II - D

2ND QUARTER REPORT - 2012

QUARTERLY PROGRESS REPORT – 2nd QUARTER 2012
Operation, Maintenance and Long-term Monitoring Activities

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

PERIOD COVERED: April – June (2nd Quarter) 2012

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 50,000 gallons of leachate were removed during the period of April 2012 thru June 2012. 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 (Oswego) sanitary sewer system. Leachate discharged into the Oswego sewer system was treated and disposed in the Oswego Eastside Wastewater Treatment Facility located at 71 Mercer St. in Oswego.

- Monthly pre-pumping groundwater elevation monitoring was performed at the Site on April 4, May 9, and June 6, 2012. Monthly groundwater 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 (See Attachment D-1).

- On May 7 & 8, 2012, 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 (See Attachment D-1).

- The semi-annual groundwater sampling was conducted on May 12, 2012 for long-term monitoring wells LR-6, LR-8 andM-21, and leachate collection wells LCW-2 and LCW-4. Sampling activities for long-term monitoring wells were conducted using low-flow sampling protocols described in the Work Plan. The associated data is provided in (Attachment D-4)

- Site maintenance activities were conducted monthly, in combination with the monthly leachate removal event. In addition, quarterly site inspection and maintenance activities were performed between June 4 and 7, 2012. Monthly maintenance activities at this Site included the following:

  - Mowing of surface grass from land caps, and along the southern, and western security fence line, along with the removal of vegetation from the Site two concrete surface drainage troughs.

- Visually inspect the Site slurry-wall containment vegetated cap for signs of burrowing vermin or surface anomalies. No damage to the cap was observed. The Site Inspection Checklist Form was utilized to document comments pertaining to land cap, leachate discharge system, leachate collection system, and general site conditions.

- 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 tanks steel protective roof, and wood structure. No discrepancies were reported at the time of the inspection.

- The Site wooden utility shed and leachate pumping equipment, including centrifuge discharge pump, flow meter, suction hose, pump oils levels, heat trace power panel, interior lighting, exterior and interior shed structure, and main power distribution panel. No discrepancies were reported at the time of the inspection.

- The Site French drainage system and two (2) concrete troughs were inspected. No discrepancies were reported at the time of the inspection.

- During the month of April-June 2012, no snow removal was required.

- The perimeter security fence and fence signage were inspected on June 7, 2012 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 Site bordering woodlands. A section of the perimeter fence in a low-lying area along the northeastern property line was cleared of overgrowth in preparation of fence repairs in the second quarter of 2012.

- On April 4, May 9, and June 6, 2012, 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. In advance of each leachate removal event, O'Brien & Gere contacted the City of Oswego Eastside Wastewater Treatment Facility official, to inform the City that leachate is planned to be discharged off the Site, into the City of Oswego sanitary sewer system. Each leachate pumping City of event was approved by the Oswego, prior to the commencement of the 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 (see Attachment D-2).

- During the months of April, May, June 2012, O'Brien & Gere pumped a total of 50,000 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, are recorded on the Leachate Disposal

Checklist completed for each removal event. The leachate pumping system consists of one electrically powered "Centrifugal Discharge Pump, flow totalizer and leachate sampling port located within the on-site wooden utility shed. The level of leachate remaining in the leachate collection tank after each leachate discharge pumping event is also recorded on the Leachate Disposal Checklist. Each monthly leachate discharge was performed using same discharge protocols.

- On May 9, 2012, The City of Oswego collected one permit required composite sample taken during the discharge of leachate from the Site, using the centrifugal pump system. This sample was collected for analysis by combining three separate grab sample's that were collected by hand from the discharge pump sample port. The City completed the chain of custody, and delivered the samples to Spectrum Laboratory for analysis. The next schedule semi-annual leachate discharge sample collection is scheduled for October 2012.

- Upon completing each monthly removal event, the leachate discharge system was drained of residual leachate and prepared for storage. Residual leachate removed was returned to the leachate collection tank. The leachate collection tank enclosure door was locked and secured. During the cold weather operations, or "as needed" the discharge piping heat trace system was turned on, and the utility shed lighting was turned off, with all shed doors locked. When leaving the Site, O'Brien & Gere shut and secured the main entrance gate using a project approved padlock and chain.

- Maintenance of the Site perimeter fence, replacement of a fallen 150' section of security fence located on the Northeast corner of the property, along with the replacement of 15 "Posted No Trespassing" signs. This fence repair work is schedule to begin on or about July 15, 2012.

- The PAS Oswego Site quarterly discharge report for the 2nd quarter of 2012 was submitted to the City of Oswego on July 10, 2012, and provide the leachate volume and data collected for the quarter in compliance with the Oswego Wastewater Discharge Permit 6-2010-13. (See attachment C-3)

- The PAS Oswego Site quarterly discharge report for the 2nd quarter of 2012 was submitted to the City of Auburn on July 10, 2012 in compliance with the Auburn Wastewater Discharge Permit 2011-01, although no leachate was disposed of at the Auburn Facility for the quarter (See attachment C-3).

DOCUMENTATION OF REMOVAL ACTIVITIES DURING PREVIOUS QUARTER:

- The completed Pre-pumping Groundwater Elevation Monitoring Logs for the monitoring events performed on April 4, May 9, and June 6, 2012 are attached. (See Attachment D-1)

- The completed Leachate Disposal Checklist for the monthly removal events of April 4, May 9, and June 6, 2012 and the completed Site Inspection Checklist for the monthly removal events of April 4, May 9, and June 6, 2012 are attached. (See Attachment D-2)

- A copy of the PAS Site quarterly discharge report (2nd Quarter 2012) was submitted to the City of Oswego on July 10, 2012, and a quarterly discharge report (2nd Quarter 2012) was also sent to the City of Auburn on July 10, 2012. (See Attachment D-3)

- Groundwater sampling logs and data – wells LCW-2, LCW-4, LR-6, LR-8, M-21. (See Attachment D-4)

ATTACHMENT D-1

GROUNDWATER ELEVATION DATA

O'Brien Gere Operation
PAS Site
Oswego, New York
Pre-Pumping Monitoring Well Levels

May 9, 2012

Well	Ground	Riser	May 2011			Within Range?				Ground-Water
Number	Elevation	Elevation	Reading 1	Reading 2	Reading 3	Average	Low	High	Y / N	Elevation
SWW1	286.20	289.33	9.98	9.98	9.98	9.25	8.22	10.00	Yes	279.35
SWW2	286.30	289.37	15.30	15.30	15.30	15.05	14.48	15.42	Yes	274.07
SWW3	286.00	286.50	16.76	16.76	16.76	16.60	16.24	17.00	Yes	269.74
SWW4	282.90	283.60	14.74	14.74	14.74	14.71	12.62	15.94	Yes	268.86
SWW5	275.90	277.02	12.61	12.61	12.61	12.61	11.74	13.28	Yes	264.41
SWW6	270.90	273.06	8.10	8.10	8.10	8.60	7.58	9.21	Yes	264.96
SWW7	273.30	277.93	7.35	7.35	7.35	7.56	7.16	7.90	Yes	270.58
SWW8	275.70	278.24	3.56	3.56	3.56	4.04	3.40	4.54	Yes	274.68
SWW9	283.30	285.55	16.80	16.80	16.80	16.37	15.68	17.02	Yes	268.75
SWW10	279.30	280.43	12.32	12.32	12.32	11.22	8.50	12.62	Yes	268.11
SWW11	271.00	273.50	8.48	8.48	8.48	8.48	7.50	9.17	Yes	265.02
SWW12	270.20	272.82	8.00	8.00	8.00	8.64	7.58	9.23	Yes	264.82
LCW-1	271.40	272.21	8.02	8.02	8.02	7.66	7.04	8.30	Yes	264.19
LCW-2	272.60	274.44	10.35	10.35	10.35	9.93	9.27	10.55	Yes	264.09
LCW-3	283.30	284.36	17.70	17.70	17.70	17.62	17.24	18.05	Yes	266.66
LCW-4	283.80	285.70	16.82	16.82	16.82	17.66	17.36	18.56	No	268.88
OS-1	269.63	272.10	8.62	8.62	8.62	8.58	6.40	11.40	Yes	263.48
OI-1	269.14	272.00	11.54	11.54	11.54	11.21	10.14	12.28	Yes	260.46
OS-3	274.63	277.89	14.72	14.72	14.72	14.01	11.70	15.30	Yes	263.17
OD-3	274.96	277.85	14.57	14.57	14.57	13.86	11.58	15.12	Yes	263.28
LD-3	275.80	278.62	3.94	3.94	3.94	4.15	3.78	4.56	Yes	274.68
LD-4	276.30	279.25	11.48	11.48	11.48	10.63	8.68	11.79	Yes	267.77
LD-5	270.02	272.94	8.28	8.28	8.28	8.58	7.84	9.34	Yes	264.66
LS-6	271.40	274.14	8.74	8.74	8.74	9.36	7.95	10.74	Yes	265.40
LD-6	270.09	274.03	10.00	10.00	10.00	9.92	9.32	10.65	Yes	264.03
LD-8	269.90	272.83	7.66	7.66	7.66	7.25	6.08	8.30	Yes	265.17
LR-2	287.50	289.85	13.28	13.28	13.28	13.21	12.98	13.36	Yes	276.57
LR-3	275.50	278.06	7.53	7.53	7.53	7.75	7.10	8.36	Yes	270.53
LR-6	270.90	274.39	9.96	9.96	9.96	10.06	9.44	10.66	Yes	264.43
LR-8	270.00	273.42	9.80	9.80	9.80	9.76	9.04	10.30	Yes	263.62
M-21	270.28	272.32	9.56	9.56	9.56	9.45	8.75	9.94	Yes	262.76
M-22	270.40	273.88	9.90	9.90	9.90	10.01	9.38	10.62	Yes	263.98
M-23	267.98	270.49	11.94	11.94	11.94	12.13	11.02	12.88	Yes	258.55

O'Brien Gere Operation
PAS Site
Oswego, New York
Pre-Pumping Monitoring Well Levels

