ANNUAL PROGRESS REPORT

PAS OSWEGO SUPERFUND SITE

OSWEGO, NEW YORK

July 2015

Submitted By:



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450 Montbrook Lane Knoxville, TN 37919 865-691-5052 phone 865-691-6485 fax

Via Fedex

July 30, 2015

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

Subject: Annual Progress Report for July 2014 through June 2015 Operations, Maintenance and Long Term-Monitoring Activities Pollution Abatement Services (PAS) Site, Oswego, NY

Dear Patricia:

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, New York (Consent Decree). This Annual Report covers the period July 1, 2014 through June 30, 2015, 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, 2016 and will document work completed between the period July 1, 2015 and June 30, 2016.

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. Graphs showing slurry wall well pair groundwater elevations (Section I-A) and semi-annual groundwater and leachate sampling results (Section I-B) are included in Attachment I. In addition, figures showing groundwater potentiometric surface contours and vertical hydraulic gradients for each quarter of the reporting period are included in Section I-C of Attachment I. Tables showing the leachate volume removed from the Site LCW wells 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 Attachment II. The PAS Site Institutional Control Implementation Plan Annual Certification is provided in Section B-5 of Attachment II and documents that the requirement 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 2015 - June 2016).

SUMMARY OF LEACHATE REMOVAL ACTIVITIES

During this reporting period PAS leachate was treated and disposed at the City of Oswego Eastside Wastewater Treatment Facility, Oswego, New York through March 2015 and the City of Auburn after March 2015. A total of 180,755 gallons of leachate were removed during this reporting period (Attachment I-D, Table 1). PAS performed a treatability study and additional testing under an agreement with the City of Oswego to determine the ability to meet the very low revised pre-treatment standards for Arsenic and Selenium issued by the City of Oswego. The data associated with the treatability study and additional testing are included in the 4th quarterly POTW report submitted to the City of Oswego Attachment D-3. Subsequent to the testing, PAS notified the City of Oswego that accurate testing for the low pre-treatment levels was unachievable under approved EPA methods and PAS would discontinue discharge into the City of Oswego Wastewater Treatment Facility. In accordance with the Consent Decree and the approved Operation Monitoring and Maintenance Plan for the PAS Site, leachate was transported to the City of Auburn in March 2015. The City of Oswego is retained as the alternate disposal facility in the event that the City of Oswego obtains revised pre-treatment standards.

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 monthly 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-A. 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-C (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, continued to remain stable with water level elevations inside dropping slightly over the year and remaining well below the top of the slurry wall. The trend lines presented in the SWW-5/6 and the SWW-11/12 charts show continued declines in average elevation inside versus the elevations outside. The charts indicate that leachate pumping was effectively maintaining hydraulic control to the degree practicable, although low seasonal levels outside the containment system influence the gradients.

The vertical gradient figures shown in Attachment I-C 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 spring, summer and winter periods due to stable water levels inside the containment system, and to higher regional water levels outside the containment system. Vertical gradients typically trend downward during late summer when regional water levels are relatively low. However, since the summer of 2013, upward gradients have been present in the area around LCW-4 and the area around LCW-1 and LCW-2 indicating continued hydraulic control of the Site. We note that the extent of the downward gradients identified in the November 2014 gradient figure appeared anomalous when compared to other past November gradients. This will be reviewed closely in 2016 for any trends.

The routine elevation monitoring conducted during this reporting period indicates hydraulic control of the slurry wall containment system is being maintained through routine operation of the leachate collection system. This observation remains consistent with observations reported in previous annual reports.

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 May 1998 to May 2015 in Attachment I-B. The historical VOC concentrations at these wells are also presented in tabular format in Figure 2 in Attachment I-C. Semi-annual groundwater quality monitoring results during this reporting period indicate that VOC-concentrations at down-gradient monitoring wells LR-8 and M-21 continue to fluctuate at very low part per billion levels, and VOC-concentrations at well LR-6 continue to remain at or near detection. The only Consent Decree performance standard (Table 2) above detection level at LR-6 for the last 10 years has been 1,1 dichloroethane, which remained below the performance standard for the reporting period 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 reporting period with benzene concentrations approaching the performance standard of 0.7 ug/L, while chlorobenzene concentrations dipped below the performance standard of 5 ug/L. Other VOC constituents in this well remained at or near detection levels. Groundwater monitoring results at LR-8 remained consistent with the long-term trend of low VOC concentrations at this location. Monitoring results for down-gradient 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 period with the exception of chlorobenzene which fluctuated at the performance standard of 5 ppb during the period. General trends for VOC constituents in the monitoring wells indicate a slight reduction from historic concentrations with 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 to below the performance standard in the spring and below the performance standard in the fall.



Pursuant to EPA request and approval as presented in the letter dated March 21, 2014, sampling of the bedrock wells M-22 and OD-3 for the Consent Decree performance standards was completed semi-annually from May 2013 through May 2015. The current data for M-22 and OD-3 along with historic data including well MW-23 is provided in Table 3. The data show that the only constituent above detection in well MW-22 was 1,1-dichloroethane. The concentration of 1,1-dichloroethane in well M-22 was 1.27 ppb in May 2014, which is below the performance standard of 5 ppb, then results fell to at or near detection for the two following sampling events. The samples from well OD-3 indicated Benzene and Chlorobenzene above the performance standard in the fall of 2014 which dropped to ND in May 2015. All other constituents at OD-3 were at ND.

Graphs showing leachate concentrations at LCW-2 and LCW-4 during the period November 1998 to May 2015 are also included in Attachment I-B. 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 leachate concentrations continued to be generally higher than leachate concentrations reported at LCW-2. Xylene, which is generally the highest concentration constituent in the LCW-4 location, fluctuated significantly during the reporting period. Benzene, which is generally the highest concentration constituent in the LCW-4 locations in the past few years. Concentrations at both LCW locations, inside the containment area, remain well above the concentrations of wells outside the containment area and the performance standards.

These 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 achieve performance standards through natural attenuation, 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 Well

Clay McClarnon

CMC/akw

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

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LIST OF ATTACHMENTS

ATTACHMENT I – FIGURES & TABLES

- I A Slurry Wall Groundwater Elevation Charts
- I B Long Term Monitoring Groundwater and Leachate Quality Graphs
- I-C Figure 1 Existing Site Wells

Figure 2 – Historical VOC Concentrations

Figure Set 3 -<u>Potentiometric Surfaces and Inferred Vertical Hydraulic Gradient Figures</u> Figure 2014-Q3-A - Potentiometric Surfaces – 8/6/2014 Figure 2014-Q3-B - Inferred Vertical Hydraulic Gradient – 8/6/2014 Figure 2014-Q4-A - Potentiometric Surfaces – 11/3/2014 Figure 2014-Q4-B - Inferred Vertical Hydraulic Gradient – 11/3/2014 Figure 2015-Q1-A - Potentiometric Surfaces – 2/4/2015 Figure 2015-Q1-B - Inferred Vertical Hydraulic Gradient – 2/4/2015 Figure 2015-Q2-A - Potentiometric Surfaces – 5/4/2015 Figure 2015-Q2-B - Inferred Vertical Hydraulic Gradient – 5/4/2015

 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 2014
 - A-1 Groundwater Elevation Data
 - A-2 Site Inspection Checklist and Leachate Disposal Checklist
 - A-3 Quarterly POTW Discharge Reports 3rd Quarter 2014

II – B <u>4th Quarter 2014</u>

- B-1 Groundwater Elevation Data
- B-2 Site Inspection Checklist and Leachate Disposal Checklist
- B-3 Quarterly POTW Discharge Reports 4th Quarter 204
- B-4 Semi-Annual Leachate and Groundwater Monitoring (November 2014)
- B-5 Institutional Controls Certification Memorandum

II – C 1^{st} Quarter 2015

- C-1 Groundwater Elevation Data
- C-2 Site Inspection Checklist and Leachate Disposal Checklist
- C-3 Quarterly POTW Discharge Reports 1st Quarter 2015

II – D 2^{nd} Quarter 2015

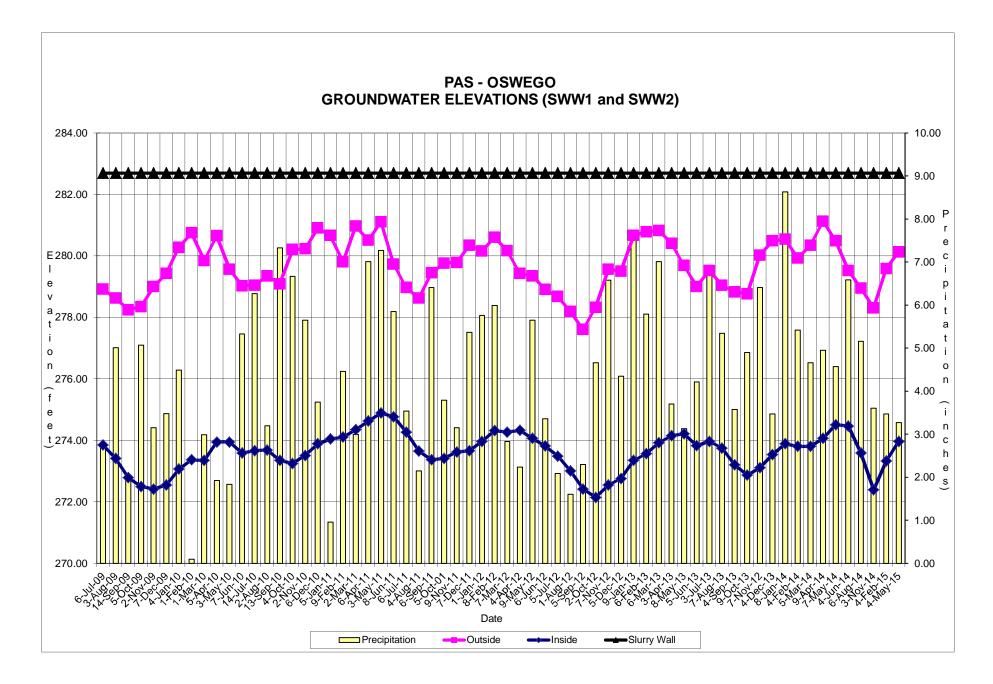
- D-1 Groundwater Elevation Data
- D-2 Site Inspection Checklist and Leachate Disposal Checklist
 D-3 Quarterly POTW Discharge Reports 2nd Quarter 2015
- D-4 Semi-Annual Leachate and Groundwater Monitoring (May 2015)

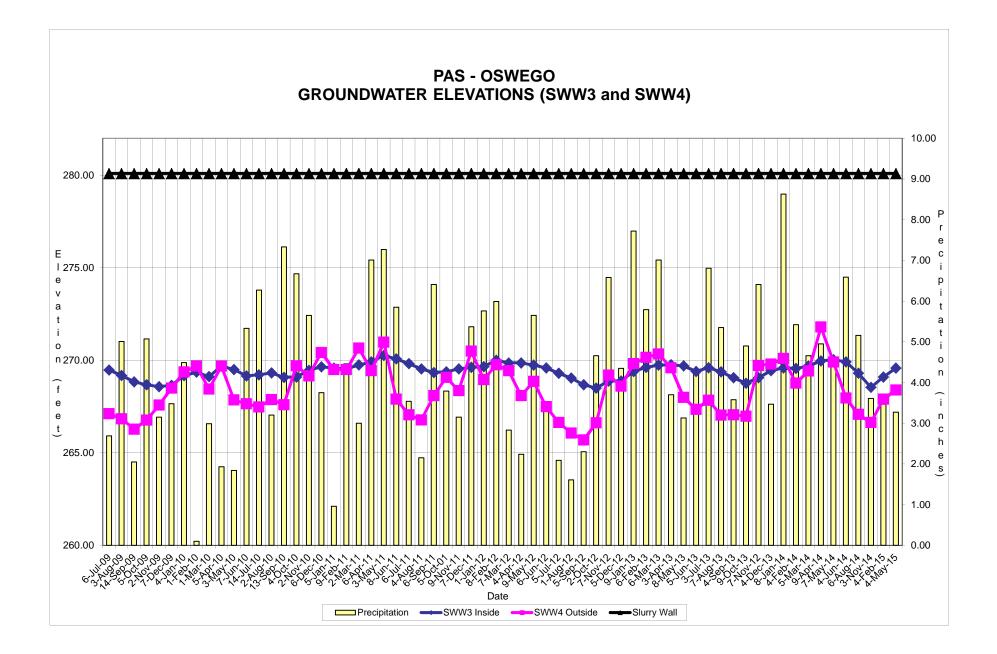
ATTACHMENT III - ACTIONS PLANNED

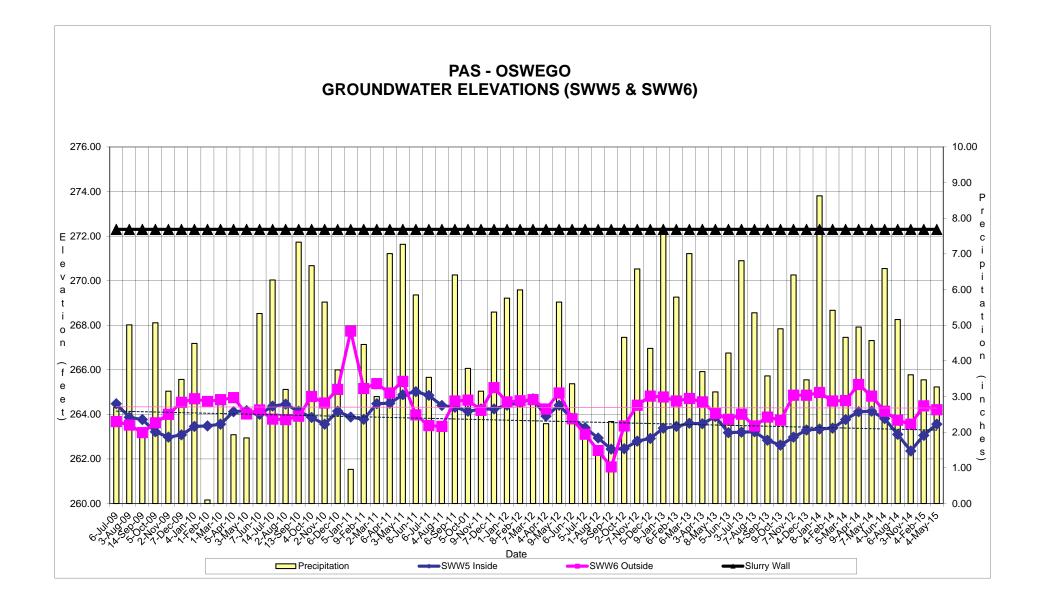
Future Report III –

I-A

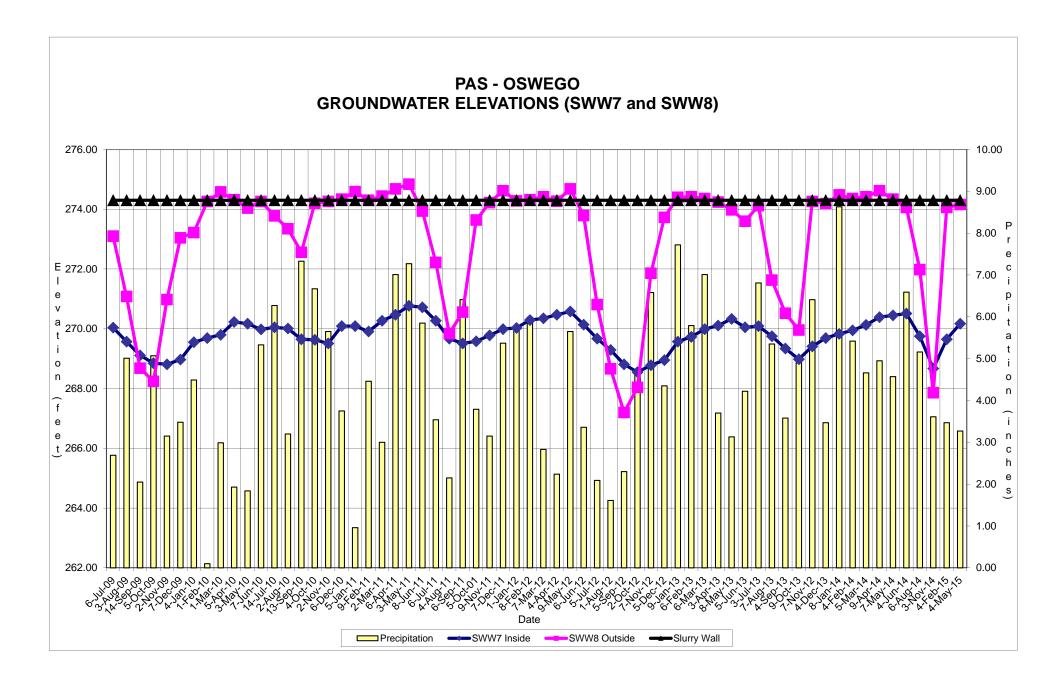
SLURRY WALL

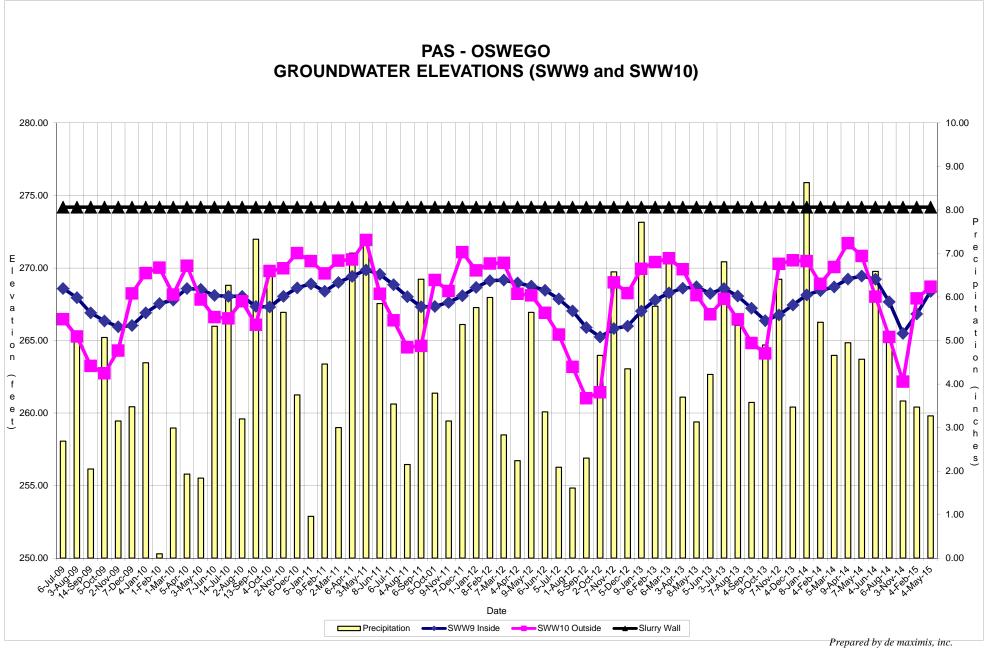




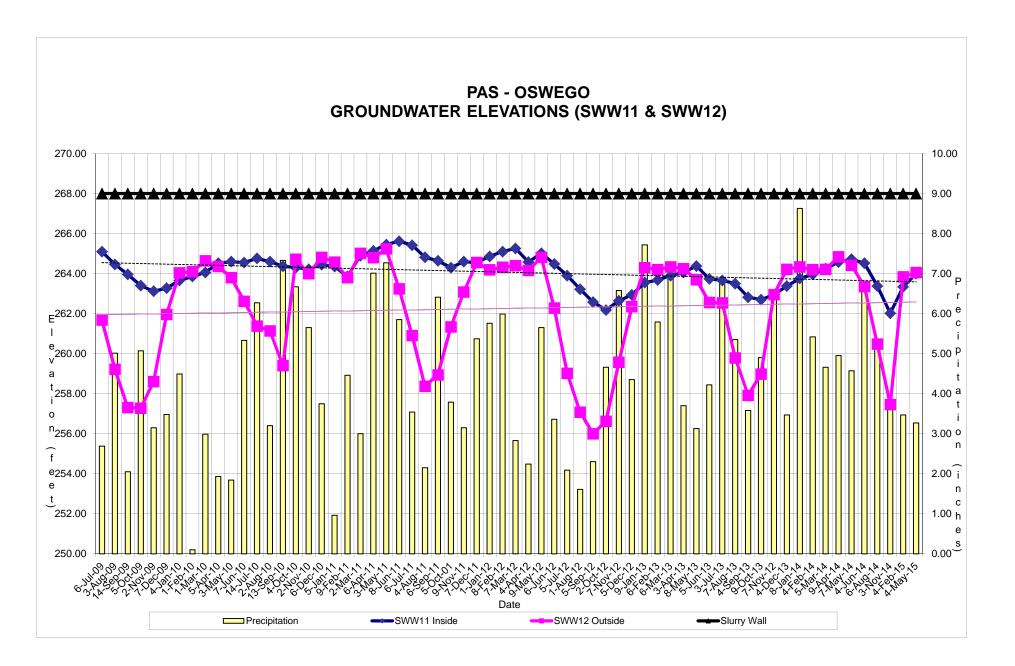


Prepared by de maximis, inc. 7/16/2015





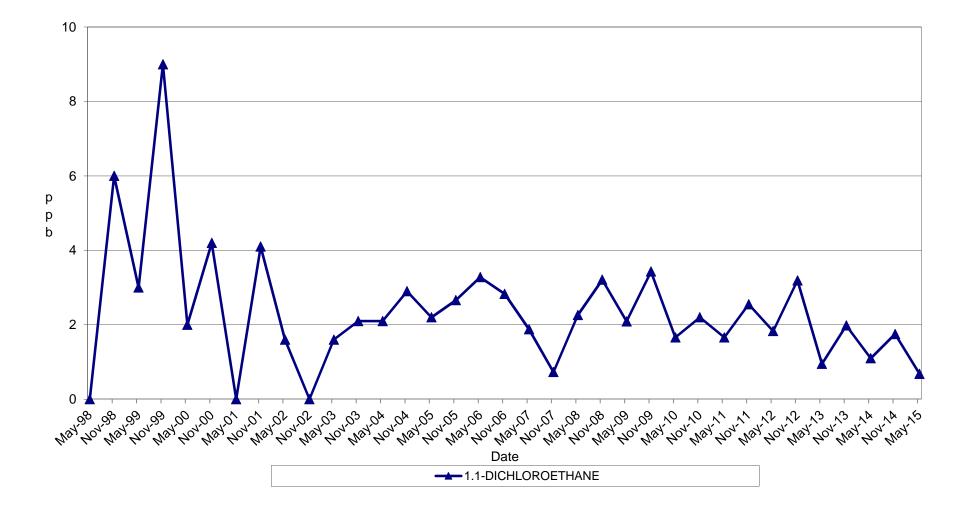
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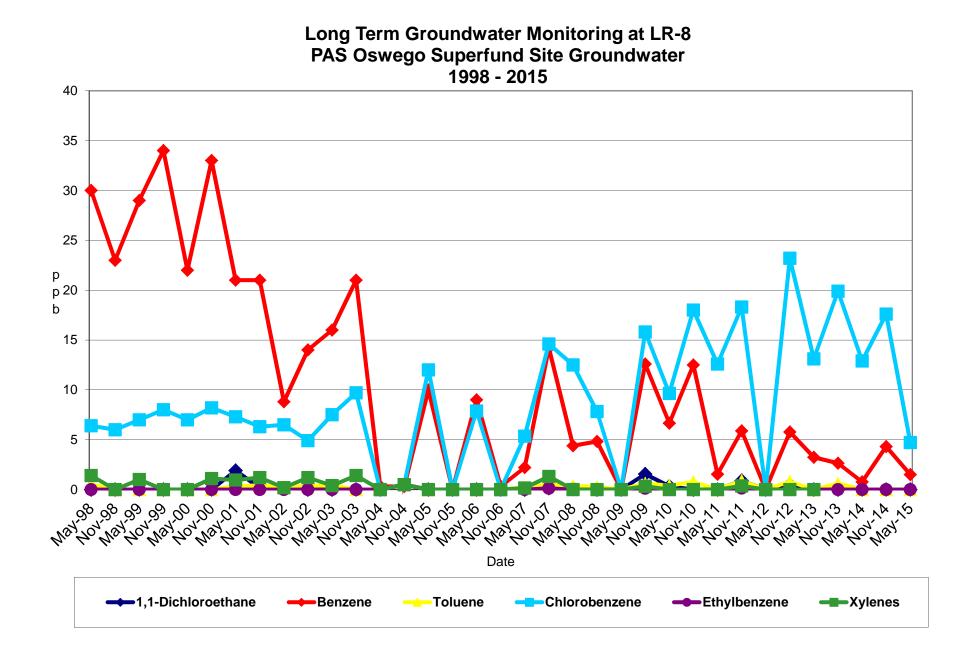


Prepared by de maximis, inc. 7/16/2015 I-B

GRAPHS

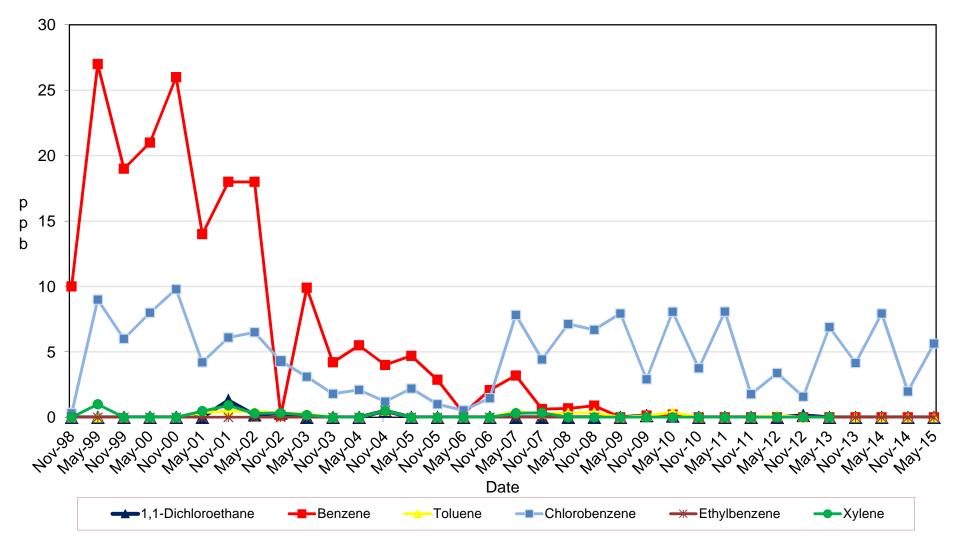




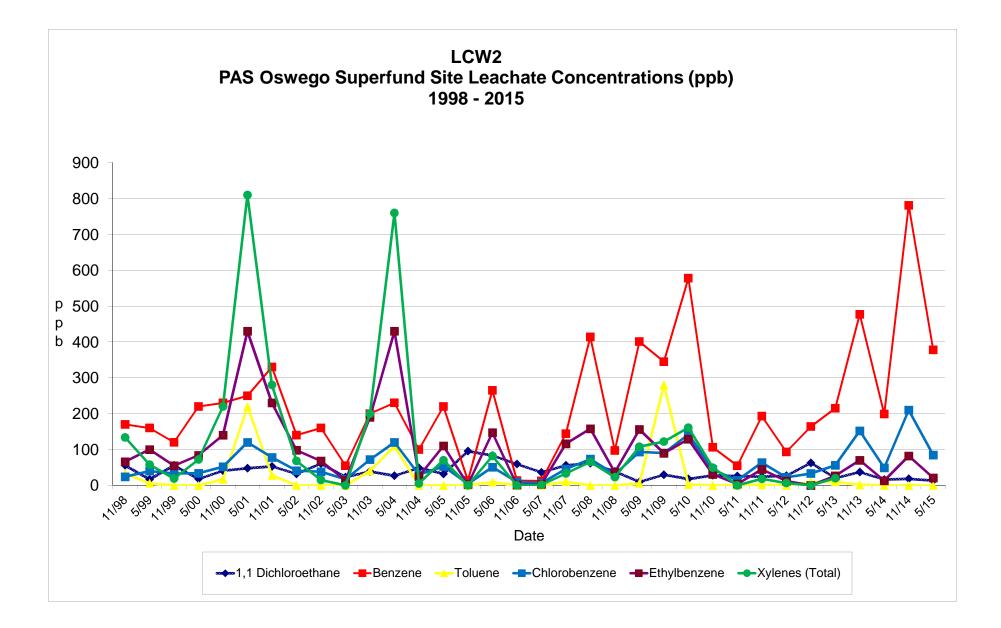


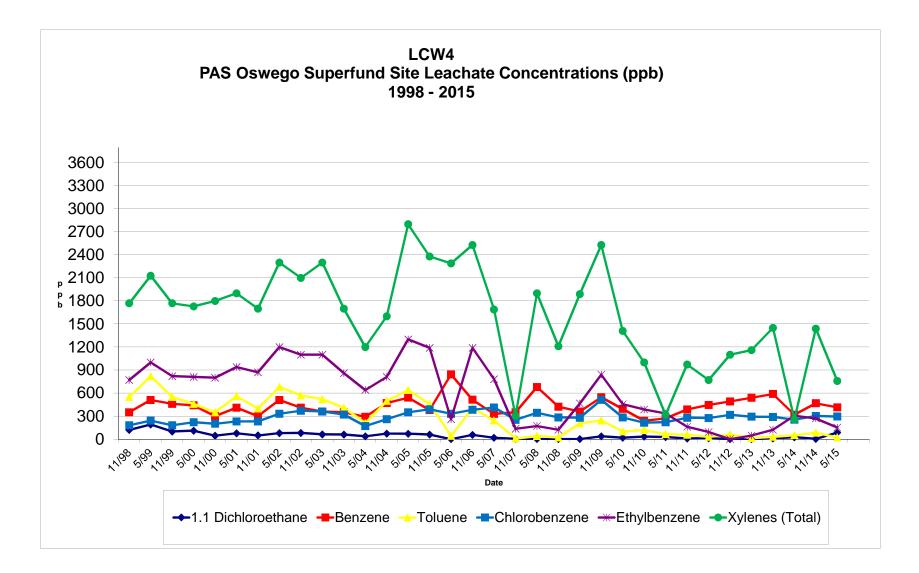
de maximis, inc. 7/16/2015

Long Term Groundwater Monitoring at M-21 PAS Oswego Superfund Site Groundwater 1998 - 2015



