ANNUAL PROGRESS REPORT

PAS OSWEGO SUPERFUND SITE

OSWEGO, NEW YORK

July 2018

Submitted By:



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de maximis, inc.

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Via Fedex

July 31, 2018

Ms. Patricia Pierre Central New York Remedial Section New York Remediation Branch Emergency and Remedial Response Division U.S. Environmental Protection Agency, Region II 20th Floor, 290 Broadway New York, New York 10007

Annual Progress Report for July 2017 through June 2018 Operations, Maintenance and Long Term-Monitoring Activities Pollution Abatement Services (PAS) Site, Oswego, NY

Dear Patricia:

Subject:

This Annual Progress Report (Annual Report) is submitted pursuant to *Consent Decree* 98-CV0112-NPMGJD and details the operation, maintenance, and long-term monitoring activities at the Pollution Abatement Services (PAS) Site (Site) in Oswego, NY (Consent Decree). This Annual Report covers the period July 1, 2017 through June 30, 2018, and is consistent with the requirements of Paragraph 30 of the Consent Decree. Our next annual progress report will be submitted on or before July 31, 2019 and will document work completed between the period July 1, 2018 and June 30, 2019.

The data for this report are presented in three attachments as discussed below. Attachment I presents graphs, figures and tables documenting long-term monitoring trends for the Site. Figures showing the Site, the Long Term Monitoring wells, the groundwater potentiometric surface contours and vertical hydraulic gradients are included in (Section I-A). Graphs showing groundwater elevations at the slurry wall well pairs are presented in (Section I-B). Semi-annual groundwater and leachate sampling results are included in (Section I-C). Tables showing the leachate volume removed from the Site LCW wells, the performance standards and additional Site well sample results are provided in (Section I-D). Attachment II of this report contains a description of the actions completed under the Consent Decree for each quarter of this reporting period. Site maintenance and monitoring records and leachate removal and disposal records for each quarter of the reporting period are also included in Section B-6 of Attachment II and documents that the requirements of the Institutional Control Plan were satisfied during this reporting period. Finally, Attachment III of this report provides a description and schedule of the actions planned during the next reporting period (July 2018 - June 2019).



SUMMARY OF LEACHATE REMOVAL ACTIVITIES

During this reporting period (July 2017 – June 2018) PAS leachate was treated and disposed at the City of Oswego POTW. A total of 179,915 gallons were removed from the containment system and discharged to the City of Oswego POTW. (Attachment I-D, Table 1).

HYDRAULIC CONTROL OF SLURRY WALL CONTAINMENT SYSTEM

The effectiveness of the hydraulic control of the slurry wall containment system is evaluated based on a review of water level elevations used to determine hydraulic gradients, both horizontal and vertical, around and beneath the containment system. Its effectiveness is also evaluated by determining whether the water level elevations are maintained below the top of the slurry wall at its downgradient extent. Horizontal gradients around the containment system are calculated using quarterly water level elevations recorded at the SWW-series monitoring wells which are located around the perimeter of the slurry wall as shown in Attachment I-B. Vertical gradients beneath the containment system are calculated based on the difference in the water level potentiometric surface in the overburden and the bedrock monitoring wells located in the vicinity of the containment system. Figures showing the potentiometric water surfaces for both the bedrock and overburden monitoring wells for each of the quarterly water level monitoring events are presented in Attachment I-A (Set 3).

The water level data for the SWW wells continue to show that the horizontal gradients at well pairs SWW-5/6 and SWW-11/12 are influenced by both leachate pumping and seasonal regional water level elevations, while horizontal gradients at other SWW well pairs are primarily affected by regional water level elevations outside the containment system. During the reporting period, the water levels at SWW-5 and SWW-11, the two interior SWW wells at the downgradient extent of the slurry wall, remained stable until early 2018 when water level elevations inside rose slightly although remaining well below the top of the slurry wall. As discussed in the 1st and 2nd quarter reports of 2018, the LCW-2 electrical control box broke off and LCW-2 was not operational until July 2018. LCW-1, LCW-3 and LCW-4 continued to operate during this time. Repair of LCW-2 and upgrading of the LCW well controls was completed on June 21, 2018 and LCW-2 pumping was renewed in July 2018. Generally, the charts indicate that leachate pumping at the rates prescribed effectively maintain hydraulic control to the degree practicable, although seasonal levels outside the containment system influence the gradients.

The vertical gradient figures shown in Attachment I-A indicate that vertical gradients are also seasonally affected by the regional water levels outside the containment system. The vertical hydraulic gradient plots presented show upward gradient trends over most of the Site during the fall, summer and winter periods due to stable water levels inside the containment system, with the plot for the spring of 2018 showing downward gradients in the LCW-2 area due to LCW-2 being inoperable. Vertical gradients typically trend downward during late summer when regional water levels are relatively low. All periods for this report showed upward gradients were present over much of the containment area especially in the area around LCW-4.

The routine elevation monitoring conducted during this reporting period indicates hydraulic control of the slurry wall containment system is maintained through routine operation of the leachate collection system. This observation remains consistent with observations reported in previous annual reports although an upward gradient variance was observed in the LCW -2 area during the 2nd quarter 2018 period.

LONG-TERM GROUNDWATER MONITORING RESULTS

The long-term groundwater quality monitoring results and trends for the downgradient monitoring wells LR-6, LR-8 and M-21 are presented graphically for the period from Nov 1998 to May 2018 in Attachment I-C. The historical VOC concentrations at these wells are also presented in tabular format in Figure 2 in Attachment I-A. Semi-annual groundwater quality monitoring results indicate that VOC-concentrations (mainly chlorobenzene) continue to fluctuate at low part per billion levels at the down-gradient monitoring wells LR-8 and M-21. In accordance with the 2016 annual report, sampling of LR-6 was performed in the fall of 2017. The concentration of 1,1 dichloroethane at well LR-6 in 2017 continued to remain at or near the detection level. The only Consent Decree performance standard constituent (Table 2) above detection level at LR-6 was 1,1 dichloroethane. This concentration remained below the performance standard in the November 2017 sampling event and has not exceeded the performance standard since 1999. Monitoring results at LR-8, the long-term monitoring well located closest to the downgradient extent of the slurry wall, remained low during the 2017-2018 period. Only chlorobenzene concentrations were above the performance standard of 5 ug/L. Monitoring results for downgradient well M-21, which is located south of Mitchell Street and north of the slurry wall containment system, were below the performance standards during the 2017 - 2018 period with the exception of chlorobenzene which fluctuated near the performance standard of 5 ug/L during the period. General trends for VOC constituents in the monitoring wells show a seasonal variation of slightly higher concentrations in the fall versus the spring for LR-6 and LR-8 wells. Well M-21 had slightly higher concentrations of chlorobenzene in the spring versus the fall with concentrations slightly above the performance standard.

Sampling of the bedrock well M-22 was performed in November 2017 and in May 2018. Results for M22 were all below performance standards although 1,1 dichlororethane was detected at 0.30 ug/L. Well OD-3 was sampled for the Consent Decree performance standards in November 2017 and May 2018. OD-3 concentrations were below detection for all performance standards in both events. The current data along with historic data is provided in Table 3.

Graphs showing leachate concentrations at LCW-2 and LCW-4 during the period November 1998 to May 2018 are also included in Attachment I-C. Leachate VOC concentrations in leachate collection well LCW-2, located in the downgradient collection trench, and well LCW-4, located in the central collection trench, showed leachate quality results consistent with historic concentrations. LCW-4 VOC concentrations continued to be higher than VOC concentrations reported at LCW-2. Xylene, which is historically the highest concentration constituent in the LCW-4 location, dropped to historic lows over the past year. Benzene, was the highest concentrations at both LCW locations, inside the containment area, remain above the concentrations of wells outside the



containment area and the performance standards.

Although chlorobenzene remains near the performance standard in the downgradient wells, the long-term monitoring results continue to support the findings that hydraulic control of the containment system has allowed VOC concentrations down-gradient of the slurry wall containment system to decline over time and that the Site remedies continue to be protective of human health and the environment.

If you have any questions, please call me at (865) 691-5052.

Sincerely, de maximis, inc Clay Mc Clarmon

Clay McClarnon

CMC/dsr

Attachments

 cc: PAS Oswego Steering Committee Marla Weider, Esq. USEPA Payson Long, NYSDEC, Div. of Hazardous Waste Remediation Brian Rogers, NYSDEC Region 7 Office Ian Ushe, NYDOH, Office of Public Health

LIST OF ATTACHMENTS

ATTACHMENT I – FIGURES, TABLES AND GRAPHS

I – A Figure 1 – Existing Site Wells

Figure 2 – Historical VOC Concentrations

Figure Set 3 -<u>Potentiometric Surfaces and Inferred Vertical Hydraulic Gradient Figures</u> Figure 2017-Q3-A - Potentiometric Surfaces – 8/8/2016 Figure 2017-Q3-B - Inferred Vertical Hydraulic Gradient – 8/8/2017 Figure 2017-Q4-A - Potentiometric Surfaces – 11/13/2017 Figure 2017-Q4-B - Inferred Vertical Hydraulic Gradient – 11/13/2017 Figure 2018-Q1-A - Potentiometric Surfaces – 2/6/2018 Figure 2018-Q1-B - Inferred Vertical Hydraulic Gradient – 2/6/2018 Figure 2018-Q2-A - Potentiometric Surfaces – 5/7/2018 Figure 2018-Q2-B - Inferred Vertical Hydraulic Gradient – 5/7/2018

- I B Slurry Wall Groundwater Elevation Charts
- I C Long Term Monitoring Groundwater and Leachate Quality Graphs
- I D Table 1 Historical Leachate Removal Summary Table 2 – Consent Decree Performance Standards Table 3 – Additional Bedrock Groundwater Monitoring Results

ATTACHMENT II – ACTIONS COMPLETED

- II A 3^{rd} Quarter 2017
 - A-1 Groundwater Elevation Data
 - A-2 Site Inspection Checklist
 - A-3 Leachate Discharge Form
 - A-4 Quarterly POTW Discharge Reports 3rd Quarter 2017
- II B 4^{th} Quarter 2017
 - B-1 Groundwater Elevation Data
 - B-2 Site Inspection Checklist
 - B-3 Leachate Discharge Form
 - B-4 Semi-Annual Leachate and Groundwater Monitoring Data (November 2017)
 - B-5 Quarterly POTW Discharge Reports 4th Quarter 2017
 - B-6 Institutional Controls Certification Memorandum

$II - C \quad 1^{st} Quarter 2018$

- C-1 Groundwater Elevation Data
- C-2 Site Inspection Checklist
- C-3 Leachate Discharge Form
- C-4 Quarterly POTW Discharge Reports 1st Quarter 2018
- II D 2^{nd} Quarter 2018
 - D-1 Groundwater Elevation Data
 - D-2 Site Inspection Checklist
 - D-3 Leachate Discharge Form
 - D-4 Semi-Annual Leachate and Groundwater Monitoring Data (May 2018)
 D-5 Quarterly POTW Discharge Reports 2nd Quarter 2018

ATTACHMENT III – ACTIONS PLANNED

Future Report III –

ATTACHMENT I FIGURES, TABLES AND GRAPHS

I-A FIGURES



- 🗣 Overburden Monitoring Well
- Manhole
- Fence (Site Boundary)
- Slurry Wall

Project No.: 3131 Plot Date: 4 May 2012 Arc Operator: BJAR

Reviewed by:

N

ddms

Saint Paul, Minnesota 55108 Main Phone: (651) 842-4224 www.ddmsinc.com

Figure 1

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Map Legend:

- Bedrock Monitoring • Well
- Leachate Collection 🖶 Well (Overburden)
- Overburden \blacklozenge Monitoring Well
- Fence (Site ----Boundary)
- Slurry Wall



Notes: VOC concentration values displayed in tables are measured in ug/L.

Data Qualifier Definitions: ND = Not detected NS = Not Sampled J = Estimated concentration (less than sample quantitation limit) J+ = Estimated, may be biased high

Basemap Source: esri World Imagery

Spatial Projection:

Coordinate System: UTM Zone 18N Units: Meters Datum: NAD83

Plot Info:

Created For: PAS Project No.: 1547-3131 Plot Date: 7/17/2018 Arc Operator: DR Reviewed by: BJR

Figure 2

Historical Concentrations of VOCs of Concern **Detected in Consent** Decree Wells (1998-2018)

Pollution Abatement Servcies Site Oswego, New York



60 Plato Boulevard East, St. Paul, Minnesota 55107 Main Phone: (651) 842-4224 www.ddmsinc.com

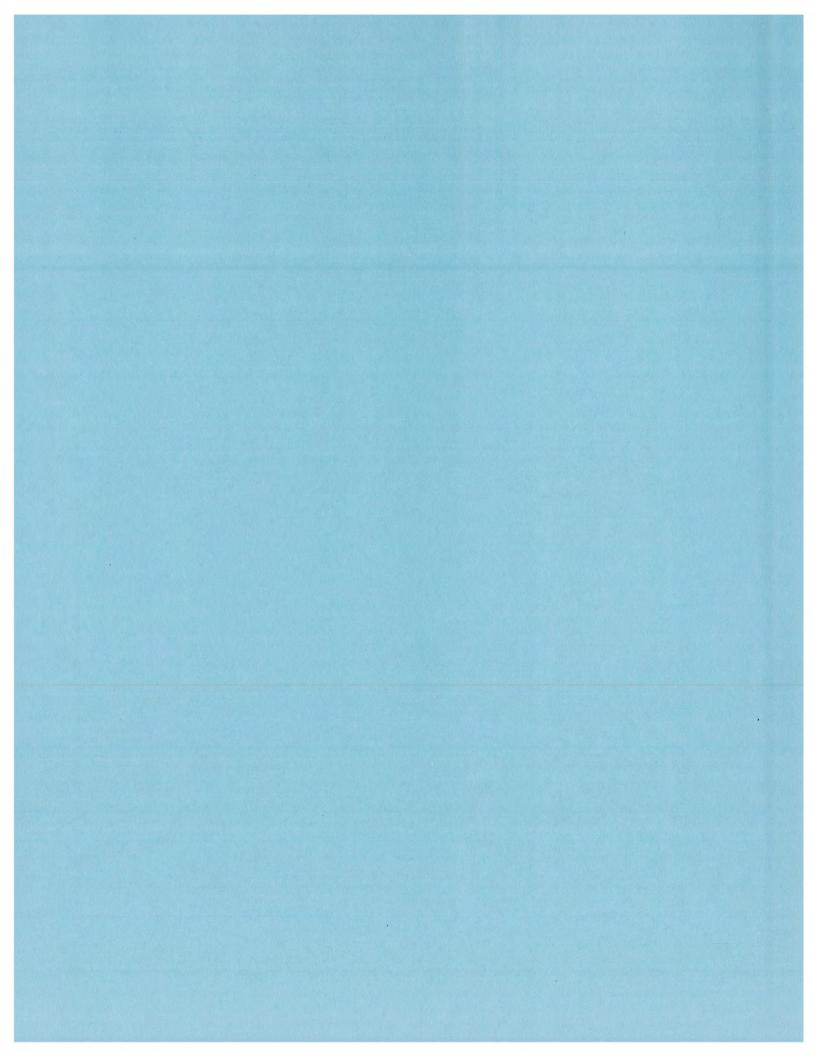


Figure Set 3 Hydraulic Gradient



- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
 - Potentiometric Surface Contours (ft)
- Fence (Site Boundary)
- Slurry Wall

Notes: LCW wells labeled on Bedrock Water Surface map for reference only and were not used in creation of the potentiometric surface.

Linear kriging was used to determine both potentiometric surfaces. Bedrock contours within the containment system are inferred from the identified bedrock wells.

POTENTIOMETRIC SURFACES August 8th, 2017

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 6 Nov 2017 Arc Operator: JNR Reviewed by: BJR





- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Fence (Site Boundary)
- Line of Potentiometric Surface Difference (ft)
- Upward Vertical Hydraulic Gradient
- Downward Vertical Hydraulic Gradient Slurry Wall

Notes:

Overburden wells within the slurry wall were used to calculate the overburden potentiometric surface. Bedrock wells outside the slurry wall were used to calculate bedrock potentiometric surface. The bedrock potentiometric surface was subtracted from the overburden surface to produce the inferred vertical hydraulic gradient.

Negative gradient values indicate an upward hydraulic gradient.

INFERRED VERTICAL HYDRAULIC GRADIENT - August 8, 2017

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 6 Nov 2017 Arc Operator: JNR Reviewed by: BJR







- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
 - Potentiometric Surface Contours (ft)
- ◆ Fence (Site Boundary)
- Slurry Wall

Notes: LCW wells labeled on Bedrock Water Surface map for reference only and were not used in creation of the potentiometric surface.

Linear kriging was used to determine both potentiometric surfaces. Bedrock contours within the containment system are inferred from the identified bedrock wells.

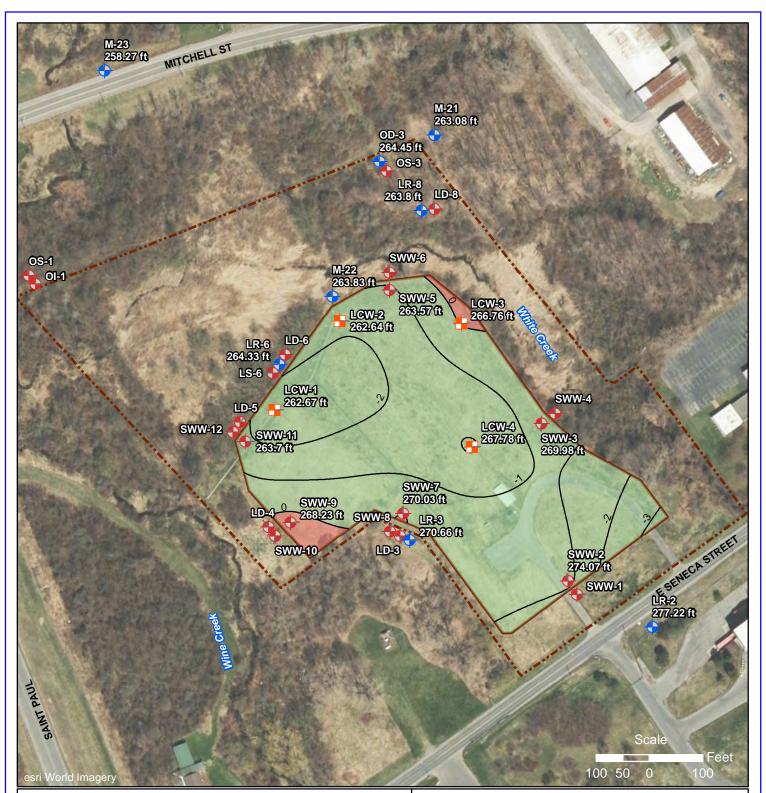
POTENTIOMETRIC SURFACES November 13, 2017

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 1 May 2018 Arc Operator: DR Reviewed by: BJR





- Bedrock Monitoring Well
 - Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Fence (Site Boundary)
 - Line of Potentiometric Surface Difference (ft)
 - Upward Vertical Hydraulic Gradient
 - Downward Vertical Hydraulic Gradient Slurry Wall

Notes:

Overburden wells within the slurry wall were used to calculate the overburden potentiometric surface. Bedrock wells outside the slurry wall were used to calculate bedrock potentiometric surface. The bedrock potentiometric surface was subtracted from the overburden surface to produce the inferred vertical hydraulic gradient.

Negative gradient values indicate an upward hydraulic gradient.

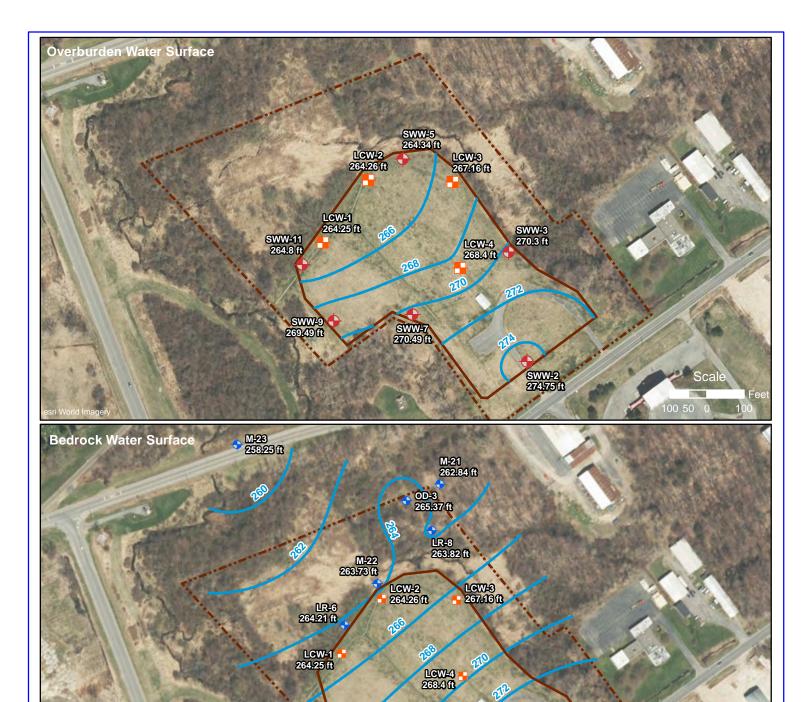
INFERRED VERTICAL HYDRAULIC GRADIENT - November 13, 2017

PAS Site, Oswego, New York





Figure 2017-Q4-B





- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well

Potentiometric Surface Contours (ft)

- ◆ Fence (Site Boundary)
- Slurry Wall

Notes: LCW wells labeled on Bedrock Water Surface map for reference only and were not used in creation of the potentiometric surface.

Linear kriging was used to determine both potentiometric surfaces. Bedrock contours within the containment system are inferred from the identified bedrock wells.

POTENTIOMETRIC SURFACES February 6, 2018

LR-2 277.35ft

PAS Site, Oswego, New York



LR-3 270.44 ft

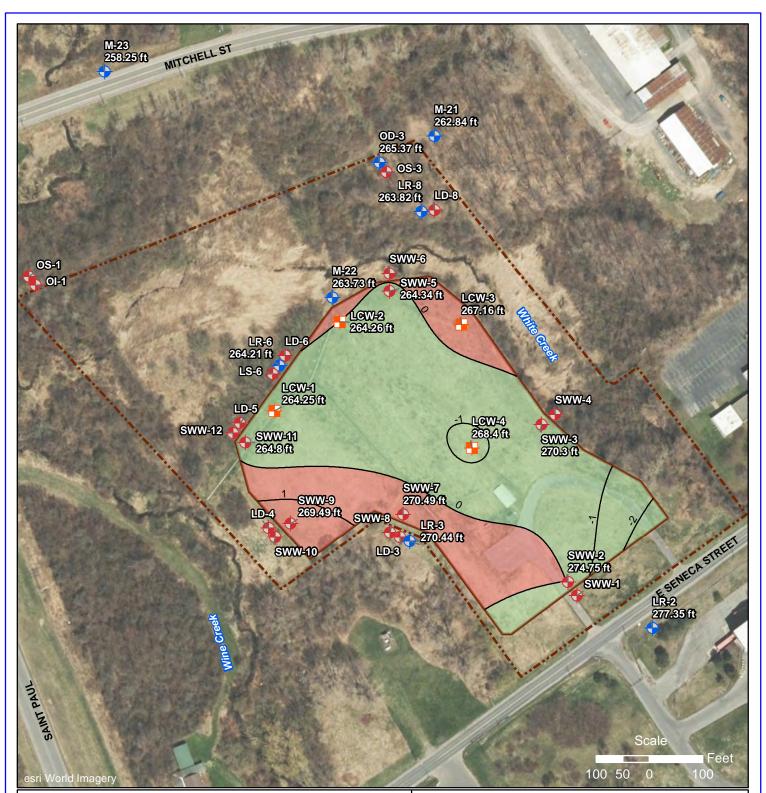
> Project No.: 3131 Plot Date: 1 May 2018 Arc Operator: DR Reviewed by: BJR



10050 0

Feet

100



- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Fence (Site Boundary)
- Line of Potentiometric Surface Difference (ft)
- Upward Vertical Hydraulic Gradient
- Downward Vertical Hydraulic Gradient Slurry Wall

Notes:

Overburden wells within the slurry wall were used to calculate the overburden potentiometric surface. Bedrock wells outside the slurry wall were used to calculate bedrock potentiometric surface. The bedrock potentiometric surface was subtracted from the overburden surface to produce the inferred vertical hydraulic gradient.

Negative gradient values indicate an upward hydraulic gradient.

INFERRED VERTICAL HYDRAULIC GRADIENT - February 6, 2018

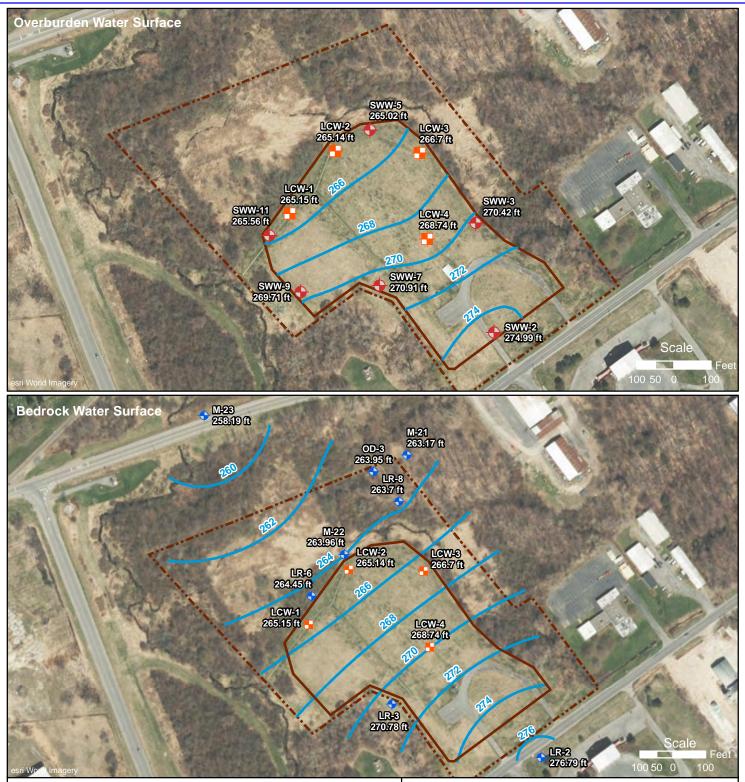
PAS Site, Oswego, New York







60 Plato Boulevard East, Suite 1 Saint Paul, Minnesota 55107 Main Phone: (651) 842-4224 www.ddmsinc.com



- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well

Potentiometric Surface Contours (ft)

Fence (Site Boundary)

Slurry Wall

Notes: LCW wells labeled on Bedrock Water Surface map for reference only and were not used in creation of the potentiometric surface.

Linear kriging was used to determine both potentiometric surfaces. Bedrock contours within the containment system are inferred from the identified bedrock wells.

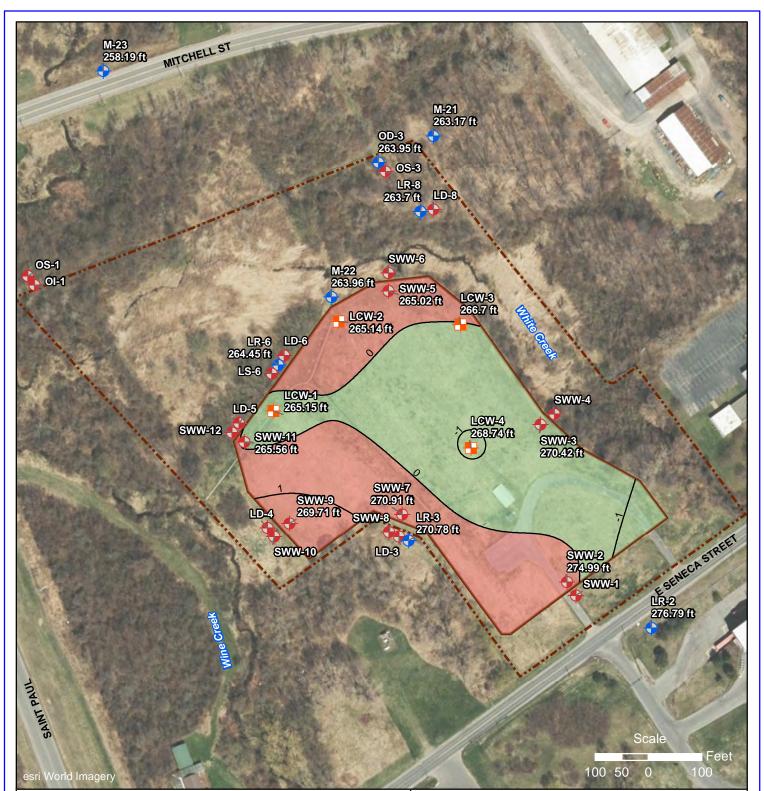
POTENTIOMETRIC SURFACES May 7, 2018

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 29 June 2018 Arc Operator: DR Reviewed by: BJR





- Bedrock Monitoring Well
 - Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Fence (Site Boundary)
 - Line of Potentiometric Surface Difference (ft)
 - Upward Vertical Hydraulic Gradient
 - Downward Vertical Hydraulic Gradient Slurry Wall

Notes:

Overburden wells within the slurry wall were used to calculate the overburden potentiometric surface. Bedrock wells outside the slurry wall were used to calculate bedrock potentiometric surface. The bedrock potentiometric surface was subtracted from the overburden surface to produce the inferred vertical hydraulic gradient.

Negative gradient values indicate an upward hydraulic gradient.

INFERRED VERTICAL HYDRAULIC GRADIENT - May 7, 2018

PAS Site, Oswego, New York

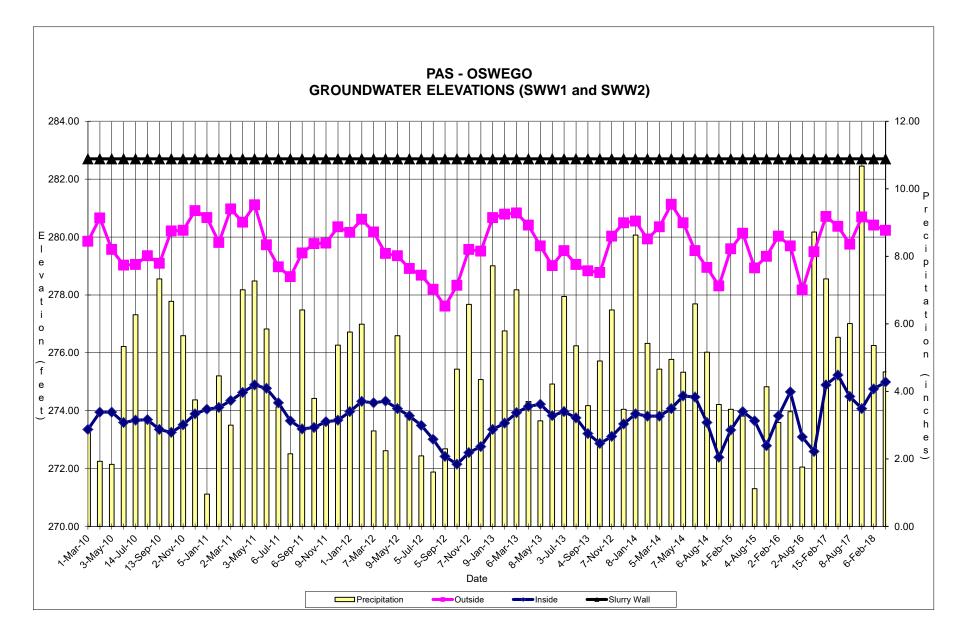


Plot Date: 29 June 2018

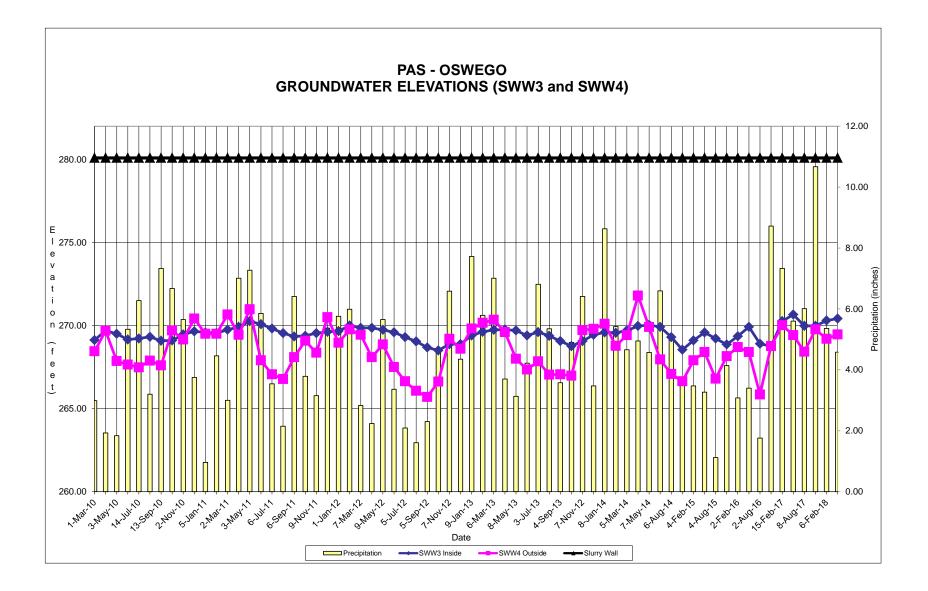


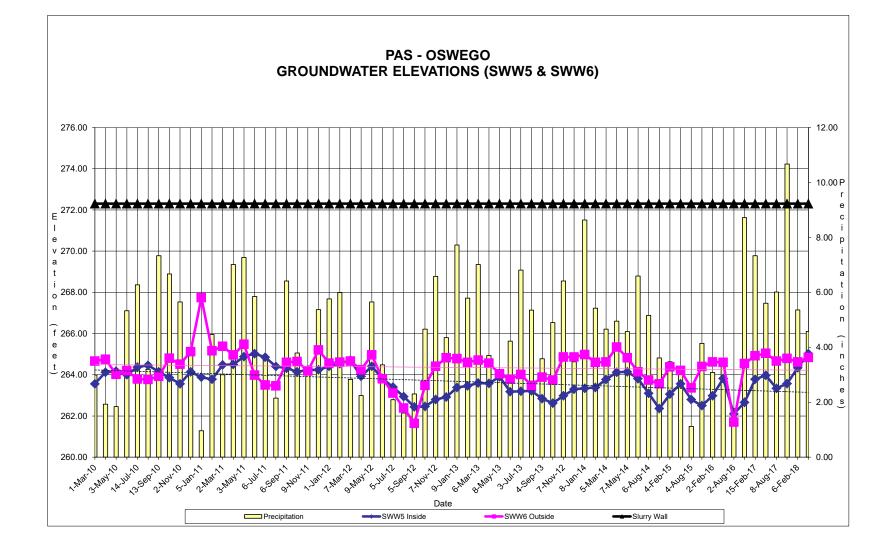


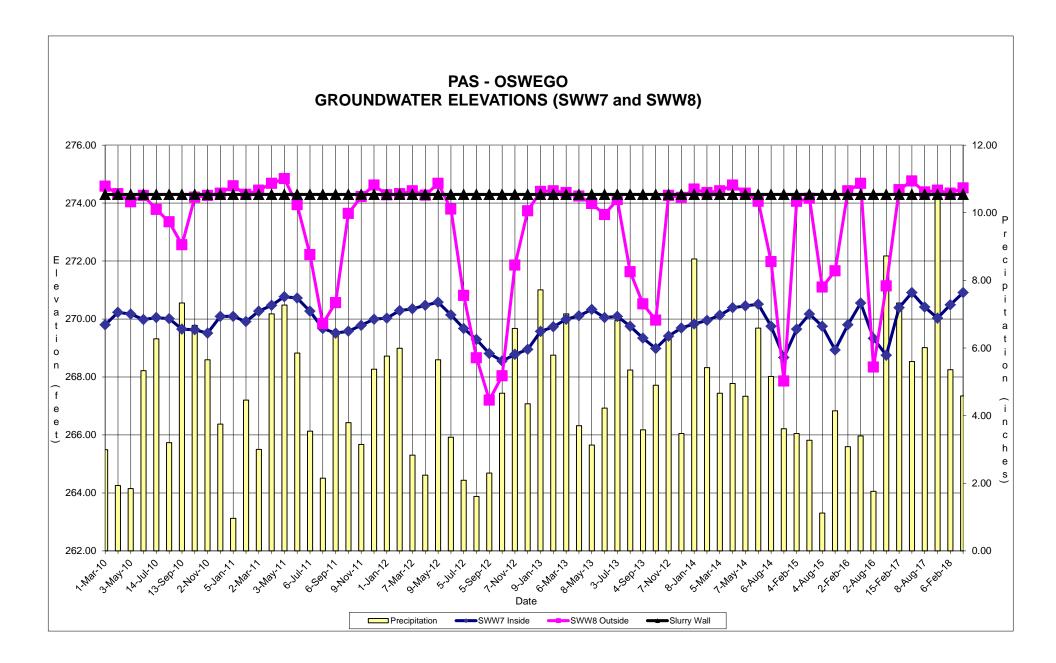
I – B Slurry Wall



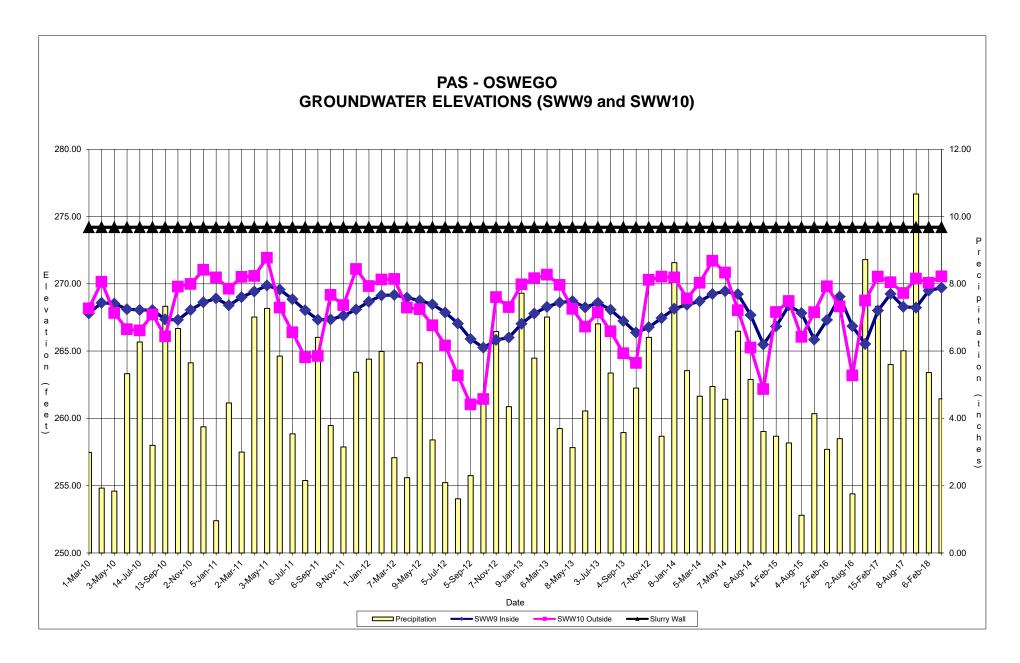
Prepared by de maximis, inc. 7/20/2018



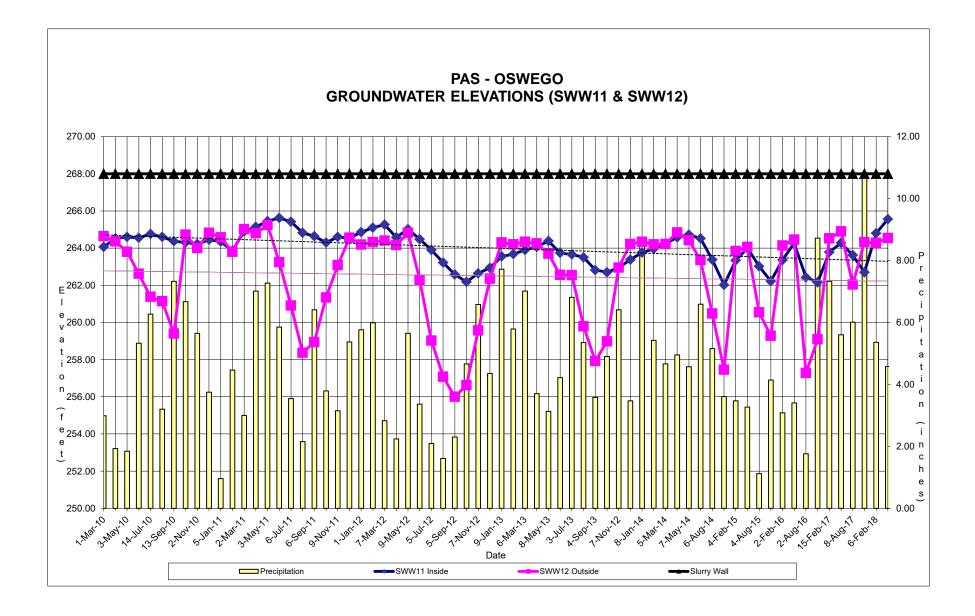




Prepared by de maximis, inc. 7/20/2018



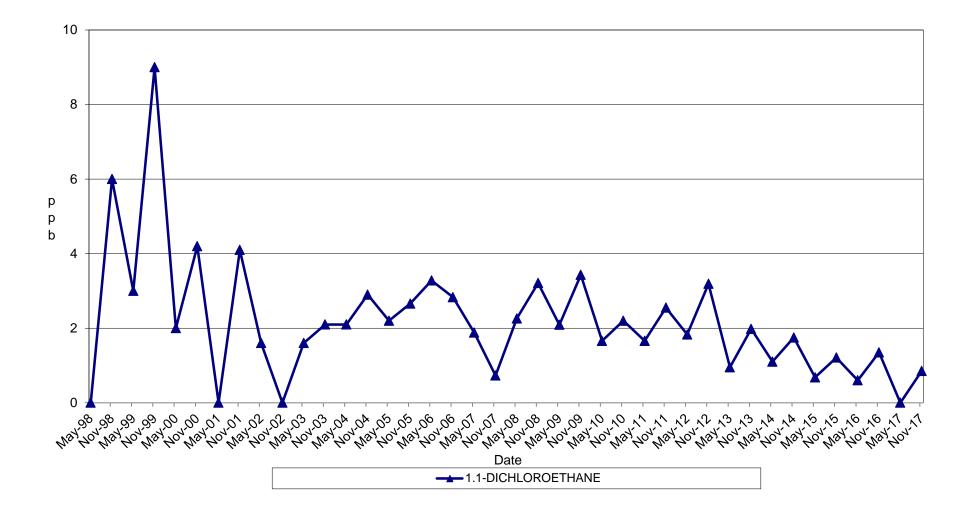
Prepared by de maximis, inc. 7/20/2018



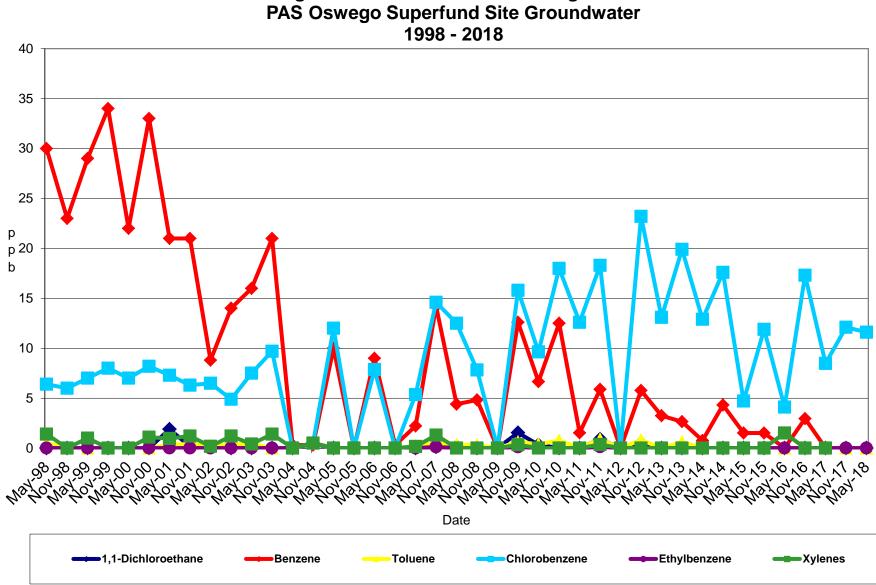
Prepared by de maximis, inc. 7/20/2018

I – C Graphs

Long Term Groundwater Monitoring at LR-6 PAS Oswego Superfund Site Groundwater 1998 - 2017

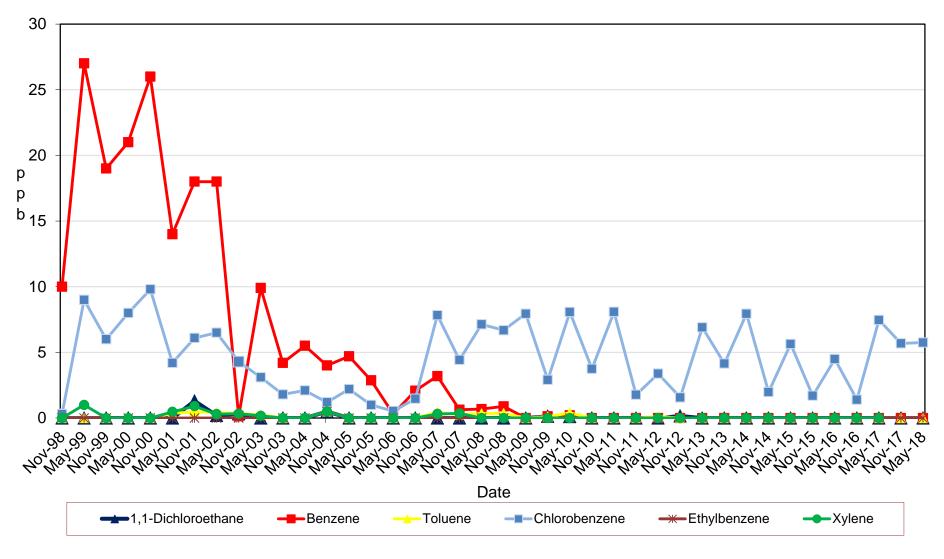


de maximis, inc. 7/19/2018

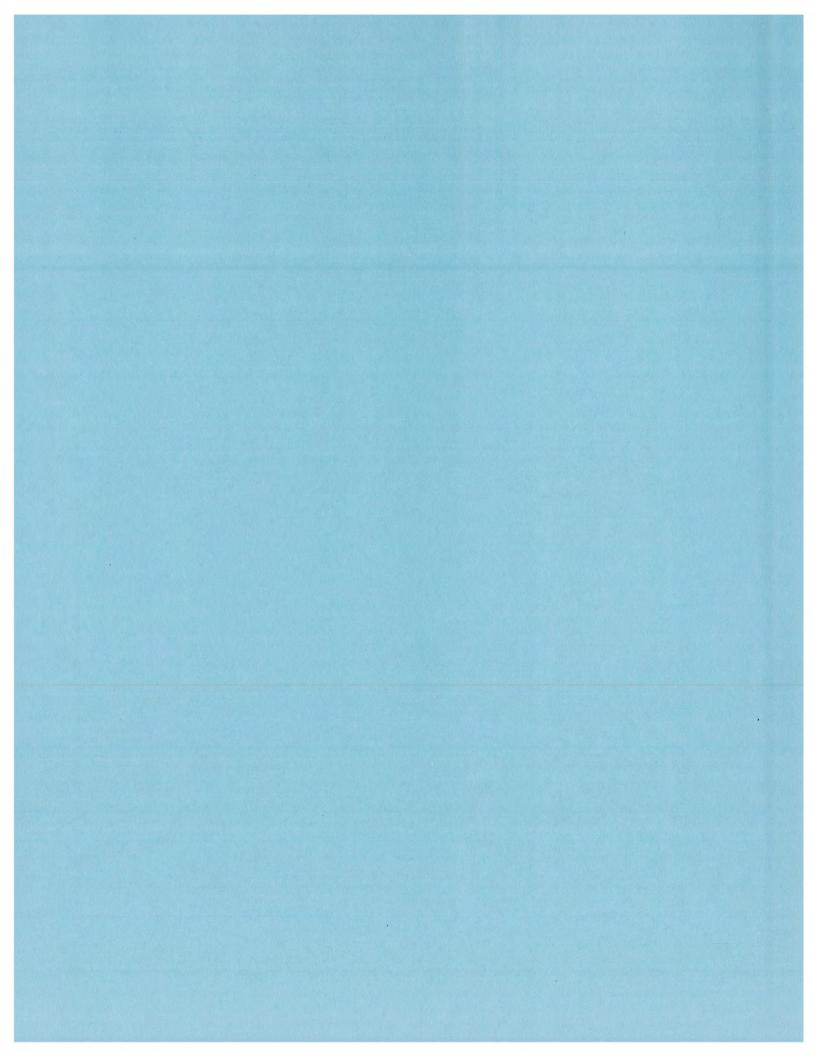


Long Term Groundwater Monitoring at LR-8

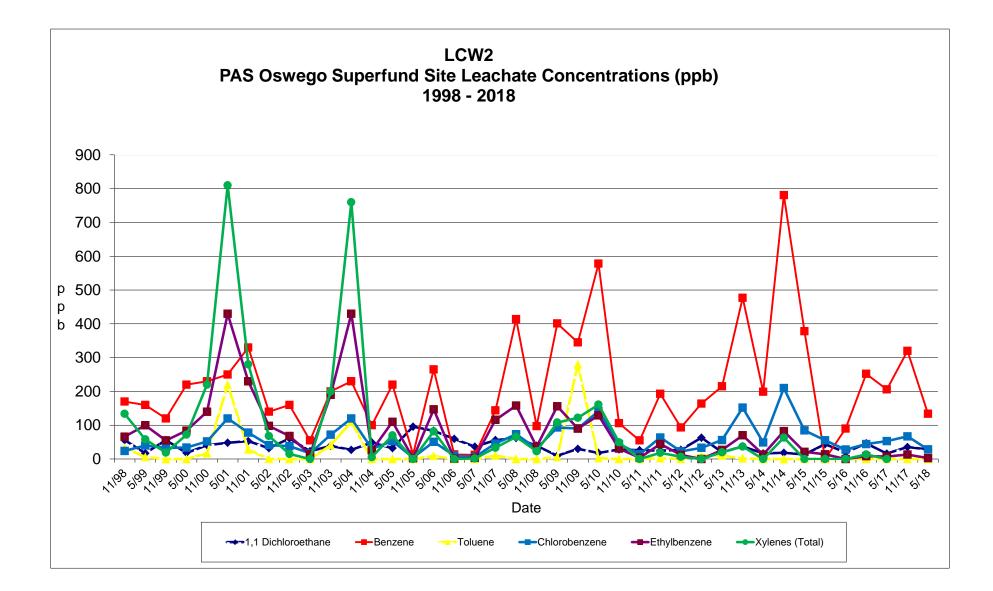
Long Term Groundwater Monitoring at M-21 PAS Oswego Superfund Site Groundwater 1998 - 2018

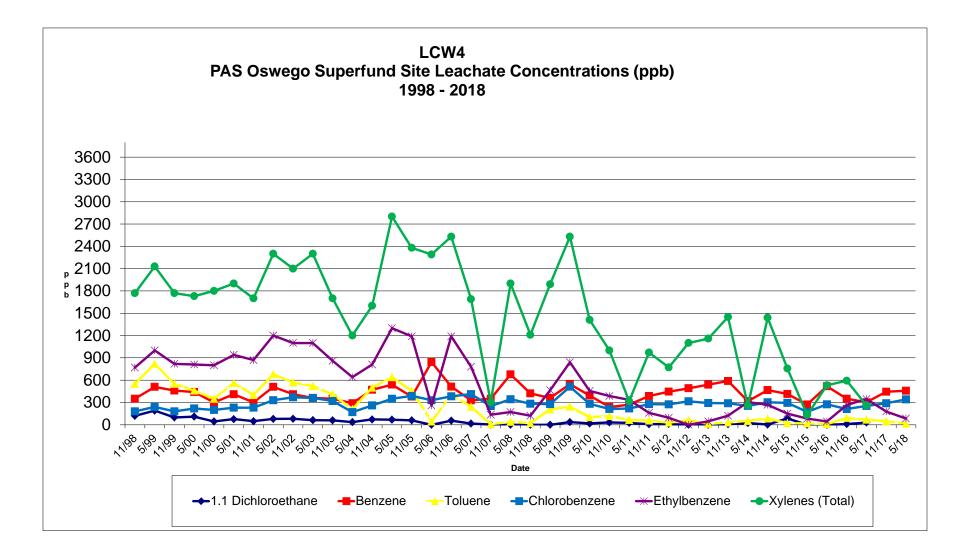


de maximis, inc. 7/19/2018



LCW Graphs





1 – D Tables

TABLE 1

HISTORICAL LEACHATE REMOVAL SUMMARY (Gallons) Pollution Abatement Services Superfund Site Oswego, New York

	9	1 IGR Ord	er			94 IGR Orde	r			98 Conse	ent Decree																		
Month	1992	1993	1994	1994	1995	1996	1997	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Jan		20,170	30,067		25,445	25,441	25,972	21,485		9,979	15,706	10,506	9,751	10,537	9,962	10,472	9,972	9,683	9,503	20,184	10,918	10,000	10,005	10,000	10,000	10,000	10,000	10,000	10,000
Feb	18,937	20,283	29,661	14 A.	25,830	23,457	22,316	12,924	1.1	16,056	9,687	10,294	10,444	9,904	9,899	10,300	10,030	9,620	9,656	11,200	11,293	10,010	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Mar	20,314	20,347	29,602		24,852	25,098	24,257	25,455		15,785	8,927	10,484	10,307	9,896	10,573	10,149	9,812	0	9,500	20,125	11,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Apr	20,140	30,403	29,051		22,815	22,187	26,793	26,009	1.1	28,110	9,352	19,609	8,463	10,211	9,765	9,947	9,795	10,058	8,575	19,600	10,995	10,010	10,000	10,000	10,000	10,125	10,000	10,000	10,000
May	20,620	30,803	29,199	3. S.S.	23,690	23,718	24,840	23,935		13,566	26,160	10,158	8,868	10,117	10,503	10,215	9,743	9,693	7,712	20,047	11,000	10,020	20,000	20,000	20,000	20,200	20,000	20,000	20,000
Jun	20,030	30,244	20,481		24,586	23,924	23,830	20,052		20,685	25,292	10,055	9,822	10,518	10,105	10,193	9,885	10,110	9,474	19,000	10,950	10,005	20,000	20,000	20,000	20,400	20,000	20,000	20,000
Jul	20,270	31,069	20,655		23,450	25,402	25,340	20,411		10,121	20,416	10,470	10,255	10,197	10,292	10,100	9,902	9,472	10,144	18,873	0	10,000	20,000	20,000	20,130	20,700	20,000	20,005	
Aug	20,363	31,404	25,690		24,188	25,129	19,677	20,292		21,832	23,597	9,368	10,254	10,403	10,306	10,025	9,839	9,781	10,200	19,600	19,000	10,020	20,000	20,000	20,000	20,200	20,130	20,005	
Sep	20,807	31,232	25,677	$\{ i \in \mathcal{I} \}$	18,343	21,514	20,417	20,520		10,255	20,407	10,473	9,907	10,566	10,456	9,672	9,499	9,616	10,000	19,000	12,800	20,005	20,000	20,000	20,000	20,700	20,000	19,895	
Oct	19,421	31,114	14,815	0	23,288	24,541	17,867	16,458		10,255	17,563	10,226	10,400	8,196	10,717	9,773	9,802	0	10,871	18,806	20,000	20,005	20,000	20,000	20,000	20,000	20,000	20,005	
Nov	20,409	30,239		25,562	20,133	20,589	18,564		8,185	10,250	9,042	9,355	10,435	9,908	10,486	9,987	9,692	9,497	10,750	19,068	20,000	20,005	10,000	10,000	10,000	10,100	10,000	10,005	
Dec	20,497	30,311		25,121	22,544	22,347	19,498		10,238	10,816	10,463	9,214	9,686	10,130	10,359	9,833	9,779	9,603	10,900	11,009	20,000	10,010	10,000	10,000	10,000	10,000	10,000	10,000	
Totals	221,808	337,619	254,898	50,683	279,164	283,347	269,371	207,541	18,423	177,710	196,613	130,212	118,592	120,583	123,423	120,666	117,750	97,133	117,285	216,512	157,956	150,090	180,005	180,000	180,130	182,425	180,130	179,915	80,000
Average																													
Removal	20,164	28,135	25,490	16,894	23,264	23,612	22,448	20,754	9,212	14,809	16,384	10,851	9,883	10,049	10,285	10,056	9,813	8,094	9,774	18,043	13,163	12,508	15,000	15,000	15,011	15,202	15,011	14,993	13,333
Per Month																													

<u>SUMMARY:</u> 1991 IGR Order:	<u>TOTALS (GAL)</u> 814,325	<u>AVG RATE (GAL/MO)</u> 23,951	
1994 IGR Order:	1,090,106	22,710	
1998 C D:	3,025,553	12,534	(11/98 to present)
Total (To Date):	4,929,984		

1) Used CECOS - Niagara Falls for lechate treatment/disposal beginning in May 1996 - DuPont Deepwater used for treatment/disposal prior to May 1996.

2) BBLES completed removal work at the end of July 2000; OBG began in Aug 2000.

3) Leachate collection well LCW4 pumped per 11/15/99 LCW4 pumping protocol as approved by EPA.

4) Leachate disposed at Clean Harbors facilities at Bristol CT from Mar 2005 to Oct 2007 and Baltimore MD from Nov 2007 to Jun 2007.

5) Leachate disposed at the Auburn Watewater Treatment Plant in Auburn, NY starting July 2008 to Oct 2010.

6) Leachate disposed at the City of Oswego Wastewater Treatment Plant in Oswego, NY starting Oct 2010 to Mar 2015.

7) Leachate disposed at the Auburn Watewater Treatment Plant in Auburn, NY starting Mar 2015 to Dec 2015.

8) Leachate disposed at the City of Oswego Wastewater Treatment Plant in Oswego, NY restarted Jan 2017.

Table 2

PAS Site Oswego, New York

<u>Consent Decree</u> <u>Performance Standards</u>

Volatile Organic Compounds in Ground Water and Leachate									
Constituent	Analysis	Performance Standard ug/L							
Benzene	8260B	0.7							
Chlorobenzene	8260B	5							
1,1-Dichloroethane	8260B	5							
Ethylbenzene	8260B	5							
Toluene	8260B	5							
Xylenes	8260B	5							

Notes:

1. ug/L = micrograms per liter which equates to parts per billion (ppb).

TABLE 3 PAS OSWEGO SUPERFUND SITE

ADDITIONAL BEDROCK GROUNDWATER MONITORING RESULTS

	Perf Std		Additional monitoring well MW-22									Additio	Additional mon well MW-23 Additional monitoring well OD-3														
LTM CONSTITUENT	(ug/l)	Apr 06	May 06	May 09	May 14	Nov 14	May 15	Nov 15	May 16	Nov 16	Nov 17	Apr 18	Apr 06	May 06	May 09	Apr 06	May 06	May 14	Nov 14	May 15	Nov 15	May 16	Nov 16	May 17	Apr 17	Nov 17	Apr 18
Benzene	0.7	0.12J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2	ND	1.25	ND	0.85	ND	ND	ND	ND
Chlorobenzene	5	1J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11J	ND	ND	26.3	ND	19.2	ND	16.5	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	0.14J	ND	1.27	ND	0.12J	0.30J	0.30J	0.30J	0.30J	0.30J	0.86	0.9	0.82	ND	ND	ND	ND	ND	0.13J	ND	0.5	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	ND									
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16J	ND	ND	ND	0.31	ND	0.26J	ND	ND	ND	ND
Xylenes	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11J	ND	0.31J	ND	0.39J	ND	ND	ND	ND	ND	ND

NOTES: 1. Additional downgradient bedrock wells M-22, M-23 and OD-3 monitored during April and May 2006 pursuant to January 25, 2006 letter to EPA and EPA approval letter dated February 2, 2006. M-22 and OD-3 sampled in 2014 and 2015 pursuant to March 21, 2014 letter and EPA approval. Sampling of MW-22 and OD-3 continued based on 2015 Annual Report. 2. All results ug/L

ATTACHMENT IIACTIONS COMPLETED

II – A 3rd QUARTER REPORT 2017



<u>QUARTERLY PROGRESS REPORT – 3rd QUARTER 2017</u> Operation, Maintenance and Long-term Monitoring Activities

PROJECT NAME: Pollution Abatement Services Site Oswego, New York

PERIOD COVERED: July – September (3rd Quarter) 2017

ACTIONS TAKEN DURING QUARTER:

- Leachate removal and site maintenance and monitoring activities were conducted at the Pollution Abatement Services (PAS) site (Site), in Oswego, NY by OBG Operations LLC (OBG) consistent with the PAS Site Operation, Maintenance and Long-term Monitoring Plan (Work Plan).
- A total of 59,905 gallons of leachate were removed from the Site during the period of July, August and September 2017. Specific quantities of leachate removed included 20,005 gallons in July, 20,005 gallons in August and 19,895 gallons in September. Details of the leachate removal for each month, along with historical leachate removal documentation are described in this progress report.
- During the months of July September 2017, leachate was pumped monthly from the PAS Site. The leachate was pumped into the City of Oswego East Side Wastewater Treatment Plant in accordance with City of Oswego Industrial User Permit no. 6-2017-18.
- Quarterly groundwater elevation monitoring was performed on August 8, 2017. Quarterly groundwater elevation monitoring results for the SWW- series monitoring wells (SWW-1 through SWW-12), leachate collection wells (LCW-1 through LCW-4), M-series wells (M-21 through M-23), LR-series wells (LR-2, 3, 6 and 8), LD-series wells (LD-3, 4, 5, 6, and 8), along with wells OS-1, OS-3, OI-1, OD-3 and LS-6 were recorded on the Pre-Pumping Well Monitoring Level Form. (Attachment A-1)
- Site maintenance activities were conducted monthly in combination with the monthly leachate removal event. The Site Inspection Checklist was used to document the land cap, leachate discharge system, leachate collection system and general Site conditions. (Attachment A-2) Monthly Site maintenance activities included the following:
 - Inspected the perimeter security fence of the Site. No discrepancies were reported at the time of the inspection.
 - The Site single French drainage system and two (2) concrete troughs were visually inspected and cleared of grass. No discrepancies were reported at the time of the inspection.
 - Visually inspected the Site slurry-wall containment vegetated cap for signs of burrowing vermin or surface anomalies. No discrepancies were reported at the time of the inspection. Mowing of the surface grass was performed the week of July 11, 2017.

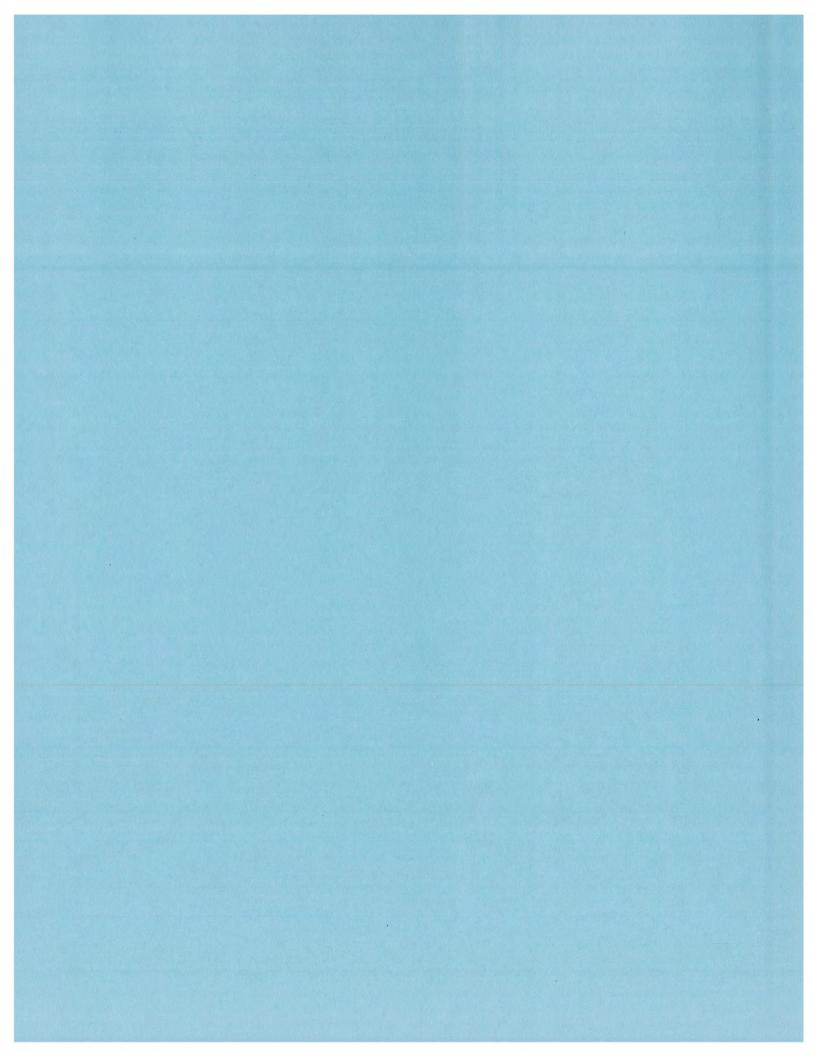


- Visually inspected the leachate collection system pumping equipment to verify proper operation. The field technician inspected each pump control panel to ensure control systems were generally free of rodents and insects, and were properly operating. The leachate holding tank was visually inspected for integrity, as were the leachate tanks steel protective roof, and wood structure. LCW4 stopped working during the September 6, 2017 removal activity due to bad contact. Contact was repaired. No other discrepancies were reported at the time of the inspection.
- The Site wooden utility shed and leachate pumping equipment, including centrifuge discharge pump, flow meter, suction hose, pump oils levels, heat trace power panel, interior lighting, exterior and interior shed structure, and main power distribution panel were inspected. No discrepancies were reported at the time of the inspection.
- On July 11, August 8, and September 6, 2017, OBG performed the monthly pre-pumping collection system inspection for leachate collection wells LCW-1, 2, 3 & 4, along with inspection of the leachate discharge pumping system. Observations were recorded on the Site Inspection Checklist. In advance of each leachate removal event, OBG informed the City of Oswego POTW of the anticipated discharge. (Attachment A-2)
- Upon completing the monthly leachate collection system inspections, OBG manually energized the four leachate collection pumps, identified as LCW-1, LCW-2, LCW-3, 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. (Attachment A-3)
- During the months of July, August and September 2017, OBG pumped a combined total of 59,905 gallons of leachate from LCW 1, 2, 3 & 4 into the leachate collection tank and then then into the City of Oswego POTW. The volume and flow rate of each leachate discharge was recorded onto the Leachate Disposal Checklist, as was leachate water pH, and temperature. The amount discharged was recorded onto the Leachate Disposal Checklist. No leachate was shipped to Auburn New York during the period. Therefore, no bill of lading was generated in this period. (Attachment A-3)
- Upon completing each monthly leachate discharge the tank suction hoses were placed back into the leachate hold tank and the leachate pump system was shut down and prepared for storage. The concrete leachate hold tank was secured, as was the wooden maintenance shed. Upon the completion of monthly Site activities, the Site metal access gates were closed and padlocked.
- The PAS Oswego Site quarterly discharge report for the 3rd quarter of 2017 for the City of Oswego was submitted on October 10, 2017 in accordance with Permit 6-2017-18. The quarterly report to the City of Auburn was submitted on September 11, 2017. The quarterly reports for Auburn do not follow annual quarters. Therefore the quarterly report for Auburn included June, July and August 2017. (Attachment A-4)



DOCUMENTATION OF REMOVAL ACTIVITIES FOR PREVIOUS QUARTER

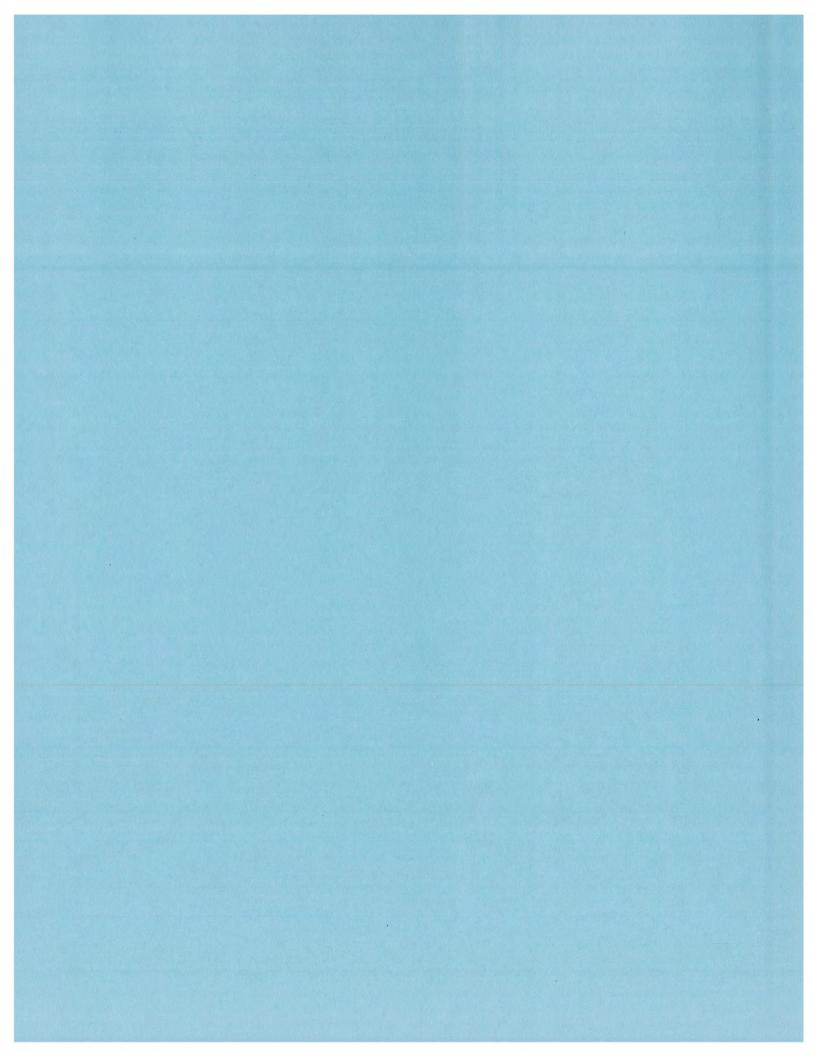
- The Groundwater Pre-Pumping Well Monitoring Level Form for August 8, 2017 is attached to this report. (Attachment A-1)
- The Site Inspection Checklist for July 11, August 8 and September 6, 2017 are attached to this report. (Attachment A-2)
- The Leachate Disposal Checklist for the July 11, August 8 and September 6, 2017 are attached to this report. (Attachment A-3)
- The PAS POTW Quarterly Discharge reports submitted on September 11, 2017 to the City of Auburn and the report submitted to the City of Oswego on October 10, 2017 are attached to this report. (Attachment A-4)



A – 1 PREPUMPING GROUNDWATER ELEVATION DATA

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

Date - 8/8/2	017			Technician -			Aartin Koe	Month - August		
Well	Riser	Well	Range Verific	ation		Monthly C			ments	
Number	Elevation	Average Well Level	Low Well Level	High Well Level	Well Level (1st) Check	Well Level (2nd) Check	(based on h range	hin Range istorical well data) NO	Well Level Check (3rd) (if "NO" & well is not within targeted range)	NOTES
SWW1	289.33	10.57	9.98	11.16	9,58	9,58		V	9,58	
SWW2	289.37	15.90	15.62	16.36	14,88	14.88		V	14.88	
SWW3	286.50	17.14	16.76	17.60	16,52	16.52		V	16,52	
SWW4	283.60	16.86	15.72	18.00	15,18	15,18		V	15.18	····
SWW5	277.02	13.29	12.26	14.92	13,68	13.68	V			
SWW6	273.06	9.75	9.15	11.36	8,40	8.40		w	8.40	· · ·
SWW7	277.93	8.32	7.92	8.64	7,52	7.52		*	7,52	······
SWW8	278.24	7.36	4.89	9.90	3,86	3,86		V	3.86	
SWW9	285.55	17.79	17.45	18.70	17.26	17.26		V	17.26	
SWW10	280.43	15.18	12.72	17.24	11.12	11.12		~	11.12	
SWW11	273.50	9.43	8.42	11.08	9,88	9,88	V			
SWW12	272.82	13.43	11.45	15.74	10,78	10,78		e.	10.78	
LCW-1	272.21	9.04	7.50	10.84	9,74	9.74	ir (
LCW-2	274.44	11.29	9.76	13.08	11.98	11.98	v			
LCW-3	284.36	18.02	17.74	18.50	17.71	וז,דיו		V	17.71	
LCW-4	285.70	17.82	17.10	18.48	17.24	17.24	V			······································
OS-1	272.10	13.29	11.36	16.48	9.82	9.82	[~	9,82	· · · · · · · · · · · · · · · · · · ·
Ol-1	272.00	13.64	12.40	16.08	10,20	10,20		V	10.20	
OS-3	277.89	16.88	15.58	18.40	15,42	15,42		V	15,42	
OD-3	277.85	16.72	15.45	18.20	15.24	15.24		v	15.24	
LD-3	278.62	7.64	5.24	10.26	4.22	4.22		V	4.22	
LD-4	279.25	14.22	12.14	16.22	11.38	11.38		V_	11.38	
LD-5	272.94	14.16	12.14	16.38	11,28	11.28		~	11.28	
LS-6	274.14	14.26	12.58	16.32	12,16	12,16		V	12.16	
LD-6	274.03	13.54	11.68	15.80		11.64		V	11.64	
LD-8	272.83	10.02	8.90	11.28	8,54		1	V	8,54	
LR-2	289.85	14.70	13.56	15.70	13,55	13.55		υ	13,55	
LR-3	278.06	9.75	8.54	11.40	7,68	7.68	<u> </u>	~	7.68	
LR-6	274.39	11.92	10.78	13.70	10,32	10,32		v	10,32	
LR-8	273.42	11.41	10.47	12.88		10.16		V	10,16	
M-21	272.32	11.03	10.06	12.42	9,72	9.72		V	9.12	
M-22	273.88	11.88	10.74	13.66	10,32	16.32		V	16.32	
M-23	270.49	13.69	13.10	14.54	12.42	12.42		V	12.42	



A – 2 SITE INSPECTION CHECKLIST

Site Inspection Checklist (V2)

Former Pollution Abatement Services (PAS Oswego) Oswego, New York

Date 7-11-17

Time 8.45

Field Technician MARTIN Koennecke

Weather Conditions over chit 70°

Check **V** (tasks completed in each event) **Inspection Features Remarks** (indicate accomplishment of each maintenance task) Monthly Quarterly Land Cap \checkmark Signs of burrowing vermin Nowe VISABLY Land cap irregularities (note anomaly) V oK French drainage system clear and function able \checkmark OK Concrete trough clear and V function able 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 V Yes prior to use. Discharge pump drained of residual water (drained upon Yes V completion of monthly discharge) Heat trace system operational & verified in the "ON" position \checkmark 056 (Applicable Oct - May) Flow totalizer operational. Flow readings recorded onto V Yes "Leachate Discharge Form" Leachate Collection System Leachate holding tank visually $\sqrt{}$ OK inspected for structural integrity

7-11-17

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•		
Leachate holding tank metal roof		
inspected for structural integrity	V	OK
Leachate tank access doors		
locked (post pump out)		Yes
Pump power panel(s) secured		
Monitoring Wells (MW)		
Locks installed	V	yes
MW's marked & identifiable	V	Yes
General Site Condition		
Trees & brush cleared off security		
fence	V	WORKIN PROGRESS
Perimeter security fence intact &		
free of damage	V	ok
Site access driveway inspected &		
free on snow & damage	V	OK
Security access gates / Padlock &		
chain serviceable	V	Yes
Site gate signage intact	V	Yes
Interior & exterior of utility		
storage shed inspected for		
damage & secure with locks	V	OK
Fire extinguisher serviceable,		
inspected, and inspection		· ·
recorded	V	Yes
Spill control material inspected &		
adequate	V	Yes
PPE available and utilized as		
required	\mathcal{V}	Yes
Emergency contact information		
posted within shed	\checkmark	Yes
Additional remarks (use separate s	heet is	s required)

PUMPED_	20,005	gallons	leachate	to	OSweyo	PTOW	
	,	0			r r		

STARTED BRUSH Hogquery LAND-Sell CAP.



