µg/L	1	05/09/11 16:13
Bromoform	ND		1.00	0.33	µg/L	1	05/09/11 16:13
Isopropylbenzene	1.38		0.50	0.10	µg/L	1	05/09/11 16:13
1,1,2,2-Tetrachloroethane	ND		0.50	0.10	µg/L	1	05/09/11 16:13
1,3-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/11 16:13
1,4-Dichlorobenzene	0.43	J	0.50	0.16	µg/L	1	05/09/11 16:13
1,2-Dichlorobenzene	0.82		0.50	0.10	µg/L	1	05/09/11 16:13
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/09/11 16:13
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/09/11 16:13
Surr: 1,2-Dichloroethane-d4	113		75-128	0.16	%REC	1	05/09/11 16:13
Surr: Toluene-d8	109		75-125	0.10	%REC	1	05/09/11 16:13
Surr: 4-Bromofluorobenzene	104		75-125	0.10	%REC	1	05/09/11 16:13

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-003A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LR-8 03May2011*
W Order:	K1105043	**Collection Date:**	05/03/11 13:10
Matrix:	WATER	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73 Sample Size 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS %Moisture:	**BatchNo:**	R21872
Revision:	05/17/11 13:44 TestCode: 8260W_OLM42	**FileID:**	1-SAMP-R8153.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dichlorodifluoromethane	ND		1.00	0.10	µg/L	1	05/09/11 16:44
Chloromethane	ND		1.00	0.33	µg/L	1	05/09/11 16:44
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/09/11 16:44
Bromomethane	ND		1.00	0.33	µg/L	1	05/09/11 16:44
Chloroethane	6.29		1.00	0.33	µg/L	1	05/09/11 16:44
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/09/11 16:44
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/09/11 16:44
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/09/11 16:44
Acetone	~~3.76 J~~ 10U		~~10.0~~ 10.0 ✓	1.00	µg/L	1	05/09/11 16:44
Carbon disulfide	~~0.18 J~~ 0.50U		~~0.50~~ 0.50 ✓	0.11	µg/L	1	05/09/11 16:44
Methyl acetate	ND		5.00	1.00	µg/L	1	05/09/11 16:44
Methylene chloride	~~0.18 J~~ 2.0U		2.00 ✓	0.16	µg/L	1	05/09/11 16:44
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 16:44
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/09/11 16:44
1,1-Dichloroethane	0.11 J		0.50	0.10	µg/L	1	05/09/11 16:44
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 16:44
2-Butanone	ND		10.0	1.00	µg/L	1	05/09/11 16:44
Chloroform	ND		0.50	0.10	µg/L	1	05/09/11 16:44
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/09/11 16:44
Cyclohexane	2.12		0.50	0.10	µg/L	1	05/09/11 16:44
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/09/11 16:44
Benzene	1.53		0.50	0.10	µg/L	1	05/09/11 16:44
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/09/11 16:44
Trichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 16:44
Methylcyclohexane	0.25 J		0.50	0.10	µg/L	1	05/09/11 16:44
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/09/11 16:44
Bromodichloromethane	ND		0.50	0.10	µg/L	1	05/09/11 16:44
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/11 16:44
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/09/11 16:44
Toluene	0.37 J		0.50	0.10	µg/L	1	05/09/11 16:44
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/11 16:44
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/09/11 16:44
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/09/11 16:44
2-Hexanone	ND		5.00	1.00	µg/L	1	05/09/11 16:44

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- J Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Practical Quantitation Limit (PQL)
- S Spike Recovery outside accepted recovery limits