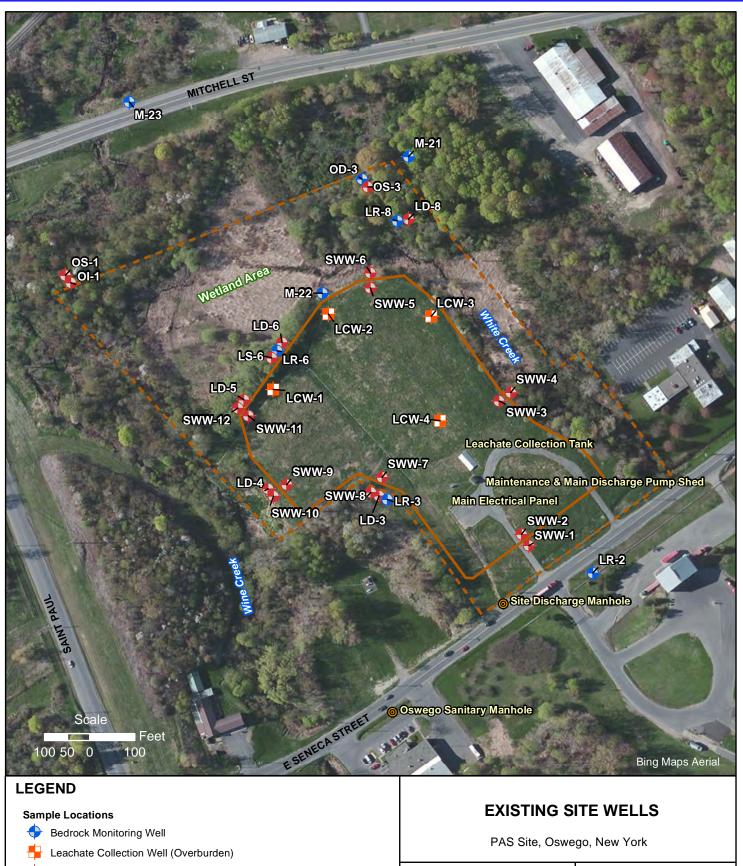
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I-C

FIGURES



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

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

Reviewed by:

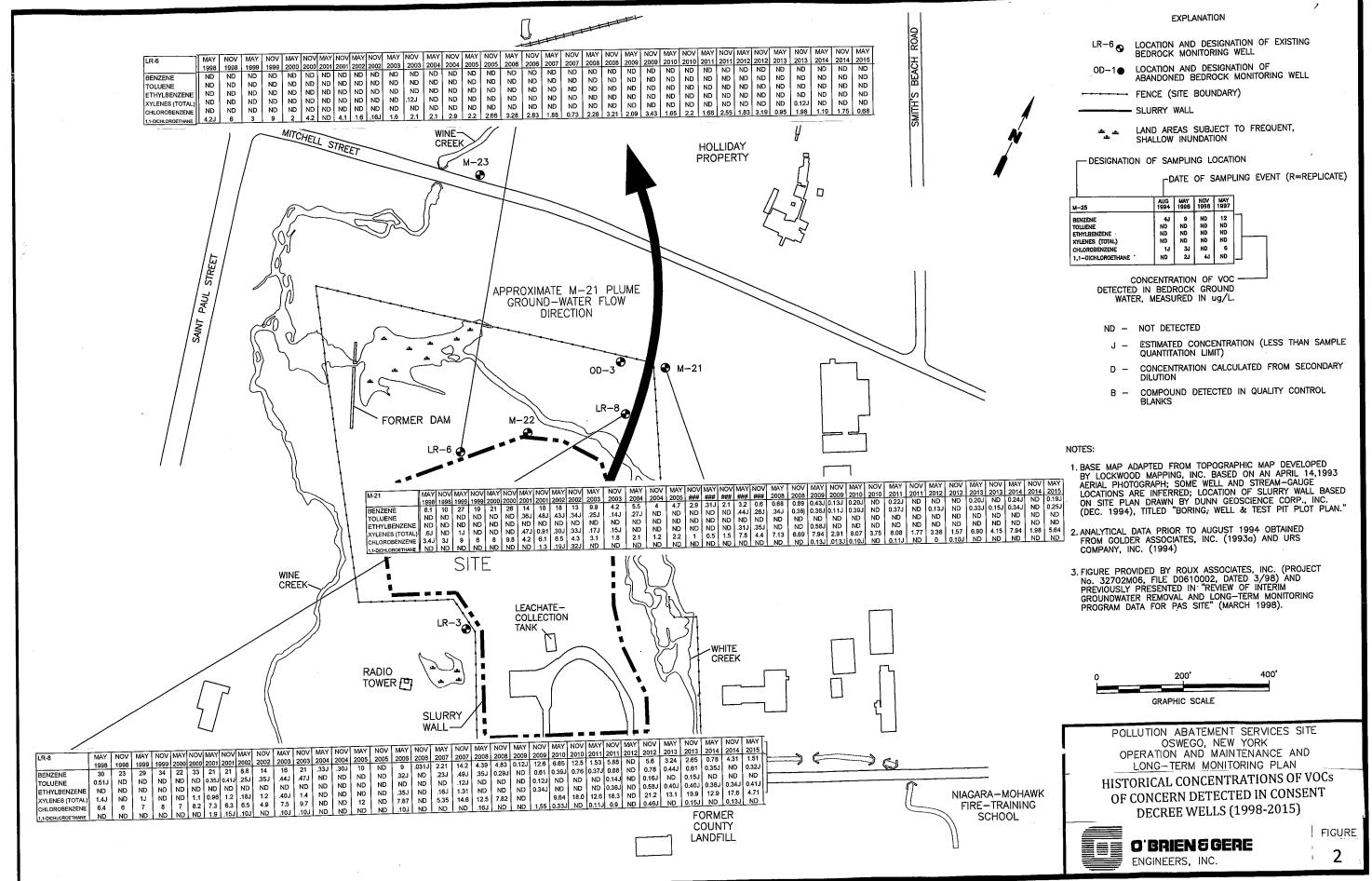
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ddms

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Figure 1

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^{LR−6} 👁	LOCATION AND DESIGNATION OF EXISTING BEDROCK MONITORING WELL
_0D-1●	LOCATION AND DESIGNATION OF ABANDONED BEDROCK MONITORING WELL
	FENCE (SITE BOUNDARY)
	SLURRY WALL
یشد یشد بیشد	LAND AREAS SUBJECT TO FREQUENT, SHALLOW INUNDATION

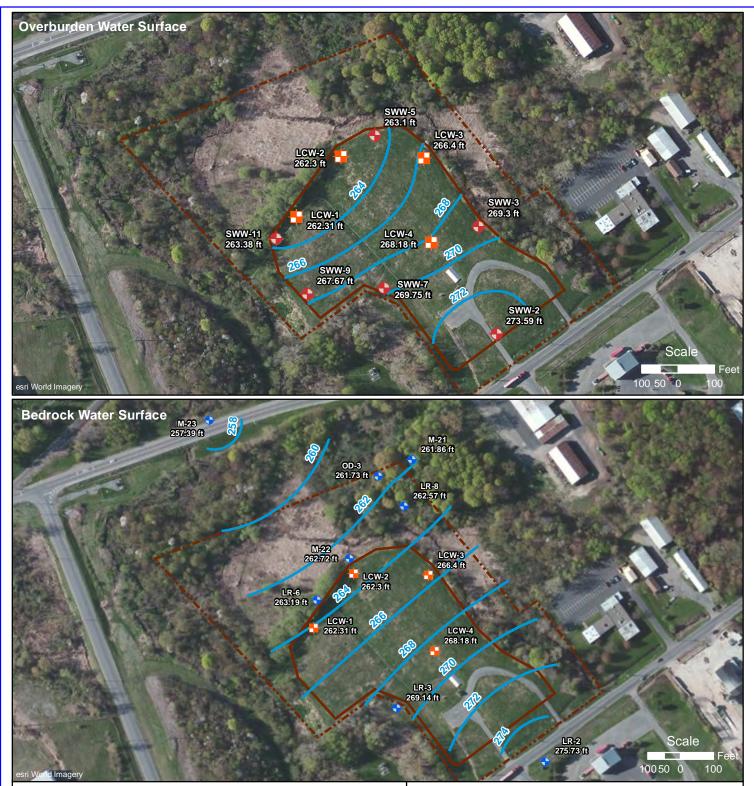
_I	AUG	MAY	NOV	MAY
M–25	1994	1996	1998	1997
ENZENE	4J	9	ND	12
ENZENE	ND	ND	ND	ND
IMUBENZENE	ND	ND	ND	ND
(TOTAL)	ND	ND	ND	ND
HLOROBENZENE	1J	3J	ND	6
1-DICHLOROETHANE	ND	2J	4J	ND

MAY	NOV	MAY	í.
2014	2014	2015	
.24J	ND	0.19J	
.34J	ND	0.25J	
ND	ND	ND	
ND	ND	ND	
7.94	1.98	5.64	
ND_	ND	ND	

FIGURES

SET 3

Potentiometric and Gradient Plots



- 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 6, 2014

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 8 Oct 2014 Arc Operator: BJR Reviewed by: MEP





- 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.

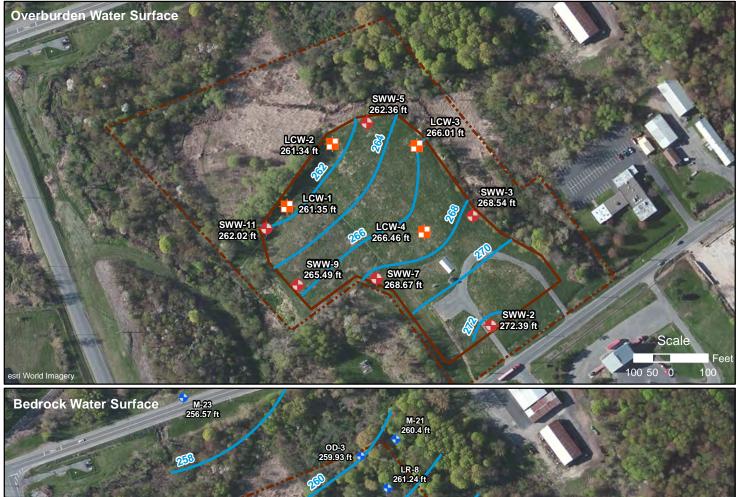
INFERRED VERTICAL HYDRAULIC GRADIENT - AUGUST 6, 2014

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 8 Oct 2014 Arc Operator: BJR Reviewed by: MEP







- 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 3, 2014

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 10 Jun 2015 Arc Operator: BJR Reviewed by: MEP







- 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.

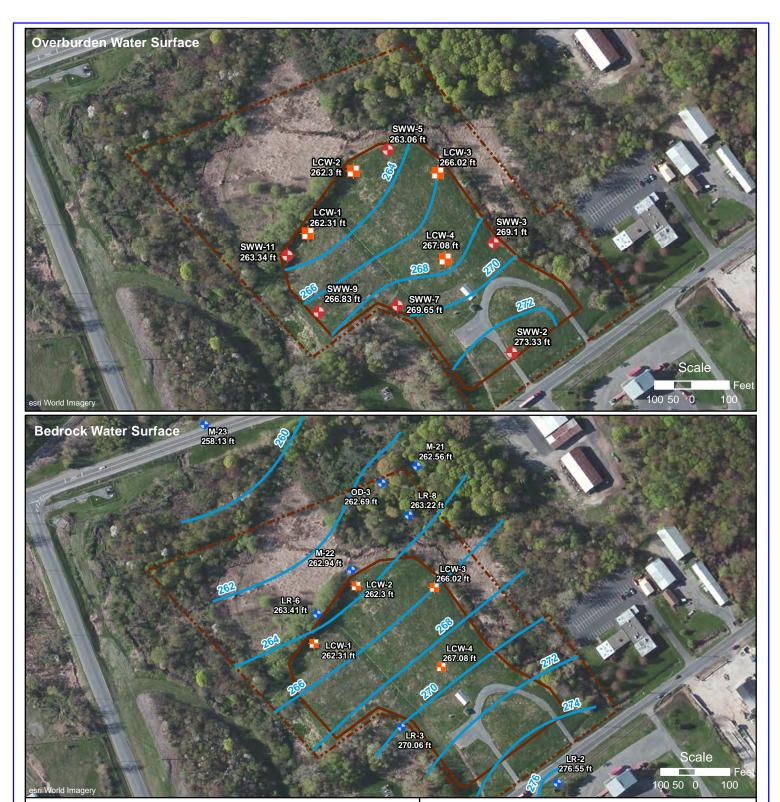
INFERRED VERTICAL HYDRAULIC GRADIENT - NOVEMBER 3, 2014

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 9 Jun 2015 Arc Operator: BJR Reviewed by: MEP





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

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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 4, 2015

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 25 Jun 2015 Arc Operator: BJR Reviewed by: MEP



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- 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 4, 2015

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 25 Jun 2015 Arc Operator: BJR Reviewed by: MEP





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

Potentiometric Surface Contours (ft)

◆ Fence (Site Boundary)

Slurry Wall

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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 4, 2015

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 29 Jun 2015 Arc Operator: BJR Reviewed by: MEP



1217 Bandana Boulevard North Saint Paul, Minnesota 55108 Main Phone: (651) 842-4224 www.ddmsinc.com



- 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

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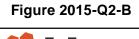
Negative gradient values indicate an upward hydraulic gradient.

INFERRED VERTICAL HYDRAULIC GRADIENT - MAY 4, 2015

PAS Site, Oswego, New York



Project No.: 3131 Plot Date: 29 Jun 2015 Arc Operator: BJR Reviewed by: MEP





I-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
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
Feb	18,937	20,283	29,661		25,830	23,457	22,316	12,924		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
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
Apr	20,140	30,403	29,051		22,815	22,187	26,793	26,009		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
May	20,620	30,803	29,199		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
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
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	0
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	0
Sep	20,807	31,232	25,677		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	0
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	0
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	0
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	0
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	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	13,333
Per Month																									

SUMMARY:	TOTALS (GAL)	<u>AVG RATE (GAL/MO)</u>	
1991 IGR Order:	814,325	23,951	
1994 IGR Order:	1,090,106	22,710	
1998 C D:	2,302,953	12,133	(11/98 to present)
Total (To Date):	4,207,384		

Used CECOS - Niagara Falls for lechate treatment/disposal beginning in May 1996 - DuPont Deepwater used for treatment/disposal prior to May 96.
 BBLES completed removal work at the end of July 2000; OBG began in August 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 Mar05 to Oct07 and Baltimore MD from Nov07 to Jun07.

5) Leachate disposed at the Auburn Watewater Treatment Plant in Auburn, NY starting Jul 31 2008 to present.

6) Leachate disposed at the City of Oswego Wastewater Treatment Plant in Oswego, NY starting October 28, 2010 to present.

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						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	Apr 06	May 06	May 09	Apr 06	May 06	May 14	Nov 14	May 15
Benzene	0.7	0.12J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2	ND
Chlorobenzene	5	1J	ND	ND	ND	ND	ND	ND	ND	ND	0.11J	ND	ND	26.3	ND
1,1-Dichloroethane	5	ND	0.14J	ND	1.27	ND	0.12J	0.86	0.9	0.82	ND	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16J	ND	ND	ND
Xylenes	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11J	ND	0.31J	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 pursuant to March 21, 2014 letter and EPA approval. 2. All results ug/L

II-A

3rd QUARTER REPORT 2014



<u>QUARTERLY PROGRESS REPORT – 3rd QUARTER 2014</u> Operation, Maintenance and Long-term Monitoring Activities

PROJECT NAME: Pollution Abatement Services Site Oswego, New York

PERIOD COVERED: July – September (3rd Quarter) 2014

ACTIONS TAKEN DURING QUARTER:

- Leachate removal and site maintenance and monitoring activities were conducted at the Pollution Abatement Services (PAS) site (Site), in Oswego, New York by O'Brien & Gere Operations LLC, (O'Brien & Gere) consistent with the PAS Site Operation, Maintenance and Long-term Monitoring Plan (Work Plan).
- A total of 60,130 gallons of leachate were removed from the Site during the period of July, August and September 2014. Specific quantities of leachate removed included 20,130 gallons in July, 20,000 gallons in August and 20,000 gallons in September. Details of the leachate removal for each month, along with historical leachate removal documentation are described in this progress report.
- Leachate was pumped monthly from the PAS Site to the City of Oswego, New York sanitary sewer system, and was treated at the Oswego, New York Eastside Wastewater Treatment Facility located at 71 Mercer St. in Oswego, New York.
- Quarterly groundwater elevation monitoring was performed on August 6, 2014. 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)
- On July 16, 2014, O'Brien & Gere performed well survey inspections for all Site wells. The inspections were documented in the well survey forms submitted with the July 2014 Annual Report.
- On August 6, 2014, O'Brien & Gere replaced all groundwater well locks using common keyed security.
- 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:
 - Mowing of surface grass from land caps, and along the southern, and western security fence line was conducted on August 7, 2014



- Inspected the perimeter security fence of the Site. Small brush and fallen tree limbs were removed from fence. No discrepancies were reported at the time of the inspection.
- The Site single French drainage system and two (2) concrete troughs were inspected and cleared of accumulated 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 damage to the cap was observed.
- Visually inspected the leachate collection system pumping equipment to verify proper operation. The field technician inspected each pump control panel to ensure control systems were generally free of rodents, and insects, and where properly operating. The leachate holding tank was visually inspected for integrity, as were the leachate tanks steel protective roof, and wood structure. No discrepancies were reported at the time of the inspection.
- The Site wooden utility shed and leachate pumping equipment, including centrifuge discharge pump, flow meter, suction hose, pump oils levels, heat trace power panel, interior lighting, exterior and interior shed structure, and main power distribution panel were inspected. No discrepancies were reported at the time of the inspection.
- During the months of July September 2014, access road repairs were not required.
- On July 9, August 6, and September 10, 2014, O'Brien & Gere performed the monthly prepumping 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, O'Brien & Gere notified the City of Oswego Eastside Wastewater Treatment Facility of the scheduled leachate discharge. Prior to each leachate discharge, the City of Oswego was notified. (Attachment A-2)
- Upon completing the monthly leachate collection system inspections, O'Brien & Gere 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-2)
- During the months of July, August and September 2014, O'Brien & Gere pumped a combined total of 60,130 gallons of leachate from LCW 1, 2, 3 & 4 into the leachate collection tank and then to the City of Oswego. Leachate was pumped using the Site discharge pumping system into the City of Oswego off-site sanitary sewer system. The leachate pumping system consists of one electrically powered centrifugal discharge pump, conveyance hose, discharge flow totalizer and leachate sampling port. This discharge system is located within the confines of the project's wooden utility shed. The amount of leachate discharged during each removal event, along with discharge flow totalizer



amounts, pH, pump priming times, and leachate water temperatures were recorded on the Leachate Disposal Checklist for each monthly removal event. (Attachment A-2)

- On August 6, 2014, O'Brien & Gere collected five-gallons of leachate water for purposes of a leachate treatability study being conducted by O'Brien & Gere in conjunction with the plan approved by the City of Oswego to address Arsenic and Selenium levels in the PAS leachate. Leachate was collected from the discharge port of the leachate pump system, and preserved using industry standard methods. The leachate water was delivered to the O'Brien & Gere pilot study lab located in Liverpool, New York for analysis.
- Upon completing each monthly leachate discharge the leachate discharge pump and tank suctions 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 or quarterly Site activities, the Site metal access gates were closed, and padlocked.
- The PAS Oswego Site quarterly discharge reports for the 3rd quarter of 2014 were submitted. The report to the City of Oswego was submitted on September 30, 2014 in accordance with permit 6-2010-13, and the report to the City of Auburn was submitted on September 16, 2013 in accordance with permit 2014-01. In addition, sampling was performed on August 6, 2014 for a Treatability Study on PAS discharge to evaluate treatment of Arsenic and Selenium as revised by the City of Oswego permit standards. (Attachment A-3)

DOCUMENTATION OF REMOVAL ACTIVITIES FOR PREVIOUS QUARTER

- The Groundwater Pre-pumping Well Monitoring Level Form for August 6, 2014 is attached to this report. (Attachment A-1)
- Site Inspection Checklist for July 9, August 6 & 7, and September 10, 2014 are attached to this report. (Attachment A-2)
- Leachate Disposal Checklist for July 9, August 6, and September 10, 2014 are attached to this report. (Attachment A-2)
- The PAS Quarterly Discharge reports submitted on September 30, 2014 to the City of Oswego and September 16, 2014 to the City of Auburn are attached. (Attachment A-3)

ATTACHMENT A-1

GROUNDWATER ELEVATION DATA

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

Date - 8/6/2 Well	014 Riser	Well	Range Verific		Martin Koer	Monthly O	Insite Field	ments	Month - August		
Number	Elevation	Average Well Level	Low Well Level	High Well Level	Well Level (1st) Check	Well Level (2nd) Check	Well With (based on h range	hin Range istorical well e data) NO	Well Level Check (3rd) (if "NO" & well is not within targeted range)	NOTES	
SWW1	289.33	10.55	9.98	11.14	10.38	10.38	V				
SWW2	289.37	15.89	15.62	16.36	1.5,78	15:78	V				
SWW3	286.50	17.08	16.76	17.46	17.20	17.20	V				
SWW4	283.60	16.82	15.72	18.00	16.52	16.52	V				
SWW5	277.02	13.02	12.26	14.08	13:92	13.92	V				
SWW6	273.06	9.66	9.15	10.68	9.32	9,32	V				
SWW7	277.93	8.33	7.92	8.64	8.18	8.18	V.				
SWW8	278.24	7.26	4.89	9.58	6.26	6,26	V				
SWW9	285.55	17.72	17.45	18.50	17.88	17.88	V				
SWW10	280.43	15.08	12.72	17.24	15.18	15,18	V				
SWW11	273.50	9.14	8.42	10.28	10.12	10,12	V				
SWW12	272.82	13.36	11.45	15.74	12,34	12.34	V				
LCW-1	272.21	8.41	7.50	9.75	9.90	9,90		V	9.90		
LCW-2	274.14	10.66	9.76	12.00	12.14	12.14		V	12,14		
LCW-3	284.36	17.94	17.74	18.31	17.96	17.96	V				
LCW-4	285.70	17.75	17.10	18.48	17,52	17,52	V				
OS-1	272.10	12.93	11.36	15.66	11.88	11,88	V				
01-1	272.00	13.53	12.45	15.20	12.40	1240					
OS-3	277.89	16.69	15.58	18.18	16,32	16,32	V				
OD-3	277.85	16.55	15.45	18.02	16,12	16.12	V				
LD-3	278.62	7.40	5.24	9.96	6.64	6.64	v				
LD-4	279.25	14.00	12.14	16.22	14,23	14,23	V				
LD-5	272.94	14.07	12.14	16.38	12,94	12,94	V				
LS-6	274.14	14.05	12.58	16.32	13,52	13,52	V				
LD-6	274.03	13.35	11.68	15.80	12,44	12.44	V				
LD-8	272.83	9.88	8.90	11.04	9.72	9,72	V				
LR-2	289.85	14.66	13.56	15.70	14.12	14.12	V			-	
LR-3	278.06	9.67	8.54	11.30	8,92	8,92	V				
LR-6	274.39	11.76	10.78	13.52	11.20	11.20	V				
LR-8	273.42	11.26	10.47	12.42	10,85	10,85	V				
M-21	272.32	10.89	10.06	12.14	10,46	10,46	V				
M-22	273.88	11.71	10.74	13.47	11.16	11.16	V				
M-23	270.49	13.66	13.12	14.54	13,10	13,10	+	4	13.10		

ATTACHMENT A-2

SITE INSPECTION CHECKLIST AND LEACHATE DISPOSAL CHECKLIST



Site Inspection Checklist (V2)

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

Date 7-9-14

Time____7:30_____

Field Technician MARTIN Koennecke Weather Conditions P-Sunny 650

Check V (tasks completed in each event) Remarks (indicate accomplishment of each maintenance task) **Inspection Features** Monthly Quarterly Land Cap V Signs of burrowing vermin NONE VISABLE Land cap irregularities (note V anomaly) OK French drainage system clear and OK function able V Concrete trough clear and 0K_____ 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 V 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 Yes V "Leachate Discharge Form" Leachate Collection System Leachate holding tank visually OK_____ inspected for structural integrity V Leachate holding tank metal roof OK V inspected for structural integrity

7-9-14

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
Genera! Site Condition			
Trees & brush cleared off security			
fence		V	OK
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			N
damage & secure with locks	V		Yes
Fire extinguisher serviceable,			
inspected, and inspection			
recorded	V	- 11	Yes
Spill control material inspected &			
adequate	V		OK
PPE available and utilized as			
required	V		OK
Emergency contact information		11	Yes
posted within shed	V		145
Additional remarks (use separate sl	neet	is re	quired)

7-7-14	- STARTED	mowing	site, 7-	914 PU,	MED
20;000 gAL	LEACHATE	To CITY of	OSWEGO,	Monthly	well Levels
Continues	Mowing	Site.	/ /	/	
	/				



Site Inspection Checklist (V2)

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

Date 8-6-14

Time 7:00

Field Technician MARTIN Koennecke

Weather Conditions OURECAST 65"

Check ✔ (tasks completed in each event)

Inspection Features	Monthly	Quarterly	Remarks (indicate accomplishment of each maintenance task)
Land Cap			
Signs of burrowing vermin	V		None VISABLE
Land cap irregularities (note anomaly)	V	2	OK
French drainage system clear and function able	V		OK
Concrete trough clear and			
function able	V		OK WILL NEED TRIMMING
Leachate Discharge System			
City of Oswego sanitary discharge			
valve positioned "Open"	V		Yes
Discharge Pump inspected &		5	,
operational	1		YES
Discharge pump oil level verified			
prior to use.	V		Yes
Discharge pump drained of			17 - 17 - 17 - 17 - 17 - 17 - 17 - 17 -
residual water (drained upon			1 and 1
completion of monthly discharge)	V		Yes
Heat trace system operational &			
verified in the "ON" position			
(Applicable Oct - May)	\mathcal{V}		Off
Flow totalizer operational. Flow			
readings recorded onto			Mar
"Leachate Discharge Form"	V		Yes
Leachate Collection System			
Leachate holding tank visually			
inspected for structural integrity	V		OK
Leachate holding tank metal roof			OF
inspected for structural integrity	V		01<

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8-6-14

Leachate tank access doors			
locked (post pump out)	V	Yes	
Pump power panel(s) secured	V	Yes	
Monitoring Wells (MW)			
Locks installed	V	RepLACED Locks	
MW's marked & identifiable	V	Yes	
General Site Condition			
Trees & brush cleared off security			
fence	V	OK	
Perimeter security fence intact &			
free of damage	N	0K	
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		March	
damage & secure with locks	V	Yes	
Fire extinguisher serviceable,			
inspected, and inspection		1/10	
recorded	V	Yes	
Spill control material inspected &			
adequate	V	OK	
PPE available and utilized as		Nee	
required	V	Yes	
Emergency contact information		Yes	
posted within shed	V	745	

Additional remarks (use separate sheet is required)

QUARTERLY Well Levels Pump 20,000 GALLONS LEACHATE TO CITY of OSWEGO

Took Two 5 gol Lementate Stamples for Pilot STUDY

CHANGED All Locks with NEW Locks KEY 2246 MASTER Lock TRIMMED AROUND SHED AND TANK



Site Inspection Checklist (V2)

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

Date 8-7-2014

Field Technician Rosenwork

Weather Conditions Cloury 650

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

Leachate tank access doors		
locked (post pump out)		
Pump power panel(s) secured		
Monitoring Wells (MW)	and the second	
Locks installed		
MW's marked & identifiable		
General Site Condition		
Trees & brush cleared off security fence		
Perimeter security fence intact & free of damage	×	
Site access driveway inspected & free on snow & damage		
Security access gates / Padlock & chain serviceable		
Site gate signage intact		
Interior & exterior of utility		
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 sheet is required)



Site Inspection Checklist (V2)

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

Date 9-10-14

Time 7:30

Field Technician MARTIN Koennecke Weather Conditions P-Sunny 62°

Chack M (tests second starting sector

4. 	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		Holes UNDER BACK of SHED, FillED IN				
Land cap irregularities (note anomaly)	V		σκ				
French drainage system clear and function able	V		оК				
Concrete trough clear and function able	V		VEGETATION GROWING IN STARTED CLEARING				
Leachate Discharge System							
City of Oswego sanitary discharge							
valve positioned "Open"	V		OK				
Discharge Pump inspected &							
operational	V		Yes				
Discharge pump oil level verified							
prior to use.	V		Yes				
Discharge pump drained of							
residual water (drained upon completion of monthly discharge)	V		Yes				
Heat trace system operational &	V						
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	V		OK				
Leachate holding tank metal roof inspected for structural integrity	V		oK				

9-10-14

Leachate tank access doors		
locked (post pump out)	V	 Yes
Pump power panel(s) secured	V	Yes
Monitoring Wells (MW)	9	
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
Security access gates / Padlock &		
chain serviceable	V	Yes 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		N. A
recorded	V	Yes
Spill control material inspected &		
adequate	V	0K
PPE available and utilized as	/	
required	V	OK
Emergency contact information		N
posted within shed	V	Yes

Additional remarks (use separate sheet is required) <u>MONTHIY</u> LEACHATE PUMPING; 20,000 GAL TO CITY of OSWEGO



Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: <u>7-9-14</u>

Time: 7:30

Field Technician MARTIN KOENNecke

Weather Conditions P-Surny 68°

Beginning Leachate	Pre-Discharge Well Pumping										
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)					
11.5"	LCW-1	8:35	11:15		122 GPM	20,130					
	LCW-2	8:35	11:15			8					
	LCW-3	8:35	9:00								
	LCW-4	8:35	11:15								
	1			1	Total	20124					

tal 20,130

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	Monthly Leachate Discharge Pumping (To the City of Oswego)										
Discharge #	Start Time	Stop Time	рН	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge				
Discharge #1	9:35	15:20	6,8	54°	650095	670190	20,095				
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum							
	83	25 min	0	8 "							
	Semi-Ar	nnual Le	achate Di	scharge S	ampling (Pe						
	Date	Sample Locatio		• 10000	ample Time	рН Те	emperature				
Sample #1											

ÖBRIEN 5 GERE

Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: 8-6-14

Time: 7:00

Field Technician MARTIN Kornwake Weather Conditions OVERLAST 65"

Beginning Leachate Hold Tank Elevation (Inches)	Pre-Discharge Well Pumping										
	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank (Gallons)					
10 "	LCW-1	840	INTER Mitte	11 1013:30	25 HOUR 127 6Pm						
	LCW-2	840		13:30		-					
	LCW-3	8:40	9:00								
	LCW-4	8:40	INTERMITED	13:30							
			<i>y</i>		Total	201					

20,000

٦

	Mo	onthly L	eachate D	ischarge	Pumping (T	o the City of Osv	vego)
Discharge #	Start Time	Stop Time	рН	Temp	Totalizer Flow Total (Start)	Totalizer Fiow Total (End)	Gallons Discharge
Discharge #1	9:50	14:10	6.8	540	670190	690190	20,000
Pump Info	Info Flow Rate Prime Pump (GPM) Time Pressure		Pump Vacuum				
	83	20 min	0	6-8"			
	Semi-Ar	Sampl			ampling (Pe		vego Permit) emperature
		Locatio	on Volu	ime	Time		
Sample #1							

O'BRIEN & GERE

Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: <u>9-10-14</u>

Time:_____ク*:3 0*____

Field Technician MARTIN KOENNecke

Weather Conditions P-Sunny 62

Beginning Leachate Hold Tank Elevation (Inches)		Pre-Discharge Well Pumping										
	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank (Gallons)						
11"	LCW-1	7:40 In	FERMITENT = 11:40	7	1296Pm	20,000						
	LCW-2		TermiThenT-11.4									
	LCW-3	7:40	7:55									
	LCW-4	7:40	9:40 /Intue m	Hent Till 11:40								
			,,,,,	· · · · · · · · · · · · · · · · · · ·	Total	20,000						

	Monthly Leachate Discharge Pumping (To the City of Oswego)									
Discharge #	Start Time	Stop Time	рН	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge			
Discharge #1	8:40	12:40	6.80	54°	690190	710195	20,005			
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum						
	83	Zoma	0	8"			25			
	Semi-Aı	nnual Le	achate Di		Sampling (Pe	er the City of Os	wego Permit)			
	Date	Sampl	e Sam	nple S	Sample	рН Т	emperature			

ATTACHMENT A-3

QUARTERLY POTW DISCHARGE REPORTS 3RD QUARTER 2014



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

September 16, 2014

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

Re: 3rd Quarter PAS Oswego Progress Report 2014

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 2014. This has been due to the EPA allowance of an alternate disposal method. However, with EPA approval we retain disposal of PAS Oswego wastewater at the Auburn POTW under Permit 2014-01 in the event that the current disposal method is unavailable in the future.