April 4, 2012

Well	Ground	Riser		April 2011				Within Range?			Ground-Water
Number	Elevation	Elevation		Reading 1	Reading 2	Reading 3	Average	Low	High	Y / N	Elevation
SWW1	286.20	289.33		9.90	9.90	9.90	8.57	7.82	9.49	No	279.43
SWW2	286.30	289.37		15.04	15.04	15.04	15.12	14.72	15.58	Yes	274.33
SWW3	286.00	286.50		16.64	16.64	16.64	16.54	16.28	16.80	Yes	269.86
SWW4	282.90	283.60		15.51	15.51	15.51	13.52	11.86	15.15	No	268.09
SWW5	275.90	277.02		13.10	13.10	13.10	12.65	11.60	13.16	Yes	263.92
SWW6	270.90	273.06		8.82	8.82	8.82	8.22	7.43	8.57	No	264.24
SWW7	273.30	277.93		7.46	7.46	7.46	7.54	7.06	7.88	Yes	270.47
SWW8	275.70	278.24		3.97	3.97	3.97	3.84	3.29	4.23	Yes	274.27
SWW9	283.30	285.55		16.58	16.58	16.58	16.36	15.73	16.96	Yes	268.97
SWW10	279.30	280.43		12.20	12.20	12.20	10.04	8.66	11.57	No	268.23
SWW11	271.00	273.50		8.92	8.92	8.92	8.63	7.70	9.22	Yes	264.58
SWW12	270.20	272.82		8.66	8.66	8.66	8.37	7.59	8.80	Yes	264.16
LCW-1	271.40	272.21		8.82	8.82	8.82	7.90	7.23	8.48	No	263.39
LCW-2	272.60	274.44		11.08	11.08	11.08	10.14	9.46	10.72	No	263.36
LCW-3	283.30	284.36		17.54	17.54	17.54	17.58	17.34	17.94	Yes	266.82
LCW-4	283.80	285.70		16.75	16.75	16.75	17.73	17.50	18.72	No	268.95
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 Gere Operation
PAS Site
Oswego, New York
Pre-Pumping Monitoring Well Levels

June 6, 2012

Well	Ground	Riser		June 2011				Within Range?			Ground-Water
Number	Elevation	Elevation		Reading 1	Reading 2	Reading 3	Average	Low	High	Y / N	Elevation
SWW1	286.20	289.33		10.42	10.42	10.42	9.96	9.02	10.44	Yes	278.91
SWW2	286.30	289.37		15.55	15.55	15.55	15.23	14.60	15.78	Yes	273.82
SWW3	286.00	286.50		16.91	16.91	16.91	16.72	16.42	17.34	Yes	269.59
SWW4	282.90	283.60		16.10	16.10	16.10	15.82	14.35	16.42	Yes	267.50
SWW5	275.90	277.02		13.20	13.20	13.20	12.65	11.81	13.65	Yes	263.82
SWW6	270.90	273.06		9.26	9.26	9.26	9.15	8.52	9.55	Yes	263.80
SWW7	273.30	277.93		7.79	7.79	7.79	7.70	7.21	7.95	Yes	270.14
SWW8	275.70	278.24		4.45	4.45	4.45	4.52	3.98	5.42	Yes	273.79
SWW9	283.30	285.55		17.08	17.08	17.08	16.64	15.98	17.44	Yes	268.47
SWW10	279.30	280.43		13.52	13.52	13.52	12.73	10.24	13.81	Yes	266.91
SWW11	271.00	273.50		9.02	9.02	9.02	8.50	7.58	9.40	Yes	264.48
SWW12	270.20	272.82		10.54	10.54	10.54	9.89	8.78	11.11	Yes	262.28
LCW-1	271.40	272.21		8.56	8.56	8.56	7.67	6.90	8.12	No	263.65
LCW-2	272.60	274.44		10.80	10.80	10.80	9.92	9.15	10.37	No	263.64
LCW-3	283.30	284.36		17.62	17.62	17.62	17.74	17.40	18.16	Yes	266.74
LCW-4	283.80	285.70		17.20	17.20	17.20	17.61	17.20	18.32	No	268.50
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

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date 4-4-12 Time 7:30

Field Technician MARTIN Koennecke Weather Conditions Sunny 42°

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	✓		Yes
Concrete trough clear and function able	✓		Yes
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 pump out)	✓		Yes
Pump power panel(s) secured	✓		Yes
Monitoring Wells (MW)			
Locks installed	✓		yes
MW's marked & identifiable	✓		OK
General Site Condition			
Trees & brush cleared off security fence		✓	WORK IN PROGRESS
Perimeter security fence intact & free of damage		✓	WORKING ON N-E SWAMP AREA
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	✓		OK
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)

MONTHLY WELL LEVELS, PUMPED 10,022 gallons to City of Oswego

O'BRIEN & GERE

Site Inspection Checklist

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date 5-9-12 Time 8:00

Field Technician MARTIN KOENNECKE Weather Conditions OVERCAST 55°

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	√		Yes
Concrete trough clear and function able	√		Yes
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)	√		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 pump out)	✓		Yes
Pump power panel(s) secured	✓		Yes
Monitoring Wells (MW)			
Locks installed	✓		Yes
MW's marked & identifiable	✓		OK
General Site Condition			
Trees & brush cleared off security fence	✓	✓	WORK IN PROGRESS
Perimeter security fence intact & free of damage		✓	SWAMP AREA WORK IN PROGRESS
Site access driveway inspected	✓		OK
Security access gates function able	✓		Yes
Site gate signage intact		✓	HAVE NEW SIGNS TO INSTALL
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	✓		OK
PPE available and utilized as required	✓		OK
Emergency contact information posted within shed	✓		NEEDS REPLACING

Additional remarks (use separate sheet is required)

City of Oswego collected Semiannual Discharge Sample During Pump out

O'BRIEN & GERE

Site Inspection Checklist

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date 6-6-12 Time 7:30

Field Technician MARTIN KOENNECKE Weather Conditions SUNNY WITH PASSING SHOWERS 65°

Check **V** (tasks completed in each event)

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

Leachate holding tank metal roof inspected for structural integrity	✓		OK
Leachate tank access doors locked (post pump out)	✓		Yes
Pump power panel(s) secured	✓		Yes
Monitoring Wells (MW)			
Locks installed	✓		Yes
MW's marked & identifiable	✓		OK
General Site Condition			
Trees & brush cleared off security fence		✓	WORK IN PROGRESS
Perimeter security fence intact & free of damage		✓	Fence CONTRACTOR QUOTE for Repair of Swamp Area
Site access driveway inspected	✓		OK
Security access gates function able	✓		Yes
Site gate signage intact	✓		will INSTALL NEXT VIST
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	✓		OK
PPE available and utilized as required	✓		OK
Emergency contact information posted within shed	✓		OK

Additional remarks (use separate sheet is required)

STARTED MOWING LANDFILL 6-4-12 will FINISH BY 6-7-12

Pumped 20,000 gal. Leachate To City of Oswego

O'BRIEN & GERE

Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date: 4-4-12 Time: 7:30

Field Technician MARTIN Koennecke Weather Conditions Sunny 42°

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	9:05	10:20	42.5	130 GPM	9760
	LCW-2	9:05	10:20			
	LCW-3	NOT PUMPED				
	LCW-4	9:05	10:20			
					Total	9760

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	10:30	12:30	6.8	45°	240095	250095	10,000
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
	83.3	20 min	Ø	8"			

	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

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date: 5-9-12 Time: 8:00

Field Technician Mike Tan Koenecke Weather Conditions FORECAST 55°

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"	LCW-1	9:40	11:40	[illegible]	66"=	20,050
	LCW-2	9:40	11:40	76.5"		
	LCW-3	NOT PUMPED				
	LCW-4	9:40	11:40	10.5"		
					Total	20,150

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	11:00	15:20	6.4	49°	250095	270095	20,000
Pump Info	**Flow Rate (GPM)**	**Prime Time**	**Pump Pressure**	**Pump Vacuum**			
		30 min	0	8"			

	Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit)					
	Date	Sample Location	Sample Volume	Sample Time	pH	Temperature
Sample #1	5-9-12	sample port	2500 ml	12:30	6.4	49°

City of Oswego Collected Sample
START composite @ 11:30, 11:45, 12:00, 12:15 12:30 600 ml ea

O'BRIEN & GERE

Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date: 6-6-12 Time: 8:30

Field Technician MARTIN Koennecke Weather Conditions Sunny w/ passing showers 65°

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	8:55	11:00		160	20,000
	LCW-2	8:55	11:00			
	LCW-3	NOT PUMPED				
	LCW-4	8:55	11:00			
					Total	20,000

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	10:10	14.35	6.75	54°	270095	290095	20,000
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
	83.3	25 min	Ø	9"			

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

ATTACHMENT D-3

QUARTERLY POTW DISCHARGE REPORTS
2ND QUARTER 2012

de maximis, inc.

450 Montbrook Lane
Knoxville, TN 37919
(865) 691-5052
(865) 691-6485 FAX
(865) 691-9835 ACCT. FAX

July 16, 2012

Mr. Tim O'Brien
Department of Municipal Utilities
35 Bradley Street
Auburn, New York 13021

Re: 2nd Quarter PAS Oswego Progress Report 2012

Dear Mr. O'Brien,

As per your request this letter confirms that the PAS Oswego Site has not shipped or discharged any wastewater from the PAS Oswego collection system to the City of Auburn POTW since September 2010. This has been due to the EPA allowance of an alternate disposal method. However, with EPA approval we retain disposal of PAS Oswego wastewater at the Auburn POTW under Permit 2011-01 in the event that the current disposal method is unavailable in the future. We understand this permit is valid through 2014.

- **Cumulative gallons removed for discharge in Auburn 2nd Qtr. 2012 - 0**
- **Cumulative gallons removed for discharge in Auburn over 2012 - 0**

Since no wastewater was shipped or discharged to Auburn, no analytical testing was required. However, we continue to perform Site maintenance and sampling activities under the Operation, Monitoring and Maintenance Program for the Site approved by EPA. The data associated with that program indicate little change in the characteristics of the Site wastewater.

Please contact me at (865) 691-5052, if you have any questions.

Sincerely,
de maximis, inc.

Clay McClarnon

CMC/dlb

cc: PAS Management Committee

de maximis, inc.

450 Montbrook Lane
Knoxville, TN 37919
(865) 691-5052
(865) 691-6485 FAX
(865) 691-9835 ACCT. FAX

Via electronic mail

July 10, 2012

Mr. Anthony A. Leotta, P.E.
City Engineer
City Hall
Oswego, New York 13126
tleotta@oswego.ny.org

Re: Quarterly Discharge Report – 2 nd Quarter 2012
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 2012 through June 2012.

The total gallons of leachate discharged during the second quarter of 2012 are 50,000 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.

The semi-annual sampling event under the permit was performed by the City of Oswego on May 12, 2012. The semi-annual sample was analyzed by Spectrum Analytical of Massachusetts to evaluate the low detection level requirements under the amended permit. The results are provided in Table 1, and the lab report is included in Attachment II. The results indicate that all parameters except arsenic and selenium meet the amended permit limits. The reported concentration for arsenic was 0.0242 mg/l, and the concentration for selenium was 0.00962 mg/l. In discussion with Mr. McGrath we understand that the City of Oswego is evaluating the amended pre-treatment standards, and that Notice of Violations for these parameters will not be issued until that evaluation is complete. However, in accordance with the amended permit and to assist the City of Oswego with the evaluation the PAS leachate discharge will be sampled during the August PAS leachate discharge event for arsenic and selenium.