Site Inspection Checklist (V2)

Former Pollution Abatement Services (PAS Oswego) Oswego, New York

Date 8-8-17

Time <u>7:25</u>

Field Technician MARTIN Kouwerke

Weather Conditions P-Sunwy 65°

Check **V** (tasks completed in each event) **Inspection Features Remarks** (indicate accomplishment of each maintenance task) Monthly Quarterly Land Cap Signs of burrowing vermin 1 NONE VISABLE Land cap irregularities (note anomaly) σK V French drainage system clear and function able V 0K -Concrete trough clear and function able V oK Leachate Discharge System City of Oswego sanitary discharge Yes valve positioned "Open" V Discharge Pump inspected & Уе.5_____ v operational Discharge pump oil level verified V Yes prior to use. Discharge pump drained of residual water (drained upon V Yes completion of monthly discharge) Heat trace system operational & verified in the "ON" position off V (Applicable Oct - May) Flow totalizer operational. Flow readings recorded onto V Yes "Leachate Discharge Form" Leachate Collection System Leachate holding tank visually V OK inspected for structural integrity

8-8-17

Leachate holding tank metal roof	[
inspected for structural integrity	6		OK
Leachate tank access doors	<u> </u>		
locked (post pump out)			Ves
Pump power panel(s) secured			xes
Monitoring Wells (MW)	<u> </u>	· .	
Locks installed	1		yes
MW's marked & identifiable) (
General Site Condition		<u>~</u>	
Trees & brush cleared off security	1		Jork In Progress
fence	<u> </u>		
Perimeter security fence intact &	V		yes
free of damage		· · · - ·	
Site access driveway inspected &			Yes.
free on snow & damage			yes
Security access gates / Padlock &			Xe S
chain serviceable			<u></u>
Site gate signage intact	· ·		· · · · · · · · · · · · · · · · · · ·
Interior & exterior of utility			Vrc
storage shed inspected for			ye s
damage & secure with locks			•
Fire extinguisher serviceable,			
inspected, and inspection			
recorded	~		Xeg
Spill control material inspected &			N/a E
adequate	1		yei
PPE available and utilized as			1
required	1		407
Emergency contact information	1		Yeq
posted within shed	1		J ⁻ .
	heet	is requir	ed)
Putters (Use separates			Les quarterly well perels
Cha D Hand d	کی محالہ		Ind proverter 11 1 1 mile
- Lieuner Vegitertican	<u> </u>	empre	The going well provers

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Former Pollution Abatement Services (PAS Oswego) Oswego, New York

Date 9-6-17

Time<u> / //:30</u>

Field Technician MARTIN Koennecke

Weather Conditions <u>overcust</u>

Check **√** (tasks completed in each event) **Inspection Features Remarks** (indicate accomplishment of each maintenance task) Monthly Quarterly Land Cap Signs of burrowing vermin V NONE VISABLE Land cap irregularities (note anomaly) 0K V French drainage system clear and function able OK V Concrete trough clear and STARTED CLEARING VEGITATION function able V Leachate Discharge System City of Oswego sanitary discharge Yes valve positioned "Open" V Discharge Pump inspected & Yes operational \mathbf{V} Discharge pump oil level verified Yes prior to use. ν Discharge pump drained of residual water (drained upon Yes completion of monthly discharge) v Heat trace system operational & verified in the "ON" position off $\boldsymbol{\nu}$ (Applicable Oct - May) Flow totalizer operational. Flow readings recorded onto "Leachate Discharge Form" v Yes Leachate Collection System Leachate holding tank visually V inspected for structural integrity OK

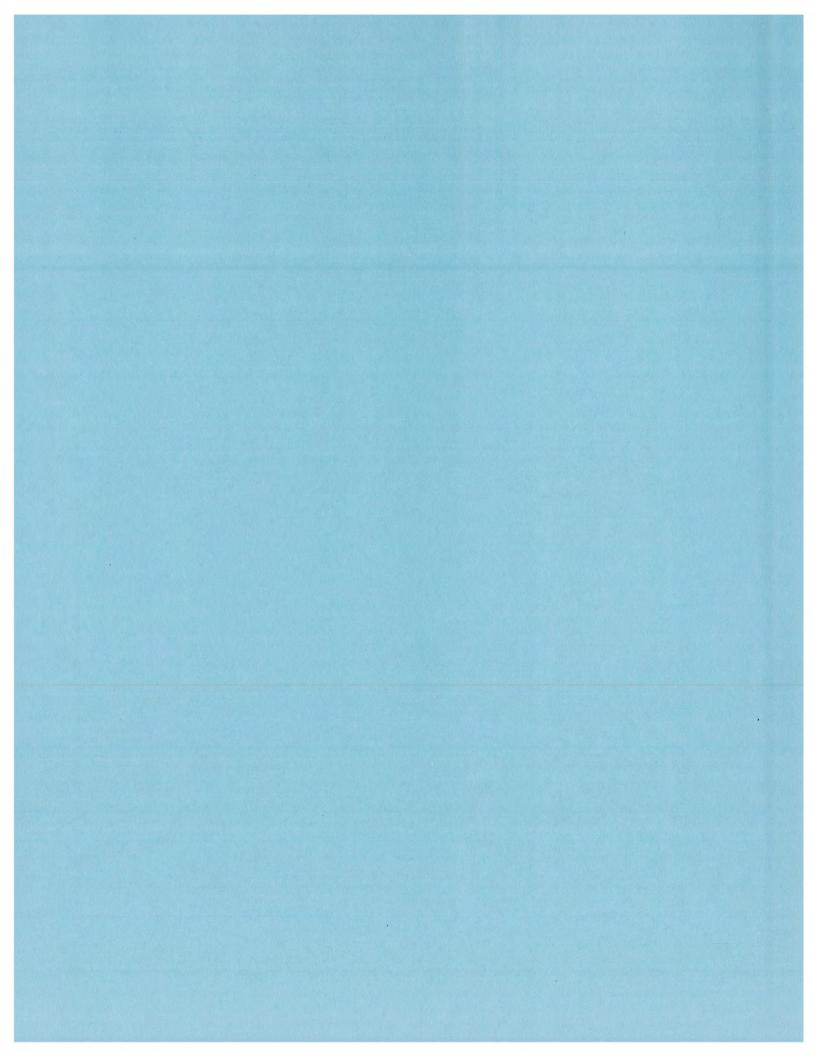
9-6-17

	9	-6-11
Leachate holding tank metal roof		
inspected for structural integrity	V	OK
Leachate tank access doors		
locked (post pump out)	V	Yes
Pump power panel(s) secured	V	Yes
Monitoring Wells (MW)		
Locks installed	V	Yes
MW's marked & identifiable	~	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 &		
free on snow & damage	v	ok
Security access gates / Padlock &		
chain serviceable	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		Yes
PPE available and utilized as		
required	V	Yes
Emergency contact information		
posted within shed	V	Yes

Additional remarks (use separate sheet is required)

PUMPING 20,000 Gul. LEALTATE TO OSWEGO POTU WEED TRIMMING AROUND SHED AND TANK STARTED CLEARING VEGITATION AWAY FROM CONCRETE TRONGG LCW-4 WELL PUMP GUIT WORKING GREEN CONTROL BOX AT Well BUSSING, BAD CONTACT ON PUMP STARTER RELAY	PUMPING	20,000	cul: Lenctrat	2 To 0	OSWEGD 1	POTW	
STARTED CLEARing Vegitation AWAY from Concrete Trough LCW - 4 Well Pump guit WORKING GREEN CONTROL BOX AT							
LCW-4 Well Pump guit working GREEN CONTRol BOXAT							TROVAL,
WALL KINSING SHO CONTREL ON PUND STARTER NELLEV	Well Bussing						

2



A – 3 LEACHATE DISCHARGE FORM



O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: <u>7-11-17</u>

Time: \$'45

Field Technician MARTIN Koennake

Weather Conditions overcast 30°

tart Pump Stop S Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
9:00	A Ster Pump of 10	~	
10:00/INTA	Rem 2 3 , 5" = 19 396	0	19390
10:00/Interm.			
	Time	Elevation	Time Elevation 10:00/ToTaunion STALT 12" 9:00 A Stea Pump wit 10" 10:00/Totaunity 3,5" = 19 390

START PUMP 950 20 MW TO PRIME

		Leach	ate D	ischarge	Pumping(N	Aonthly)	
Discharge #	Start Time	Stop Time	рĦ	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	10:10	14:05	6.8	54°	850250	870255	20,005
Discharge #2						-	
Total					**************************************		20,005
		Leachate	Disch	arge Sa	mpling (Sem	ti-Annuall	W)
Sample #1	Date	Sample Location		mple lume	Sample Time	рН	Femperature
Sample #2 (if required)							

C:\A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx



O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: <u>8-8-17</u>

Sample #2 (if required) Time: 7:25

Date: <u>8-8-17</u> Field Technician <u>MARTIN Koennecke</u>

Weather Conditions <u>P-Suna y 65°</u>

		Pre-Dis	charge Well Pi	umping	
Well Pump					
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	8:35	1130	10 -STAR	9	20,285
LCW-2	8:35	1130	20,285-17	5 pm = 116 6Pm	
LCW-3	8:35	8:45			
LCW-4	8:35	11:30	END A HER Run	DOUT - 10"	

		Leach	ate Dis	charg	e Pumping(N	Aonthly)	
Discharge #	Start Time	Stop Time	рĦ	Temp	Totālizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	9:50	13:45	6.8	540	870255	890260	20,005
Discharge #2					235: 20005 =	- 85 GPal	
Total							20,005
		Leachate .	Discha	rge Sa	mpling (Sen	ri-Annual	Ŵ
	Date	Sample Location	San Voli		Sample Time	pH	Temperature
Sample #1							

C \A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx



Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

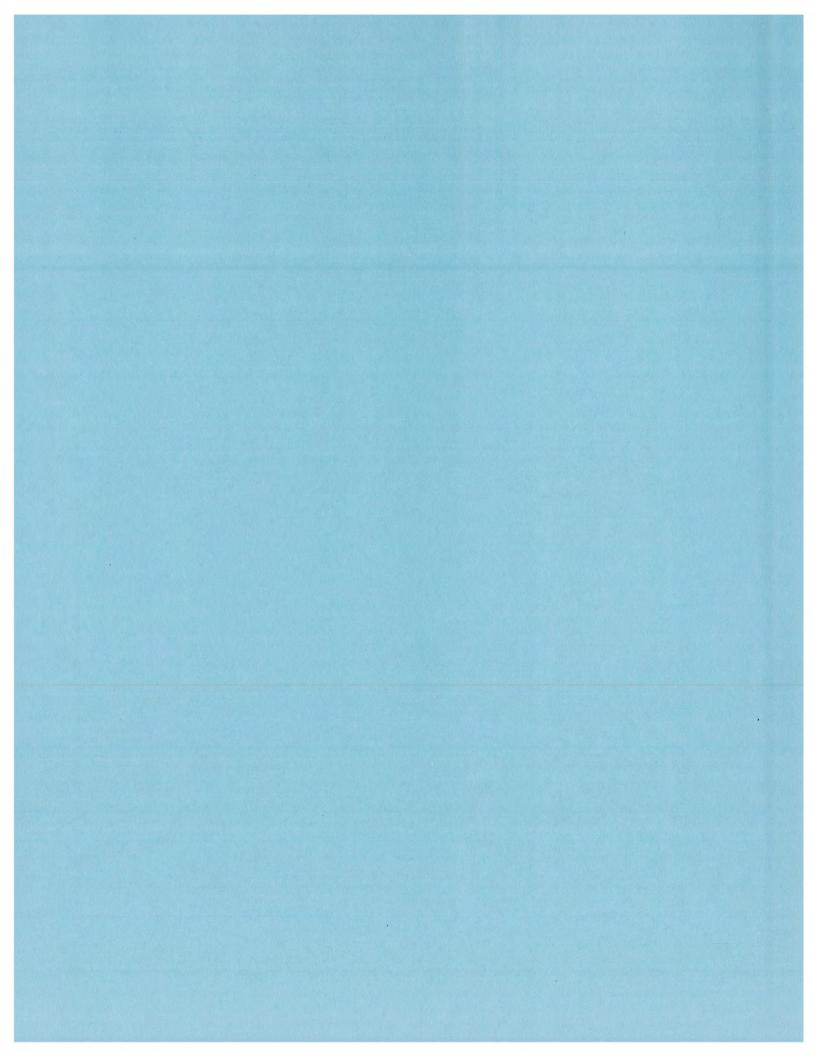
Date: <u>9-6-17</u>

Time: 7:30

Field Technician MARTIN Koenwecke

Weather Conditions Overcast 59°

Beginning Leachate			Pro	e-Dischar	ge We	ll Pump	ing		
Hold Tank Elevation (Inches)	Pumping Well #	Pump		Pump Stop Time		ling Tank evation	Flow Rat (est.)	Pur Hol	Leachate nped into ding Tank Gallons)
10"	LCW-1	7:40	,	9:00	Intern	itarT	133 6PM	, j n	,455 - Pur
<u> </u>	LCW-2	7:40		9:00				+2.1	,455 - Pur 140 - IN TA
	LCW-3	7:40	,	7:50					
Puma Tssurs	LCW-4 LCW-4 C1:00 = 45	7:40)	9:00 11	Ter miti	5.T 771	13:30		
	9:00 = 45	- 10" =35"=1	10675:	80 mm = 13.	3 GPm		Tot	al 19	895
<u> </u>	ost Pump ci	T TANK	Level	à			· .	J	
	M	onthly L	eacha	te Discha	rge Pu	imping (To the City of	Oswego)	
Discharge #	Start Time	Stop Time	pH	Ten	2 9 1 2 1 1 2	Totalizer Flow Total (Start)	Totalize Flow Tot (End)	A	allons charge
Discharge #1	9:00	13:30	6.8	54	10	840260	9101	55 19	895
Pump Info	Flow Rate (GPM)	Prime Time	Purr Press		np				
		840 - 9:00					Pump Losi	PRIM	e
)	Semi-Aı	nnual Le	eachat	e Dischar	ge Sai	mpling (F	•		
	D -1-	Comuni		Sample	- Con			Tompo	
	Date	Sampl Locatio		Volume	-	nple me	рН	rempe	rature



A – 4 POTW QUARTERLY DISCHARGE REPORTS



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

September 11, 2017

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

Re: 3rd Quarter PAS Oswego Progress Report 2017

Dear Mr. O'Brien,

This letter confirms that the PAS Oswego Site has not shipped or discharged any wastewater from the PAS Oswego collection system to the City of Auburn POTW during June – August 2017. This has been due to the EPA allowance of an alternate disposal method.

- Cumulative gallons removed for discharge in Auburn 3rd Qtr. 2017 0
- Cumulative gallons removed for discharge in Auburn over 2017 0

Since no wastewater was shipped or discharged to Auburn during the 3rd quarter, no analytical testing was required. However, we continue to perform Site maintenance and sampling activities under the Operation, Monitoring and Maintenance Program for the Site approved by EPA. The data associated with that program indicate little change in the characteristics of the Site wastewater.

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

Sincerely, de maximis, inc.

Clay Mella

Clay McClarnon

CMC/dlb

cc: PAS Management Committee

A PAPER



September 11, 2017

Mr. Timothy L. O'Brien Industrial Pretreatment Coordinator 35 Bradley Street Auburn, NY 13021

Re: Industrial Pretreatment Program Zero Discharge Certification Statement:

Dear Mr. O'Brien

For the reporting quarter(s) of January 2017 to August 2017, I certify that for Pollution Abatement Services located in Oswego New York:

- 1. There have been no changes to any of our processes resulting in the potential for the discharge from the process waste stream.
- 2. No discharge of process wastewater has occurred since December 7, 2017.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Clay McClarnon

Name

Vay Milla Signature

Project Coordinator ______ Title

September 11, 2017 (865) 691-5052 Date Phone



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

Via electronic mail

October 10, 2017

Mr. Robert L. Johnson City Engineer Technician 13 W. Oneida City Hall Oswego, New York 13126 darcher@oswegony.gov

Re: Quarterly Discharge Report – 3rd Quarter 2017 Pollution Abatement Services Site – Oswego, New York City of Oswego Wastewater Discharge Permit 6-2017-18

Dear Mr. Johnson:

This quarterly report is submitted in accordance with the City of Oswego Wastewater Discharge Permit 6-2017-18 (Permit) for discharge of leachate from the Pollution Abatement Services (PAS) Site into the City of Oswego's Eastside Wastewater Treatment Facility. This report covers the reporting period from July 2017 through September 2017.

The PAS Site discharged a total of 59,905 gallons of leachate to the Oswego sewer system during the third quarter of 2017.

Discharge to City of Oswego July 2017 – September 2017

59,905 gallons

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

Sincerely, de maximis, inc.

Clay McC

Clay McClarnon

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

F:\PROJECTS\3131 - PAS\Permits-POTW 10\2017\Oswego\3rd Qtr\Oswego 3rd Qtr 2017 rpt.doc

PAPER

TABLE 1 - PAS OSWEGO SITE QUARTERLY REPORT FOR CITY OF OSWEGO (2017) LEACHATE DISCHARGE TO OSWEGO EASTSIDE WASTEWATER TREATMENT FACILITY (Oswego SIU Wastwater Discharge Permit No.6-2017-18)

Discharge Quarter	1Q 20	017	2Q 20	017	3Q 20	017	
	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	
	1/7/17	10,010	4/4/17	10,005	7/11/17	20,005	
	42/6.8		45/6.8		54/6.8		
	2/15/17	10,005	5/3/17	20,005	8/8/17	20,005	
1	44/6.8		46/6.8		54/6.8		
	3/7/17	10,005	6/8/17	20,005	9/6/17	19,895	
	42/6.8		53/6.8		54/6.8		
Total Discharged		30,020		50,015		59,905	
Date Sampled*	Permit Limit	3/7/2017 ***					
Analytes Antinomy Arsenic Beryllium Cadmium Chromium (total) Copper Cyanide Lead Mercury Nickel Selenium Silver Thallium Zinc	mg/L 0.107 0.358 0.107 0.43 0.67 0.43 0.67 0.19 0.0002 0.69 0.282 0.65 0.073 1	mg/L 0.00075 0.0166 ND <0.0003 ND <0.001 ND <0.007 0.0197 ND <0.010 <0.0016 NA 0.296 0.005 ND <0.001 ND <0.0003 0.0052					
VOC** SVOC** BOD 5 TSS Phenolics pH	200 400 0.375 5> and <10	NA NA ND <13.3 64 0.0626 6.6			Discharge Permit No.6-2		

* Semi-annual sampling of PAS leachate discharge conducted in accordance with SIU Wastewater Discharge Permit No.6-2017-18.

** Analytes included for permit pollutant analysis performed every three years

*** Sample taken by City of Oswego

Analyte values in bold exceed limit

ATTACHMENT I

O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: 7-11-17

Time: <u>8:45</u>

Field Technician MARTIN Koennake

Weather Conditions ourcest 20°

	A STATE OF	相关, 1999, 建筑建筑、建筑、工作		
Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
850	10:00/Tituri	IT STALT IA"		
	9:00	A Stee Dung T 15	w	
	10:00/INTER	1 3,5" = 19 390	p	19390
8:50				
	Time 850 850 850	Time Time 850 10.'00/TinTeamining 850 9:00 850 10.'00/TinTeamining	Time Time Elevation 8 50 10.00/ToTeanisist START 12" 8 50 9:00 A Stee Primp out 10 8 50 10:00/ToTeanist 3,5" = 19398	Time Time Elevation 850 10.'00/Initeuniest START 12" 850 9:00 Atter Pump wit 10" 850 10:00 / Initeuniest 3,5" = 19390

START PUMO 950 20 MUN TO PRI	RIME	_
------------------------------	------	---

	Leachate Discharge Pumping(Monthly)								
Discharge #	Start Time	Stop Time	PH	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge		
Discharge #1	10:10	14:05	6.8	54°	850250	870255	20,005		
Discharge #2		1							
Total							20,005		
		Leachate	Disch	arge Sa	mpling (Sen	ui-Annuall	w '		
	Date	Sample Location	COURSE LINER	nple lume	Sample Time	pĦ	Temperatur		
Sample #1			1						
Sample #2 (if required)									

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O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: 8-8-17

Time: 7:25

Field Technician MARTIN Koennecke

Weather Conditions P-Sunay 65°

Pre-Discharge Well Pumping

Well Pump

18-19-19-19-19-19-19-19-19-19-19-19-19-19-	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	8:35	1130	10"-STAR		20,285
LCW-2	8:35	1130	20,285-17	Sour = 116 GPm	
LCW-3	8:35	8:45	1		
LCW-4	8:35	11:30	END Atter Park	DOUT - 18"	
				Total	1. 00

 20		ON
20,	d	07
	_	

Discharge #	Start Time	Stop Time	рĦ	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	9:50	13:45	6.8	54°	870255	890260	20,005
Discharge #2				17 60	235:20005=	85 6901	
Total	1			12.1			20,005

· · · · ·	and the Braker Astronomic and the second							
	Date	Sample Location	Sample Volume	Sample Time	pH	Temperature		
Sample #1		· · · · ·						
Sample #2 (if required)								

C \A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx



Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: 9-6-17

Time: 7:30

Field Technician MARTIN Koennecks

Weather Conditions Overcast 59°

Hold Tank Elevation (Inches)	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank (Gallons)
10"	LCW-1	7:40	9:00 I	TreknitorT	133 6PM	17,455 - Pur
	LCW-2	7:40		TurmiTenT		+2,440-1079
	LCW-3	7:40	7:50			
ump Issues	LCW-4	7:40	9:00 INT.	initent TH	13:30	8
	9:00 = 45"	- 10"=35"=10675:	\$ 80 mm = 133 6	fin	Total	19.895

Post Pump out TANK Level 2"

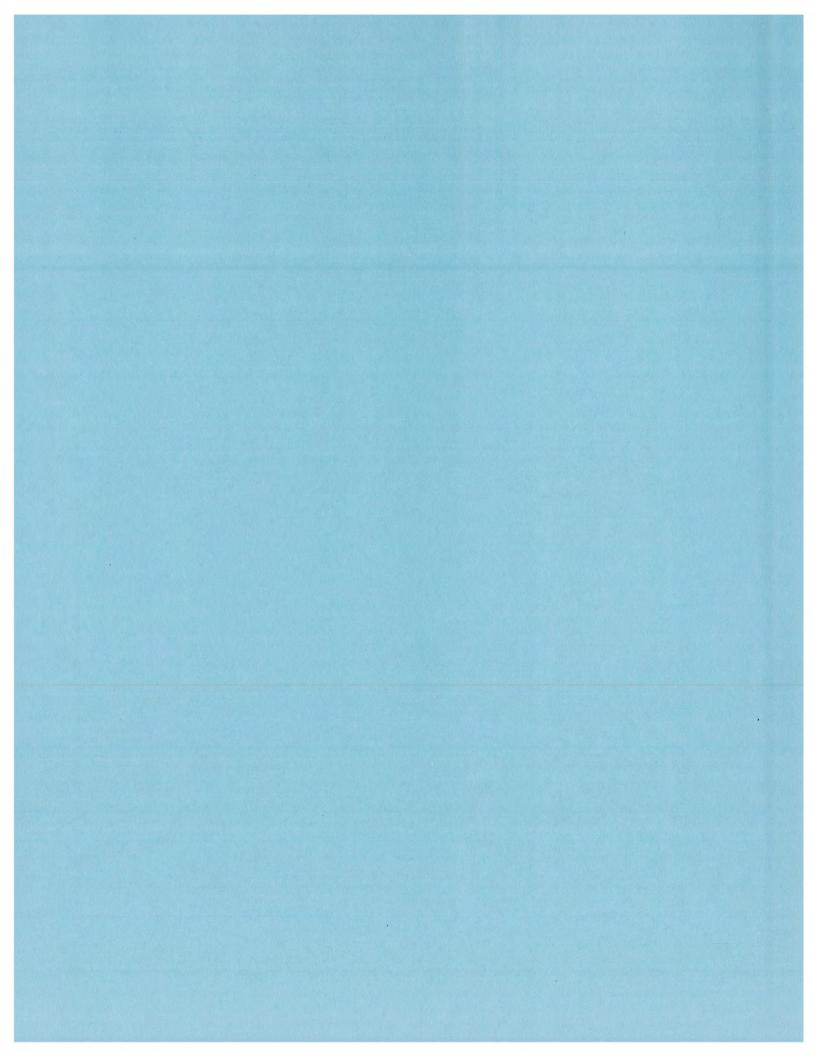
Discharge #	Start Time	Stop Time	рН	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	9:00	13:30	6.8	54°	890260	910/55	19.895
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
		840 -9:00				Pump Lost P	RIME
· •	Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit)						
	Date	Date Sample		nple S ume	ample Time	рН Те	mperature
Sample #1				4			

II – B 4TH QUARTER REPORT 2017

B – 1 PREPUMPING GROUNDWATER ELEVATION DATA

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

11/13/2017 November 2017 Within Range? Ground-Water Well Riser Ground Low High Y/N Elevation Reading 1 Reading 2 Reading 3 Average Number Elevation Elevation 280.69 289.33 8.64 8.64 8.64 9.82 8.62 11.62 Yes SWW1 286.20 15.30 15.30 16.45 15.75 17.40 No 274.07 SWW2 286.30 289.37 15.3 16.52 16.52 17.40 16.60 17.96 No 269.98 SWW3 286.00 286.50 16.52 15.10 13.44 17.12 269.77 13.83 13.83 Yes SWW4 282.90 283.60 13.83 SWW5 275.90 277.02 13.45 13.45 13.45 13.61 12.55 14.66 Yes 263.57 8.77 7.95 9.58 Yes 264.79 SWW6 270.90 273.06 8.27 8.27 8.27 7.90 7.90 8.81 8.02 9.43 No 270.03 SWW7 273.30 277.93 7.9 274.44 3.8 3.80 3.80 6.05 3.94 11.38 No SWW8 275.70 278.24 285.55 17.32 17.32 17.32 18.83 17.48 20.06 No 268.23 SWW9 283.30 SWW10 279.30 280.43 10.05 10.05 10.05 12.80 9.71 18.65 Yes 270.38 9.80 9.80 9.99 8.81 11.48 Yes 263.70 273.50 9.8 **SWW11** 271.00 8.50 8.50 11.72 8.70 15.36 No 264.32 272.82 8.5 SWW12 270.20 262.67 9.54 9.54 9.74 8.20 10.98 Yes LCW-1 271.40 272.21 9.54 11.99 10.44 13.22 Yes 262.64 272.60 274.44 11.8 11.80 11.80 LCW-2 283.30 284.36 17.6 17.60 17.60 18.14 17.40 19.56 Yes 266.76 LCW-3 16.64 267.78 285.70 17.92 17.92 17.92 18.87 19.80 Yes LCW-4 283.80 8.40 8,40 12.46 8.60 16.60 No 263.70 272.10 8.4 **OS-1** 269.63 11.10 12.80 11.14 15.26 No 260.90 **OI-1** 269.14 272.00 11.1 11.10 16.29 13.92 18.58 No 264.33 13.56 13.56 **OS-3** 274.63 277.89 13.56 13.40 13.40 16.13 13.76 18.42 No 264.45 OD-3 274.96 277.85 13.4 274.44 4.32 11.77 278.62 4.18 4.18 4.18 6.88 No LD-3 275.80 9.85 17.15 269.03 279.25 10.22 10.22 10.22 12.77 Yes LD-4 276.30 264.14 8.80 12.95 9.10 15.86 No LD-5 270.02 272.94 8.8 8.80 9.56 13.34 10.25 15.78 No 264.58 9.56 LS-6 271.40 274.14 9.56 264.13 9.90 9.90 11.87 10.12 13.88 No LD-6 270.09 274.03 9.9 266.03 10.06 7.15 15.38 No 269.90 272.83 6.8 6.80 6.80 LD-8 277.22 287.50 289.85 12.63 12.63 12.63 13.69 12.70 14.96 No LR-2 270.66 9.21 7.80 12.00 No 278.06 7.4 7.40 7.40 LR-3 275.50 10.06 11.18 10.05 12.72 Yes 264.33 10.06 10.06 270.90 274.39 LR-6 9.62 9.62 10.90 9.45 12.84 Yes 263.80 LR-8 270.00 273.42 9.62 9.17 12.50 9.24 9.24 10.52 Yes 263.08 272.32 9.24 M-21 270.28 263.83 10.05 10.05 10.05 11.17 10.00 12.62 Yes M-22 270.40 273.88 12.22 12.93 12.25 14.25 No 258.27 12.22 M-23 267.98 270.49 12.22



B – 2 SITE INSPECTION CHECKLIST



Site Inspection Checklist (V2)

Former Pollution Abatement Services (PAS Oswego) Oswego, New York

Date 10-3-17

Time____7:15

Field Technician MARTIN Koenneche

Weather Conditions Sunny 50°

	Che	eck v	(tasks completed in each event)
Inspection Features	Monthly	Quarterly	Remarks (indicate accomplishment of each maintenance task)
Land Cap			
Signs of burrowing vermin	V		NONE USABLE
Land cap irregularities (note			
anomaly)	V		oK
French drainage system clear and			
function able	V		Yes
Concrete trough clear and			
function able	V		Vegitation in Trought
Leachate Discharge System			
City of Oswego sanitary discharge			
valve positioned "Open"	V		Yes
Discharge Pump inspected &			
operational	5		Yes
Discharge pump oil level verified			
prior to use.	V		OIL ADDED
Discharge pump drained of			
residual water (drained upon			
completion of monthly discharge)	leren		Yes
Heat trace system operational &			
verified in the "ON" position			
(Applicable Oct - May)	V		off
Flow totalizer operational. Flow			
readings recorded onto			
"Leachate Discharge Form"	V		Yes
Leachate Collection System			
Leachate holding tank visually			
inspected for structural integrity	\checkmark		OK

10-3-14

OK Yes Yes Ves DORKIN PROGRESS OK OK
Yes Yes ok JORKIN PROGRESS
YES DK JORKIN PROGRESS DK
YES DK JORKIN PROGRESS DK
Yes ok JORKIN PROGRESS OK
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PUMPED	20.000	cul	To	Oswego	POTW

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CLEARED	ROAD SI	De Fence	Line of	VEGITATION	
WEED WHALKED			4.		



Former Pollution Abatement Services (PAS Oswego) Oswego, New York

Date 11-15-17

Time クィイク

Field Technician MARTIN Koennecks

Weather Conditions_ clean. 30°

Check **V** (tasks completed in each event) **Inspection Features Remarks** (indicate accomplishment of each maintenance task) Monthly Quarterly Land Cap Signs of burrowing vermin V NONE VIS4BLe Land cap irregularities (note anomaly) \checkmark OK French drainage system clear and function able V OK Concrete trough clear and 0K function able V Leachate Discharge System City of Oswego sanitary discharge Yes valve positioned "Open" V Discharge Pump inspected & V Ves operational Discharge pump oil level verified V Yes prior to use. Discharge pump drained of residual water (drained upon Yes V completion of monthly discharge) Heat trace system operational & verified in the "ON" position Yes V (Applicable Oct - May) Flow totalizer operational. Flow readings recorded onto Yes V "Leachate Discharge Form" Leachate Collection System Leachate holding tank visually inspected for structural integrity V 0K

11-15-17

	· · · · · ·	
Leachate holding tank metal roof		
inspected for structural integrity	V	0K
Leachate tank access doors		
locked (post pump out)	V	Yes
Pump power panel(s) secured	v	yes
Monitoring Wells (MW)		
Locks installed	V	Yes
MW's marked & identifiable	V	0K
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 &		
free on snow & damage	V	Yes
Security access gates / Padlock &		
chain serviceable	V	OK
Site gate signage intact	~	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	OK
PPE available and utilized as		
required	V	Yes
Emergency contact information		
posted within shed	V	Ves

Additional remarks (use separate sheet is required)

а "

OUPRTERIN Well Levels,	Semi ANN VAL Well SAMpling
10,000 cullors Lengethorto	PUMPED TO CITY of OSWERD POTU
Seni Annal Leuchate	SAMPLES TAKEN

Site Inspection Checklist (V2)

Former Pollution Abatement Services (PAS Oswego) Oswego, New York

Date 12-5-17

Time 8-00

Field Technician _ MARTIN Koennake

inspected for structural integrity

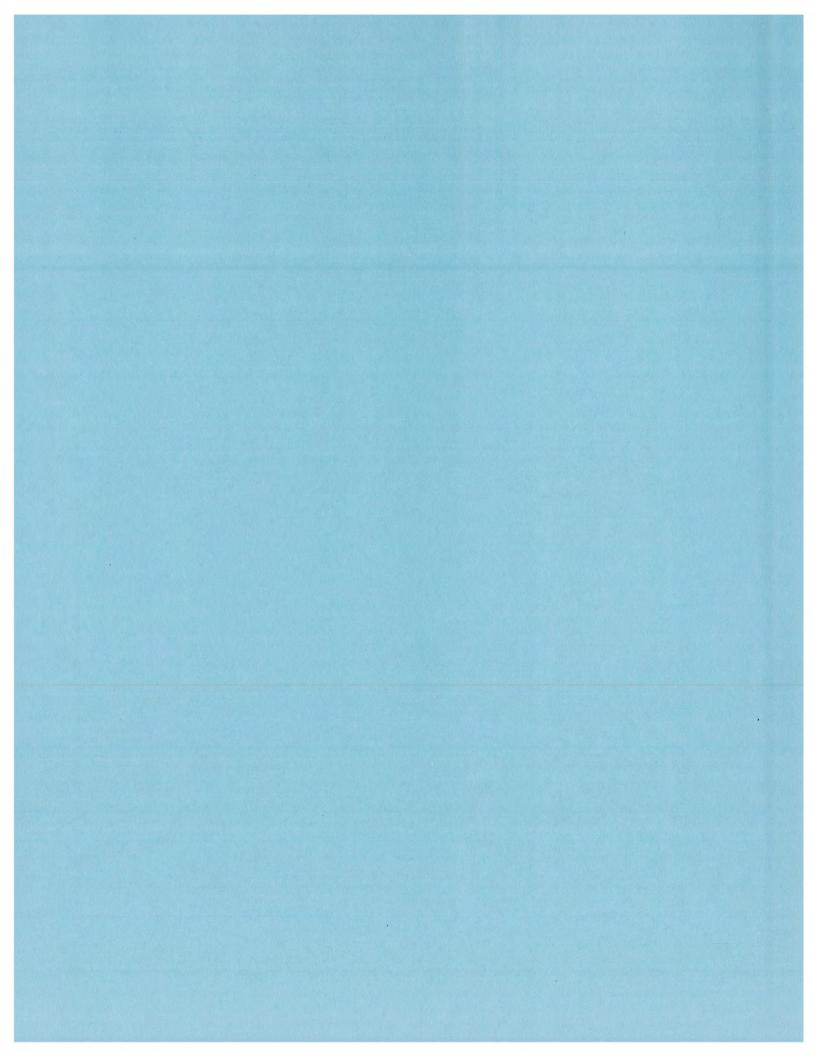
Weather Conditions <u>RAIN 46</u>

Check **√** (tasks completed in each event) **Inspection Features** Remarks (indicate accomplishment of each maintenance task) Monthly Quarterly Land Cap Signs of burrowing vermin \checkmark NONE VISABLE Land cap irregularities (note anomaly) V 0K French drainage system clear and function able OK V Concrete trough clear and V function able Yes Leachate Discharge System City of Oswego sanitary discharge valve positioned "Open" \mathbf{V} Yes Discharge Pump inspected & operational \mathbf{v} Yes Discharge pump oil level verified Yes \checkmark prior to use. Discharge pump drained of residual water (drained upon Yes V completion of monthly discharge) Heat trace system operational & verified in the "ON" position ÔN. V (Applicable Oct - May) Flow totalizer operational. Flow readings recorded onto Yes. \checkmark "Leachate Discharge Form" Leachate Collection System Leachate holding tank visually ØK

10 5 11	12	-5		1	M	
---------	----	----	--	---	---	--

/	0 3	· /
Leachate holding tank metal roof		
inspected for structural integrity	V	0K
Leachate tank access doors		
locked (post pump out)	V	Yes
Pump power panel(s) secured	r	'Yes
Monitoring Wells (MW)	-	
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	0K
Site access driveway inspected &		
free on snow & damage	V	Yes
Security access gates / Padlock &		
chain serviceable	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	765
PPE available and utilized as		
required	V	Yes
Emergency contact information		
posted within shed	V	Yes

Additional remarks (use separate sheet is required) <u>PUMPED LeacHate To Holding TANK</u> <u>PUMPED 10,000 cyullang LeacHate To CITY of OSWeyo</u>



B – 3 LEACHATE DISCHARGE FORM



PAS Site Oswego, New York

Leachate Discharge Form

Date: 10-3-17

Date: <u>10-3-17</u> Field Technician <u>MARTIN KORNAecky</u>

Weather Conditions <u>SUNNY</u> 50°

		,						
		at in the	Pre-Dis	charg	e Well Pi	umping	3	
Well Pump							ja sta	
wenrump								
	Pump Sta Time		ip Stop 'ime		Tank evation	Flow F	ate (est)	Gallons Pumped (es
LCW-1	7:20	· · · · · · · · · · · · · · · · · · ·	1100 1230			<u>,</u>		22,440
LCW-2	7:20		14n 12:30					
LCW-3			PLMPED					
LCW-4	7:20		11.12.30					
START -	. <i>Ц</i> ¹¹	J.	ND 12"				Total	22,440
					e Pumpin	· · · ·		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Discharge #	Start Time	Stop Time	PH	Гетр	Totalize Flow Tot		otalizer Flow	Gallons
					(Start)		Flow Fotal End)	Discharge
Discharge #1	9:40	13:35	6.8	54°	(Start)		Total End)	Discharge
<u> </u>	9:40	13:35	6.8	54°	(Start)		Total End)	
Discharge #1 Discharge #2 Total	9:40	13:35	6.8	54°	(Start)		Total End)	
Discharge #2		13:35 Leachate	Dischar	ge Sa	(Start) 91015 mpling (S	5 93	Total End) 30 / 60	20,005 20,005
Discharge #2		<i>Leachate</i> Sample	Dischar Samp	ge Sa	(Start) 91015 mpling (S Sample	5 93	Fotal End) 30/60 nnuall	20,005 20,005
Discharge #2		Leachate	Dischar	ge Sa	(Start) 91015 mpling (S	5 93 Semi-A	Fotal End) 30/60 nnuall	<u>до, 005</u> до, 005 у)

C \A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx



1

OBRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: <u>//-/5-/'7</u>

Time: 7.45

Field Technician MARTIN KOENNECKE

Weather Conditions Clean 30°

Pump Start Time	Pump Stop. Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est
7:55	905	STAT - 12"	END 43"	9455
7:55	905		135 6810	11.92
NOT PUMPED		·	/	
7:55	9:05			<u> </u>
	<u>Тіте</u> 7:55 7:55 NoT Ритрих	Time Time 7:55 905 7:55 905 NOT PUMPED	Time Time Elevation 7:55 905 57#7.12" 7:55 905	Time Time Elevation 7:55 905 STANT-12" END 43" 7:55 905 135 6Pm NOT PUMPED I I

9455: 70 min = 135 6Pm/ THIL AltoR-11"

	Leach		Leachate Discharge Pumping(Monthly)						
Discharge #	Start Time 9/05	Stop Time	pH	Temp	Totalizer Flow Total (Start)	Totalize Flow Total (End)	Gallons Discharge		
Discharge #1	9:30	11:30	6.7	48,5	930,160	940165	10,005		
Discharge #2									
Total							14,005		
		Leachate	Dischi	irge Sa	mpling (Sem	ui-Annua	lly)		
	Date	Sample Location		nple ume	Sample Time	pH	Temperature		
Sample #1	11-15-17	Sample Port-	1 Cur	njesite	11:15	6.7	48.5		
Sample #2 (if required)									

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Well Pump

O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: <u>/みー5・1</u>り

Time: 8.'00

Field Technician MARTIN KOSNNECKE

Weather Conditions <u>RANU 46</u>

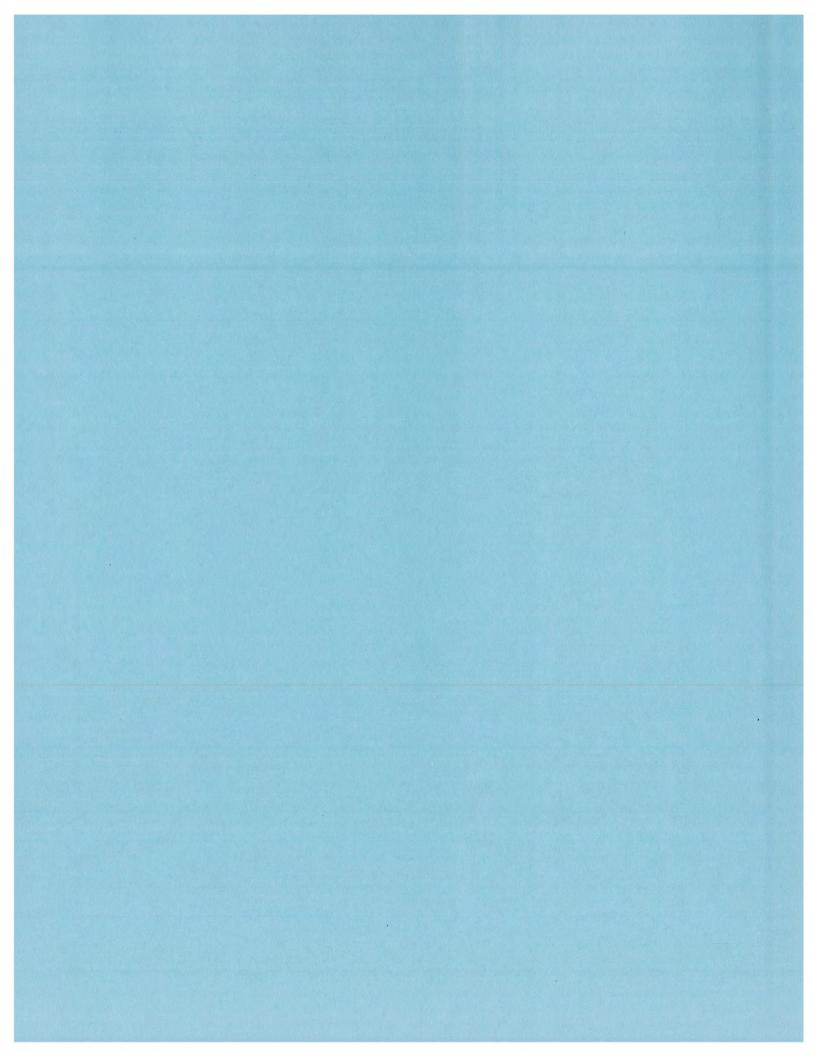
Pre-Discharge Well Pumping

		i. A and a state of the			
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	8:00	920	START-10"	STOP - 43"	10065
LCW-2	8:00	9:20		125 6Pm	
LCW-3	8:00	8:10			
LCW-4	8:00	9:20			
				Total	con to m

Total 10065

		Leach	tate Di	scharge	e Pumping(A	Aonthly)	
Discharge #	Start Time	Stop Time	PII	Тетр	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallous Discharge
Discharge #1	9:45	11:45	6.7	54°	940165	950165	10,000
Discharge #2							
Total		83,36	PM				10,000
		Leachate			e - 9:45 mpling (Sen	ti-Annua	
	Date	Sample Location	1 22484	iple ume	Sample Time	pH	Temperature
Sample #1							
Sample #2 (if required)							

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B – 4 SEMIANNUAL LEACHATE AND GROUNDWATER MONITORING DATA



DATA VALIDATION

FOR

WATER MONITORING PAS Oswego OSWEGO, NEW YORK

ORGANIC ANALYSIS DATA Volatiles in Water Laboratory Job No. 1718799

Analyses Performed

By:

Life Sciences Laboratory East Syracuse, NY

For:

de maximis, inc. Knoxville, TN 37919

Data Validation By:

ddms, inc. St. Paul, Minnesota 55108

March 28, 2018

1547-3131/jlr PAS\1718799Voa



EXECUTIVE SUMMARY

Validation of the volatile organics analysis data prepared by Life Sciences Laboratories, Inc. for eight water samples, one equipment blank, and one trip blank supporting the PAS Oswego Semi Annual Well Sampling event has been completed by de maximis Data Management Solutions, Inc. (ddms). The data were reported by the laboratory under Laboratory Job No. 1718799. The following samples were reported:

|--|

Based on the validation effort, the following qualifiers were applied:

• The results for methylene chloride in all samples, chloroform in Equipment Blank and LCW-2 and acetone in M-21, LR-8, and LCW-2 were qualified as not detected (U) at the reporting limit or reported value, whichever is greater.

All other results were determined to be valid as reported. Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report.

Documentation issues are discussed in Section XIII.

This report should be considered <u>part of the data package</u> for all future distributions of the volatiles data.



INTRODUCTION

Analyses were performed in accordance with USEPA SW-846 Method 8260C. This method does not stipulate a reporting format, however, the laboratory provided a "CLP-type" data package for review. Results of sample analyses were reported by the laboratory without qualifications.

Since no validation guidelines specific to the analytical method employed are available, ddms' validation was performed, to the extent possible, in conformance with EPA's "Validating Volatile Organic Compounds by Gas Chromatograpy/Mass Spectrometry, SW-846 Method 8260B & 8260C, SOP NO. HW-24, Revision 4" as well as ddms' "Standard Operating Procedure: Validation and Review of Volatile Organic Data; ECS-SOP-003". Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the Region II Guidelines:

- U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
- J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The result is an estimated quantity, but the result may be biased high.
- J- The result is an estimated quantity, but the result may be biased low.
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- R The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) Criteria. The analyte may or may not be present in the sample.



These codes are recorded on the Data Summary Forms contained in Attachment A of this validation report to indicate qualifications placed on the results based on the data review.

All data users should note two facts. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, no concentration is guaranteed to be accurate even if all associated quality control is acceptable. Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.



I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting sample collection dates of November 13 and 14, 2017. The samples were hand delivered to the laboratory on November 14, 2017. The temperature of the cooler on receipt at the laboratory was acceptable (2.4° C; criteria 4.0° C \pm 2.0° C). Acceptable preservation of samples (pH <2) was noted in the narrative. The samples were analyzed on November 16, 2017, within the 14-day holding time for preserved samples.

II. GC/MS Instrument Performance Check

Summary forms were provided for two bromofluorobenzene (BFB) instrument performance check run on instrument "MS04_73", representing the periods during which the samples and associated standards were analyzed. The performance checks were fully documented and acceptable.

III. Calibration

Manual integrations were indicated on the IC quantitation reports for several analyte responses, however no supporting documentation was provided to verify that the integrations were appropriately performed. The validation was completed under the assumption that all manual integrations were appropriately performed.

A. Initial Calibration (IC)

One IC was performed in support of these sample analyses. Documentation of the individual IC standards was present in the data package and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were accurately reported. All reported %RSD values were below the maximum acceptance limit of 20 percent for all site-specific compounds. All RRF met the method minimum acceptance criteria, with the exception of the RRFs in acetone (0.052) and 2-butanone (0.075). The RSDs over the ical for acetone and 2-butanone were <15% indicating linear responses, and based on professional judgement, no qualification of sample results was made.

B. Continuing Calibration (CC)

One CC was performed on November 16, 2017. All RRF values were acceptable. All percent difference values were acceptable with the exception with the exception of chloromethane and methyl acetate which exhibited an increase in sensitivity from the IC. Since these compounds were not detected in any of the samples, no data were qualified on this basis.



IV. Blanks

One laboratory method blank was analyzed in support of these samples. One trip blank and one equipment blank were submitted in support of these samples. Methylene chloride (0.630ug/L) and chloroform (0.160 ug/L) were detected in the method blank.

The results for methylene chloride in all samples and chloroform in Equipment Blank and LCW-2 were qualified as not detected (U) at the reporting limit or reported value, whichever is greater, due to method blank contamination.

Following qualification based on method blank contamination, acetone was detected in both the trip blank and equipment blank. The results for acetone in M-21, LR-8, and LCW-2 were qualified as not detected (U) at the reporting limit due to trip and equipment blank contamination.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated, accurately reported, and within acceptance limits.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on LR-6. All percent recoveries were acceptable with the exception of dichlorodifluoromethane, chloromethane and methyl acetate. In all instances the %R was biased high (acceptance criteria 70-130%R, RPD<30). These compounds were not detected in any samples and no qualification of sample results was warranted.

B. Laboratory Control Sample (LCS)

One LCS was reported with these samples. All percent recoveries were acceptable with the exception of dichlorodifluoromethane, chloromethane and methyl acetate. In all instances the %R was biased high (acceptance criteria 70-130%R). These compounds were not detected in any samples and no qualification of sample results was warranted.



VII. Field Duplicate

Sample OD-3 was collected as a blind field duplicate of Sample X-1. Following qualification based on blank results, no target analytes were detected in either sample and precision could not be assessed.

VIII. Internal Standard Performance

All internal standard (IS) areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Target analytes were detected in most samples and an acceptable mass spectrum was provided for the compounds detected. Analyte-specific reporting limits are equal to at least the lowest standard in the calibration range, in most cases higher than the lowest standard, and are well supported by the IC.

X. Compound Quantitation and Reporting Limits

Target compound concentrations and RLs were correctly calculated and accurately reported for all samples and spike samples.

The Data Summary Forms in Attachment A list all individual sample analytes. Where no result is listed, the compound was not detected and the RL was not qualified. Sample-specific RLs may be calculated from the information on the data summary form by multiplying the quantitation limit (far left column) by the dilution factor.

XI. Tentatively Identified Compounds (TIC)

Tentative identification of non-target compounds was not a requirement of this analytical program.

XII. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.



XIII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package.

The following documentation issues were observed during the validation of these data:

• The sample identifications on the COC did not include the sample date. The laboratory appended the sample dates to the field identifications to facilitate database requirements. The sample identifications provided on the COC have been used throughout this report.

While these documentation issues do not affect the usability of the data, they could be problematic if the data were used in litigation.

XIV. Overall Assessment

Based on the validation effort, the following qualifiers were applied:

- The results for methylene chloride in all samples and chloroform in Equipment Blank and LCW-2 were qualified as not detected (U) at the reporting limit or reported value, whichever is greater, due to method blank contamination.
- The results for acetone in M-21, LR-8, and LCW-2 were qualified as not detected (U) at the reporting limit or reported value, whichever is greater, due to trip and equipment blank contamination.

All other results are valid as reported.

Documentation issues observed in the data package are described in Section XIII.

This validation report should be considered <u>part of the data package</u> for all future distributions of the volatiles data.



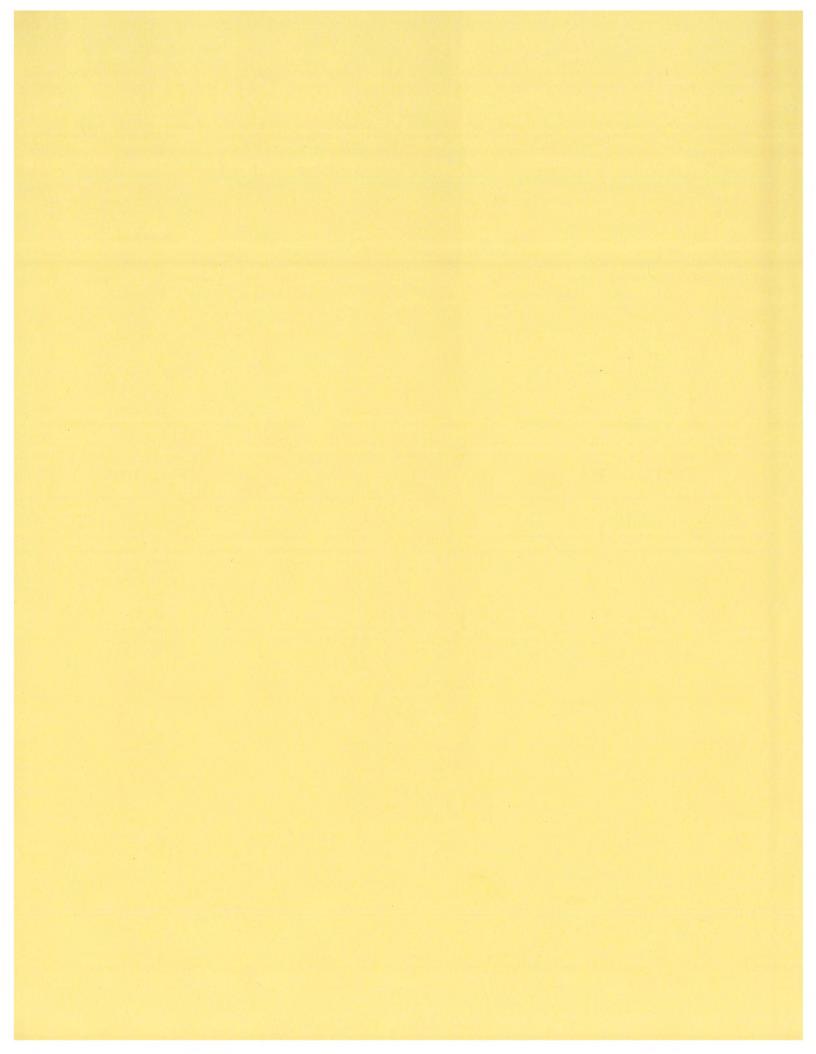
ATTACHMENT A

DATA SUMMARY FORMS Laboratory Job No. 1718799 Volatiles in Water

	Field ID	Equipment Bl	ank	LCW-2		LCW-4		LR-6	
	Sample Date	11/13/201	.7	11/14/201	.7	11/14/201	17	11/14/203	17
	DF	1		5		20		1	
Compound	RL								
1,1,1-Trichloroethane	0.5			24.9					
1,1,2,2-Tetrachloroethane	0.5			2.75					
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5			3.15					
1,1,2-Trichloroethane	0.5			0.80	J				
1,1-Dichloroethane	0.5			35.4		4.00	J	0.85	
1,1-Dichloroethene	0.5								
1,2,4-Trichlorobenzene	0.5								
1,2-Dibromo-3-chloropropane	0.5								
1,2-Dibromoethane	0.5								
1,2-Dichlorobenzene	0.5			4.25		24.0			
1,2-Dichloroethane	0.5								
1,2-Dichloropropane	0.5								
1,3-Dichlorobenzene	0.5								
1,4-Dichlorobenzene	0.5								
2-Butanone	10.0								
2-Hexanone	10.0								
4-Methyl-2-pentanone	10.0								
Acetone	0.5	1.00			U				
Benzene	0.5			320		444			
Bromodichloromethane	0.5								
Bromoform	0.5								
Bromomethane	1.0								
Carbon disulfide	0.5								
Carbon tetrachloride	0.5								
Chlorobenzene	0.5			67.0		289			
Chloroethane	1.0			11.1		71.6			
Chloroform	0.5		U	4.65	U				
Chloromethane	1.0								
cis-1,2-Dichloroethene	0.5			167		3.60	J	0.11	J
cis-1,3-Dichloropropene	0.5								
Cyclohexane	0.5					4.80	J		
Dibromochloromethane	0.5								
Dichlorodifluoromethane	1.0								
Ethylbenzene	0.5			13.2		179			
Isopropylbenzene	0.5			2.25		3.60	J		
Methyl acetate	5.0								
Methyl tert-butyl ether	1.0								
Methylcyclohexane	0.5								
Methylene chloride	2.0		U		U		U		U
Styrene	0.5								
Tetrachloroethene	0.5			103					
Toluene	0.5			1.00	J	48.2			
trans-1,2-Dichloroethene	0.5			0.50	J				
trans-1,3-Dichloropropene	0.5								
Trichloroethene	0.5			31.4				0.16	J
Trichlorofluoromethane	1.0								-
Vinyl chloride	1.0			108		8.00	J		
Xylenes (total)	0.5			10.8		927	-		

	Field ID	LR-8	M-21		M-22		OD-3	
	Sample Date	11/13/2017	11/13/201	7	11/14/2017	7	11/13/20	17
	DF	1	1		1		1	
Compound	RL							
1,1,1-Trichloroethane	0.5							
1,1,2,2-Tetrachloroethane	0.5							
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5							
1,1,2-Trichloroethane	0.5							
1,1-Dichloroethane	0.5				0.30	J		
1,1-Dichloroethene	0.5							
1,2,4-Trichlorobenzene	0.5							
1,2-Dibromo-3-chloropropane	0.5							
1,2-Dibromoethane	0.5							
1,2-Dichlorobenzene	0.5	0.42	J 0.46	J				
1,2-Dichloroethane	0.5							
1,2-Dichloropropane	0.5							
1,3-Dichlorobenzene	0.5	0.12	J					
1,4-Dichlorobenzene	0.5	0.73	0.33	J				
2-Butanone	10.0							
2-Hexanone	10.0							
4-Methyl-2-pentanone	10.0							
Acetone	0.5		U	U				
Benzene	0.5	0.26	J 0.22	J				
Bromodichloromethane	0.5							
Bromoform	0.5							
Bromomethane	1.0							
Carbon disulfide	0.5							
Carbon tetrachloride	0.5							
Chlorobenzene	0.5	12.1	5.68					
Chloroethane	1.0	4.12	1.91					
Chloroform	0.5							
Chloromethane	1.0							
cis-1,2-Dichloroethene	0.5							
cis-1,3-Dichloropropene	0.5							
Cyclohexane	0.5	2.05	1.39					
Dibromochloromethane	0.5							
Dichlorodifluoromethane	1.0		1					
Ethylbenzene	0.5							
Isopropylbenzene	0.5	0.48	J 0.46	J				
Methyl acetate	5.0	Ī	1 1					
Methyl tert-butyl ether	1.0		1 1					
Methylcyclohexane	0.5	0.20	J 0.15	J				
Methylene chloride	2.0		U	U		U		U
Styrene	0.5	Ī	1 1					
Tetrachloroethene	0.5		1 1					
Toluene	0.5	0.26	J 0.21	J				
trans-1,2-Dichloroethene	0.5		1 1					
trans-1,3-Dichloropropene	0.5		1 1					
Trichloroethene	0.5		1 1					
Trichlorofluoromethane	1.0		1 1					
Vinyl chloride	1.0		1 1					
Xylenes (total)	0.5	0.35	J					

	Field ID	X-1		QC Trip Bla	
	Sample Date			11/14/20	17
	DF			1	
Compound	RL				
1,1,1-Trichloroethane	0.5				
1,1,2,2-Tetrachloroethane	0.5				
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5				
1,1,2-Trichloroethane	0.5				
1,1-Dichloroethane	0.5				
1,1-Dichloroethene	0.5				
1,2,4-Trichlorobenzene	0.5				
1,2-Dibromo-3-chloropropane	0.5				
1,2-Dibromoethane	0.5				
1,2-Dichlorobenzene	0.5				
1,2-Dichloroethane	0.5				
1,2-Dichloropropane	0.5				
1,3-Dichlorobenzene	0.5				
1,4-Dichlorobenzene	0.5				
2-Butanone	10.0				
2-Hexanone	10.0				
4-Methyl-2-pentanone	10.0				
Acetone	0.5			1.11	
Benzene	0.5				
Bromodichloromethane	0.5				
Bromoform	0.5				
Bromomethane	1.0				
Carbon disulfide	0.5				
Carbon tetrachloride	0.5				
Chlorobenzene	0.5				
Chloroethane	1.0				
Chloroform	0.5				
Chloromethane	1.0				
cis-1,2-Dichloroethene	0.5				
cis-1,3-Dichloropropene	0.5				
Cyclohexane	0.5				
Dibromochloromethane	0.5				
Dichlorodifluoromethane	1.0				
Ethylbenzene	0.5				
Isopropylbenzene	0.5				
Methyl acetate	5.0				
Methyl tert-butyl ether	1.0				
Methylcyclohexane	0.5				
Methylene chloride	2.0		U		U
Styrene	0.5				
Tetrachloroethene	0.5				
Toluene	0.5				
trans-1,2-Dichloroethene	0.5	ł			
trans-1,3-Dichloropropene	0.5	ł			
Trichloroethene	0.5	[
Trichlorofluoromethane	1.0				
Vinyl chloride	1.0				
Xylenes (total)	0.5				



SEMIANNUAL FIELD DATA NOVEMBER 2017



Life Science Laboratories, Inc. Central Lab 5854 Butternut Drive East Syracuse, New York 13057 (315) 445-1105 **Chain of Custody**

Client: OBG Operations			· · ·				·		An	alysis	/Metho	bc	
Project ID: PAS Oswego -	· · · · · · · · · · · · · · · · · · ·					1	<u> </u>		7				
Sampled by: Martin Koennecke						/ ·	JUV						
Client Contact: Mark Byrne	Pho	one # 3	15-842	7024		/~				1			
Sample Des	cription					Paris 1			/	/	/		
Sample Location	Date Collected	Time Collected	Sample Matrix	Comp. or Grab	No. of Containers	1			/	<u> </u>			Comments
EGVIPINGAT BLANK	11-13-17	1130	w	6	3	3							
M-21	11-13-17	12:20	W	6	3	3					<u> </u>		
0D-3	11-13-17	1340	10	6	3	3							
LR-8	11-13-17	14:45	W	6	3	3				 	<u> </u>	<u> </u>	
X-1	11-13-17	~	W	6	3	3	 			<u> </u>			
LR-6, MS, MSD	11-14-17	10:00	h	6	9	9	ļ			ļ	ļ	<u> </u>	
m-22	11-14-17	1130	<u> </u>	6	3	3		ļ	ļ	ļ	<u> </u>	ŀ	
LCW-2	11-14-14	12:25	W	6	3	3		<u> </u>	ļ		<u> </u>	<u> </u>	
LCW - H	11-14-14	13.35	14	6	3_	3			<u> </u>	<u> </u>			
QCTRIP BLaink			w	<u> </u>	2	2				┼			
				<u> </u>			<u> </u>						
							<u> </u>			<u> </u>	<u> </u>	<u> </u>	Time:
Relinquished by: Marthe Komenne	Da	te: 11-14	- - [*] /Time	:/530	Receive	ed by:						Date:	
Relinquished by:	Da	te:	Tim	e:	Receive	ed by:		<u>~~</u>				Date:	Time:
Relinquished by:	Da	te:	Tim	e:	Receiv	ed by La	ab:	$\langle \downarrow$	<u>)</u>	h	E	Date: //	14-17 Time: 15:37
Shipment Method: HAND			•		Airbill N	lumber:							

Turnaround Time Required:

Comments: PO #:

Samples Received Cooler Temperature: 2.4°C On ice



Life Science Laboratories, Inc. Central Lab

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

Chain of Custody

		_										•	
Client: OBG Operations									Ar	nalysis	Meth		
Project ID: PAS Oswego - Se.	ni Ann	n. Ci	Ty of c	F	Perm,T PCTiv		// /	[]	/	/	/ 7	7	í.
Sampled by: Martin Koennecke			- .] /	'/ /				/	and the second	-418:5
Client Contact: Mark Byrne	· P	none#3	315-842	-7024					5 / .			<u>بر</u> (۲	Terrifo, h
Sample De	scriptior					E DW LEAT	25 M	4 / 5 8		/2	(¹	153	PH- G.
Sample Location	Date Collected	Time Collected	Sample Matrix	Comp. or Grab	No. of Containers	124	E 1/ S	13	/ 3	TRN	BOD CR	meru	$\frac{18.5}{16.49}$ $\frac{18.5}{16.4}$ $\frac{18.5}{16.4}$ $\frac{16.4}{16.4}$ Comments
Learthoty Effluent	11-15-17	11:15	WAIN	Conf	10	3	1 1]	١	1		1	
GL TRIP BLANK			W		2	a							
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		<u> </u>									ļ		
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Relinquished by: Minthe Kondar	Da	ate: //_ 15-	i ^ب Time	: 14,35	Receive	d by:					D	ate:	Time:
Relinquished by:	Da	ite:	Time	:	Receive	-	A					ate:	Time:
Relinquished by:	Da	ate:	Time	:	Receive	d by L	.ab: <i>Kl</i> y	V Van	do	ar Ker	C D	ate: /]_	15-17 Time: 1435
Shipment Method: Hitan					Airbill N		Í						

Turnaround Time Required: Routine <u>×</u>_____

Rush

Comments: PO #:

Samples Received

Cooler Temperature: 2.00

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

	TART	- 13:00		LEW	- 1-1	11-14	1 - 17	
Time	Depth to Water	Temperature	рН	Conductivity	ORP	DO (%) 114/L	Turbidity (NTU)	Flow Rate
5min	17.42	12.39	5.90	2,395	-212,4	3.22	3,43	300114
Danne	17.92	12.68	5.85	2,470	-223.1	1.42	2.59	Zoome
15min	17.92	12,82	5,86	2,472	- 222,1	0.86	2.46	353,2l
20 Min	17.92	12,84	5,88	2.477	- 220.B	0.87	2.52	300ml
25 ALIN	17.92	12.85	5.87	2.476	-219,1	0,83	2,62	300ml
30 14.10	17.92	12,85	5,88	a.477	- 219,5	0.81	2,58	300 ml
Ĺ								

WATER SAMPLE

Time Collected:

13:35

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	Yellow istt	Yellow is it
Odor	SLight	SLIGHT
Turbidity <100 (NTU)	Ne	No
Sheen/Free Product	NO	NO

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	alesi	3		HEL	
	0				
	· ·				
		1			

NOTES

PID - 3,6 PPM

GROUND WATER SAMPLING LOG

Date	11-14-17	Weather	Overcost 40°
Site Name	PAS Oswego	Well #	2CW-21
Location	55 East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	M. Koennecky		

WELL INFORMATION

Depth of Well	ft	Water Vol/ft for:		
Depth of Water	ft 17,92	2" Diameter Well	= 0.163 X LWC	
Length of Water Column	ft	4" Diameter Well	= 0.653 X LWC	
Volume of Water in Well	gal	6" Diameter Well	= 1.469 X LWC	
3x Volume of Water in Well	gal	14" Diameter Well	= 2.282 X LWC	X

Volume removed before Sampling	gals
Did Well go dry?	ND

Measurements Taken From: Well Casting Protective Casting Other:

INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings	
4.0 Standard	84 S Standard	
7.0 Standard	1413 S Standard	
10.0 Standard		

TEST EQUIPMENT DEPTHS WITHIN WELL

Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK



GROUND WATER SAMPLING LOG

Date	11-14-14	Weather	EVERCHIST 410°
Site Name	PAS Oswego	Well #	LCW-2
Location	55 East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	M. Koennecky		

WELL INFORMATION

Depth of Well	ft	Water Vol/ft for:		
Depth of Water	ft 11,80	2" Diameter Well	= 0.163 X LWC	
Length of Water Column	ft 💋	4" Diameter Well	= 0.653 X LWC	
Volume of Water in Well	gal	6" Diameter Well	= 1.469 X LWC	
3x Volume of Water in Well	gal	14" Diameter Well	= 2.282 X LWC	X

Volume removed before Sampling	gals
Did Well go dry?	