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	Lab ID:	K1105043-003A
Project:	PAS Oswego-Semi-Annual Well Sampling	Client Sample ID:	*LR-8 03May2011*
W Order:	K1105043	Collection Date:	05/03/11 13:10
Matrix:	WATER	Date Received:	05/04/11 16:31
Inst. ID:	MS04_73 Sample Size 10 mL	PrepDate:	
ColumnID:	Rtx-VMS %Moisture:	BatchNo:	R21872
Revision:	05/17/11 13:44 TestCode: 8260W_OLM42	FileID:	1-SAMP-R8153.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND		0.50	0.10	µg/L	1	05/09/11 16:44
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/09/11 16:44
Chlorobenzene	12.6		0.50	0.10	µg/L	1	05/09/11 16:44
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/09/11 16:44
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/09/11 16:44
Styrene	ND		0.50	0.10	µg/L	1	05/09/11 16:44
Bromoform	ND		1.00	0.33	µg/L	1	05/09/11 16:44
Isopropylbenzene	1.31		0.50	0.10	µg/L	1	05/09/11 16:44
1,1,2,2-Tetrachloroethane	ND		0.50	0.10	µg/L	1	05/09/11 16:44
1,3-Dichlorobenzene	0.12	J	0.50	0.10	µg/L	1	05/09/11 16:44
1,4-Dichlorobenzene	0.78		0.50	0.16	µg/L	1	05/09/11 16:44
1,2-Dichlorobenzene	0.50		0.50	0.10	µg/L	1	05/09/11 16:44
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/09/11 16:44
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/09/11 16:44
Surr: 1,2-Dichloroethane-d4	111		75-128	0.16	%REC	1	05/09/11 16:44
Surr: Toluene-d8	109		75-125	0.10	%REC	1	05/09/11 16:44
Surr: 4-Bromofluorobenzene	104		75-125	0.10	%REC	1	05/09/11 16:44

Qualifiers:				
	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-004A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LR-6 04May2011*
W Order:	K1105043	**Collection Date:**	05/04/11 7:30
Matrix:	WATER	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73 Sample Size 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS %Moisture:	**BatchNo:**	R21872
Revision:	05/17/11 13:44 TestCode: 8260W_OLM42	**FileID:**	1-SAMP-R8154.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dichlorodifluoromethane	ND		1.00	0.10	µg/L	1	05/09/11 17:16
Chloromethane	ND		1.00	0.33	µg/L	1	05/09/11 17:16
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/09/11 17:16
Bromomethane	ND		1.00	0.33	µg/L	1	05/09/11 17:16
Chloroethane	ND		1.00	0.33	µg/L	1	05/09/11 17:16
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/09/11 17:16
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/09/11 17:16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/09/11 17:16
Acetone 10U	~~2.83~~ J	✓	10.0	1.00	µg/L	1	05/09/11 17:16
Carbon disulfide 0.50U	~~0.46~~ J	✓	0.50	0.11	µg/L	1	05/09/11 17:16
Methyl acetate	ND		5.00	1.00	µg/L	1	05/09/11 17:16
Methylene chloride	ND		2.00	0.16	µg/L	1	05/09/11 17:16
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 17:16
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/09/11 17:16
1,1-Dichloroethane	1.66		0.50	0.10	µg/L	1	05/09/11 17:16
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 17:16
2-Butanone	ND		10.0	1.00	µg/L	1	05/09/11 17:16
Chloroform	ND		0.50	0.10	µg/L	1	05/09/11 17:16
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/09/11 17:16
Cyclohexane	ND		0.50	0.10	µg/L	1	05/09/11 17:16
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/09/11 17:16
Benzene	ND		0.50	0.10	µg/L	1	05/09/11 17:16
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/09/11 17:16
Trichloroethene	0.15	J	0.50	0.10	µg/L	1	05/09/11 17:16
Methylcyclohexane	ND		0.50	0.10	µg/L	1	05/09/11 17:16
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/09/11 17:16
Bromodichloromethane	ND		0.50	0.10	µg/L	1	05/09/11 17:16
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/11 17:16
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/09/11 17:16
Toluene	ND		0.50	0.10	µg/L	1	05/09/11 17:16
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/11 17:16
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/09/11 17:16
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/09/11 17:16
2-Hexanone	ND		5.00	1.00	µg/L	1	05/09/11 17:16

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- J Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the *Practical Quantitation Limit* (PQL)
- S Spike Recovery outside accepted recovery limits