If you need additional information please call me at (865) 691-5052.

Sincerely,
de maximis, inc.

Clay McClarnon

Attachments

cc: Gary Hallinan – City of Oswego
PAS Oswego Site Management Committee

TABLE 1 - PAS OSWEGO SITE QUARTERLY REPORT FOR CITY OF OSWEGO (2012)
LEACHATE DISCHARGE TO OSWEGO EASTSIDE WASTEWATER TREATMENT FACILITY
(Oswego SIU Wastwater Discharge Permit No.6-2010-13)

Discharge Quarter	3Q 2011		4Q 2012		1Q 2012		2Q 2012	
	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged
	7/6/12	10,000	10/5/11	20,005	1/11/12	10,005	4/4/12	10,000
	52/6.82		52/6.82		48/6.5		45/6.8	
	8/4/12	10,020	11/9/11	20,005	2/8/12	10,000	5/9/12	20,000
	54/6.80		52/6.8		45/6.8		49/6.4	
	9/6/12	20,005	12/7/11	10,010	3/7/12	10,000	6/6/12	20,000
	52/6.8		52/6.78		52/6.75		54/6.75	
	Total Discharged	40,025		50,020		30,005		50,000
Date Sampled*	**Permit Limit**	Not sampled		11/9/2011		Not sampled		5/9/2012
Analytes**	**mg/L *** **	**mg/L**		**mg/L**		**mg/L**		**mg/L **** **
Antinomy	0.003			NA				0.00051
Arsenic	0.007			NA				**0.0242**
Beryllium	0.005			NA				ND <0.002
Cadmium	0.11 lb/day			ND				ND <0.0025
Chromium (total)	2.49 lb/day			0.014				0.0083
Copper	0.11 lb/day			0.01				0.0156
Cyanide	0.17 lb/day			ND				ND <0.0005
Lead	0.05 lb/day			ND				ND <0.0075
Mercury	0.00004 lb/day			ND				ND <0.0003
Nickel	0.25 lb/day			0.56				0.401
Selenium	0.001			NA				**0.00962**
Silver	0.25 lb/day			ND				0.005
Thallium	0.003			NA				ND <0.0005
Zinc	0.5 lb/day			ND				0.0134
BOD 5	50 lb/day			13				13
TSS	100 lb/day			9				72
Phenolics	0.34lb/day			0.14				0.104
pH	5> and <10.5			7.2				6.4

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

*** Analytes in bold incorporated February 8,2012 and are being evaluated for potential compliance changes by City of Oswego.*

**** lb/day factor 0.16632@20k gal*

***** Analytes in bold exceed limit*

Prpared by de maximis, inc. 7/5/2012

ATTACHMENT I

O'BRIEN & GERE

Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date: 4-4-12 Time: 7:30

Field Technician MARTIN Koennecke Weather Conditions Sunny 42°

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	9:05	10:20	42,5	130 GPM	9760
	LCW-2	9:05	10:20			
	LCW-3	NOT PUMPED				
	LCW-4	9:05	10:20			
					Total	9760

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	10:30	12:30	6.8	45°	240095	250095	10,000
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
	83.3	20 MIN	Ø	8"			

	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

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date: 5-9-12 Time: 8:00

Field Technician MARTIN KOENNECKE Weather Conditions OVERCAST 55°

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"	LCW-1	940	11:40	[illegible]	66"=	20,050
	LCW-2	940	11:40	76.5"		
	LCW-3	NOT PUMPED				
	LCW-4	940	11:40	10.5"		
					Total	20,150

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	11:00	15:20	6.4	49°	250095	270095	20,000
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
		20 MIN	0	8"			

	Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit)					
	Date	Sample Location	Sample Volume	Sample Time	pH	Temperature
Sample #1	5-9-12	SAMPLE PORT	2500 ML	12 30	6.4	49°

CITY OF OSWEGO COLLECTED SAMPLE
START COMPOSITE @ 11:30, 11:45, 12:00, 12:15 12:30 600 ML ea

O'BRIEN & GERE

Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego)
Oswego, NY

Date: 6-6-12 Time: 8:30

Field Technician MARTIN Koennecke Weather Conditions Sunny/Passing Showers 65°

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	8:55	11:00		160	20,000
	LCW-2	8:55	11:00			
	LCW-3	NOT PUMPED				
	LCW-4	8:55	11:00			
					Total	20,000

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	10:10	14:35	6.75	54°	270095	290095	20,000
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
	83.3	25 MIN	Ø	9"			

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

ATTACHMENT II

3131-10

Report Date:
22-May-12 16:30

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

City of Oswego Wastewater Department
First Ave and West Schuyler Street
Oswego, NY 13126
Attn: Richard LaFond

Project: PAS Yearly Sampling
Project #: [none]

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SB48767-01	PAS Composite	NPW	09-May-12 12:30	09-May-12 22:00

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes.
Please note that this report contains 4 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

CASE NARRATIVE:

The samples were received 1.1 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SM5210B

Laboratory Control Samples:

1210849 SRM

Biochemical Oxygen Demand (5-day) percent recovery 60 (66-136) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

PAS Composite

1210849 SRM/SRMD

Biochemical Oxygen Demand (5-day) percent recoveries (60/69) are outside individual acceptance criteria (66-136), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

PAS Composite

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
PAS Composite SB48767-01	[none]	NPW	09-May-12 12:30	09-May-12

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Total Metals by EPA 200/6000 Series Methods													
	Preservation	Field Preserved		N/A			1	EPA 200/6000 methods			DJB	1210883	
Total Metals by EPA 200 Series Methods													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0012	1	EPA 200.7	18-May-12	19-May-12	Ir	1211453	X
7440-38-2	Arsenic	0.0242		mg/l	0.0040	0.0035	1	"	"	21-May-12	"	"	X
7440-41-7	Beryllium	< 0.0020		mg/l	0.0020	0.0008	1	"	"	19-May-12	"	"	X
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0003	1	"	"	21-May-12	"	"	X
7440-47-3	Chromium	0.0083		mg/l	0.0050	0.0026	1	"	"	19-May-12	"	"	X
7440-50-8	Copper	0.0156		mg/l	0.0050	0.0024	1	"	"	"	"	"	X
7439-97-6	Mercury	< 0.00030		mg/l	0.00030	0.00007	1	EPA 245.1/7470A	"	18-May-12	EDT	1211454	X
7440-02-0	Nickel	0.401		mg/l	0.0050	0.0012	1	EPA 200.7	"	21-May-12	edt	1211453	X
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0028	1	"	"	"	"	"	X
7440-36-0	Antimony	0.00051		mg/l	0.00050	0.00046	1	EPA 200.8	19-May-12	22-May-12	TBC	1211661	X
7782-49-2	Selenium	0.00962		mg/l	0.00050	0.00034	1	"	"	"	"	"	X
7440-28-0	Thallium	< 0.00050		mg/l	0.00050	0.00006	1	"	"	"	"	"	X
7440-66-6	Zinc	0.0134		mg/l	0.0050	0.0025	1	EPA 200.7	18-May-12	21-May-12	edt	1211453	X
General Chemistry Parameters													
	Biochemical Oxygen Demand (5-day)	13.0		mg/l	3.00	1.81	1	SM5210B	10-May-12 13:28	15-May-12 13:08	SPW	1210849	X
57-12-5	Cyanide (total)	< 0.00500		mg/l	0.00500	0.00498	1	EPA 335.4 / SW846 9012B	16-May-12	16-May-12	rthom	1211341	X
	Total Suspended Solids	72		mg/l	5	3	1	SM2540D	10-May-12	10-May-12	BD	1210812	X
Subcontracted Analyses													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
64743-03-9	Phenolics	0.104		mg/L	0.008	0.008	1	E420.4	15-May-12	15-May-12	11301	'[none]'	

Notes and Definitions

QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
June O'Connor
Kimberly Wisk

City of Oswego Wastewater Department Chain of Custody SB48767

Send Samples to: Spectrum Analytical, Inc.
6263 Taft Road
Cicero, NY 13212
(315) 214-5777
Attn.: Nancy Struzenski

Report to: Richard Lafond
City of Oswego Westside Wastewater Treatment Facility
Corner of 1st Ave and Schuyler St.
Oswego, NY 13126
phone: 315-342-8196 fax: 315-342-8233
email: rlafond@oswegony.org
email cc: johnmc72@twcny.rr.com

Project: PAS Yearly Sampling

Notes: Normal 14day TAT, PDF emailed in addition to hardcopy. Special IPP detection limits required. ***Invoice PAS for the analyses. Run metals methods 200.7, 200.8, or 200.9 to achieve DLs.***

No	Description/Location	Collection Date	Collection Time	Matrix	Container	Pres.	Test Requested: BOD/TSS	Ammonia	Metals: Cd, Be, Ni, Se, Tl, Cr, Cu, Pb, Hg, Ag, Zn, Sb, As	Total Phenols	Cyanide				Lab Only
1	PAS Composite	5/9/2012	11:30-12:30	NPW	1L HDPE	Cool	X								48767-01
~~2~~	~~PAS Composite~~ ROL	5/9/2012	11:30-12:30	NPW	~~500mL HDPE~~	~~H_2SO_4~~		X			ROL				
3	PAS Composite	5/9/2012	11:30-12:30	NPW	500mL HDPE	HNO_3			X						
4	PAS Composite	5/9/2012	11:30-12:30	NPW	32oz Glass	Cool				X					
5	PAS Composite	5/9/2012	11:30-12:30	NPW	500mL HDPE	NaOH					X				
6															
7															
8															
9															
10															

	Date:	Time:		Date:	Time:
Sampled by: John W. McGrath	5/9/12	1130-1230	Samples received by:	5/9/12	1245
Samples relinquished by:	5/9/12	1340	Samples received by:	5/9/12	18:45
Samples relinquished by:	5-9-12		Samples received by:	5/9/12	6:15
Samples relinquished by:			Samples received by:	5/9/12	

PAS YEARLY SAMPLING

§ 199-64.1. Concentration Limits

No person shall discharge directly or indirectly into the City POTW, wastewater containing any of the following pollutants in concentrations exceeding those specified below on either a daily or an instantaneous basis, except by authorization under a wastewater discharge permit. These limits apply to permitted Users without a permit limit for each specific parameter. These concentration limits are applicable to wastewater effluents at the point just prior to discharge into the POTW ("end of pipe" concentrations).