Measurements Taken From:	Casting Protective Casting	Other:
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INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings	
4.0 Standard	84 S Standard	
7.0 Standard	1413 S Standard	
10.0 Standard		

TEST EQUIPMENT DEPTHS WITHIN WELL

	Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK
-	·							



GROUND WATER SAMPLING LOG

Time	Depth to Water	Temperature C	рН	Conductivity MS/Cm	ORP	DO (%) Mg/L	Turbidity (NTU)	Flow Rate
5.nin	11.80	13,01	6,50	1,781	-266.4	0,74	1.43	300 ml
lonno	11.80	12.99	6,61	1,763	-277,3	0,50	1.67	300ml
15min	11.80	13,04	6,64	1,757	-277.0	0,46	1,108	BOOML
Romin	11.80	13,63	6.70	1.751	-277,1	0.44	1.72	300ml
Smin	11.80	13.05	6,70	15746	-278,2	0,42	1.78	302 ml
BOMIN	11,80	13.02	6.70	1.745	- 277,1	0,40	1.76	300 ml

WATER SAMPLE

Time Collected: 1みにみら

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	ilion	clean
Odor	SLight	SLight
Turbidity <100 (NTU)	Nº V	1.0
Sheen/Free Product	No	160

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	4 Kasts	3	e and the second s	HLL	and the second s
	/				

NOTES

PID - 12.0 PPM



GROUND WATER SAMPLING LOG

Date	11-14-11	Weather	OVERCAST 40°
Site Name	PAS Oswego	Well #	111-22
Location	55 East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	M. Koennecky		

WELL INFORMATION

Depth of Well	ft			Water Vol/ft for:
Depth of Water	ft 10,05	2" Diameter Well	= 0.163 X LWC	
Length of Water Column	ft	4" Diameter Well	= 0.653 X LWC	
Volume of Water in Well	gal	6" Diameter Well	= 1.469 X LWC	×
3x Volume of Water in Well	gal	14" Diameter Well	= 2.282 X LWC	

Volume removed before Sampling	gals	3	
Did Well go dry?		NU	

Measurements Taken From:

INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings	
4.0 Standard	84 S Standard	
7.0 Standard	1413 S Standard	
10.0 Standard		

TEST EQUIPMENT DEPTHS WITHIN WELL

Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK



GROUND WATER SAMPLING LOG

STI	ANT 10:5	0 M-	22		11-14	- 17		
Time	Depth to Water	Temperature	рН	Conductivity ms/@m	ORP	DO (殤) my/L	Turbidity (NTU)	Flow Rate
5 MIN	10,05	12,14	6.44	1.365	-255.4	17.44	12.4	300 ml
Rostin	10,05	12,23	5,36	1,367	. 251.0	6.34	9.54	300 ml
15 m 100	16.05	12.24	5.36	1,367	- 249,7	6,18	8,21	300 ml
dl mu	10.05	12.26	6.34	1.368	- 247,2	5,70	6,02	300 20
25 min	10,05	12.22	835	1.366	- 244,8	5,35	4.96	300 ml
30 min	10,05	12,10	6.35	1.363	-241,9	5,04	3,6le	300 000
35 min	10,05	12,06	6.36	1,361	-240,9	4,99	3,19	Billion
HOMIN	10,05	12,06	5,36	1.361	- 240.5	4.98	3,16	300 ml

WATER SAMPLE

Time Collected: 11:30

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	clear	clem
Odor	NL	NO
Turbidity <100 (NTU)	NO	ΟLΛ
Sheen/Free Product	<i>N/U</i>	NO

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	Gloss	3	•••••	HLL	
	0				
· · · · · · · · · · · · · · · · · · ·					

NOTES

PID - 0.0 PPM

GROUND WATER SAMPLING LOG

5740	iT 9	115	4	-R-6	/	1-14-10	7	
Time	Depth to	Temperature	рН	Conductivity	ORP	DO (%)	Turbidity (NTU)	Flow Rate
	Water	<u> </u>		MS/CM		114/L.		
Sam un	11.62	10,91	6.15	1.031	-291.1	<u> </u>	21.2	302 m. (.M
10 min	11.38	10,58	6.17	1,132	• 300.3	6,27	18.1	300
15mins	11,40	10,62	4,28	1,138	-3064	0,27	18,9	300
Junio	11,44	10.60	10.30	1.145	- 308,5	0,25	<u>j1,8</u>	300
25 min	11.45	10.59	6,28	1,143	-309.1	0,25	8.8	300
Same	11,45	10.58	6,31	1.145	-310,17	0,24	7,18	310
85.001.0	11,45	10,100	6,31	1,146	- 309,2	0,25	7,26	200
Winne	11.45	10.60	6.31	1.146	- 308.9	0124	7.20	300

WATER SAMPLE / D; O D

Time Collected: 10 0 0

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	clean	(llan
Odor	No	A/D
Turbidity <100 (NTU)	100	NO
Sheen/Free Product	$N_{\tilde{v}}$	NO

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
46 ml	Glass	9		HCL	and competition and a
	<i></i>	·			

NOTES

M5/AISD SAMPLES Cellected PID - 0.0 PPM



Date 11-14-17		Weather	OVERCHST 35°
Site Name	PAS Oswego	Well #	LR-6
Location	55 East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	MKVENNACKA		

WELL INFORMATION

Depth of Well	ft			Water Vol/ft for:
Depth of Water	ft 10,06	2" Diameter Well	= 0.163 X LWC	X
Length of Water Column	ft	4" Diameter Well	= 0.653 X LWC	
Volume of Water in Well	gal	6" Diameter Well	= 1.469 X LWC	
3x Volume of Water in Well	gal	14" Diameter Well	= 2.282 X LWC	

Volume removed before Sampling	gals
Did Well go dry?	

Measurements Taken From: X Well Casting Protective Casting Other:

INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings	
4.0 Standard	84 S Standard	
7.0 Standard	1413 S Standard	
10.0 Standard		

TEST EQUIPMENT DEPTHS WITHIN WELL

Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK

Date //-/3-17		Weather	OVERCHIT 38°
Site Name	PAS Oswego	Well #	LR-8
Location	55 East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	M. Koennecke		

WELL INFORMATION

Depth of Well	ft			Water Vol/ft for:
Depth of Water	ft 9.62	2" Diameter Well	= 0.163 X LWC	7
Length of Water Column	ft	4" Diameter Well	= 0.653 X LWC	
Volume of Water in Well	gal	6" Diameter Well	= 1.469 X LWC	
3x Volume of Water in Well	gal	14" Diameter Well	= 2.282 X LWC	

Volume removed before Sampling	gals
Did Well go dry?	

Measurements Taken From: Well Casting Protective Casting Other:	
---	--

INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings	
4.0 Standard	84 S Standard	
7.0 Standard	1413 S Standard	
10.0 Standard		

TEST EQUIPMENT DEPTHS WITHIN WELL

Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK

GROUND WATER SAMPLING LOG

(NTU)	DO (%)	ORP	Conductivity M5/Cm	рН	Temperature <i></i>	Depth to Water	Time
1,19	0,17	-288.1	0,844	6.14	10.59	11.32	5 MIN
0.83	0.16	- 289.4		6.15	10,64		10 min
	0.16	- 288.4	0.868	6.16	10.64		15mil
0,76	0,16	- 288.8	0.869	6,18	10,63	11.30	ROMIN
0,82	0,15	- 289.1	0,870	6.17	10,63	11,30	25min
0.80	0.15	-289,1	0,870	6.17	10.63	11,30	30 mm
0.80	0.15	- 2 87,1	0,810	6.17	10,63	11.30	<u> 30 in w</u>
	0.87 0,76 0.82	0,16 0,83 0,16 0,87 0,16 0,76 0,15 0,82	- 289.4 C.16 0.83 - 288.4 0.16 0.87 - 288.8 0,16 0,76 - 289.1 0,15 0.82	0,844 -288.1 0,17 1,19 0.867 -289.4 0,16 0,83 0,868 -288.4 0,16 0,87 0,869 -288.8 0,16 0,76 0,870 -289.1 0,15 0,82	6,14 0,844 -288.1 0,17 1,19 6,15 0.867 -289.4 0,16 0,83 6,16 0,868 -288.4 0,16 0,87 6,18 0.869 -288.8 0,16 0,76 6,17 0,870 -289.1 0,15 0,82	10,59 6,14 0,844 -288,1 0,17 1,19 10,64 6,15 0.867 -289,4 0,16 0,83 10,64 6,16 0,868 -288,4 0,16 0,87 10,63 6,18 0,869 -288,8 0,16 0,76 10,63 6,19 0,870 -289,1 0,15 0,82	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

WATER SAMPLE

Time Collected: 14:45

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 m (cplus,	3	· • • Sharawayayayayayayayayayayayayayayayayayay	HIL	
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NOTES

PID READING 0.0 PPM

GROUND WATER SAMPLING LOG

Date	11-13-17	Weather	OVERCAST 40
Site Name	PAS Oswego	Well #	02-3
Location	55 East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	M. Koennache		

WELL INFORMATION

Depth of Well	ft			Water Vol/ft for:
Depth of Water	ft 13,40	2" Diameter Well	= 0.163 X LWC	X
Length of Water Column	ft	4" Diameter Well	= 0.653 X LWC	
Volume of Water in Well	gal	6" Diameter Well	= 1.469 X LWC	
3x Volume of Water in Well	gal	14" Diameter Well	= 2.282 X LWC	

Volume removed before Sampling	gals
Did Well go dry?	

Measurements Taken From: 🔀 Well Casting 📄 Protective Casting 🗍 Other:

INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings	
4.0 Standard	84 S Standard	
7.0 Standard	1413 S Standard	
10.0 Standard		

TEST EQUIPMENT DEPTHS WITHIN WELL

Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK



GROUND WATER SAMPLING LOG

		0.	<u>D-3</u>		STAAT 1	3:00	<u></u>	
Time	Depth to Water	Temperature (-	рН	Conductivity	ORP	DO (%)	Turbidity (NTU)	Flow Rate
Smin	13, 75	10.88	6,33	0,128	- 245.4	617	4.31	300
10 min	13,90	10.98	6.43	0,130	- 243,4	6.40	4,81	300
15mir	13,92	10.99	6.27	0,134	-243,3	6.24	3,43	300
20 Min	13.90	11,0 6	6.33	0,139	- 244,1	6,02	2.92	300
asmin	13,90	11.02	6,31	0,141	· 244,3	5,81	1,90	300
30 min	13,90	11.03	6,33	0.141	- 244,5	5,71	1.88	300
35m 14	13.90	11,03	6.33	0.142	- 244,5	5.72	2.04	300

WATER SAMPLE

Time Collected:

13:40

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	clem	
Odor	Ni	
Turbidity <100 (NTU)	NO	
Sheen/Free Product	NA	

SAMPLES COLLECTED

Container Size	Container Type	# Collecte	ed	Field Filtered	Preservative	Container pH
40 ml	ülass	B	6		HCL	
	0					
·····						
······		1			····	

NOTES

READING 0,0 PPM GIG

X-1 Collected

GROUND WATER SAMPLING LOG

Date	1/-13-17	Weather	RAIN SNOW MIX 34°
Site Name	PAS Oswego	Well #	M-21
Location	55 East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	MARTIN KUERINGKU		

WELL INFORMATION

Depth of Well	ft			Water Vol/ft for:
Depth of Water	ft 9,24	2" Diameter Well	= 0.163 X LWC	
Length of Water Column	ft	4" Diameter Well	= 0.653 X LWC	
Volume of Water in Well	gal	6" Diameter Well	= 1.469 X LWC	X
3x Volume of Water in Well	gal	14" Diameter Well	= 2.282 X LWC	

Volume removed before Sampling	gals
Did Well go dry?	

|--|

INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings	
4.0 Standard	84 S Standard	
7.0 Standard	1413 S Standard	
10.0 Standard		

TEST EQUIPMENT DEPTHS WITHIN WELL

Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK



GROUND WATER SAMPLING LOG

Time	Depth to Water	Temperature	рН	Conductivity	ORP	DO (%) M4/L	Turbidity (NTU)	Flow Rate
5 min	9.24	10,79	6.05	0,786	- 259,0	1.50	1.05	300 pl
10 min	9,24	10.83	6.07	0,787	-239,1	0.97	1.79	300 ml
15min	9,24	10.80	6,05	0.786	-253.4	0.53	1.71	Booml
20.00	9,24	10.77	6.00	0,784	- 238.6	1.21	1,58	360 ml
25.000	9.24	10,76	6,04	0,784	- 241.16	1,30	1,52	Browl
3Durns	9,24	10,74	6.07	0,783	-242,5	1,34	1,60	300 ml

WATER SAMPLE

Time Collected: 12320

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	clem	clean
Odor	NO	ND
Turbidity <100 (NTU)	ND	ND
Sheen/Free Product	NO	NO

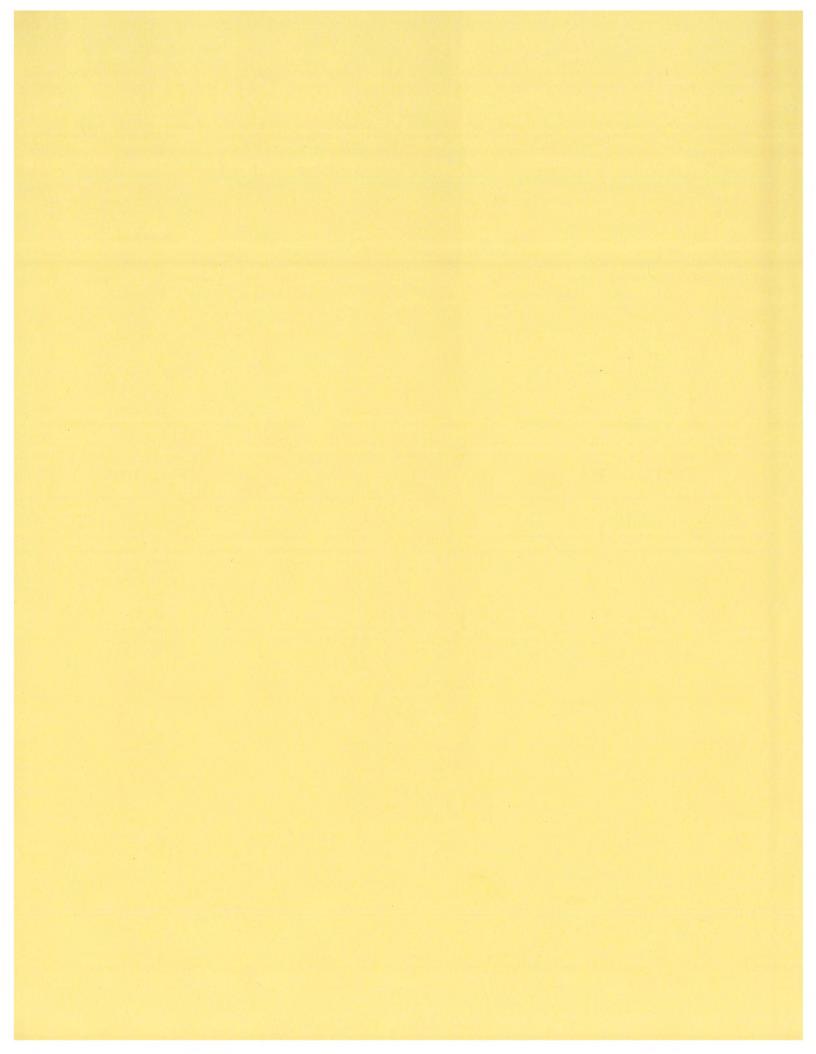
SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	gless	3		Hec	

NOTES

PID READING - 0,0 PPM

Equipment Blank sample - 11:30





Tuesday, December 19, 2017

Mark Byrne O'Brien & Gere Operations, LLC 7600 Morgan Road Liverpool, NY 13090

TEL: 315-437-6100

Project: PAS OSWEGO-SEMI-ANNUAL WELL SAMPLING

RE: Analytical Results

Order No.: 1718799

Dear Mark Byrne:

Life Science Laboratories, Inc. received 10 sample(s) on 11/14/2017 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.

David J Prichard Project Manager SEMIANNUAL LAB DATA NOVEMBER 2017

Life Science Laboratories, Inc.

Е	ast Syracuse, NY 1305	57 (315)	445-1900	5	StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		bling	Lab ID: Client Sample ID:	1718799-001A Equipment Blank 11/13/1
W Order: Matrix:	1718799 WATER			Collection Date: Date Received:	11/13/17 11:30 11/14/17 15:30
Inst. ID: ColumnID: Revision:	MS04 73 Rtx-VMS 12/18/17 7:21	Sample Size: %Moisture: TestCode:	10 mL 8260W OLM42	PrepDate: BatchNo: FileID:	R31672 1-SAMP-R3802.D
Col Type:					

Analyte	Result Qua	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMP	POUNDS BY GC/MS			SW826	0C/5030C	
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	11/16/17 15:51
Chloromethane	ND	1.00	0.33	µg/L	1	11/16/17 15:51
Vinyl chloride	ND	1.00	0.33	µg/L	1	11/16/17 15:51
Bromomethane	ND	1.00	0.33	µg/L	1	11/16/17 15:51
Chloroethane	ND	1.00	0.33	µg/L	1	11/16/17 15:51
Trichlorofluoromethane	ND	1.00	0.10	µg/L	1	11/16/17 15:51
1,1-Dichloroethene	ND	0.50	0.16	µg/L	1	11/16/17 15:51
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	0.50	0.10	µg/L	1	11/16/17 15:51
Acetone	1.00 J	10.0	1.00	µg/L	1	11/16/17 15:51
Carbon disulfide	ND	0.50	0.11	µg/L	1	11/16/17 15:51
Methyl acetate	ND	5.00	1.00	µg/L	1	11/16/17 15:51
Methylene chloride	0.56 J	2.00	0.16	µg/L	1	11/16/17 15:51
trans-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 15:51
Methyl tert-butyl ether	ND	1.00	0.16	µg/L	1	11/16/17 15:51
1,1-Dichloroethane	ND	0.50	0.10	µg/L	1	11/16/17 15:51
cis-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 15:51
2-Butanone	ND	10.0	1.00	µg/L	1	11/16/17 15:51
Chloroform	0.13 J	0.50	0.10	µg/L	1	11/16/17 15:51
1,1,1-Trichloroethane	ND	0.50	0.10	µg/L	1	11/16/17 15:51
Cyclohexane	ND	0.50	0.10	µg/L	1	11/16/17 15:51
Carbon tetrachloride	ND	0.50	0.10	µg/L	1	11/16/17 15:51
Benzene	ND	0.50	0.10	µg/L	1	11/16/17 15:51
1,2-Dichloroethane	ND	0.50	0.16	µg/L	1	11/16/17 15:51
Trichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 15:51
Methylcyclohexane	ND	0.50	0.10	µg/L	1	11/16/17 15:51
1,2-Dichloropropane	ND	0.50	0.16	µg/L	1	11/16/17 15:51
Bromodichloromethane	ND	0.50	0.10	µg/L	1	11/16/17 15:51
cis-1,3-Dichloropropene	ND	0.50	0.16	μg/L	1	11/16/17 15:51
4-Methyl-2-pentanone	ND	5.00	1.00	μg/L	1	11/16/17 15:51
Toluene	ND	0.50	0.10	µg/L	1	11/16/17 15:51
trans-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/16/17 15:51
1,1,2-Trichloroethane	. ND	0.50	0.16	µg/L	1	11/16/17 15:51
Tetrachloroethene	ND	0.50	0.10	µg/L	1	11/16/17 15:51
2-Hexanone	ND	5.00	1.00	µg/L	1	11/16/17 15:51
Oualifiers: * Value may e	exceed the Acceptable Level		B Analyte c	letected in the	associated M	ethod Blank
	ds the instrument calibration ra	nge	0			lysis exceeded
J Analyte dete	ected below the PQL					tation Limit (PQL)
P Prim./Conf.	column %D or RPD exceeds lir	nit	S Spike Re	covery outsid	e accepted rec	overy limits

Life Science Laboratories, Inc.

E	ast Syracuse,NY 1305	57 (315) 4	45-1900	S	StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		ing	Lab ID: Client Sample ID:	1718799-001A Equipment Blank 11/13/1
W Order: Matrix:	1718799 WATER			Collection Date: Date Received:	11/13/17 11:30 11/14/17 15:30
Inst. ID: ColumnID: Revision:	MS04 73 Rtx-VMS 12/18/17 7:21	Sample Size: 1 %Moisture: TestCode: 8	10 mL 3260W OLM42	PrepDate: BatchNo: FileID:	R31672 1-SAMP-R3802.D
Col Type:					

Analyte	Result Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNE	S BY GC/MS			SW826	0C/5030C	
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/16/17 15:51
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/16/17 15:51
Chlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 15:51
Ethylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 15:51
Xylenes (total)	ND	1.00	0.30	µg/L	1	11/16/17 15:51
Styrene	ND	0.50	0.10	µg/L	1	11/16/17 15:51
Bromoform	ND	1.00	0.33	µg/L	1	11/16/17 15:51
Isopropylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 15:51
1.1.2.2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	11/16/17 15:51
1.3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 15:51
1.4-Dichlorobenzene	ND	0.50	0.16	μg/L	1	11/16/17 15:51
1,2-Dichlorobenzene	ND	0.50	0.10	μg/L	1	11/16/17 15:51
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	11/16/17 15:51
1,2,4-Trichlorobenzene	ND	1.00	0.10	μg/L	1	11/16/17 15:51
Surr: 1.2-Dichloroethane-d4	108	75-130	0.16	%REC	1	11/16/17 15:51
Surr: Toluene-d8	101	75-125	0.10	%REC	1	11/16/17 15:51
Surr: 4-Bromofluorobenzene	90	75-125	0.10	%REC	1	11/16/17 15:51

	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Е	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
Oualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank

Life Science L 5854 Butternut Drive	Analytical Results					
East Syracuse, NY 1305	7 (315)	445-1900		St	ateCertNo: 1	0248
CLIENT: O'Brien & Gere Operati Project: PAS Oswego-Semi-Ann		oling	Lab ID: Client Sample		1718799-002 M-21 11/13/	
W Order: 1718799 Matrix: WATER Inst. ID: MS04 73	Sample Size:	10 ml	Date Received: 11/14/1		11/13/17 12:20 11/14/17 15:30	
ColumnID: Rtx-VMS Revision: 12/18/17 7:21 Col Type:	%Moisture: TestCode:	8260W OLM42	PrepDate: BatchNo: FileID:	-	R31672 1-SAMP-R379	98.D
Analyte	Result Q	ual PQL	MDL	Unit	s DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS	BY GC/MS			SW8	260C/5030C	
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	11/16/17 13:40
Chloromethane	ND	1.00	0.33	µg/L	1	11/16/17 13:40
Vinyl chloride	ND	1.00	0.33	µg/L	1	11/16/17 13:40
Bromomethane	ND	1.00	0.33	µg/L	1	11/16/17 13:40
Chloroethane	1.91	1.00	0.33	µg/L	1	11/16/17 13:40
Trichlorofluoromethane	ND	1.00	0.10	µg/L	1	11/16/17 13:40
1,1-Dichloroethene	ND	0.50	0.16	µg/L	1	11/16/17 13:40
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	0.50	0.10	µg/L	1	11/16/17 13:40
Acetone	1.14 J	10.0	1.00	µg/L	1	11/16/17 13:40
Carbon disulfide	ND	0.50	0.11	µg/L	1	11/16/17 13:40
Methyl acetate	ND	5.00	1.00	µg/L	1	11/16/17 13:40
Methylene chloride	0.20 J	2.00	0.16	µg/L	· 1	11/16/17 13:40
trans-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 13:40
Methyl tert-butyl ether	ND	1.00	0.16	µg/L	1	11/16/17 13:40
1,1-Dichloroethane	ND	0.50	0.10	µg/L	1	11/16/17 13:40
cis-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 13:40
2-Butanone	ND	10.0	1.00	µg/L	1	11/16/17 13:40
Chloroform	ND	0.50	0.10	µg/L	1	11/16/17 13:40
1,1,1-Trichloroethane	ND	0.50	0.10	µg/L	1	11/16/17 13:40
Cyclohexane	1.39	0.50	0.10	µg/L	1	11/16/17 13:40
Carbon tetrachloride	ND	0.50		µg/L	1	11/16/17 13:40
Benzene	0.22 J	0.50	0.10	µg/L	1	11/16/17 13:40
1,2-Dichloroethane	ND	0.50	0.16	µg/L	1	11/16/17 13:40
Trichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 13:40
Methylcyclohexane	0.15 J	0.50	0.10	µg/L	1	11/16/17 13:40
1,2-Dichloropropane	ND	0.50		µg/L	1	11/16/17 13:40
Bromodichloromethane	ND	0.50		µg/L	1	11/16/17 13:40
cis-1,3-Dichloropropene	ND	0.50	1	µg/L	1	11/16/17 13:40
4-Methyl-2-pentanone	ND	5.00	1.00	µg/L	1	11/16/17 13:40
Toluene	0.21 J	0.50	0.10	µg/L	1	11/16/17 13:40
trans-1,3-Dichloropropene	ND	0.50		µg/L	1	11/16/17 13:40
1,1,2-Trichloroethane	^o ND	0.50	0.16	µg/L	1	11/16/17 13:40
Tetrachloroethene	ND	0.50	0.10	µg/L	1	11/16/17 13:40
2-Hexanone	ND	5.00	1.00	µg/L	1	11/16/17 13:40

Value may exceed the Acceptable Level * Qualifiers:

Р

Analyte detected in the associated Method Blank В Holding times for preparation or analysis exceeded

Е Value exceeds the instrument calibration range

J Analyte detected below the PQL

- Η ND Not Detected at the Practical Quantitation Limit (PQL) Prim./Conf. column %D or RPD exceeds limit
 - S Spike Recovery outside accepted recovery limits

E	ast Syracuse, NY 13	(315) 445-1900) 	StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Oper PAS Oswego-Semi-A	,	Lab ID: Client Sample ID:	1718799-002A M-21 11/13/17
W Order: Matrix:	1718799 WATER		Collection Date: Date Received:	11/13/17 12:20 11/14/17 15:30
Inst. ID: ColumnID: Revision:	MS04 73 Rtx-VMS 12/18/17 7:21	Sample Size: 10 mL %Moisture: TestCode: 8260W (PrepDate: BatchNo: OLM42 FileID:	R31672 1-SAMP-R3798.D
Col Type:				

Analyte	Result Qua	I PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND	DS BY GC/MS			SW826	0C/50300	;
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/16/17 13:40
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/16/17 13:40
Chlorobenzene	5.68	0.50	0.10	μg/L	1	11/16/17 13:40
Ethylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 13:40
Xylenes (total)	ND	1.00	0.30	µg/L	1	11/16/17 13:40
Styrene	ND	0.50	0.10	µg/L	1	11/16/17 13:40
Bromoform	ND	1.00	0.33	µg/L	1	11/16/17 13:40
Isopropylbenzene	0.46 J	0.50	0.10	µg/L	1	11/16/17 13:40
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	11/16/17 13:40
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 13:40
1,4-Dichlorobenzene	0.33 J	0.50	0.16	μg/L	1	11/16/17 13:40
1,2-Dichlorobenzene	0.46 J	0.50	0.10	μg/L	1	11/16/17 13:40
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	μg/L	1	11/16/17 13:40
1.2.4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	11/16/17 13:40
Surr: 1,2-Dichloroethane-d4	108	75-130	0.16	%REC	1	11/16/17 13:40
Surr: Toluene-d8	101	75-125	0.10	%REC	1	11/16/17 13:40
Surr: 4-Bromofluorobenzene	90	75-125	0.10	%REC	1	11/16/17 13:40

	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Е	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
Qualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank

F	Cast Syracuse, NY 130	(315)	445-1900		StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Opera PAS Oswego-Semi-A	,	pling	Lab ID: Client Sample ID:	1718799-003A OD-3 11/13/17
W Order: Matrix:	1718799 WATER		10. 7	Collection Date: Date Received:	11/13/17 13:40 11/14/17 15:30
Inst. ID: ColumnID: Revision:	MS04 73 Rtx-VMS 12/18/17 7:21	Sample Size: %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R31672 1-SAMP-R3803.D
Col Type:					

Analyte			Result Qua	I PQL	MDL	Units	DF	Date Analyzed
VOLATILE (DRG/	ANIC COMPOUN	DS BY GC/MS			SW826	0C/5030C	
Dichlorodifluor			ND	1.00	0.10	µg/L	1	11/16/17 16:23
Chloromethan	e		ND	1.00	0.33	µg/L	1	11/16/17 16:23
Vinyl chloride			ND	1.00	0.33	µg/L	1	11/16/17 16:23
Bromomethan	e		ND	1.00	0.33	µg/L	1	11/16/17 16:23
Chloroethane			ND	1.00	0.33	µg/L	1	11/16/17 16:23
Trichlorofluoro	meth	ane	ND	1.00	0.10	µg/L	1	11/16/17 16:23
1,1-Dichloroet	hene		ND	0.50	0.16	µg/L	1	11/16/17 16:23
1,1,2-Trichloro trifluoroethane		2-	ND	0.50	0.10	µg/L	1	11/16/17 16:23
Acetone			ND	10.0	1.00	µg/L	1	11/16/17 16:23
Carbon disulfic	de		ND	0.50	0.11	µg/L	1	11/16/17 16:23
Methyl acetate	Э.		ND	5.00	1.00	µg/L	1	11/16/17 16:23
Methylene chl	oride		0.17 J	2.00	0.16	µg/L	1	11/16/17 16:23
trans-1,2-Dich	loroe	hene	ND	0.50	0.10	µg/L	1	11/16/17 16:23
Methyl tert-but	tyl eth	er	ND	1.00	0.16	µg/L	1	11/16/17 16:23
1,1-Dichloroet	hane		ND	0.50	0.10	µg/L	1	11/16/17 16:23
cis-1,2-Dichlor	roethe	ene	ND	0.50	0.10	µg/L	1	11/16/17 16:23
2-Butanone			ND	10.0	1.00	µg/L	1	11/16/17 16:23
Chloroform			ND	0.50	0.10	µg/L	1	11/16/17 16:23
1,1,1-Trichlord	bethai	ie	ND	0.50	0.10	µg/L	1	11/16/17 16:23
Cyclohexane			ND	0.50	0.10	µg/L	1	11/16/17 16:23
Carbon tetracl	hlorid	e	ND	0.50	0.10	µg/L	1	11/16/17 16:23
Benzene			ND	0.50	0.10	µg/L	1	11/16/17 16:23
1,2-Dichloroet	hane		ND	0.50	0.16	µg/L	1	11/16/17 16:23
Trichloroethen	ne		ND	0.50	0.10	µg/L	1	11/16/17 16:23
Methylcyclohe	exane		ND	0.50	0.10	μg/L	1	11/16/17 16:23
1,2-Dichloropr	opan	e	ND	0.50	0.16	µg/L	1	11/16/17 16:23
Bromodichloro	ometh	ane	ND	0.50	0.10	µg/L	1	11/16/17 16:23
cis-1,3-Dichloi	roprop	bene	ND	0.50	0.16	µg/L	1	11/16/17 16:23
4-Methyl-2-pe	ntano	ne	ND	5.00	1.00	µg/L	1	11/16/17 16:23
Toluene			ND	0.50	0.10	µg/L	1	11/16/17 16:23
trans-1,3-Dich	lorop	ropene	ND	0.50	0.16	µg/L	1	11/16/17 16:23
1,1,2-Trichlord	betha	ne	ND	0.50	0.16	µg/L	1	11/16/17 16:23
Tetrachloroeth	nene		ND	0.50	0.10	µg/L	1	11/16/17 16:23
2-Hexanone			ND	5.00	1.00	µg/L	1	11/16/17 16:23
Qualifiers:	*	Value may exceed t	he Acceptable Level		B Analyte	detected in the	associated M	ethod Blank
÷	Ε	Value exceeds the in	nstrument calibration rar	ige	H Holding	times for prep	aration or anal	ysis exceeded
	J	Analyte detected be	low the PQL		ND Not Det	ected at the Pra	actical Quantit	ation Limit (PQL)
	Р	Prim./Conf. column	%D or RPD exceeds lin	ıit	S Spike R	ecovery outsid	e accepted reco	overy limits

E	ast Syracuse, NY 1305	67 (315)	445-1900	:	StateCertNo: 10248	
CLIENT: Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		pling	Lab ID: Client Sample ID:	1718799-003A OD-3 11/13/17	
W Order: Matrix: Inst. ID:	1718799 WATER MS04 73	Sample Size:	: 10 mL	Collection Date: Date Received: PrepDate:	11/13/17 13:40 11/14/17 15:30	
ColumnID: Revision: Col Type:		%Moisture: TestCode:		BatchNo:	R31672 1-SAMP-R3803.D	

Analyte	Result Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	DS BY GC/MS			SW8260	0C/5030C	;
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/16/17 16:23
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/16/17 16:23
Chlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 16:23
Ethylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 16:23
Xylenes (total)	ND	1.00	0.30	µg/L	1	11/16/17 16:23
Styrene	ND	0.50	0.10	µg/L	1	11/16/17 16:23
Bromoform	ND	1.00	0.33	μg/L	1	11/16/17 16:23
Isopropylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 16:23
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	μg/L	1	11/16/17 16:23
1,3-Dichlorobenzene	ND	0.50	0.10	μg/L	1	11/16/17 16:23
1,4-Dichlorobenzene	ND	0.50	0.16	μg/L	1	11/16/17 16:23
1,2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 16:23
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	11/16/17 16:23
1,2,4-Trichlorobenzene	ND	1.00	0.10	μg/L	1	11/16/17 16:23
Surr: 1,2-Dichloroethane-d4	107	75-130	0.16	%REC	1	11/16/17 16:23
Surr: Toluene-d8	98	75-125	0.10	%REC	1	11/16/17 16:23
Surr: 4-Bromofluorobenzene	93	75-125	0.10	%REC	1	11/16/17 16:23

Qualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
•	Е	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

E	ast Syracuse, NY 130	57 (315)	445-1900	5	StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Opera PAS Oswego-Semi-An	,	pling	Lab ID: Client Sample ID:	1718799-004A LR-8 11/13/17
W Order: Matrix:	1718799 WATER			Collection Date: Date Received:	11/13/17 14:45 11/14/17 15:30
Inst. ID: ColumnID: Revision:	MS04 73 Rtx-VMS 12/18/17 7:21	Sample Size: %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R31672 1-SAMP-R3804.D
Col Type:		10000000			

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COM	POUNDS BY GC/MS			SW826	0C/5030C	
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	11/16/17 16:55
Chloromethane	ND	1.00	0.33	μg/L	1	11/16/17 16:55
Vinyl chloride	ND	1.00	0.33	µg/L	1	11/16/17 16:55
Bromomethane	ND	1.00	0.33	μg/L	1	11/16/17 16:55
Chloroethane	4.12	1.00	0.33	μg/L	1	11/16/17 16:55
Trichlorofluoromethane	ND	1.00	0.10	μg/L	1	11/16/17 16:55
1,1-Dichloroethene	ND	0.50	0.16	µg/L	1	11/16/17 16:55
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	0.50	0.10	µg/L	1	11/16/17 16:55
Acetone	1.49 J	10.0	1.00	μg/L	1	11/16/17 16:55
Carbon disulfide	ND	0.50	0.11	µg/L	1	11/16/17 16:55
Methyl acetate	ND	5.00	1.00	µg/L	1	11/16/17 16:55
Methylene chloride	0.22 J	2.00	0.16	μg/L	1	11/16/17 16:55
trans-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 16:55
Methyl tert-butyl ether	ND	1.00	0.16	µg/L	1	11/16/17 16:55
1,1-Dichloroethane	ND	0.50	0.10	µg/L	1	11/16/17 16:55
cis-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 16:55
2-Butanone	ND	10.0	1.00	µg/L	1	11/16/17 16:55
Chloroform	ND	0.50	0.10	µg/L	1	11/16/17 16:55
1,1,1-Trichloroethane	ND	0.50	0.10	µg/L	1	11/16/17 16:55
Cyclohexane	2.05	0.50	0.10	µg/L	1	11/16/17 16:55
Carbon tetrachloride	ND	0.50	0.10	µg/L	1	11/16/17 16:55
Benzene	0.26 J	0.50	0.10	µg/L	1	11/16/17 16:55
1,2-Dichloroethane	ND	0.50	0.16	µg/L	1	11/16/17 16:55
Trichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 16:55
Methylcyclohexane	0.20 J	0.50	0.10	µg/L	1	11/16/17 16:55
1,2-Dichloropropane	ND	0.50	0.16	µg/L	1	11/16/17 16:55
Bromodichloromethane	ND	0.50	0.10	µg/L	1	11/16/17 16:55
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/16/17 16:55
4-Methyl-2-pentanone	ND	5.00	1.00	µg/L	1	11/16/17 16:55
Toluene	0.26 J	0.50	0.10	µg/L	1	11/16/17 16:55
trans-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/16/17 16:55
1,1,2-Trichloroethane	ND	0.50	0.16	μg/L	1	11/16/17 16:55
Tetrachloroethene	ND	0.50	0.10	μg/L	1	11/16/17 16:55
2-Hexanone	ND	5.00	1.00	µg/L	1	11/16/17 16:55
Qualifiers: * Value may e	exceed the Acceptable Level		B Analyte	detected in the	associated M	ethod Blank
	eds the instrument calibration ra	nge	-	times for prep		-
J Analyte dete	ected below the PQL		ND Not Dete	ected at the Pra	actical Quantit	ation Limit (PQL)
P Prim./Conf.	column %D or RPD exceeds lin	mit	S Spike Re	covery outside	e accepted rec	overy limits

E	ast Syracuse, NY 1305	57 (315) 445-1900		StateCertNo: 10248
CLIENT:	O'Brien & Gere Operat	2	Lab ID:	1718799-004A
Project:	PAS Oswego-Semi-An		Client Sample ID:	LR-8 11/13/17
W Order:	1718799		Collection Date:	11/13/17 14:45
Matrix:	WATER		Date Received:	11/14/17 15:30
Inst. ID: ColumnID: Revision: Col Type:	MS04 73 Rtx-VMS 12/18/17 7:21	Sample Size: 10 mL %Moisture: TestCode: 8260W OLM42	PrepDate: BatchNo: FileID:	R31672 1-SAMP-R3804.D

Analyte	Result Qua	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	DS BY GC/MS			SW826)C/5030C	
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/16/17 16:55
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/16/17 16:55
Chlorobenzene	12.1	0.50	0.10	µg/L	1	11/16/17 16:55
Ethylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 16:55
Xylenes (total)	0.35 J	1.00	0.30	µg/L	1	11/16/17 16:55
Styrene	ND	0.50	0.10	µg/L	1	11/16/17 16:55
Bromoform	ND	1.00	0.33	µg/L	1	11/16/17 16:55
Isopropylbenzene	0.48 J	0.50	0.10	µg/L	1	11/16/17 16:55
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	11/16/17 16:55
1,3-Dichlorobenzene	0.12 J	0.50	0.10	µg/L	1	11/16/17 16:55
1,4-Dichlorobenzene	0.73	0.50	0.16	µg/L	1	11/16/17 16:55
1,2-Dichlorobenzene	0.42 J	0.50	0.10	µg/L	1	11/16/17 16:55
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	11/16/17 16:55
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	11/16/17 16:55
Surr: 1,2-Dichloroethane-d4	107	75-130	0.16	%REC	1	11/16/17 16:55
Surr: Toluene-d8	102	75-125	0.10	%REC	1	11/16/17 16:55
Surr: 4-Bromofluorobenzene	93	75-125	0.10	%REC	1	11/16/17 16:55

Print Date:	12/19	0/17 13:04	850513	Project Supervisor:	Davi	d J Prichard
	Р	Prim./Conf. col	umn %D or RPD	exceeds limit	S	Spike Recovery outside accepted recovery limits
	J	Analyte detecte	d below the PQL		ND	Not Detected at the Practical Quantitation Limit (PQL)
-	Ε	Value exceeds	the instrument cal	ibration range	Н	Holding times for preparation or analysis exceeded
Qualifiers:	*	Value may exce	eed the Acceptable	e Level	В	Analyte detected in the associated Method Blank

F	Cast Syracuse, NY 130	57 (315) 445-1900		StateCertNo: 10248
CLIENT:	O'Brien & Gere Opera		Lab ID:	1718799-005A
Project:	PAS Oswego-Semi-Ar		Client Sample ID:	X-1 11/13/17
W Order:	1718799		Collection Date:	11/13/17 0:00
Matrix:	WATER Q		Date Received:	11/14/17 15:30
Inst. ID: ColumnID: Revision: Col Type:	MS04 73 Rtx-VMS 12/18/17 7:21	Sample Size: 10 mL %Moisture: TestCode: 8260W OLM42	PrepDate: BatchNo: FileID:	R31672 1-SAMP-R3805.D

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND	DS BY GC/MS			SW826	0C/5030C	
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	11/16/17 17:28
Chloromethane	ND	1.00	0.33	µg/L	1	11/16/17 17:28
Vinyl chloride	ND	1.00	0.33	μg/L	1	11/16/17 17:28
Bromomethane	ND	1.00	0.33	μg/L	1	11/16/17 17:28
Chloroethane	ND	1.00	0.33	μg/L	1	11/16/17 17:28
Trichlorofluoromethane	ND	1.00	0.10	μg/L	1	11/16/17 17:28
1,1-Dichloroethene	ND	0.50	0.16	μg/L	1	11/16/17 17:28
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	0.50	0.10	µg/L	1	11/16/17 17:28
Acetone	ND	10.0	1.00	µg/L	1	11/16/17 17:28
Carbon disulfide	ND	0.50	0.11	µg/L	1	11/16/17 17:28
Methyl acetate	ND	5.00	1.00	µg/L	1	11/16/17 17:28
Methylene chloride	0.16 J	2.00	0.16	µg/L	1	11/16/17 17:28
trans-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 17:28
Methyl tert-butyl ether	ND	1.00	0.16	µg/L	1	11/16/17 17:28
1,1-Dichloroethane	ND	0.50	0.10	µg/L	1	11/16/17 17:28
cis-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 17:28
2-Butanone	ND	10.0	1.00	µg/L	1	11/16/17 17:28
Chloroform	ND	0.50	0.10	µg/L	1	11/16/17 17:28
1,1,1-Trichloroethane	ND	0.50	0.10	µg/L	1	11/16/17 17:28
Cyclohexane	ND	0.50	0.10	µg/L	1	11/16/17 17:28
Carbon tetrachloride	ND	0.50	0.10	µg/L	1	11/16/17 17:28
Benzene	ND	0.50	0.10	µg/L	1	11/16/17 17:28
1,2-Dichloroethane	ND	0.50	0.16	µg/L	1	11/16/17 17:28
Trichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 17:28
Methylcyclohexane	ND	0.50	0.10	µg/L	1	11/16/17 17:28
1,2-Dichloropropane	ND	0.50	0.16	μg/L	1	11/16/17 17:28
Bromodichloromethane	ND	0.50	0.10	µg/L	1	11/16/17 17:28
cis-1,3-Dichloropropene	ND	0.50	0.16	μg/L	1	11/16/17 17:28
4-Methyl-2-pentanone	ND	5.00	1.00	μg/L	1	11/16/17 17:28
Toluene	ND	0.50	0.10	µg/L	1	11/16/17 17:28
trans-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/16/17 17:28
1,1,2-Trichloroethane	ND	0.50	0.16	μg/L	1	11/16/17 17:28
Tetrachloroethene	ND	0.50	0.10	µg/L	1	11/16/17 17:28
2-Hexanone	ND	5.00	1.00	µg/L	1	11/16/17 17:28
Qualifiers: * Value may exceed the	e Acceptable Level		B Analyte	detected in the	associated M	lethod Blank
•	strument calibration rai	nge	H Holding	times for prepa	aration or ana	lysis exceeded
J Analyte detected bel	ow the PQL		ND Not Dete	ected at the Pra	ctical Quanti	tation Limit (PQL)
P Prim./Conf. column	%D or RPD exceeds lir	nit	S Spike Re	ecovery outside	e accepted rec	covery limits

Analytical Results

E	ast Syracuse, NY 1305	67 (315) 445	5-1900	S	StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Operat PAS Oswego-Semi-An	,	5	Lab ID: Client Sample ID:	1718799-005A X-1 11/13/17
W Order: Matrix:	1718799 WATER Q			Collection Date: Date Received:	11/13/17 0:00 11/14/17 15:30
Inst. ID: ColumnID: Revision:	MS04 73 Rtx-VMS 12/18/17 7:21	Sample Size: 10 %Moisture: TestCode: 820	mL 50W OLM42	PrepDate: BatchNo: FileID:	R31672 1-SAMP-R3805.D
Col Type:					

Analyte	Result Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND	DS BY GC/MS			SW826	0C/5030C	
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/16/17 17:28
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/16/17 17:28
Chlorobenzene	ND	0.50	0.10	μg/L	1	11/16/17 17:28
Ethylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 17:28
Xylenes (total)	ND	1.00	0.30	μg/L	1	11/16/17 17:28
Styrene	ND	0.50	0.10	μg/L	1	11/16/17 17:28
Bromoform	ND	1.00	0.33	µg/L	1	11/16/17 17:28
Isopropylbenzene	ND	0.50	0.10	μg/L	1	11/16/17 17:28
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	μg/L	1	11/16/17 17:28
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 17:28
1,4-Dichlorobenzene	ND	0.50	0.16	μg/L	1	11/16/17 17:28
1,2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 17:28
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	11/16/17 17:28
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	11/16/17 17:28
Surr: 1,2-Dichloroethane-d4	109	75-130	0.16	%REC	1	11/16/17 17:28
Surr: Toluene-d8	100	75-125	0.10	%REC	1	11/16/17 17:28
Surr: 4-Bromofluorobenzene	95	75-125	0.10	%REC	1	11/16/17 17:28

* Value may exceed the Acceptable Level Analyte detected in the associated Method Blank В Qualifiers: Е Value exceeds the instrument calibration range Н Holding times for preparation or analysis exceeded J Analyte detected below the PQL ND Not Detected at the Practical Quantitation Limit (PQL) Р Prim./Conf. column %D or RPD exceeds limit Spike Recovery outside accepted recovery limits S

E	ast Syracuse, NY 1305	i (315)	445-1900		StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		pling	Lab ID: Client Sample ID:	1718799-006A LR-6 11/14/17
W Order: Matrix:	1718799 WATER			Collection Date: Date Received:	11/14/17 10:00 11/14/17 15:30
Inst. ID: ColumnID: Revision:	MS04 73 Rtx-VMS 12/18/17 7:21	Sample Size: %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R31672 1-SAMP-R3797.D
Col Type:	12/10/17 7.21	TestCoue:	6200 W OLW42	rnei <i>D</i> .	I-SAIM -KSTFT.D

Analyte			Result Qua	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE C	DRG/	ANIC COMPOUN	DS BY GC/MS			SW826	0C/5030C	
Dichlorodifluor			ND	1.00	0.10	µg/L	1	11/16/17 13:08
Chloromethan	е		ND	1.00	0.33	µg/L	1	11/16/17 13:08
Vinyl chloride			ND	1.00	0.33	µg/L	1	11/16/17 13:08
Bromomethan	е		ND	1.00	0.33	µg/L	1	11/16/17 13:08
Chloroethane			ND	1.00	0.33	µg/L	1	11/16/17 13:08
Trichlorofluoro	meth	ane	ND	1.00	0.10	µg/L	1	11/16/17 13:08
1,1-Dichloroetl	hene		ND	0.50	0.16	μg/L	1	11/16/17 13:08
1,1,2-Trichloro trifluoroethane		<u>2</u> -	ND	0.50	0.10	µg/L	1	11/16/17 13:08
Acetone			ND	10.0	1.00	µg/L	1	11/16/17 13:08
Carbon disulfic	de		ND	0.50	0.11	µg/L	1	11/16/17 13:08
Methyl acetate)		ND	5.00	1.00	µg/L	1	11/16/17 13:08
Methylene chlo	oride		0.22 J	2.00	0.16	µg/L	1	11/16/17 13:08
trans-1,2-Dich	loroel	hene	ND	0.50	0.10	µg/L	1	11/16/17 13:08
Methyl tert-but	yl eth	er	ND	1.00	0.16	µg/L	1	11/16/17 13:08
1,1-Dichloroet	hane		0.85	0.50	0.10	µg/L	1	11/16/17 13:08
cis-1,2-Dichlor	oethe	ne	0.11 J	0.50	0.10	µg/L	1	11/16/17 13:08
2-Butanone			ND	10.0	1.00	µg/L	1	11/16/17 13:08
Chloroform			ND	0.50	0.10	µg/L	1	11/16/17 13:08
1,1,1-Trichloro	ethar	e	ND	0.50	0.10	µg/L	1	11/16/17 13:08
Cyclohexane			ND	0.50	0.10	µg/L	1	11/16/17 13:08
Carbon tetrach	loride)	ND	0.50	0.10	µg/L	1	11/16/17 13:08
Benzene			ND	0.50	0.10	µg/L	1	11/16/17 13:08
1,2-Dichloroetl	hane		ND	0.50	0.16	µg/L	1	11/16/17 13:08
Trichloroethen	е		0.16 J	0.50	0.10	µg/L	1	11/16/17 13:08
Methylcyclohe	xane		ND	0.50	0.10	μg/L	1	11/16/17 13:08
1,2-Dichloropro	opane)	ND	0.50	0.16	µg/L	1	11/16/17 13:08
Bromodichloro	meth	ane	ND	0.50	0.10	µg/L	1	11/16/17 13:08
cis-1,3-Dichlor	oprop	ene	ND	0.50	0.16	μg/L	1	11/16/17 13:08
4-Methyl-2-per	ntano	ne	ND	5.00	1.00	µg/L	1	11/16/17 13:08
Toluene			ND	0.50	0.10	μg/L	1	11/16/17 13:08
trans-1,3-Dichl	loropi	opene	ND	0.50	0.16	µg/L	1	11/16/17 13:08
1,1,2-Trichloro	ethar	e	ND	0.50	0.16	µg/L	1	11/16/17 13:08
Tetrachloroeth	ene		ND	0.50	0.10	µg/L	1	11/16/17 13:08
2-Hexanone			ND	5.00	1.00	µg/L	1	11/16/17 13:08
Qualifiers:	*	Value may exceed t	ne Acceptable Level		B Analyte	detected in the	associated M	ethod Blank
	Е	Value exceeds the in	strument calibration ran	ge	H Holding	times for prepa	aration or ana	lysis exceeded
	J	Analyte detected be	ow the PQL		ND Not Dete	cted at the Pra	ctical Quantit	ation Limit (PQL)
	Р	Prim./Conf. column	%D or RPD exceeds lin	nit	S Spike Re	covery outside	e accepted rec	overy limits

Life Science Laboratories, Inc. Analytical Results 5854 Butternut Drive East Syracuse, NY 13057 (315) 445-1900 StateCertNo: 10248 CLIENT: O'Brien & Gere Operations, LLC Lab ID: 1718799-006A

PAS Oswego-Semi-Annual Well Sampling

Project:

Matrix:

W Order:

1718799

WATER

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

Surr: Toluene-d8

Client Sample ID: *LR-6* 11/14/17

%REC

%REC

%REC

1

1

1

11/16/17 13:08

11/16/17 13:08

11/16/17 13:08

11/14/17 10:00

11/14/17 15:30

Collection Date:

Date Received:

0.16

0.10

0.10

Inst. ID:MS04 73ColumnID:Rtx-VMSRevision:12/18/17 7:21Col Type:	Sample Size:] %Moisture: TestCode: {	NA 8260W OLM42	PrepDate: BatchNo: FileID:		1672 AMP-R37	97.D
Analyte	Result Qu	ial PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS	S BY GC/MS			SW826	0C/5030C	
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/16/17 13:08
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/16/17 13:08
Chlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 13:08
Ethylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 13:08
Xylenes (total)	ND	1.00	0.30	µg/L	1	11/16/17 13:08
Styrene	ND	0.50	0.10	µg/L	1	11/16/17 13:08
Bromoform	ND	1.00	0.33	µg/L	1	11/16/17 13:08
Isopropylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 13:08
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	11/16/17 13:08
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 13:08
1,4-Dichlorobenzene	ND	0.50	0.16	µg/L	1	11/16/17 13:08
1,2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 13:08
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	11/16/17 13:08
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	11/16/17 13:08

75-130

75-125

75-125

111

100

92

Print Date: 1	2/19	9/17 13:04	853277	Project Supervisor:	Davi	id J Prichard
	Р	Prim./Conf. col	umn %D or RPD	exceeds limit	S	Spike Recovery outside accepted recovery limits
	J	Analyte detecte	d below the PQL		ND	Not Detected at the Practical Quantitation Limit (PQL)
	Ε	Value exceeds t	he instrument cal	ibration range	Н	Holding times for preparation or analysis exceeded
Qualifiers:	*	Value may exce	ed the Acceptable	e Level	В	Analyte detected in the associated Method Blank

E	ast Syracuse, NY 130	57 (315) 445-190	0	StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Opera PAS Oswego-Semi-An		Lab ID: Client Sample ID	1718799-007A : M-22 11/14/17
W Order: Matrix:	1718799 WATER		Collection Date: Date Received:	11/14/17 11:30 11/14/17 15:30
Inst. ID: ColumnID:		Sample Size: 10 mL %Moisture:	PrepDate: BatchNo:	R31672
Revision: Col Type:	12/18/17 7:21	TestCode: 8260W	OLM42 FileID:	1-SAMP-R3799.D

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	NDS BY GC/MS			SW826	0C/5030C	
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	11/16/17 14:12
Chloromethane	ND	1.00	0.33	μg/L	1	11/16/17 14:12
Vinyl chloride	ND	1.00	0.33	µg/L	1	11/16/17 14:12
Bromomethane	ND	1.00	0.33	µg/L	1	11/16/17 14:12
Chloroethane	ND	1.00	0.33	µg/L	1	11/16/17 14:12
Trichlorofluoromethane	ND	1.00	0.10	µg/L	1	11/16/17 14:12
1,1-Dichloroethene	ND	0.50	0.16	µg/L	1	11/16/17 14:12
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	0.50	0.10	µg/L	1	11/16/17 14:12
Acetone	ND	10.0	1.00	µg/L	1	11/16/17 14:12
Carbon disulfide	ND	0.50	0.11	µg/L	1	11/16/17 14:12
Methyl acetate	ND	5.00	1.00	µg/L	1	11/16/17 14:12
Methylene chloride	0.17 J	2.00	0.16	µg/L	1	11/16/17 14:12
trans-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
Methyl tert-butyl ether	ND	1.00	0.16	µg/L	1	11/16/17 14:12
1,1-Dichloroethane	0.30 J	0.50	0.10	µg/L	1	11/16/17 14:12
cis-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
2-Butanone	ND	10.0	1.00	µg/L	1	11/16/17 14:12
Chloroform	ND	0.50	0.10	µg/L	1	11/16/17 14:12
1,1,1-Trichloroethane	ND	0.50	0.10	µg/L	1	11/16/17 14:12
Cyclohexane	ND	0.50	0.10	µg/L	1	11/16/17 14:12
Carbon tetrachloride	ND	0.50	0.10	µg/L	1	11/16/17 14:12
Benzene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
1,2-Dichloroethane	ND	0.50	0.16	µg/L	1	11/16/17 14:12
Trichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
Methylcyclohexane	ND	0.50	0.10	µg/L	1	11/16/17 14:12
1,2-Dichloropropane	ND	0.50	0.16	µg/L	1	11/16/17 14:12
Bromodichloromethane	ND	0.50	0.10	µg/L	1	11/16/17 14:12
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/16/17 14:12
4-Methyl-2-pentanone	ND	5.00	1.00	µg/L	1	11/16/17 14:12
Toluene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
trans-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/16/17 14:12
1,1,2-Trichloroethane	ND	0.50	0.16	µg/L	1	11/16/17 14:12
Tetrachloroethene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
2-Hexanone	ND	5.00	1.00	µg/L	1	11/16/17 14:12
Qualifiers: * Value may exceed	the Acceptable Level		B Analyte de	etected in the	associated Me	thod Blank
-	instrument calibration rar	ige	H Holding ti	mes for prepa	ration or analy	sis exceeded
J Analyte detected be	elow the PQL		ND Not Detec	ted at the Pra	ctical Quantita	tion Limit (PQL)
P Prim./Conf. column	n %D or RPD exceeds lin	nit	S Spike Rec	overy outside	accepted reco	very limits

LSL^{5854 Butternut Drive} Analyti

E	ast Syracuse, NY 1305	7 (315)	445-1900		StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Operati PAS Oswego-Semi-Ann		bling	Lab ID: Client Sample ID:	1718799-007A M-22 11/14/17
W Order: Matrix:	1718799 WATER			Collection Date: Date Received:	11/14/17 11:30 11/14/17 15:30
Inst. ID: ColumnID: Revision:	MS04 73 Rtx-VMS 12/18/17 7:21	Sample Size: %Moisture: TestCode:	10 mL 8260W OLM42	PrepDate: BatchNo: FileID:	R31672 1-SAMP-R3799.D
Col Type:					

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNE	S BY GC/MS			SW826	0C/5030C	
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/16/17 14:12
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/16/17 14:12
Chlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
Ethylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
Xylenes (total)	ND	1.00	0.30	µg/L	1	11/16/17 14:12
Styrene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
Bromoform	ND	1.00	0.33	µg/L	1	11/16/17 14:12
Isopropylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	11/16/17 14:12
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
1,4-Dichlorobenzene	ND	0.50	0.16	µg/L	1	11/16/17 14:12
1,2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 14:12
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	11/16/17 14:12
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	11/16/17 14:12
Surr: 1,2-Dichloroethane-d4	108	75-130	0.16	%REC	1	11/16/17 14:12
Surr: Toluene-d8	100	75-125	0.10	%REC	1	11/16/17 14:12
Surr: 4-Bromofluorobenzene	91	75-125	0.10	%REC	1	11/16/17 14:12

Oualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
2	Ε	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

LSL 5854 Butternut Drive

E	ast Syracuse, NY 1305	37 (315)	445-1900	5	StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Operat PAS Oswego-Semi-Ann		pling	Lab ID: Client Sample ID:	1718799-008A LCW-2 11/14/17
W Order:	1718799			Collection Date:	11/14/17 12:25
Matrix:	WATER			Date Received:	11/14/17 15:30
Inst. ID:	MS04 73	Sample Size:	: 10 mL	PrepDate:	
ColumnID:	Rtx-VMS	%Moisture:		BatchNo:	R31672
Revision:	12/18/17 7:21	TestCode:	8260W OLM42	FileID:	1-SAMP-R3800.D
Col Type:					

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC CO	MPOUNDS BY GC/MS			SW826	0C/5030C	,
Dichlorodifluoromethane	ND	5.00	0.50	µg/L	5	11/16/17 14:45
Chloromethane	ND	5.00	1.65	µg/L	5	11/16/17 14:45
Vinyl chloride	108	5.00	1.65	µg/L	5	11/16/17 14:45
Bromomethane	ND	5.00	1.65	µg/L	5	11/16/17 14:45
Chloroethane	11.1	5.00	1.65	µg/L	5	11/16/17 14:45
Trichlorofluoromethane	ND	5.00	0.50	µg/L	5	11/16/17 14:45
1,1-Dichloroethene	ND	2.50	0.80	µg/L	5	11/16/17 14:45
1,1,2-Trichloro-1,2,2- trifluoroethane	3.15	2.50	0.50	µg/L	5	11/16/17 14:45
Acetone	7.35 J	50.0	5.00	µg/L	5	11/16/17 14:45
Carbon disulfide	ND	2.50	0.55	µg/L	5	11/16/17 14:45
Methyl acetate	ND	25.0	5.00	µg/L	5	11/16/17 14:45
Methylene chloride	2.90 J	10.0	0.80	µg/L	5	11/16/17 14:45
trans-1,2-Dichloroethene	0.50 J	2.50	0.50	µg/L	5	11/16/17 14:45
Methyl tert-butyl ether	ND	5.00	0.80	µg/L	5	11/16/17 14:45
1,1-Dichloroethane	35.4	2.50	0.50	µg/L	5	11/16/17 14:45
cis-1,2-Dichloroethene	167	2.50	0.50	µg/L	5	11/16/17 14:45
2-Butanone	ND	50.0	5.00	µg/L	5	11/16/17 14:45
Chloroform	4.65	2.50	0.50	µg/L	5	11/16/17 14:45
1,1,1-Trichloroethane	24.9	2.50	0.50	µg/L	5	11/16/17 14:45
Cyclohexane	ND	2.50	0.50	µg/L	5	11/16/17 14:45
Carbon tetrachloride	ND	2.50	0.50	µg/L	5	11/16/17 14:45
Benzene	320	2.50	0.50	µg/L	5	11/16/17 14:45
1,2-Dichloroethane	ND	2.50	0.80	µg/L	5	11/16/17 14:45
Trichloroethene	31.4	2.50	0.50	µg/L	5	11/16/17 14:45
Methylcyclohexane	ND	2.50	0.50	µg/L	5	11/16/17 14:45
1,2-Dichloropropane	ND	2.50	0.80	µg/L	5	11/16/17 14:45
Bromodichloromethane	ND	2.50	0.50	µg/L	5	11/16/17 14:45
cis-1,3-Dichloropropene	ND	2.50	0.80	µg/L	5	11/16/17 14:45
4-Methyl-2-pentanone	ND	25.0	5.00	µg/L	5	11/16/17 14:45
Toluene	1.00 J	2.50	0.50	µg/L	5	11/16/17 14:45
trans-1,3-Dichloropropene	ND	2.50	0.80	µg/L	5	11/16/17 14:45
1,1,2-Trichloroethane	0.80 J	2.50	0.80	µg/L	5	11/16/17 14:45
Tetrachloroethene	103	2.50	0.50	µg/L	5	11/16/17 14:45
2-Hexanone	ND	25.0	5.00	µg/L	5	11/16/17 14:45
Qualifiers: * Value ma	ay exceed the Acceptable Level		B Analyte	detected in the	associated N	Aethod Blank
	ceeds the instrument calibration rar	nge	H Holding	times for prepa	ration or an	alysis exceeded
J Analyte	letected below the PQL		ND Not Dete	ected at the Prac	ctical Quant	itation Limit (PQL)
P Prim./Co	nf. column %D or RPD exceeds lin	nit	S Spike Re	covery outside	accepted re-	covery limits

Life Science Laboratories, Inc. **Analytical Results** 5854 Butternut Drive East Syracuse, NY 13057 (315) 445-1900 StateCertNo: 10248 O'Brien & Gere Operations, LLC 1718799-008A **CLIENT:** Lab ID: **Project:** PAS Oswego-Semi-Annual Well Sampling Client Sample ID: *LCW-2 11/14/17* W Order: 1718799 **Collection Date:** 11/14/17 12:25 Matrix: WATER Date Received: 11/14/17 15:30 Inst. ID: MS04 73 Sample Size: 10 mL **PrepDate:** ColumnID: Rtx-VMS %Moisture: **BatchNo:** R31672 **Revision:** 12/18/17 7:21 TestCode: 8260W OLM42 FileID: 1-SAMP-R3800.D Col Type: Analyte **Result Qual PQL MDL** Units DF **Date Analyzed** VOLATILE ORGANIC COMPOUNDS BY GC/MS SW8260C/5030C

Dibromochloromethane	ND	2.50	0.50	µg/L	5	11/16/17 14:45
1,2-Dibromoethane	ND	2.50	0.80	µg/L	5	11/16/17 14:45
Chlorobenzene	67.0	2.50	0.50	µg/L	5	11/16/17 14:45
Ethylbenzene	13.2	2.50	0.50	µg/L	5	11/16/17 14:45
Xylenes (total)	10.8	5.00	1.50	µg/L	5	11/16/17 14:45
Styrene	ND	2.50	0.50	µg/L	5	11/16/17 14:45
Bromoform	ND	5.00	1.65	µg/L	5	11/16/17 14:45
Isopropylbenzene	2.25 J	2.50	0.50	µg/L	5	11/16/17 14:45
1,1,2,2-Tetrachloroethane	2.75	2.50	0.50	µg/L	5	11/16/17 14:45
1,3-Dichlorobenzene	ND	2.50	0.50	µg/L	5	11/16/17 14:45
1,4-Dichlorobenzene	ND	2.50	0.80	µg/L	5	11/16/17 14:45
1,2-Dichlorobenzene	4.25	2.50	0.50	µg/L	5	11/16/17 14:45
1,2-Dibromo-3-chloropropane	ND	25.0	5.00	µg/L	5	11/16/17 14:45
1,2,4-Trichlorobenzene	ND	5.00	0.50	µg/L	5	11/16/17 14:45
Surr: 1,2-Dichloroethane-d4	104	75-130	0.80	%REC	5	11/16/17 14:45
Surr: Toluene-d8	101	75-125	0.50	%REC	5	11/16/17 14:45
Surr: 4-Bromofluorobenzene	88	75-125	0.50	%REC	5	11/16/17 14:45

D	10/1	0/17 12 04 050500 5 1 1 7		
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	E	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
Qualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank

Project: PAS Oswego-Semi-Annual Well Sampling Client Sample ID: Lab	718799-009A CW-4 11/14/17
V Order: 1718700 Collection Date: 11/	
Matrix: WATER Date Received: 11/	1/14/17 13:35 1/14/17 15:30
	31672 SAMP-R3801.D

Analyte	Result Qua	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS						
Dichlorodifluoromethane	ND	20.0	2.00	µg/L	20	11/16/17 15:17
Chloromethane	ND	20.0	6.60	µg/L	20	11/16/17 15:17
Vinyl chloride	8.00 J	20.0	6.60	µg/L	20	11/16/17 15:17
Bromomethane	ND	20.0	6.60	µg/L	20	11/16/17 15:17
Chloroethane	71.6	20.0	6.60	µg/L	20	11/16/17 15:17
Trichlorofluoromethane	ND	20.0	2.00	µg/L	20	11/16/17 15:17
1,1-Dichloroethene	ND	10.0	3.20	µg/L	20	11/16/17 15:17
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	10.0	2.00	µg/L	20	11/16/17 15:17
Acetone	ND	200	20.0	µg/L	20	11/16/17 15:17
Carbon disulfide	ND	10.0	2.20	µg/L	20	11/16/17 15:17
Methyl acetate	ND	100	20.0	µg/L	20	11/16/17 15:17
Methylene chloride	8.80 J	40.0	3.20	µg/L	20	11/16/17 15:17
trans-1,2-Dichloroethene	ND	10.0	2.00	µg/L	20	11/16/17 15:17
Methyl tert-butyl ether	ND	20.0	3.20	µg/L	20	11/16/17 15:17
1,1-Dichloroethane	4.00 J	10.0	2.00	µg/L	20	11/16/17 15:17
cis-1,2-Dichloroethene	3.60 J	10.0	2.00	µg/L	20	11/16/17 15:17
2-Butanone	ND	200	20.0	µg/L	20	11/16/17 15:17
Chloroform	ND	10.0	2.00	µg/L	20	11/16/17 15:17
1,1,1-Trichloroethane	ND	10.0	2.00	µg/L	20	11/16/17 15:17
Cyclohexane	4.80 J	10.0	2.00	µg/L	20	11/16/17 15:17
Carbon tetrachloride	ND	10.0	2.00	µg/L	20	11/16/17 15:17
Benzene	444	10.0	2.00	µg/L	20	11/16/17 15:17
1,2-Dichloroethane	ND	10.0	3.20	µg/L	20	11/16/17 15:17
Trichloroethene	ND	10.0	2.00	µg/L	20	11/16/17 15:17
Methylcyclohexane	ND	10.0	2.00	µg/L	20	11/16/17 15:17
1,2-Dichloropropane	ND	10.0	3.20	µg/L	20	11/16/17 15:17
Bromodichloromethane	ND	10.0	2.00	µg/L	20	11/16/17 15:17
cis-1,3-Dichloropropene	ND	10.0	3.20	µg/L	20	11/16/17 15:17
4-Methyl-2-pentanone	ND	100	20.0	µg/L	20	11/16/17 15:17
Toluene	48.2	10.0	2.00	µg/L	20	11/16/17 15:17
trans-1,3-Dichloropropene	ND	10.0	3.20	µg/L	20	11/16/17 15:17
1,1,2-Trichloroethane	ND	10.0	3.20	µg/L	20	11/16/17 15:17
Tetrachloroethene	ND	10.0	2.00	µg/L	20	11/16/17 15:17
2-Hexanone	ND	100	20.0	µg/L	20	11/16/17 15:17
Qualifiers: * Value may exceed the Ac	ceptable Level		B Analyte d	etected in the	associated M	ethod Blank
E Value exceeds the instrur	nent calibration rar	nge	H Holding t	imes for prepa	aration or ana	lysis exceeded
J Analyte detected below the	ne PQL		ND Not Dete	cted at the Pra	ctical Quanti	tation Limit (PQL)
P Prim./Conf. column %D	or RPD exceeds lin	nit	S Spike Re	covery outside	e accepted rec	overy limits

Life Science Laboratories, Inc.