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-004A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LR-6 04May2011*
W Order:	K1105043	**Collection Date:**	05/04/11 7:30
Matrix:	WATER	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R21872
Revision:	05/17/11 13:44 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-R8154.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND		0.50	0.10	µg/L	1	05/09/11 17:16
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/09/11 17:16
Chlorobenzene	ND		0.50	0.10	µg/L	1	05/09/11 17:16
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/09/11 17:16
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/09/11 17:16
Styrene	ND		0.50	0.10	µg/L	1	05/09/11 17:16
Bromoform	ND		1.00	0.33	µg/L	1	05/09/11 17:16
Isopropylbenzene	ND		0.50	0.10	µg/L	1	05/09/11 17:16
1,1,2,2-Tetrachloroethane	ND		0.50	0.10	µg/L	1	05/09/11 17:16
1,3-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/11 17:16
1,4-Dichlorobenzene	ND		0.50	0.16	µg/L	1	05/09/11 17:16
1,2-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/11 17:16
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/09/11 17:16
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/09/11 17:16
Surr: 1,2-Dichloroethane-d4	111		75-128	0.16	%REC	1	05/09/11 17:16
Surr: Toluene-d8	112		75-125	0.10	%REC	1	05/09/11 17:16
Surr: 4-Bromofluorobenzene	102		75-125	0.10	%REC	1	05/09/11 17:16

Qualifiers:	* Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	J Analyte detected below the PQL	ND	Not Detected at the *Practical Quantitation Limit* (PQL)
	P Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-005A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LCW-2 04May2011*
W Order:	K1105043	**Collection Date:**	05/04/11 9:05
Matrix:	WATER	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R21872
Revision:	05/17/11 13:44 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-R8155.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dichlorodifluoromethane	ND		5.00	0.50	µg/L	5	05/09/11 17:48
Chloromethane	ND		5.00	1.65	µg/L	5	05/09/11 17:48
Vinyl chloride	5.75		5.00	1.65	µg/L	5	05/09/11 17:48
Bromomethane	ND		5.00	1.65	µg/L	5	05/09/11 17:48
Chloroethane	ND		5.00	1.65	µg/L	5	05/09/11 17:48
Trichlorofluoromethane	ND		5.00	0.50	µg/L	5	05/09/11 17:48
1,1-Dichloroethene	0.80	J	2.50	0.80	µg/L	5	05/09/11 17:48
1,1,2-Trichloro-1,2,2-trifluoroethane	0.85	J	2.50	0.50	µg/L	5	05/09/11 17:48
Acetone	~~16.8~~ 50U	J ✓	50.0	5.00	µg/L	5	05/09/11 17:48
Carbon disulfide	~~0.70~~ 2.50U	J ✓	2.50	0.55	µg/L	5	05/09/11 17:48
Methyl acetate	ND		25.0	5.00	µg/L	5	05/09/11 17:48
Methylene chloride	ND		10.0	0.80	µg/L	5	05/09/11 17:48
trans-1,2-Dichloroethene	ND		2.50	0.50	µg/L	5	05/09/11 17:48
Methyl tert-butyl ether	ND		5.00	0.80	µg/L	5	05/09/11 17:48
1,1-Dichloroethane	26.0		2.50	0.50	µg/L	5	05/09/11 17:48
cis-1,2-Dichloroethene	8.35		2.50	0.50	µg/L	5	05/09/11 17:48
2-Butanone	ND		50.0	5.00	µg/L	5	05/09/11 17:48
Chloroform	~~1.16~~ 2.50U	J ✓	2.50	0.50	µg/L	5	05/09/11 17:48
1,1,1-Trichloroethane	7.30		2.50	0.50	µg/L	5	05/09/11 17:48
Cyclohexane	ND		2.50	0.50	µg/L	5	05/09/11 17:48
Carbon tetrachloride	ND		2.50	0.50	µg/L	5	05/09/11 17:48
Benzene	55.0		2.50	0.50	µg/L	5	05/09/11 17:48
1,2-Dichloroethane	1.00	J	2.50	0.80	µg/L	5	05/09/11 17:48
Trichloroethene	18.2		2.50	0.50	µg/L	5	05/09/11 17:48
Methylcyclohexane	ND		2.50	0.50	µg/L	5	05/09/11 17:48
1,2-Dichloropropane	ND		2.50	0.80	µg/L	5	05/09/11 17:48
Bromodichloromethane	ND		2.50	0.50	µg/L	5	05/09/11 17:48
cis-1,3-Dichloropropene	ND		2.50	0.80	µg/L	5	05/09/11 17:48
4-Methyl-2-pentanone	ND		25.0	5.00	µg/L	5	05/09/11 17:48
Toluene	ND		2.50	0.50	µg/L	5	05/09/11 17:48
trans-1,3-Dichloropropene	ND		2.50	0.80	µg/L	5	05/09/11 17:48
1,1,2-Trichloroethane	ND		2.50	0.80	µg/L	5	05/09/11 17:48
Tetrachloroethene	72.9		2.50	0.50	µg/L	5	05/09/11 17:48
2-Hexanone	ND		25.0	5.00	µg/L	5	05/09/11 17:48