Pollutant	Concentration (mg/l)
Antimony*	0.003
Arsenic	0.007
Beryllium*	0.005
Cadmium	0.018
Chromium	0.10
Copper	0.14
Cyanide	0.082
Lead	0.058
Mercury	N/A
Nickel	0.050
Selenium*	0.001
Silver	0.019
Thallium*	0.003
Zinc	0.231
Phenols, Total	0.000025

1.) All concentrations listed for metallic substances shall be as "total metal", which shall be defined as the value measured in a sample acidified to a pH value of two (2) or less, without prior filtration.
2.) Concentration determinations shall be made on a composite sample taken from the User's daily discharge over a typical operational and/or production day.
3.) If it is determined that a grab sample taken from the User's discharge at any time during the daily operational and/or production period is representative the City **may** elect to grab sample the discharge.
4.) Other substances which may be limited are:
    a. antibiotics
    b. chemical compounds which, upon acidification, alkalinization, oxidation or reduction, in the discharge or after mixture with wastewater and its components in the POTW produce toxic, flammable or explosive compounds
    c. pesticides, including algaecides, fungicides, herbicides, insecticides and rodenticides
    d. polyaromatic hydrocarbons
    e. viable pathogenic organisms from industrial processes or hospital procedures.

* For the metals with a concentration less than the detection limit, one half the detection limit was used for the concentration.

FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO) **GROUND WATER SAMPLING LOG (APPENDIX B)**

Date	5-8-12	Weather	RAIN 55°
Site Name	PAS Oswego	Well #	LR-8
Location	55 East Seneca St	Evacuation Method	Grunfus Low Flow
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	Martin Koenvake		

WELL INFORMATION

Depth of Well	42.80	ft
Depth of Water	9.80	ft
Length of Water Column		ft
Volume of Water in Well		gal
3x Volume of Water in Well		gal

Water Vol/ft for:	
*2" Diameter Well	= 0.163 X LWC
4" Diameter Well	= 0.653 X LWC
6" Diameter Well	= 1.469 X LWC

14" Diameter well = 2.62 X LWC

Volume removed before Sampling	3gal	gals
Did Well go dry?	NO	

Measurements Taken From: ☒ Well Casing ☐ Protective Casing ☐ Other:

INSTRUMENT CALIBRATION

pH Buffer Readings
4.0 Standard
7.0 Standard
10.0 Standard

Conductivity Standard Ratings
84 S Standard
1413 S Standard

WATER PARAMETERS

Time	Depth to Water	Temperature	pH	Conductivity (mS/cm)	ORP	DO (%) (mg)	Turbidity (NTU)	Flow Rate
10:15								
5min	9.94	11.02	6.92	0.889	-112.0	1.41	2.0	300 ml
10 min	9.80	10.68	6.85	1.022	-110.6	1.26	1.8	300 ml
15min	9.80	10.65	6.86	1.112	-106.2	.80	1.8	300 ml
20min	9.80	10.66	6.85	1.110	-106.8	.48	1.6	300 ml
25 min	9.80	10.64	6.88	1.108	-112.0	.41	0.85	300 ml
30min	9.80	10.65	6.88	1.112	-112.4	.39	0.80	300 ml
35min	9.80	10.64	6.89	1.110	-112.6	.31	0.80	300 ml
40 min	9.80	10.65	6.88	1.110	-112.0	.36	0.80	300 ml

WATER SAMPLE

Time Collected: 11:00

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	Clear	Clear
Odor	NO	NO

LR-8

Turbidity <100 (NTU)	0.80
Sheen/Free Product	NO

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	glass	3	NO	HCL	—

NOTES

PID Reading 0.0 PPM

FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO) **GROUND WATER SAMPLING LOG (APPENDIX B)**

Date	5-8-12
Site Name	PAS
Location	Oswego NY
Project Number	
Personnel	Martin Fernandez

PAS Oswego
55 East Seneca St

Weather	Rain ~55°
Well #	M-21
Evacuation Method	Grunfus Low Flow
Sampling Method	EPA Low Flow Method II

WELL INFORMATION

Depth of Well	39.60	ft
Depth of Water	9.56	ft
Length of Water Column		ft
Volume of Water in Well		gal
3x Volume of Water in Well		gal

Water Vol/ft for:	
2" Diameter Well	= 0.163 X LWC
4" Diameter Well	= 0.653 X LWC
X 6" Diameter Well	= 1.469 X LWC
14" u	= 2.282 LWC

Volume removed before Sampling	3.5	gals
Did Well go dry?	NO	

Measurements Taken From: ☒ Well Casing ☐ Protective Casing ☐ Other:

INSTRUMENT CALIBRATION

pH Buffer Readings	
4.0 Standard	
7.0 Standard	
10.0 Standard	

Conductivity Standard Ratings	
84 S Standard	
1413 S Standard	

WATER PARAMETERS

Time	Depth to Water	Temperature	pH	Conductivity mS/cm	ORP	DO (%) mg/L	Turbidity (NTU)	Flow Rate
9:00								
5 min	9.60	9.83	7.45	0.863	-73.2	0.41	8.4	300 ml
10 min	9.58	10.45	7.48	0.948	-88.0	0.48	4.0	300 ml
15 min	9.58	10.45	7.50	0.948	-124.0	0.31	2.3	300 ml
20 min	9.58	10.45	7.50	0.950	-130.2	0.30	1.8	300 ml
25 min	9.58	10.44	7.49	0.948	-131.0	0.31	1.6	300 ml
30 min	9.58	10.46	7.50	0.948	-133.4	0.29	1.2	300 ml
35 min	9.58	10.45	7.50	0.949	-132.8	0.28	1.4	300 ml
40 min	9.58	10:45	7.50	0.948	-132.6	0.29	1.2	300 ml

WATER SAMPLE

Time Collected: 9:45

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	Clear	Clear
Odor	NO	NO

FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO) GROUND WATER SAMPLING LOG (APPENDIX B)

Turbidity <100 (NTU)	1.2
Sheen/Free Product	NO

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 mL	Glass	3	NO	HCL	—

NOTES

PID Reading 0.0 PPM

FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO) — GROUND WATER SAMPLING LOG (APPENDIX B)

Date	5-7-12	Weather	overcast 65°
Site Name	PAS Oswego	Well #	LCW-4
Location	55 East Seneca St	Evacuation Method	Grunfus Low Flow
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	MARTin Koennecke		

WELL INFORMATION

Depth of Well	28.80	ft
Depth of Water	16.82	ft
Length of Water Column		ft
Volume of Water in Well		gal
3x Volume of Water in Well		gal

Water Vol/ft for:	
2" Diameter Well	= 0.163 X LWC
4" Diameter Well	= 0.653 X LWC
6" Diameter Well	= 1.469 X LWC
14"	= 2.282 LWC

Volume removed before Sampling	4	gals
Did Well go dry?	NO	

Measurements Taken From: ☒ Well Casting ☐ Protective Casting ☐ Other:

INSTRUMENT CALIBRATION

pH Buffer Readings
4.0 Standard
7.0 Standard
10.0 Standard

Conductivity Standard Ratings
84 S Standard
1413 S Standard

WATER PARAMETERS

Time	Depth to Water (ft)	Temperature (C)	pH	Conductivity (ms/cm)	ORP	DO (%) (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)
13:35								
5 min	16.82	10.50	6.69	2.938	-95.1	0.39	5.6	300 ml
10 min	16.82	10.52	6.67	2.876	-93.9	0.29	4.1	300 ml
15 min	16.82	10.53	6.65	2.774	-85.0	0.21	3.5	300
20 min	16.82	10.53	6.64	2.695	-88.8	0.16	3.2	300
25 min	16.82	10.53	6.63	2.670	-90.9	0.17	3.2	300
30 min	16.82	10.53	6.63	2.614	-87.1	0.14	3.1	300
35 min	16.82	10.52	6.64	2.591	-87.0	0.14	3.1	300
40 min	16.82	10.51	6.64	2.578	-88.8	0.14	3.2	300
45 min	16.82	10.52	6.64	2.560	-95.0	0.13	3.6	300
50 min	16.82	10.52	6.64	2.553	-95.5	0.12	3.2	300
55 min	16.82	10.51	6.64	2.552	-95.9	0.12	3.1	300

WATER SAMPLE ~~14:35~~

Time Collected: 14:35

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	Slight Yellow	Slight Yellow
Odor	Slight	Slight

LCW-4

Turbidity <100 (NTU)	3.1
Sheen/Free Product	NO

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 mL	glass	3	NO	HCL	

NOTES

PID Readings – Peak – 1.3 PPM.
Avg. – 0.0 PPM.

FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO) **GROUND WATER SAMPLING LOG (APPENDIX B)**

Date	5-7-12	Weather	Sunny 60°
Site Name	PAS Oswego	Well #	LCW-2
Location	55 East Seneca St	Evacuation Method	Grunfus Low Flow
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	Martin Koennecke		

WELL INFORMATION

Depth of Well	19.85	ft
Depth of Water	10.35	ft
Length of Water Column		ft
Volume of Water in Well		gal
3x Volume of Water in Well		gal

Water Vol/ft for:	
2" Diameter Well	= 0.163 X LWC
4" Diameter Well	= 0.653 X LWC
6" Diameter Well	= 1.469 X LWC
14"	= 2.282 LWC

Volume removed before Sampling	3.5	gals
Did Well go dry?	NO	

Measurements Taken From: ☒ Well Casting ☐ Protective Casting ☐ Other:

INSTRUMENT CALIBRATION

pH Buffer Readings	
4.0 Standard	
7.0 Standard	
10.0 Standard	

Conductivity Standard Ratings	
84 S Standard	
1413 S Standard	

WATER PARAMETERS

Time	Depth to Water	Temperature	pH	Conductivity mS/cm	ORP	DO (%) mg/L	Turbidity (NTU)	Flow Rate mL/min
11:40								
5 min	10.35	11.04	6.85	1.333	-28.7	1.30	2.0	300
10 min	10.35	10.91	6.78	1.333	-24.9	0.86	2.2	300
15 min	10.35	10.78	6.67	1.333	-21.5	0.40	1.8	300
20 min	10.35	10.81	6.65	1.335	-22.6	0.33	1.8	300
25 min	10.35	10.78	6.64	1.334	-24.6	0.27	1.8	300
30 min	10.35	10.58	6.63	1.330	-24.8	0.26	2.0	300
35 min	10.35	10.65	6.64	1.334	-25.8	0.23	1.8	300
40 min	10.35	10.68	6.65	1.334	-26.2	0.20	1.8	300
45 min	10.35	10.68	6.64	1.334	-25.8	0.20	1.8	300

WATER SAMPLE

Time Collected: 12:30

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	Slight Yellow	Clear
Odor	NO	NO

LCW-2

Turbidity <100 (NTU)	1.8
Sheen/Free Product	NO

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	glass	9	NO	HCL	

NOTES

PID Readings - High 45.0 PPM
Avg. 8.6 PPM

MS, MSD Collected

FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO) **GROUND WATER SAMPLING LOG (APPENDIX B)**