Analytical Results

E	ast Syracuse, NY 130	57 (315)	445-1900	5	StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		pling	Lab ID: Client Sample ID:	1718799-009A LCW-4 11/14/17
W Order:	1718799			Collection Date:	11/14/17 13:35
Matrix:	WATER		Y.	Date Received:	11/14/17 15:30
Inst. ID:	MS04 73	Sample Size:	: 10 mL	PrepDate:	
ColumnID:	Rtx-VMS	%Moisture:		BatchNo:	R31672
Revision:	12/18/17 7:21	TestCode:	8260W OLM42	FileID:	1-SAMP-R3801.D
Col Type:					

Analyte	Result Qua	I PQL	MDL	Units	ĎF	Date Analyzed
VOLATILE ORGANIC COMPOUND	SW826	0C/5030C	;			
Dibromochloromethane	ND	10.0	2.00	μg/L	20	11/16/17 15:17
1,2-Dibromoethane	ND	10.0	3.20	µg/L	20	11/16/17 15:17
Chlorobenzene	289	10.0	2.00	µg/L	20	11/16/17 15:17
Ethylbenzene	179	10.0	2.00	µg/L	20	11/16/17 15:17
Xylenes (total)	927	20.0	6.00	μg/L	20	11/16/17 15:17
Styrene	ND	10.0	2.00	µg/L	20	11/16/17 15:17
Bromoform	ND	20.0	6.60	μg/L	20	11/16/17 15:17
Isopropylbenzene	3.60 J	10.0	2.00	µg/L	20	11/16/17 15:17
1,1,2,2-Tetrachloroethane	ND	10.0	2.00	µg/L	20	11/16/17 15:17
1,3-Dichlorobenzene	ND	10.0	2.00	µg/L	20	11/16/17 15:17
1,4-Dichlorobenzene	ND	10.0	3.20	µg/L	20	11/16/17 15:17
1,2-Dichlorobenzene	24.0	10.0	2.00	µg/L	20	11/16/17 15:17
1,2-Dibromo-3-chloropropane	ND	100	20.0	µg/L	20	11/16/17 15:17
1,2,4-Trichlorobenzene	ND	20.0	2.00	µg/L	20	11/16/17 15:17
Surr: 1,2-Dichloroethane-d4	104	75-130	3.20	%REC	20	11/16/17 15:17
Surr: Toluene-d8	98	75-125	2.00	%REC	20	11/16/17 15:17
Surr: 4-Bromofluorobenzene	88	75-125	2.00	%REC	20	11/16/17 15:17

* Value may exceed the Acceptable Level B Analyte detected in the associated Method Blank Qualifiers: Value exceeds the instrument calibration range E Holding times for preparation or analysis exceeded Н J Analyte detected below the PQL ND Not Detected at the Practical Quantitation Limit (PQL) Prim./Conf. column %D or RPD exceeds limit Р Spike Recovery outside accepted recovery limits S Print Date: 12/19/17 13:04 850510 Project Supervisor: David J Prichard

LSL 5854 Butternut Drive

E	ast Syracuse, NY 1305	7 (315)	445-1900		StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Operati PAS Oswego-Semi-Anr		pling	Lab ID: Client Sample ID:	1718799-010A QC Trip Blank 11/13/17
W Order: Matrix:	1718799 WATER Q			Collection Date: Date Received:	11/14/17 0:00 11/14/17 15:30
Inst. ID: ColumnID: Revision: Col Type:	MS04 73 Rtx-VMS 12/18/17 7:21	Sample Size: %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R31672 1-SAMP-R3806.D

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNI			SW826	0C/5030C		
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	11/16/17 18:00
Chloromethane	ND	1.00	0.33	µg/L	1	11/16/17 18:00
Vinyl chloride	ND	1.00	0.33	µg/L	1	11/16/17 18:00
Bromomethane	ND	1.00	0.33	μg/L	1	11/16/17 18:00
Chloroethane	ND	1.00	0.33	μg/L	1	11/16/17 18:00
Trichlorofluoromethane	ND	1.00	0.10	µg/L	1	11/16/17 18:00
1,1-Dichloroethene	ND	0.50	0.16	µg/L	1	11/16/17 18:00
1,1,2-Trichloro-1,2,2- trifluoroethane	ND	0.50	0.10	µg/L	1	11/16/17 18:00
Acetone	1.11 J	10.0	1.00	µg/L	1	11/16/17 18:00
Carbon disulfide	ND	0.50	0.11	µg/L	1	11/16/17 18:00
Methyl acetate	ND	5.00	1.00	µg/L	1	11/16/17 18:00
Methylene chloride	0.41 J	2.00	0.16	µg/L	1	11/16/17 18:00
trans-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 18:00
Methyl tert-butyl ether	ND	1.00	0.16	μg/L	1	11/16/17 18:00
1,1-Dichloroethane	ND	0.50	0.10	µg/L	1	11/16/17 18:00
cis-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 18:00
2-Butanone	ND	10.0	1.00	µg/L	1	11/16/17 18:00
Chloroform	ND	0.50	0.10	µg/L	1	11/16/17 18:00
1,1,1-Trichloroethane	ND	0.50	0.10	µg/L	1	11/16/17 18:00
Cyclohexane	ND	0.50	0.10	µg/L	1	11/16/17 18:00
Carbon tetrachloride	ND	0.50	0.10	µg/L	1	11/16/17 18:00
Benzene	ND	0.50	0.10	µg/L	1	11/16/17 18:00
1,2-Dichloroethane	ND	0.50	0.16	µg/L	1	11/16/17 18:00
Trichloroethene	ND	0.50	0.10	µg/L	1	11/16/17 18:00
Methylcyclohexane	ND	0.50	0.10	µg/L	1	11/16/17 18:00
1,2-Dichloropropane	ND	0.50	0.16	µg/L	1	11/16/17 18:00
Bromodichloromethane	ND	0.50	0.10	µg/L	1	11/16/17 18:00
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/16/17 18:00
4-Methyl-2-pentanone	ND	5.00	1.00	µg/L	1	11/16/17 18:00
Toluene	ND	0.50	0.10	µg/L	1	11/16/17 18:00
trans-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	11/16/17 18:00
1,1,2-Trichloroethane	ND	0.50	0.16	µg/L	1	11/16/17 18:00
Tetrachloroethene	ND	0.50	0.10	μg/L	1	11/16/17 18:00
2-Hexanone	ND	5.00	1.00	µg/L	1	11/16/17 18:00
Qualifiers: * Value may exceed th	e Acceptable Level		B Analyte detected in the associated Method Blank			
-	strument calibration rar	nge	H Holding	times for prepa	ration or ana	lysis exceeded
J Analyte detected belo	ow the PQL		ND Not Dete	cted at the Pra	ctical Quanti	tation Limit (PQL)
P Prim./Conf. column	%D or RPD exceeds lin	nit	S Spike Re	covery outside	accepted rec	overy limits

F	Cast Syracuse, NY 1305	57 (315)	445-1900		StateCertNo: 10248
CLIENT: Project:	O'Brien & Gere Operat PAS Oswego-Semi-Ani	,	bling	Lab ID: Client Sample ID:	1718799-010A QC Trip Blank 11/13/17
W Order: Matrix: Inst. ID:	1718799 WATER Q MS04_73	Same I. St	10.1	Collection Date: Date Received:	11/14/17 0:00 11/14/17 15:30
ColumnID: Revision: Col Type:		Sample Size: %Moisture: TestCode:	8260W OLM42	PrepDate: BatchNo: FileID:	R31672 1-SAMP-R3806.D

Analyte	Result Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND	SW826	SW8260C/5030C				
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/16/17 18:00
1,2-Dibromoethane	ND	0.50	0.16	μg/L	1	11/16/17 18:00
Chlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 18:00
Ethylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 18:00
Xylenes (total)	ND	1.00	0.30	µg/L	1	11/16/17 18:00
Styrene	ND	0.50	0.10	µg/L	1	11/16/17 18:00
Bromoform	ND	1.00	0.33	μg/L	1	11/16/17 18:00
Isopropylbenzene	ND	0.50	0.10	µg/L	1	11/16/17 18:00
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	μg/L	1	11/16/17 18:00
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/16/17 18:00
1,4-Dichlorobenzene	ND	0.50	0.16	µg/L	1	11/16/17 18:00
1,2-Dichlorobenzene	ND	0.50	0.10	μg/L	1	11/16/17 18:00
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	11/16/17 18:00
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	11/16/17 18:00
Surr: 1,2-Dichloroethane-d4	106	75-130	0.16	%REC	1	11/16/17 18:00
Surr: Toluene-d8	99	75-125	0.10	%REC	1	11/16/17 18:00
Surr: 4-Bromofluorobenzene	91	75-125	0.10	%REC	1	11/16/17 18:00

		Film./Com. column %D of KPD exceeds filmt	3	Spike Recovery outside accepted recovery limits
	Р	Prim./Conf. column %D or RPD exceeds limit	6	Spiles Bassyon, sutside assorted recovery limits
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Ε	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
Qualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank

Chain of Custody Life Science Laboratories, Inc. 5854 Butternut Drive LSL East Syracuse, New York 13057 **Central Lab** 1718799 (315) 445-1105 Client: **OBG** Operations Analysis/Method Project ID: PAS Oswego -JU V Sampled by: Martin Koennecke Phone # 315-842-7024 **Client Contact: Mark Byrne** Pace . **Sample Description** No. of Date Time Sample Comp. Comments Sample Location Collected | Collected or Grab Containers Matrix 3 3 11-13-17 Equipment BLANK 1130 6 W 001 3 6 3 M-21 11-13-17 12:30 W 0=2 3 Ġ 3 0D-3 11-13-17 1340 11 003 LR-8 004 11-13-17 6 3 3 14:45 W 3 6 3 X-1 W 11-13-17 005 9 LR-6, MS, MSD g 11-14-17 10:00 6 006 \mathcal{L} 3 6 3 <u>M-22</u> 1130 11-14-17 007 w 3 6 3 LCW-2 11-14-19 12:25 008 W 3 6. LCW - H 3 009 11-14-14 13.35 110 BLANK 010 QC TRIP 11-7-17 2 2 NA North Kounal Date: 11-14.17Time: 1530 Relinquished by: Received by: Date: Time: Time: Date: Time: Received by: Date: Relinguished by: Received by Lab: Date: //-/c/-Time: 15:37 Date: Time: Relinguished by: HAND Airbill Number: Shipment Method:

Turnaround Time Required:

Comments: PO #:

Routine X Rush

Samples Received Cooler Temperature: On Ice

Client Name: OGINA PAS		Date and Ti	me Received:	11/14/2017 3:30:00 PM
Work Order Number: 1718799		Received by	y: rsd	
Checklist completed by:	- 17	Reviewed	by:	11/16/17 Date
Delivery Method:	Hand Delivered	ļ		
Shipping container/cooler in good condition?	Yes 🖌	No	Not Present	
Custody seals intact on shipping container/cooler?	Yes	No	Not Present	
Custody seals intact on sample bottles?	Yes	No	Not Applicable	
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 🗌		
Sufficient sample volume for indicated test?	Yes 🗸	No 🗌		
All samples received within holding time?	Yes 🗹	Νο		
Container/Temp Blank temperature in compliance?	Yes 🗸	No 🗌		
Water - VOA vials have zero headspace?	Yes 🗹	Νο	No VOA vials submi	tted
Water - pH acceptable upon receipt?	Yes	No 🗌	Not Applicable 🔽	

Sample Receipt Checklist

Comments:

Client/Project OGINA PAS 1718799

		Sa	mple Co	ontrol Record		
Sample ID	Frac	Client Sample ID	Domovod	Date and Time Removed	Analysis	Date and Time Returned
001-7010	A	C		Stored in Fridge 1B	8260	11/14/17 1730
001 710	A		MSV	1/16/17 0820	8260	N.R.
· · · · · ·			ана н -			
				~		
			-		· · · · · · · · · · · · · · · · · · ·	
	×					
					· · · · · · · · · · · · · · · · · · ·	

G:\Logbook Forms\Logbooks (old)\GeneralLaboratory\Sign out.xls

CLIENT:	O'Brien & Gere Operations, LLC	
Project: Lab Order:	PAS Oswego-Semi-Annual Well Sampling 1718799	Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
1718799-001A	Equipment Blank 11/13/17		11/13/2017	11/14/2017
1718799-002A	M-21 11/13/17		11/13/2017	11/14/2017
1718799-003A	OD-3 11/13/17		11/13/2017	11/14/2017
1718799-004A	LR-8 11/13/17		11/13/2017	11/14/2017
1718799-005A	X-1 11/13/17		11/13/2017	11/14/2017
1718799-006A	LR-6 11/14/17		11/14/2017	11/14/2017
1718799-007A	M-22 11/14/17		11/14/2017	11/14/2017
1718799-008A	LCW-2 11/14/17		11/14/2017	11/14/2017
1718799-009A	LCW-4 11/14/17		11/14/2017	11/14/2017
1718799-010A	QC Trip Blank 11/13/17		11/14/2017	11/14/2017

1718799

O'Brien & Gere Operations, LLC

PAS Oswego-Semi-Annual Well S

Lab Order:

Client:

Project:

19-Dec-17

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1718799-001A	Equipment Blank 11/13/17	11/13/2017 11:30:00 AM	Water	Volatile Organic Compounds by GC/MS			11/16/2017
1718799-002A	M-21 11/13/17	11/13/2017 12:20:00 PM		Volatile Organic Compounds by GC/MS			11/16/2017
1718799-003A	OD-3 11/13/17	11/13/2017 1:40:00 PM		Volatile Organic Compounds by GC/MS			11/16/2017
1718799-004A	LR-8 11/13/17	11/13/2017 2:45:00 PM		Volatile Organic Compounds by GC/MS		· · · ·	11/16/2017
1718799-005A	X-1 11/13/17	11/13/2017	Water Q	Volatile Organic Compounds by GC/MS			11/16/2017
1718799-006A	LR-6 11/14/17	11/14/2017 10:00:00 AM	Water	Volatile Organic Compounds by GC/MS			11/16/2017
1718799-007A	M-22 11/14/17	11/14/2017 11:30:00 AM		Volatile Organic Compounds by GC/MS			11/16/2017
1718799-008A	LCW-2 11/14/17	11/14/2017 12:25:00 PM		Volatile Organic Compounds by GC/MS			11/16/2017
1718799-009A	LCW-4 11/14/17	11/14/2017 1:35:00 PM		Volatile Organic Compounds by GC/MS			11/16/2017
1718799-010A	QC Trip Blank 11/13/17	11/14/2017	Water Q	Volatile Organic Compounds by GC/MS			11/16/2017

GC/MS Volatile Organics Case Narrative - Page 1

Client: Project/Order: Work Order #: Methodology: OGINA PAS PAS Oswego – Semi-Annual Well Sampling 1718799 8260C/5030C

Analyzed/Reviewed by (Initials/Date):

Supervisor/Reviewed by (Initials/Date):

QA/QC Review (Initials/Date):

File Name:

U:\Narratives\MSVoa\1718799msnar.doc

GC/MS Volatile Organics

The GC/MS Volatile instruments are equipped with a Restek Rtx-VMS, 60 m x 0.25 mm ID capillary column (MS01, MS04, MSK, and MSN), Restek Rtx-502.2, 105 m x 0.53 mm ID capillary column (MS02), and a Restek Rtx-502.2, 60 m x 0.25 mm ID capillary column (MS03).

Holding Times and Sample Preservation

All samples were prepared and analyzed within the method and/or QAPP specified holding time requirements. Samples had a pH of < 2.

Laboratory Control Sample

The following compound(s) did not meet laboratory control sample recovery criteria:

LCS No.	Compound	Corrective Action
LCS-31672	Cyclohexane	1
	Methyl cyclohexane	1
LCS-31672	Dichlorodifluoromethane	2
	Methyl acetate	2

- 1 The recovery exceeded the lower control limit and was detected in several associated samples. Results may be biased low. The associated CCV met acceptance criteria. It is suspected that these analytes degraded in the LCS solution and that the calibration is accurate. No corrective action was taken.
- 2 The recovery exceeded the upper control limit in the LCS and CCV and was not detected in the associated samples. No corrective action was taken.

MS/MSD

The following compound(s) did not meet matrix spike and/or matrix spike duplicate percent recovery and/or RPD criteria:

Sample Description	Sample #	Compound	% REC	RPD	Corrective Action
LR-6 11/14/17	1718799-006A	Dichlorodifluoromethane	X		1
		Chloromethane	X		1
		Cyclohexane	X		2
	~	Methyl cyclohexane	X		2

GC/MS Volatile Organics Case Narrative - Page 2

Client: Project/Order: Work Order #: Methodology: OGINA PAS PAS Oswego – Semi-Annual Well Sampling 1718799 8260C/5030C

- 1 The recovery exceeded the upper control limit and was not detected in the associated sample. No corrective action was taken.
- 2 The recovery exceeded the lower control limit and was not detected in the associated samples. No corrective action was taken.

Surrogate Standards

All surrogate standard recoveries met method and/or project specific QC criteria.

Internal Standards

All internal standard areas met method and/or project specific QC criteria.

Calibrations

All initial calibrations and calibration verifications met method and/or project specific QC criteria.

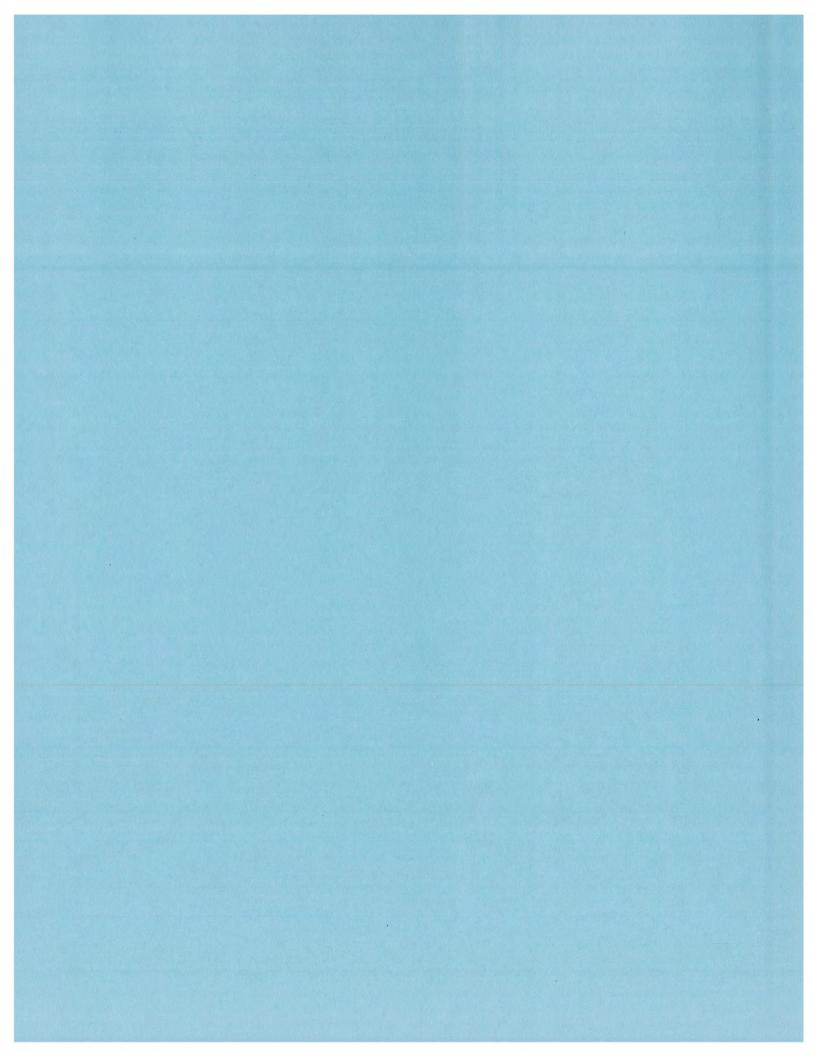
The following continuing calibration compound(s) exceeded method percent drift and/or RRF criteria:

Calibration ID	Instrument	Compound	%D	RRF	Corrective Action
CCV-31672	#4MS73	Chloromethane	22.7		1
		Methyl acetate	26.7		1

1 The recovery exceeded the upper control limit in the LCS and CCV and was not detected in the associated samples. No corrective action was taken.

Preparation Blanks

All preparation blanks met method and/or project specific QC criteria.



B -5 QUARTERLY POTW DISCHARGE REPORTS



450 Montbrook Lane Knoxville, TN 37919 865-691-5052 865-691-9835 Fax

Via electronic mail

January 3, 2018

Mr. Robert L. Johnson City Engineer Technician 13 W. Oneida City Hall Oswego, New York 13126 darcher@oswegony.gov

Re: Quarterly Discharge Report – 4th Quarter 2017 Pollution Abatement Services Site – Oswego, New York City of Oswego Wastewater Discharge Permit 6-2017-18

Dear Mr. Johnson:

This quarterly report is submitted in accordance with the City of Oswego Wastewater Discharge Permit 6-2017-18 (Permit) for discharge of leachate from the Pollution Abatement Services (PAS) Site into the City of Oswego's Eastside Wastewater Treatment Facility. This report covers the reporting period from October 2017 through December 2017.

The PAS Site discharged a total of 40,010 gallons of leachate to the Oswego sewer system during the fourth quarter of 2017.

Discharge to City of Oswego October 2017 - December 2017 40,010 gallons.

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

Sincerely, de maximis, inc.

Clay Millamor

Clay McClarnon

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

F:\PROJECTS\3131 - PAS\Qtr Rpts, Annual Rpts, 5 yr rvws 07\2017\4th qtr\Oswego 4th Qtr 2017 rpt.doc

TABLE 1 - PAS OSWEGO SITE QUARTERLY REPORT FOR CITY OF OSWEGO (2017) LEACHATE DISCHARGE TO OSWEGO EASTSIDE WASTEWATER TREATMENT FACILITY (Oswego SILL Wastwater Discharge Permit No. 6-2017-18)

Discharge Quarter	1Q 2	017	2Q 2017 3Q 2017		4Q 20	017		
	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged
	1/7/17	10,010	4/4/17	10,005	7/11/17	20,005	10/3/17	20,005
	42/6.8		45/6.8		54/6.8		54/6.8	
	2/15/17	10,005	5/3/17	20,005	8/8/17	20,005	11/15/17	10,005
	44/6.8		46/6.8		54/6.8		48.5/6.7	
	3/7/17	10,005	6/8/17	20,005	9/6/17	19,895	12/5/17	10,000
	42/6.8		53/6.8		54/6.8		54/6.7	
Total Discharged		30,020		50,015		59,905		40,010
Date Sampled*	Permit Limit	3/7/2017 ***	·					11/15/2017
Analytes	mg/L	mg/L						
Antinomy Arsenic Beryllium Cadmium Chromium (total) Copper Cyanide Lead Mercury Nickel Selenium Silver Thallium Zinc	0.107 0.358 0.107 0.43 0.67 0.43 0.67 0.19 0.0002 0.69 0.282 0.65 0.073 1	0.00075 0.0166 ND <0.0003 ND <0.001 ND <0.007 0.0197 ND <0.010 <0.0016 NA 0.296 0.005 ND <0.001 ND <0.0003 0.0052						ND <0.010 0.021 ND <0.010 ND <0.010 0.017 0.026 ND <0.010 ND <0.010 ND <0.0020 0.41 ND <0.010 ND <0.010 ND <0.020 ND <0.020
VOC** SVOC** BOD 5 TSS Phenolics pH	200 400 0.375 5> and <10	NA NA ND <13.3 64 0.0626 6.6			scharae Permit No 6-20			NA NA 15 45 ND <0.010 6.7

* Semi-annual sampling of PAS leachate discharge conducted in accordance with SIU Wastewater Discharge Permit No.6-2017-18.

** Analytes included for permit pollutant analysis performed every three years

*** Sample taken by City of Oswego

Analyte values in bold exceed limit

ATTACHMENT I



PAS Site Oswego, New York

Leachate Discharge Form

Date: 10-3-17

Date: <u>10-3-17</u> Field Technician <u>MARTIN KORNAecky</u>

Weather Conditions <u>SUNNY</u> 50°

		,							
		at in the	Pre-Dis	charg	e Well Pi	umping	3		
Well Pump							in Altonomia		
wenrump									
Pump Start Time			ip Stop 'ime	Tank Elevation		Flow Rate (est)		Gallons Pumped (es	
LCW-1	7:20	· · · · · · · · · · · · · · · · · · ·	1100 1230			<u>,</u>		22,440	
LCW-2	7:20		14n 12:30						
LCW-3	care		PLMPED						
LCW-4	7:20		11.12.30						
START -	. <i>Ц</i> ¹¹	J.	ND 12"				Total	22,440	
					e Pumpin	· · · ·		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Discharge #	Start Time	Stop Time	PH	Гетр	Totalize Flow Tot		otalizer Flow	Gallons	
					(Start)		Flow Fotal End)	Discharge	
Discharge #1	9:40	13:35	6.8	54°	(Start)		Total End)	Discharge	
<u> </u>	9:40	13:35	6.8	54°	(Start)		Total End)		
Discharge #1 Discharge #2 Total	9:40	13:35	6.8	54°	(Start)		Total End)		
Discharge #2		13:35 Leachate	Dischar	ge Sa	(Start) 91015 mpling (S	5 93	Total End) 30 / 60	20,005 20,005	
Discharge #2		<i>Leachate</i> Sample	Dischar Samp	ge Sa	(Start) 91015 mpling (S Sample	5 93	Fotal End) 30/60 nnuall	20,005 20,005	
Discharge #2		Leachate	Dischar	ge Sa	(Start) 91015 mpling (S	5 93 Semi-A	Fotal End) 30/60 nnuall	<u>до, 005</u> до, 005 у)	

C \A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx



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OBRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: <u>//-/5-/'7</u>

Time: 7.45

Field Technician MARTIN KOENNECKE

Weather Conditions Clean 30°

Pump Start Time	Pump Stop. Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est
7:55	905	STAT - 12"	END 43"	9455
7:55	905		135 6810	11.92
NOT PUMPED		·	/ 22 0001	
7:55	9:05			<u> </u>
	<u>Тіте</u> 7:55 7:55 NoT Ритрих	Time Time 7:55 905 7:55 905 NOT PUMPED	Time Time Elevation 7:55 905 57#7.12" 7:55 905	Time Time Elevation 7:55 905 STANT-12" END 43" 7:55 905 135 6Pm NOT PUMPED I I

9455: 70 min = 135 6Pm/ THIL AltoR-11"

		Leach	ate Di	ischarg	e Pumping(I	Aonthly)	
Discharge #	Start Time 9/05	Stop Time	pH	Temp	Totalizer Flow Total (Start)	Totalize Flow Total (End)	Gallons Discharge
Discharge #1	9:30	11:30	6.7	48,5	930,160	940165	10,005
Discharge #2							
Total							14,005
		Leachate	Dischi	irge Sa	mpling (Sem	ui-Annua	lly)
	Date	Sample Location		nple ume	Sample Time	pH	Temperature
Sample #1	11-15-17	Sample Port-	1 Cur	njesite	11:15	6.7	48.5
Sample #2 (if required)							

C \A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx



Well Pump

O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: $/2 - 5 - 1^{n}$

Time: 8.'00

Field Technician MARTIN KOSNNECKE

Weather Conditions <u>RANU 46</u>

Pre-Discharge Well Pumping

		i. A and a state of the				
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)	
LCW-1	8:00	920	START-10"	STOP - 43"	10065	
LCW-2	8:00	9:20		125 6Pm		
LCW-3	8:00	8:10				
LCW-4	8:00	9:20				
				Total	con to m	

Total 10065

	Leachate Discharge Pumping(Monthly)							
Discharge #	Start Time	Stop Time	рП	Тетр	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge	
Discharge #1	9:45	11:45	6.7	54"	940165	950165	5 10,000	
Discharge #2								
Total		83,36	PM				10,000	
STAAT PUMP 9:20 FRINED & -9:45 Leachate Discharge Sampling (Semi-Annually)								
	Date	Sample Location	1 2.1484	iple ime	Sample Time	pH	Temperature	
Sample #1					· · · · · · · · · · · · · · · · · · ·			
Sample #2 (if required)								

C \A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx



Life Science Laboratories, Inc. 5854 Butternut Drive East Syracuse, NY 13057 Phone: 315-445-1105 Fax: 315-445-1301

TO: OBG Operations-PAS Oswego Mark Byrne

- FROM: Life Science Laboratories, Inc. Quality Assurance Department
- RE: Revision of Report and/or Invoice 1718915
- DATE: January 2, 2018

The attached report and/or invoice was revised. The reason for the change and instructions on how it was revised is as follows:

The client needs Beryllium reported for this report. It was added and a revised report was generated.

If you have any questions regarding this change, please don't hesitate to contact us at 315-445-1105.

ATTACHMENT II



Tuesday, January 02, 2018



Mark Byrne O'Brien & Gere Operations, LLC. 7600 Morgan Road Liverpool, NY 13090

TEL: 315-437-6100

Project:PAS OSWEGO, 4TH QUARTER LEACHATE SAMPLESRE:Analytical ResultsOrder No.: 1718915

Dear Mark Byrne:

Life Science Laboratories, Inc. received 2 sample(s) on 11/15/2017 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.

David J Prichard Project Manager

Analytical Results Life Science Laboratories, Inc. 5854 Butternut Drive StateCertNo: 10248 East Syracuse, NY 13057 (315) 445-1900 Lab ID: O'Brien & Gere Operations, LLC. 1718915-001A **CLIENT:** Client Sample ID: Tank Effluent Leachate, **Project:** PAS Oswego, 4th Quarter Leachate Samples 11/15/17 1718915 W Order: 11/15/17 11:15 **Collection Date:** Matrix: WATER 11/15/17 14:35 Date Received: PrepDate: Fisher balance XA Sample Size: NA Inst. ID: BatchNo: R31665 %Moisture: ColumnID: TestCode TSS2540D FileID: 0-SAMP-11/20/17 10:55 **Revision:** Col Type: Units DF **Date Analyzed** Result Qual PQL Analyte SM 2540 D-97,-11 RESIDUE-NON-FILTERABLE (TSS) 11/16/17 mg/L 45 5.0 1 Residue-non-filterable (TSS)

Qualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
	Ε	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	tected below the PQL ND Not Detected at the Practical Quantita	
P Prim./Conf. column %D or RPD		Prim./Conf. column %D or RPD exceeds limit	S Spike Recovery outside accepted recovery lin	

Ī

Analytical Results Life Science Laboratories, Inc. 5854 Butternut Drive StateCertNo: 10248 East Syracuse, NY 13057 (315) 445-1900 1718915-001B Lab ID: O'Brien & Gere Operations, LLC. **CLIENT:** Client Sample ID: Tank Effluent Leachate, PAS Oswego, 4th Quarter Leachate Samples **Project:** 11/15/17 W Order: 1718915 11/15/17 11:15 **Collection Date:** WATER Matrix: 11/15/17 14:35 Date Received: 11/20/17 0:00 PrepDate: MS06 40 Sample Size: 1000 mL Inst. ID: BatchNo: R31710 %Moisture: ColumnID: DB-5MS 1-SAMP-K7328 FileID: TestCode 625W 12/07/17 14:31 Revision: Col Type: DF Date Analyzed Units Result Qual PQL Analyte EPA 625 SEMI-VOLATILE ORGANICS COMPOUNDS BY GC/MS 11/22/17 13:14 µg/L 1 ND 10 Phenol 11/22/17 13:14 1 102 46-149 %REC Surr: 2,4,6-Tribromophenol 11/22/17 13:14 %REC 1 29 26-130 Surr: 2-Fluorophenol

21-134

25

%REC

1

0	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
Qualifiers:	Е	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
		Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	-	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Surr: Phenol-d5

11/22/17 13:14



Analytical Results

	ast Syracuse, NY	13057 (315) 445-1900	\$	StateCertNo: 102	48
CLIENT: Project: W Order:	O'Brien & Gere Op PAS Oswego, 4th 0 1718915	perations, LLC. Quarter Leachate Samples	Lab ID: Client Sample ID:	1718915-001C Tank Effluent L 11/15/17	eachate,
Matrix:	WATER		Collection Date: Date Received:	11/15/17 11:15 11/15/17 14:35	
Inst. ID: ColumnID: Revision:	ICAP 61E 01/02/18 16:49	Sample Size: 50 mL %Moisture: TestCode 200.7 NPW	PrepDate: BatchNo: FileID:	11/20/17 0:00 24397/R31669 1-SAMP-311269	
Col Type: Analyte		Result Qual PQL	Units	DF	Date Analyzed

TOTAL METALS BY ICP			EPA 200.7		(EPA 200.2)
Antimony	ND	0.010	mg/L	1	11/21/17 18:12
Arsenic	0.021	0.010	mg/L	⁻ 1	11/21/17 18:12
Barium	0.49	0.10	mg/L	1	11/21/17 18:12
Beryllium	ND	0.010	mg/L	1	11/21/17 18:12
Cadmium	ND	0.010	mg/L	1	11/21/17 18:12
Chromium	0.017	0.010	mg/L	1	11/21/17 18:12
	0.026	0.010	mg/L	1	11/21/17 18:12
Copper	19	0.050	mg/L	1	11/21/17 18:12
Iron	ND	0.010	mg/L	1	11/21/17 18:12
Lead	0.41	0.010	mg/L	1	11/21/17 18:12
Nickel		0.010	mg/L	1	11/21/17 18:12
Selenium	ND		mg/L	. 1	11/21/17 18:12
Silver	ND	0.010	•	1	11/21/17 18:12
Thallium	ND	0.020	mg/L	1	11/21/17 18:12
Zinc	ND	0.020	mg/L	1	11/21/17 10:12

Qualifiers: * Value may exceed the Acceptable 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 pike Recovery outside accepted recovery limits
--	--

Analytical Results

	ast Syracuse, NY		00	5	StateCert	No: 10248
CLIENT: Project:	O'Brien & Gere Op PAS Oswego, 4th O 1718915	perations, LLC. Quarter Leachate Samples		Lab ID: Client Sample ID:	171891 Tank Ef [1/15/17	fluent Leuchute,
W Order: Matrix:	WATER			Collection Date: Date Received:	11/15/17 11/15/17	/ 14:35
Inst. ID: ColumnID:	FIMS 100	Sample Size: 40 mL %Moisture:		PrepDate: BatchNo:	11/17/17 24393/R	31663
Revision: Col Type:	11/20/17 8:39	TestCode HG245W		FileID:	1-SAMP	-
Analyte		Result Qual	PQL	Units	DF	Date Analyzed
MERCURY Mercury		ND	0.00020	EPA 245.1 mg/L	1	(EPA 245.1) 11/17/17 15:38

Oualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
Quanners:	Е	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

LSL 58	Life Scienc 854 Butternut Driv ast Syracuse, NY			-	Analyti StateCertNo:	cal Results
CLIENT: Project:	O'Brien & Gere Op PAS Oswego, 4th 0	perations, LLC. Quarter Leachate Sample	S	Lab ID: Client Sample ID:	1718915-0 Tank Efflue 11/15/17	01D ant Leachate,
W Order: Matrix:	1718915 WATER			Collection Date: Date Received:	11/15/17 11 11/15/17 14	
Inst. ID: ColumnID:	AA3	Sample Size: 50 m %Moisture:	ıL	PrepDate: BatchNo:	11/28/17 0:0 24418/R316	-
Revision: Col Type:	11/29/17 7:33	TestCode CN335.	4W	FileID:	1-SAMP-	
Analyte		ResultQu	al PQL	Units	DF	Date Analyzed
CYANIDE, 1 Cyanide, Tota		ND	0.010	EPA 335.4 mg/L	(EPA 335.4) 11/29/17

	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
Qualifiers:		Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
		Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	-	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

	LIIE Science 854 Butternut Drive	Laboratories, ii	ic. 4	Anarytica	II INCOULLS
	East Syracuse, NY 13	057 (315) 445-1900	<u> </u>	StateCertNo: 10	248
CLIENT: Project: W Order:	O'Brien & Gere Opera PAS Oswego, 4th Qua 1718915	ations, LLC. arter Leachate Samples	Lab ID: Client Sample ID:	1718915-001E Tunk Effluent I 11/15/17	
Matrix:	WATER		Collection Date: Date Received:	11/15/17 11:15 11/15/17 14:35	
Inst. ID: ColumnID:	Traacs	Sample Size: 1 mL %Moisture: TestCode TKN351.2	PrepDate: BatchNo: FileID:	11/21/17 0:00 24404/R31674 1-SAMP-	
Revision: Col Type:	11/22/17 15:07			20	Doto Analyzad
Analyte		ResultQual PQL	, Units	DF	Date Analyzed
	NITROGEN - TOTAL	(ASN) 25 6.0	EPA 351.2 mg/L	(EPA 3	3 51.2) 11/22/17

O lift and	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
Qualifiers:	Е	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Analytical Results

and the second second

LSL 5	Life Science 854 Butternut Driv ast Syracuse, NY			-	æ/	vtical Results
CLIENT: Project:		perations, LLC. Quarter Leachate Samples		Lab ID: Client Sample ID:	171891 Tank Ef, 11/15/17	fluent Leachate,
W Order: Matrix:	1718915 WATER			Collection Date: Date Received:	11/15/17 11/15/17	
Inst. ID: ColumnID:	Traacs	Sample Size: 50 ml %Moisture: TestCode TP365.1		PrepDate: BatchNo: FileID:	11/21/17 24405/R 1-SAMP	31671
Revision: Col Type:	11/22/17 9:54					Date Analyzed
Analyte		ResultQua	I PQL	Units	DF	
PHOSPHOF Phosphorus,	R US, TOTAL (AS P) Total (As P)	0.28	0.050	EPA 365.1 mg/L	1	(EPA 365.1) 11/22/17

Qualifiers:	*	Value may exceed the Acceptable Level		Analyte detected in the associated Method Blank	
	Е	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded	
	I	Analyte detected below the PQL	ND Not Detected at the Practical Quantitation Limit (F		
	P	Prim./Conf. column %D or RPD exceeds limit	S Spike Recovery outside accepted recovery limits		

LSL 5	Life Scien 854 Butternut Dr ast Syracuse, NY				•	ytical Results
CLIENT: Project:	O'Brien & Gere (PAS Oswego, 4th 1718915	Dperations, LLC. n Quarter Leachate Samples		Lab ID: Client Sample ID:		5-001F ffluent Leachate, 7
W Order: Matrix:	WATER			Collection Date: Date Received:	11/15/1 11/15/1	
Inst. ID: ColumnID: Revision: Col Type:	MSK 75 Rtx-VMS 12/01/17 8:30	Sample Size: 10 mL %Moisture: TestCode 624W		PrepDate: BatchNo: FileID:	R31690 1-SAMF	Р-С:\НРСН
Analyte		Result Qual	PQL	Units	DF	Date Analyzed
VOLATILE	ORGANIC COMP	OUNDS BY GC/MS		EPA 624		
1,1,1-Trichlor		5.65	5.00	µg/L	5	11/21/17 13:52
Methylene ch		ND	5.00	µg/L	5	11/21/17 13:52
Tetrachloroet		49.6	5.00	μg/L	5	11/21/17 13:52
Toluene		53.1	5.00	μg/L	5	11/21/17 13:52
Trichloroethe	ne	14.8	5.00	μg/L	5	11/21/17 13:52
Surr: 1,2-D	ichloroethane-d4	95	75-130	%REC	5	11/21/17 13:52
	mofluorobenzene	91	75-125	%REC	5	11/21/17 13:52
Surr: Tolue	ne-d8	94	75-125	%REC	5	11/21/17 13:52

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

Page 8 of 12

E	354 Butternut Drive ast Syracuse, NY 13()57 (315) 445-1900	5	StateCertNo: 10	0248
CLIENT: Project:		ations, LLC. arter Leachate Samples	Lab ID: Client Sample ID:	1718915-0010 Tank Effluent 11/15/17	
W Order: Matrix:	1718915 WATER		Collection Date: Date Received:	11/15/17 11:15 11/15/17 14:35	
Inst. ID: ColumnID:	Fisher balance XA	Sample Size: 1000 mL %Moisture:	PrepDate: BatchNo:	11/30/17 7:48 24434/R31693	
Revision: Col Type:	12/04/17 7:02	TestCode OG1664A	FileID:	1-SAMP-	
Analyte		Result Qual PQL	Units	DF	Date Analyzed
OIL AND GI	REASE (LLE) se	ND 5.00	EPA 1664A mg/L	(EP)	A 1664A) 12/03/17

Analytical Results

	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
Qualifiers:		Value exceeds the instrument calibration range		Holding times for preparation or analysis exceeded
		Analyte detected below the PQL		Not Detected at the Practical Quantitation Limit (PQL)
		Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits
		· · · · · · · · · · · · · · · · · · ·		

Analytical Results Life Science Laboratories, Inc. 5854 Butternut Drive StateCertNo: 10248 East Syracuse, NY 13057 (315) 445-1900 Lab ID: 1718915-001H **CLIENT:** O'Brien & Gere Operations, LLC. Client Sample ID: Tank Effluent Leachate, PAS Oswego, 4th Quarter Leachate Samples **Project:** 11/15/17 W Order: 1718915 11/15/17 11:15 **Collection Date:** WATER Matrix: 11/15/17 14:35 Date Received: 11/16/17 13:21 PrepDate: Sample Size: NA DO Meter Inst. ID: BatchNo: R31678 %Moisture: ColumnID: 1-SAMP-FileID: TestCode BODSM5210B 11/27/17 8:04 **Revision:** Col Type: DF **Date Analyzed** Units ResultQual PQL Analyte SM 5210B-01,-11 BIOCHEMICAL OXYGEN DEMAND (BOD5) mg/L 1 11/16/17 Biochemical oxygen demand (BOD5) 15 4.0

NOTES: The method blank results associated with this analysis did not meet method specified acceptance criteria.; This sample seems to exhibit the characteristics of toxicity toward the BOD method, therefore this result should be considered to be an estimate.

Qualifiers:	*	Value may exceed the Acceptable Level		Analyte detected in the associated Method Blank		
	Е	Value exceeds the instrument calibration range	H Holding times for preparation or analysis exceed			
	1	Analyte detected below the PQL	ND Not Detected at the Practical Quantitation Limit (F			
	Р	Prim./Conf. column %D or RPD exceeds limit		S Spike Recovery outside accepted recovery limits		
				D 10 01		

LSL	854 Butternut Drive		-	Analyt StateCertNo	ical Results
CLIENT: Project:	o'Brien & Gere Op PAS Oswego, 4th Q		Lab ID: Client Sample ID:	1718915-	
W Order: Matrix:	1718915 WATER		Collection Date: Date Received:	11/15/17 1 11/15/17 1	
Inst. ID: ColumnID:	GENESYS 20	Sample Size: NA %Moisture:	PrepDate: BatchNo: FileID:	R31661 0-SAMP-	
Revision: Col Type:	11/17/17 8:12	TestCode CRHEX7196W			Date Analyzed
Analyte		ResultQual PQL	Units SW7196A	DF	Date Analyzeu
CHROMIUN Chromium, H	1, HEXAVALENT exavalent	ND 0.010	mg/L	1	11/16/17

				the state of the state of Disele		
Qualifiers:	*	Value may exceed the Acceptable Level		Analyte detected in the associated Method Blank		
		Value exceeds the instrument calibration range		Holding times for preparation or analysis exceeded		
		Analyte detected below the PQL	ND Not Detected at the Practical Quantitation Limit (PQL)			
	-	Prim./Conf. column %D or RPD exceeds limit	S	S Spike Recovery outside accepted recovery limits		
4						

Analytical Results

	ast Syracuse, NY 1	(315) 445-19	00	S	StateCertNo: 102	248
CLIENT: Project:	O'Brien & Gere Op PAS Oswego, 4th C	erations, LLC. Quarter Leachate Samples		Lab ID: Client Sample ID:	1718915-002A Trip Blank	•
W Order:	1718915				11/07/17 0 00	
Matrix:	WATER Q			Collection Date: Date Received:	11/07/17 0:00 11/15/17 14:35	
Inst. ID: ColumnID: Revision: Col Type:	MSK 75 Rtx-VMS 12/01/17 8:30	Sample Size: 10 mL %Moisture: TestCode 624W		PrepDate: BatchNo: FileID:	R31690 1-SAMP-C:\HPCH	
Analyte		ResultQual	PQL	Units	DF	Date Analyze
	ORGANIC COMPOL	INDS BY GC/MS		EPA 624		
1,1,1-Trichlor		ND	1.00	µg/L	1	11/21/17 22:34
Methylene ch		ND	1.00	μg/L	1	11/21/17 22:34
Tetrachloroet		ND	1.00	µg/L	1	11/21/17 22:34
Toluene		ND	1.00	μg/L	1	11/21/17 22:34
Trichloroethe	ne	ND	1.00	µg/L	1	11/21/17 22:34
	ichloroethane-d4	92	75-130	%REC	1	11/21/17 22:34
	mofluorobenzene	92	75-125	%REC	1	11/21/17 22:34
		98	75-125	%REC	1	11/21/17 22:34

			D	Analyte detected in the associated Method Blank
Oualifiers:	*	Value may exceed the Acceptable Level		-
Quanners	Е	Value exceeds the instrument calibration range		Holding times for preparation or analysis exceeded
		Analyte detected below the PQL		Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc. **Central Lab**

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



1718915

Client: OBG Operations				Analysis/Method									
Project ID: PAS Oswego - Sea	i Arema	rt. Cī	Tx of o	P	esimi,T POTEV		11.7	/	/	/	7	Ţ	0
Project ID: PAS Oswego - Seni Annuk City of Oswego Permit Sampled by: Martin Koennecke						/	///				/		-48:5
Client Contact: Mark Byrne Phone # 315-842-7024											TEATP		
Sample Description				EPH ERY	25 PA 625	Ch 4 Gues		12	/d.)	5'5	TE.MP - 4855 " PH - 6.11		
Sample Location	Date Collected	Time Collected	Sample Matrix	Comp. or Grab	No. of Containers	124	14	13	15	TRN	800	METHER'S See Bar	Comments
LevelHate EffluenT	11-15-17	11:15	WAT-11	Comp	10	3	1 1	1	١	t	١	1	
QL TRIP BLANK	11-7-17		W		2	2							
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······································	1												
Relinquished by: Marthe Homenhan	Da	te://_15_1	γ Time:	/4,35	Receive	d by:					Da	ite:	Time:
Relinquished by:	Da	te:	Time:		Receive	d by:		/				ite:	Time:
Relinquished by:	Da	te:	Time:		Receive	d by L	ab: Ky	- Van	dara	is Ker	- Da	ate: /)/	5-17 Time: 1435
Shipment Method:					Airbill Nu	umber	1	•					

Turnaround Time Required: Routine <u>X</u>

1 😥 🕯

Comments: PO #:

Rush

Samples Received

DC Cooler Temperature: ok

On Ice

Client Name: OGINA PAS	Date and Time Received: 11/15/2017 2:35:00 PM
Work Order Number: 1718915	Received by: rv
Checklist completed by:	Reviewed by:
· · ·	
Delivery Method: Hand Delive	red
Shipping container/cooler in good condition? Yes 🗹	No 🗌 Not Present 🗍
Custody seals intact on shipping container/cooler? Yes	No 🗌 Not Present 📝
Custody seals intact on sample bottles? Yes	No 🗌 🛛 Not Applicable 🗹
Chain of custody present? Yes 🗹	No
Chain of custody signed when relinquished and received? Yes	No []]
Chain of custody agrees with sample labels? Yes 🔽	Νο
Samples in proper container/bottle? Yes 🔽	No 🗀
Sample containers intact? Yes 🗹	No
Sufficient 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 submitted 💹
Water - pH acceptable upon receipt? Yes 🔽	No 🗌 Not Applicable 🗍

Sample ID

	<u>рН</u>	<u>Preservative</u>	pH Acceptable
	>12	NaOH	Yes 🗹 N 🗌 NA 🗌
8	<2	HNO3	Yes 🗹 N 🗌 NA 🗌
	<2	HSO4	Yes 🗹 N 🗋 NA 🗌
	<2	1:1 HCL	Yes 🗌 N 🗍 NA 🗹
. :	5-9	Pest/PCBs (608/8081)	Yes 🗌 N 🗌 NA 🗹
1			

Volume of Preservative added in Lab.

Comments:

, t

Corrective Action:



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

December 1, 2017

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

Re: 4th Quarter PAS Oswego Progress Report 2017

Dear Mr. O'Brien,

This letter confirms that the PAS Oswego Site has not shipped or discharged any wastewater from the PAS Oswego collection system to the City of Auburn POTW during September – November 2017. This has been due to the EPA allowance of an alternate disposal method.

- Cumulative gallons removed for discharge in Auburn 4th Qtr. 2017 0
- Cumulative gallons removed for discharge in Auburn over 2017 0

Since no wastewater was shipped or discharged to Auburn during the 4th quarter of 2017, no analytical testing was required. However, we continue to perform Site maintenance and sampling activities under the Operation, Monitoring and Maintenance Program for the Site approved by EPA. The data associated with that program indicate little change in the characteristics of the Site wastewater.

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

Sincerely, de maximis, inc.

clay 14 lano

Clay McClarnon

CMC/dlb

cc: PAS Management Committee





December 1, 2017

Mr. Timothy L. O'Brien Industrial Pretreatment Coordinator 35 Bradley Street Auburn, NY 13021

Re: Industrial Pretreatment Program Zero Discharge Certification Statement:

Dear Mr. O'Brien

For the reporting quarter(s) of January 2017 to November 2017, I certify that for Pollution Abatement Services located in Oswego New York:

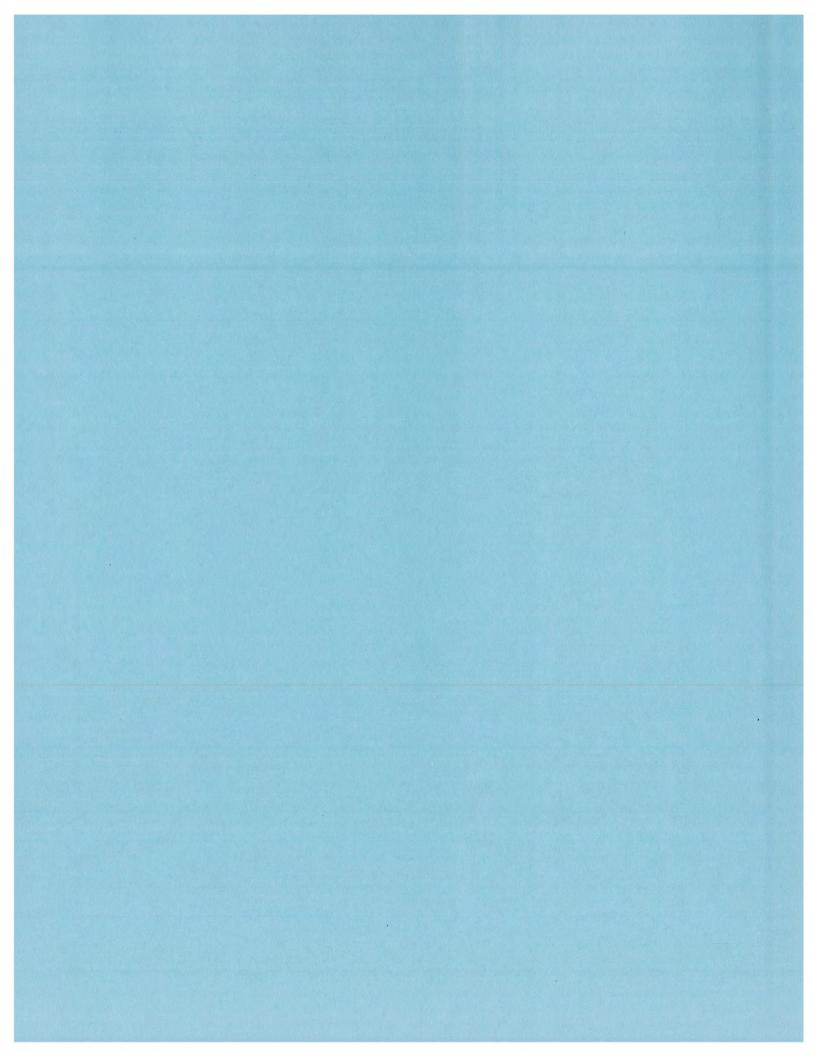
- 1. There have been no changes to any of our processes resulting in the potential for the discharge from the process waste stream.
- 2. No discharge of process wastewater has occurred since December 7, 2016.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Clay McClarnon	Project Coordinator
Name	Title
an is al	

Clay Mc Clarmo December 11, 2017 Signature Date

(865) 691-5052 Phone



B – 6 INSTITUTIONAL CONTROL CERTIFICATION

PAS OSWEGO SUPERFUND SITE

Institutional Controls Implementation Plan Annual Certification November 15, 2017

REQUIREMENT: The Institutional Control Implementation Plan (ICIP) for the PAS Oswego Superfund Site (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 November 15, 2017. During this visit an inspection was made of the PAS Oswego Site during a monthly operation leachate removal event. This Site inspection was scheduled to allow a visit with a representative of Industrial Precision Products to determine if any intrusive activities may have occurred on their property since the Remedial Action Completion Report was approved in August 2006. *de maximis* also contacted representatives of the City and County to confirm that no potential filings were made to install wells on the Industrial Precision Property. Based on results of the 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.

II – C 1ST QUARTER REPORT 2018



<u>QUARTERLY PROGRESS REPORT – 1st QUARTER 2018</u> Operation, Maintenance and Long-term Monitoring Activities

PROJECT NAME: Pollution Abatement Services Site Oswego, New York

PERIOD COVERED: January – March (1st Quarter) 2018

ACTIONS TAKEN DURING QUARTER:

- Leachate removal and site maintenance and monitoring activities were conducted at the Pollution Abatement Services (PAS) site (Site), in Oswego, NY by OBG Operations LLC (OBG) consistent with the PAS Site Operation, Maintenance and Long-term Monitoring Plan (Work Plan).
- A total of 30,000 gallons of leachate were removed from the Site during the period of January, February, and March 2018. Specific quantities of leachate removed included 10,000 gallons in January, 10,000 gallons in February and 10,000 gallons in March. Details of the leachate removal for each month, along with historical leachate removal documentation are described in this progress report.
- During the months of January March 2018, leachate was pumped monthly from the PAS Site. The leachate was pumped into the City of Oswego East Side Wastewater Treatment Plant in accordance with City of Oswego Industrial User Permit no. 6-2017-18.
- Quarterly groundwater elevation monitoring was performed on February 6, 2018. Quarterly groundwater elevation monitoring results for the SWW- series monitoring wells (SWW-1 through SWW-12), leachate collection wells (LCW-1 through LCW-4), M-series wells (M-21 through M-23), LR-series wells (LR-2, 3, 6 and 8), LD-series wells (LD-3, 4, 5, 6, and 8), along with wells OS-1, OS-3, OI-1, OD-3 and LS-6 were recorded on the Pre-Pumping Well Monitoring Level Form. (Attachment C-1)
- Site maintenance activities were conducted monthly in combination with the monthly leachate removal event. The Site Inspection Checklist was used to document the land cap, leachate discharge system, leachate collection system and general Site conditions. (Attachment C-2) Monthly Site maintenance activities included the following:
 - Inspected the perimeter security fence of the Site. No discrepancies were reported at the time of the inspection.
 - The Site single French drainage system and two (2) concrete troughs were visually inspected. No discrepancies were reported at the time of the inspection.
 - Visually inspected the Site slurry-wall containment vegetated cap for signs of burrowing vermin or surface anomalies. No discrepancies were reported at the time of the inspections.

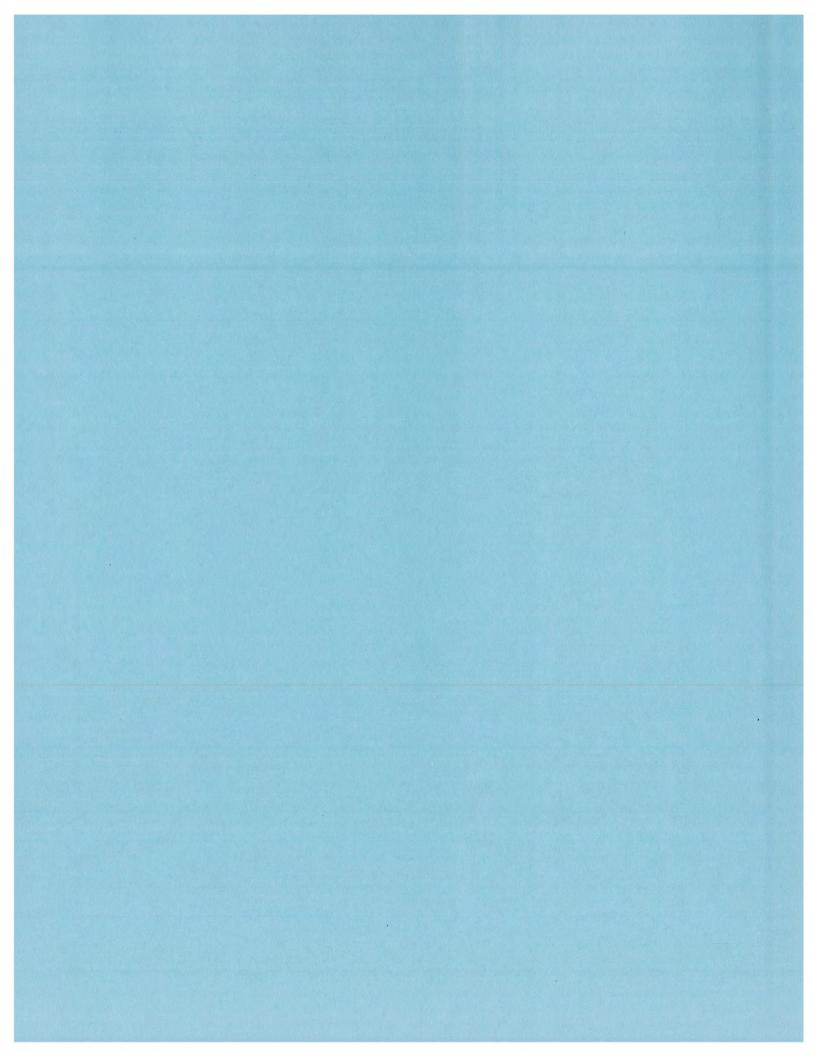


- Visually inspected the leachate collection system pumping equipment to verify proper operation. The field technician inspected each pump control panel to ensure control systems were generally free of rodents and insects, and were properly operating. The leachate holding tank was visually inspected for integrity, as were the leachate tanks steel protective roof, and wood structure. The February 6, 2018 Site inspection noted the LCW-2 electrical panel was broken off the stand and inoperable. No other discrepancies were reported at the time of the inspection.
- The Site wooden utility shed and leachate pumping equipment, including centrifuge discharge pump, flow meter, suction hose, pump oils levels, heat trace power panel, interior lighting, exterior and interior shed structure, and main power distribution panel were inspected. No discrepancies were reported at the time of the inspection.
- On January 9, February 6, and March 6, 2018, OBG performed the monthly pre-pumping collection system inspection for leachate collection wells LCW-1, 2, 3 & 4, along with inspection of the leachate discharge pumping system. Observations were recorded on the Site Inspection Checklist. LCW-2 was inoperable during the period. In advance of each leachate removal event, OBG informed the City of Oswego POTW of the anticipated discharge. (Attachment C-2)
- Upon completing the monthly leachate collection system inspections, OBG manually energized the four leachate collection pumps, identified as LCW-1, LCW-2, LCW-3, 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. LCW-2 was not operational; however, LCW-1 continued to pump leachate from the down gradient trench. (Attachment C-3)
- During the months of April, May and June 2018, OBG pumped a combined total of 50,000 gallons of leachate from LCW 1, 2, 3 & 4 into the leachate collection tank and then into the City of Oswego POTW. The volume and flow rate of each leachate discharge was recorded onto the Leachate Disposal Checklist, as was leachate water pH, and temperature. The amount discharged was recorded onto the Leachate Disposal Checklist. No leachate was shipped to Auburn New York during the period. Therefore, no bill of lading was generated. (Attachment C-3)
- Upon completing each monthly leachate discharge the tank suction hoses were placed back into the leachate hold tank and the leachate pump system was shut down and prepared for storage. The concrete leachate hold tank was secured, as was the wooden maintenance shed. Upon the completion of monthly Site activities, the Site metal access gates were closed and padlocked.
- The PAS Oswego Site quarterly discharge report for the 1st quarter of 2018 for the City of Oswego was submitted on April 19, 2018 in accordance with Permit 6-2017-18. The quarterly report to the City of Auburn was submitted on March 6, 2018. The quarterly reports for the City of Auburn do not follow annual quarters. Therefore, the quarterly report for Auburn included December 2017, January, February 2018 (Attachment C-4)



DOCUMENTATION OF REMOVAL ACTIVITIES FOR PREVIOUS QUARTER

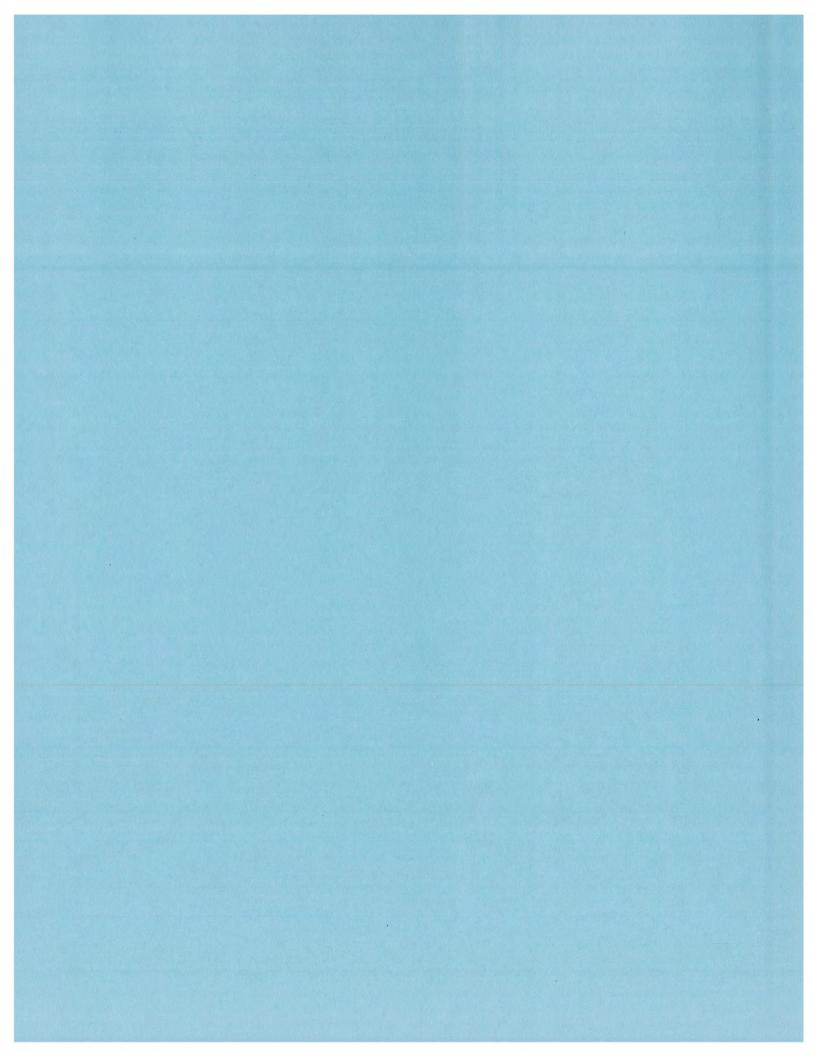
- The Groundwater Pre-Pumping Well Monitoring Level Form for February 6, 2018 is attached to this report. (Attachment C-1)
- The Site Inspection Checklist for January 9, February 6 and March 6, 2018 are attached to this report. (Attachment C-2)
- The Leachate Disposal Checklist for the January 9, February 6 and March 9, 2018 are attached to this report. (Attachment C-3)
- The PAS Quarterly Discharge reports submitted on April 19, 2018 to the City of Oswego and the report submitted to the City of Auburn on March 6, 2018 are attached to this report. (Attachment C-4)



C -1 GROUNDWATER ELEVATION DATA

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

	2-6-12				MAR	MARTIN KOENNELKE					February	2018	
Well	Riser	Well	Range Verific	ation		Monthly C	nsite Field	Measurer	ments				
Number	Elevation	Average Well Level	Low Well Level	High Well Level	Well Level (1st) Check	Well Level (2nd) Check	(based on h range	hìn Range istorical well data) NO	Well Level Check (3rd) (if "NO" & well is not within targeted renge)		NOTES		
SWW1	289.33	9.13	8.11	9.74	8,92	8.92	V						
SWW2	289.37	15.59	14.48	16.08	14,62	14.62	V				,		
SWW3	286.50	17.08	16.24	19.94	16,20	16.20		1	16.20				
SWW4	283.60	14.54	12.55	15.70	14.40	14,40	V						
SWW5	277.02	13.20	12.48	14.04	12.68	12.68	~						
SWW6	273.06	8.50	7.90	8.90	8,44	8.44	V						
SWW7	277.93	8.04	7.54	8.30	7.44	7.44		1. Cr	7.44				
SWW8	278.24	4.02	3.78	4.30	3,90	3.90	V						
SWW9	285.55	17.34	16.40	18.72	16,06	16.06		V	110.06				
SWW10	280.43	11.09	9.20	12.53	10.36	10.36	V						
SWW11	273.50	9.28	8.40	10.16	8,70	8.70	r						
SWW12	272.82	8.73	8.30	9.20	8,54	8.54	V						
LCW-1	272.21	8.93	7.70	9.90	7,96	7.910	V						
LCW-2	274.44	11.18	9.95	12.14	10.18	10,18	V						
LCW-3	284.36	17.79	17.18	18.34	17,20	17.20	V						
LCW-4	285.70	18.33	17.35	19.42	19,30	17,30		V	17.30				
OS-1	272.10	9.42	8.30	10.94	9,28	9,28	V				-1		
01-1	272.00	11.21	10.90	11.80	10,96	10,96	V						
OS-3	277.89	13.92	12.48	15.38	12.50	12,50	V						
OD-3	277.85	13.86	12.36	15.16	12.48	12,48	V						
LD-3	278.62	4.30	4.16	4.62	4.18	4.18	V						
LD-4	279.25	10.52	9.82	11.90	10,34	10,34	V				the state of the second st		
LD-5	272.94	8.92	8.58	9.48	8,80	8,80	V						
LS-6	274.14	9.84	8.75	11.28	9,78	9.78	V					Alexander	
LD-6	274.03	10.09	9.58	10.82	9.80	9,80	V				-01-17 V		
LD-8	272.83	7.64	6.56	9.52	7,82	7.82	V	-					
LR-2	289.85	12.83	12.34	13.30	12.50	12.50	V						
LR-3	278.06	7.85	7.38	8.12	17,10 2	7.62	V				and the most of the		
LR-6	274.39	10.32	9.88	10.98	10,18		-				and the second		
LR-8	273.42	9.77	9.30	10.20	9,60					-			
M-21	272.32	9.54	9.06	10.44	9.48	9,48	V						
M-22	273.88	10.18	9.62	10.94	10,15	10.15	V						
M-23	270.49	12.32	12.05	12.65	12,24	12,24	V		1			in the second	



C – 2 SITE INSPECTION CHECKLIST



Site Inspection Checklist (V2)

Former Pollution Abatement Services (PAS Oswego) Oswego, New York

Date /-9-18

Time 8:00 Am

Field Technician MARTin Loennecky

Weather Conditions Overcast 30°

Check **V** (tasks completed in each event) Inspection Features Remarks (indicate accomplishment of each maintenance task) Monthly Quarterly Land Cap Signs of burrowing vermin 1 SNOW COVERED Land cap irregularities (note anomaly) SNOW COVERED V French drainage system clear and function able V COVERED IN SNOW Concrete trough clear and function able V COVERED IN SNOW Leachate Discharge System City of Oswego sanitary discharge Ves valve positioned "Open" V **Discharge Pump inspected &** operational Yes V Discharge pump oil level verified prior to use. Yes V Discharge pump drained of residual water (drained upon Yes completion of monthly discharge) V Heat trace system operational & verified in the "ON" position V (Applicable Oct - May) Yes on Flow totalizer operational. Flow readings recorded onto V "Leachate Discharge Form" YES Leachate Collection System Leachate holding tank visually inspected for structural integrity V OK

1	~	9	~	18

,

		,0
Leachate holding tank metal roof		
inspected for structural integrity	V	OK
Leachate tank access doors		
locked (post pump out)	V	Yes
Pump power panel(s) secured	V	Yes
Monitoring Wells (MW)		
Locks installed	V	Yes
MW's marked & identifiable	V	Yes -
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 &		
free on snow & damage	\checkmark	PLOWED SNOW
Security access gates / Padlock &		
chain serviceable	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	i⁄	Yes
PPE available and utilized as		
required	V	Yes
Emergency contact information		
posted within shed	$ $ \vee	Yes

Additional remarks (use separate sheet is required) <u>SiTE COVERED IN SNOW THREE PLUS FEET</u> <u>PUMPED 10,000 gullons Legutate To OSWEYO POTIN</u>



Site Inspection Checklist (vz)

Former Pollution Abatement Services (PAS Oswego) Oswego, New York

Date 2-6-18

Time 7:15

Field Technician MARTIN Koennecke Weather Conditions SNOW 19°

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

	9	2-6-18
Leachate holding tank metal roof inspected for structural integrity	V	OK
Leachate tank access doors locked (post pump out)	V	Yes
Pump power panel(s) secured	1	LWW-2 BROKON Off STAND-INOPER
Monitoring Wells (MW)		
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	~	OK
Site access driveway inspected & free on snow & damage	V	SNOW PLOWED
Security access gates / Padlock & chain serviceable	L	Yes
Site gate signage intact	V	Yes
Interior & exterior of utility storage shed inspected for damage & secure with locks	V	0K
Fire extinguisher serviceable, inspected, and inspection recorded	L	Yes
Spill control material inspected & adequate	V	Ves
PPE available and utilized as required	v	Yes
Emergency contact information posted within shed	V	Ye5

Additional remarks (use separate sheet is required)

QUARTER	rly well 1	evels TAKI	EN, 10,00	0 gAllons	DISCHARGED
To OSU	vego Potu)	, ,	,	1
LCU	U-2 Pou	er PAnnel	At well	Broken	off of
PIPE ST	AND LAY.	ng on GRO	UND WIRE	5 BRoken	Off AT
Bottom of	& CONTROL	BOX, (NOT	USED)		



Site Inspection Checklist (V2)

Former Pollution Abatement Services (PAS Oswego) Oswego, New York

Date 3-4-18

Time <u>7,30</u>

Field Technician MARTIN Koemerke Weather Conditions OVERCAST 30°

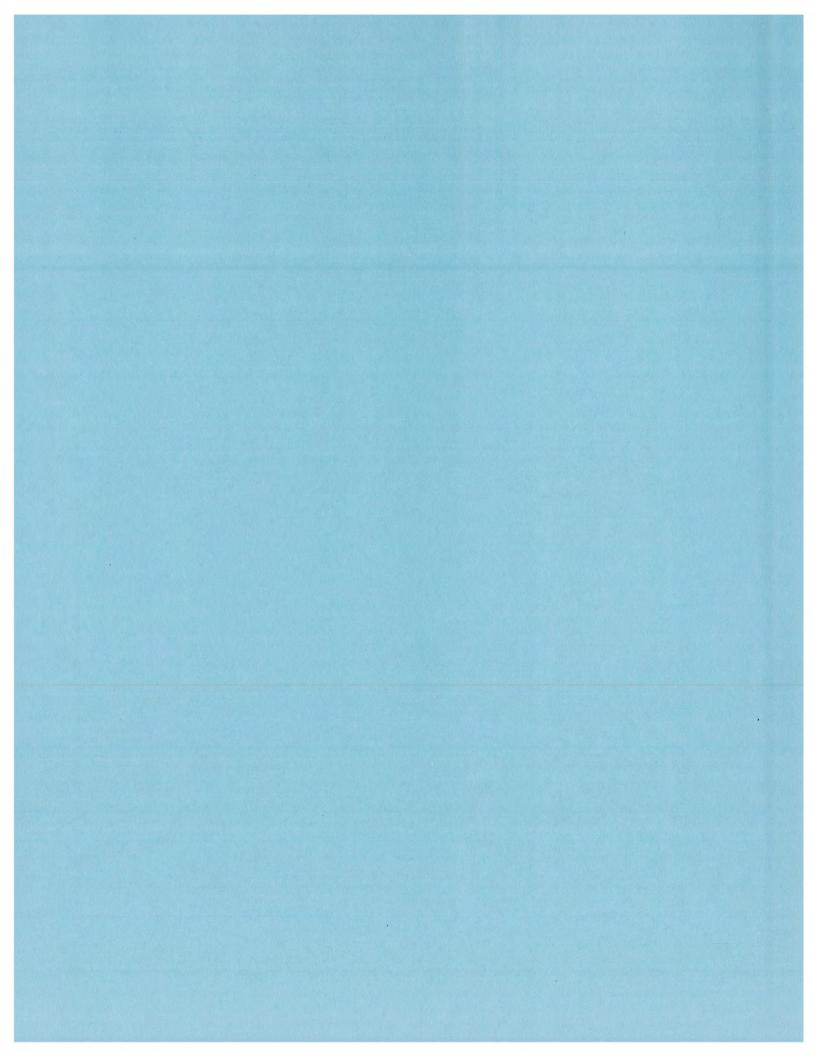
	Che	ck V	(tasks completed in each event)
Inspection Features	Monthly	Quarterly	Remarks (indicate accomplishment of each maintenance task)
Land Cap			
Signs of burrowing vermin	V		SNOW COVERED
Land cap irregularities (note			
anomaly)	V		NO
French drainage system clear and			
function able	V		SNUW COVERED
Concrete trough clear and			
function able	V		SNOW LOVERED
Leachate Discharge System			
City of Oswego sanitary discharge			
valve positioned "Open"	V		Yes
Discharge Pump inspected &			
operational	v		Yé.S
Discharge pump oil level verified			
prior to use.	ν		Yes ADDED OIL
Discharge pump drained of			
residual water (drained upon			
completion of monthly discharge)	レ		Yes
Heat trace system operational &			
verified in the "ON" position			
(Applicable Oct - May)			ON
Flow totalizer operational. Flow			
readings recorded onto			
"Leachate Discharge Form"	V		Yes
Leachate Collection System			
Leachate holding tank visually			
inspected for structural integrity	$ $ \checkmark		CK

3-6-18

No. Contraction of the second s	5	
Leachate holding tank metal roof		
inspected for structural integrity	V	OK
Leachate tank access doors		
locked (post pump out)	V	Yes
Pump power panel(s) secured	V	Yés
Monitoring Wells (MW)		
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 &		
free on snow & damage	V	OK PLOWED SNOW
Security access gates / Padlock &		
chain serviceable	V	Yes
Site gate signage intact	V	Yes
Interior & exterior of utility		
storage shed inspected for		
damage & secure with locks	V	OK
Fire extinguisher serviceable,		
inspected, and inspection		N. C.
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) <u>LCW-J PUMP IN OPERATABLE, PUMPED 10,000 Gal,</u> <u>LEACHATE TO CITY OF OSWEGP POTU</u>

.