Cumulative gallons removed for discharge in Auburn 3rd Qtr. 2014 - 0

• Cumulative gallons removed for discharge in Auburn over 2014 - 0

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

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

Sincerely, de maximis, inc.

Clay McClarnor

CMC/dlb

cc: PAS Management Committee

F:\PROJECTS\3131\2014\POTW\Auburn 3rd Qtr 2014 rpt.doc

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

PAPER



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

Via electronic mail

September 30, 2014

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

Re: Quarterly Discharge Report – 3rd Quarter 2014 Pollution Abatement Services Site – Oswego, New York City of Oswego Wastewater Discharge Permit 6-2010-13

Dear Mr. Leotta:

This quarterly report is submitted in accordance with the City of Oswego Wastewater Discharge Permit 6-2010-13 (Permit) for discharge of leachate from the Pollution Abatement Services (PAS) Site into the City of Oswego's Eastside Wastewater Treatment Facility. This report covers the reporting period from July 2014 through September 2014.

The total number of gallons of leachate discharged during the third quarter of 2014 is 60,100 gallons. The amount of leachate discharged during each monthly removal event is summarized in Table 1. A completed Leachate Discharge Form documenting the quantity of leachate discharged during each leachate removal event is included in Attachment I. The flow totalizer readings documenting quantities discharged, as well as date and time of each discharge event is provided on this form. Measurements for pH and temperature during each removal event are also recorded in the Leachate Discharge Form.

The next sample event is scheduled for November 2014.

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

Sincerely, de maximis, inc.

May Millano

Clay McClarnon

Attachments

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

C:\Users\Reception\Documents\GroupWise\Oswego POTW Quart Rpt 2014_3Q_Sept- 30- 2014.doc

Discharae Quarter	40 2013		10,2014 20,2014	014	20.2014	014	20,000	NA.
					4 7 1			
	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged
	10/9/13	20,000	1/8/14	10,000	4/9/14	20,000	7/9/14	20,095
	54/6.6		48/6.75		44/6.8		54/6.8	
	11/6/13	10,000	2/4/14	10,000	5/7/14	20,000	8/6/14	20,000
	52/6.8		42/6.7		46/6.8		54/6.8	
	12/4/13	10,000	3/5/14	10,000	6/4/14	10,000	9/10/14	20,005
	52/6.7		52/6.8		50/6.8		54/6.8	
Fotal Discharged		40,000		30,000		50,000		60,100
			第一次の東京部港湾市市市市市市市市市市 一次市場市市市市市市市市市市市市市市 一次市場市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市					
Date Sampled*		11/6/2013		Not sampled		5/7/2014		Not sampled
Analytes**		mg/L		mg/L		mg/L		mg/L
Antinomy Arsenic Beryllium Cadmium		ND <0.010 0.025 ND <0.010 ND <0.010				ND <0.00125 0.0198 ND <0.00125 ND <0.0010		
Chromium (total) Copper		0.012 0.014				ND <0.0085 0.0177		
Cyanide Lead		ND <0.010 ND <0.010				ND <0.0050 0.00218		
Nickel		0.51 0.51				0.00000314 0.339		
Silver		ULU <0.010 ND <0.010				0.0056 ND <0.00125		
Thallium Zinc		ND <0.02 ND <0.02				ND <0.00125 ND <0.0150		
VOC****		1204				NA		
SVOC****		QN				NA		
BOD 5 TSS		13 5.4				⊲3.0 25		
Phenolics		0.12				65 0.103		
Цd		b./				6.7		

Prpared by de maximis, inc. 9/30/2014

**** Analytes included for permit pollutant analysis performed every three years Analyte values in bold exceed limit

ATTACHMENT I



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O'BRIEN & GERE

Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: 7-9-14

Time: 7:30

Field Technician MARTIN KOENNECKE Weather Conditions P-Sunny 68°

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Beginning Leachate	Pre-Discharge Well Pumping									
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)				
11.5"	LCW-1	8:35	11:15		1226.pm	20,130				
	LCW-2	8:35	11:15			• •				
	LCW-3	8:35	9:00							
	LCW-4	8:35	11:15							
	1				Total	20,130				

Monthly Leachate Discharge Pumping (To the City of Oswego) **Discharge** # Totalizer Gallons Totalizer **Start Time** Stop pН Temp Flow Total Discharge Flow Total Time (End) (Start) Discharge #1 54° 9:35 650095 676190 30,045 15:20 6,8 Pump **Flow Rate** Prime Pump **Pump Info** (GPM) Time Pressure Vacuum 8" 25 mile C 83 Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit) Temperature Sample Sample рH Date Sample Time Volume Location Sample #1



Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: 8-4-14

Т

Time: 7:00

Field Technician Michain Kozonacke

Weather Conditions CUCKANST 65

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Beginning Leachate	Pre-Discharge Well Pumping										
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	\$40	JuTur mille	11 13:30	127 614						
	LCW-2	846		13:30							
	LCW-3	\$ 40	9.00								
	LCW-4	8 40	IN VERMILIO	13:30							
	I	J			Total	21,000					

Monthly Leachate Discharge Pumping (To the City of Oswege) **Discharge**# Gallons Start Time Totalizer Totalizer Temp Stop pН Time Flow Total **Fiow Total** Discharge (Start) (End) Discharge #1 540 14:10 4:50 6,8 670190 690190 20,000 Pump Info **Flow Rate** Prime Pump Pump (GPM) Time Pressure Vacuum 6-5' 83 6 acon Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit) Sample Date Sample Sample pН Temperature Time Volume Location Sample #1



🖀 🧮 O'BRIEN & GERE

Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: 9-10-14

Time: 7:30

Field Technician MARTAN KOENNecks

Weather Conditions P. Simuy 62

Beginning Leachate		Pre-Discharge Well Pumping									
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)					
11"	LCW-1	7:40 In	Fermittent - 11:40	,	1296.Fm	20,000					
	LCW-2	7:46 70	Termitten -11.4	0							
	LCW-3	7:40	7:55								
_ <u></u>	LCW-4	7:40	9:40 Tutel 1	Hent Till 11:40							
	I		· · · · · · · · · · · · · · · · · · ·		Total	20,000					

Discharge #	Monthly Leachate Discharge Pumping (To the City of Oswego)									
	Start Time	Stop Time	рН	Temp	Totalizer Flow Total (Start)	Totalizer Fiow Total (End)	Gallons Discharge			
Discharge #1	8:40	1240	6,80	54°	690190	710195	20,005			
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum						
	83	2.0inus	0	8"						
	Semi-Ai Date	Sampl	e San	nple !	S ampling (Pi Sample		wego Permit) emperature			
		Locatio	on Volu	ıme	Time					

II-B

4TH QUARTER REPORT 2014



QUARTERLY PROGRESS REPORT - 4th QUARTER 2014

Operation, Maintenance and Long-term Monitoring Activities

PROJECT NAME: Pollution Abatement Services Site Oswego, New York

PERIOD COVERED: October – December (4th Quarter) 2014

ACTIONS TAKEN DURING QUARTER:

- Leachate removal and site maintenance and monitoring activities were conducted at the Pollution Abatement Services (PAS) site (Site), in Oswego, New York by O'Brien & Gere Operations LLC, (O'Brien & Gere) consistent with the PAS Site Operation, Maintenance and Long-term Monitoring Plan (Work Plan).
- A total of 40,000 gallons of leachate were removed from the Site during the period of October, November and December 2014. Specific quantities of leachate removed included 20,000 gallons in October, 10,000 gallons in November and 10,000 gallons in December. Details of the leachate removal for each month, along with historical leachate removal documentation are described in this progress report.
- During the months of October, November and December 2014, leachate was pumped monthly from the PAS Site to the City of Oswego, New York sanitary sewer system, and was treated at the Oswego, New York Eastside Wastewater Treatment Facility located at 71 Mercer St. in Oswego, New York.
- Quarterly groundwater elevation monitoring was performed on November 3, 2014. 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 onto the Pre-Pumping Well Monitoring Level Form. (Attachment B-1)
- The semi-annual ground water sampling was conducted on November 3, and 4, 2014 for long-term monitoring wells LR-6, LR-8, M-21 and leachate collection wells LCW-2 and LCW-4. Wells M-22 and OD-3 were also sampled during this event. Sampling activities for longterm 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, New York for analysis. (Attachment B-4)
- On November 5, 2014, semi-annual effluent sampling in conformance with the City of Oswego wastewater discharge permit 6-2010-13 was performed. One composite sample was collected by O'Brien & Gere during the discharge of leachate from the Site. The leachate sample was collected from a sample port located on the leachate effluent discharge pump. The composite sample was collected for laboratory analysis by combining three separately collected grab samples taken over the course of the leachate discharge



from the Site. The sample was preserved using industry standard methods delivered for analysis at Spectrum Laboratories in East Syracuse, New York. The results are included with the 4th Quarterly report submitted to the City of Oswego. (Attachment B-3)

- The treatability study performed under the pre-treatment agreement with the City of Oswego for As and Se was submitted to the City of Oswego as part of the 4th Quarter Report dated December 29, 2014. The results indicate the required Se levels were below standard EPA method detection levels and the As levels were not achievable with the tested methods. (Attachment B-3)
- Site maintenance activities were conducted monthly in combination with the monthly leachate removal event. The Sites Inspection Checklist was used to document the land cap, leachate discharge system, leachate collection system, and general Site conditions. (Attachment B-2) Monthly site maintenance activities included the following:
 - Light vegetation was removed by hand from the two Site concrete surface drainage troughs. Removal of small brush and fallen tree limbs was removed from the perimeter security fence of the Site.
 - The Site single French drainage system and two (2) concrete troughs were inspected and cleared of accumulated 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 damage to the cap was observed.
 - 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 was the leachate tank 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 October 8, November 5, and December 3, 2014, O'Brien & Gere 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, O'Brien & Gere notified the City of Oswego Eastside Wastewater Treatment Facility of the scheduled leachate discharge. Prior to each leachate discharge, the City of Oswego was notified. (Attachment B-2)
- Upon completing the monthly leachate collection system inspections, O'Brien & Gere manually energized 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 B-2)

- During the months of October, November and December 2014. O'Brien & Gere pumped a combined total of 40,000 gallons of leachate into the leachate collection tank and then to the City of Oswego. Leachate was pumped using the Site discharge pumping system into the City of Oswego off-site sanitary sewer system. The leachate pumping system consists of one electrically powered centrifugal discharge pump, conveyance hose, discharge flow totalizer and leachate sampling port. This discharge system is located within the confines of the projects wooden utility shed. The amount of leachate discharged during each removal event, along with discharge flow totalizer amounts, pH, pump priming times, and leachate water temperatures were recorded on the Leachate Disposal Checklist for each monthly removal event. (Attachment B-2)
- Upon completing each monthly leachate discharge, the leachate discharge pump and tank suctions hoses were placed back into the leachate hold tank and the leachate pump system shutdown and prepared for storage. The concrete leachate hold tank was secured, as was the wooden maintenance shed. Upon the completion of monthly or quarterly site activities the Sites metal access gates were closed, and padlocked.
- The PAS Oswego Site quarterly discharge reports for the 4 th quarter of 2014 were submitted. The report to the City of Oswego was submitted on December 29, 2014 in accordance with permit 6-2010-13, and the report to the City of Auburn was submitted on December 5, 2014 in accordance with permit 2014-01. (Attachment B-3)
- The Institutional Control and Site Inspection was completed on November 5, 2014. This included interviews with the Industrial Precision Products facility manager and review of City and County records. (Attachment B-5)

DOCUMENTATION OF REMOVAL ACTIVITIES FOR PREVIOUS QUARTER

- The Groundwater Pre-pumping Well Monitoring Level Form for November 5, 2014, is attached to this report. (Attachment B-1)
- Site Inspection Checklist for October 8 & 23, November 5, and December 3, 2014 are attached to this report. (Attachment B-2)
- Leachate Disposal Checklist for October 8, November 5, and December 3, 2014 are attached to this report. (Attachment B-2)
- The PAS Quarterly Discharge reports submitted on December 29, 2014 to the City of Oswego including the semi-annual effluent data and on December 5, 2014 to the City of Auburn are attached. (Attachment B-3)
- Semi-annual well sampling for LR-6, LR-8 and M-21, M-22, and OD-3, and leachate collection wells LCW-2 and LCW-4 is attached. (Attachment B-4)
- Institutional Control inspection and record review is attached. (Attachment B-5)

ATTACHMENT B-1

GROUNDWATER ELEVATION DATA

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

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Date - //	- <i>3-14</i> Riser	N/oli	Range Verific		- Martin Koe		ineira/Eial		ments	Month - November
Number	Elevation	Average Well Level	Low Well Level	High Well Level	WG Itevel (//si))Gied	weihtevet	Well Wi	CONTRACTOR OF A CONTRACTOR OF	Well Level Check ((ard)) (I/Not & Well Lingt With Clargens (mite)	Month - November
SWW1	289.33	9.70	8.62	11.62	11.02	11.02	V			·
SWW2	289.37	16.37	15.75	17.40	16.98	16.98	V	ļ		
SWW3	286.50	17.29	16.60	17.92	17.96	17.96		V ·	17.96	
SWW4	283.60	14.94	13.44	17.12	16,96	16.96	V	ļ		
SWW5	277.02	13.38	12.55	14.22	14.66	14.66		v	14.66	
SWW6	273.06	8.73	7.95	9.58	9,50	9.50	V	ļ		· · · · · · · · · · · · · · · · · · ·
SWW7	277.93	8.73	8.02	9.43	9.26	9.24	V			
SWW8	278.24	5.56	3.94	11.38	10.38	10,38	V	-		
sww9	285.55	18.56	17.48	20.05	20,06	20.06		r	20.06	
SWW10	280.43	12.46	9.71	18.65	18.26	18,26	V			
SWW11	273.50	9.64	8.81	10.86	11,48	11.48		r	11.48	
SWW12	272.82	11.10	8.70	15.24	15,36	15,36		v	15,36	·
LCW-1	272.21	9.24	8.20	10.46	10,86	10.86		v	10,86	
LCW-2	274.44	11.49	10.44	12.76	13.10	13,10		V	13, 10	
LCW-3	284.36	18.05	17.40	19.56	18,35	18,35	v			
LCW-4	285.70	18.56	16.64	19.66	19,24	19.24	V			
OS-1	272.10	12.22	8.60	16.60	14,84	14.84	1			·
0i-1	272.00	12.79	11.14	15.26	13,60	13.60	V			
OS-3	277,89	15.90	13.92	18.58	18.08	18.08	V			
OD-3	277.85	15.74	13.76	18.42	17.92	17.92	V			
LD-3	278.62	6.23	4.32	11.77	10,75	10.75	/			
LD-4	279.25	12.25	9.85	17.15	16.94	16.94	V			
LD-5	272.94	12.03	9.10	15.75	15,86	15.86		~	15.86	
LS-6	274.14	12.70	10.25	14.76	15,78	15,78		~	15,78	
LD-6	274.03	11.42	10.12	12.86	13,88	13,88		V	13.88	· · · · · · · · · · · · · · · · · · ·
LD-8	272.83	9.86	7.15	15.38	11.25	11, 25	V			
LR-2	289.85	13.55	12.70	14.96	14,87	14.87	\checkmark			
LR-3	278.06	8.99	7.80	12.00	10,92	10.92	V			
LR-6	274.39	10.99	10.05	12.72	12,43	1a.43	 ✓ 			
LR-8	273.42	10.65	9.45	12.84	12,18	12,18	V			
M-21	272.32	10.28	9.17	12.50	11,92	11.92	/			
M-22	273.88	10.98	10.00	12.62	12,38	12,38	1			
M-23	270.49	12.86	12.25	14.25	13,92	13,92	v			

ATTACHMENT B-2

SITE INSPECTION CHECKLIST AND LEACHATE DISPOSAL CHECKLIST



Site Inspection Checklist (V2)

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

Date 12-3-14

Time 7:45

Field Technician MARTIN KOENNecke

Weather Conditions overcast, 40, RAINS Houses

Check V (tasks completed in each event)						
Inspection Features	Monthly	Quarterly	Remarks (indicate accomplishment of each maintenance task)			
Land Cap						
Signs of burrowing vermin	~		NONE VISABLE			
Land cap irregularities (note anomaly)	v		OK			
French drainage system clear and function able	V		Yes			
Concrete trough clear and function able	v		Yes			
Leachate Discharge System	1	2.36				
City of Oswego sanitary discharge valve positioned "Open"	V		Yes			
Discharge Pump inspected & operational	~		Yes			
Discharge pump oil level verified prior to use.	v		Yes			
Discharge pump drained of residual water (drained upon completion of monthly discharge)	v		Yes			
Heat trace system operational & verified in the "ON" position (Applicable Oct - May)	v		CN			
Flow totalizer operational. Flow readings recorded onto						
"Leachate Discharge Form"	V		Yes			
Leachate Collection System						
Leachate holding tank visually	\checkmark		OK			
inspected for structural integrity						
Leachate holding tank metal roof inspected for structural integrity	v		OK			

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17	7		111
12		-	14
10.	0		

		12-3-19
Leachate tank access doors		
locked (post pump out)	V	/ Yes
Pump power panel(s) secured	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 PROGRESS
Perimeter security fence intact &		
free of damage	V	Yes
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	V	OK
PPE available and utilized as		5 · ·
required	V	Yes
Emergency contact information		V.A
posted within shed	V	Yes

Additional remarks (use separate sheet is required) <u>PUMPED 10,000 GALLON LOACHATE</u> PLANT, To CITY of Oswego TREATMENT



Site Inspection Checklist (V2)

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

Date_____11-5-14_____

Time 7:30

Field Technician MARTIN KOENNECK

Weather Conditions Overcost 48°

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 V anomaly) OK French drainage system clear and function able 425 V Concrete trough clear and V function able Yes Leachate Discharge System City of Oswego sanitary discharge Yes V valve positioned "Open" Discharge Pump inspected & Yes operational V 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 V Yes "Leachate Discharge Form" Leachate Collection System Leachate holding tank visually inspected for structural integrity \checkmark OK Leachate holding tank metal roof V inspected for structural integrity OK

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11-5-14

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	V	WORK IN PROGRESS
Perimeter security fence intact &			,
free of damage	V		Yes
Site access driveway inspected &			
free on snow & damage	V		ok
Security access gates / Padlock &			N
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		oK
PPE available and utilized as			
required	V		OK
Emergency contact information			
posted within shed	V		Yes

Additional remarks (use separate sheet is required) <u>Semi Annual well sampling 11-3-14 And 11-4-14</u> QUARTURIY Well <u>LEVELS</u>; <u>PUMPED 10,000 GAL, LEARDATE TO CITY OF OSLOGO</u> <u>Semi Annual Descharge sample Taken</u>



Site Inspection Checklist (V2)

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

Date 10-23-14

Field Technician _MARTIN KOENNecky

Weather Conditions <u>P-Surry</u>

Check V (tasks completed in each event)							
Inspection Features	Monthly	Quarterly	Remarks (indicate accomplishment of each maintenance task)				
Land Cap		1999					
Signs of burrowing vermin	V		NONE VISABLE				
Land cap irregularities (note anomaly)	V		OK				
French drainage system clear and function able	V		TRIMMED AND CLEARED				
Concrete trough clear and							
function abie	V		TRIMMED HAD CLEARED				
Leachate Discharge System	120-224						
City of Oswego sanitary discharge							
valve positioned "Open"	V		Yes				
Discharge Pump inspected &							
operational	V		Yes				
Discharge pump oil level verified							
prior to use.	V		Yes				
Discharge pump drained of							
residual water (drained upon	V		Vec				
completion of monthly discharge)	V		Yes				
Heat trace system operational &							
verified in the "ON" position			off				
(Applicable Oct - May)	V						
Flow totalizer operational. Flow							
readings recorded onto	3.2		Yes				
"Leachate Discharge Form"	V		765				
Leachate Collection System							
Leachate holding tank visually			A 14				
inspected for structural integrity	V		0K				
Leachate holding tank metal roof	1000000		δK				
inspected for structural integrity	V		ON				

		10-23-14
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	working on BACK of SiTe
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	V	OK .
PPE available and utilized as		
required	V	OK
Emergency contact information		Marc
posted within shed	V	Xes

Additional remarks (use separate sheet is required)

CLEARED	Concrete	- TROUght	1	WORKED	ON	CLEARING
FEMR A	T ROAR	of site	5	-		,



Site Inspection Checklist

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

Date /0-8-14

Time___________

Field Technician MARTIN Koennecke

Weather Conditions P-Sunny 57° w/RAIN SHOWERS

14

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

			(tasks completed in each event)
Inspection Features	Monthly	Quarterly	Remarks (indicate accomplishment of each maintenance task)
Land Cap			
Signs of burrowing vermin	V		NONE VISABLE
Land cap irregularities (note			
anomaly)	V		OK
French drainage system clear and			
function able	V		Yes
Concrete trough clear and			0K
function able	V		BRUSHOGED EDGES NEEDS TO BE CLEANED UP
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		OK
Discharge pump drained of			
residual water (drained upon			
completion of use)	V		Yes
Heat trace system operational &			
verified in the "ON" position			
(during wintertime periods)	V		off
Flow totalizer operational. Flow			
readings recorded onto			N
"Leachate Discharge Form"	V		Yes
Leachate Collection System			
Leachate holding tank visually			
inspected for structural integrity	V		ok
Leachate holding tank metal roof			
inspected for structural integrity	V		OK

10-8-14

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	\checkmark	ΰK.	
General Site Condition			
Trees & brush cleared off security			
fence	V	WORK IN PROGRESS	
Perimeter security fence intact &			
free of damage	V	OK	
Site access driveway inspected	V	OK	
Security access gates function			
able	\checkmark	Yes	
Site gate signage intact	V	Yes	
Interior & exterior of utility			
storage shed inspected for	NO 1 145/1		
damage & secure with locks	V	Yes	
Fire extinguisher serviceable,			
inspected, and inspection		1.	
recorded	V	Yes	
Spill control material inspected &			
adequate	V	OK	
PPE available and utilized as			
required	V	оК	
Emergency contact information		1	
posted within shed	V	Yes	

Additional remarks (use separate sheet is required)

MONTHLY	Leachate Pum	POUT 20	,000 gallin	s To Cit	y of Oswego
BRUSHOG	AND TRIMMET) CONCRE	te TROUGHT,	AROUND	BUIDING AND
	TRIMMED FR)



Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: 12-3-14

Time: 745

Field Technician MARTIN Koennicke

Weather Conditions Overcut 40 RAIN S HOLERS

Beginning Leachate Hold Tank Elevation (Inches)	Pre-Discharge Well Pumping										
	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank (Gallons)					
10 ''	LCW-1	7:50	9:20	43"	112 Gim	10,065					
	LCW-2	7:50	9:20	923		,					
	LCW-3	7:50	8:05								
	LCW-4	7:50	9:20								
					Total	10,065					

Monthly Leachate Discharge Pumping (To the City of Oswego) **Discharge** # Start Time Totalizer Totalizer Gallons Stop pH Temp **Flow Total Flow Total** Discharge Time (Start) (End) 10,000 Discharge #1 480 9:40 11:40 740195 6.8 750195 CHIS MK **Flow Rate** Prime **Pump Info** Pump Pump (GPM) Time Pressure Vacuum 6-8" 83,3 20min 0 Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit) Sample Sample Date Sample pH Temperature Location Volume Time Sample #1



Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: <u>11-5-14</u>

Time: 7.'30

Field Technician MARTIN Koewweeke

Weather Conditions OVeccusT 48°

Beginning Leachate Hold Tank Elevation (Inches)	Pre-Discharge Well Pumping									
	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank (Gallons)				
10"	LCW-1	7:30	9:00	43"	112 GPM	19,065				
	LCW-2	7:30	9:00			,				
	LCW-3	4:30	7:45							
	LCW-4	7:30	9:00							
	1			11	Total	10,065				

Discharge #	Monthly Leachate Discharge Pumping (To the City of Oswego)										
	Start Time	Stop Time	рН	Temp	Totalizer Flow Tota (Start)	Tota I Flow (En	Total	Gallons Discharge			
Discharge #1	9:20	11:20	6.8	520	730195	740	195	19,000			
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum	1.0						
	83	20mm	0	6-8"							
	Semi-An	Sampl	e Sam		ampling (ample Time	Per the City		vego Permit) mperature			
Sample #1	11-5-14	c ample :	RATI COMPOSI		1:30	6,8		52°			

Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: 10-8-14

diamental formation

Time: 8:00

Field Technician MARTIN KOENNecke

O'BRIEN & GERE

Weather Conditions P. Sunny 59°

N/RAIN SHOWERS

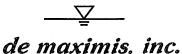
Beginning Leachate Hold Tank Elevation (Inches)	Pre-Discharge Well Pumping									
	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank (Gallons)				
10.5"	LCW-1	8:00	10:00 (Intermitteit	Till 12:00	129	20,000				
	LCW-2	8:00	10:00/INTERMITER	Till 12:00						
	LCW-3	8:00	8:20							
	LCW-4	8:00	930/INTreprise	T Till 12:00						
					Total					

Total 20,000

Discharge #	Monthly Leachate Discharge Pumping (To the City of Oswego)										
	Start Time	Stop Time	рН	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge				
Discharge #1	9:30	13:30	6.8	53°	710195	730195	20,000				
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum							
	8 3 ,3	25 min	Ö	8"							
	Semi-An	Sample	e Sam		ampling (Pe		vego Permit) mperature				
	and the second	Locatio	n Volu	ime	Time						
Sample #1											

ATTACHMENT B-3

QUARTERLY POTW DISCHARGE ERPORTS 4TH QUARTER 2014



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

December 5, 2014

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

Re: 4th Quarter PAS Oswego Progress Report 2014

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 2014. This has been due to the EPA allowance of an alternate disposal method. However, the PAS Site expects to ship material to the Auburn POTW under Permit 2014-01 in early 2015. OBG will coordinate the transport and discharge of the wastewater with Auburn.

- Cumulative gallons removed for discharge in Auburn 4th Qtr. 2014 0
- Cumulative gallons removed for discharge in Auburn over 2014 0

Since no wastewater was shipped or discharged to Auburn during the 4th 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 McClarnon

CMC/dlb

cc: PAS Management Committee





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

Via electronic mail

December 29, 2014

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

Re: Quarterly Discharge Report – 4th Quarter 2014 Pollution Abatement Services Site – Oswego, New York City of Oswego Wastewater Discharge Permit 6-2010-13

Dear Mr. Leotta:

This quarterly report is submitted in accordance with the City of Oswego Wastewater Discharge Permit 6-2010-13 (Permit) for discharge of leachate from the Pollution Abatement Services (PAS) Site into the City of Oswego's Eastside Wastewater Treatment Facility. This report covers the reporting period from October 2014 through December 2014.

The total number of gallons of leachate discharged during the fourth quarter of 2014 is 40,000 gallons. The amount of leachate discharged during each monthly removal event is summarized in Table 1. A completed Leachate Discharge Form documenting the quantity of leachate discharged during each leachate removal event is included in Attachment I. The flow totalizer readings documenting quantities discharged, as well as date and time of each discharge event is provided on this form. Measurements for pH and temperature during each removal event are also recorded in the Leachate Discharge Form. The semi-annual discharge sampling event was performed on November 5, 2014. The results for that event are provided in Attachment II.