Date	5-7-12	Weather	Sunny 60°
Site Name	PAS Oswego	Well #	LR-6
Location	55 East Seneca St	Evacuation Method	Grunfus Low Flow
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	Martin Koennecke		

WELL INFORMATION

Depth of Well	ft		
Depth of Water	10.30 ft	X	
Length of Water Column	ft		
Volume of Water in Well	gal		
3x Volume of Water in Well	gal		

Water Vol/ft for:	
2" Diameter Well	= 0.163 X LWC
4" Diameter Well	= 0.653 X LWC
6" Diameter Well	= 1.469 X LWC
14"	= 2.282 LWC

Volume removed before Sampling	3	gals
Did Well go dry?	NO	

Measurements Taken From: ☒ Well Casting ☐ Protective Casting ☐ Other:

INSTRUMENT CALIBRATION

pH Buffer Readings	
4.0 Standard	
7.0 Standard	
10.0 Standard	

Conductivity Standard Ratings	
84 S Standard	
1413 S Standard	

WATER PARAMETERS

Time	Depth to Water	Temperature	pH	Conductivity mS/cm	ORP	DO (%) mg/L	Turbidity (NTU)	Flow Rate mL/min
9:50								
5min	10.82	10.73	6.51	0.884	48.9	0.86	2.0	300
10min	10.82	10.83	6.41	0.887	42.0	0.97	1.6	300
15min	10.80	10.90	6.61	0.890	5.6	0.72	1.7	300
20min	10.80	10.95	6.66	0.892	2.2	0.60	1.8	300
25min	10.80	11.00	6.69	0.891	0.0	0.47	1.8	300
30min	10.80	10.98	6.70	0.892	-0.5	0.41	1.7	300
35min	10.80	11.01	6.71	0.892	-1.8	0.39	1.8	300
40min	10.80	11.00	6.71	0.893	-2.0	0.39	1.8	300
45min	10.80	11.00	6.72	0.893	-2.1	0.36	1.7	300

WATER SAMPLE

Time Collected: 10:40

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	Clear	Clear
Odor	NO	NO

LR-60

Turbidity <100 (NTU)	1.7
Sheen/Free Product	NO

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ML	glass	6	NO	HCL	

NOTES

PID Readings 0.0 PPM

X-1 Collected

Standard Order

PACKING

Pine Environmental Services, Inc.
1900 Brewerton Road, Mattydale, NY 13211
Toll Free (877) 903-7463 - Local (315) 455-5100
Fax (315) 455-5130
www.pine-environmental.com

CONTRACT NUMBER: Y086814

CONTRACT DATE: 4/30/2012
BEGIN DATE: 5/7/2012
CUSTOMER P.O.: 180056777
PROJECT:

TAKEN BY: LDM
SHIP DATE: 5/7/2012 ~~MON~~ FRI
5/4/12

BILLED TO: 06-OB13057
O'BRIEN GERE ENGINEERS
ATTN: ACCOUNTS PAYABLE
333 WEST WASHINGTON STREET
P.O. BOX 4873
SYRACUSE, NY 13221-4873

SHIP TO:
PINE ENVIRONMENTAL SVCS, INC
ATTN: MARTIN KONECKE
1900 BREWERTON ROAD
MATTYDALE, NY 13211

CONFIRM TO: MARTIN KONECKE

Comment:

SHIP VIA:	SHIPPER ID:	TERMS:
Customer Pick Up		Net 30 Days

ITEM NUMBER	TYPE	UNIT	Ordered	Shipped	Back Order
RAIR21001	R	EACH	1.00	2616	
PID-MiniRAE2000 10.6 120V Contains: Charger, Probe, Manual and Alk Battery Adapter			Warehouse:NY1		
RWSA21007	R	EACH	1.00	19230	—
Pump- Sub Grundfos 2" RENTAL			Warehouse:NY1		
RWSA21010	R	EACH	1.00	14076	—
Control Box for Grundfos 2" 120V with Case			Warehouse:NY1		
RMIS20001	R	EACH	1.00	17485	—
Generator -SMALL			Warehouse:NY1		
RWQA49015	R	EACH	1.00	2933	—
Lamotte 2020 Turbidity Meter			Warehouse:NY1		
RWQA52170	R	EACH	1.00	4663	—
YSI 556-01 MPS- DO,pH,Cond,ORP Temp - Includes carrying case, PC adapter RS-232 & FLOW CELL, YSI 556			Warehouse:NY1		
RWQA52177	R	EACH	1.00	1	—
Flow Cell, YSI 556			Warehouse:NY1		
SA12101-XL	S	BOX	1.00	1	—
Glove Nitrile Sempergd PF-XL			Warehouse:SNY		

PLEASE CALL WHEN YOU ARE DONE WITH THE EQUIPMENT AT (877) 903-7463, OR EMAIL AT PINE-NY@PINE-ENVIRONMENTAL.COM THE DAY YOU ARE FINISHED OR THE NEXT BUSINESS DAY BEFORE NOON.

Standard Order

PACKING

Pine Environmental Services, Inc.
1900 Brewerton Road, Mattydale, NY 13211
Toll Free (877) 903-7463 - Local (315) 455-5100
Fax (315) 455-5130
www.pine-environmental.com

CONTRACT NUMBER: Y086814

CONTRACT DATE: 4/30/2012
BEGIN DATE: 5/7/2012
CUSTOMER P.O.: 180056777
PROJECT:

TAKEN BY: LDM
SHIP DATE: 5/7/2012 MON

BILLED TO: 06-OB13057
O'BRIEN GERE ENGINEERS
ATTN: ACCOUNTS PAYABLE
333 WEST WASHINGTON STREET
P.O. BOX 4873
SYRACUSE, NY 13221-4873

SHIP TO:
PINE ENVIRONMENTAL SVCS, INC
ATTN: MARTIN KONECKE
1900 BREWERTON ROAD
MATTYDALE, NY 13211

CONFIRM TO: MARTIN KONECKE

Comment:

SHIP VIA:	SHIPPER ID:	TERMS:
Customer Pick Up		Net 30 Days

ITEM NUMBER	TYPE	UNIT	Ordered	Shipped	Back Order

BILLING PERIOD WILL END ONCE THE CALL OR EMAIL IS RECEIVED. EQUIPMENT MUST BE AVAILABLE FOR PICKUP

Life Science Laboratories, Inc.
Central Lab

5854 Butternut Drive
East Syracuse, New York 13057
(315) 445-1105

Chain of Custody

Client: OBRIEN & GERE

Project: PAS- Oswego Semi Annual wet Samples

Sampled by: MARTIN KOENNECKE

Client Contact: KEVIN STONE Phone #

Sample Description

Sample Location	Date Collected	Time Collected	Sample Matrix	Comp. or Grab	No. of Containers	Analysis/Method: 8260	Comments
EQUIPMENT BLANK	5-7-12	9:30	WATER	GRAB	3	3	
LR-6	5-7-12	10:40	WATER	GRAB	3	3	
LCW-2, MS, MSD	5-7-12	1230	WATER	GRAB	9	9	
LCW-4	5-7-12	14:35	WATER	GRAB	3	3	
X-1	5-7-12	—	WATER	GRAB	3	3	
M-21	5-8-12	9:45	WATER	GRAB	3	3	
LR-8	5-8-12	11:00	WATER	GRAB	3	3	
QC TRIP BLANKS					2	2	

Relinquished by: Martin Koennecke	Date: 5-8-12 Time: 1405	Received by:	Date: Time:
Relinquished by:	Date: Time:	Received by:	Date: Time:
Relinquished by:	Date: Time:	Received by Lab:	Date: 5-8-12 Time: 14:65
Shipment Method: HAND		Airbill Number:	

Turnaround Time Required:
Routine X
Rush

Comments:

Cooler Temperature: 6.0° on Ice

Original - Laboratory
Copy - Client

ATTACHMENT D-4

SEMI-ANNUAL LEACHATE
AND GROUNDWATER MONITORING
MAY 2012

MEMORANDUM

TO: Kevin Stone **cc:**

FROM: Karen Storne

RE: PAS Oswego Data Validation Report

FILE: 6363/48585.260.010

DATE: July 12, 2012

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 2012.

The environmental samples, trip blank, field duplicate, matrix spike and matrix spike duplicate 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. 2008. Reviewed 2009. *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 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.

VOC DATA EVALUATION SUMMARY

The following QA/QC parameters were found to meet method and validation criteria or did not result in additional qualification of sample results:

- Chain-of-custody records and sample collection
- Holding times and sample preservation
- GC/MS instrument check
- Surrogate recoveries
- MS/MSD analysis
- LCS analysis
- Internal standards performance
- Field duplicate analysis
- Target analyte identification
- Documentation completeness

Excursions from method or validation criteria and additional observations are described below.

I. Blank analysis

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

- Acetone in samples LR-6 07May2012, LCW-2 07May2012, X-1 07May2012 [LR-6], M-21 08May2012 and LR-8 08May2012.
- Methylene chloride in samples LCW-2 07May2012 and LCW-4 07May2012.

II. Calibrations

Due to minor initial calibration excursions, the following sample results were qualified as approximate (UJ):

- Dibromochloromethane and 1,1,2,2-tetrachloroethane in samples Equipment Blank 07May2012, LR-6 07May2012, LCW-2 07May2012, LCW-4 07May2012, X-1 07May2012 [LR-6], M-21 08May2012, LR-8 08May2012 and QC Trip Blank 08May2012.

III. 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 07May2012 and LCW-4 07May2012 due to the presence of elevated target analytes.

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.

ATTACHMENT A

Sample Cross Reference List

Table 2. *Sample cross reference list*

Laboratory	Date Collected	Laboratory ID	Client ID	Matrix	Analysis Requested
Life Science Labs	5/7/2012	K1205093-001	Equipment Blank 07May2012	Aqueous	VOCs
Life Science Labs	5/7/2012	K1205093-002	LR-6 07May2012	Groundwater	VOCs
Life Science Labs	5/7/2012	K1205093-003	LCW-2 07May2012, MS/MSD	Groundwater	VOCs
Life Science Labs	5/7/2012	K1205093-004	LCW-4 07May2012	Groundwater	VOCs
Life Science Labs	5/7/2012	K1205093-005	X-1 07May2012 [LR-6]	Groundwater	VOCs
Life Science Labs	5/8/2012	K1205093-006	M-21 08May2012	Groundwater	VOCs
Life Science Labs	5/8/2012	K1205093-007	LR-8 08May2012	Groundwater	VOCs
Life Science Labs	5/8/2012	K1205093-008	QC Trip Blank 08May2012	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.