C -3 LEACHATE DISCHARGE FORM

O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: 1-9-18

Time: 8:00 Am

Field Technician MARTIN Koenverte

Weather Conditions OVERCAST 30°

Well Pump		Pre-Di	scharge Well I	Pumping	
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	9:30	10:50	STALT ID"	STOP 42 *	.9760
LCW-2	9:30	10:50		80 mm - 9760 =	
LCW-3	NOT PUMPED				
LCW-4	9:30	10:50	END 9"		
	1.00			Total	9460

	Leachate Discharge Pumping(Monthly)										
Discharge #	Start Time	Stop Time	pĦ	Тетр	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge				
Discharge #1	11:35	13/35	6,8	480	950165	960165	10,000				
Discharge #2											
Total	START ()	1.15 PRun) 11:35		83,3 6PM		10,000				
		Leachate	Discha	irge Sai	mpling (Sem	i-Annuall	y)				
	Date	Sample Location	-1 -1 -1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	iple ume	Sample Time	pH	Femperature				
Sample #1											
Sample #2 (if required)											

C \A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx

O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: 2-6-18

Time: 7:15

Field Technician MARTIN KOENNecky

Weather Conditions Snow 19°

		Pre-Dis	charge Well I	Pumping	
Well Pump					an a
4. 	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	10:15	12:25	START. 9"		
LCW-2	NOT PUMP	ED - INOPERABLE	END - 43"	34 = 130 min	10,370
LCW-3	10:15	10:30		80 gpm P	1
LCW-4	10:15	12:25		<i>n</i>	
				Total	10,340

	Leachate Discharge Pumping(Monthly)										
Discharge #	Start Time	Stop Time	pĦ	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge				
Discharge #1	12:30	14:30	6.8	480	960165	970165	10,000				
Discharge #2											
Total							10,000				
		Leachate	Discha	arge Sa	mpling (Sen	ui-Annual					
	Date	Sample Location	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	nple ume	Sample Time	pH	Temperature				
Sample #1											
Sample #2 (if required)											

OBRIEN 6 GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: 3 - 6 - 18

Total

Time: 7:30

Field Technician MARTIN Koenwerke

Weather Conditions OVERCHIT 30

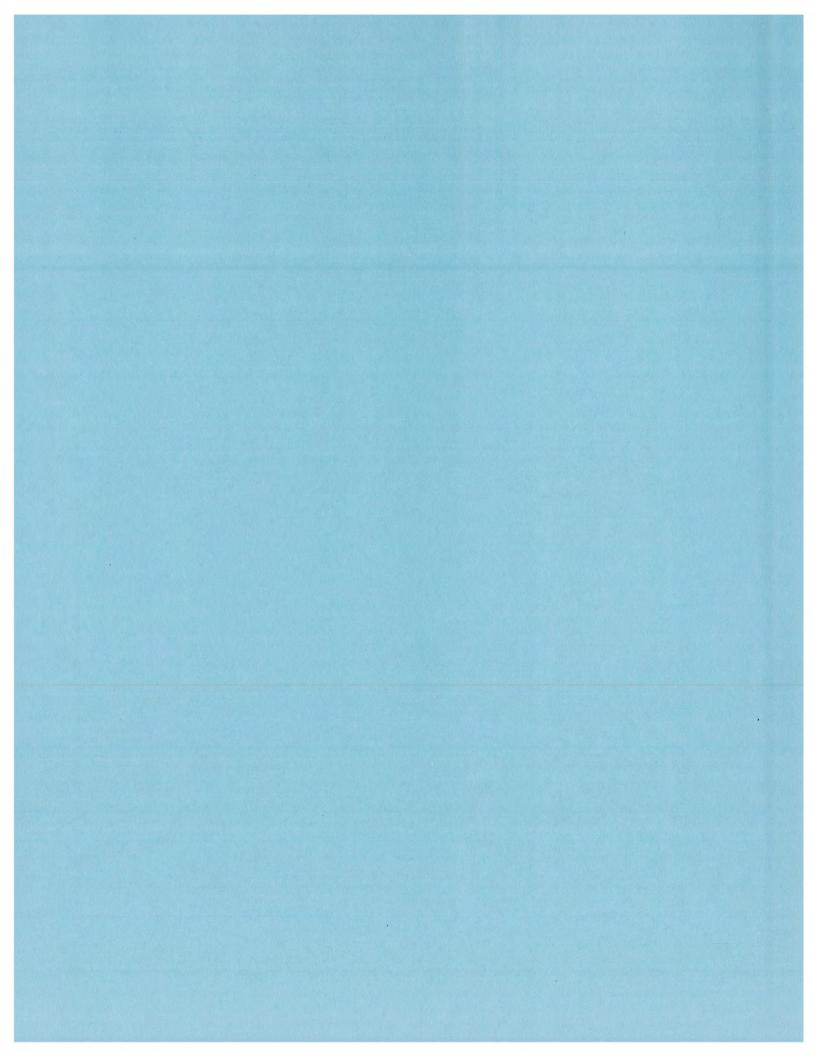
10,000

			Pre-Di	scharg	e Well Pi	umping	
Well Pump							
	Pump Star Time		np Stop. Fime		Fank evation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	730	9.15	55	STAL	ī-10"	76 6.9M	10065
LCW-2	NOT US	ED					
LCW-3	730	7:	50			· · · · · · · · · · · · · · · · · · ·	
LCW-4	7,30	9:	55	5707	- 43''		
			· · ·			Total	10.065
		Leac	hate Dis	charge	e Pum pin	g(Monthly)	
Discharge#	Start Time	Stop Time	PH	Temp	Totalizo Flow To (Start)	tal Flow	Gallons Discharge
Discharge #1	10:00	12:00	6.8	44 °	97016	5 980165	10,000
Discharge #2						83,3 6Fm	÷

Leachate Discharge Sampling (Semi-Annually)

Da	te Sample	Sample S	Sample pH	Temperature
	Location		Time	
Sample #1				
Sample #2 (if required)				

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C – 4 QUARTERLY POTW DISCHARGE REPORTS



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

Via electronic mail

April 19, 2018

Mr. Robert L. Johnson City Engineer Technician 13 W. Oneida City Hall Oswego, New York 13126 darcher@oswegony.gov

Re: Quarterly Discharge Report – 1st Quarter 2018 Pollution Abatement Services Site – Oswego, New York City of Oswego Wastewater Discharge Permit 6-2017-18

Dear Mr. Johnson:

This quarterly report is submitted in accordance with the City of Oswego Wastewater Discharge Permit 6-2017-18 (Permit) for discharge of leachate from the Pollution Abatement Services (PAS) Site into the City of Oswego's Eastside Wastewater Treatment Facility. This report covers the reporting period from January 2018 through March 2018.

The PAS Site discharged a total of 30,000 gallons of leachate to the Oswego sewer system during the first quarter of 2018.

Discharge to City of Oswego January 2018 – March 2018

30,000 gallons

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

Sincerely, de maximis, inc.

Clay Mc Clarmon

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

F:\PROJECTS\3131 - PAS\Permits-POTW 10\2018\Oswego\1st Qtr\Oswego 1st Qtr 2018 rpt.doc

Allentown, PA • Clinton, NJ • Greensboro, GA • Knoxville, TN • San Diego, CA Cortland, NY • Wheaton, IL • Sarasota, FL • Houston, TX • Windsor, CT • Waltham, MA

TABLE 1 - PAS OSWEGO SITE QUARTERLY REPORT FOR CITY OF OSWEGO (2017)
LEACHATE DISCHARGE TO OSWEGO EASTSIDE WASTEWATER TREATMENT FACILITY
(Oswego SIU Wastwater Discharge Permit No.6-2017-18)

Discharge Quarter	2Q 2017	-	3Q 20	017	4Q 20	017	1Q 20	018
	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged
	4/4/17	10,005	7/11/17	20,005	10/3/17	20,005	1/9/18	10,000
	45/6.8		54/6.8		54/6.8		48/6.8	
	5/3/17	20,005	8/8/17	20,005	11/15/17	10,005	2/6/18	10,000
	46/6.8		54/6.8		48.5/6.7		48/6.8	
	6/8/17	20,005	9/6/17	19,895	12/5/17	10,000	3/6/18	10,000
	53/6.8		54/6.8		54/6.7		6.8/44	-
Total Discharged		50,015		59,905		40,010		30,000
Date Sampled*	Permit Limit					11/15/2017		
Analytes	mg/L					mg/L		
Antinomy Arsenic Beryllium Cadmium Chromium (total) Copper Cyanide Lead Mercury Nickel Selenium Silver Thallium Zinc	0.107 0.358 0.107 0.43 0.67 0.43 0.67 0.19 0.0002 0.69 0.282 0.65 0.073 1					ND <0.010 0.021 ND <0.010 ND <0.010 0.017 0.026 ND <0.010 ND <0.010 ND <0.0020 0.41 ND <0.010 ND <0.010 ND <0.010 ND <0.020 ND <0.020		
VOC** SVOC** BOD 5 TSS Phenolics pH	200 400 0.375 5> and <10		d in accordance with SI			NA NA 15 45 ND <0.010 6.7		

* Semi-annual sampling of PAS leachate discharge conducted in accordance with SIU Wastewater Discharge Permit No.6-2017-18.

** Analytes included for permit pollutant analysis performed every three years

Analyte values in bold exceed limit

ATTACHMENT I



OBRIEN 6 GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: 1-9-18

Time: 8:00 A.17

Field Technician Migener Koenverte

Weather Conditions OVER (45 30°

Well Pump		Pre-Di	scharge Well I	Pumping	
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	9:30	10,50	STAT IU"	STOP 4/2 "	9760
LCW-2	9:30	10:50		80mm - 9760 =	1226800
LCW-3	NET PUMPED				
LCW-4	9:30	10:50	END 4"		
				Total	9460

		Leach	ate Di	scharge	e Pumping(N	(onthly)	
Discharge #	Start Time	Stop Time	pH	Тетр	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	11:35	13:35	6,8	480	950165	960165	10,000
Discharge #2							<i>,</i>
Total	START (G)	1.15 PR.) 11:35		\$3.3 6PM		10,000
		Leachate			mpling (Sem	i-Annual	
	Date	Sample Location	10.00	iple ume	Sample Time	pH	Temperature
Sample #1							
Sample #2 (if required)							

C VA (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx

O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: 2 - (0- 18

Time: 7:15

Field Technician MARTIN KOEMNecke

Weather Conditions Swow 19"

Well Pump		Pre-Dis	charge Well I	Pumping	
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	10:15	12:25	START.9"		
LCW-2	12. 1	ED - INOPERABLE	END - 43"	34 = 130 mm	10,370
LCW-3	10:15	10:30		80 gpm 1	
LCW-4	10:15	12:25	-		
				Total	10,370

		Leach	iate Di	scharg	e Pumping(I	Monthly)
Discharge #	Start. Time	Stop Time	рЯ	Temp	Totalizer Flow Total (Start)	Totaliz Flow Total (End)	Discharge
Discharge #1	12:30	14:30	6.8	480	960165	97016	5 10,000
Discharge #2							/
Total							10,000
	X.				mpling (Sen		
1.4	Date	Sample Location	1 1 1 4 2	nple ume	Sample Time	pH	Temperature
Sample #1							
Sample #2 (if required)							

C VA (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx

O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: <u>3-6-18</u>

Time: 7:30

Field Technician MARTIN Koenwecke

Weather Conditions Overcust 30°

Well Pump			Pre-Dis	charg	e Well P	ump	ing		
	Pump Start Time		p Stop. ime	1. A. O. O. M. M.	Fank Evation	Flo	w Rate (e	est)	Gallons Pumped (est
LCW-1	730	9:5	5	STAL	ī - 10 "		766	-PM	10065
LCW-2	NOT USE	D —							
LCW-3	730	7:5	0						
LCW-4	.7:30	9:4	5	STOP	- 43"				
•							T	'otal	10065
Discharge #	Start Time	Stop Time	7 * 7. 9(1);9 	Temp	· Totaliz Flow To	er tal	lonthly Totaliz Flow	er	Gallons Discharge
Discharge # Discharge #1 Discharge #2	Time	Stop	7 * 7. 9(1);9 		- Totaliz	er tal)	Totaliz Flow Total (End 98014	er 1) 05	A STRATE AND A REPORT OF A STRATE AND A STRATE AS
Discharge #1	Time	Stop Time	pH	Temp	Totaliz Flow To (Start	er tal)	Totaliz Flow Total (End	er 1) 05	Discharge
Discharge #1 Discharge #2	Time 10:00	Stop Time /2:00	pff 6.8 Dischar	Temp ЦЦ° rge Sa	Totaliz Flow To (Start 97016 mpling (J	er tal) 5	Totaliz Flow Total (End 98014 8336 8336	er) o5 s ^c m vally	Discharge 10,000 10,000
Discharge #1 Discharge #2	Time 10:00	Stop Time /A.: 00	р П 6.8	Тетр ЦЦ [°] rge Sa	Totaliz Flow To (Start 97016	er tal) 5	Totaliz Flow Total (End 98014 83,36	er) o5 s ^c m vally	Discharge 10,000 10,000

C-\A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx



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

March 6, 2018

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

Re: 1st Quarter PAS Oswego Progress Report 2018

Dear Mr. O'Brien,

This letter confirms that the PAS Oswego Site has not shipped or discharged any wastewater from the PAS Oswego collection system to the City of Auburn POTW during December 2017– February 2018. This has been due to the EPA allowance of an alternate disposal method.

- Cumulative gallons removed for discharge in Auburn 1st Qtr. 2018 0
- Cumulative gallons removed for discharge in Auburn 2018 0

Since no wastewater was shipped or discharged to Auburn during the 1st quarter of 2018, no analytical testing was required. However, we continue to perform Site maintenance and sampling activities under the Operation, Monitoring and Maintenance Program for the Site approved by EPA. The data associated with that program indicate little change in the characteristics of the Site wastewater.

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

Sincerely, de maximis, inc.

Clay McClarnon

CMC/dsr

cc: PAS Management Committee





March 6, 2018

Mr. Timothy L. O'Brien Industrial Pretreatment Coordinator **35 Bradley Street** Auburn, NY 13021

Re: Industrial Pretreatment Program Zero Discharge Certification Statement:

Dear Mr. O'Brien

For the reporting quarter(s) of December 2017 to February 2018, I certify that for Pollution Abatement Services located in Oswego New York:

- 1. There have been no changes to any of our processes resulting in the potential for the discharge from the process waste stream.
- 2. No discharge of process wastewater has occurred since December 7, 2017.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information. including the possibility of fine and imprisonment for knowing violations.

Clay McClarnon

Name

Project Coordinator Title

March 6, 2017 Date (865) 691-5052 Phone

II – D 2ND QUARTER REPORT 2018



<u>QUARTERLY PROGRESS REPORT – 2nd QUARTER 2018</u> Operation, Maintenance and Long-term Monitoring Activities

PROJECT NAME: Pollution Abatement Services Site Oswego, New York

PERIOD COVERED: April – June (2nd Quarter) 2018

ACTIONS TAKEN DURING QUARTER:

- Leachate removal and site maintenance and monitoring activities were conducted at the Pollution Abatement Services (PAS) site (Site), in Oswego, NY by OBG Operations LLC (OBG) consistent with the PAS Site Operation, Maintenance and Long-term Monitoring Plan (Work Plan).
- A total of 50,000 gallons of leachate were removed from the Site during the period of April, May and June 2018. Specific quantities of leachate removed included 10,000 gallons in April, 20,000 gallons in May and 20,000 gallons in June. Details of the leachate removal for each month, along with historical leachate removal documentation are described in this progress report.
- During the months of April June 2018, leachate was pumped monthly from the PAS Site. The leachate was pumped into the City of Oswego East Side Wastewater Treatment Plant in accordance with City of Oswego Industrial User Permit no. 6-2017-18.
- Quarterly groundwater elevation monitoring was performed on May 7, 2018. Quarterly groundwater elevation monitoring results for the SWW- series monitoring wells (SWW-1 through SWW-12), leachate collection wells (LCW-1 through LCW-4), M-series wells (M-21 through M-23), LR-series wells (LR-2, 3, 6 and 8), LD-series wells (LD-3, 4, 5, 6, and 8), along with wells OS-1, OS-3, OI-1, OD-3 and LS-6 were recorded on the Pre-Pumping Well Monitoring Level Form. (Attachment D-1)
- Site maintenance activities were conducted monthly in combination with the monthly leachate removal event. The Site Inspection Checklist was used to document the land cap, leachate discharge system, leachate collection system and general Site conditions. (Attachment D-2) Monthly Site maintenance activities included the following:
 - Inspected the perimeter security fence of the Site. No discrepancies were reported at the time of the inspection.
 - The Site single French drainage system and two (2) concrete troughs were visually inspected. No discrepancies were reported at the time of the inspection.
 - Visually inspected the Site slurry-wall containment vegetated cap for signs of burrowing vermin or surface anomalies. No discrepancies were reported at the time of the inspections.



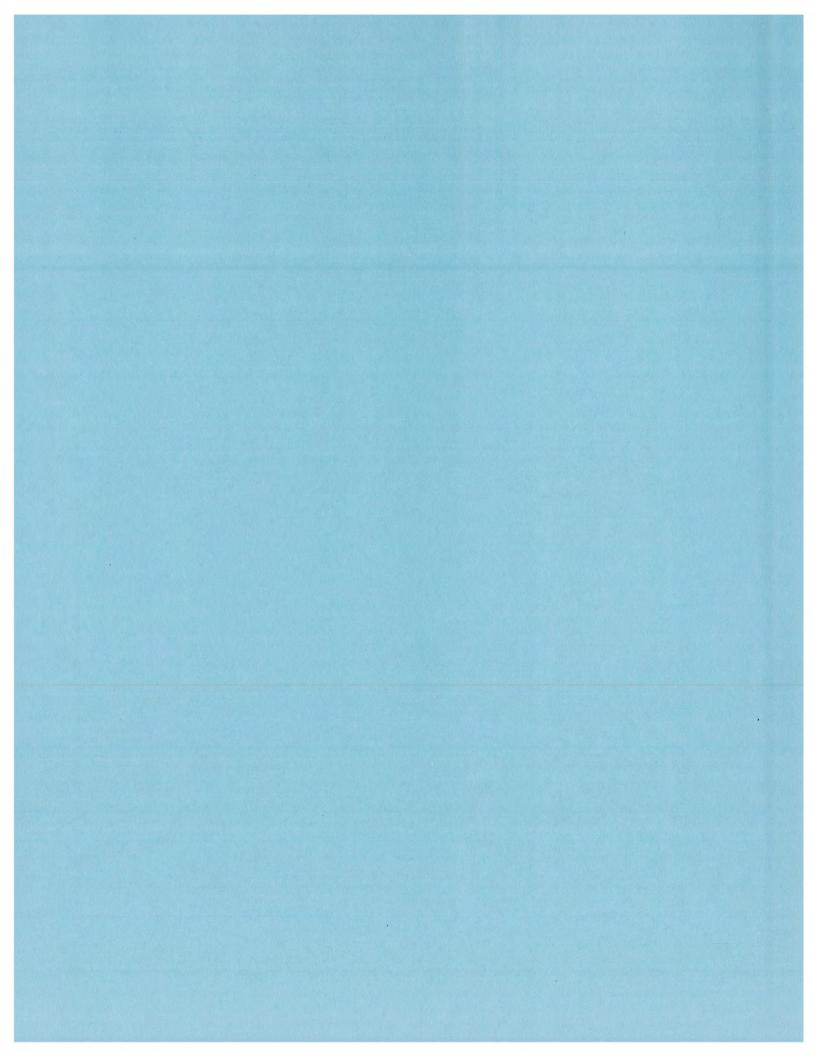
- Visually inspected the leachate collection system pumping equipment to verify proper operation. The field technician inspected each pump control panel to ensure control systems were generally free of rodents and insects, and were properly operating. The leachate holding tank was visually inspected for integrity, as were the leachate tanks steel protective roof, and wood structure. No discrepancies were reported at the time of the inspection.
- The Site wooden utility shed and leachate pumping equipment, including centrifuge discharge pump, flow meter, suction hose, pump oils levels, heat trace power panel, interior lighting, exterior and interior shed structure, and main power distribution panel were inspected. No discrepancies were reported at the time of the inspection.
- On April 3, May 9, and June 5, 2018, OBG performed the monthly pre-pumping collection system inspection for leachate collection wells LCW-1, 2, 3 & 4, along with inspection of the leachate discharge pumping system. Observations were recorded on the Site Inspection Checklist. LCW-2 was inoperable during the period. In advance of each leachate removal event, OBG informed the City of Oswego POTW of the anticipated discharge. (Attachment D-2)
- Upon completing the monthly leachate collection system inspections, OBG manually energized the four leachate collection pumps, identified as LCW-1, LCW-2, LCW-3, 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. LCW-2 was inoperable; however, LCW-1 continued to pump leachate from the down gradient trench. (Attachment D-3)
- During the months of April, May and June 2018, OBG pumped a combined total of 50,000 gallons of leachate from LCW 1, 2, 3 & 4 into the leachate collection tank and then into the City of Oswego POTW. The volume and flow rate of each leachate discharge was recorded onto the Leachate Disposal Checklist, as was leachate water pH, and temperature. The amount discharged was recorded onto the Leachate Disposal Checklist. No leachate was shipped to Auburn New York during the period. Therefore, no bill of lading was generated. (Attachment D-3)
- Upon completing each monthly leachate discharge the tank suction hoses were placed back into the leachate hold tank and the leachate pump system was shut down and prepared for storage. The concrete leachate hold tank was secured, as was the wooden maintenance shed. Upon the completion of monthly Site activities, the Site metal access gates were closed and padlocked.
- On May 7, 2018, OBG performed the semi-annual groundwater sampling for monitoring wells LR-8, M-21, and leachate collection wells LCW2 and LCW4. Based on the 2016 Annual Report, well OD-3 was included in the sampling event, and wells M-22 and LR-6 were not sampled during this event. Sampling activities for long term monitoring wells were conducted using low-flow sampling protocols described in the Work Plan. Samples were preserved using industry standard methods, and delivered to Life Science Laboratories in East Syracuse, NY for analysis. (Attachment D-4)

de maximis, inc.

• The PAS Oswego Site quarterly discharge report for the 2nd quarter of 2017 for the City of Oswego was submitted on July 14, 2017 in accordance with Permit 6-2017-18. The quarterly report to the City of Auburn was submitted on June 5, 2017. (Attachment D-5)

DOCUMENTATION OF REMOVAL ACTIVITIES FOR PREVIOUS QUARTER

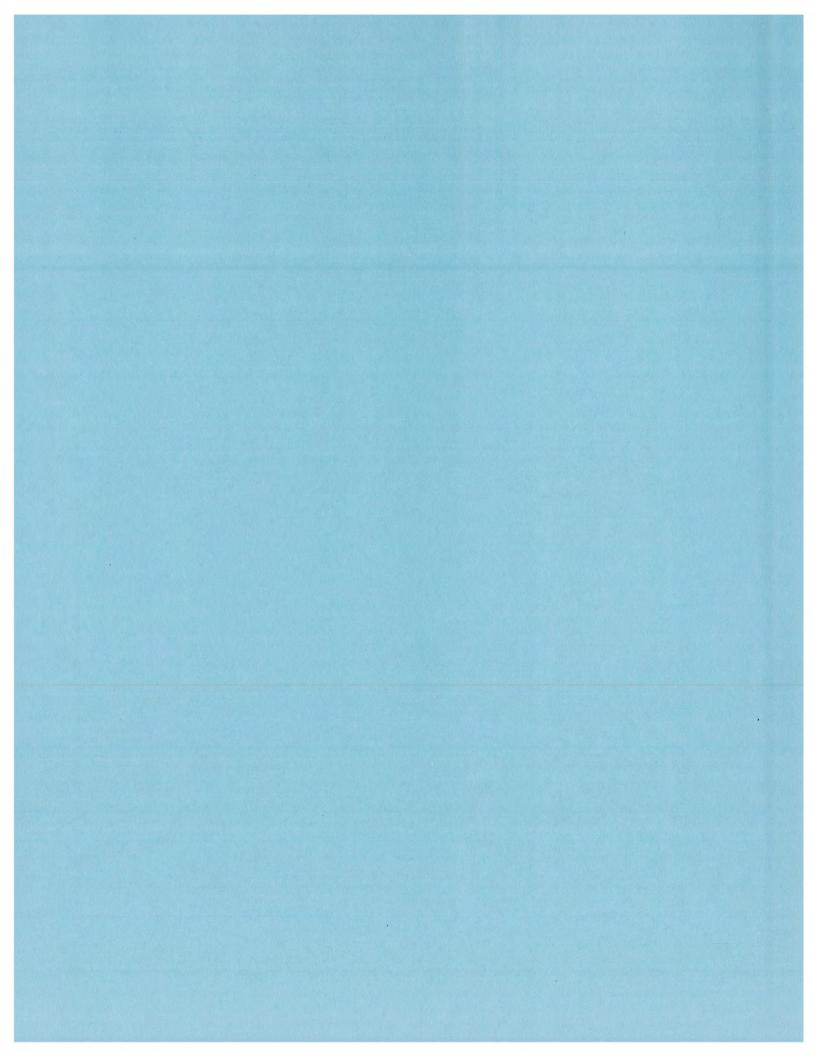
- The Groundwater Pre-Pumping Well Monitoring Level Form for May 1, 2017 is attached to this report. (Attachment D-1)
- The Site Inspection Checklist for April 4, May 4 and June 8, 2017 are attached to this report. (Attachment D-2)
- The Leachate Disposal Checklist for the April 4, May 3 and June 8, 2017 are attached to this report. (Attachment D-3)
- The validated lab report for the Semi-annual Groundwater sampling of LR-8, M-21 and the sampling for, LCW2, LCW4 and OD-3 performed on May 1, 2017 is attached to this report. (Attachment D-4)
- The PAS Quarterly Discharge reports submitted on July 14, 2017 to the City of Auburn and the report submitted to the City of Oswego on June 5, 2017 are attached to this report. (Attachment D-5)



D -1 GROUNDWATER ELEVATION DATA

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

Date - 🟒	5-7-18	?		Technician	MARTI	n Koenn	recke			Month - May 2018
Well	Riser	Well	Range Verifi					d Measure	ments	CV10
Number	Elevation	Average Well Level	Low Well Level	High Well Level	Well Level (1st) Check	Well Level (2nd) Check	(based on l rang	hin Range Istorical well e data) NO	Well Level Check (3rd) ((ff "NO" & well is not within targeted range)	NOTES
SWW1	289.33	9.25	8.22	10.00	9,10	9,10				<u>en la muera de la muera de la consecta de la presenta de la Presenta de la presenta de la pres</u>
SWW2	289.37	14.99	14.14	15.42	14,38	14,38				· · · · · · · · · · · · · · · · · · ·
SWW3	286.50	16.58	15.84	17.00	16,08	16.08			· · ·	
SWW4	283.60	14.73	12.62	15.94	14,14	14,14				
SWW5	277.02	12.77	11.74	13.46	12.00	12.00				
SWW6	273.06	8.57	7.58	9.21	8,22	8,22				
SWW7	277.93	7.52	7.02	7.90	7.02	7,02			·······	
SWW8	278.24	3.99	3.40	4.54	3,72	3,72				
SWW9	285.55	16.43	15.68	17.16	15,84	15,84				
SWW10	280.43	11.23	8.50	12.62	9.88	9.88				
SWW11	273.50	8.69	7.50	9.50	7.94	7,94				
SWW12	272.82	8.60	7.58	9.23	8,28	8.28				
LCW-1	272.21	8.24	7.04	9.12	7,06	7.06				
LCW-2	274.44	10.49	9.27	11.36	9,30	9,30				
LCW-3	284.36	17.69	17.24	18.05	17,66	17.66				
LCW-4	285.70	17.62	16.82	18.56	16.96	16.96				
<u> 05-1</u>	272.10	8.83	6.40	11.40	8,80	_8,80				
01-1	272.00	11.20	10.14	12.28	11.06	11.06				
OS-3	277.89	14.22	11.70	15.30	14,06	14.06				
OD-3	277.85	14.06	11.58	15.12	13,90	13,90				
LD-3	278.62	4.19	3.78	4.64	4,10	4,10				
LD-4	279.25	10.76	8.68	11.79	9,96	9.96				
LD-5	_272.94	8.69	7.84	9.42	8,54	8.54				
LS-6	274.14	9.63	7.95	10.74	9,34	9,34				
LD-6	274.03	10.01	9.32	10.65	9.40	9.40				
LD-8	272.83	7.32	6.08	8.30	7,02	7.02				
LR-2	289.85	13.19	12.96	13.42	13.06	13.06				
LR-3	278.06	7.75	7.10	8.36	7,28	7.28				
LR-6	274.39	10.15	9.44	10.66	9,94	9.94				
LR-8	273.42	9.82	9.04	10.35	9.72	9,72				
M-21	272.32	9.50	8.75	10.02	9,15	9.15				
M-22	273.88	10.16	9.38	10.64	9.92	9.92				
M-23	270.49	12.10	11.02	12.88	12,30	12.30				



D – 2 SITE INSPECTION CHECKLIST

Site Inspection Checklist (V2)

Former Pollution Abatement Services (PAS Oswego) Oswego, New York

4-3-18. Date

Time___ 7:30

Field Technician MARTIN KOEMerke

Weather Conditions OVERCAST 35

· · · · · · · · · · · · · · · · · · ·	Che	eck V	(tasks completed in each event)				
Inspection Features			Remarks (indicate accomplishment of each maintenance task)				
	Monthly	erly					
	Mor	Quarterly					
Pressent and the second sec		đ					
Land Cap							
Signs of burrowing vermin	V		NONE VISABLE				
Land cap irregularities (note							
anomaly)	V		OK AND THE PROPERTY AND				
French drainage system clear and							
function able	V		Yes				
Concrete trough clear and							
function able	V		OK				
Leachate Discharge System							
City of Oswego sanitary discharge							
valve positioned "Open"	V		Yes				
Discharge Pump inspected &							
operational	V		Yes				
Discharge pump oil level verified							
prior to use.	V) Yes				
Discharge pump drained of		1					
residual water (drained upon							
completion of monthly discharge)	V		Yes				
Heat trace system operational &							
verified in the "ON" position							
(Applicable Oct - May)	ν		ON				
Flow totalizer operational. Flow							
readings recorded onto							
"Leachate Discharge Form"	V		Yes				
Leachate Collection System			· / · · · · · · · · · · · · · · · · · ·				
Leachate holding tank visually	all age of the second of the	<u></u>					
inspected for structural integrity	V		0K				

4-3-18

· · ·	1	0	10
Leachate holding tank metal roof			
inspected for structural integrity	V		OK
Leachate tank access doors			
locked (post pump out)	V		Yes
Pump power panel(s) secured	V	1	Yes
Monitoring Wells (MW)			
Locks installed	v		Yes
MW's marked & identifiable	V		OK
General Site Condition			
Trees & brush cleared off security			
fence	V		WORK IN prograss
Perimeter security fence intact &			l l l l l l l l l l l l l l l l l l l
free of damage	. V		OK
Site access driveway inspected &			
free on snow & damage	V	1	OK
Security access gates / Padlock &			
chain serviceable	V		Yes
Site gate signage intact			Yes
Interior Constanton of utility			
Interior & exterior of utility			
storage shed inspected for			
	v		οK
storage shed inspected for	V		OK
storage shed inspected for damage & secure with locks	V		
storage shed inspected for damage & secure with locks Fire extinguisher serviceable,	V		oK Yes
storage shed inspected for damage & secure with locks Fire extinguisher serviceable, inspected, and inspection			Yes
storage shed inspected for damage & secure with locks Fire extinguisher serviceable, inspected, and inspection recorded			
storage shed inspected for damage & secure with locks Fire extinguisher serviceable, inspected, and inspection recorded Spill control material inspected &	V		Yes Yes
storage shed inspected for damage & secure with locks Fire extinguisher serviceable, inspected, and inspection recorded Spill control material inspected & adequate	V		Yes
storage shed inspected for damage & secure with locks Fire extinguisher serviceable, inspected, and inspection recorded Spill control material inspected & adequate PPE available and utilized as	V		Yes Yes Yes
storage shed inspected for damage & secure with locks Fire extinguisher serviceable, inspected, and inspection recorded Spill control material inspected & adequate PPE available and utilized as required	V		Yes Yes
storage shed inspected for damage & secure with locks Fire extinguisher serviceable, inspected, and inspection recorded Spill control material inspected & adequate PPE available and utilized as required Emergency contact information posted within shed		is rea	Yes Yes Yes
storage shed inspected for damage & secure with locks Fire extinguisher serviceable, inspected, and inspection recorded Spill control material inspected & adequate PPE available and utilized as required Emergency contact information posted within shed Additional remarks (use separate sh	V V V		Yes Yes Yes Yes quired)
storage shed inspected for damage & secure with locks Fire extinguisher serviceable, inspected, and inspection recorded Spill control material inspected & adequate PPE available and utilized as required Emergency contact information posted within shed Additional remarks (use separate sh Pumper 10,000 gol Le	V V V	is rea	Yes Yes Yes Yes quired)
storage shed inspected for damage & secure with locks Fire extinguisher serviceable, inspected, and inspection recorded Spill control material inspected & adequate PPE available and utilized as required Emergency contact information posted within shed Additional remarks (use separate sh Pumper 10,000 god Le		ti Ti	Yes Yes Yes Yes quired)

NOT OPERATIONAL)

LCW-2

2

.



Site Inspection Checklist (V2)

Former Pollution Abatement Services (PAS Oswego) Oswego, New York

Date___5-9-18

Time 7:45

Field Technician MARTIN Koennecke

Weather Conditions Surry 60

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

5-9-18

Leachate holding tank metal roof inspected for structural integrity \vee OK Leachate tank access doors locked (post pump out) \vee Yes Pump power panel(s) secured \sim Yes Monitoring Weils (MW) \vee Yes Locks installed \vee Yes MW's marked & identifiable \vee Yes General Site Condition \vee Ves Trees & brush cleared off security fence \vee $Work in Progress$ Perimeter security fence intact & free of damage \vee OK Site access driveway inspected & chain serviceable \vee Yes Interior & exterior of utility storage shed inspected for damage & secure with locks \vee Yes Fire extinguisher serviceable, inspected, and inspection \vee Yes Fire extinguisher serviceable, inspected, and inspection recorded \vee Yes PRE available and utilized ac PEF available and utilized ac \vee PRE available and utilized ac \vee Production \vee </th <th></th> <th>·</th> <th></th> <th></th> <th></th> <th>- .</th> <th><u></u></th> <th></th>		·				- .	<u></u>	
Impercent for outdefind integrity UK Leachate tank access doors V locked (post pump out) V Pump power panel(s) secured V Monitoring Wells (MW)Locks installed V Locks installed V W's marked & identifiable V General Site ConditionTrees & brush cleared off security fence V Work IN $Progress$ Perimeter security fence intact & free of damage V Site access driveway inspected & ree on snow & damage V VVesSite gate signage intact V VYesInterior & exterior of utility storage shed inspected for damage & secure with locks V Fire extinguisher serviceable, inspected, and inspection recorded V YesSill control material inspected & adequateSpill control material inspected & adequate V YesSill control material inspected & adequate	-							
locked (post pump out)VYesPump power panel(s) securedVYesMonitoring Wells (MW)VYesLocks installedVYesMW's marked & identifiableVOKGeneral Site ConditionVVesTrees & brush cleared off security fenceVWork in ProgressPerimeter security fence intact & free of damageOKSite access driveway inspected & free on snow & damageOKSecurity access gates / Padlock & chain serviceableVVYesInterior & exterior of utility storage shed inspected for damage & secure with locksYesFire extinguisher serviceable, inspected, and inspection recordedYesSpill control material inspected & adequateYes		V	OK					
Pump power panel(s) secured v Xes Monitoring Wells (MW) v Yes Locks installed v Yes MW's marked & identifiable v OK General Site Condition v Work in Progress Trees & brush cleared off security fence v Work in Progress Perimeter security fence intact & free of damage v OK Site access driveway inspected & free on snow & damage v OK Security access gates / Padlock & chain serviceable v Ye S Site gate signage intact v Ye S Interior & exterior of utility storage shed inspected for damage & secure with locks v Ye S Fire extinguisher serviceable, inspected, and inspection recorded v Ye S Spill control material inspected & adequate v Ye S	Leachate tank access doors							
Monitoring Wells (MW)VYesLocks installed \vee YesMW's marked & identifiable \vee OK General Site Condition \vee OK Trees & brush cleared off security fence \vee $Work in Phagness$ Perimeter security fence intact & free of damage \vee OK Site access driveway inspected & free on snow & damage \vee OK Security access gates / Padlock & chain serviceable \vee Yes Site age signage intact \vee Yes Interior & exterior of utility storage shed inspected for damage & secure with locks \vee Yes Fire extinguisher serviceable, inspected, and inspection recorded \vee Yes Spill control material inspected & adequate \vee Yes		V	Yes					
Locks installed \vee $\forall estimates S$ MW's marked & identifiable \vee ok General Site Condition \vee ok Trees & brush cleared off security fence \vee $work in Progress$ Perimeter security fence intact & free of damage \vee ok Site access driveway inspected & free on snow & damage \vee ok Security access gates / Padlock & chain serviceable \vee $\forall estimates$ Site gate signage intact \vee $\forall estimates$ Interior & exterior of utility storage shed inspected for damage & secure with locks \vee $\forall estimates$ Fire extinguisher serviceable, inspected, and inspection recorded \vee $\forall estimates$ Spill control material inspected & adequate \vee $\forall estimates$		¢	Yes					
MW's marked & identifiable V OK General Site Condition V OK Trees & brush cleared off security V WORK IN Progress Perimeter security fence intact & V OK Site access driveway inspected & V OK Site access driveway inspected & V OK Security access gates / Padlock & V Ye S Site gate signage intact V Ye S Interior & exterior of utility storage shed inspected for damage damage & secure with locks V Ye S Fire extinguisher serviceable, V Ye S Spill control material inspected & V Ye S	Monitoring Wells (MW)	和公司			nig 21 wine. Ng Pangangan	teren terren Grand der der		
MW's marked & identifiable \vee OK General Site Condition \vee OK Trees & brush cleared off security fence \vee $WORK$ in $Progress$ Perimeter security fence intact & free of damage \vee OK Site access driveway inspected & free on snow & damage \vee OK Security access gates / Padlock & chain serviceable \vee Ves Site gate signage intact \vee Ves Interior & exterior of utility storage shed inspected for damage & secure with locks \vee Fire extinguisher serviceable, 	Locks installed	V	Yes	·			· • 3	
Trees & brush cleared off security fencevWORK IN PROGRESSPerimeter security fence intact & free of damagevOKSite access driveway inspected & free on snow & damagevOKSecurity access gates / Padlock & chain serviceablevYe SSite gate signage intactvYe SInterior & exterior of utility storage shed inspected for damage & secure with locksvYe SFire extinguisher serviceable, inspected, and inspection recordedvYe SSpill control material inspected & adequatevYe S	MW's marked & identifiable	V						
fenceVWORK IN ProgressPerimeter security fence intact & free of damageVOKSite access driveway inspected & free on snow & damageVOKSecurity access gates / Padlock & chain serviceableVYe SSite gate signage intactVYe SInterior & exterior of utility storage shed inspected for damage & secure with locksVYe SFire extinguisher serviceable, inspected, and inspection recordedVYe SSpill control material inspected & adequateVYe S	General Site Condition					els segue 2 production		
Perimeter security fence intact & free of damage \vee OK Site access driveway inspected & free on snow & damage \vee OK Security access gates / Padlock & chain serviceable \vee Ves Site gate signage intact \vee Yes Interior & exterior of utility 	Trees & brush cleared off security							
Perimeter security fence intact & free of damage \vee OK Site access driveway inspected & free on snow & damage \vee OK Security access gates / Padlock & chain serviceable \vee Ves Site gate signage intact \vee Yes Interior & exterior of utility storage shed inspected for damage & secure with locks \vee Yes Fire extinguisher serviceable, inspected, and inspection recorded \vee Yes Spill control material inspected & adequate \vee Yes	fence	. V	wor	KINÍ	PROGRES	5		
Site access driveway inspected & free on snow & damageVOKSecurity access gates / Padlock & chain serviceableVYe SSite gate signage intactVYe SInterior & exterior of utility storage shed inspected for damage & secure with locksVYe SFire extinguisher serviceable, inspected, and inspection recordedVYe SSpill control material inspected & adequateVYe S	Perimeter security fence intact &				- /			
free on snow & damage ν OK Security access gates / Padlock & chain serviceable ν $\forall e s$ Site gate signage intact ν $\forall e s$ Interior & exterior of utility ν $\forall e s$ Interior & exterior of utility ν $\forall e s$ storage shed inspected for damage & secure with locks ν $\forall e s$ Fire extinguisher serviceable, inspected, and inspection recorded ν $\forall e s$ Spill control material inspected & adequate ν $\forall e s$	free of damage	V	OK.					
Security access gates / Padlock & chain serviceableYesSite gate signage intactVSite gate signage intactVVYesInterior & exterior of utilityVstorage shed inspected for damage & secure with locksVYesFire extinguisher serviceable, inspected, and inspection recordedVYesSpill control material inspected & adequateVYes	Site access driveway inspected &							-
Security access gates / Padlock & chain serviceableYesSite gate signage intactVSite gate signage intactVVYesInterior & exterior of utilityVstorage shed inspected for damage & secure with locksVYesFire extinguisher serviceable, inspected, and inspection recordedVYesSpill control material inspected & adequateVYes	free on snow & damage	V	OK					
Site gate signage intact \checkmark $\checkmark_{e.S}$ Interior & exterior of utilitystorage shed inspected fordamage & secure with locks \checkmark $\forall e.S$ Fire extinguisher serviceable,inspected, and inspectionrecorded \checkmark $\forall e.S$ Spill control material inspected & $adequate$ \checkmark $\forall e.S$	Security access gates / Padlock &							
Interior & exterior of utilityInterior & exterior of utilitystorage shed inspected forInterior & Yesdamage & secure with locksInterior & YesFire extinguisher serviceable,Interior & Yesinspected, and inspectionInterior & YesrecordedInterior & YesSpill control material inspected & adequateInterior & Yes	chain serviceable	v	Yes					
Interior & exterior of utilityInterior & exterior of utilitystorage shed inspected forInterior & Yesdamage & secure with locksInterior & YesFire extinguisher serviceable,Interior & Yesinspected, and inspectionInterior & YesrecordedInterior & YesSpill control material inspected & adequateInterior & Yes	Site gate signage intact	V	Yes	· ·	ż		· .	
damage & secure with locksVYesFire extinguisher serviceable, inspected, and inspection recordedVYesSpill control material inspected & adequateVYes	Interior & exterior of utility							
Fire extinguisher serviceable, inspected, and inspection inspected, and inspection v recorded v Spill control material inspected & adequate v	storage shed inspected for							
Fire extinguisher serviceable, inspected, and inspection inspected, and inspection v recorded v Spill control material inspected & adequate v	damage & secure with locks		Yes					
recorded v Yes Spill control material inspected & adequate v Yes	Fire extinguisher serviceable,						· · ·	
Spill control material inspected & adequateVYes	inspected, and inspection							
adequate v Yes	recorded	V	Yes					
	Spill control material inspected &							
PPE available and utilized as	adequate	V	Yes	· · · ·		· .		. •.
	PPE available and utilized as					-		
required v Yes	required	ν	Yes					. ÷
Emergency contact information	Emergency contact information			A	·			
posted within shed \vee Yes	posted within shed	V	Yes					
Additional remarks (use separate sheet is required)	Additional remarks (use separate sl	neet		···	*****		8	
LCW-2 TEMPARK REPAIRED 5-8-18, QUAPTERLY Well Levels	· · ·			8.	QUADT	erly	well	Levels
TAKEN, SEMI ANNUAL Well SAMPLING DONE 5-7-18					1.		5-7-	18
AND 5-8-18, PUMPED 20,000 gal To POTW OSWEDD							ØŚι	Nego

Site Inspection Checklist (V2)

Former Pollution Abatement Services (PAS Oswego) Oswego, New York

Date 6-5-18

Time 7:25

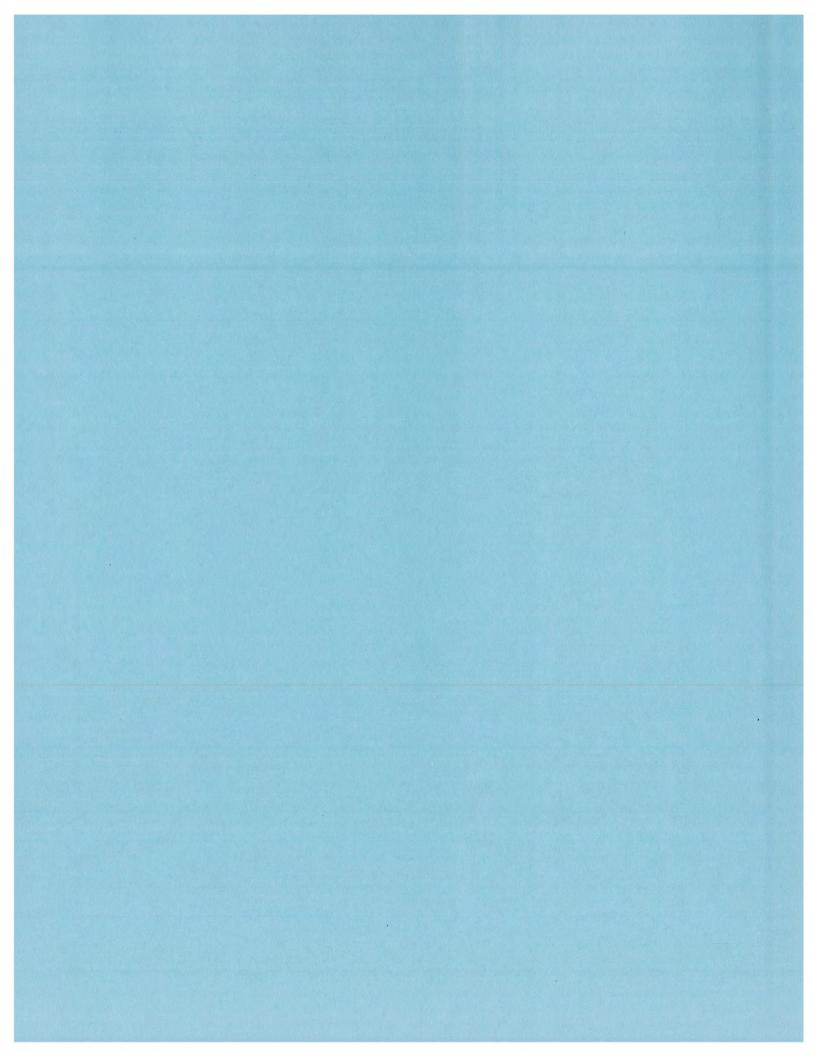
Field Technician MARTIN Koennecke Weather Conditions OVERCAST 55°

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

6-5-18

Leachate holding tank metal roof		
inspected for structural integrity	1	OK
Leachate tank access doors		
locked (post pump out)	V	Yes
Pump power panel(s) secured	V	Yes
Monitoring Wells (MW)		
Locks installed	V	Yes
MW's marked & identifiable	V	OK
General Site Condition		
Trees & brush cleared off security		
fence	V	WIRK IN PROGRESS
Perimeter security fence intact &		
free of damage	V	OK
Site access driveway inspected &		
free on snow & damage	V	OK
Security access gates / Padlock &		
chain serviceable	V	Yes
Site gate signage intact	V	Yes
Interior & exterior of utility		
storage shed inspected for	-	12
damage & secure with locks	V	Yes
Fire extinguisher serviceable,		
inspected, and inspection		
recorded	V	Yes ExcHANGED with Newly Inspected
Spill control material inspected &		
adequate	V	Yes
PPE available and utilized as	12 1	
required	V	Yes
Emergency contact information		25
posted within shed	V	Yes

Additional remarks (use separate sheet is required) <u>PUMPED 20,000 GALLUNS LEACHATE TO OSWEGD POTW</u> WEED WHACKED AROUND SHED AND TANK AREA'S



D - 3 LEACHATE DISCHARGE FORM



OBRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: <u>4-3-18</u>

7:30 Time:

Field Technician MARTIN Koennecke

Weather Conditions <u>over (457 35</u>°

Well Pump		Pre-Dis	charge Well P	umping	
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	730	945	·	73,4 6FM	
LCW-2	NOT PUMPK	D (· · · · · · · · · · · · · · · · · · ·	
LCW-3	7:30	8:00	STAT-11"		
LCW-4	7:30	945	STOP-43,5	=32.5 : 73GP	n
				Total	9,912

Discharge#	Start Time	Stop Time	pH	Тетр	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	9:55	11:55	6.8	440	980165	990165	10,000
Discharge #2							
Total						· · · · · · · · · · · · · · · · · · ·	16,000

	Date	Sample Location	Sample Volume	Sample Time	рН	Temperature
Sample #1	4-3-18	5 Angoly Pai	<u>39a</u> (11:45	6.8	440
Sample #2 (if required)		• • • • • • • • • • •				
Jahn Maye	ath - 0	. 16	7010 pick 10:10 - 11:45	<i>,</i> .	s - 11:40	

C VA (Kevin)VAII Projects/PAS Oswego/Forms/Checklist/PAS Leachate Disposal Checklist_V1_2010.docx



PAS Site Oswego, New York

Leachate Discharge Form

Date: <u>5-9-18</u>

Time: 7:45

Field Technician MARTIN KOENNacke

Weather Conditions SUNNY 60°

网络静学

		Pre-Disc	sharge Well P	umping	
Well Pump			ut in allong un Standing Ki Kadadak		A O A mail constraints
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	7.45	11:45		104 gpm	191,95
LCW-2	7:45	/1:45		//	
LCW-3	7:45	8:00			
LCW-4	7:45	9:40 IN	Tennitten		
	· · · · · · · · · · · · · · · · · · ·	· · · ·	· · · ·	Total	19.695

START 13" @930-45" = 104 6Pm END 12

rational References References	Leachate Discharge Pumping(Monthly)									
Discharge#	Start Time	Stop Time	pĦ	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge			
Discharge #1	9:20	13:15	6.8	48°	990165	1010165	20,000			
Discharge #2										
Total					·····		20,000			
		Leachate	Discha	irge Sa	mpling (Sen	ni-Annuall	Ŵ			
	Date	Sample Location	4 100 100 100	iple ume	Sample Time	pH	<u>Femperature</u>			
Sample #1										
Sample #2 (if required)				-		-				

C \A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx



O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: 6-5-18

7:25 Time:

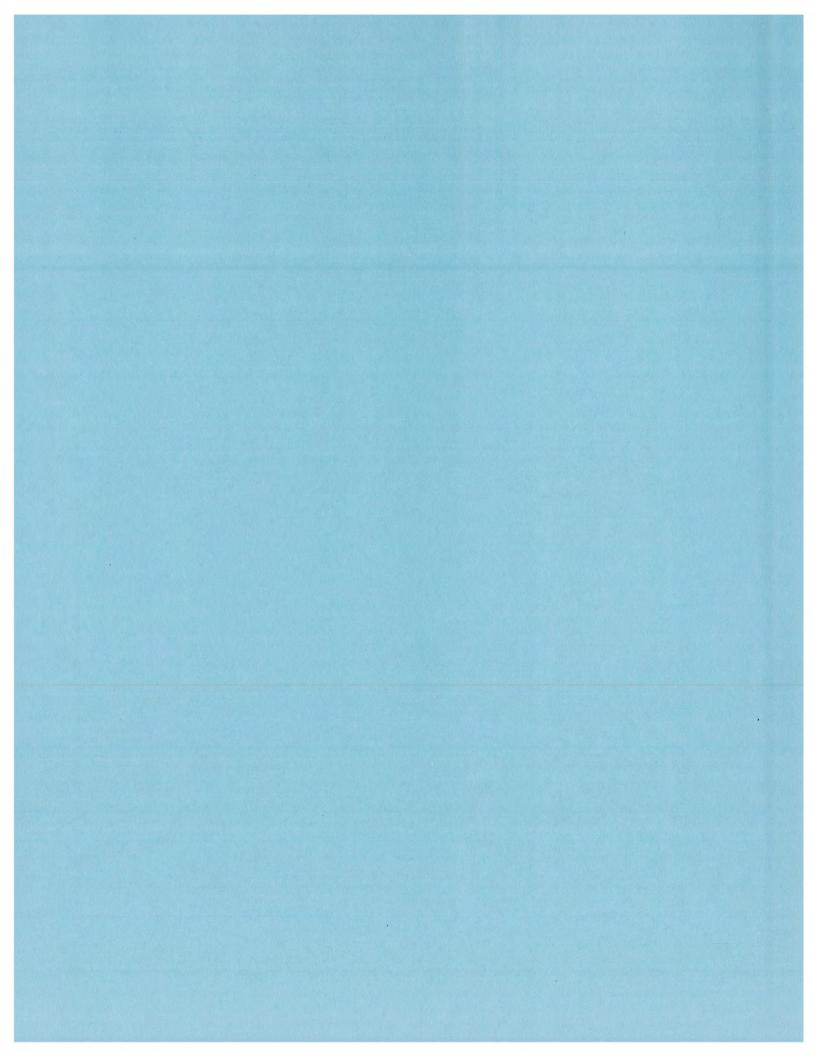
Field Technician MARTIN Koennecky

Weather Conditions P-Sunny -55°

Pump Start TimePump Stop, TimeTank ElevationFlow Rate (est) Pumped (est)Gallons Pumped (est)LCW-1 730 11.00 $5THCT - 13''$ $1/3.8$ GPm $30.900''$ LCW-2 730 11.00 19.308 19.308 LCW-3 730 750 19.50 19.308 LCW-4 730 915 $Imrediation Flow Flow Flow Flow Flow Flow Flow Flow$			Pre-D	iscnarg	e Well P	un	oung	
$\frac{1730}{11.00} = \frac{17.00}{11.00} = \frac{17.00}{11.00} = \frac{17.00}{11.00} = \frac{17.38 GPM}{19.38 GPM} = \frac{19.00}{19.300} = \frac{19.30}{19.300} = \frac{19.300}{19.300} = \frac{19.300}$	A CONTRACTOR OF			a second s	2013年1月1月1日日	Flo	ow Rate (est) Gallons Pumped (est)
LCW-3 17 30 17:50 LCW-4 17 30 9 15 Intermedia RUNNING Total Post Pump out 10" Total Post Pump out 10" Total Discharge # Start Stop pH Temp Totalizer Flow Gallons Discharge # Time pH Temp Totalizer Flow Discharge Discharge #1 9:10 13:05 6,8 49° 1010165 1030/65 20,000 Discharge #2 Total Total Discharge #2 Total Discharge Sampling (Semi-Annually) Leachate Discharge Sampling (Semi-Annually) Date Sample Sample PH Temperature	730	11:			-12"	11	3,8 6Pm	20,000
LCW-3 17 30 17:50 LCW-4 17 30 9 15 Intermeted Runnited Runni	730	11:	00					19,368
TotalPost PumpoutTotalPost Pumpout IO'' IO'' Discharge #StartStoppHTimeTimepHTempTimeTime IO'' IOO'' Discharge #1 $G'IO$ $I3'O5$ $6,8$ 49° Discharge #2Image ImageImage Image Im		7:						,
Total Post Pumpout 10" Total Post Pumpout 10" Total Image: Post Pumping (Monthly) Image: Post Pumping (Monthly) Discharge # Start Time Stop Time pH Temp Totalizer Flow Total (Start) Total (End) Discharge #1 9:10 13:05 6,8 49° 1010165 1030/65 30,000 Discharge #2 Image: Post Pumping (Semi-Annually) Image: Post Pumping (Semi-Annually) Image: Post Pumping (Semi-Annually) Date Sample Sample Sample Post Pumping (Semi-Annually)	730	9	15	In	TERMINTED	RU	INNING	
TimeTimeTimeFlow Total (Start)Flow Total (End)DischargeDischarge #19:1013:056.849°1010165103016530,000Discharge #2	Start		11. A N					Gallons
Discharge #1 9:10 13:05 6.8 49° 1010165 1030165 20,000 Discharge #2 Image: Constraint of the second s	a Dell'ENCE		pH	Temp	and the second second		the second second second second second	Tutt Provide Light Agen
Discharge #2 Discharge #2 Discharge #2 Discharge Sampling (Semi-Annually) Discharge Sample Sample Sample Sample					(Start	t)		
Discharge #2 Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Total Image: Constraint of the system Total Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constraint of the system Image: Constrainton Image: Constraint of the system	9:10	13:05	6.8	490	101011	05	1030/65	20,000
Leachate Discharge Sampling (Semi-Annually) Date Sample Sample Sample pH Temperature							-	
Leachate Discharge Sampling (Semi-Annually)DateSampleSamplepHTemperature								20,000
	1	Leachate	Disch	arge Sa	mpling (Sen	ui-Annua	
	Date	•	-1.41941				pH	Temperature
Sample #1		Time 1730 1730 1730 10 9:10	Time T 730 11: 730 11: 730 7: 730 7: 730 7: 730 9 Leach Start Stop Time Time 9:10 13:05 Leach Leach Date Sample	Time Time 730 11:00 730 11:00 730 750 730 750 730 915 730 915 Post Post 915 10 13:05 6,8 9:10 13:05 6,8 10 13:05 6,8 10 13:05 6,8 10 13:05 6,8	Time Time Eld 730 11:00 \$TART 730 11:00 \$TART 730 11:00 \$TART 730 750 \$TR 730 750 \$TR 730 915 \$TR 730 915 \$TR 750 \$TR \$Post \$TR Post \$Pump \$Post \$Pump Leachate Discharge \$Post \$Pump 9:10 13:05 6.8 \$49.0 \$Image: Part of \$Pill \$Time \$Image: Pill \$Pill \$	Time Time Elevation 730 11:00 \$THRT-1∂" 730 11:00 \$THRT-1∂" 730 11:00 \$THRT-1∂" 730 750 \$THRT-1∂" 730 750 \$THRT-1∂" 730 750 \$THRT-1∂" 730 915 \$THRTHER 700 915 \$THRTHER 700 915 \$Thermutter 8 \$Thermutter \$Thermutter 100 \$Thermutter \$Thermutter	Time Time Elevation 730 11:00 \$TART-13" 11. 730 11:00 \$TART-13" 11. 730 11:00 \$TART-13" 11. 730 17:50 \$TOTERMATED RADIATION RADI	Time Time Elevation 730 11:00 \$THRT-13" 113,8 GPm 730 11:00 5 11:00 11:00 730 17:50 10 10 10 730 7:50 10 10 10 730 9:15 In Texminited RVINNING RVINNING 700 9:15 In Texminited RVINNING Totalizer 700 9:15 In Texminited RVINNING Totalizer Post Pump out 10" 10" Start Stop pH Temp Totalizer Time Time Flow Total (Start) Flow 9:10 13:05 6,8 49° 1010165 1030/65 9:10 13:05 6,8 49° 1010165 1030/65 10 10 10 10 10 10 Leachate Discharge Sampling (Semi-Annual Date Sample Sample PH

C \A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx

Sample #2 (if required)



D – 4 SEMIANNUAL LEACHATE AND GROUNDWATER MONITORING DATA



DATA VALIDATION

FOR

WATER MONITORING PAS Oswego OSWEGO, NEW YORK

ORGANIC ANALYSIS DATA Volatiles in Water Laboratory Job No. 1806874

Analyses Performed

By:

Life Sciences Laboratory East Syracuse, NY

For:

de maximis, inc. Knoxville, TN 37919

Data Validation By:

ddms, inc. St. Paul, Minnesota 55108

July 9, 2018

1547-3131/psn PAS\1806874Voa



EXECUTIVE SUMMARY

Validation of the volatile organics analysis data prepared by Life Sciences Laboratories, Inc. for seven water samples, one equipment blank, and one trip blank supporting the PAS Oswego Semi Annual Well Sampling event has been completed by de maximis Data Management Solutions, Inc. (ddms). The data were reported by the laboratory under Laboratory Job No. 1806874. The following samples were reported:

Equipment Blank	M-21	LR-8	OD-3	X-1
LR-6	LCW-2	LCW-4	Trip Blank	
LR-0		LCVV-4	пр ыапк	

Based on the validation effort, the following qualifiers were applied:

- Results for acetone, 2-butanone, 2-hexanone, and 1,2-dibromo-3chloropropane were qualified as estimated (J, UJ).
- Results for chlorobenzene in M-21, LR-8, LCW-2, and LCW-4 were qualified estimated (J+) and may be biased high.
- Results for cyclohexane in M-21 and LR-8 were qualified estimated (J) and presumptively present (N), and results for cyclohexane in the remaining samples and for Freon 113 and methyl acetate in all samples were rejected (R).

All other results were determined to be valid as reported. Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report.

Documentation issues are discussed in Section XIII.

This report should be considered <u>part of the data package</u> for all future distributions of the volatiles data.



INTRODUCTION

Analyses were performed in accordance with USEPA SW-846 Method 8260C. This method does not stipulate a reporting format, however, the laboratory provided a "CLP-type" data package for review. Results of sample analyses were reported by the laboratory without qualifications.

Since no validation guidelines specific to the analytical method employed are available, ddms' validation was performed, to the extent possible, in conformance with EPA's "Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B & 8260C, SOP NO. HW-24, Revision 4" as well as ddms' "Standard Operating Procedure: Validation and Review of Volatile Organic Data; ECS-SOP-003". Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the Region II Guidelines:

- U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
- J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The result is an estimated quantity, but the result may be biased high.
- J- The result is an estimated quantity, but the result may be biased low.
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- R The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) Criteria. The analyte may or may not be present in the sample.



These codes are recorded on the Data Summary Forms contained in Attachment A and the Organic Analysis Report Sheets in Attachment B of this validation report to indicate qualifications placed on the results based on the data review.

All data users should note two facts. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, no concentration is guaranteed to be accurate even if all associated quality control is acceptable. Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.



I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting sample collection dates of May 7 and 8, 2018. The samples were hand delivered to the laboratory on May 8, 2018. The temperature of the cooler on receipt at the laboratory was acceptable (2.0° C; criteria 4.0° C \pm 2.0° C). Acceptable preservation of samples (pH <2) was noted in the narrative. The samples were analyzed on May 9, 2018, within the 14-day holding time for preserved samples.