Also attached to this report is the Treatability Study performed for the PAS leachate (Attachment III). Unfortunately, the results of the Treatability Study indicate that the current Oswego pre-treatment requirements for Arsenic and Selenium are not achieved through use of the tested polymers. Although the report also identifies method detection and matrix concerns for confirming the 0.001 mg/L permit limit for Se, we propose to perform one additional test in January using chemical addition with pH adjustment. Although there appear to be method detection issues for Se, we agree to use Spectrum Labs for the January treatability test. The results of that test will be provided by January 30, 2015.

The next sample event is scheduled for January 2015 in conjunction with the proposed testing.

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

PAPER

de maximis

Mr. Anthony A. Leotta, P.E. December 29, 2014 Page 2 of 2

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

Sincerely, de maximis, inc.

Clay McClamon

Clay McClarnon

Attachments

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

F:\PROJECTS\3131\2014\POTW\Oswego POTW Quart Rpt 2014_4Q_Dec- 29- 2014.doc

	TABLE 1 LEACHAT			ARTERLY REP D EASTSIDE W ter Discharge	VAS OSWEGO SITE QUARTERLY REPORT FOR CITY OF OSWEGO (2014) SCHARGE TO OSWEGO EASTSIDE WASTEWATER TREATMENT FACILITY (Oswego SIU Wastwater Discharge Permit No.6-2010-13)	FOR CITY OF OSWEGO (2014) EWATER TREATMENT FACILIT nit No.6-2010-13)	2014) CILITY	
Discharge Quarter	10 2013		2Q 2014	014	3Q 2014	014	4Q 2014	014
	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharaed
	1/8/14	10,000	4/9/14	20,000	7/9/14	20,095	10/8/14	20,000
	48/6.75		44/6.8		54/6.8		53/6.8	
	2/4/14	10,000	5/7/14	20,000	8/6/14	20,000	11/5/14	10,000
	42/6.7		46/6.8		54/6.8		52/6.8	
	3/5/14	10,000	6/4/14	10,000	9/10/14	20,005	12/3/14	10,000
	52/6.8		50/6.8		54/6.8		48/6.8	
Total Discharged		30,000		50,000		60,100		40,000
Date Sampled*		Not sampled		5/7/2014		8/6/2014		11/5/2014
Analytes**	-	mg/L		mg/L		mg/L		mg/L
Antinomy Arsenic				ND <0.00125 0.0198		0.015		ND<0.0016 0.024
Beryllium Cadmium				ND <0.00125 ND <0.0010	· .		·····	ND <0.0004
Chromium (total)				ND <0.0085				0.0110
Cyanide				0500.05 UN				0.0134 ND <0.00440
Lead Mercury				0.00218 0.00000314			· · ·	0.0025 0.00008
Nickel				0.339		100		0.435
Silver				ND <0.00125		-		9100.0> UN
I halkum Zinc				ND <0.0150 ND <0.0150				ND <0.0005 ND <0.0036
1/1/1####				NA				
SVOC****				A A				A A
BOD5				<3.0				43
TSS Phenolice				65 n 1na				58
Hd				6.7				0.093 5.86
* Semi-annual sampling of PAS leachate discharge conducted in occordance with SIU Wastewater Discharge Permit No.6-2010 ** Analytes in hold incorrected Exhause 8 2013 and no bains and und for consultation of the second	hing of PAS leachate (discharge conducted	in accordance with S.	U Wastewater Disc	* Semi-annual sampling of PAS leachate discharge conducted in accordance with SIU Wastewater Discharge Permit No.6-2010-13.	10-13.		

** Analytes in bold incorporated February 8,2012 and are being evaluated for potential compliance changes by City of Oswego.
*** Ib/day factor 0.16632@20K gal

**** Analytes included for permit pollutant analysis performed every three years
Analyte values in bold exceed limit

Prpared by de maximis, inc. 12/17/2014

de maximis

ATTACHMENT I

C) PAPER

		Lea	chate	Disposal	<u>Checklist</u>		
	Form	ner Pollutio		tement S swego, N	ervices (PAS Y	Oswego)	
Date:	-8-14				Time:	8:00	
Field Techr	nician <u>////</u>	etm Koenn	<u>recKe</u>	_	Weather	. Conditions س	P. SUNNY 547 "
Beginning Leachate			Pre-D	Discharge	Well Pump		
Hold Tank Elevation (Inches)	Pumping Well #	Pump Stai Time	et Pi	imp Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped Into Holding Tank
10.5	LCW-1	8:00	10:00	Intermitter	TH 12:00	129	(Gallons)
	LCW-2	8:00	1.	Totesmoter			20,000
	LCW-3	8:00	8	.20			
	LCW-4	8:00	930	/InTremue	Till 12:00		
						Total	20,000
	Mi	onthly Leac	hate L	Discharge	Pumping (1	o the City of Osi	vego)
Discharge #	Start Time	Stop Time	рH	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
bischarge #1	9:30	13:30	6.8	53°	71.0195	430195	20,000
ump Info	Flow Rate (GPM)	Prime P	ump ssure	Pump Vacuum			
	83 ,3	25 min	0	8"		<u> </u>	
	Semi-An	nual Leach	ate Di	scharge	Sampling (Pe	r the City of Osu	vego Permit)
	Date	Sample	Sam		Sample	pH Te	mperature

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O'BRIEN 5 GERE

Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: //-5-/4

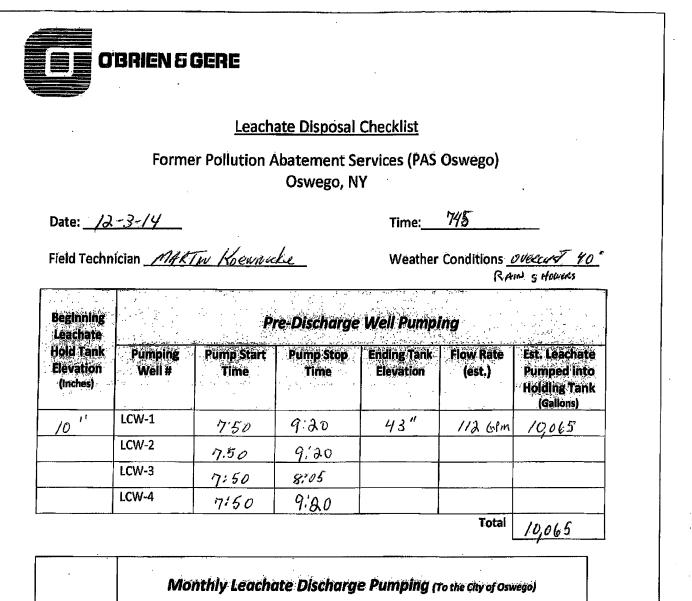
Time: <u>7.'30</u>

Fleld Technician _ MARTIN Knewwerke

Weather Conditions Overcost 18°

Beginning Leachate		P	re-Discharge	Well Rump	ing	
Hold Tank Elevation (inches)	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped Into Holding Tank (Callons)
10"	LCW-1	7:30	9:00	43"	112 GPM	19,065
	LCW-2	7:30	9:00			
	LCW-3	4:30	7:45			
	LCW-4	7:30	9:00			
	<u>_</u>				Total	10,065

	Monthly Leachate Discharge Pumping (To the City of Oswego)												
Discharge #	Start Time	Stop Time	pН	Temp	Totalizer Flow Tota (Start)		Total	Gallons Discharge					
Discharge #1	9:20	11:20	6.8	52	730195	7.40	195	19,000					
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum									
	83	20mm	0	6-8"									
	Semi-An	nual Le	achate Di	scharge S	ampling	(Per the City	y of Osw	vego Permit)					
	Date	Date Sample Sample Location Volume		-	ample Time	· · · ·		mperature					
Sample #1	11-5-14	s ample ;	LATT COMMAN	te 3que 1	1:30	6,8		52°					



	<i>ivi</i> c		eacnate L	uscnarge	rumping (1	o the City of Os	wego)
Discharge #	Start Time	Stop Time	рH	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	9:40	11:40	6.8	48°	740195	750195	10,000
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
····	83,3	DOMIN	0	6-8"			
	Semi-Ar	nnual Le	achate D	lscharge S	Campling (P	er the City of Os	wego Permit)
	Date	Samp	1	• .	ample Time	рН Т	emperature



Site Inspection Checklist

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

Date /0-8-14

Time___________

Field Technician MARTIN Koenneckie

Weather Conditions P-Suncy 51° W/RAIN SHOWERS

	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	8		NONE VISABLE
Land cap irregularities (note			
anomaly)	V		<i>бК</i>
French drainage system clear and			
function able	V		Yes
Concrete trough clear and			OK
function able			BRUSHOGED EDGES NEEDS TO BE CLEANDU
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		oK
Discharge pump drained of			
residual water (drained upon			
completion of use)	V		Yes
Heat trace system operational &			
verified in the "ON" position			
(during wintertime periods)	V		off
Flow totalizer operational. Flow			
readings recorded onto			N.A
"Leachate Discharge Form"	V		Yes
Leachate Collection System			- ·····
Leachate holding tank visually			
inspected for structural integrity	V		ok
Leachate holding tank metal roof		T	·····
inspected for structural integrity	ν		OK

10-8-14

Leachate tank access doors		1	
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		WORK IN PROGRESS
Perimeter security fence intact &			- AND THA HAR PARA
free of damage	V		OK
Site access driveway inspected	V		ok
Security access gates function able	V		Yes
Site gate signage intact	V		Yes
Interior & exterior of utility			
storage shed inspected for		-	
damage & secure with locks	V		Yes
Fire extinguisher serviceable,			
inspected, and inspection recorded	V		Yes
Spill control material inspected &			
adequate	V		ÔK
PPE available and utilized as required	v		оК
Emergency contact information			Yes

Additional remarks (use separate sheet is required)

MONTHLY L	eachate Pi	MA OUT	20,000 callin	s To Ci	ly of OSWEDD
BRUSHOU	AND TRIMM	ED CONC	Rete TROUGHT,	AKOKAD	BUIDING AND
TANK			Along ROAD		
	· · · · · · · · · · · · · · · · · · ·				



Site Inspection Checklist (V2)

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

Date 10-み3-14

Field Technician _MARTin Koennecky

Weather Conditions <u>P-Surry</u>

	Ch	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		NOME USABLE
Land cap irregularities (note anomaly)	V		oK
French drainage system clear and function able	v		
Concrete trough clear and function able	V		TRIMMED AND CLEARED TRIMMED HAD CLEARED
Leachate Discharge System			
City of Oswego sanitary discharge valve positioned "Open"	v		Yes
Discharge Pump inspected & operational	V		Yes
Discharge pump oil level verified prior to use.	v		Yes
Discharge pump drained of residual water (drained upon completion of monthly discharge)	V		Yes
Heat trace system operational & verified in the "ON" position			<u></u>
(Applicable Oct - May) Flow totalizer operational. Flow	V		off
readings recorded onto "Leachate Discharge Form"	~		Yes
Leachate Collection System			
Leachate holding tank visually			
inspected for structural integrity	V		0K
Leachate holding tank metal roof inspected for structural integrity	v		οĸ

10-23-14

		10 03414
V		yes
1		yes
V		yes
V		ok.
T		
V		WORKING ON BACK of Site
V		OK
V		OK
Γ		•
V		Yes
V		Yes
V		Yes
V		Yes
V		0K
V		OK
		N /
		Xes

Additional remarks (use separate sheet is required)

ľ.

i 1

لأمصغد

<u>CLEARED CONCRETE TROUGHT, WORKED ON CLEARING</u> <u>FEACE AT REAR OF Site</u>



Site Inspection Checklist (V2)

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

Date 11-5-14

17:30 Time____

Field Technician MARTIN Koennecke

Weather Conditions <u>Overcust</u> 48"

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

l

11-5-14

to a state to a track a trace of the	1	<u> </u>	T
Leachate tank access doors			
locked (post pump out)	V	1	Yes
Pump power panel(s) secured	V		Yes
Monitoring Wells (MW)			
Locks installed	V		Ye 5
MW's marked & identifiable	LV		OK
General Site Condition			
Trees & brush cleared off security			
fence	V	V	work in Progeess
Perimeter security fence intact &			
free of damage	V		Yes
Site access driveway inspected &			
free on snow & damage	\checkmark		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	1		oK
PPE available and utilized as			
required	V		0K
Emergency contact information			
posted within shed	V		Yes
Additional remarks (use senarate sh	·		

Additional remarks (use separate sheet is required)

Sevi ANNUAL Well SAMPING 11-3-14 AND 11-4-14, QUARTERLY Well LEVELS; PUMPED 10,000 GAL, LEACHATE TO LITY OF OSLOGO Semi ANNUAL DUSCHARGE SAMPLE TAKEN



Site Inspection Checklist (V2)

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

Date____12-3-14

Time_____<u>7:45</u>____

Field Technician ________ KOENNUCKI

Weather Conditions OVERCAST, 40; RAMUS Houses

	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	1		NONE VISABLE
Land cap irregularities (note			
anomaly)	V		0K
French drainage system clear and			
function able	V		Yes
Concrete trough clear and			
function able	V.		Yes
Leachate Discharge System			
City of Oswego sanitary discharge			
valve positioned "Open"	~		Yes
Discharge Pump inspected &			
operational	~		Yes
Discharge pump oil level verified			· · ·
prior to use.	V		Yes
Discharge pump drained of		_	
residual water (drained upon			
completion of monthly discharge)	V		Yes
Heat trace system operational &			
verified in the "ON" position			
(Applicable Oct - May)	V		ON
Flow totalizer operational. Flow			
readings recorded onto			N
"Leachate Discharge Form"	V		Yes
Leachate Collection System			
Leachate holding tank visually			_
inspected for structural integrity	\checkmark		OK
Leachate holding tank metal roof		-	
inspected for structural integrity	V		OK

		12-3-14
Leachate tank access doors		
locked (post pump out)	1	Yes
Pump power panel(s) secured	V	Yes
Monitoring Wells (MW)		
Locks installed	1	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	Yes
Site access driveway inspected &		
free on snow & damage	1	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	V	OK
PPE available and utilized as		
required	V	Ves
Emergency contact information		
posted within shed	V	Yes
Additional remarks (use separate sh	oot is	required)

Additional remarks (use separate sheet is required) <u>Pumper</u> 10,000 gnllow LencHate PLANT,

.

To CITY of Oswego TREATMENT

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_____ de maximis

ATTACHMENT II

Report Date: 20-Nov-14 16:06



Final Report
Re-Issued Report
Revised Report

SPECTRUM ANALYTICAL, INC. Featwring HANIBAL TECHNOLOGY Laboratory Report

O'Brien & Gere Engineers 333 West Washington St. Syracuse, NY 13221 Attn: Kevin Stone

Project: Oswego, NY Project #: PAS Oswego

Laboratory IDClient Sample IDMatrixDate SampledDate ReceivedSB99233-01Leachate DischargeGround Water05-Nov-14 11:3005-Nov-14 21:00

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

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



Authorized by:

ficolo Leja

Nicole Leja Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 8 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our Quality'web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

Data has been reported to the MDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 10.1 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

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

Analyses for Total Hardness, pH, and Total Residual Chlorine fall under the state of Pennsylvania code Chapter 252.6 accreditation by rule.

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

EPA 200.8

Duplicates:

1427338-DUP1 Source: SB99233-01

Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.

Antimony

RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.

Selenium

The Reporting Limit has been raised to account for matrix interference.

Selenium

Samples:

SB99233-01 Leachate Discharge

The Reporting Limit has been raised to account for matrix interference.

Selenium

<u>EPA 245.1/7470A</u>

Spikes:

1426832-MS1 Source: SB99233-01

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Mercury

Sample Acceptance Check Form

Client:O'Brien & Gere Engineers - Syracuse, NYProject:Oswego, NY / PAS OswegoWork Order:SB99233Sample(s) received on:11/5/2014

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

- 1. Were custody seals present?
- 2. Were custody seals intact?
- 3. Were samples received at a temperature of $\leq 6^{\circ}$ C?
- 4. Were samples cooled on ice upon transfer to laboratory representative?
- 5. Were samples refrigerated upon transfer to laboratory representative?
- 6. Were sample containers received intact?
- 7. Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?
- 8. Were samples accompanied by a Chain of Custody document?
- 9. Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?
- 10. Did sample container labels agree with Chain of Custody document?
- 11. Were samples received within method-specific holding times?

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2	

20-Nov-14 16:06

	<u>identification</u> e Discharge 8–01				Project # Dswego		<u>Matrix</u> Ground W		ection Date 5-Nov-14 11			<u>cceived</u> Nov-14	
CAS No.	Analyte(s) Result		Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Total Met	als by EPA 200/6000 Serie:	s Methods											
	Preservation	Field Preserved		N/A			1	EPA 200/6000 methods			YR	1426344	
Total Met	als by EPA 200 Series Met	hods											
7440-22-4	Silver	< 0.0016	U	mg/l	0.0050	0.0016	1	EPA 200.7	12-Nov-14	14-Nov-14	edt	1426820	х
7440-38-2	Arsenic	0.0240		mg/i	0.0040	0.0024	1	и	и	я	11	18	х
7440-41-7	Beryllium	< 0.0004	U	mg/l	0.0020	0.0004	1	n	11	"	*1		х
7440-43-9	Cadmium	< 0,0008	U	mg/l	0.0025	0.0006	1	11	n		υ.	*	х
7440-47-3	Chromium	0.0119		mg/l	0.0050	0.0014	1	-11	u		в	4	х
7440-50-8	Copper	0.0134		mg/l	0,0050	0.0018	1	н	*			u	х
7439-97-6	Mercury	< 0.00008	U	mg/ł	0.00020	0.00008	1	EPA 245,1/7470A	W	13-Nov-14	SMR	1426832	x
7440-02-0	Nickeł	0.435		mg/i	0.0050	0.0016	1	EPA 200,7	"	14-Nov-14	edit	1426820	х
7439-92-1	Lead	0.0025	J	mg/l	0.0075	0.0020	1	u		н	н		х
7440-36-0	Antimony	0.00046		mg/l	0.00025	0,00012	1	EPA 200,8	17-Nov-14	19-Nov-14	edt	1427338	х
782-49-2	Selenium	0.0135	R01, D	mg/l	0.00125	0.00023	5	н	0	19-Nov-14	u	M.	х
7440-28-0	Thallium	< 0,00005	Ų	mg/ł	0,00025	0,00005	1	u	ы	19-Nov-14	4	н	х
7440-66-6	Zinc	0.0036	J	mg/l	0.0050	0.0033	1	EPA 200.7	12-Nov-14	14-Nov-14	edt	1426820	х
General C	hemistry Parameters												
	Biochemical Oxygen Demand (5-day)	43.0		mg/l	37.5	1.53	1	SM5210B	06-Nov-14 16:35	17-Nov-14 10:59	DJB	1426436	х
57-12-5	Cyanide (total)	< 0.00440	U	mg/l	0.00500	0.00440	1	EPA 335,4 / SW846 9012B	12-Nov-14	12-Nov-14	RLT	14 26 894	X
	рH	5.86	pН	pH Units			1	ASTM D 1293-99B	06-Nov-14 18:47	06-Nov-14 19:00	DJB	1426457	
	Total Suspended Solids	58.0	LIV	mg/l	10.0	4.3	1	SM2540D	07-Nov-14	11-Nov-14	СМВ	1 426 496	х
Subcontra	cted Analyses												
Analysis pe	rformed by Phoenix Environ	imental Labs, In	c. * - CT00	7									
4743-03-9	Phenolics	0.093		mg/L	0,015	0.015	1	E420.4	07-Nov-14	07-Nov-14	11301	291546A	

Total Metals by EPA 2	00 Series Methods -	Quality Control
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Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPI Lim
Batch 1426820 - EPA 200 Series										
Blank (1426820-BLK1)					Pr	epared: 12-	Nov-14 An	aivzed: 14-N	iov-14	
Nickel	< 0.0016	U	mg/l	0.0016	<u></u>					
Lead	< 0.0020	U	mg/l	0.0020						
Zinc	< 0.0033	U	mg/l	0.0033						
Beryllium	< 0.0004	Ŭ	mg/l	0.0004						
Cadmium	< 0,0006	- U	mg/l	0.0006						
Chromium	< 0.0014	- U	mg/l	0.0014						
Copper	< 0.0018	U	mg/l	0.0014						
Arsenic	< 0.0024	Ų	mg/l	0.0024						
Silver	< 0.0024	Ŭ	-	0.0024						
	< 0.0016	Ŷ	mg/l	0.0010	_					
LCS (1426820-BS1)			_			epared: 12-		alyzed: 14-N	<u>ov-14</u>	
Zinc	1.28		mg/l	0.0033	1.25		102	85-115		
Nickel	1.28		mg/l	0.001 6	1.25		102	85-115		
Lead	1.30		mg/l	0.0020	1,25		104	85-115		
Beryllium	1.41		mg/i	0.0004	1.25		113	85-115		
Cadmium	1,32		mg/l	0.0006	1.25		106	85-115		
Chromium	1.32		mg/l	0,0014	1.25		105	85-115		
Copper	1.31		mg/l	0.0018	1.25		105	85-115		
Arsenic	1.27		mg/l	0.0024	1.25		102	85-115		
Silver	1.23		mg/l	0.0016	1.25		98	85-115		
atch 1426832 - EPA200/SW7000 Series										
Blank (1426832-BLK1)					Pre	pared: 12-1	Nov-14 An	alvzed: 13-N	<u>ov-14</u>	
Mercury	< 0.00008	U	mg/l	0.00008						
LCS (1426832-BS1)					Pre	pared: 12-1	Nov-14 An	alyzed: 13-N	<u>ov-14</u>	
Mercury	0.00470		mg/l	0.00008	0.00500		94	85-115		
Duplicate (1426832-DUP1)			Source: Si	<u> 399233-01</u>	<u>Pre</u>	pared: 12-N	Nov-14 An	alyzed: 13-N	<u>ov-14</u>	
Mercury	< 0.00008	U	mg/ł	80000.0		BRL				20
Matrix Spike (1425832-MS1)			Source: SE	399233-01	Pre	pared: 12-N	Nov-14 An	alvzed: 13-N	ov-14	
Mercury	0.00385	QM7	mg/l	80000.0	0.00500	BRL	77	80-120		
itch 1427338 - EPA 200 Series										
Biank (1427338-BLK1)			#		<u> </u>	pareo: 17-6	10V-14 AR	ajyzed: 19-N	<u>av-14</u>	
Antimony	0.00017	J	mg/l	0.00012						
Selenium	< 0.00005	U 	mg/l	0.00005						
Thallium	< 0.00005	U	mg/l	0.00005						
LCS (1427338-BS1)						pared: 17-N	lov-14 An	alyzed: 19-N	<u>ov-14</u>	
Antimony	0.0564	D	mg/l	0.00124	0.0500		113	85-115		
Selenium	0.280	Ð	mg/l	0.00047	0.250		112	85-115		
Thailium	0.0543	D	mg/i	0.00048	0.0500		109	85-115		
Duplicate (1427338-DUP1)			Source: SE	<u> 99233-01</u>	Pre	pared: 17-N	lov-14 An	alyzed: 19-N	ov-14	
Selenium	0.00902	QR9,	mg/l	0.00023		0.0135			40	20
• dimension		R01, D								
Antimony	0.00064	QR8	mg/l	0.00012		0.00046			33	20
Thallium	< 0.00005	U	mg/l	0.00005		BRL				20
Matrix Spike (1427338-MS1)			Source: SE	<u> 99233-01</u>	Pre	pared: 17-1		alvzed: 19-N	<u>ov-14</u>	
Selenium	0.257	D	mg/l	0.00047	0.250	0.0135	97	70-130		
Antimony	0.0537	D	mg/l	0.00124	0.0500	0.00046	107	70-130		
Thallium	0.0505	Ð	mg/l	0.00048	0.0500	BRL	101	70-130		
Post Spike (1427338-PS1)			Source: SE	<u> 99233-01</u>	<u>P</u> re	pared: 17-1	Nov-14 An	alvzed: 19-N	ov-14	
Selenium	0.245	D	mg/l	0.00047	0.250	0.0135	93	85-115		
Antimony	0.0524	Ð	mg/l	0.00124	0.0500	0.00046	104	85-115		
Thallium	0.0492	D		· · · · • · • • •						

This laboratory report is not valid without an authorized signature on the cover page.

General	Chemistry	Parameters -	Quality Control	l
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Analyte(s)	Result	Flag	Units	*RDL	Spike Løvel	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1426436 - General Preparation										
Blank (1426436-BLK1)					Pr	epared; 06-	Nov-14 A	nalyzed: 17-N	<u>lov-14</u>	
Biochemical Oxygen Demand (5-day)	< 1.53	U	mg/i	1.53						
<u>Blank (1426436-BLK2)</u>					<u>er</u>	epared: 06-	Nov-14 A	naivzed: 17-N	<u>lov-14</u>	
Blochemical Oxygen Demand (5-day)	< 1,53	U	mg/l	1.53						
LCS (1426436-BS1)						epared: 06-		naivzed: 17-N	Nov-14	
Biochemical Oxygen Demand (5-day)	170		mg/l	1.53	198		86	85-115		
Reference (1426438-SRM1)						epared: 06-		nalyzed: 17-M	<u>lov-14</u>	
Biochemical Oxygen Demand (5-day)	107		mg/l	1,53	95.8		112	64 -138		
Reference (1426436-SRM2)						epared: 06-		nalyzed: 17-N	<u>lov-14</u>	
Biochemical Oxygen Demand (5-day)	108		mg/l	1.53	95.8		113	64-136		
Batch 1426457 - General Preparation										
Reference (1426457-SRM1)					Pr	epared & Al				
pH	5.99		pH Units		6.00		100	97.5-102. 5		
Reference (1426457-SRM2)					Pr	epared & Ar	nalvzed: 06	-Nov-14		
pH	6.01		pH Units		6.00		100	97.5-102.		
								5		
Batch 1426496 - General Preparation					_					
Blank (1426498-BLK1)					Po	epared: 07-	Nov-14 A	nalvzed: 11-N	<u>lov~14</u>	
Total Suspended Solids	< 2.2	U	mg/l	2.2	_					
LCS (1426496-B\$1)						epared: 07-		halvzed: 11-N	<u>lov-14</u>	
Total Suspended Solids	100		mg/l	4.3	100		100	90-110		
Batch 1426894 - General Preparation										
Blank (1426894-BLK1)					Pr	epared & Ar	alyzed: 12	<u>-Nov-14</u>		
Cyanide (total)	< 0.00440	Ų	mg/l	0.00440						
Blank (1426894-BLK2)					Pn	epared & Ar	nalvzed: 12	-Nov-14		
Cyanide (total)	< 0,00440	U	mg/l	0.00440						
LCS (1426894-BS1)						epared & Ar				
Cyanide (total)	0.285		mg/l	0.00440	0.300		95	90-110		
LCS (1426894-BS2)						epared & Ar				
Cyanide (total)	0.288		mg/l	0.00440	0.300		96	90-110		
Reference (1426894-SRM1)						epared & An				
Cyanide (total)	0.331		mg/l	0.00440	0.385		86	65-135		

•

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 291546A - 291546										
BLK (BH37167-BLK)			Source: Bi	137167	<u>Pre</u>	pared & Ap	nalyzed: 07-	Nov-14		
Phenolics	< 0.015		mg/L	0.015				-		
DUP (BH37157-DUP)			Source: Bi	<u>137157</u>	Pre	ared & Ar	nalvzed: 07-	Nov-14		
Phenolics	< 0.015		mg/L	0,015				-	NC	20
LCS (BH37167-LCS)			Source: Bl	137167	Pre	ared & Ar	nalyzed: 07-	Nov-14		
Phenolics	ND		mg/L				94.3	85-115		20
MS (BH37157-MS)			Source: Bi	37157	Pre	pared & Ar	nalyzed: 07-	<u>Nov-14</u>		
Phenolics	ND		mg/L				84.0	75-125		20

Subcontracted Analyses - Quality Control

Notes and Definitions

- D Data reported from a dilution
- J Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- QM7 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- QR8 Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.
- QR9 RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.
- R01 The Reporting Limit has been raised to account for matrix interference.
- U Analyte included in the analysis, but not detected at or above the MDL.
- dry Sample results reported on a dry weight basis
- NR Not Reported
- RPD Relative Percent Difference
- pH The method for pH does not stipulate a specific holding time other than to state that the samples should be analyzed as soon as possible. For aqueous samples the 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous pH samples not analyzed in the field are considered out of hold time at the time of sample receipt. All soil samples are analyzed as soon as possible after sample receipt.
- LIV The initial volume for this sample has been reduced due to sample matrix and/or historical data therefore elevating the reporting limit.