ATTACHMENT B

Data Validation Approach

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 for organic and inorganic analyses 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 and Inorganic 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.
	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

O'Brien & Gere Data validation approach *Using USEPA Region II Data validation guidelines*	
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.
	For calibration blanks, preparation blanks and field blanks at concentrations greater than laboratory QLs: (a) Concentration in the associated samples of greater than the blank concentration and less than ten times the blank concentration are qualified as approximate (J). (b) Concentrations in the associated samples of greater than or equal to the MDLs but less than or equal to QLs are revised to the QL level and are qualified as non-detected (U). (c) Concentration in the associated samples of greater than the QLs and less than the blank concentration are rejected (R).
	For calibration blanks and preparation blanks at concentrations less than the negative value of the QLs: (a) Concentration in the associated samples of less than ten times the QLs are qualified as approximate (J). (b) Non-detected concentrations in the associated samples are qualified as approximate (UJ).
Source O'Brien & Gere	

ATTACHMENT C

Definitions of QA/QC Terms

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	

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-001A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*Equipment Blank 07May*
W Order:	K1205093	**Collection Date:**	05/07/12 9:30
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R24038
Revision:	05/10/12 9:22	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-K9609.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	05/09/12 16:16
Chloromethane	ND		1.00	0.33	µg/L	1	05/09/12 16:16
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/09/12 16:16
Bromomethane	ND		1.00	0.33	µg/L	1	05/09/12 16:16
Chloroethane	ND		1.00	0.33	µg/L	1	05/09/12 16:16
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/09/12 16:16
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/09/12 16:16
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/09/12 16:16
Acetone	2.59	J	10.0	1.00	µg/L	1	05/09/12 16:16
Carbon disulfide	ND		0.50	0.11	µg/L	1	05/09/12 16:16
Methyl acetate	ND		5.00	1.00	µg/L	1	05/09/12 16:16
Methylene chloride	ND		2.00	0.16	µg/L	1	05/09/12 16:16
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/09/12 16:16
1,1-Dichloroethane	ND		0.50	0.10	µg/L	1	05/09/12 16:16
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
2-Butanone	ND		10.0	1.00	µg/L	1	05/09/12 16:16
Chloroform	ND		0.50	0.10	µg/L	1	05/09/12 16:16
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/09/12 16:16
Cyclohexane	ND		0.50	0.10	µg/L	1	05/09/12 16:16
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/09/12 16:16
Benzene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 16:16
Trichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
Methylcyclohexane	ND		0.50	0.10	µg/L	1	05/09/12 16:16
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/09/12 16:16
Bromodichloromethane	ND		0.50	0.10	µg/L	1	05/09/12 16:16
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 16:16
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/09/12 16:16
Toluene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 16:16
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 16:16
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
2-Hexanone	ND		5.00	1.00	µg/L	1	05/09/12 16:16

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

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-001A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*Equipment Blank 07May*
W Order:	K1205093	**Collection Date:**	05/07/12 9:30
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R24038
Revision:	05/10/12 9:22	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-K9609.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 16:16
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/09/12 16:16
Chlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/09/12 16:16
Styrene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
Bromoform	ND		1.00	0.33	µg/L	1	05/09/12 16:16
Isopropylbenzene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
1,1,2,2-Tetrachloroethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 16:16
1,3-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
1,4-Dichlorobenzene	ND		0.50	0.16	µg/L	1	05/09/12 16:16
1,2-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 16:16
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/09/12 16:16
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/09/12 16:16
Surr: 1,2-Dichloroethane-d4	121		75-128	0.16	%REC	1	05/09/12 16:16
Surr: Toluene-d8	97		75-125	0.10	%REC	1	05/09/12 16:16
Surr: 4-Bromofluorobenzene	102		75-125	0.10	%REC	1	05/09/12 16:16

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

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-008A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*QC Trip Blanks 08May20*
W Order:	K1205093	**Collection Date:**	05/08/12 0:00
Matrix:	WATER Q	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R24038
Revision:	05/10/12 9:22 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-K9610.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	05/09/12 16:47
Chloromethane	ND		1.00	0.33	µg/L	1	05/09/12 16:47
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/09/12 16:47
Bromomethane	ND		1.00	0.33	µg/L	1	05/09/12 16:47
Chloroethane	ND		1.00	0.33	µg/L	1	05/09/12 16:47
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/09/12 16:47
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/09/12 16:47
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/09/12 16:47
Acetone	2.59	J	10.0	1.00	µg/L	1	05/09/12 16:47
Carbon disulfide	ND		0.50	0.11	µg/L	1	05/09/12 16:47
Methyl acetate	ND		5.00	1.00	µg/L	1	05/09/12 16:47
Methylene chloride	0.29	J	2.00	0.16	µg/L	1	05/09/12 16:47
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/09/12 16:47
1,1-Dichloroethane	ND		0.50	0.10	µg/L	1	05/09/12 16:47
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
2-Butanone	ND		10.0	1.00	µg/L	1	05/09/12 16:47
Chloroform	ND		0.50	0.10	µg/L	1	05/09/12 16:47
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/09/12 16:47
Cyclohexane	ND		0.50	0.10	µg/L	1	05/09/12 16:47
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/09/12 16:47
Benzene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 16:47
Trichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
Methylcyclohexane	ND		0.50	0.10	µg/L	1	05/09/12 16:47
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/09/12 16:47
Bromodichloromethane	ND		0.50	0.10	µg/L	1	05/09/12 16:47
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 16:47
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/09/12 16:47
Toluene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 16:47
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 16:47
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
2-Hexanone	ND		5.00	1.00	µg/L	1	05/09/12 16:47

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

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-008A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*QC Trip Blanks 08May20*
W Order:	K1205093	**Collection Date:**	05/08/12 0:00
Matrix:	WATER Q	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R24038
Revision:	05/10/12 9:22	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-K9610.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 16:47
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/09/12 16:47
Chlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/09/12 16:47
Styrene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
Bromoform	ND		1.00	0.33	µg/L	1	05/09/12 16:47
Isopropylbenzene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
1,1,2,2-Tetrachloroethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 16:47
1,3-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
1,4-Dichlorobenzene	ND		0.50	0.16	µg/L	1	05/09/12 16:47
1,2-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 16:47
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/09/12 16:47
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/09/12 16:47
Surr: 1,2-Dichloroethane-d4	120		75-128	0.16	%REC	1	05/09/12 16:47
Surr: Toluene-d8	95		75-125	0.10	%REC	1	05/09/12 16:47
Surr: 4-Bromofluorobenzene	99		75-125	0.10	%REC	1	05/09/12 16:47

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

Print Date: 05/18/12 7:21 602346 **Project Supervisor:** Anthony Crescenzi

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-002A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LR-6 07May2012*
W Order:	K1205093	**Collection Date:**	05/07/12 10:40
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R24038
Revision:	05/10/12 9:22 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-K9606.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	05/09/12 14:43
Chloromethane	ND		1.00	0.33	µg/L	1	05/09/12 14:43
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/09/12 14:43
Bromomethane	ND		1.00	0.33	µg/L	1	05/09/12 14:43
Chloroethane	ND		1.00	0.33	µg/L	1	05/09/12 14:43
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/09/12 14:43
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/09/12 14:43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/09/12 14:43
Acetone	~~2.81~~ 10U	J	10.0	1.00	µg/L	1	05/09/12 14:43
Carbon disulfide	ND		0.50	0.11	µg/L	1	05/09/12 14:43
Methyl acetate	ND		5.00	1.00	µg/L	1	05/09/12 14:43
Methylene chloride	ND		2.00	0.16	µg/L	1	05/09/12 14:43
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 14:43
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/09/12 14:43
1,1-Dichloroethane	1.83		0.50	0.10	µg/L	1	05/09/12 14:43
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 14:43
2-Butanone	ND		10.0	1.00	µg/L	1	05/09/12 14:43
Chloroform	ND		0.50	0.10	µg/L	1	05/09/12 14:43
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/09/12 14:43
Cyclohexane	ND		0.50	0.10	µg/L	1	05/09/12 14:43
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/09/12 14:43
Benzene	ND		0.50	0.10	µg/L	1	05/09/12 14:43
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 14:43
Trichloroethene	0.16J	J	0.50	0.10	µg/L	1	05/09/12 14:43
Methylcyclohexane	ND		0.50	0.10	µg/L	1	05/09/12 14:43
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/09/12 14:43
Bromodichloromethane	ND		0.50	0.10	µg/L	1	05/09/12 14:43
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 14:43
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/09/12 14:43
Toluene	ND		0.50	0.10	µg/L	1	05/09/12 14:43
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 14:43
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 14:43
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/09/12 14:43
2-Hexanone	ND		5.00	1.00	µg/L	1	05/09/12 14:43

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

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-002A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LR-6 07May2012*
W Order:	K1205093	**Collection Date:**	05/07/12 10:40
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R24038
Revision:	05/10/12 9:22	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-K9606.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 14:43
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/09/12 14:43
Chlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 14:43
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/09/12 14:43
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/09/12 14:43
Styrene	ND		0.50	0.10	µg/L	1	05/09/12 14:43
Bromoform	ND		1.00	0.33	µg/L	1	05/09/12 14:43
Isopropylbenzene	ND		0.50	0.10	µg/L	1	05/09/12 14:43
1,1,2,2-Tetrachloroethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 14:43
1,3-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 14:43
1,4-Dichlorobenzene	ND		0.50	0.16	µg/L	1	05/09/12 14:43
1,2-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 14:43
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/09/12 14:43
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/09/12 14:43
Surr: 1,2-Dichloroethane-d4	116		75-128	0.16	%REC	1	05/09/12 14:43
Surr: Toluene-d8	97		75-125	0.10	%REC	1	05/09/12 14:43
Surr: 4-Bromofluorobenzene	103		75-125	0.10	%REC	1	05/09/12 14:43

