#### II - B 4TH QUARTER REPORT - 2010

#### QUARTERLY PROGRESS REPORT 4<sup>th</sup> QUARTER 2010 Operation, Maintenance and Long-term Monitoring Activities

**PROJECT NAME**: Pollution Abatement Services Site

Oswego, New York

**PERIOD COVERED**: October - December (4<sup>th</sup> Quarter) 2010

#### **ACTIONS TAKEN DURING QUARTER:**

• Leachate removal, and site maintenance activities were conducted at the former Pollution Abatement Services (PAS Oswego) site consistent with the Operation, Maintenance and Long-term Monitoring Activities Plan (BBL, 1998) (Work Plan).

- A total of 60,000 gallons of leachate was removed during the period of October 2010 through December 2010. Specific quantities of leachate removed during each month, along with leachate discharge documentation are described in this progress report.
- Construction of the PAS leachate discharge system was initiated on October 18, 2010 following receipt of EPA's September 30, 2010 Explanation of Significant Differences (ESD) approving the discharge of PAS leachate into the City of Oswego's Eastside Wastewater Treatment Facility. EPA's ESD acknowledged the City of Oswego wastewater discharge permit that was issued in July 2010 for the discharge of PAS leachate into the Eastside Wastewater Treatment Facility, which is located at 71 Mercer St. in Oswego. The construction of the leachate discharge system consisted of the installation of a leachate discharge pump and monitoring system in the existing site utility shed. In addition, a new piping system consisting of a force main was installed above the existing site cap, which was connected to a gravity drain line constructed in the City of Oswego right-of-way along E. Seneca Street. The integrity of the existing site cap was maintained during the installation of the force main over the top of the cap. The gravity drain line was tied into an existing City of Oswego manhole following receipt of a sewer hookup permit from the City's engineering department. Construction of the leachate discharge system was substantially completed on October 27, 2010. Leachate was first pumped from the Site and discharged into the City of Oswego sanitary sewer system on October 28, 2010.
- Routine groundwater elevation monitoring was performed at the Site on October 4, November 2 and December 6, 2010. 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.

- On November 2, 2010 quarterly groundwater elevation monitoring was performed. Quarterly groundwater elevation monitoring results for the M-series wells M-21 thru M-23, the LR-series wells LR-2, -3, -6 and -8, the LD-series wells LD-3, -4, -5, -6, and -8, along with wells OS-1 and -3, OI-1, OD-3 and LS-6 were recorded onto the groundwater elevation monitoring log.
- The semi-annual groundwater sampling event was conducted on November 3, 2010 for long-term monitoring wells LR-6, LR-8 and M-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.
- Site inspection and maintenance activities were conducted on October 4 and 28, November 2 and 29, and December 6 and 29, 2010. Inspection and maintenance activities at this site included the following:
  - Visually inspected the slurry wall containment vegetated cap for signs of burrowing vermin or surface anomalies. No discrepancies were reported.
  - Visually inspected the leachate collection system pumping equipment to verify proper operation. The field technician inspected each pump control panel to ensure control systems were generally free of rodents and insects, and where properly operating. The leachate holding tank was visually inspected for integrity, as were the leachate tanks steel protective roof, and wood structure. No discrepancies were reported.
  - Visually inspected the utility shed and leachate pumping equipment, including leachate discharge pump, flow meter, suction hose, pump oil levels, heat trace power panel, interior lighting, exterior and interior shed structure, and main power distribution panel.
     No discrepancies were reported.
  - The single french drainage system and two concrete troughs were inspected. No discrepancies were reported.
  - The perimeter security fence was inspected to ensure the integrity and the security of the site is maintained. Security fencing was inspected for the presence of any fallen tree limbs or overgrown vegetation. The field technician removed shallow rooted vegetation (brush) or other similar vegetation that had grown up along the security fence, or had fallen onto the fence from the sites bordering woodlands.
  - The Site Inspection Checklist form was utilized to document any comments pertaining to site conditions referenced above.
  - During the months of November and December, accumulated snowfall was removed from the sites access road and gate area using a service truck with a front mounted snow plow. Accumulated snow was pushed off the sites entry road to a parking area located on the site.

- Pre-pumping inspections were conducted prior to each leachate removal event. Upon completing each 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.
- On October 4, 2010, O'Brien & Gere performed a monthly pre-pumping inspection of the three leachate collections wells LCW-1,-2 and -4 and pumped leachate into the leachate collection tank. The leachate pumped into the collection tank on October 4 was stored until the leachate discharge system construction was completed later in October.
- On October 28, 2010, the leachate pumped on October 4<sup>th</sup> and stored in the collection tank was discharged into the City of Oswego sanitary sewer system (the first discharge event into the City of Oswego's wastewater treatment system). During the discharge, the leachate collection pumps were activated to pump additional leachate into the collection tank sufficient for discharge of a total of 20,000 gallons into the City sanitary sewer system on October 28<sup>th</sup>. The City of Oswego was notified and inspected the leachate discharge system prior to the October 28<sup>th</sup> discharge event.
- On November 2 and December 6, 2010, O'Brien & Gere performed the monthly pre-pumping collection system inspection of leachate collection wells LCW-1, 2, & 4, along with inspection of the leachate discharge pumping system. The leachate pumping system consists of one electrically powered leachate discharge pump, flow totalizer and leachate sampling port, all located within the on-site utility shed. In advance of each leachate removal event, O'Brien & Gere contacted a City of Oswego Eastside Wastewater Treatment Facility official, to inform the City of the date leachate was planned to be discharged into the City of Oswego sanitary sewer system. The date of each leachate pumping event was acknowledged by the City of Oswego prior to the commencement of each discharge event.
- During the months of October, November and December 2010, O'Brien & Gere pumped a total of 60,000 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, were recorded on the Leachate Disposal Checklist completed for each removal event. Each monthly leachate discharge was performed using the same discharge protocols.
- On October 28, 2010, one semi-annual leachate discharge composite sample was collected by O'Brien & Gere as required by the City of Oswego wastewater discharge permit. The sample was collected for analysis by compositing three grab samples taken from the leachate discharge pump sample port. The sample chain of custody was completed, and the sample delivered to Life Sciences Laboratories at the completion of the pumping activities.

- Upon completing each monthly removal event, the leachate discharge system was drained of residual leachate and prepared for storage. Residual leachate removed was disposed into the leachate collection tank. The leachate collection tank enclosure door was locked and secured. During cold weather operations, the discharge piping heat trace system was verified to be on, and the utility shed secured. Prior to leaving the site, O'Brien & Gere closed and secured the chain lock at the main entrance gate.
- On November 29, 2010, monitoring well LR-6 was re-sampled and vacuum and pressure gauges were installed on the leachate discharge system.
- On October 29, 2010, the site inspection and related activities required by the PAS Institutional Control Plan (ICIP) were completed. The ICIP provides that the findings of the site inspection and records review be prepared, along with a certification confirming that operation and maintenance activities continue, and be included in the annual progress report submitted to EPA each year.

#### **DOCUMENTATION OF REMOVAL ACTIVITIES DURING QUARTER:**

- The completed groundwater elevation monitoring logs for the monitoring events performed on October 4, November 2 and December 6 and 29, 2010 are attached. (See Attachment B-1)
- The completed Site Inspection Checklist forms for the monthly removal events of October 4 and 28, November 2 and 29, and December 6, 2010 are attached (See Attachment B-2).
- The completed Leachate Disposal Checklist for the monthly removal events on October 4 and 28, November 2, and December 6. 2010 are attached. (See Attachment B-2)
- A copy of the PAS Oswego Site quarterly discharge report (4<sup>th</sup> quarter 2010) submitted to the City of Oswego on January 26, 2011 is attached. (See Attachment B-3). This quarterly discharge report includes the first semi-annual leachate quality discharge sampling results conducted for the City of Oswego Wastewater Discharge Permit. The date of the leachate discharge sampling, along with the discharge flow totalizer, pH and temperature readings, are recorded on the attached Leachate Disposal Checklist forms included herein.
- The validated data for the semi-annual groundwater sampling event conducted on November 3, 2010, is attached (See Attachment B-4).
- The Institutional Controls Certification Memorandum documenting the October 29, 2010 site inspection and related activities is included as Attachment B-5.

### ATTACHMENT B-1 GROUND-WATER ELEVATION DATA

O'Brien Grand Operation

P. te
Oswego, New York

Pre-Pumping Monitoring Well Levels

October 4, 2010 9:30 AM

Well	Ground	Riser		October 2010			With	Within Range?	rge?	Ground-Water
Number	Elevation	Elevation	Reading 1	Reading 2	Reading 3	Average	Low	High	V/V	Elevation
SWW1	286.20	289.33	9.12	9.12	9.12	10.64	10.40	11.90	No	280.21
SWW2	286.30	289.37	16.12	16.12	16.12	16.50	16.02	17.03	Yes	273.25
SWW3	286.00	286.50	17.40	17.40	17.40	17.42	17.10	17.82	Yes	269.10
SWW4	282.90	283.60	13.90	13.90	13.90	16.34	16.22	17.46	No	269.70
SWWS	275.90	277.02	13.16	13.16	13.16	13.38	12.78	13.90	Yes	263.86
9MMS	270.90	273.06	8.26	8.26	8.26	9.33	9.04	10.03	No	264.80
SWW7	273.30	277.93	8.30	8.30	8.30	8.88	8.32	9.22	No	269.63
SWW8	275.70	278.24	4.04	4.04	4.04	7.84	4.66	11.15	No	274.20
6MMS	283.30	285.55	18.23	18.23	18.23	18.70	18.04	19.34	Yes	267.32
SWW10	279.30	280.43	10.64	10.64	10.64	15.94	14.36	18.80	No	269.79
SWW11	271.00	273.50	9.20	9.20	9.20	9.64	9.27	10.38	No	264.30
SWW12	270.20	272.82	8.10	8.10	8.10	13.69	12.64	16.08	No	264.72
LCW-1	271.40	272.21	8.53	8.53	8.53	89.8	8.42	9.30	Yes	263.68
LCW-2	272.60	274.44	10.78	10.78	10.78	10.94	10.70	11.54	Yes	263.66
LCW-3	283.30	284.36	18.02	18.02	18.02	18.37	17.96	19.20	Yes	266.34
LCW-4	283.80	285.70	18.26	18.26	18.26	17.88	16.40	19.21	Yes	267.44
OS-1	269.63	272.10								
01-1	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								
9-ST	271.40	274.14								
9- <b>C</b> T	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 G Operation
P. tte
Oswego, New York
Pre-Pumping Monitoring Well Levels

November 2, 2010 8:30 AM

Well	Ground	Ricer		November 2010			With	Within Range?	900	Ground-Water
Number	Elevation	Elevation	Reading 1	Reading 2	Reading 3	Average	Low	High	Y/N	Elevation
SWW1	286.20	289.33	9.10	9.10	9.10	9.76	8.62	11.62	Yes	280.23
SWW2	286.30	289.37	15.86	15.86	15.86	16.40	15.75	17.40	Yes	273.51
SWW3	286.00	286.50	17.04	17.04	17.04	17.27	16.60	17.92	Yes	269.46
SWW4	282.90	283.60	14.44	14.44	14.44	15.08	13.44	17.12	Yes	269.16
SWW5	275.90	277.02	13.46	13.46	13.46	13.28	12.55	14.04	Yes	263.56
9MMS	270.90	273.06	8.55	8.55	8.55	8.79	7.95	9.58	Yes	264.51
SWW7	273.30	277.93	8.42	8.42	8.42	8.77	8.02	9.43	Yes	269.51
8MMS	275.70	278.24	3.98	3.98	3.98	5.82	3.94	11.38	Yes	274.26
6MMS	283.30	285.55	17.50	17.50	17.50	18.47	17.48	20.05	Yes	268.05
SWW10	279.30	280.43	10.45	10.45	10.45	12.88	9.71	18.65	Yes	269.98
SWW11	271.00	273.50	9.28	9.28	9.28	9.49	8.81	10.38	Yes	264.22
SWW12	270.20	272.82	8.82	8.82	8.82	11.15	8.70	15.24	Yes	264.00
LCW-1	271.40	272.21	9.02	9.02	9.02	8.91	8.20	9.73	Yes	263.19
LCW-2	272.60	274.44	11.25	11.25	11.25	11.15	10.44	11.98	Yes	263.19
LCW-3	283.30	284.36	17.40	17.40	17.40	18.22	17.90	19.56	No	266.96
LCW-4	283.80	285.70	18.98	18.98	18.98	18.16	16.64	19.60	Yes	266.72
OS-1	269.63	272.10	10.60	10.60	10.60	11.91	8.60	14.75		261.50
OI-1	269.14	272.00	11.25	11.25	11.25	12.40	11.14	14.05		260.75
OS-3	274.63	277.89	14.45	14.45	14.45	15.96	13.92	18.58		263.44
OD-3	274.96	277.85	14.30	14.30	14.30	15.81	13.76	18.42		263.55
LD-3	275.80	278.62	4.36	4.36	4.36	7.02	4.32	11.77		274.26
LD-4	276.30	279.25	10.12	10.12	10.12	13.07	9.85	17.15		269.13
LD-5	270.02	272.94	9.15	9.15	9.15	12.22	9.10	15.75		263.79
9-ST	271.40	274.14	11.06	11.06	11.06	12.51	10.25	14.76		263.08
9- <b>Q</b> T	270.09	274.03	10.70	10.70	10.70	11.37	10.12	12.86		263.33
FD-8	269.90	272.83	7.90	7.90	7.90	10.14	7.15	15.38		264.93
LR-2	287.50	289.85	12.78	12.78	12.78	13.66	12.70	14.96		277.07
LR-3	275.50	278.06	7.88	7.88	7.88	9.38	7.80	12.00		270.18
LR-6	270.90	274.39	10.32	10.32	10.32	11.16	10.05	12.72		264.07
LR-8	270.00	273.42	9.82	9.82	9.82	10.84	9.45	12.84		263.60
M-21	270.28	272.32	9.46	9.46	9.46	10.50	9.17	12.50		262.86
M-22	270.40	273.88	10.30	10.30	10.30	11.11	10.00	12.62		263.58
M-23	267.98	270.49	12.44	12.44	12.44	13.06	12.35	14.25		258.05

O'Brien Gradion
P. te
Oswego, New York
Pre-Pumping Monitoring Well Levels

December 6, 2010 8:30 AM

Woll	Cround	Diser		December 2010			Wit	Within Range?	900	Ground-Water
Number	Elevation	Elevation	Reading 1	Reading 2	Reading 3	Average	Low	High	N/X	Elevation
SWW1	286.20	289.33	8.42	8.42	8.42	8.82	7.80	96.6	Yes	280.91
SWW2	286.30	289.37	15.48	15.48	15.48	16.03	15.20	17.18	Yes	273.89
SWW3	286.00	286.50	16.85	16.85	16.85	17.01	16.17	17.85	Yes	269.65
SWW4	282.90	283.60	13.18	13.18	13.18	13.34	10.92	15.10	Yes	270.42
SWWS	275.90	277.02	12.88	12.88	12.88	12.97	12.28	13.94	Yes	264.14
9MMS	270.90	273.06	7.94	7.94	7.94	8.13	7.30	8.52	Yes	265.12
SWW7	273.30	277.93	7.84	7.84	7.84	8.35	7.57	8.96	Yes	270.09
SWW8	275.70	278.24	3.90	3.90	3.90	4.35	3.40	5.85	Yes	274.34
6MMS	283.30	285.55	16.92	16.92	16.92	17.97	16.65	19.65	Yes	268.63
SWW10	279.30	280.43	9.40	9.40	9.40	10.25	8.69	12.18	Yes	271.03
SWW11	271.00	273.50	9.05	9.05	9.05	9.24	8.50	10.23	Yes	264.45
SWW12	270.20	272.82	8.00	8.00	8.00	9.10	7.72	11.55	Yes	264.82
LCW-1	271.40	272.21	8.72	8.72	8.72	8.94	8.65	9.74	Yes	263.49
LCW-2	272.60	274.44	10.96	10.96	10.96	11.20	10.01	12.00	Yes	263.48
LCW-3	283.30	284.36	17.44	17.44	17.44	17.92	17.42	18.72	Yes	269.3
LCW-4	283.80	285.70	18.88	18.88	18.88	18.15	16.53	19.64	Yes	266.82
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						-		
9-ST	271.40	274.14								
TD-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									
M-23	267.98	270.49								
					,					