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

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

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

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

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

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

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

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

Validated by: June O'Connor

5899233	Special Handling:	Standard TAT - 7 to 10 business days	🗌 Rush TAT - Date: Needed:	All TATs subject to laboratory approval Min. 24-hr notification needed for cushes Samples disposed after 60 days unless otherwise instructed.	PAS OSWEGD		OSUCYO NY State MY		-	eport?	CT DPH RCP Report?	**.	□ N Reduced*		State-specific	I meines see the with		C					01/0/10 D				j	pr Couch-Sells 🗍 Preser 🕂 unar 🗍 Selen	lion - Dachigunari - Dir voxintzio - O soltarito da	n Rev. Jan 2014	
			KD		Project No:	Site Name:	Location:	Semple(s)-	List Preservative Code helow:	-	(1) 2 07 156 156	7'7 17 57 H 60	7511	1K7 700 700 1-76			 		1411	11/5/14	111-111	. · .			C 🛛 EDD format:	E-mail to:		ConditionImon.ecc		spectrum-analytical.cou	
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PERMIT NO. 6-2010-13 Page 3 of 17

WASTEWATER DISCHARGE PERMIT FOR SIGNIFICANT INDUSTRIAL USERS

PART L - <u>WASTEWATER DISCHARGE LIMITATION AND MONITORING</u> <u>REQUIREMENTS</u>:

- A. During the period June 1, 2010 to December 31, 2013, the Permittee, Pollution Abatement Services Site (PAS) of Oswego, NY (Site) is authorized to discharge its leachate to the City of Oswego Sewer System.
- B. During this same period it is understood that based on historical data, PAS will typically discharge between 15,000-20,000 gallons of leachate each month. PAS will provide an annual schedule of anticipated discharge dates to the City at the beginning of each year and notify the City of any changes in a timely fashion. It is anticipated that PAS leachate will typically be discharged in the first week of each month. In addition, the discharge from the site shall not exceed the following limitations:

Industry Discharge Limitation

Parameter

Daily Maximum Loading

1.	Flow	.03 MGD*	
2.	Temperature	(See Section D. 3)	
- 3.	pH No less than 5.0	Instantaneous / No more than 10.5	Instantaneous
·• 4,	TSS	100 lbs/da	
× 5.	BOD	50 lbs/da	
- 5.	Antinomy	0.003 mg/l	
C.L.	Antinomy Arsenic	0.007 mg/l	
*** 8.	Beryllium	0.005 mg/l	
···9.	Cadmium	0.11 Ibs/da	
~10.	Chromium (Total)	2.49 lbs/da	,
<i>⊷*</i> ¢11.	Copper	0.11 lbs/da	
- 12.	Cyanide	0.17 lbs/da	
- 13.	Lead	0.05 lbs/da	
-14.	Mercury**	0.0002 mg/l / 0.00004 lbs/da	
-15.	Nickel	0.25 lbs/da	
91 S)	Selenium	0.001 mg/i	
en 17.	Silver	0.25 lbs/da	
<u>⇔⊉8</u> .	Thallium	0.003 mg/l	
₩19.	Zinc	0.50 lbs/da	
- 20.	Total Phenols	0.34 lbs/da	

* Multiple daily discharge events may be performed during any month.

** Concentration based on flow discharge of .03 mgd.

_____ de maximis

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ATTACHMENT III



December 24, 2014

Mr. Clay McClarnon de maximis, inc. 450 Montbrook Lane Knoxville, TN 37919

> RE: Report Se & As treatability (PAS Oswego) FILE: 5597/51412

Dear Clay:

O'Brien & Gere is pleased to provide de maximis with this report for evaluation of groundwater treatment at the Pollution Abatement Services (PAS) Oswego, New York (Site). This report was prepared in accordance with O'Brien & Gere's January 30, 2014 proposal. To facilitate your review, this report is organized as follows:

- Project background
- Testing methods and results
- Selenium analytical detection limit
- Conclusions and recommendations

PROJECT BACKGROUND

It is understood that arsenic (As) & selenium (Se) discharge concentrations within the existing collection system exceed the pre-treatment limits provided in City of Oswego permit modification dated February 28, 2012. As such, O'Brien & Gere proposed evaluating two adsorbent media to quantify the potential reduction of these constituents prior to discharge.

It was noted that the pre-treatment discharge limits for As and Se are 0.007 mg/L and 0.001 mg/L, respectively. Therefore, an investigation of laboratory procedures and feasibility of meeting the detection limit for selenium was also conducted.

TESTING METHODS AND RESULTS

A five (5)-gallon sample of groundwater was obtained on August 6, 2014 from the site for testing. The concentration of As and Se in this sample was 0.015 mg/L and <0.010 mg/L, respectively. These were analyzed using EPA Method 200.7 (ICP) using Life Science Laboratories, Inc (LSL) (NYS Certification #10248).

Two types of media were used for batch isotherm jar testing: a granular ferric hydroxide (ASG) media and a granular zero-valent iron (ZVI) media. For each medium, five discrete dosages were tested. Following addition of the media, the samples were mixed in glass containers on a gang stirrer for an 8-hour period. At the end of the 8-hour period, the media was separated from each test aliquot by filtration through a 0.45-µm membrane filter. Each filtrate was quantified for As and Se using EPA Method 200.7 (ICP) via LSL.

Testing results are provided in Table 1, below.

Mr. Clay McClarnon December 24, 2014 Page 2

Sample	ASG	As	Se	Sample	ZVI	As	Se
ID	Mg	mg/L	mg/L	ID	mg	mg/L	mg/L
ASG-0	0	0.015	<0.01	ZVI-0	0	0.015	<0.01
ASG-1	15.0	0.015	<0.01	ZVI-1	14.3	0.015	<0.01
ASG-2	31.0	0.015	<0.01	ZVI-2	30.6	0.015	<0.01
ASG-3	62.5	0.015	<0.01	ZVI-3	59.2	0.015	<0.01
ASG-4	118.8	0.015	< 0.01	ZVI-4	105.6	0.015	<0.01
ASG-5	173.4	0.016	<0.01	ZVI-5	153.8	0.016	<0.01

Table 1 - Batch Isotherm Data

Note: The detection level (PQL) for As using EPA Method 200.7 is 0.010 mg/L. The detection level (PQL) for Se using EPA Method 200.7 is 0.010 mg/L.

SUMMARY OF RESULTS

ARSENIC

As can be seen in Table 1, there was no removal of As. This can be contributed to two potential factors:

- The primary factor is likely the low initial value of As. At 0.015 mg/L, it is very difficult to achieve further reduction due to lack of driving force of As to adsorb to the solid, as well as potential equilibrium between the dissolved and adsorbed As at that low concentration.
- Secondarily, there may be minor impacts depending on the valence state of arsenic present (arsenite: As⁺³ and arsenate: As⁺⁵). Selectivity of adsorption to the media can depend on valence state.

SELENIUM

The removal of selenium could not be evaluated because the initial was below the analytical detection value of 0.010 mg/L.

INVESTIGATION OF SELENIUM ANALYTICAL METHODS AND DETECTION LIMITS

There are six methods that were found to be provided through commercial laboratories:

» ICP-MS EPA 200.8

» PC ICP-MS EPA 1640 RP

» ICP-DRC-MS Modified EPA 200.8 / Modified EPA 1638

- » GFAAS EPA 200.9 / SM 3113B
- » HGAAS SM3114B
- » HGAFS (It is unclear if this has an approved method. It may be considered a modified SM3114B)

Regardless of lab method availability, three fundamental questions were identified:

1) Is 0.001 mg/L achievable with any of the methods?

Mr. Clay McClarnon December 24, 2014 Page 3

2) What is the reporting limit achievable for the PAS ground water matrix and the Oswego WW matrix?

3) Is the method an EPA approved method?

Specifically under this scope, both ICP and ICP-MS detection limits were evaluated at a local lab and that lab could not provide the required PQL given the existing background matrix interferences in the PAS Oswego groundwater. Because the sample exhibited high background dissolved solids, potential false positives for Se in the MS were of concern. Therefore, ICP was used for treatability testing, as indicated in Testing Methods and Results.

The following review of available information is assumed to be related to "clean" water samples (those with no background interferences):

Brook Rand Laboratories

Available publications from BrookRand Labs show MDLs of 0.070 μ g/L, with a reporting limit of 0.2 μ g/L for saline waters (EPA Method 1640 RP) and a 0.024/0.19 μ g/L MDL, with a reporting limit of 0.040/0.50 μ g/L(EPA Methods 1638 DRC/Method 1638).

Of note, the information indicates that wastewater samples are typically diluted 50X, which would result in reporting limits of 0.002/0.025 mg/L, for EPA Methods 1638 DRC/Method 1638.

Frontier GeoSciences

A 2005 article on ICP-DRC-MS suggests a MDL of 0.010 μ g/L.

Applied Speciation – Bothell, WA

The major issue with hydride generation methods (HGAAS, HGFAS) is that they are operationally limited to the quantification of arsenite and selenite in solution; requiring pretreatment to convert all arsenic and selenium species to arsenite and selenite before analysis. Due to this inherent limitation, these methods can only provide "total reducible" arsenic and selenium and not "total" results that ICP-MS can provide.

In addition, the complexity of the sample matrix can alter the efficiency of the reduction procedure or the hydride generation reaction. The interferences from transition metals, dissolved organic carbon, and salinity are very well documented and allow for significant biases associated with complex matrices, especially at trace levels.

Research Environmental & Industrial Consultants – Beaver, WV

It was posted in 2010 that Hydride Generation Atomic Fluorescence Spectroscopy (HGAFS) can reliably and accurately measure selenium in water at levels less than one part per billion (<0.001 mg/L), according to laboratory director Dr. Clarence Haile. This is a significant improvement over the Graphite Furnace Atomic Absorption Spectroscopy (GFAAS) currently used by most labs. REIC's HGAFS procedure is essentially a modification of a current method, replacing the absorption detector with a more sensitive fluorescence detector. The fluorescence detector is not only more sensitive, it is also less susceptible to interferences.

West Virginia Study

A 2010 study commissioned by the WV DEP shows that several of these analysis techniques could be used in a clean water matrix to obtain a method detection limit (MDL) of 0.005 mg/L. This study did not focus on achieving lower results. However, an important conclusion of this study is the relative precision between methods and anticipated impacts of background matrix interferences.

Mr. Clay McClarnon December 24, 2014 Page 4

In the presence of common mine-related interferences, GFAA and ICP/MS show difficultly in accurately quantifying Selenium. ICP/MS appears to have difficulty even detecting Selenium in more contaminated samples, without using extraordinary techniques to examine each sample.

The gaseous hydride technique seems to generate the best data when used in a routine manner, regardless of whether the AA (Atomic Absorption) or AF (Atomic Fluorescence) detection technology is used, although this observation is based on a small sample set as only two laboratories assessed used this technique.

If one is to generate acceptable data by GFAA or ICP/MS in the presence of difficult matrices, some additional practices will have to be employed. For GFAA and ICP/MS mine related samples present inherent problems with detection and quantification of Selenium.

CONCLUSIONS AND RECOMMENDATIONS

- An independent review of the City of Oswego headworks analysis report and basis of limit establishment for both As and Se would be recommended.
- Additional evaluation/testing to identify a feasible treatment approach to meet the 0.007 mg/L discharge limit for As and the 0.001 mg/L discharge limit for Se will be required, if this limit remains to be enforceable.
- The treatability of Se could not be assessed, because the concentration was below analytical detection in the sample received for testing.
- It is believed based on the information reviewed that obtaining a laboratory method to achieve a PQL of <0.001 mg/L for Se may be difficult given the groundwater background matrix.</p>

O'Brien & Gere appreciates this opportunity to provide continued services to de maximis, inc. Should you have any questions regarding this report, please feel free to contact Frank DeOrio at (315)956-6222 (Frank.DeOrio@obg.com) or me at (315) 956-6534 (Scott.Grieco@obg.com).

Very truly yours, O'BRIEN & GERE ENGINEERS, INC.

Scott A. Grieco, Ph.D., P.E. Vice President

cc: Tee Tong-Ngork – O'Brien & Gere Nonnie Lim – O'Brien & Gere Kevin Stone – O'Brien & Gere

ATTACHMENT B-4

SEMI-ANNUAL LEACHATE AND GROUNDWATER MONITORING NOVEMBER 2014

O'BRIEN 5 GERE

Kevin Stone
Karen Storne
PAS Oswego Data Validation Report
6363/51412.260.045
December 30, 2014

This report presents the results of a data validation performed for groundwater samples collected as part of the PAS Oswego Semi-Annual Ground Water Sampling event at the New York State site. Sample collection activities were conducted by O'Brien & Gere in November 2014.

cc:

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

LSL utilized the methods listed in the following table.

Table 1-1. Analytical methods and references

Parameter	Method	Reference
VOCs	USEPA Methods 5030B/8260C	1
Note:		Endersting Calid Master
	tal Protection Agency (USEPA). 2006. <i>Test Methods for</i> <i>c, SW-846,</i> 3rd Edition. Washington D.C.	Evaluating Solid Waste:

VOCs indicates volatile organic compounds.

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

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

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

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

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

• USEPA. 2014. USEPA Region II Standard Operating Procedure For the Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP HW-24, Revision 4. New York, NY.

The validation included checking the following parameters:

- Chain-of-custody record
- Sample collection
- Holding times and sample preservation
- Blank analysis

june 18, 2014 Page 2

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

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

VOC DATA EVALUATION SUMMARY

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

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

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

I. Calibrations

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

• Dichlordifluoromethane, chloromethane, vinyl chloride, bromomethane, trichlorofluoromethane, methyl acetate, carbon tetrachloride, 1,1,2-trichloroethane and 1,2,4-trichlorobenzene in samples Equipment Blank, M-21, OD-3, LR-8, X-1[OD-3], LR-6, M-22, LCW-2, LCW-4 and Trip Blank.

II. Blank analysis

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

- Acetone and toluene in samples OD-3, LR-8, X-1[OD-3], and LCW-2.
- Methylene chloride in sample LCW-2.



june 18, 2014 Page 3

IV. Target analyte quantitation and OLs

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

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

DATA USABILITY

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



ATTACHMENT A

Sample Cross Reference List



Table 2. Sample cross reference list	rence list				
Laboratory	Date Collected	Laboratory ID	Client ID	Matrix	Analysis Requested
Life Science Labs	11/3/2014	K1411015-001	Equipment Blank	Aqueous	VOCS
Life Science Labs	11/3/2014	K1411015-002	M-21	Groundwater	vocs
Life Science Labs	11/3/2014	K1411015-003	OD-3	Groundwater	VOCs
Life Science Labs	11/3/2014	K1411015-004	LR-8	Groundwater	VOCs
Life Science Labs	11/3/2014	K1411015-005	X-1[OD-3]	Groundwater	VOCs
Life Science Labs	11/4/2014	K1411015-006	LR-6	Groundwater	VOCs
Life Science Labs	11/4/2014	K1411015-007	M-22	Groundwater	VOCs
Life Science Labs	11/4/2014	K1411015-008	LCW-2	Groundwater	VOCs
Life Science Labs	11/4/2014	K1411015-009	LCW-4	Groundwater	vocs
Life Science Labs	11/4/2014	K1411015-010	Trip Blank	Aqueous	vocs
Notes:					
Life Science Labs indicates Life Science Laboratories Inc., Syracuse, New York	Life Science Labora	tories Inc., Syracuse,	New York		
VOCs indicates volatile organic compounds.	ganic compounds.				
MS/MSD indicates matrix spike/ matrix spike duplicate.	spike/ matrix spike o	duplicate.			
The sample utilized for field duplicate	ld duplicate locatior	location is listed in brackets.			

ATTACHMENT B

Data Validation Approach



260C).	The validation approach taken by O'Brien & Gere is a conservative one; qualifiers are applied to same
	data to indicate both major and minor excursions so that data associated with any type of excursion a identified to the data user. Major excursions result in data being rejected (R), indicating that the data a considered unusable for either quantitative or qualitative purposes. Minor excursions result in same data being qualified as approximate (J, UJ, JN) or non-detected (U) that is otherwise usable for quantitative purposes.
General Validation	Excursions are subdivided into excursions that are within the laboratory's control and those that are o
Approach	of the laboratory's control. Excursions involving laboratory control sample recovery, calibration response method blank excursions, low or high spike recovery due to inaccurate spiking solutions or po- instrument response, holding times, interpretation errors, and quantitation errors are within the contro- of the laboratory. Excursions resulting from matrix spike recovery, serial dilution recovery, surrogate, a internal standard performance due to interference from the matrix of the samples are examples of tho excursions that are not within the laboratory's control if the laboratory has followed proper meth- procedures, including performing appropriate cleanup techniques.
Applying professional judgment	USEPA data validation directs professional judgment to be used when applying qualifiers in some cases. When utilizing professional judgment, provide justification for actions taken in the associated validation notes.
	O'Brien & Gere Data Validation Approach based on Region II guidelines for SW-846 methods, current as June 2014. Since Region II guidelines available for metals apply only to the CLP method, only the genera
Validation Parameter	approach to applying qualifiers was utilized for metals and inorganics. U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the
	quantitation limit (QL). J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the QL).
	J+ The result is an approximated quantity, but the result may be biased high. J- The result is an approximated quantity, but the result may be biased low.
Validation Qualifiers	NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. UJ - The analyte was not detected at a level greater than or equal to the QL. However, the QL is
	approximate and may be inaccurate or imprecise. R - The sample results are unusable due to the quality of the data generated because certain criteria we not met. The analyte may or may not be present in the sample.
	EMPC- Estimated maximum possible concentration is characterized by a response with a signal to noise at least 2.5 for both the quantitation ions but does not meet all the identification criteria specified in the method.
	Results for samples submitted for organic and inorganic analyses that are impacted by coolers that did n contain ice, or if the ice melted upon receipt and the cooler temperatures are greater than 10°C, are qualified as approximate (UJ, J). If samples are delivered to the laboratory the same day as sample collection and samples did not have
Cooler Temperature	sufficient time to reach 10°C, samples are not qualified, unless proper preservation was not provided fo samples between sample collection and sample receipt at the laboratory. Results for samples received at ambient temperature involved in extended shipment-day issues may be rejected, applying professional judgment.
ater sample collection r VOCs	If headspace or air bubbles are observed in VOC containers, the VOC data is qualified as approxima (UJ, J).
olding Time for Organics	Results for samples properly preserved and analyzed outside of but less than two times the holding time window established in the method or the QAPP for preparation and/or analysis are qualified approximate (UJ, J).
	Non-detected results for samples properly preserved and analyzed greater than two times the holding time window for preparation and/or analysis are <u>rejected</u> (R). Detected results for samples properly preserved and analyzed greater than two times the holding
	time window for preparation and/or analysis are qualified as approximate (J).



O'Brien & Gere Data validat (8260C).	ion approach based on USEPA Region II Data validation guidelines for SW-846 analytical methods: VOCs
Calibration Actions for Organics	Due to relative standard deviation (RSD) calibration excursions, detected results for analytes in samples associated with the calibration are qualified as approximate (J). Non-detected results associated with RSD excursions may be qualified as approximate (UJ) based on professional judgment. If the RSD calibration excursion is greater than 90, detected results for analytes in samples associated with the calibration are qualified as approximate (J) and non-detected results may be rejected (R), applying professional judgment. Due to %D calibration verification excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J) and non-detected results for analytes in samples associated with the calibration excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers. For response factor excursions, detected results are qualified as approximate (J) and non-detected results are rejected (R). For initial calibration verifications (ICV) excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers. For initial calibration verifications (ICV) excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers.
VOCs Calibration Evaluation	VOC target analytes are evaluated using the criteria of 20 (<15% for EPA 8260B) percent relative standard deviation (%RSD) or correlation coefficient of 0.990 for initial calibration curves. If RSD >20%, detected results are qualified as approximate (J) and non-detected results are qualified using professional judgment. Initial calibrations and calibration verifications are also evaluated using the response factor (RF) criteria listed in Table 4 or >0.050 for those compounds with no listed RRF and greater than 0.010 for ketones, alcohols, acrolein and 1,4-dioxane). If RRF is less than method requirements, qualify detected results as approximate (J) and non-detected results are unusable (R). ICV recoveries (opening CCV) are evaluated using laboratory control limits if available or 70 to 130% or a %D of less than 30. Calibration verifications (CCVs) are evaluated using a criterion of 20 percent difference (%D) for target analytes. If %D is not meet for ICV and CCV, qualify detected and non-detected results as approximate (J, UJ).
Associating samples with Field and Laboratory QC Samples	 Trip blanks are associated with samples in the same sample cooler. Equipment blanks (Rinsate blanks) are associated with samples collected in the same day (or sampling event) using the same sample collection equipment and decontamination solutions. When sampling equipment or decontamination solutions are changed, a new equipment blank should be collected. Each sample should be associated with one equipment blank, which is collected as close to the sample collection date/time as possible. Use professional judgment. Field blanks are associated with the sample containers used to collect samples. When sampling container lots are changed, a new field blank should be collected. Method blanks are associated with samples prepared at the same time (if preparation is required) or analyzed in the same analytical batch as the samples. Method blanks should reflect the sample matrix type (aqueous, low level solid, medium level solid). LCSs are associated with samples are collected in the field. The laboratory must prepare using project samples. MS/MSD and laboratory duplicate samples are collected in the field. The laboratory must prepare using project samples. MS/MSDs and laboratory duplicates are associated with samples of the same time (if preparation is required) is required. Field duplicates are collected in the field and are associated with samples of the same matrix type. Field duplicate each sample are provided due to field or laboratory problems, use professional judgment to associate each sample with a QC sample that reflects the samples, record the impact in the



O'Brien & Gere Data validat. (8260C).	ion approach based on USEPA Region II Data validation guidelines for SW-846 analytical methods: VOCs
<u>,</u>	The laboratory control limit (CL) is used to assess MS/MSD, LCS, surrogate and laboratory duplicate data.
	Refer to Region II guidelines if laboratory control limits are not available.
	In the case that excursions are identified in more than one quality control sample of the same matrix
	within one sample delivery group, samples are batched according to sample preparation or analysis date
	and qualified accordingly (see batching description above).
	If percent recoveries are less than laboratory CLs but greater than 10%, non-detected and detected results
	are qualified as approximate (UJ, J).
	If percent recoveries are greater than laboratory CLs, detected results are qualified as approximate (J).
	If percent recoveries are less than 10%, detected results are qualified as approximate (J) and non-detected
Evaluation and Action for MS/MSD, LCS, Surrogate and Field Duplicate Data	results are qualified as <u>rejected</u> (R).
	If RPDs for MSDs or laboratory duplicates are outside of laboratory CLs, detected results are qualified as
	approximate (J). Non-detected results may not be qualified, applying professional judgment.
	Qualification is performed only when both MS and MSD recoveries are outside of laboratory CLs.
for VOCs	Organic data are rejected (R) in the case that both MS/MSD recoveries are less than 10%.
	Qualification is not performed if MS/MSD or surrogate recoveries are outside of laboratory CLs with an
	analysis that applied a dilution factor of 10 times or more, applying professional judgment.
	Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked
	sample or the field duplicate pair, respectively.
	Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 50 percent
	for aqueous samples and less than 100 percent for soils when results are greater than or equal to five
	times the QL. When a field duplicate result is less than five times the QL, a control limit of plus or minus
	two times the QL (difference criterion) is applied. If RPDs or differences are outside of criterion, detected
	and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions.
	Blanks are not qualified due to contamination of another blank.
	Sample results qualified as non-detected (U) are treated as hits when qualifying for surrogate or
Evaluation and Actions for Blank Results (Method, Field, Equipment, Instrument, Storage) for Organics	calibration excursions.
	The following approach is utilized for applying qualifiers, using twice the quantitation limit (QL) for
	methylene chloride, 2-butanone and acetone:
	1. For blank results less than the QL, samples with concentrations less than the QL are reported at
	the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the
	QL are not qualified or may apply the Blank Rule Option.
	2. For blank results greater than the QL, samples with concentrations less than the QL are reported
	at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to
	the QL and less than the blank contamination level are reported and qualified as non-detected (U).
	Samples with concentrations greater than or equal to the QL and greater than or equal to the blank contamination level are not qualified or may apply the Blank Rule Option.
	3. For blank results equal to the QL, sample concentrations less than the QL are reported at the QL
	value and qualified as non-detected (U). Samples greater than or equal to the QL are not qualified
	or may apply the Blank Rule Option.
	4. For gross contamination in blanks (saturated peaks, interference peaks, poor baselines), a
	associated sample detected results are rejected (R) or qualified as non-detected (U) using
	professional judgment.
	Blank Rule Option:
	If methylene chloride, acetone, 2-butanone, or phthalates are detected in the sample at a
	concentration that is less than ten times the concentration in the associated blank, the sample resul
	is qualified as "U". If other target analytes are detected in the sample at a concentration that is less
	than five times the concentration detected in the associated blank, the sample result is qualified as
	"U".



Evaluation of Internal Standards for Organics	Internal standard recoveries are evaluated using control limits of from 50% of the lower standard area to 100% of the upper standard area of the associated calibration verification standard. The results associated with internal standard area recoveries 25% or greater but less than 50% are qualified as approximate (J, UJ). Non-detected results associated with internal standard area recoveries less than 25% are <u>rejected</u> (R), using professional judgment.
Target Analyte Identifications for Organics	If incorrect target analyte identifications were made due to data interpretation or laboratory transcription errors, the associated result will be corrected or <u>rejected</u> (R), applying professional judgment.





ATTACHMENT C

Definitions of QA/QC Terms



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



	Laboratory QA/QC term definitions
Matrix	The material of which the sample is composed or the substrate containing the analyte of interest, such as drinking water, waste water, air, soil/sediment, biological material.
Matrix Spike (MS)	An aliquot of a matrix (water or soil) fortified (spiked) with known quantities of specific target analytes and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for the matrix by measuring recovery.
Matrix spike duplicate (MSD)	A second aliquot of the same matrix as the matrix spike that is spiked in order to determine the precision of the method.
Retention time	The time a target analyte is retained on a GC column before elution. The identification of a target analyte is dependent on a target compound's retention time falling within the specified retention time window established fo that compound.
Relative retention time	The ratio of the retention time of a compound to that of a standard.

Source O'Brien & Gere



Date: 21-Nov-14

· · · :	· · · · · · · · · · · · · · · · · · ·	
CLIENT:	O'Brien & Gere Operations, LLC	
Project:	PAS Oswego-Semi-Annual Well Sampling	Work Order Sample Summary
Lab Order:	K1411015	* • • • *

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
K1411015-001A	Equipment Blank 11/3/14		11/3/2014	11/4/2014
K1411015-002A	M-21 11/3/14		11/3/2014	11/4/2014
K1411015-003A	OD-3 11/3/14		11/3/2014	11/4/2014
K1411015-004A			11/3/2014	11/4/2014
K1411015-005A	X-111/3/14 [OP-3]		11/3/2014	11/4/2014
KI411015-006A	LR-6 11/4/14 MS/MS	D	11/4/2014	11/4/2014
K1411015-007A	M-22 11/4/14		11/4/2014	11/4/2014
K1411015-008A	LCW-2 11/4/14		11/4/2014	11/4/2014
K1411015-009A	LCW-4 11/4/14		11/4/2014	11/4/2014
K1411015-010A	QC Trip Blanks 11/4/14		11/3/2014	11/4/2014

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Page 1 of I

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Life Science Laboratories, Inc. East Syracuse, NY 13057

Kiyllol5 Chain of Custody Record

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Analytical Results

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:	K1411015-001A Equipment Blank 11/3/14
W Order: Matrix:	K1411015 WATER Q			Collection Date: Date Received:	11/03/14 11:30 11/04/14 16:00
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502.2 11/17/14 10:18	Sample Size %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R27798 1-SAMP-J7981.D
Col Type:	11/1//14 10:18	rescoue:	6200 W_OLAVI42	FIGLD.	L-DHMI-7/761,D

Analyte	Result Qual PQL	MDL	Units	DF	Date Analyze
VOLATILE ORGANIC COMPOUND	S BY GC/MS		SW8260	C/5030C	
Dichlorodifluoromethane	ND UJ 1.00	0.10	µg/L	1	11/13/14 13:07
Chloromethane	NO U J100	0.33	µg/L	1	11/13/14 13:07
Vinyl chloride	ND U J1,00	0.33	µg/L	1	11/13/14 13:07
Bromomethane	ND 4 51.00	0.33	µg/L	1	11/13/14 13:07
Chloroethane	ND 1.00	0.33	µg/L	1	11/13/14 13:07
Trichlorofiluoromethane	ND UJ 1.00	0.10	µg/L	1	11/13/14 13:07
1,1-Dichloroethene	, ND 0.50	0.16	μg/L	1	11/13/14 13:07
1,1,2-Trichloro-1,2,2-trifluoroethane	ND 0.50	0.10	μ g /L	1	11/13/14 13:07
Acetone	2.98(J) 10.0	1.00	µg/L	1	11/13/14 13:07
Carbon disuifide	ND 0.50	0.11	µg/L	1	11/13/14 13:07
Methyl acetate	- ND (155.00	1.00	µg/L	1	11/13/14 13:07
Methylene chloride	3 ND 2.00	0.16	µg/L	1	11/13/14 13:07
trans-1,2-Dichloroethene	ND 0,50	0.10	µg/L	1	11/13/14 13:07
Methyl tert-butyl ether	ND 1.00	0.16	µg/L	1	11/13/14 13:07
1,1-Dichloroethane	ND 0.50	0.10	µg/L	1	11/13/14 13:07
cis-1,2-Dichloroethene	ND 0.50	0.10	µg/L	1	11/13/14 13:07
2-Butanone	ND 10.0	1.00	μg/L	1	11/13/14 13:07
Chloroform	ND 0.50	D.10	µg/L	1	11/13/14 13:07
1,1,1-Trichloroethane	ND 0.50	0.10	µg/L	1	11/13/14 13:07
Cyclohexane	ND 0.50	0.10	µg/L	1	11/13/14 13:07
Carbon tetrachioride	ND UJ 0.50	0.10	µg/L	1	11/13/14 13:07
Benzene	ND 0.50	0.10	µg/L	1	11/13/14 13:07
1,2-Dichloroethane	ND 0.50	0.16	µg/L	1	11/13/14 13:07
Trichloroethene	ND 0.50	0.10	µg/L	1	11/13/14 13:07
Methylcyclohexane	ND 0,50	0.10	µg/L	1	11/13/14 13:07
1,2-Dichioropropane	* ND 0.50	0.16	µg/L	1	11/13/14 13:07
Bromodichloromethana	ND 0.50	0.10	µg/L	1	11/13/14 13:07
cis-1,3-Dichloropropene	ND 0.50	0.16	μg/L	1	11/13/14 13:07
4-Methyl-2-pentanone	ND 5.00	1.00	µg/L	1	11/13/14 13:07
Toluene	0.10(1) 0.50	0.10	µg/L	1	11/13/14 13:07
trans-1,3-Dichloropropene	ND 0,50	0.16	µg/L	1	11/13/14 13:07
1,1,2-Trichioroethane	ND UJ 0.50	0,16	µg/L	1	11/13/14 13:07
Tetrachioroethene	ND 0.50	- 0,10	µg/L	1	11/13/14 13:07
2-Hexanone	ND 5.00	1.00	µg/L	1	11/13/14 13:07
Quantisers;	um Contaminant Level	•	detected in the as times for prepara		
J Analyte detected below	•	•			ation Limit (PQL)