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

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-003A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LCW-2 07May2012*
W Order:	K1205093	**Collection Date:**	05/07/12 12:30
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R24038
Revision:	05/10/12 9:22	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-K9600.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	05/09/12 11:37
Chloromethane	ND		5.00	1.65	µg/L	5	05/09/12 11:37
Vinyl chloride	6.30		5.00	1.65	µg/L	5	05/09/12 11:37
Bromomethane	ND		5.00	1.65	µg/L	5	05/09/12 11:37
Chloroethane	3.00	J	5.00	1.65	µg/L	5	05/09/12 11:37
Trichlorofluoromethane	ND		5.00	0.50	µg/L	5	05/09/12 11:37
1,1-Dichloroethene	ND		2.50	0.80	µg/L	5	05/09/12 11:37
1,1,2-Trichloro-1,2,2-trifluoroethane	1.80	J	2.50	0.50	µg/L	5	05/09/12 11:37
Acetone	~~8.95~~	J	50.0	5.00	µg/L	5	05/09/12 11:37
Carbon disulfide	ND		2.50	0.55	µg/L	5	05/09/12 11:37
Methyl acetate	ND		25.0	5.00	µg/L	5	05/09/12 11:37
Methylene chloride	~~1.10~~	J	10.0	0.80	µg/L	5	05/09/12 11:37
trans-1,2-Dichloroethene	ND		2.50	0.50	µg/L	5	05/09/12 11:37
Methyl tert-butyl ether	ND		5.00	0.80	µg/L	5	05/09/12 11:37
1,1-Dichloroethane	27.0		2.50	0.50	µg/L	5	05/09/12 11:37
cis-1,2-Dichloroethene	18.2		2.50	0.50	µg/L	5	05/09/12 11:37
2-Butanone	ND		50.0	5.00	µg/L	5	05/09/12 11:37
Chloroform	2.50		2.50	0.50	µg/L	5	05/09/12 11:37
1,1,1-Trichloroethane	19.2		2.50	0.50	µg/L	5	05/09/12 11:37
Cyclohexane	0.55	J	2.50	0.50	µg/L	5	05/09/12 11:37
Carbon tetrachloride	ND		2.50	0.50	µg/L	5	05/09/12 11:37
Benzene	93.2		2.50	0.50	µg/L	5	05/09/12 11:37
1,2-Dichloroethane	ND		2.50	0.80	µg/L	5	05/09/12 11:37
Trichloroethene	42.4		2.50	0.50	µg/L	5	05/09/12 11:37
Methylcyclohexane	ND		2.50	0.50	µg/L	5	05/09/12 11:37
1,2-Dichloropropane	ND		2.50	0.80	µg/L	5	05/09/12 11:37
Bromodichloromethane	ND		2.50	0.50	µg/L	5	05/09/12 11:37
cis-1,3-Dichloropropene	ND		2.50	0.80	µg/L	5	05/09/12 11:37
4-Methyl-2-pentanone	ND		25.0	5.00	µg/L	5	05/09/12 11:37
Toluene	ND		2.50	0.50	µg/L	5	05/09/12 11:37
trans-1,3-Dichloropropene	ND		2.50	0.80	µg/L	5	05/09/12 11:37
1,1,2-Trichloroethane	ND		2.50	0.80	µg/L	5	05/09/12 11:37
Tetrachloroethene	139		2.50	0.50	µg/L	5	05/09/12 11:37
2-Hexanone	ND		25.0	5.00	µg/L	5	05/09/12 11:37

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

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-003A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LCW-2 07May2012*
W Order:	K1205093	**Collection Date:**	05/07/12 12:30
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R24038
Revision:	05/10/12 9:22	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-K9600.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND	U	2.50	0.50	µg/L	5	05/09/12 11:37
1,2-Dibromoethane	ND		2.50	0.80	µg/L	5	05/09/12 11:37
Chlorobenzene	22.6		2.50	0.50	µg/L	5	05/09/12 11:37
Ethylbenzene	12.1		2.50	0.50	µg/L	5	05/09/12 11:37
Xylenes (total)	6.50		5.00	1.50	µg/L	5	05/09/12 11:37
Styrene	ND		2.50	0.50	µg/L	5	05/09/12 11:37
Bromoform	ND		5.00	1.65	µg/L	5	05/09/12 11:37
Isopropylbenzene	1.70	J	2.50	0.50	µg/L	5	05/09/12 11:37
1,1,2,2-Tetrachloroethane	ND	U	2.50	0.50	µg/L	5	05/09/12 11:37
1,3-Dichlorobenzene	ND		2.50	0.50	µg/L	5	05/09/12 11:37
1,4-Dichlorobenzene	ND		2.50	0.80	µg/L	5	05/09/12 11:37
1,2-Dichlorobenzene	1.75	J	2.50	0.50	µg/L	5	05/09/12 11:37
1,2-Dibromo-3-chloropropane	ND		25.0	5.00	µg/L	5	05/09/12 11:37
1,2,4-Trichlorobenzene	ND		5.00	0.50	µg/L	5	05/09/12 11:37
Surr: 1,2-Dichloroethane-d4	109		75-128	0.80	%REC	5	05/09/12 11:37
Surr: Toluene-d8	98		75-125	0.50	%REC	5	05/09/12 11:37
Surr: 4-Bromofluorobenzene	103		75-125	0.50	%REC	5	05/09/12 11:37

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

Print Date: 05/18/12 7:21 602339 **Project Supervisor:** Anthony Crescenzi

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-004A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LCW-4 07May2012*
W Order:	K1205093	**Collection Date:**	05/07/12 14:35
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R24038
Revision:	05/10/12 9:22	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-K9601.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	05/09/12 12:08
Chloromethane	ND		20.0	6.60	µg/L	20	05/09/12 12:08
Vinyl chloride	22.0		20.0	6.60	µg/L	20	05/09/12 12:08
Bromomethane	ND		20.0	6.60	µg/L	20	05/09/12 12:08
Chloroethane	92.0		20.0	6.60	µg/L	20	05/09/12 12:08
Trichlorofluoromethane	ND		20.0	2.00	µg/L	20	05/09/12 12:08
1,1-Dichloroethene	ND		10.0	3.20	µg/L	20	05/09/12 12:08
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	2.00	µg/L	20	05/09/12 12:08
Acetone	ND		200	20.0	µg/L	20	05/09/12 12:08
Carbon disulfide	ND		10.0	2.20	µg/L	20	05/09/12 12:08
Methyl acetate	ND		100	20.0	µg/L	20	05/09/12 12:08
Methylene chloride	~~4.60~~ 40U	~~J~~	40.0	3.20	µg/L	20	05/09/12 12:08
trans-1,2-Dichloroethene	ND		10.0	2.00	µg/L	20	05/09/12 12:08
Methyl tert-butyl ether	ND		20.0	3.20	µg/L	20	05/09/12 12:08
1,1-Dichloroethane	11.0		10.0	2.00	µg/L	20	05/09/12 12:08
cis-1,2-Dichloroethene	25.8		10.0	2.00	µg/L	20	05/09/12 12:08
2-Butanone	ND		200	20.0	µg/L	20	05/09/12 12:08
Chloroform	ND		10.0	2.00	µg/L	20	05/09/12 12:08
1,1,1-Trichloroethane	ND		10.0	2.00	µg/L	20	05/09/12 12:08
Cyclohexane	7.40	J	10.0	2.00	µg/L	20	05/09/12 12:08
Carbon tetrachloride	ND		10.0	2.00	µg/L	20	05/09/12 12:08
Benzene	445		10.0	2.00	µg/L	20	05/09/12 12:08
1,2-Dichloroethane	ND		10.0	3.20	µg/L	20	05/09/12 12:08
Trichloroethene	ND		10.0	2.00	µg/L	20	05/09/12 12:08
Methylcyclohexane	2.40	J	10.0	2.00	µg/L	20	05/09/12 12:08
1,2-Dichloropropane	ND		10.0	3.20	µg/L	20	05/09/12 12:08
Bromodichloromethane	ND		10.0	2.00	µg/L	20	05/09/12 12:08
cis-1,3-Dichloropropene	ND		10.0	3.20	µg/L	20	05/09/12 12:08
4-Methyl-2-pentanone	ND		100	20.0	µg/L	20	05/09/12 12:08
Toluene	29.4		10.0	2.00	µg/L	20	05/09/12 12:08
trans-1,3-Dichloropropene	ND		10.0	3.20	µg/L	20	05/09/12 12:08
1,1,2-Trichloroethane	ND		10.0	3.20	µg/L	20	05/09/12 12:08
Tetrachloroethene	2.60	J	10.0	2.00	µg/L	20	05/09/12 12:08
2-Hexanone	ND		100	20.0	µg/L	20	05/09/12 12:08

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

Print Date: 05/18/12 7:21 602340 **Project Supervisor:** Anthony Crescenzi

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	Lab ID:	K1205093-004A
Project:	PAS Oswego-Semi-Annual Well Sampling	Client Sample ID:	*LCW-4 07May2012*
W Order:	K1205093	Collection Date:	05/07/12 14:35
Matrix:	WATER	Date Received:	05/08/12 14:05
Inst. ID:	MSK_75	Sample Size 10 mL	PrepDate:
ColumnID:	Rtx-VMS	%Moisture:	BatchNo: R24038
Revision:	05/10/12 9:22	TestCode: 8260W_OLM42	FileID: 1-SAMP-K9601.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND	UJ	10.0	2.00	µg/L	20	05/09/12 12:08
1,2-Dibromoethane	ND		10.0	3.20	µg/L	20	05/09/12 12:08
Chlorobenzene	275		10.0	2.00	µg/L	20	05/09/12 12:08
Ethylbenzene	93.4		10.0	2.00	µg/L	20	05/09/12 12:08
Xylenes (total)	771		20.0	6.00	µg/L	20	05/09/12 12:08
Styrene	ND		10.0	2.00	µg/L	20	05/09/12 12:08
Bromoform	ND		20.0	6.60	µg/L	20	05/09/12 12:08
Isopropylbenzene	4.80	J	10.0	2.00	µg/L	20	05/09/12 12:08
1,1,2,2-Tetrachloroethane	ND	UJ	10.0	2.00	µg/L	20	05/09/12 12:08
1,3-Dichlorobenzene	ND		10.0	2.00	µg/L	20	05/09/12 12:08
1,4-Dichlorobenzene	3.80	J	10.0	3.20	µg/L	20	05/09/12 12:08
1,2-Dichlorobenzene	32.0		10.0	2.00	µg/L	20	05/09/12 12:08
1,2-Dibromo-3-chloropropane	ND		100	20.0	µg/L	20	05/09/12 12:08
1,2,4-Trichlorobenzene	ND		20.0	2.00	µg/L	20	05/09/12 12:08
Surr: 1,2-Dichloroethane-d4	109		75-128	3.20	%REC	20	05/09/12 12:08
Surr: Toluene-d8	97		75-125	2.00	%REC	20	05/09/12 12:08
Surr: 4-Bromofluorobenzene	101		75-125	2.00	%REC	20	05/09/12 12:08