II. GC/MS Instrument Performance Check

Summary forms were provided for two bromofluorobenzene (BFB) instrument performance check run on instrument "#3MS10", representing the periods during which the samples and associated standards were analyzed. The performance checks were fully documented and acceptable.

III. Calibration

Manual integrations were indicated on the IC quantitation reports for several analyte responses, however no supporting documentation was provided to verify that the integrations were appropriately performed. The validation was completed under the assumption that all manual integrations were appropriately performed.

A. Initial Calibration (IC)

One IC was performed in support of these sample analyses. Documentation of all of ten of the individual IC standards was present in the data package and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were accurately reported. All reported %RSD values were below the maximum acceptance limit of 20 percent for all site-specific compounds. All average RRFs were acceptable (greater than 0.05) with the exception of acetone (0.026) and 2-butanone (0.043). For 2-hexanone and 1,2-dibromo-3-chloropropane, the average RRF over the calibration range was acceptable, however the RRFs at the lower end of the calibration range were biased low. Results for acetone, 2-butanone, 2-hexanone, and 1,2-dibromo-3-chloropropane were qualified as estimated (J, UJ) due to excursions in the IC.

The laboratory states in the narrative that Freon 113, methyl acetate, and cyclohexane were not part of the calibration. Accurate identification and quantitation is not possible due to the absence of RFs and RTs for the target compounds. As a result, the laboratory reported cyclohexane in two of the samples using the closest internal standard to report estimated concentrations. However, positive identification is not possible in the absence of RT and mass spectra. Results for cyclohexane in M-21 and LR-8 were qualified estimated (J) and presumptively present (N). Results for cyclohexane



in the remaining samples and for Freon 113 and methyl acetate in all samples were rejected (R) because neither the presence nor absence can be verified based on the data provided. (See XIII. Documentation)

B. Continuing Calibration (CC)

One CC was performed on May 9, 2018. All RRF values were acceptable. The percent difference (%D) for several compounds exhibited an increase in sensitivity. In all cases except acetone (46%D), the compound was not detected in any of the samples, and no data were qualified on this basis. For acetone in M-21 and LR-8, the result is qualified as estimated (J) and may be biased high due to the increase in sensitivity from the IC.

IV. Blanks

One laboratory method blank was analyzed in support of these samples. One trip blank and one equipment blank were submitted in support of these samples. No compounds were detected in any of the blanks.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated, accurately reported, and within acceptance limits.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on LR-8. All percent recoveries were acceptable with the exception of chlorobenzene (130%R; validation acceptance criteria 70-130%R) in the MS. Results for chlorobenzene in M-21, LR-8, LCW-2, and LCW-4 were qualified estimated (J+) and may be biased high due to MS/MSD recoveries.

B. Blank Spike

Two blank spikes were reported with these samples. All percent recoveries and relative percent differences (RPDs) were acceptable with the exception of acetone (31%RPD; data validation criteria 30%). Results for acetone in M-21 and LR-8 were qualified as estimated (J) due to poor precision between paired LCS results.



VII. Field Duplicate

Sample OD-3 was collected as a blind field duplicate of Sample X-1. Since none of the target compounds were detected in either sample, no evaluation of precision could be made.

VIII. Internal Standard Performance

All internal standard (IS) areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Target analytes were detected in five of these samples and an acceptable mass spectrum was provided for most of the compounds detected.

Analyte-specific reporting limits (RLs) are equal to at least the lowest standard in the calibration range, in most cases higher than the lowest standard, and are well supported by the IC.

X. Compound Quantitation and Reporting Limits

Target compound concentrations and RLs were correctly calculated and accurately reported for all samples and spike samples, including adjustments for any dilution factors.

The Data Summary Forms in Attachment A list all individual sample analytes. Where no result is listed, the compound was not detected and the RL was not qualified. Sample-specific RLs may be calculated from the information on the data summary form by multiplying the quantitation limit (far left column) by the dilution factor.

XI. Tentatively Identified Compounds (TIC)

Tentative identification of non-target compounds was not a requirement of this analytical program.

XII. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.



XIII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package.

The following documentation issues were observed during the validation of these data:

- The sample identifications on the COC did not include the sample date. The laboratory appended the sample dates to the field identifications to facilitate database requirements. The sample identifications provided on the COC have been used throughout this report. While this documentation issue does not affect the usability of the data, it could be problematic if the data were used in litigation.
- The LCS/LCSD and MS/MSD summary forms report Freon 113, methyl acetate, and cyclohexane as having been spiked with no recoveries. At the request of the data user, the laboratory may be requested to submit a revised data package to reflect that these compounds were not spiked into the LCS/LCSD or MS/MSD spiking solutions.
- As discussed in the calibration section, cyclohexane, Freon 113, and methyl acetate were not included in the IC. No documentation was provided in the data package to support that the laboratory can accurately identify these compounds. In the absence of compound specific response factors, accurate quantitation is not possible. At the discretion of the data user, the laboratory may be requested to provide any available data to support the reported presence and/or absence of these compounds in the samples.

These documentation issues do affect the usability of the data, in addition to being problematic if the data were used in litigation.

XIV. Overall Assessment

Based on the validation effort, the following qualifiers were applied:

- Results for acetone in M-21 and LR-8 were qualified as estimated (J+) and may be biased high due to the increase in sensitivity from the IC.
- Results for acetone, 2-butanone, 2-hexanone, and 1,2-dibromo-3chloropropane were qualified as estimated (J, UJ) due to excursions in the IC.



- Results for chlorobenzene in M-21, LR-8, LCW-2, and LCW-4 were qualified estimated (J+) and may be biased high due to MS/MSD recoveries.
- Results for acetone in M-21 and LR-8 were qualified as estimated (J) due to poor precision between paired LCS results.
- Results for cyclohexane in M-21 and LR-8 were qualified estimated (J) and presumptively present (N), and results for cyclohexane in the remaining samples and for Freon 113 and methyl acetate in all samples were rejected (R) because neither the presence nor absence can be verified based on the data provided.

All other results are valid as reported.

Documentation issues observed in the data package are described in Section XIII.

This validation report should be considered <u>part of the data package</u> for all future distributions of the volatiles data.



ATTACHMENT A

DATA SUMMARY FORMS Laboratory Job No. 1806874 Volatiles in Water

DATA SUMMARY FORM: VOLATILES SEMI-ANNUAL WELL SAMPLES (ug/L)

Site Name: PAS Oswego

Laboratory Job No. 1806874

Sampling Date: May 7, 2018

ddms Project No. 1547-3131

Sample Location	Equipment Blan	k	M-21	1	OD-3		X-1	1	LR-8	1	LCW-2	1	LCW-4	
Lab Sample ID	1806874-001		1806874-00	2	1806874-00)3	1806874-004	1	1806874-005	5	1806874-000	5	1806874-00	17
Dilution Factor	1.0		1.0		1.0		1.0		1.0				20	
	1.0		1.0		1.0		1.0		1.0		5.0		20	
RL														
1.00 Dichlorodifluoromethane														<u> </u>
1.00 Chloromethane														<u> </u>
1.00 Vinyl Chloride											26.0			<u> </u>
1.00 Bromomethane														<u> </u>
1.00 Chloroethane			1.33						3.91		3.75	J	62.2	<u> </u>
1.00 Trichlorofluoromethane														<u> </u>
0.50 1,1-Dichloroethene														<u> </u>
1,1,2-Trichloro-1,2,2-trifluoroethane	R		R		R		R		R		R		R	<u> </u>
10.0 Acetone		UJ	1.17	J		UJ		UJ	2.46	J		UJ		UJ
0.50 Carbon Disulfide														<u> </u>
Methyl Acetate	R		R		R		R		R		R		R	
2.00 Methylene Chloride														—
0.50 trans-1,2-Dichloroethene											1.15	J		—
1.00 MTBE														—
0.50 1,1-Dichloroethane											28.3		2.60	
0.50 cis-1,2-Dichloroethene											168		2.20	
10.0 2-Butanone		UJ		UJ		UJ		UJ		UJ		UJ		UJ
0.50 Chloroform											3.25			
0.50 1,1,1-Trichloroethane											13.0			
Cyclohexane	R		1.30	JN	R		R		2.00	JN	R		R	
0.50 Carbon Tetrachloride														
0.50 Benzene			0.17	J					0.48	J	134		458	
0.50 1,2-Dichloroethane														
0.50 Trichloroethene											26.6			
0.50 Methylcyclohexane			0.16	J					0.21	J			2.00	J
0.50 1,2-Dichloropropane														Ļ
0.50 Bromodichloromethane														Ļ
0.50 cis-1,3-Dichloropropene														Ļ
5.00 4-Methyl-2-pentanone														Ļ
0.50 Toluene			0.21	J					0.28	J			15.4	Ļ
0.50 trans-1,3-Dichloropropene														Ļ
0.50 1,1,2-Trichloroethane											1.45	J		
0.50 Tetrachloroethene											118	\rightarrow		—
5.00 2-Hexanone		UJ		UJ		UJ		UJ		UJ		UJ		UJ
0.50 Dibromochloromethane														└──
0.50 1,2-Dibromoethane														└──
0.50 Chlorobenzene			5.75	J+					11.6	J+	28.4	J+	342	J+
0.50 Ethylbenzene											2.60		84.0	└──
1.00 Xylenes (total)													695.00	—
0.50 Styrene														—
1.00 Bromoform														┝──
0.50 Isopropylbenzene			0.48	J					0.57		1.15	J	4.20	J
0.50 1,1,2,2-Tetrachloroethane											4.40			┡
0.50 1,3-Dichlorobenzene									0.11	J				<u> </u>
0.50 1,4-Dichlorobenzene			0.32	J					0.64				3.40	J
0.50 1,2-Dichlorobenzene			0.52						0.43	J	1.35	J	24.2	\vdash
5.00 1,2-Dibromo-3-chloropropane		UJ		UJ		UJ		UJ		UJ		UJ		UJ
1.00 1,2,4-Trichlorobenzene														

DATA SUMMARY FORM: VOLATILES SEMI-ANNUAL WELL SAMPLES (ug/L)

Site Name: PAS Oswego

Laboratory Job No. 1806874

Sampling Date: May 7, 2018

ddms Project No. 1547-3131

Sample Location	QC Trip Blank								
Lab Sample ID	1806874-008								
-					-				
Dilution Factor	1.0								
RL									
1.00 Dichlorodifluoromethane									
1.00 Chloromethane									
1.00 Vinyl Chloride									
1.00 Bromomethane						-			
1.00 Chloroethane						-			
1.00 Trichlorofluoromethane									
0.50 1,1-Dichloroethene									
0.50 1,1,2-Trichloro-1,2,2-trifluoroethane	R								
10.0 Acetone		UJ							
0.50 Carbon Disulfide									
5.00 Methyl Acetate	R								
2.00 Methylene Chloride									ĹĹĹ
0.50 trans-1,2-Dichloroethene									шÌ
1.00 MTBE									шÌ
0.50 1,1-Dichloroethane									
0.50 cis-1,2-Dichloroethene									
10.0 2-Butanone		UJ							
0.50 Chloroform									
0.50 1,1,1-Trichloroethane									
0.50 Cyclohexane	R								
0.50 Carbon Tetrachloride									
0.50 Benzene									
0.50 1,2-Dichloroethane									
0.50 Trichloroethene									
0.50 Methylcyclohexane									
0.50 1,2-Dichloropropane									
0.50 Bromodichloromethane						-			
0.50 cis-1,3-Dichloropropene						-			
5.00 4-Methyl-2-pentanone									
0.50 Toluene						-			
0.50 trans-1,3-Dichloropropene						-			
0.50 1,1,2-Trichloroethane						-			
0.50 Tetrachloroethene						-			
5.00 2-Hexanone		UJ				-			
0.50 Dibromochloromethane						-			
0.50 1,2-Dibromoethane									
0.50 Chlorobenzene									
0.50 Ethylbenzene						-			
1.00 Xylenes (total)						-			
0.50 Styrene						-			
1.00 Bromoform									\square
0.50 Isopropylbenzene									
0.50 1,1,2,2-Tetrachloroethane									
0.50 1,3-Dichlorobenzene									
0.50 1,4-Dichlorobenzene									
0.50 1,2-Dichlorobenzene									
5.00 1,2-Dibromo-3-chloropropane		UJ							
1.00 1,2,4-Trichlorobenzene									



ATTACHMENT B

ORGANIC ANALYSIS REPORT SHEETS Laboratory Job No. 1806874 Volatiles in Water

	Life Science		ries, l	nc.		An	alyti	cal Results
E	ast Syracuse, NY 1		445-1900		50	State	eCertNo:	10248
CLIENT	O'Brien & Gere Ope	erations II.C			Lab ID:	18	06874-00	1 A
Project:	PAS Oswego-Semi-		ling		Client Samp	le ID: Eq	uipmen	t Blank 5/7/18
W Order: Matrix: Inst. ID: ColumnID: Revision: Col Type:	1806874 WATER MS03_10 Rtx-502.2 06/11/18 13:33	Sample Size %Moisture: TestCode:	NA 8260W_O	LM42	Collection D Date Receive PrepDate: BatchNo: FileID:	ed: 05/ R3	/07/18 11: /08/18 16: 2210 SAMP-J50	05
Analyte	······	Result Q	ual PQL		MDL	Units	DF	Date Analyzed
	ORGANIC COMPOU	NDS BY GC/MS				SW826	0C/5030C	
Dichlorodifluor		ND	1.00		0.10	µg/L	1	05/09/18 14:36
Chioromethan		ND	1.00		0.33	µg/L	1	05/09/18 14:36
Vinyl chloride	•	ND	1.00		0.33 .	µg/L	1	05/09/18 14:36
Bromomethan	a	ND	1.00		0.33	µg/L	1	05/09/18 14:36
Chloroethane		ND	1.00		0.33	μg/L	1	05/09/18 14:36
Trichlorofluoro	methane	ND	1.00		0.10	µg/L	1	05/09/18 14:36
1,1-Dichloroet		ND	0.50		0.16	µg/L	1	05/09/18 14:36
	p-1,2,2-trifluoroethane	.ND	0.50	R	0.10-	µg/L	1	05/09/18 14:36
1,1,2-1101000	-1,2,2-0,00000000			17		0. 1. 1. 10		05/00/49 44-36

Analyte		Result Qual	PQL		MDL	Units	DF	Date Analyzeo
	RGANIC COMPOUND	S BY GC/MS				SW826	0C/5030C	
Dichlorodifluoro		ND	1.00		0.10	µg/L	1	05/09/18 14:36
Chioromethane		ND	1.00		0.33	µg/L	1	05/09/18 14:36
Vinyl chloride		ND	1.00		0.33	µg/L	1	05/09/18 14:36
Bromomethane		ND	1.00		0.33	µg/L	1	05/09/18 14:36
Chloroethane		ND	1.00		0.33	μg/L	1	05/09/18 14:36
Trichlorofluoror	nethane	ND	1.00		0.10	µg/L	1	05/09/18 14:36
1.1-Dichloroeth		ND	0.50		0.16	µg/L	1	05/09/18 14:36
	-1,2,2-trifluoroethane	ND	0.50	.R	0.10-	µg/L	1	05/09/18 14:36
Acetone	-1,2,2-ti)ildoroetildike	ND	10.0	US	1.00	µg/L	1	05/09/18 14:36
Carbon disulfid	•	ND	0.50	V-Q	0.11	μg/L	1.	05/09/18 14:36
Methyl acetate		ND	-5.00	R	- 1.00-	µg/L	1	05/09/18 14:36
Methylene chlo	rida	ND	2.00		0.16	µg/L	1	05/09/18 14:36
trans-1,2-Dichl		ND	0.50		0.10	µg/L	1	05/09/18 14:36
Methyl tert-buty		ND	1.00		0.16	µg/L	1	05/09/18 14:36
1,1-Dichloroeth		ND	0.50		0.10	µg/L	1	05/09/18 14:36
cis-1,2-Dichloro		ND	0.50		0.10	µg/L	1	05/09/18 14:36
2-Butanone	USERICITE .	ND	10.0	US	1.00	µg/L	1	05/09/18 14:36
Chloroform	•	ND	0.50		0.10	μg/L	1	05/09/18 14:36
1,1,1-Trichloro	othano	ND	0.50		0.10	μg/L	1	05/09/18 14:36
	eulaire	ND	0.50	-R	· 0.10	μg/L	1	05/09/18 14:36
Cyclohexane Carbon tetrach	larida	ND	0.50	-	0.10	μg/L	1	05/09/18 14:36
	IOIICE	ND	0.50	¢	0.10	µg/L	1	05/09/18 14:36
Benzene 4 2 Diablaraath	1050	ND	0.50		0,16	µg/L	1	05/09/18 14:36
1,2-Dichloroeth		ND	0.50		0.10	µg/L	1	05/09/18 14:36
Trichloroethene		ND	0.50		0.10	μg/L	1	05/09/18 14:36
Methylcyclohex		ND	0.50		0.16	µg/L	1	05/09/18 14:36
1,2-Dichloropro	all the second sec	ND	0.50		0.10	μg/L	1	05/09/18 14:36
Bromodichloro		ND	0.50		0.16	µg/L	1	05/09/18 14:36
cis-1,3-Dichlor		ND	5.00		1,00	μg/L	1	05/09/18 14:36
4-Methyl-2-pen	itanone		0.50		0.10	μg/L	1	05/09/18 14:36
Toluene		ND			0.16	µg/L	1	05/09/18 14:36
trans-1,3-Dichl		ND	0.50		0.16	µg/L	1	05/09/18 14:36
1,1,2-Trichloro		ND	0.50		0.10	µg/L	1	05/09/18 14:36
Tetrachloroeth	ene	ND	0.50			μα/L	1	05/09/18 14:36
2-Hexanone		ND	5.00	us	1.00 0.10	р 9 /с µg/L	1	05/09/18 14:36
Dibromochloro		ND	0.50			• -		
Qualifiers:	* Value may exceed the	Acceptable Level				te detected in the		
	E Value exceeds the instr	rument calibration range				ng times for prepa		
	J Analyte detected below	v the PQL						tion Limit (PQL)
	P Prim./Conf. column %	D or RPD exceeds limit			S Spike	Recovery outside	e accepted reco	very mmus

Print Date: 06/11/18 13:36

870107

Project Supervisor: David J Prichard

	Life Science I 854 Butternut Drive	aborato	ories, Inc.		Analytical Results
E	ast Syracuse, NY 1305	7 (315)	445-1900		StateCertNo: 10248
CLIENT	O'Brien & Gere Operat	-	er ester	Lab ID:	1806874-001A
Project:	PAS Oswego-Semi-An	nual Well Sam	pling	Client Sample ID:	Equipment Blank 5/7/18
W Order:	1806874			Collection Date:	05/07/18 11:40
Matrix:	WATER			Date Received:	05/08/18 16:05
Inst. ID:	MS03 10	Sample Size	NA	PrepDate:	
ColumnID:	Rtx-502.2	%Moisture:		BatchNo:	R32210
Revision:	06/11/18 13:33	TestCode:	8260W_OLM42	FileID:	1-SAMP-J5081.D
Col Type:		an shahanni ve tilitiketiketi		•5	

Analyte	Result Qu	al PQL	MJ	DL Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	DS BY GC/MS			SW82	60C/50300	;
1,2-Dibromoethane	ND	0.50	0.1	δ μg/L	1	05/09/18 14:36
Chlorobenzene	ND	0.50	0.1) µg/L	1	05/09/18 14:36
Ethylbenzene	ND	0.50	0.10) µg/L	1	05/09/18 14:36
Xylenes (total)	ND	1.00	0.3) µg/L	1	05/09/18 14:36
Styrene	ND	0.50	0.1) µg/L	1	05/09/18 14:36
Bromoform	ND	1.00	0.3	3 µg/L	1	05/09/18 14:36
Isopropylbenzene	ND	0.50	0.10) µg/L	1	05/09/18 14:36
1.1.2.2-Tetrachloroethane	ND	0.50	0.1) µg/L	1	05/09/18 14:36
1,3-Dichlorobenzene	ND	0.50	0.10) µg/L	1	05/09/18 14:36
1,4-Dichlorobenzene	ND	0.50	0.10	6 µg/L	1	05/09/18 14:36
1,2-Dichlorobenzene	ND	0,50	0.10) jug/L	1	05/09/18 14:36
1.2-Dibromo-3-chloropropane	ND	5.00	UJ 1.0) µg/L	1	05/09/18 14:36
1,2,4-Trichlorobenzene	ND	1.00	0.10) µg/L	1	05/09/18 14:36
Surr: 1,2-Dichloroethane-d4	94	75-130	0.10		1	05/09/18 14:36
Surr: Toluene-d8	102	75-125	0.1) %REC	1	05/09/18 14:36
Surr: 4-Bromofluorobenzene	95	75-125	0.1) %REC	1	05/09/18 14:36

Polly S. Newbold 7/5/2018

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

Print Date: 06/11/18 13:36 870107 Project Supervisor: David J Prichard

Analytical Results Life Science Laboratories, Inc. 5854 Butternut Drive StateCertNo: 10248 East Syracuse, NY 13057 (315) 445-1900 1806874-002A Lab ID: O'Brien & Gere Operations, LLC CLIENT Client Sample ID: M-21 5/7/18 **Project:** PAS Oswego-Semi-Annual Well Sampling 05/07/18 12:35 **Collection Date:** W Order: 1806874 05/08/18 16:05

Date Received:

R32210

1-SAMP-J5082.D

PrepDate:

BatchNo:

WATER Matrix: Inst. ID: MS03_10 Sample Size NA ColumnID: Rtx-502.2 %Moisture: 06/11/18 13:33 TestCode: 8260W_OLM42 FileID: **Revision:** Col Type:

Analyte		Result Qual	PQL		MDL	Units	DF	Date Analyze
VOLATILE O	RGANIC COMPOUND	S BY GC/MS			SW826	0C/5030C		
Dichlorodifluoro		ND	1.00		0.10	µg/L	1	05/09/18 15:06
Chloromethane		ND	1.00		0.33	µg/L	1	05/09/18 15:06
Vinyl chloride		ND	1.00		0.33	µg/L	1	05/09/18 15:06
Bromomethane		ND	1.00		0.33	µg/L	1	05/09/18 15:06
Chloroethane		1.33	1.00		0.33	µg/L	1	05/09/18 15:06
Trichlorofluorom	ethane	ND	1.00		0.10	µg/L	1	05/09/18 15:06
1.1-Dichloroethe	ne	ND	0.50		0.16	µg/L	1	05/09/18 15:06
	,2,2-trifluoroethane	-ND	0.50	R	-0.10-	µg/L	1	05/09/18 15:06
Acetone		1.17,85	10.0		1.00	µg/L	1	05/09/18 15:06
Carbon disulfide		ND	0.50		0.11	µg/L	1	05/09/18 15:06
Vethyl acetate		-ND	5.00	R	- 1:00	µg/L	1	05/09/18 15:06
Vethylene chlori	de	ND	2.00		0.16	µg/L	1	05/09/18 15:06
rans-1,2-Dichlo		ND	0.50		0.10	µg/L	1	05/09/18 15:05
Vethyl tert-butyl		ND	1.00		0.16	µg/L	1	05/09/18 15:06
1,1-Dichloroetha		ND	0.50		0.10	µg/L	1	05/09/18 15:06
cis-1,2-Dichloro		ND	0.50		0.10	µg/L	1	05/09/18 15:06
2-Butanone		ND	10.0	US	1.00	μg/L	1	05/09/18 15:06
Chloroform		ND	0.50	0.0	0.10	µg/L	1	05/09/18 15:06
1,1,1-Trichloroe	thane	ND	0.50		0.10	µg/L	1	05/09/18 15:06
Cyclohexane		1.30#	0.50	JN	0,10	µg/L	1	05/09/18 15:06
Carbon tetrachic	oride	ND	0.50	5.1	0.10	µg/L	1	05/09/18 15:06
Benzene		0.17 J	0.50		0.10	µg/L	1	05/09/18 15:06
1,2-Dichloroetha	ine	ND	0.50		0.16	µg/L	1	05/09/18 15:06
Trichloroethene		ND	0.50		0.10	µg/L	1	05/09/18 15:06
Viethylcyclohexa	ine	0.16 J	0.50		0.10	μg/L	1	05/09/18 15:06
1,2-Dichloropro		ND	0.50		0.16	µg/L	1	05/09/18 15:06
Bromodichlorom		ND	0.50		0.10	μg/L	1	05/09/18 15:06
cis-1,3-Dichloro		ND	0.50		0.16	μg/L	1	05/09/18 15:06
4-Methyl-2-pent		ND	5.00		1.00	μg/L	1	05/09/18 15:06
Toluene	anone	0.21 J	0.50		0.10	µg/L	1	05/09/18 15:06
trans-1,3-Dichlo	ropropene	ND	0.50		0.16	µg/L	1	05/09/18 15:06
1.1.2-Trichloroe		ND	0.50		0,16	µg/L	1	05/09/18 15:06
Tetrachloroethe		ND	0.50		0.10	μg/L	1	05/09/18 15:06
2-Hexanone		ND	5.00	45	1.00	μg/L	1	05/09/18 15:06
Dibromochloron	rethane	ND	0.50		0.10	µg/L	1	05/09/18 15:06
	* Value may exceed the					detected in the	associated M	lethod Blank
Qualifiers:		ument calibration range				g times for prepa		
	J Analyte detected below							tation Limit (PQL)
		D or RPD exceeds limit				lecter at the France		

Print Date: 06/11/18 13:36 870108 Project Supervisor: David J Prichard

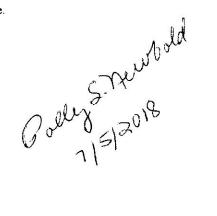
LSL	Life Science L 1854 Butternut Drive	aborato	ories, Inc.		Analytical Results
No. 1	Cast Syracuse, NY 1305	7 (315)	445-1900		StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		pling	Lab ID: Client Sample ID:	1806874-002A M-21 5/7/18
W Order: Matrix:	1806874 WATER MS03 10	Sample Size	NA	Collection Date: Date Received: PrenDate:	05/07/18 12:35 05/08/18 16:05
Inst. ID: ColumnID: Revision:	Rtx-502.2 06/11/18 13:33	%Moisture: TestCode:		BatchNo:	R32210 1-SAMP-J5082.D

Analyte	Result Qua	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY GC/MS			SW8260	C/5030C	-
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	05/09/18 15:06
Chlorobenzene	5.75	0.50 3+	0.10	µg/L	1	05/09/18 15:06
Ethylbenzene	ND	0.50	0.10	µg/L	1	05/09/18 15:06
Xylenes (total)	ND	1.00	0.30	µg/L	1	05/09/18 15:06
Styrene	ND	0.50	0.10	µg/L	1	05/09/18 15:06
Bromoform	ND	1.00	0.33	µg/L	1	05/09/18 15:06
isopropylbenzene	0.48 J	0.50	0.10	µg/L	1	05/09/18 15:06
1.1.2.2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	05/09/18 15:06
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	05/09/18 15:06
1,4-Dichlorobenzene	0.32 J	0.50	0.16	µg/L	1	05/09/18 15:06
1.2-Dichlorobenzene	0.52	0.50	0.10	µg/L	1	05/09/18 15:06
1,2-Dibromo-3-chloropropane	ND	5.00 UJ	1.00	μg/L	1	05/09/18 15:06
1.2.4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	05/09/18 15:06
Surr: 1.2-Dichloroethane-d4	93	75-130	0.16	%REC	1	05/09/18 15:06
Sur: Toluene-d8	102	75-125	0.10	%REC	1	05/09/18 15:06
Surr: 4-Bromofluorobenzene	96	75-125	0.10	%REC	1	05/09/18 15:06

NOTES:

Col Type:

#Estimated value. The associated QC criteria were not satisfied for this analyte.



Oualifiers:	*	Value may exceed the Acceptable Level		Analyte detected in the associated Method Blank
Qualificity	Е	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 06/11/18 13:36 870108 Project Supervisor: David J Prichard

LSL	Life Science L 854 Butternut Drive ast Syracuse, NY 1305		ories, Inc. 445-1900		Analytical Results StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		pling	Lab ID: Client Sample ID:	1806874-003A OD-3 5/7/18
W Order: Matrix:	1806874 WATER		102	Collection Date: Date Received:	05/07/18 14:15 05/08/18 16:05
Inst. ID: ColumnID: Revision: Col Type:	MS03_10 Rtx-502.2 06/11/18 13:33	Sample Size %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R32210 1-SAMP-J5083.D

Analyte		Result Qua	l PQL	,	MDL	Units	DF	Date Analyze
VOLATILE C	ORGANIC COMPOUNDS	BY GC/MS				SW826	0C/5030C	
Dichlorodifluoro	omethane	ND	1.00		0.10	µg/L	1	05/09/18 15:35
Chloromethane	1	ND	1.00		0.33	µg/L	1	05/09/18 15:35
Vinyl chloride		ND	1.00		0.33	µg/L	1	05/09/18 15:35
Bromomethane	5	ND	1.00		0.33	μg/L	1	05/09/18 15:35
Chloroethane		ND	1.00		0.33	µg/L	1	05/09/18 15:35
richlorofluoror	methane	ND	1.00		0.10	μg/L	1	05/09/18 15:35
1,1-Dichloroeth	iene	ND	0.50		0.16	µg/L	1	05/09/18 15:35
, 1,2-Trichloro	-1,2,2-trifluoroethane	-ND	- 0.50	R	-0.10-	µg/L	1	05/09/18 15:35
Acetone		ND	10.0	US.	1.00	µg/L	1	05/09/18 15:35
Carbon disulfid	le .	ND	0.50		0.11	µg/L	1	05/09/18 15:35
Aethyl acetate		. ND	5.0 0	R	1.00	μg/L	1	05/09/18 15:35
Aethylene chlo	ride	ND	2.00	81 3	0.16	µg/L	1	05/09/18 15:35
rans-1,2-Dichl	oroethene	ND	0.50		0.10	µg/L	1	05/09/18 15:35
Nethyl tert-buty	/l ether	ND	1,00		0.16	µg/L	1	05/09/18 15:35
1-Dichloroeth	ane	ND	0.50		0.10	μg/L	1	05/09/18 15:35
is-1,2-Dichlor	oethene	ND	0.50		0.10	µg/L	1	05/09/18 15:35
-Butanone		ND	10.0	WS	1.00	µg/L	1	05/09/18 15:35
Chloroform		. ND	0.50		0.10	µg/L	1	05/09/18 15:35
,1,1-Trichloro	ethane	ND	0.50	~-	0.10	µg/L	1	05/09/18 15:35
Cyclohexane		-ND	-0.50	R	-0.10	µg/L	1	05/09/18 15:35
Carbon tetrach	loride	ND	0.50		0.10	µg/L	1	05/09/18 15:35
Benzene		ND	0.50		0.10	μg/L	1	05/09/18 15:35
,2-Dichloroeth	nane	ND	0,50		0.16	µg/L	1	05/09/18 15:35
richloroethene	3	ND	0.50		0.10	μg/L	1	05/09/18 15:35
viethylcyclohex	ane	ND	0.50		0.10	μg/L	1	05/09/18 15:35
,2-Dichloropro	opane	ND	0.50		0.16	µg/L	1	05/09/18 15:35
Bromodichloro		ND	0.50		0.10	μg/L	1	05/09/18 15:35
is-1,3-Dichlor	opropene	ND	0.50		0.16	µg/L	1	05/09/18 15:35
1-Methyl-2-pen	tanone	ND	5.00		1.00	µg/L	1	05/09/18 15:35
Foluene		ND	0.50		0.10	µg/L	1	05/09/18 15:35
rans-1,3-Dichl	oropropene	ND	0.50		0.16	µg/L	1	05/09/18 15:35
1,2-Trichloro	ethane	ND	0.50		0.16	µg/L	1	05/09/18 15:35
Fetrachloroeth	ene	ND	0.50	20120	0.10	µg/L	1	05/09/18 15:35
2-Hexanone		ND	5.00	uS	1.00	µg/L	1	05/09/18 15:35
Dibromochloro	methane	ND	0.50		0.10	μg/L	1	05/09/18 15:35
Oualifiers:	* Value may exceed the A	Acceptable Level				detected in the		
Lanutes of	E Value exceeds the instru	ment calibration rang	je		H Holding	g times for prepa	ration or ana	lysis exceeded
	J Analyte detected below	the PQL			ND Not De	tected at the Pra	ctical Quanti	tation Limit (PQL)
	P Prim./Conf. column %I) or RPD exceeds limit	t.		S Spike F	lecovery outside	accepted rec	overy limits

Project Supervisor: David J Prichard

Life Science Laboratories, Inc.

Analytical Results

1 5854 Butternut Drive	
East Syracuse, NY 13057	(315) 445-1900

E	ast Syracuse, NY 1305	57 (315)	445-1900	S	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		pling	Lab ID: Client Sample ID:	1806874-003A OD-3 5/7/18
W Order: Matrix:	1806874 WATER	57 		Collection Date: Date Received:	05/07/18 14:15 05/08/18 16:05
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502.2 06/11/18 13:33	Sample Size %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R32210 1-SAMP-J5083.D
Col Type:	00/11/10 13:33	FEBICUUC:		- 117320 -	

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	NDS BY GC/MS			SW826	OC/5030C	
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	05/09/18 15:35
Chlorobenzene	ND	0.50	0.10	µg/L	1	05/09/18 15:35
Ethylbenzene	ND	0.50	0.10	µg/L	1	05/09/18 15:35
Xvienes (total)	ND	1.00	0.30	µg/L	1	05/09/18 15:35
Styrene	ND	0,50	0.10	µg/L	1	05/09/18 15:35
Bromoform	ND	1.00	0.33	µg/L	1	05/09/18 15:35
Isopropylbenzene	ND	0.50	0.10	µg/L	1	05/09/18 15:35
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	05/09/18 15:35
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	05/09/18 15:35
1,4-Dichlorobenzene	ND	0,50	0.16	µg/L	1	05/09/18 15:35
1,2-Dichlorobenzene	ND	0,50	0.10	µg/L	1	05/09/18 15:35
1,2-Dibromo-3-chloropropane	ND	5.00 UJ	1.00	µg/L	1	05/09/18 15:35
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	05/09/18 15:35
Surr: 1.2-Dichloroethane-d4	94	75-130	0.16	%REC	1	05/09/18 15:35
Surr: Toluene-d8	101	75-125	0.10	%REC	1	05/09/18 15:35
Surr: 4-Bromofluorobenzene	96	75-125	0.10	%REC	1	05/09/18 15:35
		1711770 (1717777777				



Onalifiers :	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
Zummer al	E	Value exceeds the instrument calibration range	н	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)	
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 06/11/18 13:36

870109

Project Supervisor: David J Prichard

LSL 5854 Butternut Drive

Analytical Results

	ast Syracuse, NY 1		445-1900	5	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Ope PAS Oswego-Semi-		pling	Lab ID: Client Sample ID:	1806874-004A X-1 5/7/18
W Order: Matrix:	1806874 WATER Q			Collection Date: Date Received:	05/07/18 0:00 05/08/18 16:05
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502.2 06/11/18 13:33	Sample Size %Moisture: TestCode:	NA 8260W OLM42	PrepDate: BatchNo: FileID:	R32210 1-SAMP-J5084.D
Col Type:		and harman at a			

COMPOUNDS BY	00000							
VOLATILE ORGANIC COMPOUNDS BY GO			GC/MS			SW8260C/5030C		
	ND	1.00		0.10	µg/L	1	05/09/18 16:05	
	ND	1.00		0.33	µg/L	1	05/09/18 16:05	
	ND	1.00		0.33	µg/L	1	05/09/18 16:05	
	ND	1.00		0.33	µg/L	1	05/09/18 16:05	
	ND	1.00		0.33	µg/L	1	05/09/18 16:05	
	ND	1.00		0.10	µg/L	1	05/09/18 16:05	
	ND	0.50		0.16	µg/L	1	05/09/18 16:05	
proethane	ND	0.5 0	R	0:10 -	µg/L	1	05/09/18 16:05	
	ND	10.0	us	1.00	μg/L	1	05/09/18 16:05	
0	ND	0.50	~ \ \	0.11	µg/L	1	05/09/18 16:05	
	NĐ	5:00	R	4.00	µg/L	1	05/09/18 16:05	
	ND	2,00	• •	0.16	µg/L	1	05/09/18 16:05	
	ND	0.50		0.10	μg/L	1	05/09/18 16:05	
	ND	1,00		0.16	µg/L	1	05/09/18 16:05	
	ND	0.50		0.10	µg/L	1	05/09/18 16:05	
	ND	0.50		0.10	µg/L	1	05/09/18 16:05	
	ND		UJ	1.00	µg/L	1	05/09/18 16:05	
	ND	0.50	0143	0.10	µg/L	1	05/09/18 16:05	
	ND	0.50		0,10	µg/L	1	05/09/18 16:05	
	-ND	0.50	- R	0.10	μg/L	1	05/09/18 16:05	
	ND	0.50	•	0.10	µg/L	1	05/09/18 16:05	
	ND	0.50		0.10	µg/L	1	05/09/18 16:05	
						1	05/09/18 16:05	
						1	05/09/18 16:05	
	6.00 7 70				10000	1	05/09/18 16:05	
						1	05/09/18 16:05	
					• -	1	05/09/18 16:05	
							05/09/18 16:05	
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1					and the second	1	05/09/18 16:05	
					10 Tours		05/09/18 16:05	
			UN				05/09/18 16:05	
	ND	0,50	5	0.10	µg/L	1	05/09/18 16:05	
te may exceed the Accen	table Level	- 10-10-10-10-10-10-10-10-10-10-10-10-10-1		B Analvie	detected in the	associated M	lethod Blank	
		01P						
		5						
Real and the protection of the	and and a set of							
	ue exceeds the instrument lyte detected below the P n./Conf. column %D or F	ND ND ND ND we may exceed the Acceptable Level we exceeds the instrument calibration ran lyte detected below the PQL n./Conf. column %D or RPD exceeds lim	ND 0.50 ND 0.50 ND 0.50 ND 0.50 ND 0.50 ND 0.50 ND 5.00 ND 0.50 ND 0.50	ND 0.50 ND	ND 0.50 0.10 ND 0.50 0.10 ND 0.50 0.16 ND 0.50 0.16 ND 0.50 0.16 ND 0.50 0.16 ND 5.00 1.00 ND 0.50 0.16 ND 0.50 0.10 ND 5.00 U≤ ND 0.50 0.10 ND 5.00 U≤ ND 0.50 0.10 ND 0.50	ND 0.50 0.10 µg/L ND 0.50 0.10 µg/L ND 0.50 0.16 µg/L ND 0.50 0.16 µg/L ND 0.50 0.16 µg/L ND 0.50 0.16 µg/L ND 5.00 1.00 µg/L ND 0.50 0.16 µg/L ND 0.50 0.10 µg/L ND 5.00 √5 1.00 µg/L ND 0.50 0.10 µg/L ND ND 0.50 0.10 µg/L ND ND 0.50 0.10 µg/L ND ND 0.50 0.10	ND 0.50 0.10 µg/L 1 ND 0.50 0.10 µg/L 1 ND 0.50 0.10 µg/L 1 ND 0.50 0.16 µg/L 1 ND 0.50 0.10 µg/L <td< td=""></td<>	

Print Date: 06/11/18 13:36

Project Supervisor: David J Prichard

870110

Life Science Laboratories, Inc.

Analytical Results

E	ast Syracuse, NY 1	3057 (315)	445-1900	5	StateCertNo: 10248	
CLIENT Project:	O'Brien & Gere Ope PAS Oswego-Semi-		pling	Lab ID: Client Sample ID:	1806874-004A X-1 5/7/18	
W Order: Matrix:	1806874 WATER Q			Collection Date: Date Received:	05/07/18 0:00 05/08/18 16:05	
Inst. ID: ColumnID:	MS03_10 Rtx-502.2	Sample Size %Moisture:		PrepDate: BatchNo: FileID:	R32210 I-SAMP-J5084.D	15
Revision: Col Type:	06/11/18 13:33	TestCode:	8260W_OLM42	FileID:	1-3AMI -13004.D	

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND	S BY GC/MS			SW8260	DC/5030C	
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	05/09/18 16:05
Chlorobenzene	ND	0.50	0.10	μg/L	1	05/09/18 16:05
Ethylbenzene	ND	0.50	0.10	µg/L	1	05/09/18 16:05
Xylenes (total)	ND	1.00	0.30	μg/L	1	05/09/18 16:05
Styrene	ND	0.50	0.10	µg/L	1	05/09/18 16:05
Bromoform	ND	1.00	0.33	µg/L	1	05/09/18 16:05
Isopropylbenzene	ND	0.50	0.10	µg/L	1	05/09/18 16:05
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	05/09/18 16:05
1.3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	05/09/18 16:05
1,4-Dichlorobenzene	ND	0.50	0,16	µg/L	1	05/09/18 16:05
1,2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	05/09/18 16:05
1,2-Dibromo-3-chloropropane	ND	5.00 US	1.00	μg/L	1	05/09/18 16:05
1,2,4-Trichlorobenzene	ND	1.00	0.10	μg/L	1	05/09/18 16:05
Surr: 1,2-Dichloroethane-d4	95	75-130	0.16	%REC	1	05/09/18 16:05
Surr: Toluene-d8	101	75-125	0.10	%REC	1	05/09/18 16:05
Surr: 4-Bromofluorobenzene	97	75-125	0.10	%REC	1	05/09/18 16:05



Oualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
Quannersi	Е	Value exceeds the instrument calibration range	н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
2	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 06/11/18 13:36 870110 Project Supervisor: David J Prichard

Analytical Results Life Science Laboratories, Inc. 5854 Butternut Drive StateCertNo: 10248 East Syracuse, NY 13057 (315) 445-1900 1806874-005A Lab ID: CLIENT O'Brien & Gere Operations, LLC Client Sample ID: LR-8 5/7/18 PAS Oswego-Semi-Annual Well Sampling Project: 05/08/18 9:30 **Collection Date:** 1806874 W Order: 05/08/18 16:05 Date Received: WATER Matrix: PrepDate: Sample Size NA MS03 10 Inst. ID: R32210 BatchNo: %Moisture: ColumnID: Rtx-502.2 1-SAMP-J5085.D 8260W_OLM42 FileID: TestCode: 06/11/18 13:33

Revision: Col Type:

.

Analyte	Result Qua	l PQL		MD	L Units	DF	Date Analyze
VOLATILE ORGANIC COMPOUND	S BY GC/MS	Y GC/MS			SW8260C/5030C		
Dichlorodifluoromethane	ND	1.00		0.10	µg/L	1	05/09/18 16:34
Chloromethane	ND	1.00		0.33	µg/L	1	05/09/18 16:34
/inyl chloride	ND	1.00		0.33	µg/L	1	05/09/18 16:34
Bromomethane	ND	1.00		0.33	μg/L	1	05/09/18 16:34
Chloroethane	3.91	1.00		0.33	µg/L	1	05/09/18 16:34
Trichlorofluoromethane	ND	1.00		0.10	µg/L	1	05/09/18 16:34
.1-Dichloroethene	ND	0.50		0.16	µg/L	1	05/09/18 16:34
,1,2-Trichloro-1,2,2-trifluoroethane	• ND	0.50	R	~ 0.10	µg/L	1	05/09/18 16:34
Acetone	2.46	10.0	1	1.00	µg/L	1	05/09/18 16:34
Carbon disulfide	ND	0.50	-	0.11	µg/L	1	05/09/18 16:34
Aethyl acetate	•ND	5.00	R	-1:00		1	05/09/18 16:34
Aethylene chloride	ND	2.00		0.16	µg/L	1	05/09/18 16:34
rans-1,2-Dichloroethene	ND	0.50		0.10	µg/L	1	05/09/18 16:34
Aethyl tert-butyl ether	ND	1.00		0.16	µg/L	1	05/09/18 16:34
.1-Dichloroethane	ND	0.50		0.10	µg/L	1	05/09/18 16:34
sis-1,2-Dichloroethene	ND	0.50	22	0.10	µg/L	1	05/09/18 16:34
2-Butanone	ND	10.0	15	1.00	µg/L	1	05/09/18 16:34
Chloroform	ND	0.50		0.10	µg/L	1	05/09/18 16:34
,1,1-Trichloroethane	ND	0.50		0.10	µg/L	1	05/09/18 16:34
Cyclohexane	2.00# 3	N0.50	SN	0.10	µg/L	1	05/09/18 16:34
Carbon tetrachloride	ND	0.50	•	0.10	µg/L	1	05/09/18 16:34
Benzene	0.48 J	0.50		0.10	µg/L	1	05/09/18 16:34
,2-Dichloroethane	ND	0.50		0.16	µg/L	1	05/09/18 16:34
Trichloroethene	ND	0.50		0.10	µg/L	1	05/09/18 16:34
Methylcyclohexane	0.21 J	0.50		0.10	µg/L	1	05/09/18 16:34
,2-Dichloropropane	ND	0.50		0.16	µg/L	1	05/09/18 16:34
Bromodichloromethane	ND	0.50		0.10	µg/L	1	05/09/18 16:34
sis-1,3-Dichloropropene	ND	0.50		0.16	µg/L	1	05/09/18 16:34
Methyl-2-pentanone	ND	5,00		1.00	µg/L	1	05/09/18 16:34
Foluene	0.28 J	0,50		0.10	μg/L	1	05/09/18 16:34
rans-1,3-Dichloropropene	ND	0.50		0.16	µg/L	1	05/09/18 16:34
1,1,2-Trichloroethane	ND	0.50		0.16	μ g /L	1	05/09/18 16:34
Fetrachloroethene	ND	0.50		0.10	μg/L	1	05/09/18 16:34
2-Hexanone	ND	5.00	15	1.00	µg/L	1	05/09/18 16:34
2-nexanone Dibromochloromethane	ND	0.50		0.10	μg/L	1	05/09/18 16:34
			101		analyte detected in the	24	fethod Blank
Qualifiers: * Value may exceed the	~				lolding times for prepa		
E Value exceeds the instr		e			lot Detected at the Prac		
J Analyte detected below	1.2	4			pike Recovery outside		
P Prim./Conf. column %	D or RPD exceeds limi	L		SS	pike Recovery outside	ancpierre	60 Y 02 J 11111160

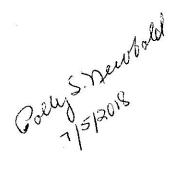
Analytical Results Life Science Laboratories, Inc. 5854 Butternut Drive StateCertNo: 10248 (315) 445-1900 East Syracuse, NY 13057 1806874-005A Lab ID: O'Brien & Gere Operations, LLC CLIENT Client Sample ID: LR-8 5/7/18 PAS Oswego-Semi-Annual Well Sampling **Project:** 05/08/18 9:30 **Collection Date:** W Order: 1806874 05/08/18 16:05 **Date Received:** WATER Matrix: **PrepDate:** Inst. ID: MS03 10 Sample Size NA

ColumnID: Rtx-502.2 Revision: 06/11/18 13:33 Col Type:	%Moisture: TestCode:	8260W_OLM42	BatchNo: FileID:		2210 SAMP-J5()85.D
Analyte	Result Q	Qual PQL	MDL	Units	DF	Da
VOLATILE ORGANIC COMP	OUNDS BY GC/MS		2	SW826	0C/50300	;
1.2-Dibromoethane	ND	0.50	0.16	µg/L	1	05
Chiorobenzene	11.6	0.50 5+	0.10	µg/L	1	05
Ethylbenzene	ND	0.50	0.10	μg/L	1	05
Yulanon (total)	ND	1.00	0.30	uoA	1	05

VULATILE UKGANIC CONFOUNDS						
1.2-Dibromoethane	ND	0.50	0.16	µg/L	1	05/09/18 16:34
Chiorobenzene	11.6	0.50 5+	0.10	µg/L	1	05/09/18 16:34
Ethylbenzene	ND	0.50	0.10	μg/L	1	05/09/18 16:34
Xylenes (total)	ND	1.00	0.30	µg/L	1	05/09/18 16:34
Styrene	ND	0.50	0.10	µg/L	1	05/09/18 16:34
Bromoform	ND	1.00	0.33	µg/L	1	05/09/18 16:34
sopropylbenzene	0.57	0.50	0.10	µg/L	1	05/09/18 16:34
1.1.2.2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	05/09/18 16:34
1.3-Dichlorobenzene	0.11 J	0.50	0.10	µg/L	1	05/09/18 16:34
1.4-Dichlorobenzene	0.64	0.50	0.16	μg/L	1	05/09/18 16:34
1,2-Dichlorobenzene	0.43 J	0.50	0.10	μg/L	1	05/09/18 16:34
1,2-Dibromo-3-chloropropane	0.400 ND	5.00 U.S	1.00	μg/L	1	05/09/18 16:34
	ND	1.00	0.10	µg/L	1	05/09/18 16:34
1,2,4-Trichlorobenzene	95	75-130	0.16	%REC	1	05/09/18 16:34
Surr: 1,2-Dichloroethane-d4				%REC	1	05/09/18 16:34
Surr: Toluene-dB	101	75-125	0.10	10.00	1	05/09/18 16:34
Surr: 4-Bromofluorobenzene	97	75-125	0.10	%REC	I	00/03/10 10:04

NOTES:

#Estimated value. The associated QC criteria were not satisfied for this analyte.



Date Analyzed

Oualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
Quantiers,	E	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 06/11/18 13:36 870111 Project Supervisor: David J Prichard

Life Science Laboratories, Inc.

Analytical Results

E	ast Syracuse, NY 1305	(315)	445-1900	S	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		oling	Lab ID: Client Sample ID:	1806874-006A LCW-2 5/7/18
W Order: Matrix:	1806874 WATER			Collection Date: Date Received:	05/08/18 12:45 05/08/18 16:05
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502.2 06/11/18 13:33	Sample Size %Moisture: TestCode:	NA 8260W_OLM42	PrepDate: BatchNo: FileID:	R32210 1-SAMP-J5079.D
Col Type:					

Analyte		Result Qua	l PQL		MDL	Units	DF	Date Analyze
OLATILE ORGANIC COMPOUNDS BY GC/MS					SW826	0 C /50300	:	
Dichlorodifluoro	methane	ND	5.00		0.50	µg/L	5	05/09/18 13:37
Chloromethane		ND	5.00		1.65	µg/L	5	05/09/18 13:37
vinyl chloride		26.0	5.00		1.65	µg/L	5	05/09/18 13:37
Bromomethane		ND	5.00		1.65	µg/L	5	05/09/18 13:37
Chloroethane		3.75 J	5.00		1.65	μg/L	5	05/09/18 13:37
Frichlorofluorom	lethane	ND	5.00		0.50	µg/L	5	05/09/18 13:37
1.1-Dichloroethe		ND	2.50		0.80	µg/L	5	05/09/18 13:37
	1,2,2-trifluoroethane	-ND	2.50	- R	0.50	µg/L	5	05/09/18 13:37
Acetone	1-1-1-	6.85 🖌	50.0	5	5.00	µg/L	5	05/09/18 13:37
Carbon disulfide	•	ND	2.50	-	0.55	µg/L	5	05/09/18 13:37
Methyl acetate		-ND	25.0	R-	5:00	µg/L	5	05/09/18 13:37
Viethylene chlor	ide	ND	10.0		0.80	µg/L	5	05/09/18 13:37
rans-1,2-Dichio		1.15 J	2.50		0.50	μg/L	5	05/09/18 13:37
Viethyl tert-butyl		ND	5.00		0.80	µg/L	5	05/09/18 13:37
1,1-Dichloroetha		28.3	2.50		0.50	µg/L	5	05/09/18 13:37
cis-1,2-Dichloro		168	2.50		0.50	µg/L	5	05/09/18 13:37
2-Butanone		ND	50.0	NJ	5.00	µg/L	-5	05/09/18 13:37
Chloroform		3.25	2.50		0.50	μg/L	5	05/09/18 13:37
1,1,1-Trichloroe	thane	13.0	2.50		0.50	μg/L	5	05/09/18 13:37
Cyclohexane		-ND	2.50	R	0.60-	µg/L	5	05/09/18 13:37
Carbon tetrachl	oride	ND	2.50		0.50	µg/L	5	05/09/18 13:37
Benzene		134	2.50		0.50	µg/L	5	05/09/18 13:37
1.2-Dichloroetha	ane	ND	2.50		0.80	µg/L	5	05/09/18 13:37
Trichloroethene		26.6	2.50		0.50	µg/L	5	05/09/18 13:37
Methylcyclohexa		ND	2.50		0.50	μg/L	5	05/09/18 13:37
1.2-Dichloropro		ND	2.50		0.80	µg/L	5	05/09/18 13:37
Bromodichloron	No. of Control of Cont	ND	2.50		0,50	µg/L	5	05/09/18 13:37
cis-1,3-Dichloro		ND	2.50		0.80	µg/L	5	05/09/18 13:37
4-Methyl-2-pent		ND	25.0		5.00	μg/L	5	05/09/18 13:37
Toluene		ND	2.50		0.50	µg/L	5	05/09/18 13:37
trans-1,3-Dichlo	propropene	ND	2.50		0.80	µg/L	5	05/09/18 13:37
1,1,2-Trichloroe	•. .	1.45 J	2.50		0.80	µg/L	5	05/09/18 13:37
Tetrachloroethe		118	2.50		0.50	µg/L	5	05/09/18 13:37
2-Hexanone		ND	25.0	US	5.00	µg/L	5	05/09/18 13:37
Dibromochloror	nethane	ND	2.50	5.63	0.50	μg/L	5	05/09/18 13:37
	* Value may exceed the A	ccentable Level			B Analyte	detected in the	associated N	Aethod Blank
Qualifiers:	E Value exceeds the instru		e.			times for prepa		
	J Analyte detected below							itation Limit (PQL)
	P Prim./Conf. column %I		• ,			ecovery outside		

Print Date: 06/11/18 13:36

870105 Project Supervisor: David J Prichard

	Life Science 854 Butternut Drive		Analytical Results				
E	ast Syracuse, NY 1	3057 (315) 4	45-1900		State	CertNo:	10248
CLIENT Project:	O'Brien & Gere Op PAS Oswego-Semi-		ling	Lab ID: Client Samp		06874-00 CW-2 5/2	
W Order: Matrix:	1806874 WATER			Collection D Date Receive		08/18 12: 08/18 16:	
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502.2 06/11/18 13:33	Sample Size %Moisture: TestCode:	NA 8260W OLM42	PrepDate: BatchNo: FileID:		2210 AMP-J50	79.D
Col Type:	00/11/10 10:55	itstoode.					e - 1
Analyte		Result Q	ual PQL	MDL	Units	DF	Date Analyzed
VOLATILE	ORGANIC COMPOU	NDS BY GC/MS			SW8260	C/5030C	
1,2-Dibromoet		ND	2.50	0,80	µg/L	5	05/09/18 13:37
Chlorobenzene		. 28.4	2.50 3+	0.50	µg/L	5	05/09/18 13:37
Ethylbenzene		2.60	2.50	0.50	µg/L	5	05/09/18 13:37

VOLATILE ORGANIC COMPOUNDS B	Y GC/MS			SW8260	C/5030C	
1,2-Dibromoethane	ND	2.50	0.80	µg/L	5	05/09/18 13:37
Chlorobenzene	28.4	2.50 3+	0.50	µg/L	5	05/09/18 13:37
Ethylbenzene	2.60	2.50	0.50	µg/L	5	05/09/18 13:37
Xvienes (total)	ND	5.00	1.50	µg/L	5	05/09/18 13:37
Styrene	ND	2.50	0.50	µg/L	5	05/09/18 13:37
Bromoform	ND	5.00	1.65	µg/L	5	05/09/18 13:37
Isopropylbenzene	1.15 J	2.50	0.50	µg/L	5	05/09/18 13:37
1.1.2.2-Tetrachloroethane	4,40	2.50	0.50	μg/L	5	05/09/18 13:37
1.3-Dichlorobenzene	ND	2.50	0.50	µg/L	5	05/09/18 13:37
1.4-Dichlorobenzene	ND	2.50	0.80	µg/L	5	05/09/18 13:37
1,2-Dichlorobenzene	1.35 J	2.50	0.50	µg/L	5	05/09/18 13:37
1,2-Dibromo-3-chloropropane	ND	25.0 UJ	5.00	µg/L	5	05/09/18 13:37
1.2.4-Trichlorobenzene	ND	5.00	0.50	µg/L	5	05/09/18 13:37
Surr: 1,2-Dichloroethane-d4	92	75-130	0.80	%REC	` 5	05/09/18 13:37
Surr: Toluene-d8	102	75-125	0.50	%REC	5	05/09/18 13:37
Surr: 4-Bromofluorobenzene	94	75-125	0.50	%REC	5	05/09/18 13:37



Oualifiers:	+	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
Qualifiers.	E	Value exceeds the instrument calibration range	н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 06/11/18 13:36 870105 Project Supervisor: David J Prichard

	ast Syracuse, NY 13		445-1900				1806874-00	74
CLIENT	O'Brien & Gere Ope				Lab ID:	ula ma	5	
Project:	PAS Oswego-Semi-A	Annual Well Samj	pling			•	LCW-4 5/7	
W Order: 1806874					Collection Date: 05/08/18 13:50			
Matrix:	WATER				Date Recei	ved:	05/08/18 16:	05
inst. ID:	MS03_10	Sample Size	NA		PrepDate:			
ColumnID:	Rtx-502.2	%Moisture:			BatchNo:		R32210	~~ ~
Revision:	06/11/18 13:33	TestCode:	8260W_	OLM42	FileID:		1-SAMP-J50	80.D
Col Type:						67 (2010)		9
Analyte		Result Q	ual PQL	f	MDL	Uni	ts DF	Date Analyzed
OLATILE	ORGANIC COMPOUN	NDS BY GC/MS				SW	8260C/5030C	
Dichlorodifluor	omethane	ND	20.0		2.00	hð\r		05/09/18 14:07
Chloromethane	e	ND	20.0		6.60	µg/L		05/09/18 14:07
/inyl chloride		ND	20.0		6,60	µg/L		05/09/18 14:07
Bromomethane	2	ND	20.0		6.60	µg/L	. 20	05/09/18 14:07
Chloroethane		62.2	20.0		6.60	µg/L	. 20	05/09/18 14:07
richlorofluoro	methane	ND	20.0		2.00	µg/L	. 20	05/09/18 14:07
,1-Dichloroeth	nene	ND	10.0		3.20	µg/L	. 20	05/09/18 14:07
	-1,2,2-trifluoroethane	-ND-		R	-2.00-	μg/L	. 20	05/09/18 14:07
cetone	5. 5	ND	200	US	20.0	µg/L	. 20	05/09/18 14:07
arbon disulfic	le	ND	10.0		2.20	μg/L	20	05/09/18 14:07
Aethyl acetate		ND-	-180	R	-20.0	µg/L	20	05/09/18 14:07
Aethylene chic		ND	40.0	1000 B0 - 0	3.20	µg/L	. 20	05/09/18 14:07
rans-1,2-Dich		ND	10.0		2.00	µg/L	20	05/09/18 14:07
Aethyl tert-but		ND	20.0		3.20	µg/L	20	05/09/18 14:07
1-Dichloroet		2.60 J	10.0		2.00	μg/L	. 20	05/09/18 14:07
sis-1,2-Dichlor		2.20 J	10.0		2.00	µg/l		05/09/18 14:07
2-Butanone		ND	200	LJ	20.0	µg/l		05/09/18 14:07
Chioroform		ND	10.0	0.23	2.00	µg/L		05/09/18 14:07
1,1-Trichloro	ethane	ND	10.0		2.00	µg/L		05/09/18 14:07
Cyclohexane		ND-	10.0	R	-2.00-	μg/L		05/09/18 14:07
Carbon tetrach	loricie	ND	10.0		2.00	μg/L		05/09/18 14:07
Benzene		458	10.0		2.00	µg/L		05/09/18 14:07
1,2-Dichioroet	hane	ND	10.0		3.20	μg/L		05/09/18 14:07
Frichloroethen		ND	10.0		2.00	µg/L		05/09/18 14:07
Vethylcyclohe		2,00 J			2.00	μg/L		05/09/18 14:07
,2-Dichloropr		ND	10.0		3.20	μg/L	212	05/09/18 14:07
Bromodichloro		ND	10.0		2.00	μg/l		05/09/18 14:07
cis-1,3-Dichior		ND	10.0		3.20	μg/l		05/09/18 14:07
and the contraction		ND	100		20.0	μg/l		05/09/18 14:07
4-Methyl-2-per		15.4	10.0		2.00	μg/l		05/09/18 14:07
Foluene	loropropago	ND	10.0		3,20	μg/l		05/09/18 14:07
rans-1,3-Dich		ND	10.0		3.20	μg/l		05/09/18 14:07
1,1,2-Trichlord		ND	10.0		2.00	μg/l		05/09/18 14:07
Tetrachloroeth		ND	100	NJ	20.0	pg/l		05/09/18 14:07
2-Hexanone Dibromochloro	mothana	ND	10.0	5	2.00	part hg/t		05/09/18 14:07
JIDIOMOCNIOIC			10.0					10000
Qualifiers:		the Acceptable Level					n the associated M	
		nstrument calibration ra	ange				preparation or ana	ation Limit (PQL)
	J Analyte detected be							

Life Science Laboratories. Inc.

Analytical Results

14

Print Date: 06/11/18 13:36

Project Supervisor: David J Prichard 870106

Life Science Laboratories, Inc.