P Prim./Conf. column %D or RPD exceeds limit 698075

Print Date: 11/17/14 10:25

Project Supervisor: Anthony Crescenzi

S Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc. LSL 5854 Butternut Drive

Analytical Results

E	ast Syracuse, NY 130	57 (315)	445-1900		StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Opera PAS Oswego-Semi-An	-	pling	Lab ID: Client Sample ID:	K1411015-001A Equipment Blank 11/3/14
W Order: Matrix:	K1411015 WATER Q			Collection Date: Date Received:	11/03/14 11:30 11/04/14 16:00
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502.2 11/17/14 10:18	Sample Size %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R27798 1-SAMP-J7981.D
Col Type:			-		

Analyte	Rea	wit Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY GC	/MS			SW8260	0C/5030C	
Dibromochloromethane		ND	0.50	0.10	µg/L	1	11/13/14 13:07
1,2-Dibromoethane		ND	0,50	0.16	µg/L	1	11/13/14 13:07
Chiorobenzene		ND	0.50	0.10	µg/L	1	11/13/14 13:07
Ethylbenzene		ND	0.50	0.10	µg/L	1	11/13/14 13:07
Xylenes (total)		ND	1.00	0.30	µg/L	1	11/13/14 13:07
Styrene		ND	0,50	0.10	µg/L	1	11/13/14 13:07
Bromoform		ND	1.00	0.33	µg/L	1	11/13/14 13:07
sopropylbenzene	, į.	ND	0.50	0.10	µg/L	1	11/13/14 13:07
1,1,2,2-Tetrachloroethane		ND	0.50	0,10	µg/L	1	11/13/14 13:07
1,3-Dichlorobenzene		ND	0,50	0.10	µg/L	1	11/13/14 13:07
,4-Dichiorobenzene		ND	0.50	0.16	µg/∟	1	11/13/14 13:07
,2-Dichlorobenzene	Ł	ND	0.50	Q.10	µg/L	1	11/13/14 13:07
1,2-Dibromo-3-chloropropane	4.4	ND	5.00	1.00	μ g/ L	1	11/13/14 13:07
1,2,4-Trichlorobenzene		NDUJ	1.00	0.10	µg/L	1	11/13/14 13:07
Surr: 1,2-Dichloroethane-d4	••••••••••••••••••••••••••••••••••••••	121	75-130	0.16	%REC	1	11/13/14 13:07
Surr: Toluane-d8		99	75-125	0.10	%REC	1	11/13/14 13:07
Surr: 4-Bromofiuorobenzene		104	75-125	0.10	%REC	1	11/13/14 13:07

Oualifiers :	*	Value exceeds Maximum Contaminant 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
·		· · · · · · · · · · · · · · · · · · ·		

Print Date: 11/17/14 10:25 698075

Analytical Results

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:	K1411015-002A M-21 11/3/14
W Order: Matrix:	K1411015 WATER		<i></i>	Collection Date: Date Received:	11/03/14 13:30 11/04/14 16:00
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502,2 11/17/14 10:18	Sample Size %Moisture: TestCode:	10 mL 8260W OLM42	PrepDate: BatchNo: FileID:	R27798 1-SAMP-J7982.D
Col Type:					

Analyte	Result Qual PQL	MDL	Units	DF	Date Analyze
VOLATILE ORGANIC COMPO			SW8260	0C/5030C	
Dichlorodifluoromethane	ND U J1.00	0.10	µg/L	1	11/13/14 13:36
Chloromethane	ND UT1.00	0.33	μ g/ L	1	11/13/14 13:36
Vin <u>yl chlor</u> ide	ND (1J1.00	0.33	րց/Լ	1	11/13/14 13:36
Bromomethane	ND 4 71.00	0.33	µg/L	1	11/13/14 13:36
Chloroethane	0.69 J 1.00	0.33	µg/L	1	11/13/14 13:36
Trichlorofluoromethane	ND UJT.00	0.10	µg/L	1	11/13/14 13:36
1,1-Dichloroethene	ND 0.50	0.16	µg/L	1	11/13/14 13:36
1,1,2-Trichloro-1,2,2-trifluoroethane	ND 0.50	0.10	µg/L	1	11/13/14 13:36
Acetone	, ND 10.0	1.00	µg/L	1	11/13/14 13:36
Carbon disulfide	ND 0.50	0.11	µg/L	1	11/13/14 13:36
Vethvi acetate	ND UJ500	1.00	µg/L	1	11/13/14 13:36
Methylene chloride	: ND 2.00	0.16	µg/L	1	11/13/14 13:36
rans-1,2-Dichloroethene	' ND 0.50	0.10	µg/L	1	11/13/14 13:36
Viethyl tert-butyl sther	ND 1.00	0.16	µg/L	1	11/13/14 13:36
1,1-Dichloroethane	ND 0.50	0.10	µg/L	1	11/13/14 13:36
cis-1,2-Dichloroethene	ND 0,50	0.10	µg/L	1	11/13/14 13:36
2-Butanone	ND 10.0	1.00	µg/L	1	11/13/14 13:36
Chloroform	ND 0,50	0.10	µg/L	1	11/13/14 13:36
1,1,1-Trichloroethane	ND 0.50	0.10	µg/L	1	11/13/14 13:36
Cyclohexana	0.31(1) 0.50	0.10	µg/L	1	11/13/14 13:36
Carbon tetrachloride	ND UJ 0.50	0.10	µg/L	1	11/13/14 13:36
Benzene	ND 0.50	0,10	µg/L	1	11/13/14 13:36
,2-Dichloroethane	ND 0,50	0.16	µg/L	1	11/13/14 13:36
Frichloroethene	ND 0.50	0.10	µg/L	1	11/13/14 13:36
Vethylcyclohexane	ND 0.50	0.10	µg/L	1	11/13/14 13:36
2-Dichloropropana	ND 0.50	0.16	µg/L	1	11/13/14 13:36
Bromodichloromethane	ND 0.50	0,10	µg/L	1	11/13/14 13:36
s-1,3-Dichloropropene	ND 0.50	0.16	µg/L	1	11/13/14 13:36
-Methyl-2-pentanone	ND 5.00	1.00	µg/L	1	11/13/14 13:36
oluene	ND 0.50	0.10	µg/L	1	11/13/14 13:36
rans-1,3-Dichtoropropene	ND 0.50	0,16	µg/L	1	11/13/14 13:36
1,2-Trichloroethane	ND 4 J 0.50	0,16	µg/L	1	11/13/14 13:36
etrachioroethene	ND 0,50	0.10	μg/L	1	11/13/14 13:36
2-Hexanone	ND 5.00	1.00	µg/L	1	11/13/14 13:36
Onalifiers: * Value exceeds M	aximum Contaminant Level	B Analyte	detected in the a	ssociated M	ethod Blank
	e instrument calibration range	H Holding	times for prepar	ation or ana	lysis exceeded.
J Analyte detected	below the PQL	ND Not Deta	ected at the Prace	tical Quantif	ation Limit (PQL)
P Prim/Conf. colu	nn %D or RPD exceeds limit	S Spike Ra	covery outside	accepted rec	overy limits

Print Date: 11/17/14 10:25

698328

Analytical Results

E	ast Syracuse, NY 13	3057 (315)	445-1900		stateCertNo: 10248
CLIENT Project:	O'Brien & Gere Ope PAS Oswego-Semi-		pling	Lab ID: Client Sample ID:	K1411015-002A M-2I 11/3/14
V Order: Matrix:	K1411015 WATER			Collection Date: Date Received:	11/03/14 13:30 11/04/14 16:00
inst. ID: ColumnID:	MS03_10 Rtx-502.2	Sample Size %Moisture:	10 mL	PrepDate: BatchNo:	R27798
Revision: Col Type:	11/17/14 10:18	TestCode:	8260W_OLM42	FileID:	1-SAMP-J7982.D

Analyte .	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY GC/MS		· • • •	SW828	0C/5030C	;
Dibromochloromethane	ND	0.50	0.10	µg/L	1	11/13/14 13:36
1,2-Dibromoethane	ND	0.50	0.16	μg/L	1	11/13/14 13:36
Chlorobenzene	1.98	0.50	0,10	µg/L	1	11/13/14 13:36
Ethylbenzene	ND	0,50	0.10	µg/L	1	11/13/14 13:36
Xylenes (total)	ND	1.00	0.30	µg/L	1	11/13/14 13:36
Styrene	ND	0.50	0.10	µg/L	1	11/13/14 13:36
Bramoform	ND	1.00	0.33	µg/L	1	11/13/14 13:36
Isopropylbenzene	0,18	0.50	0.10	μg/L	1	11/13/14 13:36
1,1,2,2-Tetrachloroethane	, ND	0.50	0.10	µg/L	1	11/13/14 13:36
1,3-Dichiorobenzene	ND	0.50	0,10	µg/L	1	11/13/14 13:36
1,4-Dichiorobenzene	ND	0.50	0,16	μg/L	1	11/13/14 13:36
1,2-Dichlorobenzene	⇒ 0.19(J	0.50	0.10	µg/L	1	11/13/14 13:36
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	µg/L	t	11/13/14 13:36
1,2,4-Trichlorobenzene	' ND U	J 1.00	0.10	µg/L	1	11/13/14 13:36
Surr: 1,2-Dichloroethane-d4	122	75-130	0.16	%REC	1	11/13/14 13:36
Surr: Toluena-d8	102	75-125	0.10	%REC	1	11/13/14 13:36
Surr: 4-Bromofluorobenzene	102	75-125	0.10	%REC	1	11/13/14 13:36

Qualifiers:

E Value exceeds the instrument calibration range

Value exceeds Maximum Contaminant Level

698328

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

Print Date: 11/17/14 10:25

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Analytical Results

Project: P W Order: K	O'Brien & Gere Operati PAS Oswego-Semi-Anr K1411015		pling	Lab ID: Client Sample ID:	
	K1411015			Collection Deter	
	WATER			Collection Date: Date Received:	11/03/14 15:00 11/04/14 16:00
ColumnID: R	MS03_10 Rtx-502.2 11/17/14 10:18	Sample Size %Moisture: TestCode:		PrepDate: BatchNo; FileID:	R27798 1-SAMP-17983.D

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Analyte	Result Qual PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND	S BY GC/MS		SW826	0C/50300	:
Dichlorodifluoromethane	ND UJ1.00	0.10	µg/L	1	11/13/14 14:05
Chloromethane	ND UJ 1.00	0.33	µg/L	1	11/13/14 14:05
Vinyl chloride	ND 4JT1.00	0.33	µg/L	1	11/13/14 14:05
Bromomethane	ND UJ 1.00	0.33	µg/L	1	11/13/14 14:05
Chloroethane	4.69 1.00	0.33	µg/L	1	11/13/14 14:05
Trichlozofluoromethane	ND UTI.00	0.10	μ9/1.	1	11/13/14 14:05
1,1-Dichioroethene	ND 0.50	0.16	µg/i_	1	11/13/14 14:05
1,1,2-Trichloro-1,2,2-triflucroethane	ND 0,50	0.10	hð\f	1	11/13/14 14:05
Acetone	\〇: 2.43 J (人 10.0	1.00	µg/L	1	11/13/14 14:05
Carbon disulfide	ND 0,50	0.11	µg/L	1	11/13/14 14:05
Methyl acetate	- ND UJ 5.00_	1.00	µg/∟	1	11/13/14 14:05
Methylene chloride	ND 2.00	0.16	µg/L	1	11/13/14 14:05
trans-1,2-Dichloroethene	ND 0.50	0.10	µg/L	1	11/13/14 14:05
Methyl tert-butyl ether	ND 1.00	0,16	µg/L	1	11/13/14 14:05
1,1-Dichlorgethane	0.10(1) 0.50	0.10	µg/L	1	11/13/14 14:05
cls-1,2-Dichlorosthene	ND 0.50	0.10	µg/L	1	11/13/14 14:05
2-Butanone	ND 10.0	1.00	µg/L	1	11/13/14 14:05
Chloroform	ND 0.50	0.10	µg/L	1	11/13/14 14:05
1,1,1-Trichioroethane	ND 0.50	0.10	µg/L	1	11/13/14 14:05
Cyclohexane	1.76 0.50	0.10	µg/L	1	11/13/14 14:05
Carbon tetrachloride	ND UT 0.50	0.10	µg/L	1	11/13/14 14:05
Benzene	2.20 0.50	0.10	µg/L	1	11/13/14 14:05
1,2-Dichioroethane	ND 0.50	0.16	µg/L	1	11/13/14 14:05
Trichloroethene	ND 0.50	0.10	µg/L	1	11/13/14 14:05
Methylcyclohexane	0.14() 0.50	0.10	µg/L	1	11/13/14 14:05
1,2-Dichioropropane	ND 0.50	0.16	jug/L	1	11/13/14 14:05
Bromodichloromethane	ND 0.50	0.10	μ <u>α</u> /Γ	1	11/13/14 14:05
cis-1,3-Dichloropropene	ND 0,50	0.16	µg/L	1	11/13/14 14:05
4-Methyl-2-pentanone	ND 5.00	1.00	μg/L	1	11/13/14 14:05
	50 0.20 J (0.50	0.10	μg/L	1	11/13/14 14:05
trans-1,3-Dichloropropens	ND 0.50	0.16	μg/L	1	11/13/14 14:05
1,1,2-Trichloroethane	ND 400.50	0.16	µg/L	1	11/13/14 14:05
Tetrachloroethene	ND 0,50	0.10	µg/L	1	11/13/14 14:05
2-Hexanone	ND 5.00	1.00	µg/L	1	11/13/14 14:05
Ouslifiers: * Value exceeds Maximu	m Contaminant Level	B Analyte	detected in the a	ssociated M	ethod Blank
	ument calibration range	H Holding	times for prepar	ation or ana	lysis exceeded
J Analyte detected below	v the PQL	ND Not Dete	cted at the Prac	tical Quanti	tation Limit (PQL)
P Prim./Conf. column %	D or RPD exceeds limit	S Spike Re	covery outside	accepted rec	overy limits

Print Date: 11/17/14 10:25

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Analytical Results

	ast Syracuse, NY 1305	7 (315)	445-1900	5	stateCertNo; 10248
CLIENT Project:	O'Brien & Gere Operati PAS Oswego-Semi-Ann	•	pling	Lab ID: Client Sample ID:	K1411015-003A OD-3 11/3/14
W Order: Matrix: Inst. ID:	K1411015 WATER MS03 10	Sample Size	10 mľ.	Collection Date: Date Received: PrepDate:	11/03/14 15:00 11/04/14 16:00
ColumnID: Revision: Col Type:		%Moisture: TestCode:		BatchNo:	R27798 1-SAMP-J7983.D

Analyte	Result Qua	l PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY GC/MS			SW826	0C/5030C	
Dibromochioremethane	ND	0,50	0.10	µg/L	1	11/13/14 14:05
1,2-Dibromoethane	ND	0.50	0.16	µg/L	1	11/13/14 14:05
Chlorobenzena	26.3	0.50	0.10	µg/L	1	11/13/14 14:05
Ethylbenzene	ND	0.50	0.10	µg/L	1	11/13/14 14:05
Xytenes (total)	0.31	1.00	0.30	ug/L	1	11/13/14 14:05
Styrene	ND	0.50	0.10	μg/L	1	11/13/14 14:05
Bromoform	ND	1.00	0,33	µg/L	1	11/13/14 14:05
Isopropylbenzene	1.10	0.50	0.10	µg/L	1	11/13/14 14:05
1,1,2,2-Tetrachioroethane	, ND	0.50	0,10	µg/L	1	11/13/14 14:05
1,3-Dichlorobenzene	0,10(J)	0.50	0.10	µg/L	1	11/13/14 14:05
1,4-Dichlorobenzene	- 1.30	0.50	0.16	µg/L	1	11/13/14 14:05
1,2-Dichlorobenzene	0.82	0.50	0.10	µg/L	1	11/13/14 14:05
1,2-Dibromo-3-chloropropane	· NO	5.00	1.00	µg/L	1	11/13/14 14:05
1,2,4-Trichlorobenzene	ND US	T 1.00	0.10	µg/L	1	11/13/14 14:05
Surr: 1,2-Dichloroethane-d4	101	75-130	0.16	%REC	1	11/13/14 14:05
Surr: Tolusna-d8	99	75-125	0.10	%REC	1	11/13/14 14:05
Surr: 4-Bromoficorobenzene	99	75-125	0.10	%REC	1	11/13/14 14:05

Qualifiers:

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

698329

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Practical Quantitation Limit (PQL)
- S Spike Recovery outside accepted recovery limits

Print Date: 11/17/14 10:25

Project Supervisor: Anthony Crescenzi

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Analytical Results

	ast Syracuse, NY 130:	57 (315) 44	45-1900	5	stateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operat PAS Oswego-Semi-An	•	ing	Lah ID: Client Sample ID:	K1411015-004A LR-8 11/3/14
W Order: Matrix: Inst. ID:	K1411015 WATER MS03 10	Sample Size 10		Collection Date: Date Received: PrepDate:	11/03/14 16:05 11/04/14 16:00
ColumnID: Revision: Col Type:		%Moisture:	260W_OLM42	BatchNo: FileID;	R27798 1-SAMP-J7984.D

Analyte	Result Qual PQL	MDL	Units	DF	Date Analyze
VOLATILE ORGANIC COMPOUND	S BY GC/MS		SW826	0C/5030C	;
Dichlorodifluoromethane	ND UJ1.00	0.10	µg/L	1	11/13/14 14:35
Chloromethane	ND UJ 1.00	0.33	µg/L	1	11/13/14 14:35
Vinyl chlorida	ND UJ1.00.	0.33	µg/L	1	11/13/14 14:35
Bromomethane	ND 45 1.00	0.33	µg/L	1	11/13/14 14:35
Chioroethane	4.22 1.00	0.33	µg/L	1	11/13/14 14:35
Trichiorofiuoromethane	ND UJ1.00	0.10	µg/∟	1	11/13/14 14:35
1,1-Dichioroethene	ND 0.50	0.16	µg/L	1	11/13/14 14:35
1,1,2-Trichloro-1,2,2-trifluoroethane	ND 0,50	0.10	µg/L	1	11/13/14 14:35
Acetone	10, 1.25 U 10.0	1.00	µg/L	1	11/13/14 14:35
Carbon disulfide	ND 0.50	0.11	µg/L	1	11/13/14 14:35
Methyl acetate	ND UT 5.00	1.00	µg/L	· 1	11/13/14 14:35
Methylene chloride	ND 2.00	0.16	µg/L	1	11/13/14 14:35
trans-1,2-Dichloroethene	ND 0.50	0.10	µg/L	1	11/13/14 14:35
Methyl tert-butyl ether	ND 1.00	0.16	µg/L	1	11/13/14 14:35
1,1-Dichloroethane	0.13(j) 0.50	0.10	µg/L	1	11/13/14 14:35
cis-1,2-Dichlorosthane	ND 0.50	0.10	µg/L	1	11/13/14 14:35
2-Butanone	ND 10.0	1.00	µ g /L	1	11/13/14 14:35
Chicroform	ND 0.50	0.10	µg/L	1	11/13/14 14:35
1,1,1-Trichioroethane	ND 0.50	0.10	μg/L	1	11/13/14 14:35
Cyciohexane	2.93 0.50	0.10	µg/L	1	11/13/14 14:35
Car <u>bon tetrachlo</u> ride	ND はす 0.50	0.10	µg/L	1	11/13/14 14:35
Benzene	4,31 0,50	0.10	µg/L	1	11/13/14 14:35
1,2-Dichloroethane	ND 0.50	0.16	µg/L	1	11/13/14 14:35
Trichloroethene	ND 0.50	0.10	µg/L	1	11/13/14 14:35
Methylcyclohexane	0,16(1) 0.50	0.10	μg/L	1	11/13/14 14:35
1,2-Dichloropropane	ND 0,50	0.16	µg/L	1	11/13/14 14:35
Bromodichloromethane	ND 0,50	0.10	µg/L	1	11/13/14 14:35
cis-1,3-Dichloropropene	ND 0.50	0.16	µg/L	1	11/13/14 14:35
4-Methyl-2-pentanone	ND 5.00	1.00	µg/L	1	11/13/14 14:35
	50 0:37 JU 0.50	0,10	µg/L	1 '	11/13/14 14:35
trans-1,3-Dichloropropene	ND 0.50	0,16	µg/L	1	11/13/14 14:35
1.1.2-Trichlomethane	ND UT 0.50	D.16	µg/L	1	11/13/14 14:35
Tetrachioroethene	ND 0.50	0.10	µg/∟	1	11/13/14 14:35
2-Hexanone	ND 5.00	1.00	µg/L	1	11/13/14 14:35
Qualifiers: * Value exceeds Maxim	um Contaminant Level	-	detected in the		
	rument calibration range		times for prepa		-
J Analyte detected below	v the PQL	ND Not Det	ected at the Pra	zical Quanti	tation Limit (FQL)
D Dim Cant ashing 94	D or DBD exceeds limit	S Soike R	ecovery outside	accented rec	avery limits

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

S Spike Recovery outside accepted recovery limits

Print Date: 11/17/14 10:25

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Analytical Results

E	ast Syracuse, NY 130	057 (315)	445-1900	£	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Oper PAS Oswego-Semi-A		pling	Lab ID: Client Sample ID:	K1411015-004A LR-8 11/3/14
W Order: Matrix:	K1411015 WATER			Collection Date: Date Received:	11/03/14 16:05 11/04/14 16:00
Inst. ID: ColumnID:		Sample Size %Moisture:		PrepDate: BatchNo:	R27798
Revision: Col Type:	11/17/14 10:18	TestCode:	8260W_OLM42	FileID:	1-SAMP-J7984.D

Analyte	R	esult Qua	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY G	C/MS			SW826	0C/5030C	
Dibromochioromethane		ND	0.50	0.10	µg/L	1	11/13/14 14:35
1,2-Dibromoethane		ND	0.50	0.16	µg/∟	1	11/13/14 14:35
Chlorobenzene		17.6	0.50	0.10	µg/L	1	11/13/14 14:35
Ethylbenzene		ND	0.50	0.10	µg/L	1	11/13/14 14:35
Xylenes (total)		0.34()	1.00	0.30	µg/L	1	11/13/14 14:35
Styrene		ND	0.50	0.10	µg/L	1	11/13/14 14:35
Bromoform		ND	1.00	0.33	µg/L	1	11/13/14 14:35
sopropyibenzene	i f	1.01	0.50	0.10	μg/L	1	11/13/14 14:35
1,1,2,2-Tetrachloroethane		ND	0.50	0.10	µg/L	1	11/13/14 14:35
1,3-Dichlorobenzene		0.13()	0.50	0,10	µg/L	1	11/13/14 14:35
1,4-Dichlorobenzene	. 14	0.91	0.50	0.16	µg/L	1	11/13/14 14:35
1,2-Dichiorobenzene	:	0,68	0.50	0.10	µg/L	1	11/13/14 14:35
1,2-Dibromo-3-chioropropane		ND	5.00	1,00	µg/L	1	11/13/14 14:35
1,2,4-Trichlorobenzene	•	UD UN	1.00	0,10	μg/L	1	11/13/14 14:35
Surr: 1,2-Dichloroethane-d4		115	75-130	0,16	%REC	1	11/13/14 14:35
Suit: Toluane-d8		100	75-125	0,10	%REC	1	11/13/14 14:35
Surr: 4-Bromofluorobenzene		99	75-125	0.10	%REC	1	11/13/14 14:35

Qualifiers:

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

Print Date: 11/17/14 10:25 698330

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Analytical Results

	ast Syracuse, NY 13	057 (315)	445-1900	1	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Oper PAS Oswego-Semi-A		pling	Lab ID: Client Sample ID:	K1411015-005A X-1 11/3/14 (00-3)
W Order: Matrix:	K1411015 WATER			Collection Date: Date Received:	11/03/14 0:00 11/04/14 16:00
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502,2 11/17/14 10:18	Sample Size %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R27798 1-SAMP-J7985.D
Col Type:	11/1//14 10.10	Testrone:	0200 W_OLW42		7-13-211111 -4 / 20-2, 1 2

Analyte	Result Qui	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COM				SW8260C/5030C		
Dichlorodifluoromethane	NDU		0.10	µg/L	1	11/13/14 15:04
Chioromethane	ND L	J _{1.00}	0,33	µg/L	1	11/13/14 15:04
Vinyi chloride	ND U	J1.00	0.33	µg/L	1	11/13/14 15:04
Bromomethane	ND U	J 1.00	0,33	µg/L	1	11/13/14 15:04
Chloroethane	4.65	1.00	0.33	µg/L	1	11/13/14 15:04
Trichlorofluoromethane	ND U	J1.00	0.10	µg/L	1	11/13/14 15:04
1,1-Dichloroethene	ND	0.50	0.16	µg/L	1	11/13/14 15:04
1,1,2-Trichloro-1,2,2-trifluoroethan	e ND	0,50	0.10	µg/L	1	11/13/14 15:04
Acetone	10 . 1.81 5-1	100	1.00	µg/L	1	11/13/14 15:04
Carbon disulfide	ND	0.50	0.11	µg/L	1	11/13/14 15:04
Methyl acetate	- NO U	J.5.00	1.00	µg/L	1	11/13/14 15:04
Methylene chloride	ND	2.00	0.16	µg/L	1	11/13/14 15:04
trans-1,2-Dichloroethene	ND	0.50	0.10	μg/L	1	11/13/14 15:04
Methyl tert-butyl ether	ND	1.00	0,16	μg/L	1	11/13/14 15:04
1,1-Dichloroethane	0.11(3)	0,50	0.10	µg/L	1.	11/13/14 15:04
ris-1,2-Dichloroethene	ND	0.50	0.10	µg/L	1	11/13/14 15:04
2-Butanone	ND	10.0	1.00	µg/L	1	11/13/14 15:04
Chloroform	ND	0,50	0.10	µg/L	1	11/13/14 15:04
1,1,1-Trichloroethane	ND	0.50	0.10	µg/L	1	11/13/14 15:04
Cyclohexane	1.73	0.50	0.10	µg/L	1	11/13/14 15:04
Carbon tetrachioride	ND UT	T 0.50	0.10	µg/L	1	11/1 3/14 15:0 4
Benzene	2.44	0,50	0.10	µg/L	1	11/13/14 15:04
1,2-Dichlorosthane	ND	0.50	0.16	µg/L	1	11/13/14 15:04
Trichtoroethene	ND	0.50	0.10	µg/L	1	11/13/14 15:04
Viethylcyclohexane	0.12(J)	0.50	0.10	µg/L	1	11/13/14 15:04
2-Dichloropropane	ND	0.50	0.16	µg/∟	1	11/13/14 15:04
Bromodichloromethane	ND	0.50	0,10	µg/∟	1	11/13/14 15:04
xis-1,3-Dichloropropene	ND	0,50	0.16	µg/L	1	11/13/14 15:04
1-Methyl-2-pentanone	ND	5.00	1.00	µg/L	1	11/13/14 15:04
Toluene	0,50 029-31	0.50	0.10	µg/L	1	11/13/14 15:04
rans-1,3-Dichloropropene	ND	0.50	0,16	µg/L	1	11/13/14 15:04
1.1.2-Trichtoroethane	ND UT	T 0.50	0.16	µg/L	1	11/13/14 15:04
Tetrachloroethene	ND	0.50	0.10	µg/L	1	11/13/14 15:04
2-Hexanone	ND	5.00	1.00	µg/L	1	11/13/14 15:04
Qualifiers: * Value exceed	Maximum Contaminant Level		B Analyic	detected in the a	ssociated M	ethod Blank
	the instrument calibration range	•	H Holding	times for prepar	ation or ana	lysis exceeded
J Analyte detec	ted below the PQL		ND Not Det	ected at the Prac	tical Quantit	ation Limit (PQL)
P Prim./Conf. c	olumn %D or RPD exceeds limit	1	S Spike R	ecovery outside :	accepted rec	overy limits

Print Date: 11/17/14 10:25

698331 Project Supervisor: Anthony Crescenzi

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Analytical Results

	ast Syracuse, NY 130	3/ (313)	445-1900	1	StateCertNo: 10248
	O'Brien & Gere Opera PAS Oswego-Semi-An		pling	Lab ID: Client Sample ID:	K1411015-005A X-1 11/3/14
Matrix:	K1411015 WATER			Collection Date: Date Received:	11/03/14 0:00 11/04/14 16:00
ColumnID:	MS03_10 Rtx-502.2 11/17/14 10:18	Sample Size %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R27798 1-SAMP-J7985.D

Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUR	IDS BY GC/MS			SW828	0C/5030C	·····
Dibromochloromethane	ND	0.50	0,10	µg/L	1	11/13/14 15:04
1,2-Dibromoethane	: ND	0,50	0.16	μg/L	1	11/13/14 15:04
Chiorobenzanę	25.1	0,50	0,10	µg/L	1	11/13/14 15:04
Ethylbenzene	ND	0,50	0.10	μg/L	1	11/13/14 15:04
Xylenes (total)	0.32(J)	1.00	0.30	µg/L	1	11/13/14 15:04
Styrene	ND	0.50	0.10	μ g /L	1	11/13/14 15:04
Bromoform	ND	1.00	0.33	µg/L	1	11/13/14 15:04
sopropylbenzene	1.23	0.50	0.10	µg/L	1	11/13/14 15:04
1,1,2,2-Tetrachloroethane	ND	0.50	0.10	μg/L	1	11/13/14 15:04
1,3-Dichlorobenzene	· 0.11()	0,50	0.10	µg/L	1	11/13/14 15:04
1,4-Dichlorobenzene	~ 1,30	0.50	0.16	µg/L	1	11/13/14 15:04
1,2-Dichlorobenzene	0.81	0.50	0.10	µg/L	1	11/13/14 15:04
1,2-Dibromo-3-chioropropane	ND	5.00	1.00	µg/L	1	11/13/14 15:04
1,2,4-Trichlorobenzene	· NO U	J1.00	0.10	µg/L	1	11/13/14 15:04
Surr: 1,2-Dichloroethane-d4	116	75-130	0,16	%REC	1	11/13/14 15:04
Surr: Toluene-d8	99	75-125	0.10	%REC	1	11/13/14 15:04
Surr: 4-Bromofluorobenzene	101	75-125	0.10	%REC	1	11/13/14 15:04