#### ATTACHMENT B-2

#### SITE INSPECTION CHECKLIST AND LEACHATE DISPOSAL CHECKLIST



#### Site Inspection Checklist

Date 10-4-10	<del></del>	Time 9:30
Field Technician MART	Tin Koeni	Necke. Weather Overcast RAIN SHOWERS
Site Feature	Check √	Condition / Maintenance Performed
Cap		
Burrowing Animals	ν.	NONE VISABLE
Cap vegetation	V	6000
Concrete drainage trough	v.	0K
French drain	V .	OK.
Weeds	v	NA
Leachate Collection	:	7013.
System / Building		
Pumps	v.	Responding
Pump controls / alarms	v	NA
Tank level	¥	y" after Pumping 48"
Monitoring Wells		7 7 7 7 10
Locks	V	OK
Riser	V.	OK
Surface completion	i	NA
General Site Condition	,	
Foliage	V	(DOOD
Perimeter fence	v	OK MARSH AREA NEED WORK
Site access driveway	V	OK
Stream gauges	v	NA.
Other Items		
Equipment storage shed	V	600D
Fire extinguishers	V :	0K
Spill control material	V	STOCKED.
PPE	V	STOCKED
Remarks (use separate sheet monthly well Le	is required we LS	
	-	



#### Site Inspection Checklist

Date 10-28-10	Time 7:30
Field Technician MARTIN Kneunes Le	Weather overcast windy 50

Site Feature	Check $$	Condition / Maintenance Performed
Сар		
Burrowing Animals	V	NONE VEABLE
Cap vegetation	V	600D
Concrete drainage trough	ı	OK
French drain	V	OK
Weeds	v	NA.
Leachate Collection System / Building		
Pumps	v	Responding
Pump controls / alarms	V	NA
Tank level	V	7" STACT
Monitoring Wells		
Locks	V	OK
Riser	V	oK
Surface completion	~	NA
General Site Condition		
Foliage	V	GOOD
Perimeter fence	V	OK
Site access driveway	V	ok
Stream gauges	V	NA.
Other Items		
Equipment storage shed	V	6000
Fire extinguishers	✓	0 K
Spill control material	V	STOCKED
PPE	ν.	STOCKED

Remarks (use sep-	arate sheet is required)						
Pumpi	ng LeacHATE	To	CITY .	of OS	wegn		
with new	DUMPING SYM	Pilm.	CLAY	ON SITE			Rent
Clegned	DART OF ROAD SIDE	FENCE	LINE		D-11 ()	1000	100015



#### Site Inspection Checklist

Date 11-2-19	<u> </u>		Time
Field Technician	MARTIN	Koennecke	Weather Conditions Sunny 35°

Inspection Features	Check √	Remarks
Land Cap	V	
Signs of burrowing vermin		1
Land cap irregularities (note	_	None Visable
, ,		4
anomaly)	- v	None
French drainage system clear and	J	
function able		6000
Concrete trough clear and function		
able	V	OK
Leachate Discharge System		
City of Oswego sanitary discharge		Vac
valve positioned "Open"	V	Yes
Discharge Pump inspected &	,,	Van
operational	V	Yes
Discharge pump oil level verified	V	Yes
prior to use.	V	742
Discharge pump drained of		
residual water (drained upon	v	Vac
completion of use)	•	Yes
Heat trace system operational &		
verified in the "ON" position	V	AV
(during wintertime periods)	<b>'</b>	OK
Flow totalizer operational. Flow		
readings recorded onto "Leachate	1	Yes
Discharge Form"		165
Leachate Collection System		
Leachate holding tank visually		
inspected for structural integrity	ν	OK
Leachate holding tank metal roof	:	1
inspected for structural integrity	V	OK
Leachate tank access doors locked		
(post pumpout)	<b>V</b> ;	Yes
Pump power panel(s) secured	V	Yes
Monitoring Wells (MW)	ì	
Locks installed	V	Yes

MW's marked & identifiable	V	OK
General Site Condition		
Trees & brush cleared off security		
fence	V	WORK IN PROGRESS
Perimeter security fence intact &		
free of damage	v	OK
Site access driveway inspected	V	OK
Security access gates function able	V	Yes
Site gate signage intact	V	yes
Interior & exterior of utility		
storage shed inspected for damage		
& secure with locks	V	Yes
Fire extinguisher serviceable,		
inspected, and inspection recorded	V	Yes
Spill control material inspected &		
adequate	v	STOCKED
PPE available and utilized as		STOCKED STOCKED
required	V	STOCKED
Emergency contact information		
posted within shed	V	yes

Additional remarks (use separate sheet is required)

- QUARTERLY Well Levels, Pumper 20,000 gallons

To City of Oswego



#### Site Inspection Checklist

Date // - 29 - 10	

Time 9: 00

Field Technician MARTIN Koennake

Weather Conditions Surary 35"

Inspection Features	Check √	Remarks
Land Cap		
Signs of burrowing vermin	1	NONE VISABLY
Land cap irregularities (note		
anomaly)	~	OK
French drainage system clear and		
function able	~	OK .
Concrete trough clear and function		
able	V	OK
Leachate Discharge System		
City of Oswego sanitary discharge		
valve positioned "Open"	V	OK
Discharge Pump inspected &	<b>/</b>	
operational		ok
Discharge pump oil level verified	V	Yes
prior to use.	-	76>
Discharge pump drained of		
residual water (drained upon	V	NA
completion of use)		/ v /
Heat trace system operational &		
verified in the "ON" position	1/	NA
(during wintertime periods)		1017
Flow totalizer operational. Flow		
readings recorded onto "Leachate Discharge Form"	V	ok
Leachate Collection System		UK
Leachate holding tank visually		
inspected for structural integrity	V	DK
Leachate holding tank metal roof		
inspected for structural integrity	$\nu$	oK
Leachate tank access doors locked		UN
(post pumpout)		Yes
Pump power panel(s) secured	v ·	Ve S
Monitoring Wells (MW)	-	
Locks installed		Yes

MW's marked & identifiable	V	OK
General Site Condition		
Trees & brush cleared off security		
fence	V	work in Progress
Perimeter security fence intact &		
free of damage	V	ok
Site access driveway inspected	V	OK
Security access gates function able	v	yes
Site gate signage intact	V	yes
Interior & exterior of utility		
storage shed inspected for damage		
& secure with locks	V	Yes
Fire extinguisher serviceable,		
inspected, and inspection recorded	V	Yes
Spill control material inspected &		
adequate	V	STOCKED
PPE available and utilized as		
required	K	STocked
Emergency contact information		\ \ \ \ -
posted within shed	1	745

Additional remarks (use separate sheet is required)

Second Montthly Site Inspection, Resample Well LR-Lo

Installed VACOM AND PRESSURE GAGES IN DUMP PIDING,

SPREAD OUT STRAW & SEEDED TRENCHED AREA FROM

PAVED AREA TO SHED



#### Site Inspection Checklist

Date 12-6-	10		
		1/	1

Time 8:30

Field Technician MARTIN Kourver Le

Weather Conditions SNOW & WIND 25°

Inspection Features	Check	Remarks			
	√	Pro 1994 - The Company of the Section Bell (1997) and the			
Land Cap					
Signs of burrowing vermin	V	NONE VISABLE			
Land cap irregularities (note					
anomaly)	0	SNOW COULRED			
French drainage system clear and	i de la companya de l				
function able	W.	OK			
Concrete trough clear and function					
able	U	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	HEAT TRACE ON			
Flow totalizer operational. Flow					
readings recorded onto "Leachate		No.	,		
Discharge Form"	V	yes			
Leachate Collection System	1		1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		
Leachate holding tank visually			No.		
inspected for structural integrity	1	OK			
Leachate holding tank metal roof					
inspected for structural integrity	1	OK			
Leachate tank access doors locked					
(post pumpout)	V	yes			
Pump power panel(s) secured	V	Ves			
Monitoring Wells (MW)	;				
Locks installed	V	OK			

12-6-10

1000		
MW's marked & identifiable	V	Yes
General Site Condition		ing and the second of the seco
Trees & brush cleared off security		
fence	V	WORK IN PROGRESS
Perimeter security fence intact &		
free of damage	V	OK
Site access driveway inspected	V	PLOW SITE DRIVE
Security access gates function able	· V	Yes
Site gate signage intact	V	OK
Interior & exterior of utility		
storage shed inspected for damage		
& secure with locks	V	Yes
Fire extinguisher serviceable,		
inspected, and inspection recorded	V	Yes
Spill control material inspected &		
adequate	V	Yes
PPE available and utilized as		
required	V	yes.
Emergency contact information		
posted within shed	V	Yes .

Additional remarks (use separate sheet is required)

PLOWED SITE, Monthly well LOVALS, REPLACED 1'4 SUCKTOCHIOSE

CUITH 3" FROM TANK TO PUMP ADD IN VACUM GAGE, PRIME PUMPS

PUMP DRAWING 9" VAC, CAP 85 6PM DISCHARGE, O DISCHARGE PRESSURE



#### Site Inspection Checklist

Date	12-29-10	
- 5		

Time 9:30 Am

Field Technician MARTIN KOENNEKE

Weather Conditions SNOW SHOWERS 30"

Inspection Features	Check √	Remarks
Land Cap	9.50	
Signs of burrowing vermin	V	NONE VISABLE - SNOW COVERED
Land cap irregularities (note		
anomaly)	V	o K
French drainage system clear and		
function able	V	OK
Concrete trough clear and function		
able	V	loK
Leachate Discharge System	W	
City of Oswego sanitary discharge		_
valve positioned "Open"	V	Yes
Discharge Pump inspected &	j	
operational	V	Yes
Discharge pump oil level verified		
prior to use.	V	OK
Discharge pump drained of		
residual water (drained upon		
completion of use)	r	Ves
Heat trace system operational &	:	
verified in the "ON" position		
(during wintertime periods)	V	HEAT TRACE IS ON
Flow totalizer operational. Flow		
readings recorded onto "Leachate	6	
Discharge Form"	\$**	Yes
Leachate Collection System	*	
Leachate holding tank visually	-	
inspected for structural integrity	o/	OK
Leachate holding tank metal roof		
inspected for structural integrity	V	ΰK
Leachate tank access doors locked		
(post pumpout)	V	Yes
Pump power panel(s) secured	V	Yes
Monitoring Wells (MW)	200	ta e e e e e e e e e e e e e e e e e e e
Locks installed	V.	yes

MW's marked & identifiable		
General Site Condition		
Trees & brush cleared off security		
fence	V	work in Progress
Perimeter security fence intact &		
free of damage	V	0K
Site access driveway inspected	V	PLOWED DRIVE
Security access gates function able	V	Yes
Site gate signage intact	W	Yes
Interior & exterior of utility		
storage shed inspected for damage		
& secure with locks	V	Yes
Fire extinguisher serviceable,		,
inspected, and inspection recorded	V	Yes
Spill control material inspected &		
adequate	V	STOCKED
PPE available and utilized as		
required	12	STOCKED
Emergency contact information		
posted within shed	V	Yes

Additional remarks (use separate sheet is required)

PLOWED DRIVE, SHOVELED OUT GATE

2<sup>MD</sup> MONTHLY SITE INSPECTION

BumpED pump NOT FROZEN UP, HEAT TRACE IS ON



#### **PAS Site** Oswego, New York

#### Leachate Disposal Checklist

Field Technic	ian:	MARTIN KO	ernecke		Time on-site:	9:30
Transportation	n Subcontractor	: <u>NA.</u>				
Leachate Desi	ination:	NA.				
Date: //	0-4-10					
Well	1	llection Well ping		ing Flow Rate		Calculation
	Start Time	Stop Time	Time	Tank Elev. (Down)		
LCW-1	11:00	12:20				
LCW-2	11:00	12:20				
LCW3	NOT P		·			
LCW-4	11:00	12:20	·			
Leachate Hold	ling Tank Heigh	ıt:	•			
Start	7 "	/		·		
Stop	48"	<u>/ · · · · · · · · · · · · · · · · · · ·</u>				
End		1				
Initial Flow M	leter Reading:	:				
Final Flow Mo	eter Reading:	:				

Load		(Pre-Loading) Tanker		ost-Loading) Tanker	Destination	Gallons
Load	Time Start	Confirmed Clean	Time Stop	Tanker Volume (by Stick Mass)	Manifest(s) Numbers	
Load #1					·	
Load #2						
Load #3	_					
Load #4						



#### O'BRIEN & GERE

#### PAS Site Oswego, New York

#### Leachate Discharge Form

Well Pump		Pre-Discha	arge Well Pumping
Field Technic	cian MAKTIN	Keenneckie	Weather Conditions OVERCHST 50°
Date: /// 0	18-70		Time: 730

	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	13 45	14:30			
LCW-2	/3:45	14130		21606.0m	
LCW-3	NOT Pump	OED			
LCW-4	13:45	14:30			
	· · · · · · · · · · · · · · · · · · ·			Total	

ENDTANK 7.5

	T				ENDTANK	7,5 "		
	Leachate Discharge Pumping(Monthly)							
Discharge#	Start Time	Stop Time	pН	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge	
Discharge #1	11:00	17.20	6,6	52°F	0.0	20,000	20,000	
Discharge #2				1				
Total								
	,	Leachate .	Disch	arge Sa	mpling (Se	emi-Annua	lly)	
	Date	Sample Location		nple lume	Sample Time	рН	Temperature	
Sample #1	10-28-16	Sample PORT			/a:a5	6.6	52°F	
Sample #2 (if required)		·						



#### PAS Site Oswego, New York

#### Leachate Discharge Form

Date://~	-2-10	_			Time:_	8:30	
Field Technic	cian <i>MAG</i>	eTw Koen	wecke		Weath	er Conditions	Survy 35°
Well Pump		1	Pre-Dis	charg	e Well Pur	nping	
	Pump Star Time		Stop me	E	Tank J	Flow Rate (est)	Gallons Pumped (est
LCW-1	9:45	300 11:30	13:45				
LCW-2	9:45	300 /1:30	13:45				
LCW-3	No T	PurpED					
LCW-4	9:45	300 /1:30	13:45				
						Tota	ıl
<u></u>	T		TAN	K-8	"After DI	schange	
		Leach	ate Disc	charge	Pumping	(Monthly)	
Discharge #	Start Time	Stop Time	pH	Temp	Totalizer Flow Tota (Start)	i i	Gallons Discharge
Discharge #1	10:15	16:40	6.4	50°F	20,000	40,000	20,000
Discharge #2							,
Total							
		Leachate l	Dischai	rge Sa	mpling (S	emi-Annual	(Iy)
	Date	Sample Location	Sam Volu		Sample Time	рН	Temperature
Sample #1	11-2-10	SAMPLE ADRITA Effluent	Cyan	250M		6.4	50°F
Sample #2							

(if required)



LCW-4

12:50

#### CEPIENEGERE

#### PAS Site Oswego, New York

#### Leachate Discharge Form

Date: 17-	6-10		Tin	ne: 8:30	e Laterape Radio Augustus and Control of Con
Field Techni	cian Waruh	- Koumee	ku We	ather Conditions	S molns
Well Pump		Pre-Disc	harge Well F	Pumping	
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	12:50	14:55			
LCW-2	12:50	14:55			
LCW-3			-		

Total

	Leachate Discharge Pumping(Monthly)									
Discharge #	Start Time	Stop Time	рН	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge			
Discharge #1	13:20	וח:דט	6.7	50°	40,000	60,000	20,000			
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum						
	85	15wiL	\$ PSI	Qu	·					
		Leacha	te Discha	arge Samp	oling (Semi	-Annually)	)			
	Date	Samp Locati	. 1	mple S	Sample Time	рН Т	emperature			
Sample #1	NA						on a state of the			
Sample #2 (if required)	WA	1402405	Market by Secretary Secretary			in the state of th				



#### **PAS Site** Oswego, New York

#### Leachate Discharge Form

Date: <u>/2</u> -	6-10		Tin	ne: <i>8:30</i>	
Field Technic	cian <u>MARTIN</u>	Koennake	We	ather Conditions $\underline{\mathcal{L}}$	VIND + SNOW 25°
Well Pump		Pre-Dis	charge Well 1	Pumping	
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-I	/ <i>à:50</i>	14:50			
LCW-2	12:50	14:50			
LCW-3	NOT PumpE	D			
LCW-4	12:50	14:50			
				Total	

	Leachate Discharge Pumping(Monthly)								
Discharge #	Start Time	Stop Time	pН	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge		
Discharge #1	13:20	17:20	6.7	50°	40,000	60,000	20,000		
Discharge #2					//		1 7 9 9		
Total	Rup	Line	Dons	noi	newn	4546	7		
	Leachate Discharge Sampling (Semi-Annually)								
	Date	Sample Location	1	iple ume	Sample Time	pH	Temperature		
Sample #1			-						
Sample #2 (if required)				;					

#### ATTACHMENT B-3

CITY OF OSWEGO DISCHARGE REPORT

4<sup>TH</sup> QUARTER 2010

#### de maximis, inc.

PECEWED

de maximis, inc.