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

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-005A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*X-1 07May2012*
W Order:	K1205093	**Collection Date:**	05/07/12 0:00
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R24038
Revision:	05/10/12 9:22 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-K9602.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	05/09/12 12:39
Chloromethane	ND		1.00	0.33	µg/L	1	05/09/12 12:39
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/09/12 12:39
Bromomethane	ND		1.00	0.33	µg/L	1	05/09/12 12:39
Chloroethane	ND		1.00	0.33	µg/L	1	05/09/12 12:39
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/09/12 12:39
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/09/12 12:39
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/09/12 12:39
Acetone	~~2.5~~ 10	~~J~~	10.0	1.00	µg/L	1	05/09/12 12:39
Carbon disulfide	ND		0.50	0.11	µg/L	1	05/09/12 12:39
Methyl acetate	ND		5.00	1.00	µg/L	1	05/09/12 12:39
Methylene chloride	ND		2.00	0.16	µg/L	1	05/09/12 12:39
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 12:39
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/09/12 12:39
1,1-Dichloroethane	1.80		0.50	0.10	µg/L	1	05/09/12 12:39
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 12:39
2-Butanone	ND		10.0	1.00	µg/L	1	05/09/12 12:39
Chloroform	ND		0.50	0.10	µg/L	1	05/09/12 12:39
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/09/12 12:39
Cyclohexane	ND		0.50	0.10	µg/L	1	05/09/12 12:39
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/09/12 12:39
Benzene	ND		0.50	0.10	µg/L	1	05/09/12 12:39
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 12:39
Trichloroethene	0.17	J	0.50	0.10	µg/L	1	05/09/12 12:39
Methylcyclohexane	ND		0.50	0.10	µg/L	1	05/09/12 12:39
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/09/12 12:39
Bromodichloromethane	ND		0.50	0.10	µg/L	1	05/09/12 12:39
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 12:39
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/09/12 12:39
Toluene	ND		0.50	0.10	µg/L	1	05/09/12 12:39
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 12:39
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 12:39
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/09/12 12:39
2-Hexanone	ND		5.00	1.00	µg/L	1	05/09/12 12:39

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

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-005A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*X-1 07May2012*
W Order:	K1205093	**Collection Date:**	05/07/12 0:00
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R24038
Revision:	05/10/12 9:22	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-K9602.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 12:39
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/09/12 12:39
Chlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 12:39
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/09/12 12:39
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/09/12 12:39
Styrene	ND		0.50	0.10	µg/L	1	05/09/12 12:39
Bromoform	ND		1.00	0.33	µg/L	1	05/09/12 12:39
Isopropylbenzene	ND		0.50	0.10	µg/L	1	05/09/12 12:39
1,1,2,2-Tetrachloroethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 12:39
1,3-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 12:39
1,4-Dichlorobenzene	ND		0.50	0.16	µg/L	1	05/09/12 12:39
1,2-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 12:39
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/09/12 12:39
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/09/12 12:39
Surr: 1,2-Dichloroethane-d4	111		75-128	0.16	%REC	1	05/09/12 12:39
Surr: Toluene-d8	98		75-125	0.10	%REC	1	05/09/12 12:39
Surr: 4-Bromofluorobenzene	102		75-125	0.10	%REC	1	05/09/12 12:39

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

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-006A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*M-21 08May2012*
W Order:	K1205093	**Collection Date:**	05/08/12 9:45
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R24038
Revision:	05/10/12 9:22 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-K9607.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	05/09/12 15:14
Chloromethane	ND		1.00	0.33	µg/L	1	05/09/12 15:14
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/09/12 15:14
Bromomethane	ND		1.00	0.33	µg/L	1	05/09/12 15:14
Chloroethane	0.92	J	1.00	0.33	µg/L	1	05/09/12 15:14
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/09/12 15:14
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/09/12 15:14
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/09/12 15:14
Acetone	~~3.06~~ 10U	~~J~~	10.0	1.00	µg/L	1	05/09/12 15:14
Carbon disulfide	ND		0.50	0.11	µg/L	1	05/09/12 15:14
Methyl acetate	ND		5.00	1.00	µg/L	1	05/09/12 15:14
Methylene chloride	ND		2.00	0.16	µg/L	1	05/09/12 15:14
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 15:14
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/09/12 15:14
1,1-Dichloroethane	ND		0.50	0.10	µg/L	1	05/09/12 15:14
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 15:14
2-Butanone	ND		10.0	1.00	µg/L	1	05/09/12 15:14
Chloroform	ND		0.50	0.10	µg/L	1	05/09/12 15:14
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/09/12 15:14
Cyclohexane	1.00		0.50	0.10	µg/L	1	05/09/12 15:14
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/09/12 15:14
Benzene	ND		0.50	0.10	µg/L	1	05/09/12 15:14
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 15:14
Trichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 15:14
Methylcyclohexane	0.12	J	0.50	0.10	µg/L	1	05/09/12 15:14
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/09/12 15:14
Bromodichloromethane	ND		0.50	0.10	µg/L	1	05/09/12 15:14
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 15:14
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/09/12 15:14
Toluene	0.13	J	0.50	0.10	µg/L	1	05/09/12 15:14
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 15:14
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 15:14
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/09/12 15:14
2-Hexanone	ND		5.00	1.00	µg/L	1	05/09/12 15:14

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

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC	**Lab ID:**	K1205093-006A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*M-21 08May2012*
W Order:	K1205093	**Collection Date:**	05/08/12 9:45
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R24038
Revision:	05/10/12 9:22	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-K9607.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 15:14
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/09/12 15:14
Chlorobenzene	3.38		0.50	0.10	µg/L	1	05/09/12 15:14
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/09/12 15:14
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/09/12 15:14
Styrene	ND		0.50	0.10	µg/L	1	05/09/12 15:14
Bromoform	ND		1.00	0.33	µg/L	1	05/09/12 15:14
Isopropylbenzene	0.80		0.50	0.10	µg/L	1	05/09/12 15:14
1,1,2,2-Tetrachloroethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 15:14
1,3-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 15:14
1,4-Dichlorobenzene	0.19	J	0.50	0.16	µg/L	1	05/09/12 15:14
1,2-Dichlorobenzene	0.34	J	0.50	0.10	µg/L	1	05/09/12 15:14
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/09/12 15:14
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/09/12 15:14
Surr: 1,2-Dichloroethane-d4	118		75-128	0.16	%REC	1	05/09/12 15:14
Surr: Toluene-d8	96		75-125	0.10	%REC	1	05/09/12 15:14
Surr: 4-Bromofluorobenzene	98		75-125	0.10	%REC	1	05/09/12 15:14

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

Print Date: 05/18/12 7:21 602343 **Project Supervisor:** Anthony Crescenzi

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-007A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LR-8 08May2012*
W Order:	K1205093	**Collection Date:**	05/08/12 11:00
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75 **Sample Size** 10 mL	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R24038
Revision:	05/10/12 9:22 **TestCode:** 8260W_OLM42	**FileID:**	1-SAMP-K9608.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	05/09/12 15:44
Chloromethane	ND		1.00	0.33	µg/L	1	05/09/12 15:44
Vinyl chloride	ND		1.00	0.33	µg/L	1	05/09/12 15:44
Bromomethane	ND		1.00	0.33	µg/L	1	05/09/12 15:44
Chloroethane	ND		1.00	0.33	µg/L	1	05/09/12 15:44
Trichlorofluoromethane	ND		1.00	0.10	µg/L	1	05/09/12 15:44
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	05/09/12 15:44
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.10	µg/L	1	05/09/12 15:44
Acetone	~~3.04~~ 10U		10.0	1.00	µg/L	1	05/09/12 15:44
Carbon disulfide	ND		0.50	0 11	µg/L	1	05/09/12 15:44
Methyl acetate	ND		5.00	1.00	µg/L	1	05/09/12 15:44
Methylene chloride	ND		2.00	0.16	µg/L	1	05/09/12 15:44
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
Methyl tert-butyl ether	ND		1.00	0.16	µg/L	1	05/09/12 15:44
1,1-Dichloroethane	ND		0.50	0.10	µg/L	1	05/09/12 15:44
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
2-Butanone	ND		10.0	1.00	µg/L	1	05/09/12 15:44
Chloroform	ND		0.50	0.10	µg/L	1	05/09/12 15:44
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	05/09/12 15:44
Cyclohexane	ND		0.50	0.10	µg/L	1	05/09/12 15:44
Carbon tetrachloride	ND		0.50	0.10	µg/L	1	05/09/12 15:44
Benzene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
1,2-Dichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 15:44
Trichloroethene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
Methylcyclohexane	ND		0.50	0.10	µg/L	1	05/09/12 15:44
1,2-Dichloropropane	ND		0.50	0.16	µg/L	1	05/09/12 15:44
Bromodichloromethane	ND		0.50	0.10	µg/L	1	05/09/12 15:44
cis-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 15:44
4-Methyl-2-pentanone	ND		5.00	1.00	µg/L	1	05/09/12 15:44
Toluene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
trans-1,3-Dichloropropene	ND		0.50	0.16	µg/L	1	05/09/12 15:44
1,1,2-Trichloroethane	ND		0.50	0.16	µg/L	1	05/09/12 15:44
Tetrachloroethene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
2-Hexanone	ND		5.00	1.00	µg/L	1	05/09/12 15:44

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

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT	O'Brien & Gere Operations, LLC.	**Lab ID:**	K1205093-007A
Project:	PAS Oswego-Semi-Annual Well Sampling	**Client Sample ID:**	*LR-8 08May2012*
W Order:	K1205093	**Collection Date:**	05/08/12 11:00
Matrix:	WATER	**Date Received:**	05/08/12 14:05
Inst. ID:	MSK_75	**Sample Size** 10 mL	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R24038
Revision:	05/10/12 9:22	**TestCode:** 8260W_OLM42	**FileID:** 1-SAMP-K9608.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					SW8260B		
Dibromochloromethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 15:44
1,2-Dibromoethane	ND		0.50	0.16	µg/L	1	05/09/12 15:44
Chlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
Ethylbenzene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
Xylenes (total)	ND		1.00	0.30	µg/L	1	05/09/12 15:44
Styrene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
Bromoform	ND		1.00	0.33	µg/L	1	05/09/12 15:44
Isopropylbenzene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
1,1,2,2-Tetrachloroethane	ND	UJ	0.50	0.10	µg/L	1	05/09/12 15:44
1,3-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
1,4-Dichlorobenzene	ND		0.50	0.16	µg/L	1	05/09/12 15:44
1,2-Dichlorobenzene	ND		0.50	0.10	µg/L	1	05/09/12 15:44
1,2-Dibromo-3-chloropropane	ND		5.00	1.00	µg/L	1	05/09/12 15:44
1,2,4-Trichlorobenzene	ND		1.00	0.10	µg/L	1	05/09/12 15:44
Surr: 1,2-Dichloroethane-d4	120		75-128	0.16	%REC	1	05/09/12 15:44
Surr: Toluene-d8	96		75-125	0.10	%REC	1	05/09/12 15:44
Surr: 4-Bromofluorobenzene	101		75-125	0.10	%REC	1	05/09/12 15:44

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

Print Date: 05/18/12 7:21 602344 **Project Supervisor:** Anthony Crescenzi