Qualifiers:

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

Print Date: 11/17/14 10:25 698331

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Life Science Laboratories, Inc. Analytical Results

E	ast Syracuse, NY 130	57 (315)	445-1900	1	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Opera PAS Oswego-Semi-Ar	•	pling	Lab ID: Client Sample ID:	K1411015-006A LR-6 11/4/14
W Order: Matrix:	K1411015 WATER			Collection Date: Date Received:	11/04/14 8:50 11/04/14 16:00
Inst. ID: ColumnID:		Sample Size %Moisture:		PrepDate: BatchNo:	R27798
Revision: Col Type:	11/17/14 10:18	TestCode:	8260W_OLM42	FileID:	1-SAMP-J7986.D

Analyte	Result Qual PQL	MDL	Units	DF	Date Analyze
VOLATILE ORGANIC COM	POUNDS BY GC/MS		SW826	C/5030C	:
Dichlorodifiuoromethane	ND (151.00	0.10	µg/L	ſ	11/13/14 15:33
Chloromethane	ND UJ1.00	0,33	μg/L	1	11/13/14 15:33
Vinyi chloride	ND UJ1.00	0.33	µg/L	1	11/13/14 15:33
Bromomethane	ND UJ 1.00	0.33	µg/L	1	11/13/14 15:33
Chloroethane	ND 1.00	0.33	µg/L	1	11/13/14 15:33
Trichierofluoromethane	ND UJ1.00	0.10	µg/L	1	11/13/14 15:33
1,1-Dichloroethené	ND 0.50	0.16	µg/L	1	11/13/14 15:33
1,1,2-Trichloro-1,2,2-trifluoroethar	не <mark>і ND 0.50</mark>	0.10	µg/∟	1	11/13/14 15:33
Acetone	, ND 10.0	1.00	µg/L	1	11/13/14 15:33
Carbon disuifide	ND 0,50	0.11	μg/L	1	11/13/14 15:33
Methyl acetate	- ND (JJ 5.00	1.00	µg/L	1	11/1 3/14 15:33
Methylene chloride	ND 2.00	0.16	µg/L	1	11/13/14 15:33
trans-1,2-Dichloroethene	" ND 0.50	0.10	µg/L	1	11/13/14 15:33
Methyl tert-butyl ether	ND 1.00	0.16	µg/L	1	11/13/14 15:33
1,1-Dichloroethane	1.75 0.50	0.10	µg/L	1	11/13/14 15:33
cis-1,2-Dichloroethene	ND 0.50	0.10	µg/L	1	11/13/14 15:33
2-Butanone	ND 10.0	1.00	µg/L	1	11/ 13/14 15:3 3
Chloroform	ND 0.50	0.10	µg/L	1	11/13/14 15:33
1,1,1-Trichloroethane	ND 0.50-	0.10	µg/L	1 .	11/13/14 15:33
Cyciohexane	ND 0.50	0.10	µg/L	1	11/1 3/14 15:3 3
Carbon tetrachloride	ND (U J 0.50	0.10	µg/L	1	11/13/14 15:33
Benzene	ND 0.50	0.10	µg/L	1	11/13/14 15:33
1,2-Dichloroethane	ND 0.50	0.16	µg/L	1	11/13/14 15:33
Trichloroethene	0.14() 0.50	0.10	µg/L	1	11/13/14 15:33
Methylcyclohaxane	ND 0.50	0.10	µg/L	1	11/13/14 15:33
1,2-Dichloropropane	ND 0.50	0.16	µg/L	1	11/13/14 15:33
Bromodichioromethane	ND 0.50	0,10	µg/L	1	11/13/14 15:33
cis-1,3-Dichloropropene	ND 0.50	0,16	µg/L	1	11/13/14 15:33
4-Methyl-2-pentanone	ND 5.00	1.00	µg/L	1	11/13/14 15:33
Toluene	ND 0.50	0.10	µg/L	1	11/13/14 15:33
trans-1,3-Dichloropropene	ND 0.50	0.16	µg/L	1	11/13/14 15:33
1,1,2-Trichloroethane	ND UJ 0.50	0.16	µg/L	1	11/13/14 15:33
Tetrachloroethene	ND 0.50	0.10	µg/L	1	11/13/14 15:33
2-Hexanone	ŃD 5.00	1.00	µg/L	1	11/13/14 15:33
Qualifiers: * Value excee	is Maximum Contaminant Level	B Analyte	detected in the s	ssociated M	ethod Blank
	is the instrument calibration range	H Holding	times for prepar	ation or ana	lysis exceeded
	cted below the PQL	ND Not Dete	cted at the Prac	tical Quantit	ation Limit (PQL)
P Prim./Conf.	column %D or RPD exceeds limit	S Spike Re	covery outside	accepted rec	overy limits

Print Date: 11/17/14 10:25 698332 Project Supervisor: Anthony Crescenzi

Analytical Results

CLIENT Project:O'Brien & Gere Operations, LLCLab ID:K1411015-006AProject:PAS Oswego-Semi-Annual Well SamplingClient Sample ID:LR-6 11/4/14W Order:K1411015Collection Date:11/04/14 8:50Matrix:WATERDate Received:11/04/14 16:00Inst. ID:MS03_10Sample Size 10 mLPrepDate:ColumnID:Rtx-502.2% Molsture:BatchNo:R27798Beavision:11/07/14 10:18TestCode:8260W OLM42BileID:	E	ast Syracuse, NY 130	57 (315)	445-1900	5	StateCertNo: 10248
Matrix:WATERDate Received:11/04/14 16:00Inst. ID:MS03_10Sample Size 10 mLPrepDate:ColumnID:Rtx-502.2% Moisture:BatchNo:R27798		•	•	pling		· · ·
ColumnID: Rtx-502.2 %Moisture: BatchNo: R27798						
			-		BatchNo:	R27798 1-SAMP-J7986.D

Analyte	Resu	it Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOU	NDS BY GC/	18		المتحديد المتقادي	SW826	C/5030C	
Dibromochloromethane	1	ND	0.50	0.10	µg/L	1	11/13/14 15:33
1,2-Dibromoethane	ł	ND ·	0,50	0,16	µg/L	1	11/13/14 15:33
Chlorobenzene	- 1	ND	0,50	0.10	µg/L	1	11/13/14 15:33
Ethylbenzene	I	ND	0.50	0.10	µg/L	1	11/13/14 15:33
Xylenes (total)	1	ND	1.00	0,30	µg/L	1	11/13/14 15:33
Styrene	1	ND	0.50	0.10	µg/L	1	11/13/14 15:33
Bromoform	1	ND	1.00	0,33	µg/L	1	11/13/14 15:33
Isopropylbenzene	• 1	ND	0.50	0.10	µg/L	1	11/13/14 15:33
1,1,2,2-Tetrachioroethane	., 1	ND	0.50	0.10	µg/L	1	11/13/14 15:33
1,3-Dichlorobenzene		ND	0.50	0.10	µg/L	1	11/13/14 15:33
1,4-Dichlorobenzene		D	0.50	0.16	µg/L	1	11/13/14 15:33
1,2-Dichlorobenzene	• 1	ND	0.50	0.10	µg/L	1	11/13/14 15:33
1,2-Dibromo-3-chloropropane	- 1	D	5.00	1.00	μg/L	1	11/13/14 15:33
1,2,4-Trichiorobenzene	1	U UJ	1.00	0.10	µg/L	1	11/13/14 15:33
Surt. 1,2-Dichloroethane-d4	1	24	75-130	0.16	%REC	1	11/13/14 15:33
Surr: Toluene-d8	1	01	75-125	0,10	%REC	1	11/13/14 15:33
Sur: 4-Bromofluorobenzene	1	00	75-125	0.10	%REC	1	11/13/14 15:33

Qualifiers:

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

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded ND Not Detected at the Practical Quantitation Limit (PQL)
- S Spike Recovery outside accepted recovery limits

Print Date: 11/17/14 10:25 698332

LSL 5854 Butternut Drive 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-An	,	Lab ID: Client Sample ID:	K1411015-007A M-22 11/4/14
W Order: Matrix: Inst. ID: ColumnID:	K1411015 WATER MS03_10 Btx=502.2	Sample Size 10 1 %Moisture:	Collection Date: Date Received: nL. PrepDate: BatchNo:	11/04/14 10:20 11/04/14 16:00 R27798
Revision: Col Type:	11/17/14 10:18		0W_OLM42 FileID:	1-SAMP-J7987.D

Analyte		Result Qual PQL	MDL	Units	DF	Date Analyze
VOLATILE	RGANIC COMPOUND			SW8280C/5030C		;
Dichlorodilluon	methane	ND 451.00	0.10	µg/L	1	11/13/14 16:03
Chloromethane	•	ND 4J1.00	0.33	µg/L	1	11/13/14 16:03
Vinyi chioride		ND (1 J1.00	0,33	µg/L	1	11/13/14 16:03
Bromomethane	· · · · · · · · · · · · · · · · · · ·	ND 4 J 1.00	0.33	µg/∟	1	11/13/14 16:03
Chloroethane		ND 1.00	0,33	µg/L	1	11/13/14 16:03
Trichlorofluoro	methane	NO UJ1.00	0,10	μg/L	1	11/13/14 16:03
1,1-Dichloroeth	lene	ND 0.50	0,16	µg/L	1	11/13/14 16:03
1,1,2-Trichloro	-1,2,2-trifluoroethane	j ND 0.50	0.10	μg/L	1	11/13/14 16:03
Acetone		ί ND 10.0	1,00	µg/L	1	11/13/14 16:03
Carbon disulfid	le	ND 0,50	0,11	µg/L	1	11/13/14 16:03
Methyl acetate		- ND 4J 5.00	1,00	µg/L	1	11/13/14 16:03
Methylene chlo	ride	ND 2,00	0,16	µg/L	1	11/13/14 16:03
rans-1,2-Dichl	araethene	ND 0.50	0,10	μg/L	1	11/13/14 16:03
Viethyl tert-buty	/l ether ·	ND 1.00	0.16	µg/L	1	11/13/14 16:03
1,1-Dichlorceth		ND 0.50	0,10	µg/L	1	11/13/14 16:03
is-1,2-Dichlon	oethene	ND 0.50	0.10	µg/L	1	11/13/14 16:03
2-Butanone		ND 10.0	1.00	µg/L	1	11/13/14 16:03
Chloroform		ND 0.50	0.10	µg/L	1	11/13/14 16:03
1,1,1-Trichioro	ethane	ND 0,50	0,10	µg/L	1	11/13/14 16:03
Cyclohexane		ND 0,50	0.10	µg/L	1	11/13/14 16:03
Carbon tetrach	laride	ND UJ 0.50	0.10	µg/L	1	11/13/14 16:03
Benzene		ND 0,50	0_10	µg/L	1	11/13/14 16:03
1,2-Dichloroeth	ane	ND 0.50	0.16	µg/L	1	11/13/14 16:03
Trichloroethen	2	ND 0,50	0.10	µg/L	1	11/13/14 16:03
Vethylcyclohed	909	ND 0.50	0.10	µg/∟	1	11/13/14 16:03
2-Dichloropro	pane	ND 0.50	0.16	µg/L	1	11/13/14 16:03
Bromodichioro	methane	ND 0.50	0.10	µg/L	1	11/13/14 16:03
sis-1,3-Dichlor	opropene	ND 0.50	0.16	µg/L	1	11/13/14 16:03
4-Methyl-2-per		ND 5,00	1.00	µg/L	1	11/13/14 16:03
roluene		ND 0.50	0.10	µg/L.	1	11/13/14 16:03
rans-1,3-Dichi	oropropene	ND 0.50	0.16	µg/L	1	11/13/14 16:03
1,1,2-Trichioro	elhane	ND UJ 0.50	0.16	µg/L	1	11/13/14 16:03
Tetrachloroeth	ene	ND 0,50	0.10	µg/L	1	11/13/14 16:03
2-Hexanone		ND 5,00	1.00	µg/L	1	11/13/14 16:03
Qualifiers	* Value exceeds Maximu	um Contaminant Level	B Analyte	detected in the a	ssociated M	ethod Blank
£	E Value exceeds the instr	ument calibration range	H Holding	times for prepar	stion or ana	lysis exceeded
	J Analyte detected below	the PQL	ND Not Det	ected at the Prac	tical Quanti	tation Limit (PQL)
	P Prim./Conf. column %i	D or RPD exceeds limit	S Spike R	ecovery outside	accepted rec	overy limits

Print Date: 11/17/14 10:25 698333 Project Supervisor: Anthony Crescenzi

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Analytical Results

E	ast Syracuse, NY 1305	7 (315)	445-1900	5	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operati PAS Oswego-Semi-Ann	-	pling	Lab ID: Client Sample ID:	K1411015-007A M-22 11/4/14
W Order: Matrix:	K1411015 WATER			Collection Date: Date Received:	11/04/14 10:20 11/04/14 16:00
Inst. ID; ColumnID: Revision:	MS03_10 Rtx-502.2 11/17/14 10:18	Sample Size %Molsture: TestCode:	10 mL 8260W OLM42	PrepDate: BatchNo: FileID:	R27798 1-SAMP-J7987.D
Col Type:					

Analyte	Re	mlt Qua	I PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	IDS BY GC	/MS			SW826	0C/5030C	
Dibromochloromethane		ND	0.50	0,10	µg/L	1	11/13/14 16:03
1.2-Dibromoethane	•	ND	0.50	0.16	µg/L	1	11/13/14 16:03
Chlorobenzene	;	ND	0,50	0.10	µg/L	1	11/13/14 16:03
Ethylbenzene		NÐ	0.50	0.10	µg/L	1	11/13/14 16:03
Xylenes (total)		ND	1.00	0,30	µg/L	1	11/13/14 16:03
Styrens		ND	0.50	0.10	µg/L	1	11/13/14 16:03
Bromoform		ND	1.00	0.33	µg/L	1	11/13/14 16:03
Isopropyibenzene		ND	0.50	0,10	μg/L	1	11/13/14 16:03
1,1,2,2-Tetrachloroethane		ND	0.50	0.10	μg/L	1	11/13/14 16:03
1,3-Dichlorobenzene	•	ND	0,50	0,10	µg/L	1	11/13/14 16:03
1,4-Dichlorobenzene	••	ND	0.50	0.16	μg/L	1	11/13/14 16:03
1,2-Dichlorobenzene	;	ND	0.50	0.10	µg∕L.	1	11/13/14 16:03
1,2-Dibromo-3-chloropropane	-	ND	5.00	1,00	µg/L	1	11/13/14 16:03
1,2,4-Trichtorobenzens	1	NDUT	J 1.00	0.10	µg/L	1	11/13/14 16:03
Surr: 1,2-Dichloroethane-d4		125	75-130	0,16	%REC	1	11/13/14 16:03
Sur: Toluene-d8		99	75-125	0.10	%REC	1	11/13/14 16:03
Surr: 4-Bromofluorobenzene		100	75-125	0.10	%REC	1	11/13/14 16:03

Qualifiers:

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

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- B Analyte detected in the associated Method Blank H Holding times for preparation or analysis exceeded
- ND Not Detected at the Practical Quantitation Limit (PQL)
- S Spike Recovery outside accepted recovery limits

Print Date: 11/17/14 10:25

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Analytical Results

$\begin{array}{c} \mathbf{t} \ \mathbf{Qual} \ \mathbf{PQ} \\ \mathbf{s} \\ \mathbf{D} \ \mathbf{UT} \ 10.0 \\ \mathbf{D} \ \mathbf{UT} \ 5.00 \\ \mathbf{D} \ \mathbf{UT} \ $		Lab ID: Client Samp Collection L Date Receiv PrepDate: BatchNo: FileID: MIDL 1.00 3.30 3.30 3.30 3.30 1.00 1.60 1.00 1.60 1.00 1.60 1.00 1.60 1.00 1.60 1.00	ble ID: L(pate: 11, ed: 11, R2 1-5 Units SW828 µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	/04/14 12:0 /04/14 16:0 7798 SAMP-J798 DF 0C/5030C 10 10 10 10 10 10 10 10 10 10 10 10 10	6/14 0 0
$\begin{array}{c} zze \ 10 \ mL \\ re: \\ 8260W \\ \hline \\ t \ Qual \ PQ \\ \hline \\ s \\ t \ Qual \ PQ \\ \hline \\ s \\ t \ Qual \ PQ \\ \hline \\ s \\ 0 \ U \ 10.0 \\ \hline \\ 2 \ U \ 10.0 \\ \hline \\ 0 \ U \ 5.00 \\ \hline \\ 0 \ 0 \ 5.00 \\ \hline \\ 0 \ 5.00 \\ \hline \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$		Collection L Date Receiv PrepDate: BatchNo: FileID: MDL 1.00 3.30 3.30 3.30 3.30 1.00 1.60 1.00 1.00 1.00 1.00 1.00 1.0	Pate: 11, ed: 11, R2 1-5 Units SW828 µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	/04/14 12:0 /04/14 16:0 7798 SAMP-J798 DF 0C/5030C 10 10 10 10 10 10 10 10 10 10 10 10 10	0 0 8,D Date Analyzed 11/13/14 16:32 11/13/14 16:32
re: 8260W t Qual PQ S U T 10.0 D U T 5.00 D U T		Date Receiv PrepDate: BatchNo: FileID: MDL 1.00 3.30 3.30 3.30 3.30 1.00 1.60 1.00 1.00 1.10 1.00 1.60 1.00 1.60 1.00	ed: 11 R2 1-5 Units SW826 µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	/04/14 16:0 7798 SAMP-J798 DF 0C/5030C 10 10 10 10 10 10 10 10 10 10 10 10 10	0 8,D Date Analyzed 11/13/14 16:32 11/13/14 16:32
re: 8260W t Qual PQ S U T 10.0 D U T 5.00 D U T		Date Receiv PrepDate: BatchNo: FileID: MDL 1.00 3.30 3.30 3.30 3.30 1.00 1.60 1.00 1.00 1.10 1.00 1.60 1.00 1.60 1.00	ed: 11. R2 1-5 Units SW826 µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	7798 SAMP-J798 DF 0C/5030C 10 10 10 10 10 10 10 10 10 10 10 10 10	8,D Date Analyzed 11/13/14 16:32 11/13/14 16:32
re: 8260W t Qual PQ S U T 10.0 D U T 5.00 D U T		BatchNo: FileID: MIDL 1.00 3.30 3.30 3.30 3.30 1.00 1.60 1.00 1.00 1.00 1.10 1.00 1.60 1.00 1.60 1.00	1-5 Units SW828 µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	DF 0C/5030C 10 10 10 10 10 10 10 10 10 10 10 10 10	Date Analyzed 11/13/14 16:32 11/13/14 16:32
re: 8260W t Qual PQ S U T 10.0 D U T 5.00 D U T		BatchNo: FileID: MIDL 1.00 3.30 3.30 3.30 3.30 1.00 1.60 1.00 1.00 1.00 1.10 1.00 1.60 1.00 1.60 1.00	1-5 Units SW828 µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	DF 0C/5030C 10 10 10 10 10 10 10 10 10 10 10 10 10	Date Analyzed 11/13/14 16:32 11/13/14 16:32
$\begin{array}{c} \mathbf{t} \ \mathbf{Qual} \ \mathbf{PQ} \\ \mathbf{s} \\ \mathbf{D} \ \mathbf{UT} \ 10.0 \\ \mathbf{D} \ \mathbf{UT} \ 5.00 \\ \mathbf{D} \ \mathbf{UT} \ $		MIDL 1.00 3.30 3.30 3.30 1.00 1.60 1.00 1.00 1.10 1.00 1.60 1.00 1.60 1.00 1.60 1.00 1.60 1.00	Units SW828 µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	DF 0C/5030C 10 10 10 10 10 10 10 10 10 10 10 10 10	Date Analyzed 11/13/14 16:32 11/13/14 16:32
S D U J 10.0 D U J 5.00 D U J 50.0 D U J 50.		1.00 3.30 3.30 3.30 1.00 1.60 1.00 1.00 1.10 1.00 1.60 1.00 1.60 1.00	SW828 µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	0C/5030C 10 10 10 10 10 10 10 10 10 10	11/13/14 16:32 11/13/14 16:32
S D U J 10.0 D U J 5.00 D U J 50.0 D U J 50.		1.00 3.30 3.30 3.30 1.00 1.60 1.00 1.00 1.10 1.00 1.60 1.00 1.60 1.00	SW828 µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	0C/5030C 10 10 10 10 10 10 10 10 10 10	11/13/14 16:32 11/13/14 16:32
$\begin{array}{c} D & U & 1_{0.0} \\ D & U & 1_{0.0} \\ D & U & 1_{0.0} \\ \hline D & 0 & 5.00 \\ \hline D & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline D & 0 & 0 & 5.00 \\ \hline \end{array}$		3.30 3.30 3.30 1.00 1.60 1.00 10.0 1.10 1.00 1.60 1.00	μg/L μg/L μg/L μg/L μg/L μg/L μg/L μg/L	10 10 10 10 10 10 10 10 10 10 10 10 10	11/13/14 16:32 11/13/14 16:32
$\begin{array}{c c} D & U & 10.0 \\ \hline D & 5.00 \\ \hline U & 5.00 \\ \hline D & 5.00 \\ \hline D & 0 & 5.00 \\ \hline D & 5.00 \\ \hline D & 5.00 \\ \hline D & 5.00 \\ \hline \end{array}$		3.30 3.30 3.30 1.00 1.60 1.00 10.0 1.10 1.00 1.60 1.00	μ σ/L μσ/L μσ/L μσ/L μσ/L μσ/L μσ/L μσ/L μσ/L	10 10 10 10 10 10 10 10 10 10 10 10	11/13/14 16:32 11/13/14 16:32
$\begin{array}{c c} 2 & J_{10,0} \\ \hline 0 & U J_{10,0} \\ \hline 0 & 0 & 10,0 \\ \hline 0 & 0 & 5,00 \\ \hline 0 & 0 & 0 & 5,00 \\ \hline 0 & 0 & 0 & 5,00 \\ \hline 0 & 0 & 0 & 5,00 \\ \hline 0 & 0 & 0 & 5,00 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ \hline 0 & 0 & 0 & 0 \\ $		3.30 3.30 1.00 1.60 1.00 10.0 1.10 1.00 1.60 1.00	μg/L μg/L μg/L μg/L μg/L μg/L μg/L μg/L	10 10 10 10 10 10 10 10 10 10 10	11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32
$\begin{array}{c} \underline{D} \ U \ J 100 \\ \underline{D} \ U \ J 100 \\ \underline{D} \ U \ J 100 \\ \underline{D} \ S 00 \\ \underline{S} \ S \ S \ S 00 \\ \underline{S} \ S \ S \ S 00 \\ \underline{S} \ S \ S \ S \ S \ S \ S \ S \ S \ S \$		3.30 3.30 1.60 1.60 10.0 1.10 1.10 1.60 1.60	μg/L μg/L μg/L μg/L μg/L μg/L μg/L μg/L	10 10 10 10 10 10 10 10 10 10	11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32
0 10.0 0 110.0 0 5.00 0 5.00 0 1100 0 1100 0 1100 0 100 0 100 0 100 0 100 0 5.00 0 10.0 0 5.00 0 5.00		3.30 1.60 1.60 10.0 10.0 1.10 10.0 1.60 1.00	μ ց/L μ g/L μ g/L μg/L μg/L μg/L μg/L μg/L	10 10 10 10 10 10 10 10 10	11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32
$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} $	-	1.00 1.60 1.00 10.0 1.10 10.0 1.60 1.00	μg/L μg/L μg/L μg/L μg/L μg/L μg/L	10 10 10 10 10 10 10 10	11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32
$\begin{array}{c} D & 5.00 \\ \hline 0 & 5.00 \\ \hline 2 & 0 & 100 \\ \hline 0 & 5.00 \\ \hline 0 & 0 & 5.00 \\ \hline 0 & 5.00 \\ D & 5.00 \\ D & 10.0 \\ \hline 5 & 5.00 \\ \hline \end{array}$		1.60 1.00 10.0 1.10 10.0 1.60 1.00	μg/L μg/L μg/L μg/L μg/L μg/L	10 10 10 10 10 10 10	11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32
S.00 5.00 2 U 100 5.00 5.00 0 U 50.0 0 10.0 5 5.00		1.00 10.0 1.10 10.0 1.60 1.00	μg/L μg/L μg/L μg/L	10 10 10 10 10 10	11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32
2 0 5.00 0 0 0 0 0 0 0 0 0 0 0 0		10.0 1.10 10.0 1.60 1.00	μg/L μg/L μg/L μg/L μg/L	10 10 10 10 10	11/13/14 16:32 11/13/14 16:32 11/13/14 16:32 11/13/14 16:32
D 5.00 D (J 50.0 D (J 50.0 D 5.00 D 5.00 D 10.0 5 5.00		1.10 10.0 1.60 1.00	μg/L μg/L μg/L μg/L	10 10 10 10	11/13/14 16:32 11/13/14 16:32 11/13/14 16:32
DUT50.0 DU 20.0 D 5.00 D 10.0 5 5.00		10.0 1.60 1.00	μg/L μg/L μg/L	10 10 10	11/13/14 16:32 11/13/14 16:32
D 20,0 D 5,00 D 10,0 ,5 5,00		1.60 1.00	μg/L μg/L	10 10	11/13/14 16:32
D 5,00 D 10.0 ,5 5,00		1.00	μg/L	10	
D 10.0 .5 5,00			• =		11/13/14 16:32
.5 5,00		1.60			
			µg/L	10	11/13/14 16:32
		1.00	µg/L	10	11/13/14 16:32
.0 5.00		1.00	hðųr	10	11/13/14 16:32
D 100		10.0	µg/L	10	11/13/14 16:32
5.00		1.00	ha\r	10	11/13/14 16:32
5 5.00		1.00	µg/L	10	11/13/14 16:32
DUJ 5.00		1,00	µg/L	10	11/13/14 16:32
		1.00	µg/L	10	11/13/14 16:32 11/13/14 16:32
0E 5,80		1,00 2.0	hð\r	-10-20	11/13/14 15:32
D 5.00		1,60	µg/L	10	11/13/14 16:32
0 5.00		1.00	hð\r	10	11/13/14 16:32
D 5.00		1.00	µg/L	10	11/13/14 16:32
					11/13/14 16:32
			• -		11/13/14 16:32
			• •	-	11/13/14 16:32
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					11/13/14 16:32 11/13/14 16:32
		10.0	hR\r F	10	11/13/14 16:32
Level		-			
n range		-		•	
				-	
	D 5.00 D 5.00 D 5.00 D 50.0 e し5.00 D し 5.00 D し 5.00 T 5.00 D し 50.0 D し 50.0 D し 50.0 D 50.0	5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 7 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00	D 5.00 1.60 D 5.00 1.00 D 5.00 1.60 D 5.00 1.60 D 50.0 10.0 e U.5.00 1.60 D 5.00 1.60 D 1.00 1.60 D 1.00 1.60 D 1.00 1.00 D 50.0 1.00 D 50.0 10.0 Level B Analyte de n range H Holding tin ND ND	D 5.00 1.60 µg/L D 5.00 1.00 µg/L D 5.00 1.60 µg/L D 5.00 1.60 µg/L D 50.0 10.0 µg/L D 5.00 1.00 µg/L D 5.00 1.60 µg/L D 5.00 1.60 µg/L D 5.00 1.60 µg/L D 5.00 1.00 µg/L D 50.0 1.00 µg/L D 50.0 10.0 µg/L D S0.0 10.0 µg/L D ND Not Detected at the Prace	D 5.00 1.60 µg/L 10 D 5.00 1.00 µg/L 10 D 5.00 1.60 µg/L 10 D 5.00 1.60 µg/L 10 D 50.0 10.0 µg/L 10 D 5.00 1.00 µg/L 10 D 5.00 1.60 µg/L 10 D 5.00 1.60 µg/L 10 D J.5.00 1.60 µg/L 10 D J.5.00 1.00 µg/L 10 D J.00 µg/L 10 10 D 50.0 1.00 µg/L 10 D 50.0 10.0 µg/L 10 Level B Analyte detected in the associated Methem range H Holding times for preparation or analys ND Not Detected at the Practical Quartitation

Print Date: 11/17/14 10:25

698334

Project Supervisor: Anthony Crescenzi

Life Science Laboratories, Inc.