JAN 3 I 2011

January 26, 2011

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

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

Ouarterly Discharge Report - 4th Quarter 2010

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 Service (PAS) Site in the City of Oswego's Eastside Wastewater Treatment Facility. This is the first quarterly report submitted and covers the period from October 2010 through December 2010.

Installation of the new leachate discharge system was completed in accordance with City requirements on October 28, 2010 and the first leachate discharge event was completed on that date. The total gallons of leachate discharged are summarized in Table 1. We also performed the first semi-annual leachate sampling event in accordance with the requirements of the Permit during the October 28, 2010 discharge event. The data for the semi annual event are provided as Attachment I.

Completed 'Leachate Discharge Form' documenting each leachate discharge event are provided as Attachment II. The quantities discharged, date and time of discharge, as well as measurements for pH and temperature are recorded in each Leachate Discharge Form.

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

Sincerely,

de maximis, inc.

Clay McClarnon

Clay Ne Claro

Attachments

cc:

Mark Valentine Michael Coffey

PAS OSWEGO SITE  QUARTERLY DISCHARGE EVENTS	
---	--

	4Q 2010	1Q 2011	2Q 2011	3Q 2011	4Q 2011
Discharge Date	(gpd)	(gpd)	(gpd)	(gpd)	(gpd)
10/28/2010	20,000				
11/2/2010	20,000				
12/6/2010	20,000				
Total Discharged					
(gpd)	60,000				
Analytes	mg/L	mg/L	mg/L	mg/L	mg/L
Cadmium	ND	·	MC 2012 THE LAND		
Chromium (total)	0.015		240000000000000000000000000000000000000		
Copper	B				
Lead	ND	Modernment agent			
Nickel	0.58		Societies		PACIFIC AND PACIFI
Silver	8	· Section of the Control	ist <del>o mi</del> tripo mono		
Zinc	Z		N <del>OLONO</del>		
Mercury	ND				Mr Byrollowy
BOD5	Ü			<b>W</b> Card Sweet San	have the ball of the co
TSS	9				
Phenolics	0.14		nt perilabera	ROJENSKE ODBO	
pΗ	7.15				

#### ATTACHMENT I



Tuesday, November 09, 2010

Kevin Stone O'Brien & Gere Inc. of North America 555 E Genesee Street Fayetteville, NY 13066

TEL: 315-637-2234

Project: PAS OSWEGO-SEMI-ANNUAL

RE: Analytical Results

Order No.: K1010344

Dear Kevin Stone:

Life Science Laboratories, Inc. received 1 sample(s) on 10/28/2010 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,

Life Science Laboratories, Inc.

Pamela J. Titus
Project Manager



W Order: K1010344

#### Life Science Laboratories, Inc.

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

#### **Analytical Results**

StateCertNo: 10248

CLIENT O'Brien & Gere Inc. of North America

Project: PAS Oswego-Semi-Annual

Lab ID:

K1010344-001A

Client Sample ID: Effluent Grab 10/28/10

Collection Date:

10/28/10 12:25

Matrix: WATER		Date Received:	10/28/10	15:35
Analyte	Result Qual	PQL Units	DF .	Date Analyzed
BIOCHEMICAL OXYGEN DEMAND (BO	D5)	SM 18-20 5210 B	Control of the Contro	
Biochemical oxygen demand (BOD5)	13	5.0 mg/L	1	10/29/10 14:34
NOTES:				
This result did not meet minimum depletion	requirements and show	ald be considered an estimate.		
LABORATORY (PH)	······································	SM 18-20 4500-H B		
pH	7.15	1.00 pH Units	1	11/02/10
RESIDUE-NON-FILTERABLE (TSS)		SM 18-20 2540 D		
Residue-non-filterable (TSS)	9.0	5.0 mg/L	1	11/01/10 14:00

Qualifiers:

\* Value exceeds Maximum Contaminant Level

E Value exceeds the instrument calibration range

J Analyte detected below the PQL

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)

Page 1 of 2

S Spike Recovery outside accepted recovery limits

Print Date: 11/09/10 16:25 Project Supervisor: Pamela J. Titus



5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

#### **Analytical Results**

StateCertNo: 10248

CLIENT O'Brien & Gere Inc. of North America

Project: PAS Oswego-Semi-Annual

W Order: K1010344 Matrix: WATER Lab ID:

K1010344-001B

Client Sample ID: Effluent Grab 10/28/10

Collection Date:
Date Received:

10/28/10 12:25 10/28/10 15:35

		Secretary Secretary			
Analyte	Result		PQL Units	DF	Date Analyzed
PHENOLICS, TOTAL RECOVERABLE			EPA 420.1	(E420	
Phenolics, Total Recoverable	0.14		0.050 mg/L	10	11/08/10

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

Print Date: 11/09/10 16:25 Project Supervisor: Pamela J. Titus

Page 2 of 2



5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

#### **Analytical Results**

StateCertNo: 10248

CLIENT: O'Brien & Gere Inc. of North America

Project: PAS Oswego-Semi-Annual

W Order: K1010344 Matrix: WATER

K1010344-001C Lab ID:

Client Sample ID: Effluent Grab 10/28/10

Collection Date: Date Received:

10/28/10 12:25 10/28/10 15:35

	Date Income		10/20/1	10/20/10 13.55	
Analyte	Result Qu	al PQL Units	DF	Date Analyzed	
MERCURY	- Section 1980	EPA 245.1	(E24	5.1)	
Mercury	ND	0.00020 mg/L	1	11/01/10 17:26	
TOTAL METALS BY ICP		EPA 200.7	(E20	0.2)	
Cadmium	ND	0.010 mg/L	1	11/03/10 13:00	
Chromium	0.015	0.010 mg/L	1	11/03/10 13:00	
Copper	ND	0.010 mg/L	1	11/03/10 13:00	
Lead	ND	0.010 mg/L	1	11/03/10 13:00	
Nickel	0.58	0.010 mg/L	1	11/03/10 13:00	
Silver	ND	0.010 mg/L	1	11/03/10 13:00	
Zinc	ND	0.020 mg/L	1	11/03/10 13:00	

#### Qualifiers:

Print Date: 11/09/10 13:27 Project Supervisor: Pamela J. Titus Page 1 of 1

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

## Brittonfield Lab

4 Butternut Drive

Chain of C. stody

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

Client: C'BRIEN & EERG COERATIONS	777 SAC	A	Analysis/Method	
Project: PAS Semi Annual	DISCHARGE	NZ SA		
Sampled by: MARTIN Koenner he	l.	1 8 8 57 J		
Client Contact: Kevin STowe	PHONG # KEVING STONE & OBG , COM			3
Sample E	Sample Description	1. AC		
Sample Location	Date Time Sample Comp. Collected Collected Matrix or Grab	Comp. No. of Og N. Car in or Grab Containers		Comments
EffLuenT	10-28-16 12-35 WITCH (SRAB)	3		
				the state of the s
		•		
Relinquished by: Minth. Kninh.	Date: 10-28.0 Time: 1430	Received by: Aur in	Para Date: 15-25	Date: (5-15-10 Time: )4730
1	Date: しってなーいTime: 1 えろく Received by:	Received by:	Date:	Time:
Relinquished by:	Date: Time:	Received by Lab:	Date: 10-36-10 Time: 18	10 Time: 18 135
Shipment Method:		Alrbill Number:	     ک	

uired:	
Red	
Time	9
puno	0.41
ırnar	
٣	

Routine Rush (Specify)

Cooler Temperature: ( ) o b C en XC L

Comments:

Original - Laboratory Copy - Client

#### Sample Receipt Checklist

Client Name: OGINA PAS		Date and Time Received	: 10/28/2010 3:35:00 PM
Work Order Number: K1010344		Received by: AC	
Checklist completed by: Initials	Delivery Method: Hand Delivered	Reviewed by:	7 10/29/10 Date
Shipping container/cooler in good condition?	Yes 🗹	No Not Preser	nt 🔲
Custody seals intact on shipping container/cooler?	Yes	No Not Preser	nt 🔽
Custody seals intact on sample bottles?		No Not Applic	able 🗹
Chain of custody present?		No 🗆	
Chain of custody signed when relinquished and received?		No 🗆	
Chain of custody agrees with sample labels?		No 🗆	
Samples in proper container/bottle? Yes ✓		No 🗆	
Sample containers intact? Yes ✓		№. 🗆	
ufficient sample volume for indicated test?		No 🗆	
All samples received within holding time?	Yes 🗹	No 🗆	
Container/Temp Blank temperature in compliance?	Yes. 🗹	No 🗆	
Water - VOA vials have zero headspace? Yes		No 🗌 No VOA vial	s submitted 🗹
Water - pH acceptable upon receipt?	Yes 🗹	No 🗌 Not Applic	able 🗌
pH Preservative pH Acceptable >12 NaOH Yes N	Sample ID  NA ☑	Volume of Prese	ervative added in Lab.
<2 HNO3 Yes ☑ N	NA 🗆		
<2 HSO4 Yes V N	NA:		
<2 1:1 HCL Yes \( \subseteq \text{N \subseteq} \)	□ na ☑		
5-9 Pest/PCBs (608/8081) Yes N	l na <u>w</u> i	•	
	:		
	· •		ł
	•		i .
comments: Cifanide on	COC as he	tals parai	reter? (p)
Corrective Action: Clear No fified;	Will be colle	ded separa	kely (PD)



Tuesday, November 09, 2010

Kevin Stone O'Brien & Gere Inc. of North America 555 E Genesee Street Fayetteville, NY 13066

TEL: 315-637-2234

Project: PAS OSWEGO-SEMI-ANNUAL

RE: Analytical Results

Order No.: K1011041

Dear Kevin Stone:

Life Science Laboratories, Inc. received 1 sample(s) on 11/3/2010 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,

Life Science Laboratories, Inc.

Pamela J. Titus

Project Manager

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

# **Analytical Results**

StateCertNo: 10248

**CLIENT** 

O'Brien & Gere Inc. of North America

Project:

PAS Oswego-Semi-Annual

W Order:

K1011041 WATER

Matrix: Inst. ID:

AA3

ColumnID Revision:

11/05/10 17:17

Sample Size: 50 mL

%Moisture:

TestCode CN335.4W

Lab ID:

K1011041-001A

Client Sample ID: Pump Sample Port #1 Effluent

Collection Date:

11/02/10 11:00

Date Received:

11/03/10 16:21

PrepDate:

11/05/10 0:00

BatchNo: FileID:

12299/R20989 1-SAMP-

DF

1

Col Type:

Result Qual PQL Analyte

EPA 335.4

(E335.4)

Cyanide, Total

CYANIDE, TOTAL

ND

0.010

mg/L

Units

11/05/10

Date Analyzed

Qualifiers:

Value exceeds Maximum Contaminant Level

E Value exceeds the instrument calibration range

Analyte detected below the PQL

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)

Spike Recovery outside accepted recovery limits

Print Date: 11/09/10 16:30

537359

Project Supervisor: Pamela J. Titus

Page 1 of 1

# Chain of Custody

# Life Science Laboratories, Inc. **Brittonfield Lab**

East Syracuse, New York 13057 5604 Buffernut Drive

(315)445-1105

Daté:1-03-10 Tiráe:21 スピレリ Comments Time: Time: Date: Date: Analysis/Method SYANIOR Received by Lab: Airbill Number: Received by: Received by: No. of Containers/ KEVINO STONE @ OBGO COM Date: 1-3-10 Time: 16:30 Comp. or Grab GRAB Time: Time: Sample Matrix WATER Time Collected 11.co Date: Date: Date Collected 01-2-11 KEVIN STONE Phone# Sample Description MARTIN KOENNECKE OBRIEN & GERE OPS OS wedo Pump Sample Part T. E. F. LuenT Sample Location HAND PAS Client Contact: Shipment Method: Relinquished by: Sampled by: Relinquished by: Relinquished by: Project: Client:

Turnaround Time Required:
Routine
Rush (Specify)

Comments:

0: Cooler Temperature:\_

Original - Laboratory Copy - Client

## Sample Receipt Checklist

Client Name: OGINA PAS		Date and T	ime Received:	11/3/2010 4:21:00 PM
Work Order Number: K1011041		Received b	y: gis	
Checklist completed by:	13/10 bate	Reviewed	d by:	- III 4(10
Delivery Me	ethod: <u>Hand Delivered</u>	<u>1</u>	·	·
Shipping container/cooler in good condition?	Yes 🗹	No 🗌	Not Present [	
Custody seals intact on shipping container/cooler?	Yes 🗌	No 🗆	Not Present	<b>✓</b>
Custody seals intact on sample bottles?	Yes 🗌	No 🗆	Not Applicable	<b>√</b>
Chain of custody present?	Yes 🗹	No 🗆		
Chain of custody signed when relinquished and received?	Yes 🗹	No 🗆		
Chain of custody agrees with sample labels?	Yes 🗹	No 🗌		
Samples in proper container/bottle?	Yes 🗹	No 🗆		
Sample containers intact?	Yes 🗹	No 🗆		
oufficient sample volume for indicated test?	Yes 🗹	No 🗆		
All samples received within holding time?	Yes 🗹	No 🔲		
Container/Temp Blank temperature in compliance?	· Yes ☑	No 🗆		
Water - VOA vials have zero headspace?	Yes 🗌	No 🗌	No VOA vials subr	mitted 🗹
Water - pH acceptable upon receipt?	Yes 🗹	No 🗌	Not Applicable	
pH Preservative pH Acceptable	Sample ID	Vo	lume of Preservativ	e added in Lab.
>12 NaOH Yes 🗹 N 🗌 NA 🗌				
<2 HNO3 Yes N N NA				
<2 HSO4 Yes N NA				
<2 1:1 HCL Yes N N NA				
5-9 Pest/PCBs (608/8081) Yes N NA 🗸				

comments: Goes W/ K1010344 - Re-sampled CN in proper container

Corrective Action:

# ATTACHMENT II



# PAS Site Oswego, New York

# Leachate Discharge Form

Date: 10 -6	28-10		Tin	ne: 730	· ———
Field Techni	cian MARTIN	Kiennecke	We	ather Conditions of	OVERCHST 50°
Well Pump		Pre-Di	scharge Well I	Pumping	
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	13 45	14:30	;		
LCW-2	13:45	14:30	:	21606Pm	H
LCW-3	NOT Pum	PID			
LCW-4	13:45	14:30			
				Total	
r	`		ENDTAN	K 7.5 "	

MARKET					END THRIC	7.5	· · · · · · · · · · · · · · · · · · ·			
		Leachate Discharge Pumping(Monthly)								
Discharge #	Start Time	Stop Time	pH	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge			
Discharge #1	11:00	17:20	6,6	52°F	0.0	20,000	20,000			
Discharge #2				1						
Total				:						
	·	Leachate .	Disch	arge Sa	mpling (Se	mi-Annua	lly)			
	Date	Sample Location	i	nple lume	Sample Time	pН	Temperature			
Sample #1	10.28-16	Sample Port			/a: a5	6.6	52° F			
Sample #2 (if required)	÷									



# PAS Site Oswego, New York

# Leachate Discharge Form

Date:	-d-10					Time	e:	8.30	
Field Technic	ian	RTW	Koen	weike	2	Wea	ther	Conditions _	Sumy 35°
Well Pump			<u> </u>	Pre-Di	scharg	e Well P	umļ	oing	
	Pump Sta Time			1	Tank Elevation		w Rate (est)	Gallons Pumped (est	
LCW-1	9:45	1300	11:30	13:45	5				
LCW-2	9:45	1300	11:30	13:4	₹.	arakan da a			
LCW-3	NoT	-	MED	~					
LCW-4	9:45	1300	/1:30	13:4	ξ				
			71.50		43		I	Total	
				TA	nK-8	"After	Disc	Hange	
			Leach			e Pumpir		<b>V</b>	
Discharge #	Start Time		Stop Cime	pН	Temp	Totaliz Flow To (Start	tal	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	10:15	1	6:40	6.4	50°F	20,0	00	40,000	20,000
Discharge #2					-				,
Total									
		Lea	achate	Discha	arge Sa	mpling (	Sen	ni-Annuali	(y)
	Date	L	ample ocation		nple ume	Sample Time		рН	Temperature
Sample #1	11-2-10	540	APPLY FORTH	_	NIDE			6.4	50°F
Sample #2					-				



Date: 12-6-10

# PAS Site Oswego, New York

# Leachate Discharge Form

Time: 8:30

Field Techn	ician <u>Waru</u>	- Koumell	Lu Wear	ther Conditions	now of win
Well Pump		Pre-Disc	harge Well Pi	umping	
<del>-</del> - <del>-</del> -	Pump Start Time	Pump Stop Time	7779	Flow Rate (est)	Gallons Pumped (est)
LCW-1	12:50	14:55			
LCW-2	12:50	14:55			
LCW-3	N/w	N/W			
LCW-4	12.50	14:55	:		
				Total	

	Leachate Discharge Pumping (Mon						thly)	
						ty∯izii. ≑cetirii		
Discharge #	Start		H	Temp	Totaliz	·	Totalizer	Gallons
	Time	Time	<del>.</del> .		Flow		Flow Total	Discharge
				:	Total Start	Fann 117   1	(End)	
Discharge #1	13:20	17:70 b	7	50°	40,00	0	60,000	with
Pump Info	Flow	Prime Pi	ımp	Pump				. =
	Rate	Time Pre	ssure	Vacuum			¥.,	
	(GPM)		·					
	85	15mil \$	PSI	qu				
					* ************************************			
		Leachate D	ischa	rge Sam	pling (Se	mi-A	Innually	)
				0	L G Nevado C C Nevado C C Nevado C Nevado Nevad Nevado Nevad Nevado Nevado Nevado Nevad Nevad Nevado Nevad Nevad Nevado Nevad Nevad	sartag Lista Sartagan		
	Date	Sample	San	iple	Sample	I	H T	'emperature
		Location		ume	Time			_
Sample #1	NA				agantari (Alangari (Alanga			
Sample #2								
(if required)	W/A						-	

# ATTACHMENT B-4

SEMI-ANNUAL LEACHATE AND GROUNDWATER

MONITORING
(NOVEMBER 2010)

TO:

Kevin Stone

cc:

FROM:

Karen Storne

RE:

PAS Oswego Data Validation Report

FILE:

6363/45710.001.005

DATE:

January 18, 2011

This report presents the results of a data validation performed for groundwater samples collected as part of the PAS Oswego Semi-Annual Ground Water Sampling event at the New York State site. Sample collection activities were conducted by O'Brien & Gere in November 2010.

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

LSL utilized the methods listed in the following table.

**Table 1-1.** Analytical methods and references

Parameter	Method	Reference
VOCs USEPA Methods 5030B/8260B		1
BOD	SM18 5210B	2
TDS	OS SM18 2540C	
TSS	SM18 2540D	2
COD	USEPA Method 410.4	3
OC SM18 5310B		2

## 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.
- 2. American Water Works Association (AWWA), American Public Health Association (APHA) and Water Environment Federation (WEF). 1992. Standard Methods for the Examination of Water and Wastewater, 18th Edition. Washington, D.C.
- 3. United States Environmental Protection Agency (USEPA). 1983. *Methods for Chemical Analysis of Water and Wastes*, EPA-600/4-79-020. Cincinnati, Ohio.

VOCs indicates volatile organic compounds.

BOD indicates biological oxygen demand.

TDS indicates total dissolved solids.

TSS indicates total suspended solids.

COD indicates-chemical oxygen demand.

TOC indicates total organic carbon.



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 documents and professional judgment:

- USEPA. 2006a. *USEPA Region II Validating Volatile Organic Compounds by SW-846 Method 8260B, SOP HW-24* Revision 2. New York, NY.
- USEPA. 2006b. *USEPA Region II Evaluation of Metals Data for the CLP Program, SOP HW-2* Revision 13. New York, NY.

The validation included checking the following parameters:

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

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

## CHAIN-OF-CUSTODY RECORD

Time gaps were identified for the samples collected 11/3/10 and 11/29/10. The samples collected 11/3/10 were relinquished on 11/3/10 at 16:20 and the samples were received by the laboratory on 11/3/10 at 16:22. The samples collected 11/29/10 were relinquished on 11/29/10 at 13:40 and the samples were received by the laboratory on 11/29/10 at 13:37. Both sets of samples were delivered by hand to the laboratory.



## SAMPLE COLLECTTION

An equipment blank, field duplicate, MS/MSD were submitted for VOC analyses but were not submitted for samples collected for BOD, TSS, TDS, COD and TOC analyses. The impacts of these sample collections issue are addressed in the following sections.

## **VOC DATA EVALUATION SUMMARY**

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

## I. Holding times and sample preservation

The method holding time criterion for VOC analysis was met.

## II. Blank analysis

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

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

- Acetone in sample LCW-4.
- Methylene chloride in sample LCW-4.

## III. Calibrations

Calibration results met validation criteria.

## IV. GC/MS instrument check

GC/MS instrument checks met the validation criteria.

## V. Surrogate recoveries

Surrogates results met the validation criteria.

## VI. MS/MSD analysis

MS/MSD results met the validation criteria.

## VII. LCS analysis

The following results were qualified as approximate (UJ) due to a minor accuracy excursion:

• The results for 1,2-dibromo-3-chloropropene in samples Equipment Blank, LR-8, M-21, LCW-2, LCW-4, X-1[LR-6], QC Trip Blank 11/3/10.



## VIII. Internal standards performance

Internal standard results met the validation criteria.

## IX. Field duplicate analysis

Field duplicate results met the validation criteria.

## X. Target analyte quantitation, identification and QLs

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

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

## XII. Document completeness

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

## INORGANIC AND TOC DATA EVALUATION SUMMARY

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

## I. Holding times and sample preservation

The validation holding time criteria from collection to analysis were met

## II. Blank analysis

Method blanks were analyzed to evaluate the potential of laboratory-introduced concentrations of target compounds. Method blank results met the validation criteria.

The equipment blank collected for this sampling event was not submitted for BOD, TSS, TDS, COD and TOC analyses. Therefore, the potential for sample cross-contamination during sample collection could not be evaluated for these analytes.

## III. Calibrations

Calibration results met validation criteria.

## IV. MS/MSD analysis

The MS/MSD samples were not submitted for BOD, TSS, TDS, COD and TOC analyses. The laboratory performed MS/MSD analyses using project samples for TOC analyses. However, matrix impacts could not be evaluated during the validation process for BOD, TSS, COD and TDS analyses.



## V. LCS analysis

The following results were qualified as approximate (UJ, J) due to minor accuracy excursions:

• The results for BOD in samples LCW-2 and LCW-4.

Although required for accuracy evaluation and internal quality control, the laboratory did not perform an LCS analysis for the TDS and TSS analyses. Therefore, the accuracy for the TDS and TSS methods preformed by the laboratory could not be evaluated during the validation process.

## VI. Laboratory duplicate analysis

A laboratory duplicate sample was not submitted for BOD, TSS, TDS, COD and TOC analyses. The laboratory performed duplicate analyses using project samples for TOC analyses. However, laboratory precision could not be evaluated during the validation process for the for BOD, TSS, COD and TDS analyses.

## VII. Field duplicate analysis

Field duplicate results were not collected for BOD, TSS, TDS, COD and TOC analyses for this sampling event. Therefore, field precision could not be evaluated during the validation process for these analyses.

## VIII. Target analyte quantitation and QLs

Dilutions were performed for TOC and COD samples as a result of the presence of elevated concentrations of target analytes detected in the samples.

Sample results were reported to the QL concentration.

## IX. Document completeness

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

## **DATA USABILITY**

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



Table 2. Sample cross reference list

			***************************************		
Laboratory	Date Collected	ollected Laboratory ID	Client ID	Matrix	Analysis Requested
Life Science Labs	11/3/2010	K1011042-001	Equipment Blank	Aqueous	VOCs
Life Science Labs	11/3/2010	K1011042-002	LR-8, MS/MSD	Groundwater	VOCs
Life Science Labs	11/3/2010	K1011042-003	M-21	Groundwater	VOCs
Life Science Labs	11/3/2010	*	LR-6*	Groundwater	VOCs
Life Science Labs	11/3/2010	K1011042-005	LCW-2	Groundwater	VOCs, BOD, TSS, TDS, COD, TOC
Life Science Labs	11/3/2010	K1011042-006	LCW-4	Groundwater	VOCs, BOD, TSS, TDS, COD, TOC
Life Science Labs	11/3/2010	K1011042-007	X-1[LR-6]	Groundwater	VOCs
Life Science Labs	11/3/2010	K1011042-008	QC Trip Blanks	Aqueous	VOCs
Life Science Labs	11/29/2010	K1011306-001	LR-6	Groundwater	VOCs
Life Science Labs	11/29/2010	K1011306-002	QC Trip Blanks	Aqueous	VOCs
Notes:					

Life Science Labs indicates Life Science Laboratories Inc. of Syracuse, New York

VOCs indicates volatile organic compounds.

MS/MSD indicates matrix spike/ matrix spike duplicate.

The identification in parenthesis indicates the field duplicate location.

BOD indicates biological oxygen demand. TSS indicates total suspended solids. TDS indicates total dissolved solids.

COD indicates chemical oxygen demand.

TOC indicates total organic carbon.

\* Indicates that sample was re-collected due to laboratory error; the sample collected on 11/3/10 was not analyzed by the laboratory.

	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,	Laboratory established control limits are used to assess MS/MSD, LCS, and laboratory duplicate data.
LCS, 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	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.
Data Data	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

1 of 2

	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.
General Inorganic MS/MSD, LCS, Laboratory Duplicate Data	If percent recoveries are less than laboratory control limits but greater than thirty 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 thirty percent, detected results are qualified as approximate (J) and non-detected results are qualified as rejected (R) to indicate major excursions.
Inorganic Laboratory Duplicate or MSD Data	Inorganic laboratory duplicate data are evaluated against laboratory control limits established for RPD criteria when results are greater than five times the QL. When sample results for laboratory duplicate pairs are less than five times the QL, the data are evaluated using control limits of plus or minus two times the QL.
	If RPDs for MSDs or laboratory duplicates are outside of laboratory control limits, detected results are qualified as approximate (J) to indicate minor excursions.
Inorganic Blank Data	For calibration blanks, preparation blanks and field blanks at concentrations greater than laboratory MDLs but less than or equal to QLs:  (a) Concentration 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 qualified as non-detected (U).  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).

QA/QC Term	Laboratory QA/QC term definitions  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
Modrica Blank	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 fo 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.

1 of 1

O'Brien & Gere

## **Analytical Results**

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT

O'Brien & Gere Inc. of North America

K1011042-001A Lab ID:

Project:

PAS Oswego-Semi-Annual Well Sampling

Client Sample ID: Equipment Blank

W Order:

K1011042

Collection Date: Date Received:

11/03/10 7:30

Matrix: Inst. ID: WATER Q

Sample Size: 10 mL

PrepDate:

11/03/10 16:22

ColumnID Rtx-VMS

MSK 75

BatchNo:

R21077

Revision:

11/18/10 7:45

%Moisture: TestCode:

8260W\_OLM42 FileID:

1-SAMP-K3153.D

Col Type:

Analyte	Result Qua	l PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOU	NDS BY GC/MS			SW826	0B	
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	11/05/10 11:41
Chloromethane	ND	1.00	0.33	μg/L	1	11/05/10 11:41
Vinyl chloride	ND	1.00	0.33	μg/L	1	11/05/10 11:41
Bromomethane	ND	1.00	0.33	µg/L	1	11/05/10 11:41
Chloroethane	ND	1.00	0.33	µg/L	1	11/05/10 11:41
Trichlorofluoromelhane	ND	1.00	0.10	µg/L	1	11/05/10 11:41
1,1-Dichloroethene	ND	0.50	0.16	µg/L	1	11/05/10 11:41
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	0.50	0.10	ha,r	1	11/05/10 11:41
Acetone	2.53 J	10.0	1,00	µg/L	1	11/05/10 11:41
Carbon disulfide	ND	0.50	0.11	µg/L	1	11/05/10 11:41
Melhyl acetate	MD_	5.00	1.00	μg/L	1	11/05/10 11:41
Methylene chloride	0.24(J )	2.00	0.16	μg/L	1	11/05/10 11:41
trans-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/05/10 11:41
Methyl tert-butyl ether	ND	1.00	0.16	µg/L	1	11/05/10 11:41
1,1-Dichloroethane	ND	0.50	0.10	µg/L	1	11/05/10 11:41
cis-1,2-Dichloroethene	ND	0.50	0.10	μg/L	1	11/05/10 11:41
2-Butanone	ND	10.0	1.00	μg/L	- 1	11/05/10 11:41
Chloroform	ND	0.50	0.10	hã/r	1	11/05/10 11:41
1,1,1-Trichloroethane	ND	0.50	0.10	µg/L	1	11/05/10 11:41
Cyclohexane	ND	0.50	0.10	hãvr	1	11/05/10 11:41
Carbon tetrachloride	ND	0.50	0.10	h@/L	1	11/05/10 11:41
Benzene	ND	0.50	0,10	μg/L	1	11/05/10 11:41
1,2-Dichloroethane	ND	0.50	0.16	µg/L	1	11/05/10 11:41
Trichloroethene	ND	0.50	0.10	µg/L	1	11/05/10 11:41
Methylcyclohexane	ND	0.50	0.10	µg/L	1	11/05/10 11:41
1,2-Dichloropropane	ND	0.50	0.16	hã/r	1	11/05/10 11:41
Bromodichloromethane	ND	0.50	0.10	μg/L	1	11/05/10 11:41
cis-1,3-Dichloropropene	ND	0.50	0.16	μg/L	1	11/05/10 11:41
4-Methyl-2-pentanone	ND	5.00	1.00	µg/L	1	11/05/10 11:41
Toluene	ND	0.50	0.10	µg/L	1	11/05/10 11:41
trans-1,3-Dichloropropens	ND	0.50	0.16	µg/L	1	11/05/10 11:41
1,1,2-Trichloroethane	DN	0.50	0.16	μg/L	1	11/05/10 11:41
Tetrachloroethene	ND	0.50	0.10	μg/L	1	11/05/10 11:41