Analytical Results

E	ast Syracuse, NY 1305	7 (315) 445-1900	S	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		Lab ID: Client Sample ID:	1806874-007A LCW-4 5/7/18
W Order: Matrix:	1806874 WATER		Collection Date: Date Received:	05/08/18 13:50 05/08/18 16:05
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502.2 06/11/18 13:33	Sample Size NA %Moisture: TestCode: 8260W_OLM42	PrepDate: BatchNo: FileID:	R32210 1-SAMP-J5080.D
Col Type:				

Analyte	Result Qua	l PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	DS BY GC/MS			SW8260	0C/5030C	
1,2-Dibromoethane	ND	10.0	3.20	µg/L	20	05/09/18 14:07
Chlorobenzene	342	10.0	2.00	μg/L	20	05/09/18 14:07
Ethylbenzene	84.0	10.0	2.00	µg/L	20	05/09/18 14:07
Xvienes (total)	695	20.0	6.00	µg/L	20	05/09/18 14:07
Styrene	ND	10.0	2.00	µg/L	20	05/09/18 14:07
Bromoform	ND	20.0	6,60	µg/L	20	05/09/18 14:07
isopropylbenzene	4.20 J	10.0	2.00	μg/L	20	05/09/18 14:07
1,1,2,2-Tetrachloroethane	ND	10.0	2.00	µg/L	20	05/09/18 14:07
1,3-Dichlorobenzene	ND	10.0	2.00	µg/L	20	05/09/18 14:07
1,4-Dichlorobenzene	3.40 J	10.0	3.20	µg/L	20	05/09/18 14:07
1,2-Dichlorobenzene	24.2	10.0	2.00	µg/L	20	05/09/18 14:07
1,2-Dibromo-3-chloropropane	ND	100 MJ	20.0	μg/L	20	05/09/18 14:07
1,2,4-Trichlorobenzene	ND	20.0	2.00	µg/L	20	05/09/18 14:07
Surr: 1,2-Dichloroethane-d4	90	75-130	3.20	%REC	20	05/09/18 14:07
Surr: Toluene-d8	102	75-125	2.00	%REC	20	05/09/18 14:07
Surr: 4-Bromofluorobenzene	92	75-125	2.00	%REC	20	05/09/18 14:07



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

Project Supervisor: David J Prichard Print Date: 06/11/18 13:36 870106

Life Science Laboratories, Inc. SL 5854 Butternut Drive

Analytical Results

E	ast Syracuse, NY 13	057 (315)	445-1900	S	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Oper PAS Oswego-Semi-A	general second stability of the stability of the second second second second second second second second second	pling	Lab ID: Client Sample ID:	1806874-008A QC Trip Blank 5/7/18
W Order: Matrix:	1806874 WATER Q			Collection Date: Date Received:	05/03/18 0:00 05/08/18 16:05
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502.2 06/11/18 13:33	Sample Size %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R32210 1-SAMP-J5086.D
Col Type:	00/11/18 13:55	TestCoue.	0200 W_0EM142	1	

Analyte	.*	Result Qua	PQL	r	MDL	Units	DF	Date Analyze
VOLATILE ORG	ANIC COMPOUNDS	BY GC/MS			2	SW8260	C/5030	с
Dichtorodifluorometi	ane	ND	1.00		0.10	µg/L	1	05/09/18 17:04
Chloromethane		ND	1.00	×.	0.33	μg/L	1	05/09/18 17:04
Vinyl chloride	20	ND	1.00		0.33	µg/L	1	05/09/18 17:04
Bromomethane		ND	1.00		0.33	µg/L	1	05/09/18 17:04
Chloroethane		ND	1.00		0.33	µg/L	1	05/09/18 17:04
Trichlorofluorometh	ane	ND	1.00		0.10	µg/L	1	05/09/18 17:04
1,1-Dichloroethene		ND	0,50		0.16	μg/L	1	05/09/18 17:04
1,1,2-Trichloro-1,2,3	2-trifluoroethane	ND		R	0.10	μg/L	1	05/09/18 17:04
Acetone		ND	10.0	uS	1.00	μg/L	1	05/09/18 17:04
Carbon disulfide	7	ND	0.50	Vie	0.11	µg/L	1	05/09/18 17:04
Vethyl acetate		-ND	5:00	R	-1.00	μg/L	1	05/09/18 17:04
Viethylene chloride		ND	2.00	1	0.16	µg/L	1	05/09/18 17:04
rans-1,2-Dichloroel	hene	ND	0.50		0.10	µg/L	1	05/09/18 17:04
Nethyl tert-butyl eth		ND	1.00		0.16	µg/L	1	05/09/18 17:04
1,1-Dichloroethane		ND	0.50		0.10	µg/L	1	05/09/18 17:04
sis-1,2-Dichloroethe	000	ND	0.50		0.10	μg/L	1	05/09/18 17:04
2-Butanone	110	ND	10.0	us	1.00	µg/L	1	05/09/18 17:04
Chloroform		ND	0.50		0.10	µg/L	1	05/09/18 17:04
1,1,1-Trichloroethar		ND	0.50		0,10	μg/L	1	05/09/18 17:04
Cyclohexane	Ψ.	ND	-0.50	R	-0.10	µg/L	1	05/09/18 17:04
Carbon tetrachloride		ND	0.50	. .	0.10	μg/L	1	05/09/18 17:04
Benzene	×	ND	0.50		0.10	μg/L	1	05/09/18 17:04
1,2-Dichloroethane		ND	0.50		0.16	µg/L	1	05/09/18 17:04
Trichloroethene		ND	0.50		0.10	µg/L	1	05/09/18 17:04
Vethylcyclohexane		ND	0.50		0.10	µg/L	1	05/09/18 17:04
a anna an		ND	0.50		0.16	µg/L	1	05/09/18 17:04
1,2-Dichloropropana Bromodichlorometh		ND	0.50		0.10	μg/L	1	05/09/18 17:04
21 10 100105-00 40 01		ND	0.50		0.16	µg/L	1	05/09/18 17:04
cis-1,3-Dichloropro		ND	5.00		1.00	µg/L	1	05/09/18 17:04
4-Methyl-2-pentano		ND	0.50		0.10	μg/L	1	05/09/18 17:04
Toluene		ND	0.50		0.16	µg/L	1	05/09/18 17:04
rans-1,3-Dichlorop			0.50		0.16	μg/L	1	05/09/18 17:04
1,1,2-Trichloroethar	ie	ND	0.50		0.10	μg/L	1	05/09/18 17:04
Tetrachloroethene		ND		US	1.00	μg/L	1	05/09/18 17:04
2-Hexanone	200	ND ND	5.00 0.50	(m)	0.10	μg/L	1	05/09/18 17:04
Dibromochlorometh			0.50					
Qualifiers:	Value may exceed the A					te detected in the a		
E			;			ng times for prepar		
J	Analyte detected below	a server and the server of the					1000 0	titation Limit (PQL)
P	Prim./Conf. column %E) or RPD exceeds limit			S Spike	Recovery outside	accepted r	ecovery nmus

Print Date: 06/11/18 13:36

870112

Project Supervisor: David J Prichard

LSL	Life Science L 854 Butternut Drive Cast Syracuse, NY 1305		ories, Inc. 445-1900		Analytical Results
CLIENT Project:	O'Brien & Gere Operati PAS Oswego-Semi-Anr	Constraint and the second s	pling	Lab ID: Client Sample ID:	1806874-008A QC Trip Blank 5/7/18
W Order: Matrix: Inst. ID:	1806874 WATER Q MS03_10 Rtx-502.2 06/11/18 13:33	Sample Size %Moisture: TestCode:		Collection Date: Date Received: PrepDate: BatchNo: FileID:	05/03/18 0:00 05/08/18 16:05 R32210 1-SAMP-J5086.D

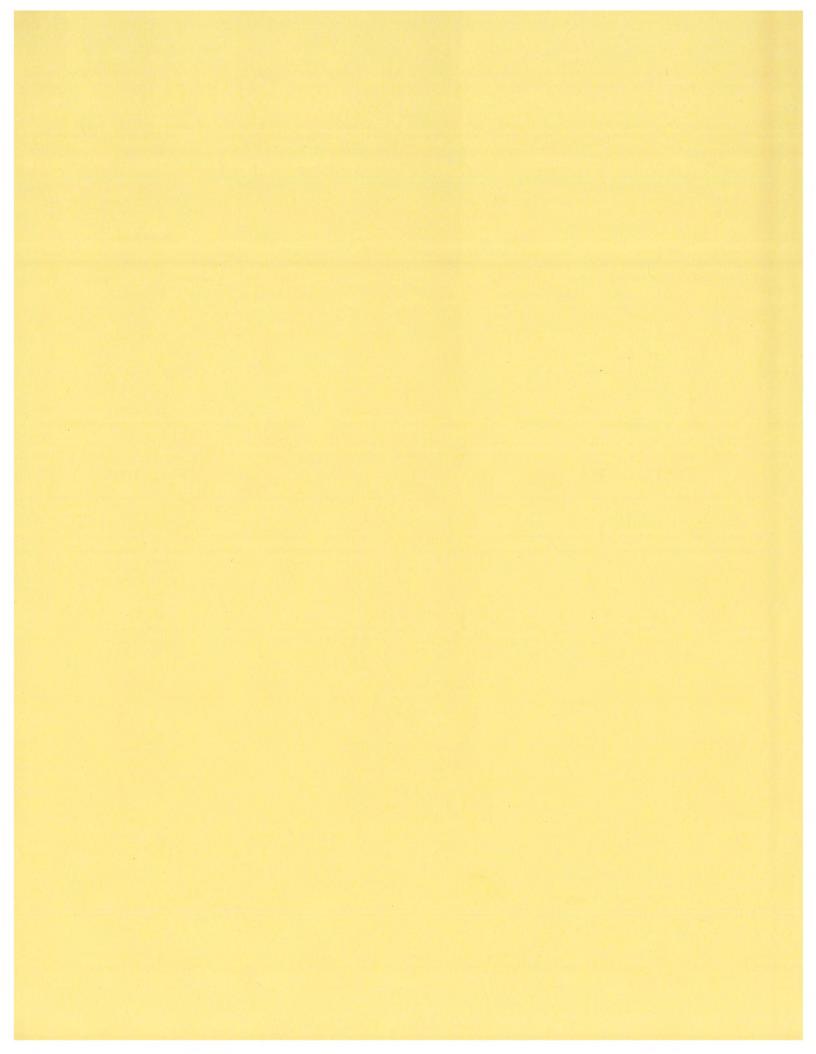
Col Type:

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND	S BY GC/MS			SW826	0C/5030C	
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	05/09/18 17:04
Chlorobenzene	ND	0.50	0.10	µg/L	1	05/09/18 17:04
Ethylbenzene	ND	0.50	0.10	µg/L	1	05/09/18 17:04
Xylenes (total)	ND	1.00	0.30	µg/L	1	05/09/18 17:04
Styrene	ND	0.50	0.10	µg/L	1	05/09/18 17:04
Bromoform	ND	1.00	0.33	µg/L	1	05/09/18 17:04
Isopropy/benzene	ND	0.50	0.10	µg/L	1	05/09/18 17:04
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	05/09/18 17:04
1,3-Dichlorobenzene	ND	0.50	0.10	μg/L	1	05/09/18 17:04
1,4-Dichlorobenzene	ND	0.50	0.16	μg/L	1	05/09/18 17:04
1.2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	05/09/18 17:04
1,2-Dibromo-3-chloropropane	ND	5.00 45	1.00	µg/L	1	05/09/18 17:04
1,2,4-Trichlorobenzene	ND	1.00	0.10	μ g/L	1	05/09/18 17:04
Surr: 1,2-Dichloroethane-d4	95	75-130	0.16	%REC	1	05/09/18 17:04
Surr: Toluene-d8	100	75-125	0.10	%REC	1	05/09/18 17:04
Surr: 4-Bromofluorobenzene	99	75-125	0.10	%REC	1	05/09/18 17:04



Qualifiers:	*	Value may exceed the Acceptable Level		Analyte detected in the associated Method Blank
	Е	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 06/11/18 13:36 870112 Project Supervisor: David J Prichard



SEMIANNUAL FIELD DATA MAY 2018

Life Science Lab Central Lab	orato	ries,	Inc.	Ea	54 Butte st Syrac 5) 445-	use, N		ork 1:	3057		С	hain	of Custody
Client: OBRIENS GERE (OPERA	Frons		•					Δ	nalysis	Moth		
Project: PAS OSWEYO Semi	ANNUAL	well	SAMO	luna			<u> </u>	1		larysis		100 7 /	
MARIN KOENNEC	ke		p	<u> </u>		/	0		/		/	/ /	•
LCHART Contact	Phone #	· · · · · · · · · · · · · · · · · · ·			<u> </u>		\$°.	. /				/	
Sample Des			<u> </u>		······	1 /							
Sample Location	Date	Time Collected	Sample	Comp.	No. of	102	5/	/ .	/	/	/		
Equipment Blank	5-7-18		Matrix W	or Grab	Containers 3	3	<u> </u>		/	<i> </i>	<u> </u>	/	Comments
<u>M-21</u>	5-7-18		W	6	·	3	· ·						
0D-3	5-7-18		W	6	3	<u> </u>			<u> </u>		<u> </u>		
<u>X-1</u>	5-7-18		w	6	$\frac{3}{3}$						<u> -</u>		· · · · · · · · · · · · · · · · · · ·
LR-8	5-8-18		W		3	3		<u> </u>			ļ		
LR-8 MS	5-8-18		Ŵ	6	3	3					ļ		-
LR-8 mSD	5-8-18			· · · · · · · · · · · · · · · · · · ·	<u>}</u>	3							
LCW-2	5-8-18	<u> </u>	W	G	3	3							
LCW - 4	5-8-18		W	6	3	3							
. QC TRIP BLANKS	5-8-70	13:50	w	6	3	3							
<u>yy_</u>	+	{	w	ļ	2	<u>a</u>	ļ						
Relinquished by: Marthe Keensh						وروارين ورواني							
Relinquished by:		ate: <u>5-8</u>	-/8 Time	16.05	Receive	d by:					D	ate:	Time:
Relinquished by:	·	ate:	Time	<u> </u>	Receive			. /	J		D	ate:	Time:
Shipmont Mark	Da	ate:	Time	:	Receive	d by Lat	b: hu	Val	63.10	Ner		ate: 5/2	
HAND HAND					Airbill N		-y-	<u> </u>				<u> </u>	7/18 Time: 1005
Rush	Comments	5:			<u></u>	·····	2	.0°_	 S	amples F	leceived		
Cooler Temperature:										On I	ce		Original - Laboratory

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FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO)

GROUND WATER SAMPLING LOG

Date	5-7-18	Weather	P-Sunny
Site Name	PAS Oswego	Well #	M-21
Location	55 East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	MARTIN KORANEOU		

WELL INFORMATION

Depth of Well	fţ	-9,15-		Water Vol/ft for:
Depth of Water	ft	9,15	2" Diameter Well = 0.163 X LWC	
Length of Water Column	ft		4" Diameter Well = 0.653 X LWC	
Volume of Water in Well	gal		6" Diameter Well = 1.469 X LWC	×
3x Volume of Water in Well	gal	· · · · ·	14" Diameter Well = 2.282 X LWC	

the second se		and the second	·	
이번 가지 그 그는 것이 아니는 것이 같아요. 이 가지 않는 것이 가지 않는 것이 가지 않는 것 같아.				
Volume removed before Samplin	_	പെട്ട്		
Volume removed before sampling	🗶 그 나는 가는 것이 잘 안 갔다. 가지 나갔는 것 같은			
	Quarter a substration of the bar	0		
	深らさば アル・ターム とうやくし なともの かくれ			
Did Well go dry?	가 왜 다니 이 가슴지? 가지? 이 다 다 나갔었지? 하네?	the second se		
Did Well go dry?	제품은 지수님이 있는 것 같아. 문화한 방송 문			
· · · · · · · · · · · · · · · · · · ·	and a strange of the strange sector of the			

INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings
4.0 Standard	84 S Standard
7.0 Standard	1413 S Standard
10.0 Standard	

TEST EQUIPMENT DEPTHS WITHIN WELL

Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK
	·						

WATER PARAMETERS START 12:00 SAmple = 12:35

Time	Depth to Water	Temperature C	рН	Conductivity	ÓRP	DO (B)	Turbidity (NTU)	Flow Rate
12:05	9.16	8.6	7.18	1,113	-102,4	1.55	1,64	300 ML
10 M.N.		8,17	7,19	1.114	-75,7	2.60	2122	300ml
15 min	9,16	8,5	7,15	1.112	-93,6	1,58	2,29	300 M
20min		8,5	7,15	1,110	- 98.6	1.51	2.31	300 ml
25 mm	9.16	8.6	7,14	1.11	-102.6	1.46	2,26	300 ml
30 MW		<u></u>	7.14	1,109	-105.2	1.44	2,20	300 al
								<u> </u>

360° Engineering and Project Delivery Solutions

Conten 5 Gere

M - 21

WATER SAMPLE

Time Collected: 1み:35

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	clean	clean
Odor	NO	No
Turbidity <100 (NTU)	NO	No
Sheen/Free Product	NO	NO

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH	
40 ml	aleas	3	NO	HCL		
· · · · · · · · · · · · · · · · · · ·						
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FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO)

GROUND WATER SAMPLING LOG

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Date	5-7-18	Weather	SUNAN 52°
Site Name	PAS Oswego	Well #	00-3
Location	55 East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	M. Koenweike		

WELL INFORMATION

Depth of Well	ft	. *	······································	Water Vol/ft for:
Depth of Water	ft	13.90	2" Diameter Well = 0.163 X LWC	\times
Length of Water Column	ft		4" Diameter Well = 0.653 X LWC	
Volume of Water in Well	gal		6" Diameter Well = 1.469 X LWC	
3x Volume of Water in Well	gal		14" Diameter Well = 2.282 X LWC	

1996년 - 1987년 1997년 1	· · · · ·	
Volume removed before Sampling		· 1
· · · · · · · · · · · · · · · · · · ·		
Did Well go dry?		

Measurements Taken From:	Well Casting	Casting 🔄 🗌 Other	•

INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings
4.0 Standard	84 S Standard
7.0 Standard	1413 S Standard
10.0 Standard	

TEST EQUIPMENT DEPTHS WITHIN WELL

Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK
						;	

WATER PARAMETERS

START - 13:30 / STUP14:10 SAmple - 14:15

Time	Depth to Water	Temperature	рH	Conductivity MS/cm	ORP	DO (2)	Turbidity (NTU)	Flow Rate
5 min	14.25	9,2	7.42	0.179	90,0	7.70	5.33	300
10 min	14.30	9,3	7,16	0,174	98.9	7.45	3.38	300
	14,36	9.3	6.97	0,171	106.0	7,40	2.24	300
domm		9.3	6.83	0.168	112,1	7,40	2.16	300
25 min	14.36	9,3	6.77	0.169	115.6	7.42	1.52	300
30 MIN	14.36	9,4	6,69	0,172	121.4	7,34	1.48	300
35 min	14,36	9,4	6.68	0,176	123,3	7.36	1,39	300
40 min	14,36	9,4	6.68	0.178	124.0	7,33	1.40	300

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WATER SAMPLE OD-3

14:15

PID READING - 0,0

x-1 Collected

.

Time Collected:

Characteristics	Physical Appearance	At Start	Physical Appearance At	Sampling
Color	clen		clen	
Odor	NO		NO	· · · · · ·
Turbidity <100 (NTU)	NO		NO	
Sheen/Free Product	No		No	

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	alous	6	NO	HLL	
	0				
				·····	
				· · · · · · · · · · · · · · · · · · ·	

NOTES

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FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO)

GROUND WATER SAMPLING LOG

and the second			
Date 5-8-18	5-8-18	Weather	SUNNY 55°
Site Name	PAS Oswego	Well #	LR-8
Location	55 East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number		Sampling Method	EPA Low Flow Method II
Personnel	M. Koennecky		

WELL INFORMATION

Depth of Well	ft			Water	Vol/ft for:
Depth of Water	ft 9,72	2" Diameter Well = 0.	163 X LWC	X	-
Length of Water Column	ft	4" Diameter Well = 0.	653 X LWC		
Volume of Water in Well	gal	6" Diameter Well = 1.	469 X LWC	· .	
3x Volume of Water in Well	gal	14" Diameter Well = 2.	282 X LWC		

Volume removed before Sampling	gals $3_{r}5$
Did Well go dry?	

Measurements Taken From:	Well Casting	Protective Casting	Other:	

INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings
4.0 Standard	84 S Standard
7.0 Standard	1413 S Standard
10.0 Standard	

TEST EQUIPMENT DEPTHS WITHIN WELL

Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK
				· · ·			

WATER PARAMETERS

STOP - 9125 START 8:45

SAmple- 9:30

Depth Turbidity DO (%) Conductivity ORP Time to Temperature pН **Flow Rate** (NTU) MS/CM Water C 9,3 0.741 3,95 300 mil 5 Min 9,82 8,24 -41.9 1,90 4.27 0,835 10 min 7,79 1.64 9,86 9.8 - 116,0 300 1,58 0.845 15 min 9,9 - 130,9 3.11 9.92 7.66 300 1.48 2,13 9,94 7,38 0,892 - 153,8 20 Min 10.1 300 1.54 25 MIN 1.43 9.95 10,2 7.18 0,960 - 161,1 300 9,95 1.39 1.07 7.08 1.002 - 162,9 1012 30 mm 300 1.35 9,95 7.00 1,030 35 min 10.3 -165,1 0.74 300 9.95 10,3 6.99 1.35 300 1,032 - 165,2 0.82 HOMIN

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DE OBRIEN 5 GERE

WATER SAMPLE LR-8

Time Collected: 9:30

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	clen	Clean
Odor	NO	Nº
Turbidity <100 (NTU)	ND	NO
Sheen/Free Product	NO	NO

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	alass	9	NO	HEL	
	0	•			
					· · · · · · · · · · · · · · · · · · ·
		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
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			······		

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FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO)

GROUND WATER SAMPLING LOG

Date 5-8-18	Weather	SUNUY 63°
Site Name PAS Oswego	Well #	LCW-2
Location 55 East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number	Sampling Method	EPA Low Flow Method II
Personnel M. Koennecte		

WELL INFORMATION

Depth of Well ft		Water Vol/ft for:
Depth of Water ft 9.30	2" Diameter Well = 0.163 X LWC	
Length of Water Column ft	4" Diameter Well = 0.653 X LWC	
Volume of Water in Well gal	6" Diameter Well = 1.469 X LWC	
3x Volume of Water in Well gal	14" Diameter Well = 2.282 X LWC	×

				······································
- ENVERING A CONTRACTOR OF A CONTRACT OF A	4 ° 1	2 1		
Volume removed before Sampling	i πole	7648		
	gais	2900		
Contraction of the state of				
· "你们,你还是你吃了你的,你们还不是你的你?""你们,你们不是你?"你们就不是你的你的,你们也是你们你们,你不是你?""你"你们,你们不是你?""你"			· · · · · · · · · · · · · · · · · · ·	
	1	8		
Did Well go dry?	1			
Line arcti Po di At	1			
	1			

I Magcuramante Takan Frame 🛸 🛸 I Mali Casting 👘 I Drati	
Measurements Taken From: Key Well Casting	ective Casting

INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings
4.0 Standard	84 S Standard
7.0 Standard	1413 S Standard
10.0 Standard	

TEST EQUIPMENT DEPTHS WITHIN WELL

Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK
					· · · · · · · · · · · · · · · · · · ·		

WATER PARAMETERS STAT 12:10 STOP-12:40 SAMPLE 12:45

Time	Depth to Water	Temperature	pH	Conductivity	ORP	DO (2) M4/L	Turbidity (NTU)	Flow Rate
Smin	9,30	8.6	6.81	1.665	-94.3	1.64	2,53	300 Ml
10 min	9,30	8,7	6.97	1.665	- 94.7	1.57	0,91	300 mb
15 MIN	9,30	8,7	6,72	1.662	-95,3	1,50	0,88	300
20 mini	9,30	8,7	6,70	1.663	- 95,9	1.48	1,23	300
25min	9,30	8,7	6,69	1.662	- 96, 3	1,45	0,93	300
BOMIN	9,30	8.6	6.68	1.664	-96.8	1.46	0.96	300

360° Engineering and Project Delivery Solutions

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READING ONO MyL

Lew-2

WATER SAMPLE

Time Collected:

Characteristics	Physical Appearance At St	art	Physical Appear	ance At Sampling
Color	SLIGHT Yellow		SLight	Yellow
Odor	SLIGHT		SLIGHT	
Turbidity <100 (NTU)	NO		NO	
Sheen/Free Product	ND		NO	

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	glass	3	NO	HCL	
· .	0				
				· · · · · · · · · · · · · · · · · · ·	
		· .			· · · · ·
			<u>Nacional</u> de la composición d		
			· · · ·		

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360° Engineering and Project Delivery Solutions

FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO)

GROUND WATER SAMPLING LOG

Date 5-8-18	Weather	SUNNY 68°
Site Name PAS Oswego	Well #	LCW-4
Location SS East Seneca St	Evacuation Method	Grundfos Low Flow Equip.
Project Number	Sampling Method	EPA Low Flow Method II
Personnel M. Koenneck		

WELL INFORMATION

Depth of Well	ft			Water Vol/ft for:
Depth of Water	ft 16,96	2" Diameter Well	= 0.163 X LWC	
Length of Water Column	ft	4" Diameter Well	= 0.653 X LWC	
Volume of Water in Well	gal	6" Diameter Well	= 1.469 X LWC	
3x Volume of Water in Well	gal	14" Diameter Well	= 2.282 X LWC	₩

Volume removed before Sampling	gals	3	· · · · · · · · · · · · · · · · · · ·		
Did Well go dry?			· ·		
Measurements Taken From: Well Casting] Prote	ective Casting	Other:	· ·

INSTRUMENT CALIBRATION

pH Buffer Readings	Conductivity Standard Ratings
4.0 Standard	84 S Standard
7.0 Standard	1413 S Standard
10.0 Standard	

TEST EQUIPMENT DEPTHS WITHIN WELL

Time	Well Screen Depth	Depth of Intake Pump	Blank	BLANK	BLANK	BLANK	BLANK

WATER PARAMETERS START 13:10 STOP - 13:45

Sample - 1350

Time	Depth to Water	Temperature	рН	Conductivity	ORP	DO (%)	Turbidity (NTU)	Flow Rate
5 nin	16.96	10,5	6.67	2.963	-119,2	1.55	1.79	300
OMIN	16.96	10,6	6.64	2,922	- 127.0	1.44	2.48	300
5min	16.96	10,7°	6063	2,910	- 131,2	1,39	1.95	300
U MIN	16.96		6.62		-133,9	1,36	2004	300
5min	16,96	10,7	662	2,864	- 138.3	1.32	2,16	300
10 MON	16.96		6.62	2.858	- 139,0	1,31	2,10	300
35 min	16.96		6.62		- 139.6	1,30	1.96	300
-			 					

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e obrien 6 gere

FORMER POLLUTION ABATMENT SERVICES (PAS OSWEGO)

READING

0.0

GROUND WATER SAMPLING LOG

WATER SAMPLE

LCW - 4

Time Collected:

	Physical Appearance At Start	Physical Appearance At Sampling		
Color	SLIGHT Yellow	SLIGHT Xellow		
Odor	SLIGHT	SLIGHT		
Turbidity <100 (NTU)	NO	NO		
Sheen/Free Product	<i>NO</i>	NO		

SAMPLES COLLECTED

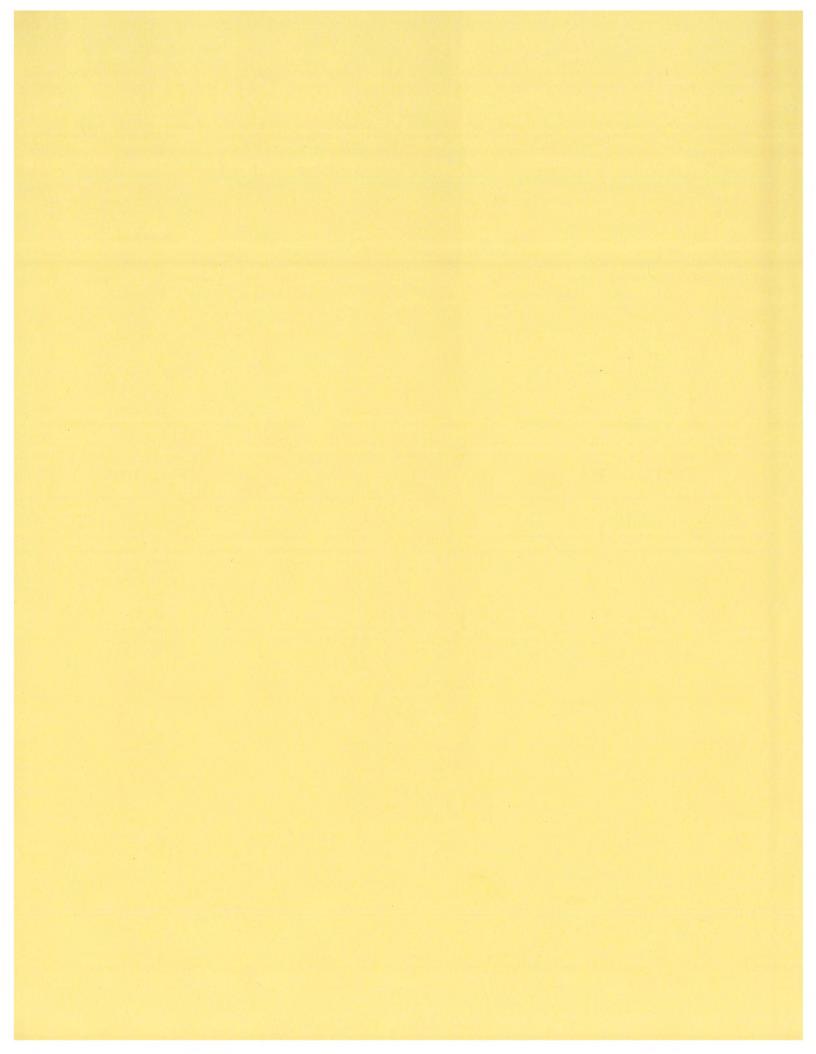
PID

Container Size			Field Filtered	Preservative	Container pH	
40 ml	Glass	3	NO	HCI		
	0					
			*****		·····	

NOTES

360° Engineering and Project Delivery Solutions





SEMIANNUAL LAB DATA MAY 2018



Sunday, June 12, 2016

Mark Byrne O'Brien & Gere Operations, LLC 7600 Morgan Road Liverpool, NY 13090

TEL: 315-437-6100

Project: PAS OSWEGO-SEMI-ANNUAL WELL SAMPLING

RE: Analytical Results

Order No.: K1605031

Dear Mark Byrne:

Life Science Laboratories, Inc. received 10 sample(s) on 5/4/2016 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.

David J Prichard Project Manager

Laboratory Report

Project Management Case Narrative

INTRODUCTION/ANALYTICAL RESULTS

This report summarizes the laboratory results for O'Brien & Gere Inc. Operations, LLC. semi-annual samples from the PAS site located in Oswego, NY.

CONDITION UPON RECEIPT/CHAIN OF CUSTODY

The cooler(s) were received intact. When the cooler(s) were received by the laboratory, the sample custodian(s) opened and inspected the shipment(s) for damage, custody inconsistencies and proper preservation. Chains of custody documenting receipt are presented in the chain of custody section. Each sample was assigned a unique laboratory number and a custody file created. The samples were placed in a secured walk-in cooler and signed in and out by the chemists performing the tests. The sign out record, or lab chronicle, is presented in the chain of custody section.

No discrepancies were noted upon receipt. The temperature of the iced cooler was 1.0°C.

METHODOLOGY

The following methods were used to perform the analyses:

PARAMETER	METHOD	REFERENCE
Volatile Organics	8260C	1

1) <u>Test Methods for Evaluating Solid Wastes</u>, SW-846 Third Edition, 9/1986 as amended by final updates.

QUALITY CONTROL

QA/QC results are summarized in the Laboratory Report Package and are also included in the raw data.

RAW DATA

The raw data is organized in a format similar to the US EPA Contract Laboratory Program order of data requirements.

Total # of Pages ___

GC/MS Volatile Organics Case Narrative - Page 1

Client: Project/Order: Work Order #: Methodology: OGINA PAS PAS Osweg0-Semi-Annual Well Sampling K1605031 8260C/5030C

Analyzed/Reviewed by (Initials/Date):

Supervisor/Reviewed by (Initials/Date):

QA/QC Review (Initials/Date):

DC6/13/16

File Name:

Z:\Narratives\MSVoa\K1605031msnar.doc

GC/MS Volatile Organics

The GC/MS Volatile instruments are equipped with a Restek Rtx-VMS, 60 m x 0.25 mm ID capillary column (MS01, MS04, MSK, and MSN), Restek Rtx-502.2, 105 m x 0.53 mm ID capillary column (MS02), and a Restek Rtx-502.2, 60 m x 0.25 mm ID capillary column (MS03).

Holding Times and Sample Preservation

All samples were prepared and analyzed within the method and/or QAPP specified holding time requirements. Samples had a pH of < 2.

Laboratory Control Sample

The following compound(s) did not meet laboratory control sample recovery criteria:

LCS No.	Compound	Corrective Action
LCS/LCSD-29836	Acetone	1
L	several	2

- 1 The recovery exceeded the upper control limit and was detected > RL in sample *Equipment Blank* 5/2/16 [K1605031-001A]. Results may be biased high. No corrective action was taken.
- 2 The recovery exceeded the upper control limit and was not detected > RL in the associated samples. Results may be biased high. No corrective action was taken.

MS/MSD

The following compound(s) did not meet matrix spike or matrix spike duplicate percent recovery and/or RPD criteria:

Sample			%		Corrective
Description	Sample #	Compound	REC	RPD	Action
M-21 5/3/16	K1605031-002A	Chloromethane	Х		1

GC/MS Volatile Organics Case Narrative - Page 2

Client: Project/Order: Work Order #: Methodology:

OGINA PAS PAS Osweg0-Semi-Annual Well Sampling K1605031 8260C/5030C

1 The recovery exceeded the upper control limit and was not detected > RL in the associated samples. The associated LCS was also outside control limits. No corrective action was taken.

Surrogate Standards

All surrogate standard recoveries met method and/or project specific QC criteria.

Internal Standards

The internal standard abundances for *Equipment Blank 5/2/16* [K1605031-001A] were below the 50% control limit. It was determined after the analytical holding time had expired that the autosampler had malfunctioned during this sample analysis only and a reduced sample volume was removed from the sample vial for analysis. The internal standard method of quantitation can accurately account for small fluctuations in sample analysis volume, and although this volume deviation was large the acceptable surrogate recoveries indicate a good estimate of sample concentrations for target analytes. No target analytes that were detected in associated samples above the RL were detected in this equipment blank. No corrective action was taken due to expired holding time.

Calibrations

The following continuing calibration compound(s) exceeded method percent drift and/or RRF criteria:

Calibration ID	alibration ID Instrument Compound %D		%D	RRF	Corrective Action	
CCV-2836	MS03 10/#3MS10	Acetone	48.5		1	
		multiple	х		2	

- 1 The recovery exceeded the upper control limit and was detected > RL in sample *Equipment Blank* 5/2/16 [K1605031-001A]. Results may be biased high. No corrective action was taken.
- 2 The recovery exceeded the upper control limit and was not detected > RL in the associated samples. Results may be biased high. No corrective action was taken.

Preparation Blanks

All preparation blanks met method and/or project specific QC criteria.

Life Science Laboratories, Inc.

Date: 12-Jun-16

CLIENT: Project: Lab Order:	O'Brien & Gere Operations PAS Oswego-Semi-Annual K1605031		Work Order Sample Sumn		
Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received	
K1605031-001A	Equipment Blank 5/2/16		5/2/2016	5/4/2016	
K1605031-002A	M-21 5/3/16		5/3/2016	5/4/2016	
K1605031-003A	LR-8 5/3/16		5/3/2016	5/4/2016	
K1605031-004A	OD-3 5/3/16		5/3/2016	5/4/2016	
K1605031-005A	LCW-4 5/3/16		5/3/2016	5/4/2016	
K1605031-006A	M-22 5/4/16		5/4/2016	5/4/2016	
K1605031-007A	LR-6 5/4/16		5/4/2016	5/4/2016	
K1605031-008A	LCW-2 5/4/16		5/4/2016	5/4/2016	
K1605031-009A	X-1 5/4/16		5/4/2016	5/4/2016	
K1605031-010A	QC Trip Blank 5/4/16		5/4/2016	5/4/2016	

Life Science Laboratories, Inc.

12-Jun-16

DATES REPORT

Lab Order:K1605031Client:O'Brien & Gere Operations, LLC

Project: PAS Oswego-Semi-Annual Well S

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date Prep Date	Analysis Date
K1605031-001A	Equipment Blank 5/2/16	5/2/2016 1:30:00 PM	Water Q	Volatile Organic Compounds by GC/MS		5/6/2016
K1605031-002A	M-21 5/3/16	5/3/2016 8:30:00 AM	Water	Volatile Organic Compounds by GC/MS		5/6/2016
K1605031-003A	LR-8 5/3/16	5/3/2016 9:45:00 AM		Volatile Organic Compounds by GC/MS		5/6/2016
K1605031-004A	OD-3 5/3/16	5/3/2016 11:15:00 AM		Volatile Organic Compounds by GC/MS		5/6/2016
K1605031-005A	LCW-4 5/3/16	5/3/2016 1:45:00 PM		Volatile Organic Compounds by GC/MS		5/6/2016
K1605031-006A	M-22 5/4/16	5/4/2016 1:40:00 PM		Volatile Organic Compounds by GC/MS		5/6/2016
K1605031-007A	LR-6 5/4/16	5/4/2016 2:10:00 PM		Volatile Organic Compounds by GC/MS		5/6/2016
K1605031-008A	LCW-2 5/4/16	5/4/2016 3:05:00 PM		Volatile Organic Compounds by GC/MS		5/6/2016
K1605031-009A	X-1 5/4/16	5/4/2016	Water Q	Volatile Organic Compounds by GC/MS		5/6/2016
K1605031-010A	OC Trip Blank 5/4/16			Volatile Organic Compounds by GC/MS		5/6/2016

Chain of Custody

External Chain of Custody

\frown	Life Scie	ence Laboratories, I	nc.										
	÷	ernut Drive cuse, NY 13057			Chai	in of	Cust	ody Re	eco:	rd			
	Phone # (31	5) 445-1900	Telefax # (3	815) 445-1 ⁻	104			act Person		LSL Proj	ect #:	2 î	
Client:	CBRIER	t & GERE	Phone #	315-9	156-61	00		K Byan			K160503		
\ddress:		LEST WASHINGTON ST			<u></u>		315 -9	842-702	.4	Client's Sit	e I.D.:		
		•	-				· ·	BYRNE				a development	
	SYRACUSE	4873 ENV 13221-4893				-		6. Com		<u> </u>	OSWego Semi Ha	write well SH 11/2	<u>~q</u>
	~/		Authorizati							Client's Pro	oject I.D.:		
SL Sampl	e Number	Client's Sample	Sample Date	Sample Time	Typ grab c		Matrix	Preserv. Added		ontainers size/type	Analyses	Free Ci (mg/L)	1
001		Eyupman BLANK	5-2-16	13:30		-	watin	ACC	3			(<u></u>
602		m-21, MS, MSP					wAte		9	i pre orti	8260		
623		LR-8	5-3-16	9:45			in Atak		3		8260		-
604		CD-3	5-3-16	11:15	U.		water		3		8260		1
605		LCh-4	5-3-16		i – – – –		water		3		8260		1
000		m - 22	5-4-16	1			Wit-n		3		8260		1
027		LR-6	5-4-16						3		8240		
004		LCW-2	5-4-16						3		8260		
009		X-1	5-4-16		. U		WATERL		3		8260		
010		QCTRIG BLANK	13				u'		2		8260		
		7											
	SAMPLES MU	UST BE RECEIVED ON ICE		SAMPLES	MUST BE	E RECEI	VED ON I	CE		SAMPLES M	UST BE RECEIVED ON ICE	·····	1
lotes and	Hazard Identif	fications:							C	ustody Tra	nsiers	Date	Time
				Sampled Print Nan		-	d By: Koeni	vale		Signature:	Marte Koenahe	5-4-16	16:10
										Received By	:		
				Relinquis	hed By:					Received By	.	~	
				Relinquis	hed By:			Rece	lved	for Lab By:	R.D.L	5-4-16	16:10
		·		Shipment	Method:					Samples Ro	ceived intact: Y N	joc on ice	

Life Science Laboratories, Inc.

Client Name: OGINA PAS		Date and T	ïme Received:	5/4/2016 4:10:00 PM
Work Order Number: K1605031		Received b	y: rsd	
Checklist completed by: Initials Date		Reviewed	by:	5 /9 /1 C Date
Delivery Method	I: Hand Delivered			
Shipping container/cooler in good condition?	Yes 🗹	No 🗔	Not Present	
Custody seals intact on shipping container/cooler?	Yes	No 🗌	Not Present	
Custody seals intact on sample bottles?	Yes	No 🗌	Not Applicable 🗹	
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 🗌		
Sufficient 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 submitted	i 🗆
Water - pH acceptable upon receipt?	Yes 🗌	No 🗌	Not Applicable 🗹	

Comments:

Internal Chain of Custody

Client/Project OBG Pas oswego / K1605031

				ontrol Record		
Sample ID	Frac	Client Sample ID	Removed By	Date and Time Removed	Analysis	Date and Time Returned
00(->(0	A		Sto	red in Fridge (B	8260	5/4/16 1730
601 -> 10	A		AD	5/6/16 0800	8260	NR
					· · · · · · · · · · · · · · · · · · ·	
						· · ·
					· · · · · · · · · · · · · · · · · · ·	

Red 5-4-16

G:\Logbook Forms\Logbooks (old)\GeneralLaboratory\Sign out

	854 Butternut Drive ast Syracuse, NY 13	057 (315) 44	45-1900		Sta	teCertNo:	10248
CLIENT	O'Brien & Gere Oper	rations LLC		Lab ID:	ŀ	x1605031-	001A
Project:	PAS Oswego-Semi-A	•	ing	-	nle ID: 7	Tauinmen	t Blank 5/2/16
W Order:	K1605031	pi			5/02/16 13:		
Matrix:	WATER Q			Collection Date Receiv		5/02/16 15: 5/04/16 16:	
Inst. ID:	MS03_10	Comple Size 1	0 m T	PrepDate:	veu: 0	5/04/10 10.	.10
ColumnID:		Sample Size 1 %Moisture:	0 mL	BatchNo:	R	29836	
Revision:	05/27/16 9:51		260W OLM42	FileID:		-SAMP-J18	52 D
Col Type:		icsicoue, o	200 11_0121142	1 1102.001	_		
Analyte		Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/M			····· • • · · ·		SW82	60C/5030C	
Dichlorodifluor		ND	1.00 [.]	0.10	µg/L	1	05/06/16 10:05
Chloromethan	2	ND	1.00	0.33	µg/L	1	05/06/16 10:05
/inyl chloride		ND	1.00	0.33	μg/L	. 1	05/06/16 10:05
Bromomethane	9	ND	1.00	0.33	µg/L	1	05/06/16 10:05
Chloroethane		ND	1.00	0.33	µg/L	1	05/06/16 10:05
Frichlorofluoro	methane	ND	1.00	0.10	μg/L	1	05/06/16 10:05
,1-Dichloroetl	nene .	ND	0.50	0.16	µg/L	<u>,</u> 1	05/06/16 10:05
,1,2-Trichloro	-1,2,2-trifluoroethane	ND	0.50	0.10	µg/L	. 1	05/06/16 10:05
cetone		13.6	10.0	1.00	µg/L	1	05/06/16 10:05
arbon disulfic	le	0.20 J	0.50	0.11	µg/L	1	05/06/16 10:05
Nethyl acetate		ND	5.00	1.00	μg/L	1 .	05/06/16 10:05
lethylene chlo	pride	2.10	2.00	0.16	µg/L	1	05/06/16 10:05
rans-1,2-Dich		. ND	0.50	0.10	µg/L	1	05/06/16 10:05
Nethyl tert-but		ND	1.00	0.16	µg/L	1	05/06/16 10:05
,1-Dichloroet		ND	0.50	0.10	µg/L	· 1	05/06/16 10:05
is-1,2-Dichlor	oethene	ND	0.50	0.10	µg/L	1	05/06/16 10:05
2-Butanone		ND	10.0	1.00	µg/L	1	05/06/16 10:05
Chloroform		0.21 J	0.50	0.10	μ g /L	1	05/06/16 10:05
,1,1-Trichloro	ethane	ND	0.50	0.10	µg/L	1	05/06/16 10:05
yclohexane		ND	0.50	0.10	µg/L	1	05/06/16 10:05
arbon tetrach	loride	ND	0.50	0.10	µg/L	1	05/06/16 10:05
Benzene		ND	0.50	0.10	µg/L	1	05/06/16 10:05
,2-Dichloroeth		ND	0.50	0.16	µg/L	1	05/06/16 10:05
richloroethen		ND	0.50	0.10	µg/L	1	05/06/16 10:05
Aethylcyclohe		ND	0.50	0.10	µg/L	1	05/06/16 10:05
,2-Dichloropro		ND	0.50	0.16	µg/L	1	05/06/16 10:05
sromodichloro is-1,3-Dichlor		ND	0.50	0.10	µg/L	1	05/06/16 10:05
-Methyl-2-per	• •	ND	0.50	0.16	µg/L	1	05/06/16 10:05
oluene		ND ND	5.00 0.50	1.00 0.10	µg/L ug/l	1 1	05/06/16 10:05 05/06/16 10:05
ans-1,3-Dichl	oropropene	ND	0.50	0.16	μg/L μg/L	1	05/06/16 10:05
,1,2-Trichloro		ND	0.50	0.16	µg/∟ µg/L	1	05/06/16 10:05
etrachloroeth		ND	0.50	0.10	μg/L μg/L	1	05/06/16 10:05
-Hexanone		ND	5.00	1.00	μg/L μg/L	1	05/06/16 10:05
Dibromochloro	methane	ND	0.50	0.10	µg/L	1	05/06/16 10:05
Qualifiers:	·	e Acceptable Level		-		e associated Me aration or anal	
	J Analyte detected belo	-		-			
	J maryle delected belo			ND Not Deter	cied at the Pr	acucai Quantit	ation Limit (PQL)

LSL ^{5854 Butternut Drive} Laboratories, Inc.

Analytical Results

E	ast Syracuse, NY 1305	7 (315)	445-1900	5	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operati PAS Oswego-Semi-Anr	,	pling	Lab ID: Client Sample ID:	K1605031-001A Equipment Blank 5/2/16
W Order: Matrix:	K1605031 WATER Q			Collection Date: Date Received:	05/02/16 13:30 05/04/16 16:10
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502.2 05/27/16 9:51	Sample Size %Moisture: TestCode:	10 mL 8260W_OLM42	PrepDate: BatchNo: FileID:	R29836 1-SAMP-J1852.D
Col Type:					

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY GC/MS			SW826	DC/50300	>
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	05/06/16 10:05
Chlorobenzene	0.11 J	0.50	0.10	µg/L	1	05/06/16 10:05
Ethylbenzene	ŇD	0.50	0.10	µg/L	1	05/06/16 10:05
Xylenes (total)	ND	1.00	0.30	µg/L	1	05/06/16 10:05
Styrene	ND	0.50	0.10	µg/L	1	05/06/16 10:05
Bromoform	ND	1.00	0.33	µg/L	1 -	05/06/16 10:05
Isopropylbenzene	ND	0.50	0.10	µg/L	1	05/06/16 10:05
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	μg/L	1	05/06/16 10:05
1,3-Dichlorobenzene	0.28 J	0.50	0.10	µg/L	1	05/06/16 10:05
1,4-Dichlorobenzene	0.34 J	0.50	0.16	µg/L	1	05/06/16 10:05
1,2-Dichlorobenzene	0.18 J	0.50	0.10	µg/L	1	05/06/16 10:05
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	05/06/16 10:05
1,2,4-Trichlorobenzene	ND	1.00	0.10	μg/L	1	05/06/16 10:05
Surr: 1,2-Dichloroethane-d4	118	75-130	0.16	%REC	1	05/06/16 10:05
Surr: Toluene-d8	98	75-125	0.10	%REC	1	05/06/16 10:05
Surr: 4-Bromofluorobenzene	99	75-125	0.10	%REC	1	05/06/16 10:05

Oualifiers :	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
•	Е	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 05/27/16 9:55 753541 Project Supervisor: David J Prichard

Life Science Laboratories, Inc. LSL 5854 Butternut Drive

E	ast Syracuse, NY 1305	7 (315)	445-1900	Ş	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operati PAS Oswego-Semi-Anr		pling	Lab ID: Client Sample ID:	K1605031-002A M-21 5/3/16
W Order: Matrix:	K1605031 WATER			Collection Date: Date Received:	05/03/16 8:30 05/04/16 16:10
Inst. ID: ColumnID:	MS03_10	Sample Size %Moisture:	10 mL	PrepDate: BatchNo:	R29836
Revision: Col Type:	05/27/16 9:51	TestCode:	8260W_OLM42	FileID:	1-SAMP-J1853.D

Analyte	Result Qu	al PQL	Μ	DL	Units	DF	Date Analyze
VOLATILE ORGANIC COMPOUN				SW826	C/5030C	· · · · ·	
Dichlorodifluoromethane	ND	1.00	0.4	10	µg/L	1	05/06/16 10:35
Chloromethane	ND	1.00	0.3		μg/L	1	05/06/16 10:35
Vinyl chloride	ND	1.00	0.3	33	µg/L	1	05/06/16 10:35
Bromomethane	ND	1.00	0,3		μg/L	1	05/06/16 10:35
Chloroethane	1.57	1.00	0.3		µg/L	1	05/06/16 10:35
Frichlorofluoromethane	ND	1.00	0.4	0	µg/L	1	05/06/16 10:35
,1-Dichloroethene	ND	0,50	0.1	16	µg/L	1	05/06/16 10:35
,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.50	0.1	10	µg/L	1	05/06/16 10:35
Acetone	1.65 J	10.0	1.(00	µg/L	1	05/06/16 10:35
Carbon disulfide	ND	0.50	0.1		μg/L	1	05/06/16 10:35
Nethyl acetate	ND	5.00	1.0	00	µg/L	1	05/06/16 10:35
Methylene chloride	ND	2.00	0.1		µg/L	1	05/06/16 10:35
rans-1,2-Dichloroethene	ND	0.50	0.4	10	μg/L	1	05/06/16 10:35
Nethyl tert-butyl ether	ND	1.00	0.4		μg/L	1	05/06/16 10:35
1-Dichloroethane	ND	0.50	0.1	10	μg/L	1	05/06/16 10:35
is-1,2-Dichloroethene	ND	0.50	0.1	0	μg/L	1	05/06/16 10:35
-Butanone	ND	10.0	1.0	00	μg/L	1	05/06/16 10:35
hloroform	ND	0.50	0.1		μg/L	1	05/06/16 10:35
,1,1-Trichloroethane	ND	0.50	0.1		μg/L	1	05/06/16 10:35
yciohexane	0.65	0.50	0.1		μg/L	1	05/06/16 10:35
Carbon tetrachloride	ND	0.50	0.1	0	μg/L	1	05/06/16 10:35
Benzene	0.15 J	0.50	0.1		μg/L	. 1	05/06/16 10:35
,2-Dichloroethane	ND	0.50	0.1		μg/L	1	05/06/16 10:35
richloroethene	ND	0.50	0.1		μg/L	1	05/06/16 10:35
/lethylcyclohexane	0.17 J	0.50	0.1		μg/L	1	05/06/16 10:35
,2-Dichloropropane	ND	0.50	0.1		μg/L	1	05/06/16 10:35
romodichloromethane	ND	0.50	0.1		μg/L	1	05/06/16 10:35
is-1,3-Dichloropropene	ND	0.50	0.1	6	µg/L	1	05/06/16 10:35
-Methyl-2-pentanone	ND	5.00	1.0		μg/L	1	05/06/16 10:35
oluene	0.19 J	0.50	0.1		μg/L	1	05/06/16 10:35
ans-1,3-Dichloropropene	ND	0.50	0.1		μg/L	. 1	05/06/16 10:35
,1,2-Trichloroethane	ND	0.50	0.1		μg/L	1	05/06/16 10:35
etrachloroethene	ND	0.50	0.1		μg/L	1	05/06/16 10:35
-Hexanone	ND	5.00	1.0		μg/L	1	05/06/16 10:35
Dibromochloromethane	ND	0.50	0.1		μg/L	1	05/06/16 10:35
Oualifiers: * Value may exceed the	Acceptable Level	······································	В	Analvte de	etected in the a	ssociated M	thod Blank
Z	trument calibration rang	e	н	-	mes for prepar		
J Analyte detected belo	-) -	ND	-			ation Limit (PQL)
	6D or RPD exceeds limi	't	S		overy outside a		

LSL	Life Science L 854 Butternut Drive ast Syracuse, NY 1305		ories, Inc. 445-1900			nalyti eCertNo:	cal Results
CLIENT	O'Brien & Gere Operat	ions. LLC		Lab ID:	K	1605031-0	002A
Project:	PAS Oswego-Semi-Ani	•	pling	Client Sample	D : <i>M</i>	-21 5/3/1	16
W Order:	K1605031			Collection Dat		/03/16 8:3	
Matrix:	WATER			Date Received		/04/16 16:	
Inst. ID:	MS03 10	Sample Size	10 mL	PrepDate:	•		
ColumnID:		%Moisture:		BatchNo:	R2	9836	
Revision :	05/27/16 9:51	TestCode:	8260W OLM42	FileID:	1-5	SAMP-J18	53.D
Col Type;							
Analyte	· ·	Result Q	Jual PQL	MDL	Units	DF	Date Analyzed
VOLATILE	ORGANIC COMPOUND	S BY GC/MS			SW826	0C/5030C	· ·
1,2-Dibromoet	hane	ND	0.50	0.16	µg/L	1	05/06/16 10:35
Chlorobenzene	e	4.49	0.50	0.10	µg/L	1	05/06/16 10:35
Ethylbenzene		ND	0.50	0.10	µg/L	1	05/06/16 10:35
Xylenes (total)		ND	1.00	0.30	µg/L	1	05/06/16 10:35
Styrene		ND	0.50	0.10	µg/L	1	05/06/16 10:35
Bromoform		ND	1.00	0.33	µg/L	1	05/06/16 10:35
Isopropylbenze	ene	0.52	0.50	0.10	µg/L	1	05/06/16 10:35
1,1,2,2-Tetrack	hloroethane	ND	0,50	0.10	µg/L	1	05/06/16 10:35
1,3-Dichlorobe	nzene	ND	0.50	0.10	µg/L	1	05/06/16 10:35
1,4-Dichlorobe	nzene	0.27 J	0.50	0.16	µg/L	1	05/06/16 10:35
1,2-Dichlorobe	nzene	0.47 J	0.50	0.10	µg/L	1	05/06/16 10:35
•	-chloropropane	ND	5.00	1.00	µg/L	1	05/06/16 10:35
1,2,4-Trichloro	benzene	ND	1.00	0.10	µg/L	1	05/06/16 10:35
,	chloroethane-d4	104	75-130	0.16	%REC	1	05/06/16 10:35
Surr: Toluen	ne-d8	99	75-125	0.10	%REC	1	05/06/16 10:35

%REC

1

05/06/16 10:35

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

100

75-125

0.10

Surr: 4-Bromofluorobenzene

LSL 5854 Butternut Drive

Analytical Results

1

E	ast Syracuse, NY 130	57 (315)	445-1900	5	StateCertNo: 10248	
CLIENT Project:	O'Brien & Gere Opera PAS Oswego-Semi-Ar	,	pling	Lab ID: Client Sample ID:	K1605031-003A LR-8 5/3/16	
W Order: Matrix: Inst. ID:	K1605031 WATER MS03 10	Sample Size	10 mI	Collection Date: Date Received: PrepDate:	05/03/16 9:45 05/04/16 16:10	
ColumnID: Revision: Col Type:		Sample Size %Moisture: TestCode:		BatchNo: FileID:	R29836 1-SAMP-J1857.D	

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed		
VOLATILE ORGANIC COMPOUN	IDS BY GC/MS			SW8260C/5030C				
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	05/06/16 12:37		
Chloromethane	ND	1.00	0.33	µg/L	1	05/06/16 12:37		
Vinyl chloride	ND	1.00	0.33	µg/L	1	05/06/16 12:37		
Bromomethane	ND	1.00	0.33	µg/L	1	05/06/16 12:37		
Chloroethane	2.67	1.00	0.33	µg/L	1	05/06/16 12:37		
Trichlorofluoromethane	ND	1.00	0.10	µg/L	1	05/06/16 12:37		
1,1-Dichloroethene	ND	0.50	0.16	µg/L	1	05/06/16 12:37		
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.50	0.10	µg/L	1	05/06/16 12:37		
Acetone	3.22 J	10.0	1.00	µg/L	1	05/06/16 12:37		
Carbon disulfide	ND	0.50	0.11	µg/L	1	05/06/16 12:37		
Methyl acetate	ND	5.00	1.00	µg/L	1	05/06/16 12:37		
Methylene chloride	ND	2.00	0.16	µg/L	1	05/06/16 12:37		
trans-1,2-Dichloroethene	ND	0.50	0.10	μg/L	1	05/06/16 12:37		
Methyl tert-butyl ether	ND	1.00	0.16	μg/L	1	05/06/16 12:37		
1,1-Dichloroethane	ND	0.50	0.10	µg/L	1	05/06/16 12:37		
cis-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	05/06/16 12:37		
2-Butanone	ND	10.0	1.00	µg/L	1	05/06/16 12:37		
Chloroform	ND	0.50	0.10	μg/L	1	05/06/16 12:37		
1,1,1-Trichloroethane	ND	0.50	0.10	µg/L	1	05/06/16 12:37		
Cyclohexane	0.14 J	0.50	0.10	µg/L	1	05/06/16 12:37		
Carbon tetrachloride	ND	0.50	0.10	µg/L	1	05/06/16 12:37		
Benzene	0.39 J	0.50	0.10	µg/L	1	05/06/16 12:37		
1,2-Dichloroethane	ND	0.50	0.16	µg/L	1	05/06/16 12:37		
Trichloroethene	ND	0.50	0.10	µg/L	1	05/06/16 12:37		
Methylcyclohexane	ND	0.50	0.10	µg/L	1	05/06/16 12:37		
1,2-Dichloropropane	ND	0.50	0.16	µg/L	1	05/06/16 12:37		
Bromodichloromethane	ND	0.50	0.10	µg/L	1	05/06/16 12:37		
cis-1,3-Dichloropropene	ND	0.50	0.16	μg/L	1	05/06/16 12:37		
4-Methyl-2-pentanone	ND	5.00	1.00	μg/L	1	05/06/16 12:37		
Toluene	0.17 J	0.50	0.10	μg/L	1	05/06/16 12:37		
trans-1,3-Dichloropropene	ND	0.50	0.16	μg/L	1	05/06/16 12:37		
1,1,2-Trichloroethane	ND	0.50	0.16	μg/L	1	05/06/16 12:37		
Tetrachloroethene	ND	0.50	0.10	μg/L	1	05/06/16 12:37		
2-Hexanone	ND	5.00	1.00	μg/L	1	05/06/16 12:37		
Dibromochloromethane	ND	0.50	0.10	μg/L	. 1	05/06/16 12:37		
Qualifiers: * Value may exceed the	e Acceptable Level		B Analyte	detected in the a	ssociated M	ethod Blank		
	strument calibration rang	;e		times for prepar				
J Analyte detected bel	ow the PQL		ND Not Det	ected at the Prac	tical Quantit	ation Limit (PQL)		
P Prim./Conf. column	%D or RPD exceeds limit	t		ecovery outside				

Print Date: 05/27/16 9:55

753546

Project Supervisor: David J Prichard

Life Science Laboratories, Inc. **Analytical Results** 5854 Butternut Drive East Syracuse, NY 13057 StateCertNo: 10248 (315) 445-1900 K1605031-003A CLIENT O'Brien & Gere Operations, LLC Lab ID: Client Sample ID: LR-8 5/3/16 **Project:** PAS Oswego-Semi-Annual Well Sampling W Order: K1605031 05/03/16 9:45 **Collection Date:** WATER Date Received: 05/04/16 16:10 Matrix:

TestCode: 8260W_OLM42 FileID:

PrepDate: BatchNo:

R29836

1-SAMP-J1857.D

٩.

Sample Size 10 mL

%Moisture:

 Inst. ID:
 MS03_10

 ColumnID:
 Rtx-502.2

 Revision:
 05/27/16 9:51

 Col Type:

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY GC/MS			SW8260	C/5030C	
1,2-Dibromoethane	NØ	0.50	0.16	µg/L	1	05/06/16 12:37
Chlorobenzene	4.10	0.50	0.10	µg/L	1	05/06/16 12:37
Ethylbenzene	0.26 J	0.50	0.10	µg/L	1	05/06/16 12:37
Xylenes (total)	1.52	1.00	0.30	µg/L	1	05/06/16 12:37
Styrene	ND	0.50	0.10	µg/L	1	05/06/16 12:37
Bromoform	ND	1.00	0.33	μg/L	1	05/06/16 12:37
Isopropylbenzene	0.25 J	0.50	0.10	μg/L	1	05/06/16 12:37
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	05/06/16 12:37
1,3-Dichlorobenzene	ND	0.50	0.10	μg/L	1	05/06/16 12:37
1,4-Dichlorobenzene	0.24 J	0.50	0.16	µg/L	1	05/06/16 12:37
1,2-Dichlorobenzene	0.16 J	0.50	0.10	µg/L	1	05/06/16 12:37
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	05/06/16 12:37
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	05/06/16 12:37
Surr: 1,2-Dichloroethane-d4	106	75-130	0.16	%REC	1	05/06/16 12:37
Surr: Toluene-d8	98	75-125	0.10	%REC	1	05/06/16 12:37
Surr: 4-Bromofluorobenzene	99	75-125	0.10	%REC	1	05/06/16 12:37

Qualifiers:	*	Value may exce	ed the Acceptable	Level	В	Analyte detected in the associated Method Blank	
	E	Value exceeds t	Value exceeds the instrument calibration range		Н	 Holding times for preparation or analysis exceeded D Not Detected at the Practical Quantitation Limit (PQL) 	
	J	Analyte detected below the PQL			ND		
	Р	Prim./Conf. col	umn %D or RPD e	xceeds limit	S	Spike Recovery outside accepted recovery limits	

Life Science Laboratories, Inc. 5854 Butternut Drive East Syracuse, NY 13057 StateCertNo: 10248 (315) 445-1900 K1605031-004A CLIENT O'Brien & Gere Operations, LLC Lab ID: **Project:** Client Sample ID: OD-3 5/3/16 PAS Oswego-Semi-Annual Well Sampling W Order: K1605031 **Collection Date:** 05/03/16 11:15 Matrix: WATER **Date Received:** 05/04/16 16:10 Inst. ID: MS03 10 **PrepDate:** Sample Size 10 mL R29836 ColumnID: Rtx-502.2 BatchNo: %Moisture: 1-SAMP-J1858.D **Revision:** 05/27/16 9:51 8260W_OLM42 FileID: TestCode: Col Type: Analyte DF **Date Analyzed Result Qual POL** MDL Units VOLATILE ORGANIC COMPOUNDS BY GC/MS SW8260C/5030C Dichlorodifluoromethane ND µg/L 1 05/06/16 13:07 1.00 0.10 Chloromethane ND 1.00 0.33 µg/L 1 05/06/16 13:07 Vinyl chloride ND 1.00 0.33 µg/L 1 05/06/16 13:07 Bromomethane ND 1.00 0.33 µg/L 1 05/06/16 13:07 Chloroethane ND 1.00 0.33 µg/L 1 05/06/16 13:07 Trichlorofluoromethane ND 1.00 0.10 µg/L 1 05/06/16 13:07 1,1-Dichloroethene 05/06/16 13:07 ND 0.50 µg/L 1 0.16 1,1,2-Trichloro-1,2,2-trifluoroethane ND 0.50 0.10 µg/L 1 05/06/16 13:07 Acetone 05/06/16 13:07 ND 10.0 1.00 µg/L 1 05/06/16 13:07 Carbon disulfide ND 0.50 µg/L 1 0.11 Methyl acetate 05/06/16 13:07 ND 5.00 1.00 µg/L 1 Methylene chloride ND 2.00 05/06/16 13:07 0.16 µg/L 1 trans-1,2-Dichloroethene ND 0.50 0.10 05/06/16 13:07 µg/L 1 Methyl tert-butyl ether ND 1.00 0.16 µg/L 1 05/06/16 13:07 1,1-Dichloroethane ND 0.50 05/06/16 13:07 0.10 µg/L 1 cis-1,2-Dichloroethene ND 0,50 0.10 µg/L 1 05/06/16 13:07 2-Butanone ND 10.0 1.00 µg/L 1 05/06/16 13:07 Chloroform ND 0.50 05/06/16 13:07 0.10 µg/L 1 1,1,1-Trichloroethane ND 0.50 05/06/16 13:07 0.10 µg/L 1 Cyclohexane ND 0.50 05/06/16 13:07 0.10 µg/L 1 Carbon tetrachloride ND 0.50 0.10 1 05/06/16 13:07 µg/L Benzene ND 0.50 0.10 µg/L 1 05/06/16 13:07 1.2-Dichloroethane 05/06/16 13:07 ND 0.50 0.16 µg/L 1 Trichloroethene ND 0.50 0.10 µg/L 1 05/06/16 13:07 Methylcyclohexane ND 0.50 0.10 µg/L 1 05/06/16 13:07 1,2-Dichloropropane ND 0.50 05/06/16 13:07 0.16 µg/L 1 Bromodichloromethane ND 0.50 0.10 µg/L 1 05/06/16 13:07 cis-1,3-Dichloropropene ND 0.50 0.16 µg/L 1 05/06/16 13:07 4-Methyl-2-pentanone ND 5.00 1.00 1 05/06/16 13:07 µg/L Toluene ND 0.50 0.10 µg/L 1 05/06/16 13:07 trans-1,3-Dichloropropene ND 0.50 0.16 1 05/06/16 13:07 µg/L 1.1.2-Trichloroethane ND 0.50 0.16 µg/L 1 05/06/16 13:07 Tetrachloroethene ND 0.50 0.10 µg/L 1 05/06/16 13:07 2-Hexanone ND 5.00 1.00 1 05/06/16 13:07 µg/L Dibromochloromethane ND 0.50 0.10 µg/L 1 05/06/16 13:07

Value may exceed the Acceptable Level Qualifiers: Έ Value exceeds the instrument calibration range J Analyte detected below the POL

Analyte detected in the associated Method Blank H Holding times for preparation or analysis exceeded

Not Detected at the Practical Quantitation Limit (PQL) ND

в

Print Date: 05/27/16 9:55 753547

Ρ

Project Supervisor: David J Prichard

LSL 5854 Butternut Drive

E	ast Syracuse, NY 1305	7 (315)	445-1900	Ś	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operat PAS Oswego-Semi-Ann		pling	Lab ID: Client Sample ID:	K1605031-004A OD-3 5/3/16
W Order: Matrix:	K1605031 WATER			Collection Date: Date Received:	05/03/16 11:15 05/04/16 16:10
Inst. D: ColumnD:	MS03_10	Sample Size		PrepDate:	
Revision:	05/27/16 9:51	%Moisture: TestCode:	8260W_OLM42	BatchNo: FileID:	R29836 1-SAMP-J1858.D
Col Type:					

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY GC/MS			SW826	0C/50300	
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	05/06/16 13:07
Chlorobenzene	ND	0.50	0.10	µg/L	1	05/06/16 13:07
Ethylbenzene	ND	0.50	0.10	µg/L	1	05/06/16 13:07
Xylenes (total)	ND	1.00	0.30	μg/L	1	05/06/16 13:07
Styrene	ND	0.50	0.10	µg/L	1	05/06/16 13:07
Bromoform	ND	1.00	0.33	µg/L	1	05/06/16 13:07
Isopropylbenzene	ND	0.50	0.10	µg/L	1	05/06/16 13:07
1,1,2,2-Tetrachioroethane	ND	0.50	0.10	µg/L	1	05/06/16 13:07
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	05/06/16 13:07
1,4-Dichlorobenzene	ND	0.50 ⁻	0.16	µg/L	1	05/06/16 13:07
1,2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	05/06/16 13:07
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	[.] 1	05/06/16 13:07
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	05/06/16 13:07
Surr: 1,2-Dichloroethane-d4	107	75-130	0.16	%REC	1	05/06/16 13:07
Surr: Toluene-d8	98	75-125	0,10	%REC	1	05/06/16 13:07
Surr: 4-Bromofluorobenzene	102	75-125	0.10	%REC	1	05/06/16 13:07

Qualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
-	Ε	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

LSL	ast Syracuse, NY 13	057 (315)	445-1900		S	stateCertNo	: 10248
CLIENT Project:	O'Brien & Gere Ope PAS Oswego-Semi-A		pling	Lab ID: Client San	nple ID:	K1605031 LCW-4 5/	
W Order:	K1605031			Collection	Date:	05/03/16 13	3:45
Matrix:	WATER			Date Rece	ived:	05/04/16 16	5:10
Inst. ID:	MS03 10	Sample Size	10 mL	PrepDate:			
ColumnID:		%Moisture:		BatchNo:		R29836	
Revision:	05/27/16 9:51	TestCode:	8260W_OLM42	FileID:		1-SAMP-J1	855.D
Col Type:							
Analyte		Result Q	ual PQL	MDL	Uni	ts DF	Date Analyze
VOLATILE	ORGANIC COMPOUN	IDS BY GC/MS			SW	8260C/5030	C
Dichlorodifluor	omethane	ND	20.0	2.00	µg/L	20	05/06/16 11:36
Chloromethane	9	ND	20.0	6.60	µg/L	20	05/06/16 11:36
Vinyl chloride		ND	20.0	6.60	μg/L	20	05/06/16 11:36
Bromomethane	3	ND	20.0	6.60	µg/L	20	05/06/16 11:36
Chioroethane		59.6	20.0	6.60	µg/L	20	05/06/16 11:36
Trichlorofluoro	methane	ND	20.0	2.00	µg/L	20	05/06/16 11:36
1,1-Dichloroet	hene	ND	10.0	3.20	µg/L	20	05/06/16 11:36
1,1,2-Trichioro	-1,2,2-trifluoroethane	ND	10.0	2.00	µg/L	20	05/06/16 11:36
Acetone		ND	200	20.0	µg/L	20	05/06/16 11:36
Carbon disulfic	le	ND	10.0	2.20	μg/L	20	05/06/16 11:36
vethyl acetate		ND	100	20.0	µg/L	20	05/06/16 11:36
Methylene chic	oride	3.40 J	40.0	3.20	µg/L	20	05/06/16 11:36
rans-1,2-Dich	loroethene	ND	10.0	2.00	μg/L	20	05/06/16 11:36
Methyl tert-but	yl ether	ND	20.0	3.20	μg/L	20	05/06/16 11:36
1,1-Dichloroeth	nane	3.00 J	10.0	2.00	µg/L	20	05/06/16 11:36
cis-1,2-Dichlor	oethene	6.60 J	10.0	2.00	μg/L	20	05/06/16 11:36
2-Butanone		ND	200	20.0	µg/L	20	05/06/16 11:36
Chloroform		ND	10.0	2.00	µg/L	20	05/06/16 11:36
1,1,1-Trichloro	ethane	ND	10.0	2.00	µg/L	20	05/06/16 11:36
Cyclohexane		ND	10.0	2.00	µg/L	20	05/06/16 11:36
Carbon tetrach	loride	ND	10.0	2.00	· μg/L	20	05/06/16 11:36
Benzene		518	10.0	2.00	µg/L	20	05/06/16 11:36
1,2-Dichloroet	nane	ND	10.0	3.20	µg/L	20	05/06/16 11:36
Trichloroethen	e	ND	10.0	2.00	µg/L	20	05/06/16 11:36
Viethylcyclohex	kane	2.20 J	10.0	2.00	µg/L	20	05/06/16 11:36
1,2-Dichloropro	opane	ND	10.0	3.20	µg/L	20	05/06/16 11:36
Bromodichloro	methane	ND	10.0	2.00	µg/L	20	05/06/16 11:36
cis-1,3-Dichlor	• •	ND	10.0	3.20	μg/L		05/06/16 11:36
4-Methyl-2-per	tanone	ND	100	20,0	μg/L		05/06/16 11:36
Toluene		10.4	10.0	2.00	μg/L		05/06/16 11:36
rans-1,3-Dichi	•••	ND	10.0	3.20	µg/L		05/06/16 11:36
1,1,2-Trichloro	ethane	ND	10.0	3.20	µg/L		05/06/16 11:36
Tetrachloroeth	ene	ND	10.0	2.00	μg/L		05/06/16 11:36
2-Hexanone		ND	100	20.0	µg/L		05/06/16 11:36
Dibromochloro	methane	ND	10.0	2.00	µg/L	20	05/06/16 11:36
Qualifiers:	* Value may exceed th	ne Acceptable Level		B Analyte	detected in	the associated N	Aethod Blank
	E Value exceeds the in	strument calibration ra	inge	H Holding	times for p	reparation or an	alysis exceeded
	J Analyte detected bel	ow the PQL		ND Not Det	ected at the	Practical Quant	itation Limit (PQL)

LSL Life Science Laboratories, Inc.

E	ast Syracuse, NY 1305	57 (315)	445-1900		StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		pling	Lab ID: Client Sample ID:	K1605031-005A LCW-4 5/3/16
W Order: Matrix:	K1605031 WATER			Collection Date: Date Received:	05/03/16 13:45 05/04/16 16:10
Inst. ID: ColumnID:	MS03_10	Sample Size %Moisture:		PrepDate: BatchNo:	R29836
Revision: Col Type:	05/27/16 9:51	TestCode:	8260W_OLM42	FileID:	1-SAMP-J1855.D

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	NDS BY GC/MS	 		SW826	0C/5030C	
1,2-Dibromoethane	ND	10.0	3.20	µg/L	20	05/06/16 11:36
Chlorobenzene	275	10.0	2,00	µg/L	20	05/06/16 11:36
Ethylbenzene	44.4	10.0	2.00	μg/L	20	05/06/16 11:36
Xylenes (total)	531	20.0	6.00	µg/L	20	05/06/16 11:36
Styrene	ND	10.0	2.00	µg/L	20	05/06/16 11:36
Bromoform	ND	20.0	6.60	µg/L	20	05/06/16 11:36
Isopropylbenzene	4.00 J	10.0	2.00	µg/L	20	05/06/16 11:36
1,1,2,2-Tetrachloroethane	ND	10.0	2.00	µg/L	20	05/06/16 11:36
1,3-Dichlorobenzene	ND	10.0	2.00	μg/L	20	05/06/16 11:36
1,4-Dichlorobenzene	3.60 J	10.0	3.20	µg/L	20	05/06/16 11:36
1,2-Dichlorobenzene	22.4	10.0	2.00	µg/L	20	05/06/16 11:36
1,2-Dibromo-3-chloropropane	ND	100	20.0	µg/L	20	05/06/16 11:36
1,2,4-Trichlorobenzene	ND	20.0	2.00	µg/L	20	05/06/16 11:36
Surr: 1,2-Dichloroethane-d4	104	75-130	3.20	%REC	20	05/06/16 11:36
Surr: Toluene-d8	100	75-125	2.00	%REC	20	05/06/16 11:36
Surr: 4-Bromofluorobenzene	101	75-125	2.00	%REC	20	05/06/16 11:36

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

LSL 5854 Butternut Drive

Analytical Results

E	ast Syracuse, NY 130	57 (315)	445-1900	5	StateCertNo: 10248	
CLIENT Project:	O'Brien & Gere Opera PAS Oswego-Semi-An	,	pling	Lab ID: Client Sample ID:	K1605031-006A M-22 5/4/16	
W Order: Matrix: Inst. ID: ColumnID: Revision:	K1605031 WATER MS03_10 Rtx-502.2 05/27/16 9:51	Sample Size %Moisture: TestCode:		Collection Date: Date Received: PrepDate: BatchNo: FileID:	05/04/16 13:40 05/04/16 16:10 R29836 1-SAMP-J1859.D	
Col Type:						

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND	S BY GC/MS			SW826	0C/50300	;
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1	05/06/16 13:38
Chloromethane	ND	1.00	0.33	µg/L	1	05/06/16 13:38
Vinyl chloride	ND	1.00	0.33	μg/L	1	05/06/16 13:38
Bromomethane	ND	1.00	0.33	μg/L	1	05/06/16 13:38
Chloroethane	ND	1,00	0.33	μg/L	1	05/06/16 13:38
Trichlorofiuoromethane	ND	1.00	0.10	μg/L	1	05/06/16 13:38
1,1-Dichloroethene	ND	0.50	0.16	μg/L	1	05/06/16 13:38
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.50	0.10	μg/L	1	05/06/16 13:38
Acetone	1.18 J	10.0	1.00	μg/L	1	05/06/16 13:38
Carbon disulfide	ND	0.50	0.11	μg/L	1	05/06/16 13:38
Methyl acetate	ND	5.00	1.00	μg/L	1	05/06/16 13:38
Methylene chloride	ND	2.00	0.16	μg/L	1	05/06/16 13:38
rans-1,2-Dichloroethene	ND	0.50	0.10	μg/L	- 1	05/06/16 13:38
Methyl tert-butyl ether	ND	1.00	0.16	µg/L	1	05/06/16 13:38
1-Dichloroethane	0.30 J	0.50	0.10	μg/L	1	05/06/16 13:38
is-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	05/06/16 13:38
2-Butanone	ND	10.0	1.00	μg/L	1	05/06/16 13:38
Chloroform	ND	0.50	0.10	μg/L	1	05/06/16 13:38
,1,1-Trichloroethane	ND	0.50	0.10	μg/L	1	05/06/16 13:38
Cyclohexane	ND	0.50	0.10	μg/L	1	05/06/16 13:38
Carbon tetrachloride	ND	0.50	0.10	μg/L	1	05/06/16 13:38
Benzene	ND	0.50	0.10	µg/L	1	05/06/16 13:38
,2-Dichloroethane	ND	0.50	0.16	µg/L	1	05/06/16 13:38
richloroethene	ND	0.50	0.10	μg/L	1	05/06/16 13:38
/lethylcyclohexane	ND	0.50	0.10	µg/L	1	05/06/16 13:38
,2-Dichloropropane	ND	0.50	0.16	µg/L	1	05/06/16 13:38
romodichloromethane	ND	0.50	0.10	µg/L	1	05/06/16 13:38
is-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	05/06/16 13:38
-Methyl-2-pentanone	ND	5.00	1.00	μg/L	1	05/06/16 13:38
oluene	ND	0.50	0.10	μg/L	1	05/06/16 13:38
ans-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	05/06/16 13:38
,1,2-Trichloroethane	ND	0.50	0.16	μg/L	1	05/06/16 13:38
etrachloroethene	ND	0.50	0.10	µg/L	1	05/06/16 13:38
-Hexanone	ND	5.00	1.00	µg/L	1	05/06/16 13:38
Dibromochloromethane	ND	0.50	0.10	µg/L	1	05/06/16 13:38
Qualifiers: * Value may exceed the A	cceptable Level		B Analy	yte detected in the a	ssociated M	ethod Blank
E Value exceeds the instru	ment calibration rang	e	-	ing times for prepar		
J Analyte detected below	-			Detected at the Prac		-
P Prim./Conf. column %D	or RPD exceeds limi	t		Recovery outside		-

Life Science Laboratories, Inc.