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- J Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Practical Quantitation Limit (PQL)
- S Spike Recovery outside accepted recovery limits

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-005A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LCW-2 04May2011*
W Order:	K1105043	**Collection Date:**	05/04/11 9:05
Matrix:	WATER	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R21872
Revision:	05/17/11 13:44 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-R8155.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND		2.50	0.50	µg/L	5	05/09/11 17:48
1,2-Dibromoethane	ND		2.50	0.80	µg/L	5	05/09/11 17:48
Chlorobenzene	14.1		2.50	0.50	µg/L	5	05/09/11 17:48
Ethylbenzene	3.80		2.50	0.50	µg/L	5	05/09/11 17:48
Xylenes (total)	ND		5.00	1.50	µg/L	5	05/09/11 17:48
Styrene	ND		2.50	0.50	µg/L	5	05/09/11 17:48
Bromoform	ND		5.00	1.65	µg/L	5	05/09/11 17:48
Isopropylbenzene	0.70	J	2.50	0.50	µg/L	5	05/09/11 17:48
1,1,2,2-Tetrachloroethane	ND		2.50	0.50	µg/L	5	05/09/11 17:48
1,3-Dichlorobenzene	ND		2.50	0.50	µg/L	5	05/09/11 17:48
1,4-Dichlorobenzene	ND		2.50	0.80	µg/L	5	05/09/11 17:48
1,2-Dichlorobenzene	0.80	J	2.50	0.50	µg/L	5	05/09/11 17:48
1,2-Dibromo-3-chloropropane	ND		25.0	5.00	µg/L	5	05/09/11 17:48
1,2,4-Trichlorobenzene	ND		5.00	0.50	µg/L	5	05/09/11 17:48
Surr: 1,2-Dichloroethane-d4	110		75-128	0.80	%REC	5	05/09/11 17:48
Surr: Toluene-d8	109		75-125	0.50	%REC	5	05/09/11 17:48
Surr: 4-Bromofluorobenzene	101		75-125	0.50	%REC	5	05/09/11 17:48

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- J Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Practical *Quantitation* Limit (PQL)
- S Spike Recovery outside accepted recovery limits