## Qualifiers:

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- 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

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT

O'Brien & Gere Inc. of North America

K1011042-001A

Project:

Client Sample ID: Equipment Blank

PAS Oswego-Semi-Annual Well Sampling

W Order:

K1011042

Collection Date:

11/03/10 7:30

Matrix:

WATER Q

Date Received:

11/03/10 16:22

Inst. ID:

MSK 75

Sample Size: 10 mL

PrepDate: BatchNo:

Lab ID:

R21077

ColumnID Rtx-VMS Revision: 11/18/10 7:45

%Moisture: TestCode:

8260W\_OLM42 FileID:

1-SAMP-K3153.D

Col Type:

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	DS BY GC/MS	<del>Biggs and a state of the particle of the state of the st</del>		SW826	)B	
2-Hexanone	ND	5.00	1.00	µg/L	1	11/05/10 11:41
Dibromochloromethane	ND	0.50	0.10	μg/L	1	11/05/10 11:41
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/05/10 11:41
Chlorobenzene	ND	0,50	0.10	μg/L	1	11/05/10 11:41
Ethylbenzene	ND	0.50	0.10	µg/L	†	11/05/10 11:41
Xylenes (lotal)	ND	1.00	0.30	µg/L	1	11/05/10 11:41
Styrene	ND	0.50	0.10	ug/L	1	11/05/10 11:41
Bromoform	ND	1.00	0.33	µg/L	1	11/05/10 11:41
Isopropylbanzene	ND	0.50	0.10	μg/L	1	11/05/10 11:41
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	•	11/05/10 11:41
1,3-Dichtorobenzene	ND	0.50	0.10	μg/L	•	11/05/10 11:41
1,4-Dichlorobenzene	ND	0.50	0.16	µg/L	1	11/05/10 11:41
1,2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/05/10 11:41
1,2-Dibromo-3-chloropropane	ND(J	J 5.00	1.00	µg/L	1	11/05/10 11:41
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	11/05/10 11:41
Surr: 1,2-Dichloroethane-d4	92	75-128	0.18	%REC	1	11/05/10 11:41
Surr: Toluene-d8	101	75-125	0.10	%REC	1	11/05/10 11:41
Surr: 4-Bromofluorobenzene	100	75-125	0.10	%REC	1	11/05/10 11:41

Qualifiers:

Value exceeds Maximum Contaminant Level

E Value exceeds the instrument calibration range

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)

Spike Recovery outside accepted recovery limits



**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT

O'Brien & Gere Inc. of North America

Lab ID:

K1011042-002A

Project:

PAS Oswego-Semi-Annual Well Sampling

Client Sample ID: LR-8

W Order:

K1011042

11/03/10 8:45

Matrix:

Collection Date: Date Received:

11/03/10 16:22

WATER

PrepDate:

Inst. ID:

MSK\_75

Sample Size 10 mL %Moisture:

BatchNo:

R21077

Revision:

ColumnID: Rtx-VMS 12/01/10 13:13

TestCode: 8260W OLM42 FileID:

1-SAMP-K3154.D

Col Type:

Analyte	Result Qua	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNE	S BY GC/MS			SW826	0B	
Dichlorodifluoromethane	NO	1.00	0.10	µg/L	1	11/05/10 12:11
Chloromethane	ND	1.00	0.33	µg/L	1	11/05/10 12:11
Vinyl chloride	ND	1.00	0.33	µg/L	1	11/05/10 12:11
Bromomethane	ND	1.00	0.33	µg/L	1	11/05/10 12:11
Chioroethane	7.18	1.00	0.33	µg/L	1	11/05/10 12:11
Trichlorofluoromethane	ND	1.00	0.10	µg/L	1	11/05/10 12:11
1,1-Dichloroethene	NO	0.50	0.16	µg/L	1	11/05/10 12:11
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.50	0.10	µg/L	1	11/05/10 12:11
Acetone	ND	10.0	1.00	µg/L	1	11/05/10 12:11
Carbon disulfide	ND	0.50	0.11	µg/L	1	11/05/10 12:11
Methyl acetate	ND	5.00	1.00	μg/L	1	11/05/10 12:11
Methylens chloride	ND _	2.00	0.16	μg/L	1	11/05/10 12:11
trans-1,2-Dichloroethene	0.11(J )	0.50	0.10	µg/L	1	11/05/10 12:11
Methyl tert-butyl ether	ND .	1.00	0.16	µg/L	1	11/05/10 12:11
1,1-Dichloroethane	0.44(1)	0.50	0.10	μg/L	1	11/05/10 12:11
cis-1,2-Dichloroethene	ND O	0.50	0.10	µg/L	1	11/05/10 12:11
2-Butanone	ND	10.0	1.00	µg/L	1	11/05/10 12:11
Chloroform	ND	0.50	0.10	µg/L	1	11/05/10 12:11
1,1,1-Trichloroethane	ND	0.50	0.10	μg/L	1	11/05/10 12:11
Cyclohexane	3.62	0.50	0.10	μg/L	1	11/05/10 12:11
Carbon tetrachloride	ND	0.50	0.10	µg/L	1	11/05/10 12:11
Benzene	12.5	0,50	0.10	μ <b>g/</b> L	1	11/05/10 12:11
1,2-Dichloroethane	ND	0.50	0.18	μ <b>g/L</b>	1	11/05/10 12:11
Trichkroethene	ND _	0,50	0.10	μg/L	1	11/05/10 12:11
Methylcyclohexane	0.46µ	0.50	0.10	μg/L	1	11/05/10 12:11
1,2-Dichloropropane	ND	0.50	0.16	µg/L	1	11/05/10 12:11
Bromodichloromethane	ND	0.50	0.10	µg/L	1	11/05/10 12:11
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/05/10 12.11
4-Methyl-2-pentanone	DM	5.00	1.00	µg/L	1	11/05/10 12:11
Toluene	0.76	0.50	0.10	μg/L	1	11/05/10 12:11
trans-1,3-Dichloropropene	ND	0.50	0.16	μg/L	1	11/05/10 12:11
1,1,2-Trichloroethane	ND	0.50	0.16	µg/L	1	11/05/10 12:11
Tetrachloroethene	DN	0.50	0.10	µg/L	1	11/05/10 12:11
2-Hexanone	ND	5.00	1.00	µg/L	1	11/05/10 12:11

## Qualifiers:

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- Analyte detected below the PQL
  - Print/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) Spike Recovery outside accepted recovery limits

Print Date: 12/01/10 13:14

538845



**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT O'Brien & Gere Inc. of North America

Lab ID: Client Sample ID: LR-8

K1011042-002A

Project:

PAS Oswego-Semi-Annual Well Sampling

W Order:

K1011042

Collection Date:

11/03/10 8:45

Matrix:

Date Received:

11/03/10 16:22

last, ID:

WATER

Sample Size 10 mL

PrepDate: BatchNo:

R21077

ColumnID: Rtx-VMS

MSK 75

12/01/10 13:13

%Moisture:

TestCode: 8260W\_OLM42 FileID:

1-SAMP-K3154.D

Revision: Col Type:

Analyte	Result Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOU	NDS BY GC/MS			SW8260	В	
Dibromochkoromethane	ND	0.50	0.10	µg/L	1	11/05/10 12:11
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/05/10 12:11
Chlombenzene	18.0	0.50	0.10	µg/L	1	11/05/10 12:11
Ethylbenzene	0.14(J)	0.50	0.10	μg/L	1	11/05/10 12:11
Xylenes (total)	0.61(3)	1.00	0.30	μ <b>g</b> /L	1	11/05/10 12:11
Styrene	ON	0.50	0.10	µg/L	1	11/05/10 12:11
Bromoform	ND	1.00	0.33	µg/L	1	11/05/10 12:11
Isopropyibenzen <del>a</del>	2.90	0.50	0.10	µg/L	1	11/05/10 12:11
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	11/05/10 12:11
1,3-Dichlorobenzene	0.1 <b>6(</b> J)	0.50	0.10	µg/L	1	11/05/10 12:11
1,4-Dichlorobenzene	1.15	0.50	0.16	µg/L	1	11/05/10 12:11
1,2-Dichlorobenzene	1.70	0.50 /	0.10	μg/L	1	11/05/10 12:11
1,2-Dibromo-3-chloropropane	CN ON	5.00	1.00	μg/L	1	11/05/10 12:11
1,2,4-Trichlorobenzene	NO	1.00	0.10	μg/L	1	11/05/10 12:11
Surr: 1,2-Dichloroethane-d4	. 91	7 <del>5</del> -128	0.16	%REC	1	11/05/10 12:11
Surr: Toluene-d8	100	75-125	0.10	%REC	1	11/05/10 12:11
Surr: 4-Bromofluorobenzene	98	75-125	0.10	%REC	1	11/05/10 12:11

Ou	uli	fie	r

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- 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

Print Date: 12/01/10 13:14

538845

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248 K1011042-003A

CLIENT

O'Brien & Gere Inc. of North America

Lab ID:

Project:

PAS Oswego-Semi-Annual Well Sampling

Client Sample ID: M-21

W Order:

K1011042

Collection Date:

11/03/10 10:00

Matrix:

WATER

11/03/10 16:22

Inst. ID:

MSK 75

Sample Size: 10 mL

PrepDate: BatchNo:

Date Received:

R21077

ColumnID Rtx-VMS Revision:

11/18/10 7:45

%Moisture: TestCode:

8260W\_OLM42 FileID:

1-SAMP-K3155.D

Col Type:

Analyte	Result Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOU	NDS BY GC/MS			SW826	0B	
Dichlorodifluoromethane	ND	1.00	0.10	µg <b>/L</b>	1	11/05/10 12:41
Chloromethane	ND	1.00	0.33	µg/L	1	11/05/10 12:41
Vinyl chloride	ND	1.00	0.33	μg/L	1	11/05/10 12:41
Bromomethane	ND	1.00	0.33	µg/L	1	11/05/10 12:41
Chloroethane	0.98(J)	1.00	0.33	μg/L	1	11/05/10 12:41
Trichiorofluoromethane	ND	1.00	0.10	μg/L	1	11/05/10 12:41
1,1-Dichloroethene	ND	0.50	0.16	μg/L	1	11/05/10 12:41
1,1,2-Trichioro-1,2,2- trifluoroethane	ND	0.50	0.10	µg/L	1	11/05/10 12:41
Acetone	ND	10.0	1.00	hā/ŗ	1	11/05/10 12:41
Carbon disulfide	ND	0.50	0.11	μ <b>g/L</b>	1	11/05/10 12:41
Methyl acetate	ND	5.00	1.00	µg/L	1	11/05/10 12:41
Methylene chloride	ND	2.00	0.16	µg/L	1	11/05/10 12:41
trans-1,2-Dichlorcethene	ND	0.50	0.10	hã/r	1	11/05/10 12:41
Methyl tert-butyl ether	ND	1.00	0.16	hð\r	1	11/05/10 12:41
1,1-Dichloroethane	ND	0.50	0.10	µ <b>₫/</b> L	1	11/05/10 12:41
cis-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/05/10 12:41
2-Butanone	ND	10.0	1.00	hā/L	1	11/05/10 12:41
Chloroform	ND	0.50	0.10	µg/L	1	11/05/10 12:41
1,1,1-Trichlorcethane	ND	0.50	0.10	hâ/r	1	11/05/10 12:41
Cyclohexane	0,94	0.50	0.10	µg/L	1	11/05/10 12:41
Carbon tetrachloride	ND _	0.50	0.10	µg/L	1	11/05/10 12:41
Benzene	0.13(1)	0.50	0.10	µg/L	1	11/05/10 12:41
1,2-Dichloroethane	מא 🔾	0.50	0.16	hãy.	1	11/05/10 12:41
Trichloroethene	ND	0.50	0.10	ħâ\r	1	11/05/10 12:41
Methylcyclohexane	ND	0.50	0.10	μg/L	1	11/05/10 12:41
1,2-Dichioropropane	ND	0.50	0.16	h8\r	1	11/05/10 12:41
Bromodichloromethane	ND	0.50	0.10	µg/L	1	11/05/10 12:41
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/05/10 12:41
4-Methyl-2-pentanone	ND _	5,00	1.00	μg/L	1	11/05/10 12:41
Toluene	0.19(J)	0.50	0.10	µg/∟	1	11/05/10 12:41
trans-1,3-Dichloropropene	ND	0.50	0.16	har	1	11/05/10 12:41
1,1,2-Trichioroethane	ND	0.50	0.16	µg/L	1	11/05/10 12:41
Tetrachloroethene	ND	0.50	0.10	µg/L	1	11/05/10 12:41

## Qualifiers:

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- 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

# LSL Life Science Laboratories, Inc. 5854 Butternut Drive

**Analytical Results** 

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT

O'Brien & Gere Inc. of North America

Lab ID:

K1011042-003A

Project:

PAS Oswego-Semi-Annual Well Sampling

Client Sample ID: M-21

W Order:

K1011042

Collection Date: Date Received:

11/03/10 10:00

Matrix:

WATER

PrepDate:

11/03/10 16:22

Inst. ID: ColumnID MSK 75

Sample Size: 10 mL %Moisture:

BatchNo:

R21077

Revision:

Rtx-VMS 11/18/10 7:45

TestCode:

8260W OLM42 FileID:

I-SAMP-K3155.D

Col Type:

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW826	OB	
2-Hexanone	ND	5.00	1.00	µg/L	1	11/05/10 12:41
Dibromochloromethans	ND	0.50	0.10	µg/L	1	11/05/10 12:41
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/05/10 12:41
Chlorobenzene	3.75	0.50	0.10	µg/L	1	11/05/10 12:41
Ethylbenzene	ND	0.50	0.10	μg/L	1	11/05/10 12:41
Xylenes (total)	ND	1.00	0.30	μg/L	1	11/05/10 12:41
Styrene	ND	0.50	0.10	µg/L	1	11/05/10 12:41
Bromoform	ND	1.00	0.33	µg/L	1	11/05/10 12:41
Isopropylbenzene	0.78	0.50	0.10	μg/L	1	11/05/10 12:41
1,1,2,2-Tetrachioroethane	ND	0,50	0.10	µg/L	1	11/05/10 12:41
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/05/10 12:41
1,4-Dichlorobenzene	0.18(J)	0.50	0.16	µg/L	1	11/05/10 12:41
1,2-Dichlorobenzene	0.42(1)	0.50	0.10	μg/L	1	11/05/10 12:41
1,2-Dibromo-3-chloropropane	NO (J.	J5.00	1.00	μg/L	1	11/05/10 12:41
1,2,4-Trichlorobenzene	NO	1.00	0.10	µg/L	1	11/05/10 12:41
Surr: 1,2-Dichloroethane-d4	91	75-128	0.16	%REC	1	11/05/10 12:41
Surr. Toluene-d8	101	75-125	0.10	%REC	1	11/05/10 12:41
Surr: 4-Bromofluorobenzene	98	75-125	0.10	%REC	1	11/05/10 12:41