E	East Syracuse, NY 13057 (315) 445-1900			StateCertNo: 10248			
CLIENT Project:	O'Brien & Gere Opera PAS Oswego-Semi-An		pling	Lab ID: Client Sample ID:	K1605031-006A M-22 5/4/16		
W Order: Matrix: Inst. ID:	K1605031 WATER MS03 10	Sample Size	10 ml.	Collection Date: Date Received: PrepDate:	05/04/16 13:40 05/04/16 16:10		
ColumnID: Revision: Col Type:		%Moisture: TestCode:		BatchNo:	R29836 1-SAMP-J1859.D		

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed	
VOLATILE ORGANIC COMPOUN	IDS BY GC/MS			SW8260C/5030C			
1,2-Dibromoethane	ND	0.50	0,16	µg/L	1 .	05/06/16 13:38	
Chlorobenzene	ND	0.50	0.10	µg/L	1	05/06/16 13:38	
Ethylbenzene	ND	0.50	0.10	µg/L	1	05/06/16 13:38	
Xylenes (total)	ND	1.00	0,30	µg/L	1	05/06/16 13:38	
Styrene	ND	0.50	0.10	µg/L	1	05/06/16 13:38	
Bromoform	ND	1.00	0.33	µg/L	1	05/06/16 13:38	
Isopropylbenzene	ND	0.50	0.10	µg/L	1	05/06/16 13:38	
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	µg/L	1	05/06/16 13:38	
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	05/06/16 13:38	
1,4-Dichlorobenzene	ND	0.50	0.16	µg/L	1	05/06/16 13:38	
1,2-Dichlorobenzene	ND	0.50	0,10	µg/L	1	05/06/16 13:38	
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	05/06/16 13:38	
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	05/06/16 13:38	
Surr: 1,2-Dichloroethane-d4	107	75-130	0.16	%REC	1	05/06/16 13:38	
Surr: Toluene-d8	99	75-125	0.10	%REC	1	05/06/16 13:38	
Surr: 4-Bromofluorobenzene	102	75-125	0.10	%REC	1	05/06/16 13:38	

•		•	ceptable Level	В	Analyte detected in the associated Method Blank
	E	Value exceeds the instrum	nent calibration range	н	Holding times for preparation or analysis exceeded
J Analyte detected below the			e PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D	or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

E	ast Syracuse, NY 13	3057 (315)	445-1900		S	StateCertNo:	10248	
CLIENT Project: W Order: Matrix:	O'Brien & Gere Ope PAS Oswego-Semi-A K1605031 WATER		nual Well Sampling			K1605031-007A ale ID: LR-6 5/4/16 pate: 05/04/16 14:10 ed: 05/04/16 16:10		
Inst. ID: ColumnID: Revision: Col Type:	MS03_10 Rtx-502.2 05/27/16 9:51	Sample Size %Moisture: TestCode:	10 mL 8260W_OLM42	PrepDate: BatchNo: FileID:	,	R29836 1-SAMP-J18	360.D	
Analyte		Result Q	Qual PQL	MDL	Uni	ts DF	Date Analyze	
VOLATILE C	DRGANIC COMPOUN	NDS BY GC/MS	<u> </u>	SW		8260C/5030C	;	
Dichlorodifluoro		ND	1.00	0.10	µg/L	1	05/06/16 14:08	
Chloromethane		ND	1.00	0.33	μg/L		05/06/16 14:08	
Vinyl chloride		ND	1.00	0.33	μg/L		05/06/16 14:08	
Bromomethane		ND	1.00	0.33	μg/L		05/06/16 14:08	
Chloroethane		ND	1.00	0.33	μg/L		05/06/16 14:08	
Trichlorofluoror	methane	ND	1.00	0.10	μg/L		05/06/16 14:08	
1,1-Dichloroeth		ND	0.50	0.16	μg/L		05/06/16 14:08	
	-1,2,2-trifluoroethane	ND	0.50	0.10	μg/L		05/06/16 14:08	
Acetone		1.22 J		1.00	μg/L		05/06/16 14:08	
Carbon disulfid							05/06/16 14:08	
		ND	0.50	0.11	µg/L		05/06/16 14:08	
Vethyl acetate	-1-1-	ND	5.00	1.00	µg/L			
Methylene chlo		ND	2.00	0.16	µg/L		05/06/16 14:08	
rans-1,2-Dichl		ND	0.50	0.10	µg/L		05/06/16 14:08	
Methyl tert-buty		ND	1.00	0.16	µg/L		05/06/16 14:08	
1,1-Dichloroeth		0.60	0.50	0.10	µg/L		05/06/16 14:08	
cis-1,2-Dichloro	pethene	ND	0.50	0.10	µg/L		05/06/16 14:08	
2-Butanone		ND	10.0	1.00	µg/L		05/06/16 14:08	
Chloroform		ND	0.50	0.10	µg/L		05/06/16 14:08	
1,1,1-Trichioroe	ethane	ND	0.50	0.10	µg/L	. 1	05/06/16 14:08	
Cyclohexane		ND	0.50	0.10	µg/L	. 1	05/06/16 14:08	
Carbon tetrach	loride	ND	0.50	0.10	µg/L	. 1	05/06/16 14:08	
Benzene		ND	0.50	0.10	µg/L	. 1	05/06/16 14:08	
l,2-Dichloroeth	iane	N.D	0.50	0.16	µg/L	. 1	05/06/16 14:08	
Trichloroethene	e	0.11 J	0.50	0.10	μg/L	. 1	05/06/16 14:08	
Viethylcyclohex	ane	ND	0.50	0.10	μg/L	. 1	05/06/16 14:08	
1,2-Dichloropro	pane	ND	0.50	0.16	µg/L	. 1	05/06/16 14:08	
Bromodichloror	methane	ND	0.50	0.10	μg/L		05/06/16 14:08	
cis-1,3-Dichlord	opropene	ND	0.50	0.16	μg/L		05/06/16 14:08	
1-Methyl-2-pen		ND	5.00	1.00	µg/L		05/06/16 14:08	
Toluene		ND	0.50	0.10	µg/L		05/06/16 14:08	
rans-1,3-Dichl	oropropene	ND	0.50	0.16	µg/L		05/06/16 14:08	
1,1,2-Trichloroe		ND	0.50	0.16	µg/L		05/06/16 14:08	
Tetrachloroethe	ene	ND	0.50	0.10	µg/L		05/06/16 14:08	
2-Hexanone		ND	5.00	1.00	μg/L		05/06/16 14:08	
Dibromochloror	methane	ND	0.50	0.10	μg/L		05/06/16 14:08	
	* Value may exceed t	he Acceptable Level				the associated M	ethod Blank	
Qualifiers:		ne Acceptable Level	8 7 00	-		preparation or ana		
	J Analyte detected be		ш1 <u>5</u> ~	-	-	-	tation Limit (PQL)	
	J Analyte detected De	IOW LIE FUL		IND INOU Dele	crea ar rue	a racical Qualiti		

Print Date: 05/27/16 9:55 753549

Project Supervisor: David J Prichard

LSL	LSL East Syracuse, NY 13057 (315) 445-1900						cal Results	
CLIENT	O'Brien & Gere Opera	tions, LLC		Lab ID:	K1	605031-0	007A	
Project:	PAS Oswego-Semi-Ar	inual Well Sam	pling	Client Samp	e ID: LR-6 5/4/16			
W Order: Matrix: Inst. ID:	K1605031 WATER MS03_10	Sample Size	10 mL	Collection Date: 05/04/16 14:1 Date Received: 05/04/16 16:1 PrepDate: 05/04/16 16:1				
ColumnID: Revision: Col Type:	Rtx-502.2 05/27/16 9:51	%Moisture: TestCode:	8260W_OLM42	BatchNo: FileID;		9836 AMP-J186	50.D	
Analyte		Result Q	ual PQL	MDL	Units	DF	Date Analyzed	
VOLATILE	ORGANIC COMPOUND	S BY GC/MS			SW8260	DC/5030C		
1,2-Dibromoetl	hane	ND	0.50	0.16	µg/L	1	05/06/16 14:08	
Chlorobenzene	e	ND	0.50	0.10	µg/L	1	05/06/16 14:08	
Ethylbenzene		ND	0.50	0.10	µg/L	1	05/06/16 14:08	
Xyienes (total)		ND	1.00	0.30	µg/L	1	05/06/16 14:08	
Styrene		ND	0.50	0.10	µg/L	1	05/06/16 14:08	
Bromoform		ND	1.00	0.33	µg/L	1 🤤	05/06/16 14:08	
Isopropylbenze	ene	ND	0.50	0.10	µg/L	1	05/06/16 14:08	
1,1,2,2-Tetrack	hloroethane	ND	0.50	0,10	µg/L	1	05/06/16 14:08	
1,3-Dichlorobe	nzene	ND	0.50	0.10	µg/L	1	05/06/16 14:08	
1,4-Dichlorobe	nzene	ND	0.50	0.16	µg/L	1	05/06/16 14:08	
1,2-Dichlorobe	nzene	ND	0.50	0.10	µg/L	1	05/06/16 14:08	
1,2-Dibromo-3	-chloropropane	ND	5.00	1.00	µg/L	· 1	05/06/16 14:08	
1,2,4-Trichloro	benzene	ND	1.00	0.10	µg/L	1	05/06/16 14:08	
Surr: 1,2-Die	chloroethane-d4	109	75-130	0.16	%REC	1	05/06/16 14:08	
Surr: Toluer	ne-d8	98	75-125	0.10	%REC	1	05/06/16 14:08	
Surr: 4-Bron	nofluorobenzene	101	75-125	0.10	%REC	1	05/06/16 14:08	

Oualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
•	Ε	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

East Syracuse, NY	13057 (315)	445-1900		Sta	teCertNo:	10248
CLIENT O'Brien & Gere Op Project: PAS Oswego-Semi W Order: K1605031 Matrix: WATER		pling	Lab ID: K1605031-008A Client Sample ID: LCW-2 5/4/16 Collection Date: 05/04/16 15:05 Date Received: 05/04/16 16:10			
Inst. ID: MS03_10 ColumnID: Rtx-502.2 Revision: 05/27/16 9:51 Col Type: Col Type:	Sample Size %Moisture: TestCode:	10 mL 8260W_OLM42	PrepDate: BatchNo: FileID:		29836 SAMP-J18	56.D
Analyte	Result Q	ual PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOL	JNDS BY GC/MS			SW82	60C/5030C	
Dichlorodifluoromethane	ND	20.0	2.00	µg/L	20	05/06/16 12:06
Chloromethane	ND	20.0	6.60	µg/L	20	05/06/16 12:06
Vinyl chloride	ND	20.0	6.60	μg/L	20	05/06/16 12:06
Bromomethane	ND	20.0	6.60	µg/L	20	05/06/16 12:06
Chloroethane	ND	20.0	6.60	µg/L	20	05/06/16 12:06
Trichlorofiuoromethane	ND	20.0	2.00	µg/L	20	05/06/16 12:06
1,1-Dichloroethene	ND	10.0	3.20	μg/L	20	05/06/16 12:06
1,2-Trichloro-1,2,2-trifluoroethane	ND	10.0	2.00	μg/L	20	05/06/16 12:06
cetone	ND	200	20.0	μg/L	20	05/06/16 12:06
arbon disulfide	ND	10.0	2.20	μg/L	20	05/06/16 12:06
Aethyl acetate	ND	100	20,0	µg/L	20	05/06/16 12:06
Nethylene chloride	ND	40.0	3.20	μg/L	20	05/06/16 12:06
rans-1,2-Dichloroethene	ND	10.0	2.00	μg/L	20	05/06/16 12:06
Aethyl tert-butyl ether	ND	20.0	3.20	µg/L	20	05/06/16 12:06
,1-Dichloroethane	19.6	10.0	2.00	μg/L	20	05/06/16 12:06
is-1,2-Dichloroethene	42.6	10.0	2.00	μg/L	20	05/06/16 12:06
2-Butanone		200	20.0	µg/L	20	05/06/16 12:06
Chloroform	ND		20.0		20	05/06/16 12:06
	2.40 J	10.0		µg/L	20	05/06/16 12:06
,1,1-Trichloroethane	8.40 J	10.0	2.00	µg/L		
Cyclohexane	ND	10.0	2.00	µg/L	20	05/06/16 12:06 05/06/16 12:06
Carbon tetrachloride	ND	10.0	2.00	µg/L	20	
Benzene	90.0	10.0	2.00	µg/L	20	05/06/16 12:06
,2-Dichloroethane	ND	10.0	3.20	µg/L	20	05/06/16 12:06
Frichloroethene	27.8	10.0	2.00	µg/L	20	05/06/16 12:06
Methylcyclohexane	ND	10.0	2.00	μg/L	20	05/06/16 12:06
,2-Dichloropropane	ND	10.0	3.20	µg/L	20	05/06/16 12:06
Bromodichloromethane	ND	10.0	2.00	µg/L	20	05/06/16 12:06
is-1,3-Dichloropropene	ND	10.0	3.20	µg/L	20	05/06/16 12:06
-Methyl-2-pentanone	ND	100	20.0	µg/L	20	05/06/16 12:06
oluene	ND	10.0	2.00	µg/L	20	05/06/16 12:06
rans-1,3-Dichloropropene	ND	10.0	3.20	µg/L	20	05/06/16 12:06
,1,2-Trichloroethane	ND	10.0	3.20	µg/L	20	05/06/16 12:06
etrachloroethene	97.0	10.0	2.00	µg/L	20	05/06/16 12:06
2-Hexanone	ND	100	20.0	µg/L	20	05/06/16 12:06
Dibromochloromethane	ND	10.0	2.00	μg/L	20	05/06/16 12:06
Qualifiers: * Value may exceed	the Acceptable Level		B Analyte	letected in the	associated M	ethod Blank
	instrument calibration ra	inge	H Holding	times for prep	aration or ana	lysis exceeded
J Analyte detected b	elow the PQL		ND Not Dete	cted at the Pra	actical Quanti	ation Limit (PQL)
J Analyte detected below the PQL ND Not Detected at the Practical Q P Prim./Conf. column %D or RPD exceeds limit S Spike Recovery outside accept						

Print Date: 05/27/16 9:55

LSL Life Science Laboratories, Inc.

E	ast Syracuse, NY 1305	37 (315)	445-1900		StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operat PAS Oswego-Semi-An		pling	Lab ID: Client Sample ID:	K1605031-008A LCW-2 5/4/16
W Order: Matrix:	K1605031 WATER			Collection Date: Date Received:	05/04/16 15:05 05/04/16 16:10
Inst. ID: ColumnID: Revision: Col Type:	MS03_10 Rtx-502.2 05/27/16 9:51	Sample Size %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R29836 1-SAMP-J1856.D

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY GC/MS			SW826	0 C/5 030C	· · · · · · · · · · · · · · · · · · ·
1,2-Dibromoethane	ND	10.0	3.20	µg/L	20	05/06/16 12:06
Chlorobenzene	28.0	10.0	2.00	µg/L	20	05/06/16 12:06
Ethylbenzene	3.60 J	10.0	2.00	µg/L	20	05/06/16 12:06
Xylenes (total)	18.4 J	20.0	6.00	µg/L	20	05/06/16 12:06
Styrene	ND	10.0	2.00	µg/L	20	05/06/16 12:06
Bromoform	ND	20.0	6.60	µg/L	20	05/06/16 12:06
Isopropylbenzene	2.60 J	10.0	2,00	µg/L	20	05/06/16 12:06
1,1,2,2-Tetrachloroethane	6.20 J	10.0	2.00	µg/L	20	05/06/16 12:06
1,3-Dichlorobenzene	ND	10.0	2.00	µg/L	20	05/06/16 12:06
1,4-Dichlorobenzene	ND	10.0	3.20	µg/L	20	05/06/16 12:06
1,2-Dichlorobenzene	2.60 J	10.0	2.00	µg/L	20	05/06/16 12:06
1,2-Dibromo-3-chloropropane	ND	100	20.0	µg/L	20	05/06/16 12:06
1,2,4-Trichlorobenzene	ND	20.0	2.00	µg/L	20	05/06/16 12:06
Surr: 1,2-Dichloroethane-d4	105	75-130	3.20	%REC	20	05/06/16 12:06
Surr: Toluene-d8	98	75-125	2.00	%REC	20	05/06/16 12:06
Surr: 4-Bromofluorobenzene	99	75-125	2.00	%REC	20	05/06/16 12:06

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

	ast Syracuse, NY 1	3057 (315)	445-1900	StateCertNo: 10248				
CLIENT	O'Brien & Gere Ope	erations, LLC		Lab ID: K1605031-009A				
Project:	PAS Oswego-Semi-	Annual Well Samp	oling	Client Sam	ple ID: X-	1 5/4/10	5	
W Order:	K1605031			Collection Date: 05/04/16 0:00)0		
Matrix:	WATER Q					/04/16 16		
Inst. ID: MS03_10 ColumnID: Rtx-502.2 Revision: 05/27/16 9:51		Sample Size	Sample Size 10 mL		Date Received: 05/04/16 16:10 PrepDate:			
					BatchNo: R29836			
			8260W OLM42	FileID:	1-5	SAMP-J18	354,D	
Col Type:			-					
Analyte		Result Q	ual PQL	MDL	Units	DF	Date Analyzed	
	ORGANIC COMPOU				SW826	0C/5030C	······	
Dichlorodifluor		NDS D1 CC/MS	1.00	0.10	µg/L	1	, 05/06/16 11:06	
Chloromethane		ND	1.00	0.33	μg/L	1	05/06/16 11:06	
vinyl chloride	-	ND	1.00	0.33	μg/L	1	.05/06/16 11:06	
Bromomethane	2	ND	1.00	0.33	μg/L	1	05/06/16 11:06	
Chloroethane	-	ND	1.00	0.33	µg/L	1	05/06/16 11:06	
Trichlorofluoro	methane	ND ND	1.00	0.10	µg/L	1	05/06/16 11:06	
,1-Dichloroeth		ND	0.50	0.16	μg/L	1	05/06/16 11:06	
	-1,2,2-trifluoroethane	ND	0,50	0.10	µg/L	1	05/06/16 11:06	
Acetone	, , , , , , , , , , , , , , , , , , , ,	1.32 J	10.0	1.00	μg/L	1	05/06/16 11:06	
Carbon disulfid	le	ND	0.50	0.11	μg/L	1	05/06/16 11:06	
Methyl acetate		ND	5.00	1.00	μg/L	1	05/06/16 11:06	
Viethylene chlø	ride	ND	2.00	0.16	μg/L	1	05/06/16 11:06	
rans-1,2-Dichi		ND	0.50	0.10	μg/L	1	05/06/16 11:06	
Methyl tert-buty	/l ether	ND	1.00	0.16	µg/L	1	05/06/16 11:06	
1,1-Dichloroeth	ane	0.28 J	0.50	0.10	µg/L	1	05/06/16 11:06	
cis-1,2-Dichlor	oethene	ND	0.50	0.10	µg/L	1	05/06/16 11:06	
2-Butanone		ND	10.0	1.00	µg/L	1	05/06/16 11:06	
Chloroform		ND	0.50	0.10	µg/L	1	05/06/16 11:06	
1,1,1-Trichloro	ethane	ND	0.50	0.10	µg/L	1	05/06/16 11:06	
Cyclohexane		ND	0.50	0.10	µg/L	1	05/06/16 11:06	
Carbon tetrach	loride	ND	0.50	0.10	µg/L	1	05/06/16 11:06	
Benzene		ND	0.50	0.10	µg/L	1	05/06/16 11:06	
,2-Dichloroeth	ane	ND	0.50	0.16	µg/L	1	05/06/16 11:06	
Trichloroethene	e	ND	0.50	0.10	µg/L	1	05/06/16 11:06	
Methylcyclohex	ane	ND	0.50	0.10	µg/L	1	05/06/16 11:06	
,2-Dichloropro	pane	ND	0.50	0.16	µg/L	1	05/06/16 11:06	
Bromodichloror	methane	ND	0.50	0.10	µg/L	1	05/06/16 11:06	
is-1,3-Dichlor	opropene	ND	0.50	0.16	µg/L	1	05/06/16 11:06	
I-Methyl-2-pen	tanone	ND	5.00	1.00	µg/L	1	05/06/16 11:06	
oluene		ND	0.50	0.10	µg/L	1	05/06/16 11:06	
rans-1,3-Dichl	• •	ND	0.50	0.16	μg/L	1	05/06/16 11:06	
,1,2-Trichloroe		ND	0.50	0.16	µg/L	1	05/06/16 11:06	
Fetrachloroethe	ene	ND	0.50	0.10	µg/L	1	05/06/16 11:06	
2-Hexanone		ND	5.00	1.00	μg/L	1	05/06/16 11:06	
Dibromochloror	methane	ND	0.50	0.10	µg/L	1	05/06/16 11:06	
Qualifiers:	-	he Acceptable Level		-	etected in the a			
		nstrument calibration ran	nge	_	imes for prepar			
	J Analyte detected be		**			-	ation Limit (PQL)	
	P Prim./Conf. column	1 %D or RPD exceeds lir	nit	S Spike Re	covery outside :	accepted reco	overy limits	

Print Date: 05/27/16 9:55 753543 Project Supervisor: David J Prichard

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LSL Life Science Laboratories, Inc.

Analytical Results

<u> </u>	Last Syracuse, NY 1305	57 (315)	445-1900		StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operat PAS Oswego-Semi-Ant		pling	Lab ID: Client Sample ID:	K1605031-009A : X-1 5/4/16
W Order: Matrix: Inst. ID:	K1605031 WATER Q MS03_10	Sample Size	10 mL	Collection Date: Date Received: PrepDate:	05/04/16 0:00 05/04/16 16:10
ColumnID: Revision: Col Type:	Rtx-502.2 05/27/16 9:51	%Moisture: TestCode:	8260W_OLM42	BatchNo: FileID:	R29836 1-SAMP-J1854.D

Analyte	Result Qu	ial PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY GC/MS			SW826	0C/5030C	
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	05/06/16 11:06
Chlorobenzene	ND	0.50	0.10	µg/L	1	05/06/16 11:06
Ethylbenzene	ND	0.50	0.10	μg/L	1	05/06/16 11:06
Xylenes (total)	ND	1.00	0.30	µg/L	1	05/06/16 11:06
Styrene	ND	0.50	0.10	μg/L	1	05/06/16 11:06
Bromoform	ND	1.00	0.33	µg/L	1	05/06/16 11:06
Isopropyibenzene	ND	0.50	0.10	µg/L	1	05/06/16 11:06
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	μg/L	1	05/06/16 11:06
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	05/06/16 11:06
1,4-Dichlorobenzene	ND	0.50	0.16	µg/L	1	05/06/16 11:06
1,2-Dichlorobenzene	ND	0,50	0.10	μg/L	1	05/06/16 11:06
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	05/06/16 11:06
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	05/06/16 11:06
Surr: 1,2-Dichloroethane-d4	105	75-130	0.16	%REC	1	05/06/16 11:06
Surr: Toluene-d8	99	75-125	0.10	%REC	1	05/06/16 11:06
Surr: 4-Bromofluorobenzene	102	75-125	0.10	%REC	1	05/06/16 11:06

J Analyte detected below the PQL ND Not Detected at the Practical Quantitation	ethod Blank	Analyte detected in the associated Method Blank	В	Value may exceed the Acceptable Level	Qualifiers:		
	lysis exceeded	Holding times for preparation or analysis exceeded	н	E Value exceeds the instrument calibration range			
	tation Limit (POL)	Not Detected at the Practical Quantitation Limit (PQL)		Analyte detected below the PQL			
5 Spike Recovery outside accepted recovery	,	Spike Recovery outside accepted recovery limits		Prim./Conf. column %D or RPD exceeds limit			

Project Supervisor: David J Prichard 753543

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

Analytical Results

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E	ast Syracuse, NY 130	57 (315)	445-1900		StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Opera PAS Oswego-Semi-Ar		pling	Lab ID: Client Sample ID:	K1605031-010A QC Trip Blank 5/4/16
W Order: Matrix:	K1605031 WATER Q			Collection Date: Date Received:	05/04/16 0:00 05/04/16 16:10
Inst. ID: ColumnID:	MS03_10	Sample Size %Moisture:	10 mL	PrepDate: BatchNo:	R29836
Revision: Col Type:	05/27/16 9:51	TestCode:	8260W_OLM42	FileID:	1-SAMP-J1861.D

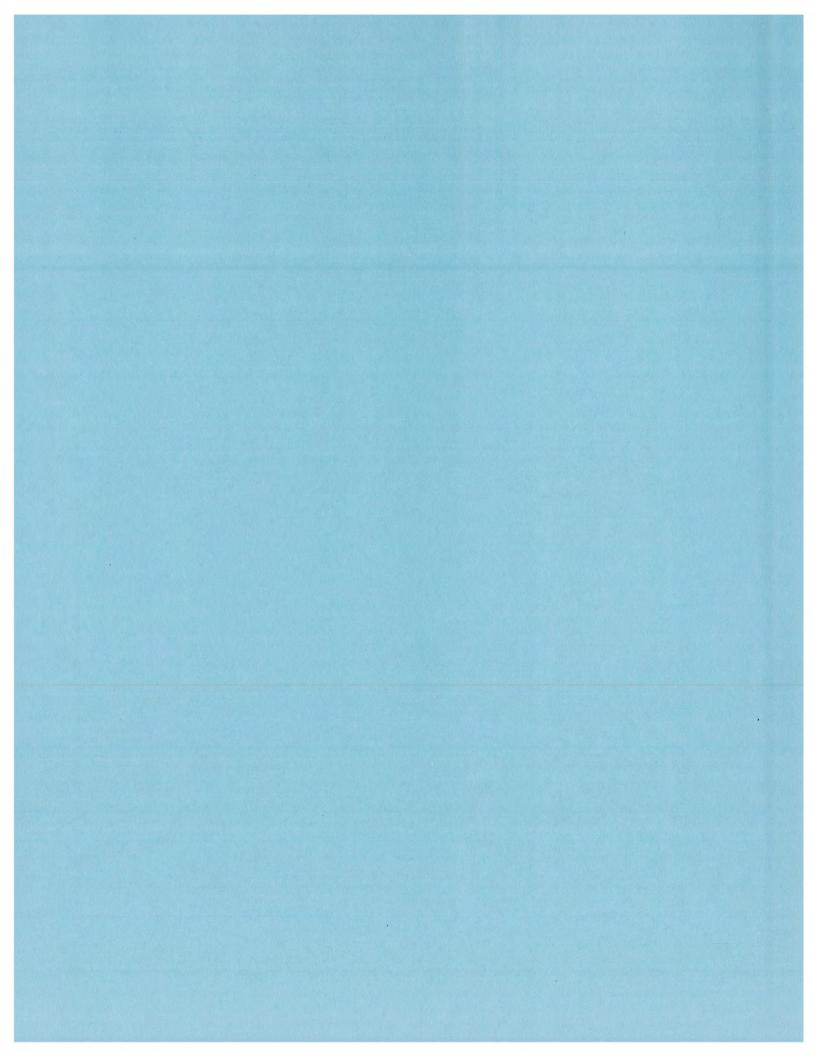
Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS	BY GC/MS			SW826	0C/5030C	
Dichlorodifluoromethane	ND	1.00	0,10	µg/L	1	05/06/16 14:39
Chioromethane	ND	1.00	0.33	μg/L	1	05/06/16 14:39
Vinyl chloride	ND	1.00	0.33	μg/L	1	05/06/16 14:39
Bromomethane	ND	1.00	0.33	⊧s-= µg/L	1	05/06/16 14:39
Chloroethane	ND	1.00	0.33	μg/L	1	05/06/16 14:39
Trichlorofluoromethane	ND	1.00	0.10	µg/L	1	05/06/16 14:39
1,1-Dichloroethene	ND	0.50	0,16	µg/L	1	05/06/16 14:39
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.50	0.10	µg/L	1	05/06/16 14:39
Acetone	ND	10.0	1.00	µg/L	1	05/06/16 14:39
Carbon disulfide	ND	0.50	0.11	µg/L	1	05/06/16 14:39
Methyl acetate	ND	5.00	1.00	μg/L	1	05/06/16 14:39
Methylene chloride	0.20 J	2.00	0.16	µg/L	1	05/06/16 14:39
trans-1,2-Dichloroethene	, ND	0.50	0.10	µg/L	1	05/06/16 14:39
Methyl tert-butyl ether	ND	1.00	0.16	μg/L	1	05/06/16 14:39
1,1-Dichloroethane	. ND	0.50	0.10	µg/L	1	05/06/16 14:39
cis-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	05/06/16 14:39
2-Butanone	ND	10.0	1.00	µg/L	1	05/06/16 14:39
Chloroform	ND	0.50	0.10	µg/L	1	05/06/16 14:39
1,1,1-Trichloroethane	ND 、	0.50	0.10	µg/L	1	05/06/16 14:39
Cyclohexane	ND	0.50	0.10	µg/L	1	05/06/16 14:39
Carbon tetrachloride	ND	0,50	0.10	μg/L	1	05/06/16 14:39
Benzene	ND	0.50	0,10	μg/L	1	05/06/16 14:39
1,2-Dichloroethane	ND	0.50	0,16	μg/L	1	05/06/16 14:39
Trichloroethene	ND	0.50	0.10	μg/L	1	05/06/16 14:39
Methylcyclohexane	ND	0.50	0.10	μg/L	1	05/06/16 14:39
1,2-Dichloropropane	ND	0.50	0.16	μg/L	1	05/06/16 14:39
Bromodichloromethane	ND	0,50	0.10	μg/L	1	05/06/16 14:39
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	05/06/16 14:39
4-Methyl-2-pentanone	ND	5.00	1.00	µg/L	1	05/06/16 14:39
Toluene	ND	0.50	0.10	µg/L	1	05/06/16 14:39
trans-1,3-Dichloropropene	ND	0.50	0.16	μg/L	1	05/06/16 14:39
1,1,2-Trichloroethane	ND	0.50	0,16	μg/L	1	05/06/16 14:39
Tetrachloroethene	ND	0.50	0.10	μg/L	1	05/06/16 14:39
2-Hexanone	ND	5.00	1.00	μg/L	1	05/06/16 14:39
Dibromochloromethane	ND	0,50	0.10	μg/L	1	05/06/16 14:39
Qualifiers: * Value may exceed the Ac	ceptable Level		B Analyte	detected in the a	sociated Me	thod Blank
E Value exceeds the instrum	=	e		times for prepar		
J Analyte detected below th	•					ation Limit (PQL)
P Prim./Conf. column %D c	•	t .		covery outside a	-	,

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

F	ast Syracuse, NY 130)57 (315)	445-1900		StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Oper PAS Oswego-Semi-A	'	pling	Lab ID: Client Sample ID:	K1605031-010A QC Trip Blank 5/4/16
W Order:	K1605031			Collection Date:	05/04/16 0:00
Matrix:	WATER Q			Date Received:	05/04/16 16:10
Inst, ID:	MS03_10	Sample Size	10 mL	PrepDate:	
ColumnID:	Rtx-502.2	%Moisture:		BatchNo:	R29836
Revision:	05/27/16 9:51	TestCode:	8260W OLM42	FileID:	1-SAMP-J1861.D
Col Type:			-		

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY GC/MS			SW826	0C/5030C	;
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	05/06/16 14:39
Chlorobenzene	ND	0.50	0.10	μg/L	1	05/06/16 14:39
Ethylbenzene	ND	0.50	0.10	μg/L	1	05/06/16 14:39
Xylenes (total)	ND	1.00	0.30	µg/L	1	05/06/16 14:39
Styrene	ND	0.50	0.10	µg/L	1	05/06/16 14:39
Bromoform	ND	1.00	0.33	µg/L	1	05/06/16 14:39
Isopropylbenzene	ND	0.50	0.10	μg/L	1	05/06/16 14:39
1,1,2,2-Tetrachloroethane	ND	0.50	- 0.10	μg/L	1	05/06/16 14:39
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	05/06/16 14:39
1,4-Dichlorobenzene	ND	0.50	0.16	µg/L	1	05/06/16 14:39
1,2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	05/06/16 14:39
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	1	05/06/16 14:39
1,2,4-Trichlorobenzene	ND	1.00	0.10	µg/L	1	05/06/16 14:39
Surr: 1,2-Dichloroethane-d4	108	75-130	0.16	%REC	1	05/06/16 14:39
Surr: Toluene-d8	98	75-125	0.10	%REC	1	05/06/16 14:39
Surr: 4-Bromofluorobenzene	103	75-125	0.10	%REC	1	05/06/16 14:39

Oualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
-	Е	Value exceeds the instrument calibration range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	Р	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits



D - 5 QUARTERLY POTW DISCHARGE REPORTS



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

Via electronic mail

July 13, 2018

Mr. John McGrath Chief Operator Westside Wastewater Treatment Plant First Avenue & West Schuyler Streets Oswego, New York 13126 Labmanager @oswegony.org

Re: Quarterly Discharge Report – 2nd Quarter 2018 Pollution Abatement Services Site – Oswego, New York City of Oswego Wastewater Discharge Permit 6-2017-18

Dear Mr. Johnson:

This quarterly report is submitted in accordance with the City of Oswego Wastewater Discharge Permit 6-2017-18 (Permit) for discharge of leachate from the Pollution Abatement Services (PAS) Site into the City of Oswego's Eastside Wastewater Treatment Facility. This report covers the reporting period from April 2018 through June 2018.

The PAS Site discharged a total of 50,000 gallons of leachate to the Oswego sewer system during the first quarter of 2018.

Discharge to City of Oswego April 2018 – June 2018 50,000 gallons

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

Sincerely, de maximis, inc.

Clay the Clamo

Clav McClarnon

cc: Dan Ramer – Chief Operator Eastside Wastewater Treatment Plant Robert Johnson – City Engineer PAS Oswego Site Management Committee

F:\PROJECTS\3131 - PAS\10 Permits-POTV\2018\Oswego\2nd Qtr\Oswego 2nd Qtr 2018 rpt.doc

TABLE 1 PAS OSWEGO SITE QUARTERLY REPORT FOR CITY OF OSWEGO (2018) LEACHATE DISCHARGE TO OSWEGO EASTSIDE WASTEWATER TREATMENT FACILITY (Oswego SIU Wastwater Discharge Permit No.6-2017-18)

(Oswego SIU Wastwater Discharge Permit No.6-2017-18)								
Discharge Quarter	3Q 2	017	4Q 2	017	1Q 2	017	2Q 2	018
	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged
	7/11/17	20,005	10/3/17	20,005	1/9/18	10,000	4/3/18	10,000
	54/6.8		54/6.8		48/6.8		44/6.8	
	8/8/17	20,005	11/15/17	10,005	2/6/18	10,000	5/9/18	20,000
	54/6.8		48.5/6.7		48/6.8		48/6.8	
	9/6/17	19,895	12/5/17	10,000	3/6/18	10,000	6/5/18	20,000
	54/6.8		54/6.7		6.8/44		6.8/49	
Total Discharged		59,905		40,010		30,000		50,000
Date Sampled*	Permit Limit		11/15/2017				4/3/2017	
Analytes	mg/L		mg/L				mg/L	
Antinomy Arsenic Beryllium Cadmium Chromium (total) Copper Cyanide Lead Mercury Nickel Selenium Silver Thallium Zinc	0.107 0.358 0.107 0.43 0.67 0.43 0.67 0.19 0.0002 0.69 0.282 0.65 0.073 1		ND <0.010 0.021 ND <0.010 ND <0.010 0.017 0.026 ND <0.010 ND <0.010 ND <0.0020 0.41 ND <0.010 ND <0.010 ND <0.010 ND <0.020 ND <0.020				0.00041 0.0129 ND <0.003 ND <0.001 ND<0.014 ND <0.010 ND<0.001 0.00000246 0.316 ND <0.004 ND <0.001 ND <0.001 ND <0.003 ND <0.005	
VOC** SVOC** BOD 5 TSS Phenolics pH	200 400 0.375 5> and <10		NA NA 15 45 ND <0.010 6.7		charge Dermit No. 6.2		NA NA <66.7 66 0.0761 6.8	

* Semi-annual sampling of PAS leachate discharge conducted in accordance with SIU Wastewater Discharge Permit No.6-2017-18.

** Analytes included for permit pollutant analysis performed every three years

ATTACHMENT I



OBRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: <u>4-3-18</u>

7:30 Time:

Field Technician MARTIN Koennecke

Weather Conditions <u>over (457 35</u>°

Well Pump		Pre-Dis	charge Well P	umping	
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	730	945	·	73,4 6FM	
LCW-2	NOT PUMPK	D (· · · · · · · · · · · · · · · · · · ·	
LCW-3	7:30	8:00	STAT-11"		
LCW-4	7:30	945	STOP-43,5	=32.5 : 73GP	n
				Total	9,912

Discharge#	Start Time	Stop Time	pH	Тетр	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	9:55	11:55	6.8	440	980165	990165	10,000
Discharge #2							
Total						· · · · · · · · · · · · · · · · · · ·	16,000

	Date	Sample Location	Sample Volume	Sample Time	рН	Temperature
Sample #1	4-3-18	5 Angoly Pai	<u>39a</u> (11:45	6.8	440
Sample #2 (if required)		• • • • • • • • • • •				
Jahn Maye	ath - 0	. 16	7010 pick 10:10 - 11:45	<i>,</i> .	s - 11:40	

C VA (Kevin)VAII Projects/PAS Oswego/Forms/Checklist/PAS Leachate Disposal Checklist_V1_2010.docx



PAS Site Oswego, New York

Leachate Discharge Form

Date: <u>5-9-18</u>

Time: 7:45

Field Technician MARTIN KOENNacke

Weather Conditions SUNNY 60°

网络静学

		Pre-Disc	sharge Well P	umping	
Well Pump			ut in alling on Statistics Kitalahan		A O A material
	Pump Start Time	Pump Stop Time	Tank Elevation	Flow Rate (est)	Gallons Pumped (est)
LCW-1	7.45	11:45		104 gpm	191,95
LCW-2	7:45	/1:45		//	
LCW-3	7:45	8:00			
LCW-4	7:45	9:40 IN	Tennitten		
	· · · · · · · · · · · · · · · · · · ·	· · · ·	· · · ·	Total	19.695

START 13" @930-45" = 104 6Pm END 12

	Leachate Discharge Pumping(Monthly)								
Discharge #	Start Time	Stop Time	pĦ	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge		
Discharge #1	9:20	13:15	6.8	48°	990165	1010165	20,000		
Discharge #2									
Total					·····		20,000		
	Leachate Discharge Sampling (Semi-Annually)								
	Date	Sample Location	4 100 100 100	iple ume	Sample Time	pH	<u>Femperature</u>		
Sample #1									
Sample #2 (if required)				-		-			

C \A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx



O'BRIEN & GERE

PAS Site Oswego, New York

Leachate Discharge Form

Date: 6-5-18

7:25 Time:

Field Technician MARTIN Koennecky

Weather Conditions P-Sunny -55°

Pre-Discharge Well Pumping									
Pump Start Time	Pump Stop Time		a second a second se	Tank Elevation		ow Rate (est) Gallons Pumped (est)		
730	11:	11:00		T-12" 11.		3.8 6Pm	20,000		
730	11:	11:00					19,368		
730	7:	7:50					,		
730	9	915 INTERMINTED RUNNING							
Leachate Dis			Scharge	Temp Totalizer			Gallons		
Start Time	Stop Time	pH	Temp	Flow To	otal	Flow	Gallons Discharge		
				Glain	,	(End)	and the second s		
9:10	13:05	6,8	490	101010	05	1030/65	20,000		
							20,000		
1	Leachate	Disch	arge Sa	mpling (Sen	ui-Annual			
Date	Sample Location	-1.2793		Sample Time		pH	Temperature		
	Time 7 30 7 30 7 30 7 30 7 30 7 30 7 30 9:10 1	Time T 730 11: 730 11: 730 7: 730 7: 730 9 Leach Start Stop Time Time 9:10 13:05 Leach Leach Date Sample	Time Time 730 11:00 730 11:00 730 7:50 730 7:50 730 9:15 Post Post 9:10 13:05 6.8 9 Leachate Disch Leachate Disch Leachate Disch Date	Time Time Ele 730 11:00 \$TART 730 11:00 1 730 750 1 730 750 1 730 750 1 730 915 Tr 730 915 Tr 730 915 Tr Post Pump Leachate Discharge Start Stop pH Temp Time 13:05 6,8 49° 9:10 13:05 6,8 49° Leachate Discharge Sa Leachate Discharge Sa Sample	Time Time Elevation 730 11:00 \$TART-13" 730 11:00 \$TART-13" 730 11:00 \$TART-13" 730 750 \$Totaliz 730 915 Internation 730 915 Internation 730 915 Internation 700 915 Internation Post Pump out \$Totaliz Start Stop pH Temp Totaliz Flow Totaliz \$Time \$Iotaliz \$Iotaliz \$Iotaliz 9:10 13:05 6.8 49° 101010 1 1 1 1 1 Leachate Discharge Sampling (Date Sample Sample Sample	Time Time Elevation 730 11:00 5THRT - 12" 113 730 11:00 5THRT - 12" 113 730 750 11:00 11:00 730 750 10 10 730 915 In Tekmulter Ru Ru 730 915 In Tekmulter Ru Ru Post Pumpout 10" 10" V Post Pumpout 10" Eachate Discharge Pumping(N 1 13:05 6.8 49" 1010165 10 13:05 6.8 49" 1010165 10 10 10 10" 10"	Time Time Elevation 730 11:00 \$TART-13" 113,8 GPm 730 11:00		

C \A (Kevin)\All Projects\PAS Oswego\Forms\Checklist\PAS Leachate Disposal Checklist_V1_2010.docx

Sample #2 (if required)

ATTACHMENT II



Pace Analytical Services, LLC 575 Broad Hollow Road Melville, NY 11747 (631)694-3040

April 26, 2018

John McGrath City of Oswego Waste Water Treatment Facilities 2 First Ave Oswego, NY 13126

RE: Project: SEMI ANNUAL IPP MONITORING Pace Project No.: 7047516

Dear John McGrath:

Enclosed are the analytical results for sample(s) received by the laboratory on April 06, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Method 4500 CNE fot total Cyanide was run out of hold due to an oversight by a new analyst. Extra help in this department has been scheduled to aid new staff members in their duties. This was not a conscious excursion from our SOP, but a mistake made during training with the new analyst

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

2 mily

James Murphy james.murphy@pacelabs.com (518)346-4592 Project Manager

Enclosures

cc: Gary Hallinan, City of Oswego Waste Water Treatment Facilities



REPORT OF LABORATORY ANALYSIS



CERTIFICATIONS

Project: SEMI ANNUAL IPP MONITORING

Pace Project No.: 7047516

Grand Rapids Certification ID's

5560 Corporate Exchange Ct SE, Grand Rapids, MI 49512 Minnesota Department of Health, Certificate #1385941 Arkansas Department of Environmental Quality, Certificate #17-046-0 Georgia Environmental Protection Division, Stipulation Illinois Environmental Protection Agency, Certificate #004325 Michigan Department of Environmental Quality, Laboratory #0034

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747 New York Certification #: 10478 Primary Accrediting Body New Jersey Certification #: NY158 Pennsylvania Certification #: 68-00350 Connecticut Certification #: PH-0435 New York State Department of Health, Serial #56192 and 56193 North Carolina Division of Water Resources, Certificate #659 Virginia Department of General Services, Certificate #9028 Wisconsin Department of Natural Resources, Laboratory #999472650 U.S. Department of Agriculture Permit to Receive Soil, Permit #P330-17-00278

Maryland Certification #: 208 Rhode Island Certification #: LAO00340 Massachusetts Certification #: M-NY026 New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS



SAMPLE ANALYTE COUNT

Project:SEMI ANNUAL IPP MONITORINGPace Project No.:7047516

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7047516001	PAS TOTAL DISCHARGE COMPOSITE	EPA 200.8	SK2	12	PACE-MV
		SM22 2540D	STH	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
7047516002	PAS TOTAL DISCHARGE GRAB	EPA 1631E	KLV	1	PASI-GRMI
		EPA 420.1	STH	1	PACE-MV
		SM22 4500-CN-E	JS3	1	PACE-MV



ANALYTICAL RESULTS

Project: SEMI ANNUAL IPP MONITORING

Pace Project No.: 7047516

Sample: PAS TOTAL DISCHARGE COMPOSITE	Lab ID: 7047	516001	Collected: 04/03/	18 11:45	Received: 04	/06/18 09:20	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Meth	od: EPA 20	0.8 Preparation Me	thod: EP	PA 200.8			
Antimony	0.41	ug/L	0.40	1	04/07/18 11:19	04/09/18 15:21	7440-36-0	
Arsenic	12.9	ug/L	2.0	2	04/07/18 11:19	04/10/18 13:19	7440-38-2	M1
Beryllium	<0.30	ug/L	0.30	1	04/07/18 11:19	04/09/18 15:21	7440-41-7	
Cadmium	<1.0	ug/L	1.0	1	04/07/18 11:19	04/09/18 15:21	7440-43-9	
Chromium	<14.0	ug/L	14.0	2	04/07/18 11:19	04/10/18 13:19	7440-47-3	M1
Copper	<4.0	ug/L	4.0	2	04/07/18 11:19	04/10/18 13:19	7440-50-8	M1
Lead	<1.0	ug/L	1.0	1	04/07/18 11:19	04/09/18 15:21	7439-92-1	
Nickel	316	ug/L	1.0	2	04/07/18 11:19	04/10/18 13:19	7440-02-0	D6,M1
Selenium	<4.0	ug/L	4.0	2	04/07/18 11:19	04/10/18 13:19	7782-49-2	M1
Silver	<1.0	ug/L	1.0	1	04/07/18 11:19	04/09/18 15:21	7440-22-4	
Thallium	<0.30	ug/L	0.30	1	04/07/18 11:19	04/09/18 15:21	7440-28-0	
Zinc	<5.0	ug/L	5.0	1	04/07/18 11:19	04/09/18 15:21	7440-66-6	M1
2540D Total Suspended Solids	Analytical Meth	od: SM22 2	2540D					
Total Suspended Solids	66.0	mg/L	20.0	1		04/09/18 17:08		
5210B BOD, 5 day	Analytical Meth	od: SM22 :	5210B Preparation	Method:	SM22 5210B			
BOD, 5 day	<66.7	mg/L	66.7	33.33	04/06/18 17:16	04/11/18 13:37		H3



ANALYTICAL RESULTS

Project: SEMI ANNUAL IPP MONITORING

Pace Project No.: 7047516

Sample: PAS TOTAL DISCHARGE GRAB	Lab ID: 7047	516002	Collected: 04/03/	18 11:45	Received: 04	/06/18 09:20 I	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1631E Mercury, Low Level	Analytical Metho	od: EPA 16	31E Preparation Me	ethod: E	PA 1631E			
Mercury	2.46	ng/L	0.20	1	04/11/18 15:00	04/12/18 12:41	7439-97-6	
Phenolics, Total Recoverable	Analytical Metho	od: EPA 420	0.1 Preparation Me	thod: EF	PA 420.1			
Phenolics, Total Recoverable	76.1	ug/L	20.0	4	04/23/18 12:00	04/23/18 16:15	5	M1
SM 4500 CNE Cyanide, Total	Analytical Metho	od: SM22 4	500-CN-E Preparat	tion Met	hod: SM20/22 45	00-CN-C		
Cyanide	<10.0	ug/L	10.0	1	04/18/18 07:30	04/18/18 15:54	57-12-5	H1,H2



Project: Pace Project No.:	SEMI ANNUAL 7047516	. IPP MONITORING									
QC Batch:	20144		Analys	is Method:	EF	PA 1631E					
QC Batch Method:	EPA 1631E		Analysi	is Descript	ion: 16	631E Mercu	ry				
Associated Lab Sar	nples: 70475 ⁻	16002									
METHOD BLANK:	80075		Ν	latrix: Wat	er						
Associated Lab Sar	nples: 70475 ⁻	16002									
D		11.54	Blank		eporting	A	1	0			
Paran	neter	Units	Result		Limit	Analyz		Qualifiers			
Mercury		ng/L	<	<0.20	0.20	04/12/18	11:06				
METHOD BLANK:	80076		N	latrix: Wat	er						
Associated Lab Sar	nples: 70475 ⁻	16002									
			Blank		eporting						
Parar	neter	Units	Result	t	Limit	Analyz	.ed	Qualifiers			
Mercury		ng/L	<	0.20	0.20	04/12/18	12:07				
METHOD BLANK:	80077		N	latrix: Wat	er						
Associated Lab Sar	nples: 70475 ⁻	16002									
			Blank	R	eporting						
Parar	neter	Units	Result	t	Limit	Analyz	ed	Qualifiers			
Mercury		ng/L	<	<0.20	0.20	04/12/18	13:09				
LABORATORY COI		E: 80078									
			Spike	LCS		LCS	% Re				
Parar	neter	Units	Conc.	Resu	t (% Rec	Limits	s Qi	ualifiers	_	
Mercury		ng/L	4		3.66	91	77	7-123			
MATRIX SPIKE & M	IATRIX SPIKE D	OUPLICATE: 80079	1		80080						
			MS	MSD							
Parame	ter	4610387002 Units Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
											Quai
Mercury		ng/L 2.61	4	4	6.08	6.19	87	89	71-125	2	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: SEMI ANNUAL IPP MONITORING

Pace Project No.: 7047516

Batch:	62474	

QC Batch:	62474	Analysis Method:	EPA 200.8	
QC Batch Method:	EPA 200.8	Analysis Description	200.8 MET	
Associated Lab San	nples: 7047516001			
METHOD BLANK:	206002	Matrix: Water		
WEINOD BLANK.	200092	Matrix. Water		
		Matrix. Water		
Associated Lab San		Blank Repo	rting	

Parameter	Units	Result	Limit	Analyzed	Qualifiers
Antimony	ug/L	<0.40	0.40	04/09/18 15:07	
Arsenic	ug/L	<1.0	1.0	04/09/18 15:07	
Beryllium	ug/L	<0.30	0.30	04/09/18 15:07	
Cadmium	ug/L	<1.0	1.0	04/09/18 15:07	
Chromium	ug/L	<7.0	7.0	04/09/18 15:07	
Copper	ug/L	<2.0	2.0	04/09/18 15:07	
Lead	ug/L	<1.0	1.0	04/09/18 15:07	
Nickel	ug/L	<0.50	0.50	04/09/18 15:07	
Selenium	ug/L	<2.0	2.0	04/09/18 15:07	
Silver	ug/L	<1.0	1.0	04/09/18 15:07	
Thallium	ug/L	<0.30	0.30	04/09/18 15:07	
Zinc	ug/L	<5.0	5.0	04/09/18 15:07	

LABORATORY CONTROL SAMPLE: 286893

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
ntimony	ug/L		50.6	101	85-115	
rsenic	ug/L	50	49.8	100	85-115	
eryllium	ug/L	50	51.2	102	85-115	
admium	ug/L	50	48.1	96	85-115	
romium	ug/L	50	50.6	101	85-115	
opper	ug/L	50	49.7	99	85-115	
ad	ug/L	50	50.6	101	85-115	
kel	ug/L	50	49.8	100	85-115	
enium	ug/L	50	49.8	100	85-115	
ver	ug/L	50	49.0	98	85-115	
allium	ug/L	50	52.4	105	85-115	
าด	ug/L	50	48.9	98	85-115	

MATRIX SPIKE SAMPLE:

286895

Parameter	Units	7047516001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	0.41	10	10.2	98	70-130	
Arsenic	ug/L	12.9	4	13.2	8	70-130	M1
Beryllium	ug/L	<0.30	5	5.1	102	70-130	
Cadmium	ug/L	<1.0	5	5.0	98	70-130	
Chromium	ug/L	<14.0	20	23.3	63	70-130	M1
Copper	ug/L	<4.0	25	18.9	61	70-130	M1

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REPORT OF LABORATORY ANALYSIS

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Project: SEMI ANNUAL IPP MONITORING

Pace Project No.: 7047516

MATRIX SPIKE SAMPLE:	286895						
		7047516001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Lead	ug/L	<1.0	2	2.4	107	70-130	
Nickel	ug/L	316	50	281	-70	70-130	M1
Selenium	ug/L	<4.0	1	4.1	15	70-130	M1
Silver	ug/L	<1.0	5	4.2	83	70-130	
Thallium	ug/L	<0.30	5	5.6	111	70-130	
Zinc	ug/L	<5.0	50	34.7	63	70-130	M1

SAMPLE DUPLICATE: 286894

		7047516001	Dup		
Parameter	Units	Result	Result	RPD	Qualifiers
Antimony	ug/L	0.41	0.43	5	
Arsenic	ug/L	12.9	10.5	20	
Beryllium	ug/L	<0.30	<0.30		
Cadmium	ug/L	<1.0	<1.0		
Chromium	ug/L	<14.0	8.7		
Copper	ug/L	<4.0	2.9		
Lead	ug/L	<1.0	<1.0		
Nickel	ug/L	316	257	21 [06
Selenium	ug/L	<4.0	3.3		
Silver	ug/L	<1.0	<1.0		
Thallium	ug/L	<0.30	<0.30		
Zinc	ug/L	<5.0	<5.0		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: SEMI ANNUAL IF Pace Project No.: 7047516	PP MONITORING						
QC Batch: 62628		Analysis M	lethod:	SM22 2540D			
QC Batch Method: SM22 2540D		Analysis D	escription:	2540D Total S	Suspended Solids	;	
Associated Lab Samples: 70475160	001						
METHOD BLANK: 287585		Matri	x: Water				
Associated Lab Samples: 70475160	001						
Parameter	Units	Blank Result	Reporting Limit	Analyz	ed Qualif	iers	
Total Suspended Solids	mg/L			.0 04/09/18			
LABORATORY CONTROL SAMPLE:	287586						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers	
Total Suspended Solids	mg/L	200	192	96	85-115		
SAMPLE DUPLICATE: 287587							
		7047598001	Dup				
Parameter	Units	Result	Result	RPD	Qualifiers	S	
Total Suspended Solids	mg/L	244	4 20	00	20		
SAMPLE DUPLICATE: 287588							
		7047690002	Dup				
Parameter	Units	Result	Result	RPD	Qualifiers	S	
Total Suspended Solids	mg/L	130	6 1;	38	1		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: SEMI ANNUAL Pace Project No.: 7047516	IPP MONITORING					
QC Batch: 62413		Analysis M	lethod:	SM22 5210B		
QC Batch Method: SM22 5210B		Analysis D		5210B BOD, 5	i day	
Associated Lab Samples: 704751	6001					
METHOD BLANK: 286578		Matri	x: Water			
Associated Lab Samples: 704751	6001					
		Blank	Reporting	3		
Parameter	Units	Result	Limit	Analyz	ed Quali	fiers
BOD, 5 day	mg/L	<2.	0	2.0 04/11/18	3:07	
LABORATORY CONTROL SAMPLE	286579	o "				
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	183	92	84.5-115.4	
	-					
SAMPLE DUPLICATE: 286580						
SAMPLE DUPLICATE: 286580		7047493001	Dup			
SAMPLE DUPLICATE: 286580 Parameter	Units	7047493001 Result	Dup Result	RPD	Qualifier	'S

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: SEMI ANNUAL IP Pace Project No.: 7047516	P MONITORING						
QC Batch: 64559		Analysis Meth	nod [.] F	EPA 420.1			
QC Batch Method: EPA 420.1		Analysis Desc		120.1 Phenolics	Macro		
Associated Lab Samples: 70475160	002						
METHOD BLANK: 296282		Matrix:	Water				
Associated Lab Samples: 70475160	002						
Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifier	ſS	
Phenolics, Total Recoverable	ug/L	<5.0	5.0				
LABORATORY CONTROL SAMPLE:	296283						
Parameter	Units		_CS lesult	LCS % Rec	% Rec Limits	Qualifiers	
Phenolics, Total Recoverable	ug/L	30	29.8	99	90-110		
MATRIX SPIKE SAMPLE:	296284						
		7047903001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	<5.0	0 20	21.3	105	75-125	
MATRIX SPIKE SAMPLE:	296286						
Parameter	Units	7047516002	Spike	MS	MS % Rec	% Rec	Qualifiers
		Result	Conc.	Result		Limits	
Phenolics, Total Recoverable	ug/L	76.	1 20	132	278	75-125	M1
SAMPLE DUPLICATE: 296285		704700004	Du:				
Parameter	Units	7047903001 Result	Dup Result	RPD	Qualifiers		
Phenolics, Total Recoverable	ug/L	<5.0	<5.0	0		_	
SAMPLE DUPLICATE: 296287							
Parameter	Units	7047516002 Result	Dup Result	RPD	Qualifiers		
Phenolics, Total Recoverable	ug/L	76.1	67.2			_	
	5						

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: SEMI ANNUAL IF Pace Project No.: 7047516	P MONITORING						
QC Batch: 63836		Analysis Met	hod:	SM22 4500-CN-	E		
QC Batch Method: SM20/22 4500-	CN-C	Analysis Des	scription:	4500 CNE Cyani	de, Total		
Associated Lab Samples: 7047516	002						
METHOD BLANK: 292938		Matrix:	Water				
Associated Lab Samples: 7047516	002						
Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifie	ers	
Cyanide	ug/L	<10.0	10.	0 04/18/18 15:	53		
LABORATORY CONTROL SAMPLE:	292939						
Parameter	Units		LCS Result	LCS % Rec	% Rec Limits	Qualifiers	
Cyanide	ug/L	75	74.8	100	85-115		
MATRIX SPIKE SAMPLE:	292940						
Parameter	Units	7047424003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	<10		92.4	92		
SAMPLE DUPLICATE: 292941							
Demonster	1 1 - 14 -	7047424003	Dup		Qualifiana		
Parameter	Units	- Result <10.0	Result		Qualifiers		
Cyanide	ug/L	< 10.0	<10.	U			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: SEMI ANNUAL IPP MONITORING

Pace Project No.: 7047516

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PACE-MV Pace Analytical Services - Melville PASI-GRMI Pace Analytical Grand Rapids

ANALYTE QUALIFIERS

- D6 The precision between the sample and sample duplicate exceeded laboratory control limits.
- H1 Analysis conducted outside the EPA method holding time.
- H2 Extraction or preparation conducted outside EPA method holding time.
- H3 Sample was received or analysis requested beyond the recognized method holding time.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:SEMI ANNUAL IPP MONITORINGPace Project No.:7047516

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7047516002	PAS TOTAL DISCHARGE GRAB	EPA 1631E	20144	EPA 1631E	20187
7047516001	PAS TOTAL DISCHARGE COMPOSITE	EPA 200.8	62474	EPA 200.8	62485
7047516001	PAS TOTAL DISCHARGE COMPOSITE	SM22 2540D	62628		
7047516001	PAS TOTAL DISCHARGE COMPOSITE	SM22 5210B	62413	SM22 5210B	63183
7047516002	PAS TOTAL DISCHARGE GRAB	EPA 420.1	64559	EPA 420.1	64568
7047516002	PAS TOTAL DISCHARGE GRAB	SM20/22 4500-CN-C	63836	SM22 4500-CN-E	63962



WO#:7047516

7047516

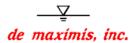
IAIN-OF-CUSTODY / Analytical Request Document me Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section		nt Info	rmatio	n:								Req		Projec		rmation					Section C																	_		P	age: 1	of 1	
City	of C)sv	reg	o Ea	ast	Sid	le V	VW.	TP								-clay@c		(imis.cor	n	Attentio	on: Kel	lly Coad														REC	GULAT	TORY A	GENO	CY		
71 N	lerc	er	Stre	eet													roupusa		usa.com	;	Compa	ny Nar	ne: City	of Osw	ego WV	/TP								N	PDES	F 9	ROUN	D WATE	SR	DRIM	KING WA	TER	
Osw	ego	, N	Y 1	312	26							cc:	John I	AcGra	ath-la	bmana	iger@os	wego	ny.org		2 First	Avenue	e Oswe	go, NY '	13126								UST RCRA OTHER										
labm	ana	age	r@c	SW	ego	ony	.or	q				Purc	hase	Order	No.:						Pace Quote	e Referenci	e:											SI	TE		Г	GA	I IL	Γ.	IN F	NI T N	с
315-	342	-81	96	3	15-	-34:	2-82	233				Pro	ject N	lame	: PA	S Sen	ni Annu	ual IP	P Monit	oring	Pace Proje	ct Manager	r:										. 2	LOCA	TION		Г	OH	r sc		WI	OTHER NY	t = 1
Requ	les	ted	Du	e Da	ate	TA	T: 1	4 d	ays	;		Proj	ect Nu	mber:							Pace Profil	e #:											Fil	tered (r/N)	/	TI	17	11	1	11	/	
ITEM #	Sec	Or	e Ch Samp	arac	SAN ter p	MPL	E ID	A-Z,	0-9			MATR DRINKN WATER WASTE PRODUC OIL WIPE AJR	IG WATER	SOIL	acup	DW W7 WW P SL CL			MATRIX CODE	SAMPLE TYPE G+GRAB C=COMP	COMPOSITE S	TART	COMPOSITE		SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	preserved			HOBN	03	Methanol	Ar		/	CLAND	METAL	LL MED	"ACURY	Partial C.	Key autom	Pace Proj	ect Number
E	-			1.	- 1		- 1	1.	-	10		OTHER			TISSUE	D		-		-	DATE	TIME	DATE	TIME		1		H ₂	HOI H	Na	Na	Me	8	X	/4/	1	1	14		N	6	01	Lab I.D.
	P	A			TC			L	-	D		-	C	-	A		GE		WW		4/3/18		4/3/18	1145		1	X	-	-	-	-		+	~	V		-			N	C	01	
2	P	A	S	_	TC	-		L	-	D		S			A		GE		WW		4/3/18		4/3/18	1145			Х	-	-	V	-		+	+	X	~	+	\vdash	+		0	27	
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4	Ρ	-	S		T			L	_	D		_	C	_	A		GE		ww		4/3/18	1000	4/3/18	1145		1			X		-		+	-		X	_		+	N	00		
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-	iona	I Co	mm	ents	; **	Met	als:	As,	Ag,S	b,Be	,Cd,	,Cr,0	Cu,N	i,Pb,	Se,T	ī,Zn	by 200	.8	FELIN	QUISH	ED BY / AF	FII IATION		DATE	TIME	ACCER	TED B	AFF	ILIATI	ON				ale a	DA	re	т	IME	SAN	MPLE	CONDI	IONS	
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Page						-	7	7	71	9			Z	2	8	8	5							4	F.		(1															

Pace Analytical*				ion Upon Reco	
Truck Legend Calebrary	Client	Name: COW	NTT	Projec	WO#:7047516
					PM: JM2 Due Date: 04/26/18
Courier: Fed Ex UPS USPS	Client Comn	nercial 📋 Pa	ice [Dti	ner	PM: JM2 Due Date: 04/26/18 CLIENT: COWWTF
Tracking #: ///9/157/		•	r		
Sustody Seal on Cooler/Box Present:	-			Yes No	Temperature Blank Present:
Packing Material; Bubble Wrap Bub			121	D	Type of Ice: Wet Blue None
hermometer Used: TH091		tion Factor:		0	Samples on ice, cooling process has begun
Cooler Temperature (°C): <u>4, 4</u>	Cooler 1	'emperature	Correct	ed (°C): <u>9.9</u>	Date/Time 5035A kits placed in freezer
emp should be above freezing to 6.0°C ISDA Regulated Soil (CNA, water san	nple)			Date and Initials o	f person examining contents: $5B4/6$
id samples originate in a quarantine zone within M, NY, OK, OR, SC, TN, TX, or VA (check map	? YES	NO NO			Did samples orignate from a foreign source (internationa including Hawaii and Puerto Rico)? Yes No include with SCUR/COC paperwork.
If Yes to either question	n, fill out a Re	gulated 301	CHECKI		COMMENTS:
hain of Custody Present:	QYes	□No		1.	
hain of Custody Filled Out:	Yes	□No		2.	
hain of Custody Relinquished:	Dires	⊡No		3.	
ampler Name & Signature on COC:	TYes	□No	□N/A	4.	•
amples Arrived within Hold Time:	ElYes	□No		5.	
hort Hold Time Analysis (<72hr):	Pres	□No		6.	
ush Turn Around Time Requested:	□Yes	12 No		7.	
ufficient Volume: (Triple volume provided for MS	MSD Des	□No		8.	
orrect Containers Used:	ElYes	□No		9.	
-Pace Containers Used:	Elles	□No			
ontainers Intact:	Ves	□No		10.	
Itered volume received for Dissolved tests	□Yes	□No	EIN/A	11. Note if sedim	ent is visible in the dissolved container.
ample Labels match COC:	EYes	□No		12.	
	WT OIL				
I containers needing preservation have been che I paper Lot # $H(727)$ I containers needing preservation are found to be impliance with EPA recommendation? NO ₃₁ , H ₂ SO ₄ , HCI, NaOH>9 Sulfide, AOH>12 Cvanide)	Untes	□No □No		13. □ HNO₃ Sample # [*]	□ H₂SO₄ □ NaOH □ HCI
corptions: VOA, Coliform, TOC/DOC, Oil and Gre RO/8015 (water). er Method, VOA pH is checked after analysis	ease,			Initial when completed:	Lot # of added preservative: Date/Time preservative add
mples checked for dechlorination: starch test strips Lot #	□Yes	□No		14.	
sidual chlorine strips Lot #				Positive for R	es. Chlorine? Y N
adspace in VOA Vials (>6mm):	□Yes	□No	DN/A	15.	
Blank Present:	□Yes	□No	DAN/A	16.	
p Blank Custody Seals Present	□Yes	□No	DINTA	/h	
ce Trip Blank Lot # (if applicable):					
ient Notification/ Resolution:				Field Data Required?	
erson Contacted:				Date/Time	
mments/ Resolution:	level v	nercu	IN	Sample	was not received
-la la la					

* PM (Project Manager) review is documented electronically in LIMS.

ATTACHMENT III ACTIONS PLANNED



ANNUAL PROGRESS REPORT – Future

Operation, Maintenance and Long-term Monitoring Activities

PROJECT NAME: Pollution Abatement Services Site Oswego, New York

PERIOD COVERED: JULY 2018 – JUNE 2019

ACTIONS PLANNED FOR THE YEAR

- Leachate removal activities will be performed during the period July 2018 through June 2019 at the PAS Oswego Site in accordance with the Operation, Maintenance and Long-term Monitoring (OM&M) Activities Plan (BBL, 1998 revised July 2012) (Work Plan). The OM&M activities will include pumping approximately 20,000 gallons per month from May through October, and 10,000 gallons per month for the winter and spring months November through April. In addition, during the months of July 2018 through September 2018 an additional 500 gallons per month will be removed from LCW-2 to adjust for the observations in the LCW-2 area during June 2018. If August 2018 elevation monitoring indicates outward gradients remain in the LCW-2 area, the need for additional pumping will be evaluated and EPA will be notified of the determination and any suggested action.
- The leachate will be discharged to the Eastside Wastewater Treatment Plant in Oswego, New York (Oswego WWTP) under an approved permit consistent with the schedule presented below. However, the Wastewater Treatment Plant in the City of Auburn, New York will continue to be retained as an alternate leachate treatment and disposal facility.
- Additional leachate sampling will be conducted as needed for treatment and disposal at the Oswego Wastewater Treatment Plant under the approved permit.
- Quarterly ground-water elevation monitoring is scheduled to be conducted on August 6, 2018, November 5, 2018, February 4, 2019 and May 6, 2019.
- Site maintenance activities will be conducted along with other monitoring and removal activities. Maintenance activities include cap vegetation control and inspection and maintenance of the storage shed, spill control materials and the perimeter fence. Snow removal will be performed on an as needed basis throughout the winter months. These activities will be performed in accordance with the approved Work Plan.
- Semi-annual groundwater and leachate quality sampling is scheduled to be conducted on November 5, 2018 and May 6, 2019. Only 1,1 dichloroethane was observed at MW-22 and LR-6 in the recent sampling events and these results were at or near detection limits. Therefore, MW-22, OD-3 and LR-6 will be sampled in the fall of 2022 to provide data for the next 5 year review. We will sample LR-8, M-21 for the semi-annual sampling events over the 2018-2019 period.
- The Institutional Control Implementation Plan (ICIP) includes the inspection 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 will continue, and that the annual report would be included in the annual OM&M progress report to be submitted to EPA in July of each year.

• The schedule for leachate removal events and tasks is provided below.

	GROUND-WATER REMOVAL EVENT SCHEDULE 2018/2019											
	July 2018 Eve		August 2018 Eve		September 2018 Removal Events							
	First Event		First Event		First Event							
Removal	July 11		Aug 8		Sep 5							

	GROUND-WATER REMOVAL EVENT SCHEDULE 2018/2019											
	October 201 Eve		November 20 Ever		December 2018 Remova Events							
	First Event		First Event		First Event							
Removal	Oct 3		Nov 7		Dec 5							

	GROUND-WATER REMOVAL EVENT SCHEDULE 2018/2019											
	January 201 Eve		February 202 Eve		March 2019 Removal Events							
	First Event		First Event		First Event							
Removal	Jan 9		Feb 13		Mar 6							

	GROUND-WATER REMOVAL EVENT SCHEDULE 2018/2019												
	April 2019 Eve		May 2019 Ever			9 Removal ents							
	First Event		First Event		First Event								
Removal	April 3		May 8		June 5								