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-006A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LCW-4 04May2011*
W Order:	K1105043	**Collection Date:**	05/04/11 11:00
Matrix:	WATER	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R21873
Revision:	05/11/11 8:53 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-R8165.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dichlorodifluoromethane	ND		20.0	2.00	µg/L	20	05/10/11 9:46
Chloromethane	ND		20.0	6.60	µg/L	20	05/10/11 9:46
Vinyl chloride	40.0		20.0	6.60	µg/L	20	05/10/11 9:46
Bromomethane	ND		20.0	6.60	µg/L	20	05/10/11 9:46
Chloroethane	ND		20.0	6.60	µg/L	20	05/10/11 9:46
Trichlorofluoromethane	ND		20.0	2.00	µg/L	20	05/10/11 9:46
1,1-Dichloroethene	ND		10.0	3.20	µg/L	20	05/10/11 9:46
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	2.00	µg/L	20	05/10/11 9:46
Acetone	~~62.6~~ 200 U	J	200	20.0	µg/L	20	05/10/11 9:46
Carbon disulfide	~~2.66~~ 10 U	J	10.0	2.20	µg/L	20	05/10/11 9:46
Methyl acetate	ND		100	20.0	µg/L	20	05/10/11 9:46
Methylene chloride	~~19.4~~ 40 U	J	40.0	3.20	µg/L	20	05/10/11 9:46
trans-1,2-Dichloroethene	ND		10.0	2.00	µg/L	20	05/10/11 9:46
Methyl tert-butyl ether	ND		20.0	3.20	µg/L	20	05/10/11 9:46
1,1-Dichloroethane	26.2		10.0	2.00	µg/L	20	05/10/11 9:46
cis-1,2-Dichloroethene	53.6		10.0	2.00	µg/L	20	05/10/11 9:46
2-Butanone	ND		200	20.0	µg/L	20	05/10/11 9:46
Chloroform	ND		10.0	2.00	µg/L	20	05/10/11 9:46
1,1,1-Trichloroethane	ND		10.0	2.00	µg/L	20	05/10/11 9:46
Cyclohexane	3.80	J	10.0	2.00	µg/L	20	05/10/11 9:46
Carbon tetrachloride	ND		10.0	2.00	µg/L	20	05/10/11 9:46
Benzene	271		10.0	2.00	µg/L	20	05/10/11 9:46
1,2-Dichloroethane	3.60	J	10.0	3.20	µg/L	20	05/10/11 9:46
Trichloroethene	ND		10.0	2.00	µg/L	20	05/10/11 9:46
Methylcyclohexane	ND		10.0	2.00	µg/L	20	05/10/11 9:46
1,2-Dichloropropane	ND		10.0	3.20	µg/L	20	05/10/11 9:46
Bromodichloromethane	ND		10.0	2.00	µg/L	20	05/10/11 9:46
cis-1,3-Dichloropropene	ND		10.0	3.20	µg/L	20	05/10/11 9:46
4-Methyl-2-pentanone	ND		100	20.0	µg/L	20	05/10/11 9:46
Toluene	64.8		10.0	2.00	µg/L	20	05/10/11 9:46
trans-1,3-Dichloropropene	ND		10.0	3.20	µg/L	20	05/10/11 9:46
1,1,2-Trichloroethane	ND		10.0	3.20	µg/L	20	05/10/11 9:46
Tetrachloroethene	ND		10.0	2.00	µg/L	20	05/10/11 9:46
2-Hexanone	ND		100	20.0	µg/L	20	05/10/11 9:46

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value exceeds the instrument calibration range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below the PQL
- ND Not Detected at the Practical Quantitation Limit (PQL)
- P Prim./Conf. column %D or RPD exceeds limit
- S Spike Recovery outside accepted recovery limits

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-006A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LCW-4 04May2011*
W Order:	K1105043	**Collection Date:**	05/04/11 11:00
Matrix:	WATER	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R21873
Revision:	05/11/11 8:53	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-R8165.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND		10.0	2.00	µg/L	20	05/10/11 9:46
1,2-Dibromoethane	ND		10.0	3.20	µg/L	20	05/10/11 9:46
Chlorobenzene	220		10.0	2.00	µg/L	20	05/10/11 9:46
Ethylbenzene	335		10.0	2.00	µg/L	20	05/10/11 9:46
Xylenes (total)	317		20.0	6.00	µg/L	20	05/10/11 9:46
Styrene	ND		10.0	2.00	µg/L	20	05/10/11 9:46
Bromoform	ND		20.0	6.60	µg/L	20	05/10/11 9:46
Isopropylbenzene	2.60	J	10.0	2.00	µg/L	20	05/10/11 9:46
1,1,2,2-Tetrachloroethane	ND		10.0	2.00	µg/L	20	05/10/11 9:46
1,3-Dichlorobenzene	ND		10.0	2.00	µg/L	20	05/10/11 9:46
1,4-Dichlorobenzene	5.00	J	10.0	3.20	µg/L	20	05/10/11 9:46
1,2-Dichlorobenzene	43.8		10.0	2.00	µg/L	20	05/10/11 9:46
1,2-Dibromo-3-chloropropane	ND		100	20.0	µg/L	20	05/10/11 9:46
1,2,4-Trichlorobenzene	ND		20.0	2.00	µg/L	20	05/10/11 9:46
Surr: 1,2-Dichloroethane-d4	108		75-128	3.20	%REC	20	05/10/11 9:46
Surr: Toluene-d8	98		75-125	2.00	%REC	20	05/10/11 9:46
Surr: 4-Bromofluorobenzene	103		75-125	2.00	%REC	20	05/10/11 9:46

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- J Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the *Practical Quantitation Limit* (PQL)
- S Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.