Qualifiers	l
------------	---

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- 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

24

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248 K1011042-005A

CLIENT O'Brien & Gere Inc. of North America

11/18/10 7:45

PAS Oswego-Semi-Annual Well Sampling

Lab ID: Client Sample ID: LCW-2

Project: W Order:

K1011042 Matrix: WATER

Collection Date: Date Received:

11/03/10 12:55 11/03/10 16:22

Inst. ID: **MSK 75** 

Sample Size: 10 mL

PrepDate:

R21077

ColumnID Rtx-VMS

%Moisture: TestCode:

BatchNo: 8260W\_OLM42 FileID:

1-SAMP-K3151.D

Revision: Col Type:

Analyte	Result Qua	l PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOL	INDS BY GC/MS		3	SW826	OB	
Dichlorodifluoromethane	ND	10.0	1.00	μg/L	10	11/05/10 10:41
Chloromethane	ND	10.0	3.30	µg/L	10	11/05/10 10:41
Vinyl chloride	24.0	10.0	3.30	µg/L	10	11/05/10 10:41
Bromomethane	ND	10.0	3.30	μg/L	10	11/05/10 10:41
Chloroethane	ND	10.0	3.30	µg/L	10	11/05/10 10:41
Trichlorofluoromethane	ND _	10.0	1.00	µg/L	10	11/05/10 10:41
1,1-Dichloroethene	2.40(J)	5.00	1.60	μg/L	10	11/05/10 10:41
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	5.00	1.00	hãv	10	11/05/10 10:41
Acetone	ND	100	10.0	µg/L	10	11/05/10 10:41
Carbon disulfide	ND	5.00	1.10	µg/L	10	11/05/10 10:41
Methyl acetate	ND	50.0	10.0	µg/L	10	11/05/10 10:41
Methylene chloride	ND	20.0	1.60	µg/L	10	11/05/10 10:41
trans-1,2-Dichloroethene	ND	5.00	1.00	μg/L	10	11/05/10 10:41
Methyl tert-butyl ether	ND	10.0	1.80	µg/L	10	11/05/10 10:41
1,1-Dichloroethane	28.4	5.00	1.00	µg/L	10	11/05/10 10:41
cis-1,2-Dichloroethene	140	5.00	1.00	µg/L	10	11/05/10 10:41
2-Butanone	ND	100	10.0	µg/L	10	11/05/10 10:41
Chleroform	3.30(J)	5.00	1.00	µg/L	10	11/05/10 10:41
1,1,1-Trichloroethane	12.5	5.00	1.00	h8/L	10	11/05/10 10:41
Cyclohexane	1.30	5.00	1.00	µg/∟	10	11/05/10 10:41
Carbon tetrachloride	ND	5.00	1.00	µg/L	10	11/05/10 10:41
Benzene	106	5.00	1.00	µg/L	10	11/05/10 10:41
1,2-Dichloroethane	ND	5.00	1,60	µg/L	10	11/05/10 10:41
Trichloroethene	30.3	5.00	1.00	µg/L	10	11/05/10 10:41
Methylcyclohexane	ND	5.00	1.00	µg/L	10	11/05/10 10:41
1,2-Dichloropropane	ND	5.00	1,60	µg/L	10	11/05/10 10:41
Bromodichloromethane	ND	5.00	1.00	µg/L	10	11/05/10 10:41
cis-1,3-Dichloropropene	ND	5.00	1.60	µg/L	10	11/05/10 10:41
4-Methyl-2-pentanone	ND	50.0	10.0	µg/L	10	11/05/10 10:41
Toluene	ND	5.00	1.00	μg/L	10	11/05/10 10:41
frans-1,3-Dichleropropens	ND	5.00	1.60	µg/L	10	11/05/10 10:41
1,1,2-Trichtoroethane	ND	5.00	1.60	µg/L	10	11/05/10 10:41
Tetrachioroethene	44.8	5.00	1.00	µg/L	10	11/05/10 10:41

## Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- 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

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

O'Brien & Gere Inc. of North America

PAS Oswego-Semi-Annual Well Sampling

K1011042-005A

Project:

K1011042

Lab ID: Client Sample ID: LCW-2

W Order: Matrix:

Collection Date:

11/03/10 12:55

Inst. ID:

WATER

Sample Size: 10 mL

Date Received: PrepDate:

11/03/10 16:22

**MSK** 75 ColumnID Rtx-VMS

%Moisture:

BatchNo:

R21077

Revision: 11/18/10 7:45

TestCode:

8260W\_OLM42 FileID:

1-SAMP-K3151.D

Col Type:

S ND	50.0 5.00 5.00 5.00 5.00 10.0 5.00	10.0 1.00 1.60 1.00 1.00 3.00	Units SW826  µg/L  µg/L  µg/L  µg/L  µg/L  µg/L  µg/L	DF  10  10  10  10  10  10  10  10  10  1	11/05/10 10:41 11/05/10 10:41 11/05/10 10:41 11/05/10 10:41 11/05/10 10:41 11/05/10 10:41
ND ND ND 1.4 0.8 0.4	5.00 5.00 5.00 5.00 10.0 5.00	1.00 1.60 1.00 1.00 3.00 1.00	hâ\r hâ\r hâ\r hâ\r hâ\r	10 10 10 10 10 10	11/05/10 10:41 11/05/10 10:41 11/05/10 10:41 11/05/10 10:41 11/05/10 10:41
ND ND 1.4 0.8 0.4	5.00 5.00 5.00 5.00 10.0 5.00	1.00 1.60 1.00 1.00 3.00 1.00	ha\r ha\r ha\r ha\r	10 10 10 10 10	11/05/10 10:41 11/05/10 10:41 11/05/10 10:41 11/05/10 10:41 11/05/10 10:41
ND 4.4 0.8 0.4	5.00 5.00 5.00 10.0 5.00	1.60 1.00 1.00 3.00 1.00	hā\r hā\r hā\r	10 10 10 10	11/05/10 10:41 11/05/10 10:41 11/05/10 10:41 11/05/10 10:41
1.4 0.8 0.4 1D	5.00 5.00 10.0 5.00	1.00 1.00 3.00 1.00	µg/L µg/L µg/L	10 10 10	11/05/10 10:41 11/05/10 10:41 11/05/10 10:41
).8 ).4 ID	5.00 10.0 5.00	1.00 3.00 1.00	μg/L μg/L	10 10	11/05/10 10:41 11/05/10 10:41
9.4 ID	10.0 5.00	3.00 1.00	μg/L	10	11/05/10 10:41
ID O	5.00	1.00			11/05/10 10:41
			µg/L	10	
ID .	10.0			· <del>-</del>	11/05/10 10:41
		3.30	µg/L	10	11/05/10 10:41
30(j)	5.00	1.00	µg/L	10	11/05/10 10:41
<b>30</b> (3)	5.00	1.00	µg/L	10	11/05/10 10:41
D	5.00	1.00	μg/L	10	11/05/10 10:41
ΙD	5.00	1.60	μg/L	10	11/05/10 10:41
<b>(</b> φο	5.00	1.00	hā/r	10	11/05/10 10:41
<u> LW a</u>	50.0	10.0			11/05/10 10:41
D	10.0	1.00		-	11/05/10 10:41
12	75-128	1.60			
2	75-125				11/05/10 10:41
iA.	75-125	7.7		10	11/05/10 10:41 11/05/10 10:41
9	10 7/J 10 92 92 98	ID 10.0 92 75-128 02 75-125	10.0 1.00 92 75-128 1.60 02 75-125 1.00	10.0 μg/L 10.0 1.00 μg/L 192 75-128 1.60 %REC 102 75-125 1.00 %REC	ID 10.0 1.00 µg/L 10  92 75-128 1.60 %REC 10  02 75-125 1.00 %REC 10

## Qualifiers:

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- 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

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT

O'Brien & Gere Inc. of North America

K1011042-006A

Project:

PAS Oswego-Semi-Annual Well Sampling

W Order:

K1011042

Client Sample ID: LCW-4

11/03/10 14:25

Matrix:

WATER

Date Received:

Collection Date:

11/03/10 16:22

Inst. ID: ColumnID MSK 75

Sample Size: 10 mL %Moisture:

PrepDate: BatchNo:

Lab ID:

R21077

Revision:

Rtx-VMS 11/18/10 7:45 TestCode:

8260W OLM42 FileID:

1-SAMP-K3152.D

Col Type:

Analyte	THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN	esult Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC CO	MPOUNDS BY GO	C/MS			SW826	ne.	
Dichlorodifluoromethane		ND	20.0	2.00	µg/L	20	11/05/10 11:11
Chicromethane		ND	20.0	6.60	µg/L	20	11/05/10 11:11
Vinyl chloride		26.0	20.0	6.60	µg/L	20	11/05/10 11:11
Bromomethane		ND	20.0	6.60	µg/L	20	
Chloroethana		49.4	20,0	6.60	μg/L	20	11/05/10 11:11 11/05/10 11:11
Trichlorofluoromethane		NO	20.0	2.00	ha/r	20	
1,1-Dichloroethene		ND	10.0	3.20	ի <b>∂</b> /Ր	20	11/05/10 11:11
1,1,2-Trichloro-1,2,2- trifluoroethane		ND	10.0	2.00	hã\r hãr	20	11/05/10 11:11 11/05/10 11:11
Acetone	200 U	<del>29.0 J</del>	200	20.0	µg/L	20	11/05/10 11:11
Carbon disulfide		ND	10.0	2.20	µg/L	20	11/05/10 11:11
Methyl acetate		ND	100	20.0	ha/r	20	
Methylene chloride	404	<del>3:20 J</del>	40.0	3.20	μg/L	20	11/05/10 11:11
rans-1,2-Dichloroethene		ND	10.0	2.00	µg/L	20	11/05/10 11:11
Methyl tert-butyl ether		ND	20.0	3.20	μg/L	20	11/05/10 11:11
1,1-Dichloroethane		31.8	10.0	2.00	հ <b>ն∖</b> Ր հծ.բ	20	11/05/10 11:11
cis-1,2-Dichloroethene		159	10.0	2.00	hā/r	20	11/05/10 11:11
2-Butanone		ND	200	20.0	µg/L	20	11/05/10 11:11
Chloroform		ND	10.0	2.00	ha\r ha\r	20	11/05/10 11:11
1,1,1-Trichloroethane		2.60(J)	10.0	2.00	μg/L	20	11/05/10 11:11
Cyclohexane		11.8	10.D	2.00	µg/L	20	11/05/10 11:11
Carbon tetrachloride		ND	10.0	2.00	ha\r ha\r	20 20	11/05/10 11:11
Benzene		239	10.0	2.00		-	11/05/10 11:11
,2-Dichloroethane		3.60(J)	10.0	3.20	μg/L	20	11/05/10 11:11
richloroethene		2.40(J)	10.0	2.00	µg/L µg/L	20	11/05/10 11:11
/lethylcyclohexane		2.20(J)	10.0	2.00		20	11/05/10 11:11
,2-Dichloropropane		NĎ	10.0	3.20	hð/F	20 20	11/05/10 11:11
Promodichioromethane		ND	10.0	2.00	իՖ∖Ր ԻՖԻՐ	20	11/05/10 11:11
is-1,3-Dichloropropene		ND	10.0	3.20	hã/r	20	11/05/10 11:11
-Methyl-2-pentanone		ND	100	20.0			11/05/10 11:11
oluene		117	10.0	2.00	hâ\r T	20 20	11/05/10 11:11
ans-1,3-Dichloropropene		ND	10.0	3.20	ha\r		11/05/10 11:11
,1,2-Trichloroethane		ND	10.0	3.20	µg/L	20	11/05/10 11:11
etrachloroethene		ND	10.0	3,20 2,00	µg/L µg/L	20 20	11/05/10 11:11 11/05/10 11:11

## Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- 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

Print Date: 11/23/10 15:56

538843

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT Project:

O'Brien & Gere Inc. of North America

Lab ID;

K1011042-006A

PAS Oswego-Semi-Annual Well Sampling

Client Sample ID: LCW-4

Collection Date:

11/03/10 14:25

W Order: Matrix:

K1011042 WATER

Date Received:

PrepDate:

11/03/10 16:22

Inst. ID:

MSK 75

Sample Size: 10 mL %Moisture:

BatchNo:

R21077

ColumnID Revision:

Rtx-VMS 11/18/10 7:45

TestCode:

8260W\_OLM42 FileID:

I-SAMP-K3152.D

Col Type:

Analyte	Result Qua	l PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	DS BY GC/MS	ali (The spillate principal and principal an		SW828	)B	
2-Hexanone	ND	100	20.0	µg/L	20	11/05/10 11:11
Dibromochloromethane	ND	10.0	2.00	μg/L	20	11/05/10 11:11
1,2-Dibromoethane	ND	10.0	3.20	µg/L	20	11/05/10 11:11
Chlorobenzene	213	10.0	2.00	µg/L	20	11/05/10 11:11
Ethylbenzene	387	10.0	2.00	μg/L	20	11/05/10 11:11
Xylenes (total)	1000	20.0	6.00	μg/L	20	11/05/10 11:11
Styrene	ND	10.0	2.00	µg/L	20	11/05/10 11:11
Bromoform	ND	20.0	6,60	µg/L	20	11/05/10 11:11
Isopropylbenzene	5.20()	10.0	2.00	μg/L	20	11/05/10 11:11
1,1,2,2-Tetrachloroethane	ND	10.0	2.00	µg/L	20	11/05/10 11:11
1,3-Dichlorobenzene	ND	10.0	2.00	µg/L	20	11/05/10 11:11
1,4-Dichlorobenzene	3.20(1)	10.0	3.20	µg/L	20	11/05/10 11:11
1,2-Dichlorobenzene	38.4	10.0	2.00	µg/L	20	11/05/10 11:11
1,2-Dibromo-3-chloropropane	NDUS	J100	20.0	µg/L	20	11/05/10 11:11
1,2,4-Trichlorobenzene	ND	20.0	2.00	μg/L	20	11/05/10 11:11
Surr: 1,2-Dichloroethane-d4	91	75-128	3.20	%REC	20	11/05/10 11:11
Surr: Toluene-d8	100	75-125	2.00	%REC	20	11/05/10 11:11
Surr: 4-Bromofluorobenzene	100	75-125	2.00	%REC	20	11/05/10 11:11

Osta	lifters

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- 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

Print Date: 11/23/10 15:56

538843

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

**Analytical Results** 

StateCertNo: 10248

CLIENT O'Brien & Gere Inc. of North America PAS Oswego-Semi-Annual Well Sampling

Project:

W Order: K1011042 WATER

Matrix:

Inst. ID: MSK 75 ColumnID Rtx-VMS

Revision: 11/18/10 7:45

Sample Size: 10 mL

%Moisture: TestCode:

8260W\_OLM42 FileID:

K1011042-007A Lab ID:

Client Sample ID: X-1 ( Lh- le Collection Date: 11/03/10 0:00

Date Received: 11/03/10 16:22

PrepDate:

BatchNo: R21077

1-SAMP-K3156.D

Col Type:

Analyte	Result Qua	l PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOU			SW826	0B		
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	11/05/10 13:11
Chloromethane	ND	1.00	0.33	μg/L	1	11/05/10 13:11
Vinyl chloride	ND	1.00	0.33	µg/L	1	11/05/10 13:11
Bromomethane	ND	1.00	0.33	μg/L	1	11/05/10 13:11
Chloroethane	ND	1.00	0.33	μ <b>g/L</b>	1	11/05/10 13:11
Trichloroflucromethane	ND	1.00	0.10	µg/L	1	11/05/10 13:11
1,1-Dichiorcethene	ND	0.50	0.16	µg/L	•	11/05/10 13:11
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	0.50	0.10	h <b>ā</b> /r	1	11/05/10 13:11
Acetone	ND	10.0	1,00	μg/L	1	11/05/10 13:11
Carbon disulfide	ND	0.50	0.11	μg/L	1	11/05/10 13:11
Methyl acetate	ND	5.00	1.00	µg/L	1	11/05/10 13:11
Methylene chloride	ND	2.00	0.16	µg/L	1	11/05/10 13:11
trans-1,2-Dichlorcethene	ND	0.50	0.10	µg/L	1	11/05/10 13:11
Melhyl tert-butyl ether	ND	1.00	0.16	μg/L	1	11/05/10 13:11
1,1-Dichloroethane	2.02	0.50	0.10	μg/L	i	11/05/10 13:11
cis-1,2-Dichloroethene	0.11(1)	0.50	0.10	µg/L	1	11/05/10 13:11
2-Bulanone	ND	10.0	1.00	µg/L	1	11/05/10 13:11
Chloraform	ND	0.50	0.10	µg/L	1	11/05/10 13:11
1,1,1-Trichioroethane	ND	0.50	0.10	µg/L	1	11/05/10 13:11
Cyclohexane	ND	0.50	0.10	μg/L	1	11/05/10 13:11
Carbon tetrachloride	ND	0.50	0.10	μg/L	1	11/05/10 13:11
Benzene	ND	0.50	0.10	µg/L	1	11/05/10 13:11
1,2-Dichloroethane	ND	0.50	0.16	μg/L	1	11/05/10 13:11
Trichloroethene	0.18/J	0.50	0.10	μg/L	1	11/05/10 13:11
Methylcyclohexane	ND	0,50	0.10	μ <b>g/L</b>	1	11/05/10 13:11
1,2-Dichloropropane	ND	0.50	0.16	µg/L	1	11/05/10 13:11
Bromodichloromethane	ND	0.50	0.10	μg/L	1	11/05/10 13:11
cis-1,3-Dichloropropene	ND	0.50	0.16	μg/L	1	11/05/10 13:11
4-Methyl-2-pentanone	ND	5.00	1.00	μg/L	1	11/05/10 13:11
Toluene	ND	0.50	0.10	µg/L	1	11/05/10 13:11
rans-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/05/10 13:11
1,1,2-Trichloroethane	ND	0.50	0.16	µg/L	1	11/05/10 13:11
Tetrachloroethene	ND	0.50	0.10	μg/L	1	11/05/10 13:11

### Qualifiers:

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

Print Date: 11/23/10 15:56

538847

**Analytical Results** 

15854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT Project:

O'Brien & Gere Inc. of North America

PAS Oswego-Semi-Annual Well Sampling

Lab ID: Client Sample ID: X-1

K1011042-007A

W Order:

K1011042

Collection Date:

11/03/10 0:00

Matrix:

WATER

11/03/10 16:22

Inst. ID:

MSK 75

Sample Size: 10 mL %Molsture:

PrepDate:

Date Received:

R21077

ColumnID Rtx-VMS Revision:

11/18/10 7:45

TestCode: 8260W\_OLM42 FileID:

BatchNo:

1-SAMP-K3156.D

Col Type:

Analyte	Result Qu	ial PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS	BY GC/MS			SW826	ìR	
2-Hexanone	ND	5.00	1.00	µg/L	1	11/05/10 13:11
Dibromochloromethane	ND	0.50	0.10	μg/L	1	11/05/10 13:11
1,2-Dibromoethane	ND	0.50	0.16	μg/L	1	11/05/10 13:11
Chlorobenzene	NO	0.50	0.10	µg/L	1	11/05/10 13:11
Ethylbenzene	ND	0.50	0.10	μg/L	1	11/05/10 13:11
Xylenes (total)	ND	1,00	0.30	µg/L	1	11/05/10 13:11
Styrene	ND	0.50	0.10	µg/L	1	11/05/10 13:11
Bromoform	ND	1.00	0.33	μg/L	1	11/05/10 13:11
Isopropylbenzene	ND	0.50	0.10	µg/L	1	11/05/10 13:11
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	μg/L	1	11/05/10 13:11
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/05/10 13:11
1,4-Dichlorobenzene	ND	0.50	. 0.16	µg/L	1	11/05/10 13:11
1,2-Dichlorobenzene	ND	0.50	0.10	μg/L	1	11/05/10 13:11
1,2-Dibromo-3-chloropropane		J5.00 V	1.00	μg/L	1	11/05/10 13:11
1,2,4-Trichlorobenzene	ND	1.00	0.10	ի <b>ն</b> ∖Ր	4	11/05/10 13:11
Surr: 1,2-Dichloroethane-d4	93	75-128	0.16	%REC	1	11/05/10 13:11
Surr: Toluene-d8	102	75-125	0.10	%REC	4	
Surr: 4-Bromofluorobenzene	98	75-125 75-125	Q.10	%REC	4	11/05/10 13:11 11/05/10 13:11

0	u e l	ifi	ers

Value exceeds Maximum Contaminant Level

E Value exceeds the instrument calibration range

Analyte detected below the POL

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

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT

O'Brien & Gere Inc. of North America

Lab ID:

K1011042-008A

Project:

PAS Oswego-Semi-Annual Well Sampling

Client Sample ID: QC Trip Blanks

W Order:

K1011042

Collection Date:

11/03/10 7:30

Matrix:

WATER O

Date Received:

11/03/10 16:22

Inst. ID:

MSK 75

Sample Size: 10 mL

PrepDate: BatchNo:

R21077

ColumnID Revision:

Rtx-VMS 11/18/10 7:45 %Moisture:

TestCode: 8260W\_OLM42 FileID;

1-SAMP-K3157.D

Col Type:

Analyte	Result Qua	l PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS				SW826	DB	
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	11/05/10 13:41
Chloromethane	ND	1.00	0.33	μg/L	1	11/05/10 13:41
Vinyl chloride	ND	1.00	0.33	μg/L	1	11/05/10 13:41
Bromomethane	ND	1.00	0.33	μg/L	1	11/05/10 13:41
Chlorcethane	ND	1.00	0.33	µ <b>g/L</b>	1	11/05/10 13:41
Trichlorofluoromelhane	ND	1.00	0.10	µg/L	1	11/05/10 13:41
1,1-Dichloroethene	ND	0.50	0,16	µg/L	1	11/05/10 13:41
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	0.50	0.10	µg/L	1	11/05/10 13:41
Acetone	5.69ปี )	10.0	1.00	μg/L	1	11/05/10 13:41
Carbon disuifide	DO	0.50	0.11	µg/L	1	11/05/10 13:41
Methyl acetate	ND .	5.00	1.00	µg/L	1	11/05/10 13:41
Methylene chloride	0.32(Ĵ)	2.00	0.16	µg/L	1	11/05/10 13:41
irans-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/05/10 13:41
Methyl tert-butyl ether	0.17(J)	1.00	0.16	µg/L	1	11/05/10 13:41
I,1-Dichloroelhane	ND	0.50	0.10	μg/L	1	11/05/10 13:41
cis-1,2-Dichloroethene	NO	0.50	0.10	μg/L	· i	11/05/10 13:41
Z-Butanone	ND	10.0	1.00	µg/L	1	11/05/10 13:41
Chloroform	ND	0.50	0.10	µg/L	1	11/05/10 13:41
1,1,1-Trichioroethane	ND	0.50	0.10	µg/L	1	11/05/10 13:41
Cyclohexane	ND	0.50	0.10	µg/L	1	11/05/10 13:41
Carbon tetrachloride	ND	0.50	0.10	μg/L	1	11/05/10 13:41
3enzene	ND	0.50	0.10	µg/L	1	11/05/10 13:41
1,2-Dichloroethane	ND	0.50	0.18	µg/L	1	11/05/10 13:41
Frichloroethene	ND	0.50	0.10	µg/L	1	11/05/10 13:41
Methylcyclohexans	ND	0.50	0.10	μg/L	1	11/05/10 13:41
f,2-Dichloropropane	ND	0.50	0.16	μg/L	1	11/05/10 13:41
3romodichloromethane	ND	0.50	0.10	µg/L	•	11/05/10 13:41
is-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/05/10 13:41
I-Methyl-2-pentanone	ND	5.00	1.00	րց/L	1	11/05/10 13:41
Toluene :	Й	0.50	0.10	hā/r	1	11/05/10 13:41
rans-1,3-Dichloropropene	ND	0.50	0.16	րց/Ն	1	11/05/10 13:41
1,1,2-Trichloroethane	ND	0.50	0.16	µg/L	1	11/05/10 13:41
Fetrachloroethene	NO	0.50	0.10	µg/L	1	11/05/10 13:41

## Qualifiers:

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- 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

Print Date: 11/23/10 16:01

538848

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT

O'Brien & Gere Inc. of North America

K1011042-008A

Project:

PAS Oswego-Semi-Annual Well Sampling

Lab ID: Client Sample ID: QC Trip Blanks

W Order:

K1011042

Collection Date: Date Received:

11/03/10 7:30

Matrix:

WATER Q

Sample Size: 10 mL

PrepDate:

11/03/10 16:22

Inst. ID: ColumnID Rtx-VMS

MSK 75

%Moisture:

BatchNo:

R21077

Revision: 11/18/10 7:45 TestCode: 8260W\_OLM42 FileID:

1-SAMP-K3157.D

Col Type:

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNI	DS BY GC/MS			SW826	)B	
2-Hexanone	ND	5.00	1.00	µg/L	1	11/05/10 13:41
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/05/10 13:41
1,2-Dibromoethane	ND	0.50	0.16	μց/Ն	1	11/05/10 13:41
Chlorobenzena	ND	0.50	0.10	μg/L	1	11/05/10 13:41
Ethylbenzene	ND	0.50	0.10	µg/L	1	11/05/10 13:41
Xylenes (total)	ND	1.00	0.30	µg/L	1	11/05/10 13:41
Styrene	ND	0.50	0.10	µg/L	1	11/05/10 13:41
Bromoform	ND	1.00	0.33	µg/L	1	11/05/10 13:41
Isopropyibenzene	ND	0.50	0.10	µg/L	1	11/05/10 13:41
1,1,2,2-Tetrachloroethane	ND	G.50	0.10	μg/L	1	11/05/10 13:41
1,3-Dichlorobenzene	ND	0.50	0.10	μg/L	1	11/05/10 13:41
1,4-Dichlorobenzene	ND	0.50	0.16	µg/L	1	11/05/10 13:41
1,2-Dichlorobenzene	ND	0.50	/ 0.10	µg/L	1	11/05/10 13:41
1,2-Dibromo-3-chloropropane	NOU	J5.00 V	1.00	µg/L	1	11/05/10 13:41
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	11/05/10 13:41
Surr. 1,2-Dichloroethane-d4	92	75-128	0.16	%REC	1	11/05/10 13:41
Surr. Toluene-d8	101	75-125	0.10	%REC	1	11/05/10 13:41
Surr: 4-Bromofluorobenzene	99	75-125	0.10	%REC	1	11/05/10 13:41

## Qualifiers:

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- 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)
- Spike Recovery autside accepted recovery fimits

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT

O'Brien & Gere Inc. of North America

K1011306-001A

Project:

PAS Oswego-Semi-Annual Well Sampling

Lab ID:

W Order:

Client Sample ID: LR-6

11/29/10 10:30

Matrix:

K1011306

Collection Date: Date Received:

11/29/10 13:37

Inst. ID:

WATER

Sample Size: 10 mL

PrepDate: BatchNo:

R21143

ColumnID Rtx-502.2

MS03 10

12/01/10 10:56

%Moisture: TestCode:

8260W\_OLM42 FileID:

1-SAMP-J1572.D

Revision: Col Type:

Analyte	Result Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOU	NDS BY GC/MS	· · · · · · · · · · · · · · · · · · ·		SW826	)B	( ) (
Dichlorodifluoromethane	ND	1.00	0.10	μg/L	1	11/30/10 14:27
Chloromethane	ND	1.00	0.33	µg/L	1	11/30/10 14:27
Vinyl chloride	ND	1.00	0.33	hđyr	1	11/30/10 14:27
Bromomethane	ND	1.00	0.33	µg/L	1	11/30/10 14:27
Chlorcethane	ND	1.00	0.33	μg/L	1	11/30/10 14:27
Trichlorofluoromethane	ND	1.00	0.10	μ <b>ց/L</b>	1	11/30/10 14:27
1,1-Dichloroethene	ND	0.50	0.16	μg/ <b>L</b>	1	11/30/10 14:27
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	0.50	0.10	μg/L	1	11/30/10 14:27
Acetone	ND	10.0	1.00	hð/L	1	11/30/10 14:27
Carbon disulfide	МD	0.50	0.11	µg/L	1	11/30/10 14:27
Methyl acetate	ND	5.00	1.00	µg∕L	1	11/30/10 14:27
Methylene chloride	ND	2.00	0.16	μg/L	1	11/30/10 14:27
trans-1,2-Dichloroethene	ND	0.50	0.10	μg/L	1	11/30/10 14:27
Methyl tert-butyl ether	ND	1.00	0.16	hāvr	1	11/30/10 14:27
1,1-Dichloroethane	1.86	0.50	0.10	hg/L	1	11/30/10 14:27
cis-1,2-Dichloroethene	ND	0.50	0.10	μg/L	1	11/30/10 14:27
2-Butanone	ND	10.0	1.00	µg/L	1	11/30/10 14:27
Chloroform	ND	0.50	0.10	µg/L	1	11/30/10 14:27
1,1,1-Trichloroethane	ND	0.50	0.10	µg/L	1	11/30/10 14:27
Cyclohexane	ND	0.50	0.10	µg∕L	1	11/30/10 14:27
Carbon tetrachloride	ND	0.50	0.10	μg/L	1	11/30/10 14:27
Benzene	ND	0.50	0.10	μ <b>g/</b> L	1	11/30/10 14:27
1,2-Dichloroethane	ND	0.50	0.16	µg/∟	1	11/30/10 14:27
Trichloroethene	0.18(J)	0.50	0.10	hã/r	1	11/30/10 14:27
Methylcyclohexane	ODM	0.50	0.10	µg/L	1	11/30/10 14:27
1.2-Dichleropropane	ND	0.50	0.16	hā/r	1	11/30/10 14:27
Bromodichloromethane	ND	0.50	9.10	µg/L	1	11/30/10 14:27
cis-1,3-Dichloropropene	ND	0.50	0.16	μg/L	1	11/30/10 14:27
4-Methyl-2-pentanone	ND	5.00	1.00	µg/L	1	11/30/10 14:27
Toluene	NĐ	0.50	0.10	µg/L	1	11/30/10 14:27
trans-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/30/10 14:27
1,1,2-Trichloroethane	ND	0.50	0.16	hâ\Γ	1	11/30/10 14:27
Tetrachloroethene	ND	0.50	0.10	μg/L	1	11/30/10 14:27

## Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- Analyte detected below the PQL
- P Primt/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

# LSL

Project:

W Order:

# Life Science Laboratories, Inc.

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

Sample Size: 10 mL

%Moisture:

TestCode:

StateCertNo: 10248

CLIENT O'Brien & Gere Inc. of North America

PAS Oswego-Semi-Annual Well Sampling

K1011306

Matrix: WATER

Inst. ID: MS03\_10 ColumnID Rtx-502.2

Revision: 12/01/10 10:56

Lab ID:

K1011306-001A

Client Sample ID: LR-6

Collection Date: 11/29/10 10:30 Date Received: 11/29/10 13:37

PrepDate:

BatchNo: R21143

8260W OLM42 FileID:

1-SAMP-J1572.D

Col Type:

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN			SW8260	)B		
2-Hexanone	ND	5.00	1.00	μg/L	1	11/30/10 14:27
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/30/10 14:27
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/30/10 14:27
Chlorobenzene	ND	0.50	0.10	µg/L	1	11/30/10 14:27
Ethylbenzene	DN	0.50	0.10	µg/L	1	11/30/10 14:27
Xylenes (total)	ND	1.00	0.30	µg/L	1	11/30/10 14:27
Styrene	NO	0.50	0.10	µg/L	1	11/30/10 14:27
Bromoform	ND	1.00	0.33	µg/L	1	11/30/10 14:27
Isopropylbenzene	ND	0.50	0.10	µg/L	1	11/30/10 14:27
1,1,2,2-Tetrachioroethane	ND	0.50	0.10	µg/L	1	11/30/10 14:27
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/30/10 14:27
1,4-Dichlorobenzene	ND	0.50	0.16	μg/L	1	11/30/10 14:27
1,2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/30/10 14:27
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	μg/L	1	11/30/10 14:27
1,2,4-Trichlorobenzene	ND	1.00	0.10	μg/L	1	11/30/10 14:27
Surr: 1,2-Dichloroethane-d4	103	75-128	0.16	%REC	*	11/30/10 14:27
Surr. Toluene-d8	102	75-125	0.10	%REC	1	11/30/10 14:27
Surr: 4-Bromofluorobenzene	98.4	75-125	0.10	%REC	1	11/30/10 14:27

0	#4	Ħ	fi.	••	4

- Value exceeds Maximum Contaminant Level
- 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

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT

O'Brien & Gere Inc. of North America

Lab ID:

K1011306-002A

Project:

PAS Oswego-Semi-Annual Well Sampling

Client Sample ID: QC Trip Blanks

W Order:

K1011306

Collection Date:

11/29/10 10:30

Matrix:

WATER Q

Date Received:

11/29/10 13:37

Inst. ID:

MS03 10

Sample Size: 10 mL

PrepDate:

ColumnID Revision:

Rtx-502.2

12/01/10 10:56

%Moisture:

BatchNo: TestCode: 8260W\_OLM42 FileID:

R21143 1-SAMP-J1573.D

Col Type:

Analyte	Result Qua	I PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOL			SW826	0B		
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	11/30/10 14:59
Chloromethane	ND	1.00	0.33	μg/L	1	11/30/10 14:59
Vinyl chloride	DM	1.00	0.33	µg/L	1	11/30/10 14:59
Bromomethane	ND	1.00	0.33	µg/L	1	11/30/10 14:59
Chloroethane	NO	1.00	0.33	µg/L	1	11/30/10 14:59
Trichlorofluoromethane	ND	1.00	0.10	μg/L	1	11/30/10 14:59
1,1-Dichloroethene	ND	0.50	0.16	µg/L	1	11/30/10 14:59
1,1,2-Trichlore-1,2,2- trifluoroethane	ND	0.50	0.10	μg/L	1	11/30/10 14:59
Acetone	6.21 <b>(</b> J)	10.0	1.00	μ <b>g/L</b>	1	11/30/10 14:59
Carbon disuffide	0.23(J)	0.50	0.11	μg/L	1	11/30/10 14:59
Methyl acetale	ND	5.00	1.00	μg/L	1	11/30/10 14:59
Methylene chloride	ND	2.00	0.16	µg/L	1	11/30/10 14:59
trans-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/30/10 14:59
Methyl tert-butyl ether	ND	1.00	0.16	µg/L	1	11/30/10 14:59
1,1-Dichloroethane	ND	0.50	0.10	ha\r	1	11/30/10 14:59
cls-1,2-Dichloroethene	ND	0.50	0.10	₽ <b>g/L</b>	1	11/30/10 14:59
2-Butanone	ND	10.0	1.00	μg/L	1	11/30/10 14:59
Chloroform	ND	0.50	0.10	μg/L	1	11/30/10 14:59
1,1,1-Trichtoroethane	ND	0.50	0.10	μдЛ	1	11/30/10 14:59
Cyclohexane	ND	0.50	0.10	μд/Ն	1	11/30/10 14:59
Carbon tetrachloride	ND	0.50	0_10	µg/L	1	11/30/10 14:59
Benzene	ND	0.50	0.10	µg/L	1	11/30/10 14:59
1,2-Dichloroethane	ND	0.50	0.16	μg/L	1	11/30/10 14:59
Trichloroethene	ND	0.50	0.10	μg/L	1	11/30/10 14:59
Methylcyclohexane	ND	0.50	0.10	µg/L	1	11/30/10 14:59
1,2-Dichloroprepane	ND	0.50	0.16	μg/L	1	11/30/10 14:59
Bromodichloromethane	ND	0.50	0.10	µg/L	1	11/30/10 14:59
cis-1,3-Dichioropropene	ND	0.50	0.15	μg/L	1	11/30/10 14:59
4-Methyl-2-pentanone	ND	5.00	1.00	µg/L	1	11/30/10 14:59
Toluene	ND	0.50	0.10	µg/L	1	11/30/10 14:59
trans-1,3-Dichloropropena	ND	0.50	0.16	µg/L	1	11/30/10 14:59
1,1,2-Trichloroethane	ND	0.50	0.16	µg/L	1	11/30/10 14:59
Tetrachloroethene	ND	0.50	0.10	μ <b>g/</b> L	1	11/30/10 14:59

## Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- Analyte detected below the PQL
- Prim/Conf. column %D or RPD exceeds limit
- 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

Print Date: 12/01/10 14:09

540544

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT

Lab ID:

K1011306-002A

Project:

O'Brien & Gere Inc. of North America

PAS Oswego-Semi-Annual Well Sampling

Client Sample ID: QC Trip Blanks

W Order:

Collection Date:

11/29/10 10:30

Matrix:

K1011306

Date Received:

WATER Q

PrepDate:

11/29/10 13:37

Inst. ID:

MS03 10

Sample Size: 10 mL %Moisture:

BatchNo:

R21143

ColumnID Revision:

Rtx-502.2 12/01/10 10:56

TestCode: 8260W OLM42 FileID:

1-SAMP-J1573.D

Col Type:

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNI	DS BY GC/MS			SW826	)8	
2-Hexanone	ND	5.00	1.00	µg/L	1	11/30/10 14:59
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/30/10 14:59
1,2-Dibromoethane	ND	0.50	0.16	μg/L	1	11/30/10 14:59
Chlorobenzene	ND	0.50	0.10	µg/L	1	11/30/10 14:59
Ethylbenzene	ND	0.50	0.10	µg/L	1	11/30/10 14:59
Xylenes (total)	ND	1.00	0.30	µg/L	1	11/30/10 14:59
Styrene	ND	0.50	0.10	µg/L	1	11/30/10 14:59
Bromoform	ND	1.00	0.33	µg/L	1	11/30/10 14:59
Isopropyibanzana	ND	0.50	0.10	µg/L	1	11/30/10 14:59
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	11/30/10 14:59
1,3-Dichlorobenzene	ND	0.50	0.10	μ <b>g/</b> L	1	11/30/10 14:59
1,4-Dichlorobenzene	ND	0.50	0.16	μg/L	1	11/30/10 14:59
1,2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/30/10 14:59
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	μg/L	1	11/30/10 14:59
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	11/30/10 14:59
Surr: 1,2-Dichloroethane-d4	102	75-128	0.16	%REC	1	11/30/10 14:59
Surr: Toluene-d8	108	75-125	0.10	%REC	1	11/30/10 14:59
Surr: 4-Bromofluorobenzene	102	75-125	0.10	%REC	1	11/30/10 14:59

Qualifier	ì
-----------	---

Value exceeds Maximum Contaminant Level

Value exceeds the instrument calibration range

Analyte detected below the PQL

Prim./Conf. column %D or RPD exceeds limit

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

W Order: K1011042

# Life Science Laboratories, Inc.

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

# **Analytical Results**

StateCertNo: 10248

CLIENT O'Brien & Gere Inc. of North America

Project: PAS Oswego-Semi-Annual Well Sampling

Client Sample ID: LCW-2

Lab ID:

K1011042-005B

Collection Date:

Data Desaived

11/03/10 12:55 11/03/10 16:33

Matrix: WATER			Date Received:	11/03/10 16:22		
Analyte	Result	Qual	PQL Units	DF	Date Analyzed	
BIOCHEMICAL OXYGEN DEMAND (BO Blochemical oxygen demand (BOD5)	D5) 8.0	J	SM 18-20 5210 B 5.0 mg/L	1	11/05/10 12:10	
RESIDUE-FILTERABLE (TDS) Residue-filterable (TDS)	1100		SM 18-20 2540 C 10 mg/L	1	11/04/10 14:00	
RESIDUE-NON-FILTERABLE (TSS) Residue-non-filterable (TSS)	25		SM 18-20 2540 D 5.0 mg/L	1	11/10/10 14:00	

## Qualifiers:

Print Date: 11/22/10 15:26

- \* Value exceeds Maximum Contaminant Level
- E Value exceeds the instrument calibration range
- Analyte detected below the PQI.
- 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

37



5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

# **Analytical Results**

StateCertNo: 10248

CLIENT O'Brien & Gere Inc. of North America

Project: PAS Oswego-Semi-Annual Well Sampling

W Order: K1011042 Matrix WATER

K1011042-005C Lab ID:

Client Sample ID: LCW-2

Collection Date: Date Received:

11/03/10 12:55 11/03/10 16:22

Analyte	Result	Qual	PQL Units	DF	Date Analyzed
COD			EPA 410.4		
Chemical Oxygen Demand	100		10 mg/L	1	11/16/10 10:59

Qualifiers:

Value exceeds Maximum Contaminant Level

E Value exceeds the instrument calibration range

Analyte detected below the PQL

Prim/Canf. 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

38 Page 2 ( Print Date: 11/22/10 15:26 Project Supervisor: Pamela J. Titus

**Analytical Results** 

5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT:

O'Brien & Gere Inc. of North America

Lab ID: K1011042-005D

Project:

PAS Oswego-Semi-Annual Well Sampling

Client Sample ID: LCW-2

W Order:

K1011042

Matrix:

WATER

Collection Date: Date Received:

11/03/10 12:55 11/03/10 16:22

Inst. ID:

TOC-5000A

Sample Size: NA %Moisture:

PrepDate: BatchNo:

R21013

ColumnID: Revision:

11/09/10 11:45

TestCode TOC5310B

FileID:

1-SAMP-

Col Type:

DF Units Date Analyzed Result Qual PQL Analyte SM 18-20 5310 B **ORGANIC CARBON-TOTAL (TOC)** mg/L 11/08/10 17:18 Organic carbon-Total (TOC) 35 5.0

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- Analyte detected below the POL
- Prim./Conf. column %D or RPD exceeds limit

- 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) 445-1105

# **Analytical Results**

StateCertNo: 10248

CLIENT O'Brien & Gere Inc. of North America

Project: PAS Oswego-Semi-Annual Well Sampling

W Order: K1011042

Lab ID:

K1011042-006B

Client Sample ID: LCW-4

Collection Date: 11/03/10 14:25

WAIEK		Date Received:	11/03/10 16:22	
Analyte	Result Qual	PQL Units	DF	Date Analyzed
BIOCHEMICAL OXYGEN DEMAND (BOD5 Biochemical oxygen demand (BOD5)	NO UJ	SN 18-20 5210 B 40 mg/L	1	11/05/10 12:12
RESIDUE-FILTERABLE (TDS) Residue-filterable (TDS)	1700	SM 18-20 2540 C 10 mg/L	1	11/04/10 14:00
RESIDUE-NON-FILTERABLE (TSS) Residue-non-fiterable (TSS)	110	SM 18-20 2540 D 5.0 mg/L	1	11/10/10 14:00

## Qualifiers:

Print Date: 12/06/10 15:56

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- Analyte detected below the PQL
- 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

40



5854 Butternut Drive

East Syracuse, NY 13057

(315) 445-1105

# **Analytical Results**

StateCertNo: 10248

CLIENT O'Brien & Gere Inc. of North America

Project: PAS Oswego-Semi-Annual Well Sampling

W Order: K1011042 Matrix: WATER Lab ID: K1

K1011042-006C

Client Sample ID: LCW-4

Collection Date:
Date Received:

11/03/10 14:25 11/03/10 16:22

Analyte	Result Qual	PQL Units	DF	Date Analyzed
COD		EPA 410.4		
Chemical Oxygen Demand	210	40 mg/L	4	11/16/10 10:59
				· · · · · · · · · · · · · · · · · · ·

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

# **Analytical Results**

East Syracuse, NY 13057

(315) 445-1105

StateCertNo: 10248

CLIENT: Project:

O'Brien & Gere Inc. of North America

Lab ID:

K1011042-006D

PAS Oswego-Semi-Annual Well Sampling

Client Sample ID: LCW-4 Collection Date:

11/03/10 14:25

W Order: Matrix:

K1011042 WATER

Date Received:

11/03/10 16:22

Inst. ID:

TOC-5000A

Sample Size: NA

PrepDate:

R21013

ColumnID:

11/09/10 11:45

%Moisture: TestCode TOC5310B BatchNo: FileID:

1-SAMP-

Revision: Col Type:

Analyte	Result Qua	PQL	Units	DF	Date Analyzed
ORGANIC CARBON-TOTAL (TOC) Organic carbon-Total (TOC)	58	5.0	SM 18-20 5310 mg/L	) B 5	11/08/10 17:30

- Value exceeds Maximum Contaminant Level
- Value exceeds the instrument calibration range
- Analyte detected below the PQL
- 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

## ATTACHMENT B-5

INSTITUTIONAL CONTROLS CERTIFICATION MEMORANDUM

## PAS OSWEGO SUPERFUND SITE

## Institutional Controls Implementation Plan Annual Certification August 2011

REQUIREMENT: The Institutional Control Implementation Plan (ICIP) for the PAS Oswego Superfund Site as approved by USEPA includes requirements for the period following the execution and recording of the Easement, which were documented in the approved Remedial Action Completion Report. It states that following implementation of institutional controls on the Industrial Precision Products Property, the Site will be inspected on an annual basis to determine whether any intrusive activities have occurred. In addition, building and property records will be reviewed to ascertain whether or not any filings have been made for such activities. The ICIP provides for an annual report summarizing the findings of the inspection and record review to be prepared, along with a certification confirming that operation and maintenance activities continue, and that this annual report would be included with the OM&M progress report to be submitted to EPA in July of each year.

CERTIFICATION: The PAS Oswego annual site and records inspection was performed by de *maximis, inc.* on October 29, 2010. During this visit an inspection was made of the PAS Oswego Site during a monthly leachate removal event. This site inspection was scheduled to determine if any intrusive activities may have occurred on the Industrial Precision Controls property since the Remedial Action Completion Report was approved in August 2006. *de maximis* also contacted representatives of the City to confirm that no potential filings were made to install wells on the Industrial Precision Property. Based on results of the annual site and records inspection, a determination has been made that no intrusive activities have occurred or are planned on the Industrial Precision Control Property and that the operation and maintenance activities at the PAS Oswego Site are continuing in accordance with the requirements of Consent Decree.