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East Syracuse, NY 13057 (315) 445-1105

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-007A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	X-1 (LR-6 04 May 2011)
W Order:	K1105043	**Collection Date:**	05/04/11 0:00
Matrix:	WATER	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R21872
Revision:	05/17/11 13:44 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-R8157.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dichlorodifluoromethane	ND		1.00	0.10	µg/L	1	05/09/11 18:51
Chloromethane	ND		1.00	0.33	µg/L	1	05/09/11 18:51
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/09/11 18:51
Bromomethane	ND		1.00	0.33	µg/L	1	05/09/11 18:51
Chloroethane	ND		1.00	0.33	µg/L	1	05/09/11 18:51
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/09/11 18:51
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/09/11 18:51
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/09/11 18:51
Acetone 10U	~~2.23~~	~~J~~	~~10.0~~ ✓	1.00	µg/L	1	05/09/11 18:51
Carbon disulfide 0.50U	~~0.18~~	~~J~~	~~0.50~~ ✓	0.11	µg/L	1	05/09/11 18:51
Methyl acetate	ND		5.00	1.00	µg/L	1	05/09/11 18:51
Methylene chloride	ND		2.00	0.16	µg/L	1	05/09/11 18:51
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 18:51
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/09/11 18:51
1,1-Dichloroethane	1.68		0.50	0.10	µg/L	1	05/09/11 18:51
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/11 18:51
2-Butanone	ND		10.0	1.00	µg/L	1	05/09/11 18:51
Chloroform	ND		0.50	0.10	µg/L	1	05/09/11 18:51
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/09/11 18:51
Cyclohexane	ND		0.50	0.10	µg/L	1	05/09/11 18:51
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/09/11 18:51
Benzene	ND		0.50	0.10	µg/L	1	05/09/11 18:51
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/09/11 18:51
Trichloroethene	0.16	J	0.50	0.10	µg/L	1	05/09/11 18:51
Methylcyclohexane	ND		0.50	0.10	µg/L	1	05/09/11 18:51
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/09/11 18:51
Bromodichloromethane	ND		0.50	0.10	µg/L	1	05/09/11 18:51
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/11 18:51
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/09/11 18:51
Toluene	ND		0.50	0.10	µg/L	1	05/09/11 18:51
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/11 18:51
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/09/11 18:51
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/09/11 18:51
2-Hexanone	ND		5.00	1.00	µg/L	1	05/09/11 18:51

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value exceeds the instrument calibration range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below the PQL
- ND Not Detected at the Practical Quantitation Limit (PQL)
- P Prim./Conf. column %D or RPD exceeds limit
- S Spike Recovery outside accepted recovery limits

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East Syracuse, NY 13057 (315) 445-1105

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-007A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*X-1*
W Order:	K1105043	**Collection Date:**	05/04/11 0:00
Matrix:	WATER	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R21872
Revision:	05/17/11 13:44 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-R8157.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND		0.50	0.10	µg/L	1	05/09/11 18:51
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/09/11 18:51
Chlorobenzene	ND		0.50	0.10	µg/L	1	05/09/11 18:51
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/09/11 18:51
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/09/11 18:51
Styrene	ND		0.50	0.10	µg/L	1	05/09/11 18:51
Bromoform	ND		1.00	0.33	µg/L	1	05/09/11 18:51
Isopropylbenzene	ND		0.50	0.10	µg/L	1	05/09/11 18:51
1,1,2,2-Tetrachloroethane	ND		0.50	0.10	µg/L	1	05/09/11 18:51
1,3-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/11 18:51
1,4-Dichlorobenzene	ND		0.50	0.16	µg/L	1	05/09/11 18:51
1,2-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/11 18:51
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/09/11 18:51
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/09/11 18:51
Surr: 1,2-Dichloroethane-d4	112		75-128	0.16	%REC	1	05/09/11 18:51
Surr: Toluene-d8	111		75-125	0.10	%REC	1	05/09/11 18:51
Surr: 4-Bromofluorobenzene	105		75-125	0.10	%REC	1	05/09/11 18:51

Qualifiers:	* Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	J Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	P Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-008A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*QC Trip Blanks*
W Order:	K1105043	**Collection Date:**	05/04/11 0:00
Matrix:	WATER Q	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R21935
Revision:	05/23/11 10:09 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-R8378.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dichlorodifluoromethane	ND		1.00	0.10	µg/L	1	05/17/11 15:46
Chloromethane	ND		1.00	0.33	µg/L	1	05/17/11 15:46
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/17/11 15:46
Bromomethane	ND		1.00	0.33	µg/L	1	05/17/11 15:46
Chloroethane	ND		1.00	0.33	µg/L	1	05/17/11 15:46
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/17/11 15:46
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/17/11 15:46
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/17/11 15:46
Acetone	1.70	J	10.0	1.00	µg/L	1	05/17/11 15:46
Carbon disulfide	ND		0.50	0.11	µg/L	1	05/17/11 15:46
Methyl acetate	ND		5.00	1.00	µg/L	1	05/17/11 15:46
Methylene chloride	0.16	J	2.00	0.16	µg/L	1	05/17/11 15:46
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/17/11 15:46
1,1-Dichloroethane	ND		0.50	0.10	µg/L	1	05/17/11 15:46
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
2-Butanone	ND		10.0	1.00	µg/L	1	05/17/11 15:46
Chloroform	ND		0.50	0.10	µg/L	1	05/17/11 15:46
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/17/11 15:46
Cyclohexane	ND		0.50	0.10	µg/L	1	05/17/11 15:46
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/17/11 15:46
Benzene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/17/11 15:46
Trichloroethene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
Methylcyclohexane	ND		0.50	0.10	µg/L	1	05/17/11 15:46
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/17/11 15:46
Bromodichloromethane	ND		0.50	0.10	µg/L	1	05/17/11 15:46
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/17/11 15:46
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/17/11 15:46
Toluene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/17/11 15:46
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/17/11 15:46
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
2-Hexanone	ND		5.00	1.00	µg/L	1	05/17/11 15:46

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value exceeds the instrument calibration range
- H Holding times for preparation or analysis exceeded
- I Analyte detected below the PQL
- ND Not Detected at the Practical Quantitation Limit (PQL)
- P Prim./Conf. column %D or RPD exceeds limit
- S Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.

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Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Inc. of North America	**Lab ID:**	K1105043-008A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*QC Trip Blanks*
W Order:	K1105043	**Collection Date:**	05/04/11 0:00
Matrix:	WATER Q	**Date Received:**	05/04/11 16:31
Inst. ID:	MS04_73 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R21935
Revision:	05/23/11 10:09 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-R8378.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND		0.50	0.10	µg/L	1	05/17/11 15:46
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/17/11 15:46
Chlorobenzene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/17/11 15:46
Styrene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
Bromoform	ND		1.00	0.33	µg/L	1	05/17/11 15:46
Isopropylbenzene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
1,1,2,2-Tetrachloroethane	ND		0.50	0.10	µg/L	1	05/17/11 15:46
1,3-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
1,4-Dichlorobenzene	ND		0.50	0.16	µg/L	1	05/17/11 15:46
1,2-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/17/11 15:46
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/17/11 15:46
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/17/11 15:46
Surr: 1,2-Dichloroethane-d4	128		75-128	0.16	%REC	1	05/17/11 15:46
Surr: Toluene-d8	111		75-125	0.10	%REC	1	05/17/11 15:46
Surr: 4-Bromofluorobenzene	100		75-125	0.10	%REC	1	05/17/11 15:46

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- J Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Practical Quantitation Limit (PQL)
- S Spike Recovery outside accepted recovery limits