Analytical Results

	ast Syracuse, NY 1305	i7 (315)	445-1900		StateCertNo: 10248
CLIENT Project;	O'Brien & Gere Operat PAS Oswego-Semi-An		pling	Lab ID: Client Sample ID:	K1411015-008A LCW-2 11/4/14
W Order: Matrix:	K1411015 WATER			Collection Date: Date Received:	11/04/14 12:00 11/04/14 16:00
Inst. ID: ColumnID:		Sample Size %Moisture:		PrepDate: BatchNo:	R27798
Revision; Col Type:	11/17/14 10:18	TestCode:	8260W_OLM42	FileID:	1-SAMP-17988_D

Analyte	Result Qua	l PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUL	NDS BY GC/MS			SW826	0C/5030C	
Dibromochloromethane	ND	5.00	1.00	µg/L	10	11/13/14 16:32
1,2-Dibromoethane	ND ND	5.00	1,60	µg/L	10	11/13/14 16:32
Chiorobenzene	210	5.00	1.00	µg/L	10	11/13/14 16:32
Ethylbenzene	82.2	5.00	1.00	µg/L	10	11/13/14 16:32
Xylenes (total)	63.4	10.0	3,00	µg/L	10	11/13/14 16:32
Styrene	ND	5.00	1.00	µg/L	10	11/13/14 16:32
Bromoform	ND	10.0	3,30	μg/L	10	11/13/14 16:32
Isopropylbenzene	3.70(J)	5.00	1.00	μg/L	10	11/13/14 16:32
1,1,2,2-Tetrachloroethane	: ND	5.00	1,00	μg/L	10	11/13/14 16:32
1,3-Dichlorobenzene	ND	5.00	1.00	µg/L	10	11/13/14 16:32
1,4-Dichlorobenzene	~ ND	5.00	1.60	µg/L	10	11/13/14 16:32
1,2-Dichlorobenzene	10.4	5,00	1.00	µg/L	10	11/13/14 16:32
1,2-Dibromo-3-chloropropane	ND	50.0	10.0	µg/L	10	11/13/14 16:32
1,2,4-Trichlerobenzene	ND 43	J 10.0	1,00	µg/L	10	11/13/14 16:32
Surr: 1,2-Dichloroethane-d4	111	75-130	1.60	%REC	10	11/13/14 16:32
Surr: Toluena-d8	96	75-125	1.00	%REC	10	11/13/14 16:32
Surr: 4-Bromofluorobenzene	92	75-125	1.00	%REC	10	11/13/14 16:32

Qualifiers:

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

698334

- 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)
- ND NOT Describer at the Pressest Quantization Limit (1 Qu
- S Spike Recovery outside accepted recovery limits

Print Date: 11/17/14 10:25

Project Supervisor: Anthony Crescenzi

LSL East Syracuse, NY 1	3057 (315) 44	15-1900		Stat	eCertNo:	10248
CLIENT O'Brien & Gere Op	erations, LLC		Lab ID:	K	411015-0	108ADI
	Annual Well Sampli	ng	Client Samp	le 10: L(CW-2 11/-	4/14
W Order: K1411015			Collection I	ate: 11/	04/14 12:0	y
Matrix: WATER			Date Receiv	ed: 11/	04/14 16/0	ю
Inst. ID: M\$03 10	Sample Size 10) mL	PrepDate:			
ColumnID: Rix-502.2	%Moisture:		BatchNo:		7807	
Revision: 11/17/14 10:24	TestCode: 82	260W_OLM42	FileID:	1-1	L-J8013.D	>
Col Type:	· ·					
Analyte	Result Qu	al PQL	MDL	Units	DF.	Date Analyzed
OLATILE ORGANIC COMPOU	NDS BY GC/MS		/	SW826	0C/5030C	
Dichlorodifluoromethane	ND	20.0	2.00	µg/L	20	11/14/14 11:41
Chloromethana	ND	20.0	6.60	µg∕L	20	11/14/14 11:41
/inyl chloride	68.6	20.0	6.90	µg/L	20	11/14/14 11:41
Bromomethane	ND	20.0	6,60	hâ/r	20	11/14/14.11:41
Chioroethane	30.4	20.0	6.60 2.00	µg/L ug/l	20 20	11/14/14 11:41 11/14/14 11:41
Trichtorofluoromethene	ND ND	20.0	3.20	µg/L µg/L	20	11/14/14 11:41
1,1-Dichloroethene 1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10.0	2.00	µg/L	20	11/14/14 11:41
Acetone	ND	200	20.0	µg/L	20	11/14/14 11:41
Carbon disulfide	ND	10.0	2,20	μg/L	20	11/14/14 11:41
viethyl acetate	ND	100	20,0	µg/L	20	11/14/14 11:41
Methylene chloride	3 ND	40.0	3,20	µg/L	20	11/14/14 11:41
rans-1,2-Dichloroethene	~ ND	10,0	2.00	µg/L	20	11/14/14 11:41
viethyl tert-butyl ether	ND	20.0	3.20	µg/L	20	11/14/14 11:41
1,1-Dichloroethane	13.8	10.0	2.00	µg/L	20	11/14/14 11:41
sis-1,2-Dichloroethene	78.4	10,0	2.00	µg/L	20. 20.	11/14/14 11:41
2-Butanone	ND	200	20.0	µg/L	20 20	11/14/14 11:41 11/14/14 11:41
Chloroform	2.00 J 14,4	10.0 10.0	2,00	µg/L µg/L	20 20	11/14/14 11:41
i,1,1-Trichloroethane	ND	10.0	2.00	μg/L	20	11/14/14 11:41
Carbon tetrachloride	AD	10.0	2.00	µg/L	20	11/14/14 11:41
Benzene	(718.)	10.0	2.00	µg/L	20	11/14/14 11:41
,2-Dichloroethane	ND	10.0	3.20	µg/L	20	11/14/14 11:41
Trichloroethene	8.60 J	10.0	2.00	µg/L	20	11/14/14 11:41
Viethylcyclohexane	ND	10.0	2.00	µg/L	20	11/14/14 11:41
1,2-Dichloropropane	ND	10.0	3,20	µg/L	20	11/14/14 11:41
Bromodichloromethane	ND	10.0	2,00	μg/L	20	11/14/14 11:41
cis-1,3-Dichtoropropene	ND	10.0	3,20	µg/L	20	11/14/14 11:41
4-Methyl-2-pentanone	ND	100	20.0	μg/L μα/i	20 20	11/14/14 11:41 11/14/14 11:41
Toluene	ND ND	10.0 10.0	2,00 3,20	µg/L. µg/L	20	11/14/14 11:41
irans-1,3-Dichioropropene 1,1/2-Trichioroethane	ND ND	10.0	3,20	μg/L	20	11/14/14 11:41
Y			2.00	րց/∟	20	11/14/14 11:41
	ND	100	20.0	µg/L	20	11/14/14 11:41
Tetrachloroethene 2-Hexanone	30.2 ND	10.0 100		• •		

Print Date: 11/17/14 10:25 698343

Project Supervisor: Anthony Crescenzi

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	racuse, NY 130) 445-1900	Lab ID: K1411015-008ADL			
Project: PAS	Oswego-Semi-A	nmal Well Sam	pling	Client Sam	le D: L(/14
V Order: K14	11015	•	**	Collection L		04/14 12:00	
Atrix: WA	TER			Date Receiv	ed: 11/	04/14 16:00	
	3_10	Sample Size		PrepDate:			
ColumnID: Rtx-		%Moisture:		BatchNo:		7807 L-J8013.D	<i></i>
	7/14 10:24	TestCode:	8260W_OLM42	2 FileD:	1-12	L-10012.D	/.
Col Type:	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·			
Inalyte			Qual PQL	MDL	Units	DF	Date Analyzed
OLATILE ORG	ANIC COMPOUN		· ·			C/5030C	
)ibromochlorometha	ne	ND	10.0	2.00	µg/L	20	11/14/14 11:41
2-Dibromoethane	· .	ND	10.0	3.20	UBL	20 20	11/14/14 11:41 11/14/14 11:41
hlorobenzene		207	10.0	2.00	µg/L	20 20	11/14/14 11:41 11/14/14 11:41
thylbenzene		75,2	10.0	2.00	΄ μ <u>α/</u> L μα/L	20 20	11/14/14 11:41
(ylenes (total)		55.4 ND	20.0 10.0	6,00 2,00	µց/ւ µց/ւ	20 20	11/14/14 11:41
Styrene Sromoform		ND	20.0	6,60	μg/L	20	11/14/14 11:41
sopropyibenzene		3.00		2.00	μg/L	20	11/14/14 11:41
1,2,2-Tetrachioroe	กลาย	ND.	10.0	2.00	µg/Ľ	20	11/14/14 11:41
.3-Dichlorobenzene		ND	10.0	2.00	µg/L	20	11/14/14 11:41
.4-Dichiorobenzene		, ND	10.0	3.20	µg/L	20	11/14/14 11:41
,2-Dichlorobenzene		9,80		2.00	µg/L	20	11/14/14 11:41
2-Dibromo-3-chlor	· ·	ND	1,06	20.0	µg/L	20	11/14/14 11:41
,2,4-Trichlorobenze		ND	20.0	2.00	µg/L	20	11/14/14 11:41
Surr: 1,2-Dichloro	ethane-d4	90	75-130	3,20	%REC	20	11/14/14 11:41
Sun: Toluene-d8		100	75-125	2.00	%REC	20	11/14/14 11:41
Surr: 4-Bromofiuo	robenzene	الكار	75-125	2.00	%REC	20	11/14/14 11:41
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Print Date: 11/17/14 10:25

698343 Project Supervisor: Anthony Crescenzi :

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Life Science Laboratories, Inc.

Analytical Results

R 1	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:	K1411015-009A LCW-4 11/4/14
W Order: Matrix:	K1411015 WATER			Collection Date: Date Received:	11/04/14 13:10 11/04/14 16:00
Inst. ID: ColumnID:		Sample Size %Moisture:		PrepDate: BatchNo:	R27798
Revision: Col Type:	11/17/14 10:18	TestCode:	8260W_OLM42	FileD:	1-SAMP-J7989.D

Inalyte Result Qual PQL		MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN			SW8264	DC/5030C	;
Dichlorodifluoromethane	ND UJ_20.0	2.00	μg/L	20	11/13/14 17:01
Chloromethane	ND UJ 20.0	6.60	μg/L	20	11/13/14 17:01
Vinyl chloride	6.60(7) 20.0	6.60	µg/L	20	11/13/14 17:01
Bromomethane	ND UJ 20.0	6.60	µg/L	20	11/13/14 17:01
Chloroethane	59.4 20.0	6.60	µg/L	20	11/13/14 17:01
Trichlorofluoromethane	ND 4 J20.0	2.00	µg/L	20	11/13/14 17:01
1,1-Dichloroethene	ND 10.0	3.20	µg/L	20	11/13/14 17:01
1,1,2-Trichioro-1,2,2-trifluoroethane	ND 10.0	2.00	µg/L	20	11/13/14 17:01
Acetone	ND 200	20.0	µg/L	20	11/13/14 17:01
Carbon disulfide	ND 10.0	2.20	µg/L	20	11/13/14 17:01
Methyl acetate	ND UJ 100	20.0	µg/L	20	11/13/14 17:01
Metinylene chloride	, ND 40.0	3,20	μg/L	20	11/13/14 17:01
trans-1,2-Dichloroethene	ND 10.0	2.00	µg/L	20	11/13/14 17:01
Methyl tert-butyl ether	ND 20.0	3.20	µg/L	20	11/13/14 17:01
1,1-Dichloroethane	2.80() 10.0	2.00	µg/L	20	11/13/14 17:01
cis-1,2-Dichloroethena	4.60(1) 10.0	2.00	µg/L	20	11/13/14 17:01
2-Butanone	ND 200	20.0	µg/L	20	11/13/14 17:01
Chloroform	ND 10.0	2.00	µg/L	20	11/13/14 17:01
1,1,1-Trichloroethane	ND 10.0	2.00	µg/L	20	11/13/14 17:01
Cyclohexane	5.00(1) 10.0	2.00	μg/L	20	11/13/14 17:01
Carbon tetrachloride	ND UJ 10.0	2.00	µg/L	20	11/13/14 17:01
Benzene	467 10.0	2.00	µg/L	20	11/13/14 17:01
,2-Dichloroethane	ND 10.0	3.20	μg/L	20	11/13/14 17:01
Trichloroethene	ND 10.0	2.00	µg/L	20	11/13/14 17:01
Methylcyclohexane	ND 10.0	2.00	ug/L	20	11/13/14 17:01
1,2-Dichloropropane	ND 10.0	3.20	µg/L	20	11/13/14 17:01
Bromodichloromethane	ND 10.0	2.00	µg/L	20	11/13/14 17:01
sis-1,3-Dichloropropene	ND 10.0	3.20	µg/L	20	11/13/14 17:01
4 Methyl-2-pentanone	ND 100	20,0	µg/L	20	11/13/14 17:01
Toluene	84.0 10.0	2.00	µg/L	20	11/13/14 17:01
rans-1,3-Dichloropropene	ND 10.0	3.20	µg/L	20	11/13/14 17:01
1,2-Trichloroethane	ND UJ 10.0	3.20	µg/L	20	11/13/14 17:01
Tetrachioroethene	ND 10.0	2.00	µg/L	20	11/13/14 17:01
2-Hexanone	ND · 100	20.0	μg/L	20	11/13/14 17:01
Qualifiers: * Value exceeds Maxi	mum Contaminant Level	B Analyte	detected in the a	ssociated M	ethod Blank
E Value exceeds the in	stnument calibration range	-	times for prepar		-
J Analyte detected bel	ow the PQL	ND Not Det	ected at the Prac	tical Quanti	tation Limit (PQL)
P Prim./Conf. column	%D or RPD exceeds limit	S Spike R	ecovery outside :	accepted rec	overy limits

Print Date: 11/17/14 10:25

698335

Project Supervisor: Anthony Crescenzi

Life Science Laboratories, Inc.

Analytical Results

E	East Syracuse, NY 13057 (315) 445-1900			StateCertNo: 10248		
CLIENT Project:	O'Brien & Gere Op PAS Oswego-Semi		pling	Lab ID: Client Sample ID:	K1411015-009A LCW-4 11/4/14	
W Order: Matrix:	K1411015 WATER			Collection Date: Date Received:	11/04/14 13:10 11/04/14 16:00	
Inst. ID: ColumnID:		Sample Size %Moisture:		PrepDate: BatchNo: FileID:	R27798 1-SAMP-J7989.D	
Revision: Col Type:	11/17/14 10:18	TestCode:	8260W_OLM42	rnen:	1-941AIL-1/202TY	

Analyte	Ŗ	esult Qual	PQL	MDL	Units	DF	Date Analyzed	
VOLATILE ORGANIC COMPOUN	IDS BY GO	C/MS			SW8260C/5030C			
Dibromochloromethane		ND	10.0	2.00	µg/L	20	11/13/14 17:01	
1,2-Dibromoethane		ND	10.0	3.20	µg/L	20	11/13/14 17:01	
Chiorobenzene	•	302	10.0	2.00	µg/L	20	11/13/14 17:01	
Ethylbenzene		269	10.0	2.00	µg/L	20	11/13/14 17:01	
Xylenes (total)		1440	20,0	6.00	µg/L	20	11/13/14 17:01	
Styrene		NÐ	10,0	2,00	µg/L	20	11/13/14 17:01	
Bromoform		ND	20.0	6.60	µg/L	20	11/13/14 17:01	
Isopropylbenzene		2.4(J)	10.0	2.00	µg/L	20	11/13/14 17:01	
1,1,2,2-Tetrachloroethane		ND	10.0	2.00	µg/∟	20	11/13/14 17:01	
1,3-Dichlorobenzene		ND	10,0	2.00	µg/L	20	11/13/14 17:01	
1,4-Dichlorobenzene		ND	10,0	3,20	µg/L	20	11/13/14 17:01	
1,2-Dichlorobenzene	¢	24.2	10.0	2.00	µg/L	20	11/13/14 17:01	
1,2-Dibromo-3-chloropropane	4	ND	100	20.0	µg/L	20	11/13/14 17:01	
1,2,4-Trichlorobenzene	4	ND UJ	20.0	2.00	µg/L	20	11/13/14 17:01	
Surr: 1,2-Dichloroethane-d4		114	75-130	3.20	%REC	20	11/13/14 17:01	
Surr: Toluene-d8		98	75-125	2,00	%REC	20	11/13/14 17:01	
Surr: 4-Bromofluorobenzene		98	75-125	2.00	%REC	20	11/13/14 17:01	

Qualifiers:

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

698335 ·

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Practical Quantitation Limit (PQL)
- S Spike Recovery outside accepted recovery limits

Print Date: 11/17/14 10:25

Project Supervisor: Anthony Crescenzi

LSL	Life Science 854 Butternut Drive		r	~~		-	cal Results
E	ast Syracuse, NY 13	057 (315)	45-1900		State	eCertNo:	10248
CLIENT	O'Brien & Gere Open			Lab ID:		1411015-0	
Project:	PAS Oswego-Semi-A	nnual Well Samp	ling	Client Sam	ple ID: L(CW-4 11/	4/14
W Order:	K1411015			Collection 1	Date: 11/	/04/14 13:	10
Matrix:	WATER			Date Receiv	ed: 11/	/04/14 16;	00
Inst. ID:	MS03_10	Sample Size	l0 mL	PrepDate:			
ColumnID:		%Moisture:		BatchNo:		7807	_
Revision:	11/17/14 10:24	TestCode:	8260W_OLM	42 FileID:	1 - F	A-78012.J)
Col Type:					/		
Analyte		Result Q	al PQL	MADL	Enits	DF	Date Analyzed
OLATILE O	RGANIC COMPOUN	DS BY GC/MS			SW826	DC/5030C	
Dichlorodifiuor	omethane	ND	20.0	1 Made	µg/L	20	11/14/14 11:11
Chloromethane		ND	- 20.0 V	6.60	µg/L	20	11/14/14 11:11
/inyl chloride		' ND	, ¹ 20.0 ~	\$ 6.60	µg/L	20	11/14/14 11:11
Sromomethane)		(¹ 20.0 20.0 ()	6.60	hâ\r	20	11/14/14 11:11
Chloroethane	·	55 4 N	20.0	6.60	µg/L	20	11/14/14 11:11
Frichlarofluoror		V NOT	20.0	2.00	μg/L	20	11/14/14 11:11
,1-Dichlorceth	iene	ND ND	10.0	3.20	µǥ/L	20	11/14/14 11:11
	-1,2,2-trifluoroethane	DO, DO	10,0	2.00	µg∕L	20	11/14/14 11:11
lcetone		ND ND	200	20.0	µg/L	20	11/14/14 11:11
Carbon disulfid			10.0	2.20	µg/L	20	11/14/14 11:11
Active acetate		ND ND	100	20.0	µg/L	20	11/14/14 11:11
Aethylene chio		NE	40.0	3.20	µg/L	20	11/14/14 11:11
rans-1,2-Dichl		ND ND	10.0	2,00	µg/L	20	11/14/14 11:11
viethyl tert-buty		ND 6		3.20	µg/L	20	11/14/14 11:11
1-Dichloroeth	and the second design of the s	2.40(J	10.0	2,00	µg/L	20	11/14/14 11:11
is-1,2-Dichlor	cethene	3.80 J	10.0	2.00	µg/L	20	11/14/14 11:11
2-Butanone	/	/ ND	200	20.0	µg/L	20	11/14/14 11:11
Chloroform	-	ND	10.0	2.00	µg/L	20 20	11/14/14 11:11
, 1, 1-Trichloro	emane	ND 4.60	10.0	2.00	µg/L	20 20	11/14/14 11:11
Cyclohexane	larida		<u>10.0</u> 10.0	2,00 2,00	μg/L. μg/L	20	11/14/14 11:11 11/14/14 11:11
Senzene		458	10.0	2.00	µg/L	20	11/14/14 11:11
,2-Dichioroeth	1900	ND	10.0	3,20	µg/L	20	11/14/14 11:11
richioroethene	/	ND	10.0	2.00	µg/L	20	11/14/14 11:11
Viethyicyclohex	/	ND	10.0	2.00	μg/L	20	11/14/14 11:11
,2-Dichloropro		ND	10.0	3.20	μg/L	20	11/14/14 11:11
Bromodichlorof		. ND	10.0	2.00	µg/L	20	11/14/14 11:11
is-1,3-Dickion		ND	10.0	3.20	μg/L	20	11/14/14 11:11
-Methyl-2-pen		ND	100	20.0	µg/L	20	11/14/14 11:11
l'oluene		84.0	10.0	2.00	μg/L	20	11/14/14 11:11
rans-1,3-Dichi	oropropene	ND	10.0	3.20	µg/L	20	11/14/14 11:11
1,2-Trichloro	• •	ND	10.0	3.20	µg/L	20	11/14/14 11:11
Tetrachioroeth		ND	10 .0	2.00	µg/L	20	11/14/14 11:11
2-Hexanone		ND	100	20.0	μg/L	20	11/14/14 11:11
0	* Value exceeds Maxir	num Contaminant Lev		B Analyte d	etected in the s	ssociated Me	thod Blank
Qualifiers:		trument calibration rat		-	imes for prepar		
	J Analyte detected belo		0			-	tion Limit (PQL)
	P Prim./Conf. column	-				accepted reco	

Print Date: 11/17/14 10:25

698344

Project Supervisor: Anthony Crescenzi

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CLIENT	ast Syracuse, NY 1. O'Brien & Gere Ope		445-1900	StateCertNo: 10248 Lab ID: K1411015-009ARA				
Project:	PAS Oswego-Semi-		nline					
-	-	Autori Weit Sau	thrung	Client Sample ID: LCW-4 11/4/14 Collection Date: 11/04/14 13:19				
Matrix:	W Order: K1411015			Collection Date Recei			/	
Inst. D:	WATER MS03 10			PrenDate:		04/14 16	.00	
ColumnID:		%Moisture:		BatchNo:		7807		
Revision:	11/17/14 10:24					A-J8012.	Ð	
Col Type:				FileID:	· /			
Analyte		Result (Qual PQL	MDL	Enits	DF	Date Analyze	
VOLATILE	ORGANIC COMPOU	NDS BY GC/MS			/)C/5030C	;	
Dibromochloro		ND	10.0	2.00	µg/L	20	11/14/14 11:11	
1,2-Dibromoett		ND	10.0	3.20	µg/L	20	11/14/14 11:11	
Chlorobenzene	1	305	10.0	2.00/	µg/L	20	11/14/14 11:11	
Ethylbenzene		275	10.0	2,00	µg/L	20	11/14/14 11:11	
(yienes (total)		1470	20.0	6.00	µg/L	20	11/14/14 11:11	
Styrene		ND	10.0	2.00	µg/L	20	11/14/14 11:11	
Bromoform		ND	20.0	6.60	µg/L	20	11/14/14 11:11 11/14/14 11:11	
sopropylbenze		2.60(J ND	10.0	2.00 2,00	µg/L	20 20	11/14/14 11:11	
, 3-Dichlorobe		ND	10.0	2,00	µg/L µg/L	20	11/14/14 11:11	
,4-Dichlorobel		· 3.40(J		3.20	hāve hāve	20	11/14/14 11:11	
,-Dichlorobe		23.8	10.0	2,00	µg/L	20	11/14/14 11:11	
•	-chloropropane	ND	100	20.0	µg/L	20	11/14/14 11:11	
,2,4-Trichloro		¹ ND 2	20.0	2.00	μg/L	20	11/14/14 11:11	
•	chioroethane-d4	119	75-130	3.20	%REC	20	11/14/14 11:11	
Surr: Toluen		1 99	75-125	2.00	%REC	20	11/14/14 11:11	
Surr: 4-Bron	nofluorobenzene	/ 99	75-125	2.00	%REC	20	11/14/14 11:11	
Qualifiers		imum Contaminant Le			detected in the s times for prepar			

Print Date: 11/17/14 10:25 698344 Proje

Project Supervisor: Anthony Crescenzi

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E	ast Syracuse, NY	13057 (315)	445-1900	StateCertNo: 10248					
CLIENT	O'Brien & Gere (Lab ID: K1411015-010A					
Project:	PAS Oswego-Ser	ni-Annual Well Sam	pling	Client Sam	ple ID: 🖉	C Trip 1	Blanks 11/4/14		
W Order;	K1411015			Collection		1/03/14 11			
Matrix:	WATER Q			Date Recei		1/04/14 16			
Inst. ID:	MS03 10	Sample Size	10 mL	PrepDate:					
ColumnID:		%Moisture:		BatchNo:	R	27798			
Revision:	11/21/14 9:15	TestCode;	8260W_OLM42	FileID:	1-	SAMP-J7	990.D		
Col Type:									
Analyte		Result (Jual PQL	MDL	Units	DF	Date Analyzed		
OLATILE	ORGANIC COMPO	UNDS BY GC/MS			SW82	30C/50300	;		
Dichlorodifluor	omethane		ムゴ1.00	0.10	µg/L	1	11/13/14 17:30		
hloromethan	3		UJ 1.00	0.33	µg/L	1	11/13/14 17:30		
/inyl chloride			UJ1.00	0.33	µg/L	1	11/13/14 17:30		
Bromomethan	3		UJ1.00	0.33	hð\r	1	11/13/14 17:30		
hloroethane		ND	1.00	0.33	µg/L	1	11/13/14 17:30		
richlorofluoro		ND	U.J1.00	0.10	µg∕L.	1	11/13/14 17:30		
,1-Dichloroet		ND	0.50	0.16	µg/L	1	11/13/14 17:30		
	-1,2,2-trifluoroethane	ND	0.50	0.10	µg/L	1	11/13/14 17:30		
cetone	_	ND	10.0	1.00	havr	1	11/13/14 17:30		
arbon disulfic		ND	$UJ_{5,00}^{0.50}$	0.11	µg/L	1	11/13/14 17:30		
Aethyl acetate				1.00	µg/L	1	11/13/14 17:30		
lethylene chk		ND	2.00	0.16	µg/L	1 1	11/13/14 17:30 11/13/14 17:30		
ans-1,2-Dich		ND	0.50 1.00	0.10 0.16	µg/L	1 1	11/13/14 17:30		
fethyl tert-but	•	ND	0,50	0.16	µg/L µg/L	1	11/13/14 17:30		
,1-Dichloroet		ND ND	0.50	0.10	ից/է	1	11/13/14 17:30		
is-1,2-Dichlor -Bulanone	Qen Blia	ND ND	10.0	1.00	μg/L	1	11/13/14 17:30		
-Buiznone Chloroform		ND	0.50	0.10	րց/է	1	11/13/14 17:30		
,1,1-Trichloro	ethane	ND	0.50	0.10	µg/L	1	11/13/14 17:30		
,,,,-nconoic Syciohexane	revaluat (G	ND	0,50	0.10	μg/L	1	11/13/14 17:30		
Carbon tetrach	laride		UJ0.50	0.10	r∌- µg/L	1	11/13/14 17:30		
snzene		ND	0.50	0.10	µg/L	1	11/13/14 17:30		
.2-Dichloroet	hane	ND	0.50	0.16	μg/L	1	11/13/14 17:30		
richloroethen		ND	0.50	0.10	µg/L	1	11/13/14 17:30		
Aethylcyclohe	-	ND	0.50	0.10	µg/L	1	11/13/14 17:30		
2-Dichieropr		ND	0.50	0.16	µg/L	1	11/13/14 17:30		
Bromodichioro	•	ND	0,50	0.10	µg/∟	1	11/13/14 17:30		
is-1,3-Dichlo	ropropene	ND	0.50	0.16	µg/L	1	11/13/14 17:30		
-Methyl-2-per	ntanone	NÐ	5.00	1.00	µg/∟	1	11/13/14 17:30		
oluene		ND	0.50	0.10	µg/∟	1	11/13/14 17:30		
rans-1,3-Dich	loropropene	ND	0.50	0.16	µg/L	1	11/13/14 17:30		
1,2-Trichlord			UJ 0.50	0.16	µg/L	1	11/13/14 17:30		
etrachloroeth	iene	ND	0.50	0.10	µg/∟	1	11/13/14 17:30		
2-Hexanone		ND	5.00	1.00	µg/L	1	11/13/14 17:30		
Onalifiers:	* Value exceeds I	Maximum Contaminant Lo	svel	-	detected in the				
-Cantry 41 34	E Value exceeds t	the instrument calibration r	ange	-			alysis exceeded		
	J Analyte detecte	d below the PQL				-	itation Limit (PQL)		
	P Prim./Conf. col	umn %D or RPD exceeds	limit	S Spike Ro	scovery outsid				

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Print Date: 11/21/14 9:17

698336 Proje

Project Supervisor: Anthony Crescenzi

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Life Science Laboratories, Inc. 5854 Butternut Drive

Analytical Results

	ast Syracuse, NY 130	57 (315)	445-1900	;	StateCertNo: 10248
CLIENT Project:	O'Brien & Gere Operat PAS Oswego-Semi-An	•	pling	Lab ID: Client Sample ID:	K1411015-010A QC Trip Blanks 11/4/14
W Order: Matrix:	K1411015 WATER Q			Collection Date: Date Received:	11/03/14 11:30 11/04/14 16:00
Inst. ID: ColumnID: Revision:	MS03_10 Rtx-502.2 11/21/14 9:15	Sample Size %Moisture: TestCode:		PrepDate: BatchNo: FileID:	R27798 1-SAMP-J7990,D
Col Type:					

Analyte	Result Qr	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUN	DS BY GC/MS			SW826	DC/5030C	
Dibromochloromethane	ND	0,50	0.10	μg/L	1	11/13/14 17:30
1,2-Dibromoethane	ND	0.50	0.18	µg/L	1	11/13/14 17:30
Chlorobenzene	ND	0,50	0,10	µg/L	1	11/13/14 17:30
Ethylbenzene	ND	0,50	0.10	µg/L	1	11/13/14 17:30
Xylenes (total)	ND	1.00	0.30	µg/L	1	11/13/14 17:30
Styrena	ND	0.50	0.10	µg/L	1	11/13/14 17:30
Bromoform	ND	1,00	0.33	µg/L	1	11/13/14 17:30
Isopropyibenzene	ND	0,50	0,10	μg/L.	1	11/13/14 17:30
1,1,2,2-Tetrachioroethane	ND	0.50	0.10	µg/L	1	11/13/14 17:30
1,3-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/13/14 17:30
1,4-Dichlorobenzene	ND	0,50	0.16	µg/L	1	11/13/14 17:30
1,2-Dichlorobenzene	ND	0.50	0.10	µg/L	1	11/13/14 17:30
1,2-Dibromo-3-chloropropane	ND	5.00	1.00	μg/L	1	11/13/14 17:30
1,2,4-Trichlorobenzene	ND G	J 1.00	0.10	µg/L	1	11/13/14 17:30
Surr: 1,2-Dichloroethans-d4	124	75-130	0.16	%REC	1	11/13/14 17:30
Surr: Toluene-dB	100	75-125	0.10	%REC	1	11/13/14 17:30
Sur: 4-Bramofluorobenzene	103	75-125	0.10	%REC	1	11/13/14 17:30

B Analyte detected in the associated Method Blank Value exceeds Maximum Contaminant Level * Qualifiers: H Holding times for preparation or analysis exceeded E Value exceeds the instrument calibration range ND Not Detected at the Practical Quantitation Limit (PQL) Analyte detected below the PQL J S Spike Recovery outside accepted recovery limits P Prim./Conf. column %D or RPD exceeds limit 698336

Print Date: 11/21/14 9:17

Project Supervisor: Anthony Crescenzi

ATTACHMENT B-5

INSTITUTIONAL CONTROLS CERTIFICATION MEMORANDUM

PAS OSWEGO SUPERFUND SITE

Institutional Controls Implementation Plan Annual Certification November 5, 2014

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 5, 2014. 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 2015



<u>QUARTERLY PROGRESS REPORT – 1st QUARTER 2015</u> Operation, Maintenance and Long-term Monitoring Activities

PROJECT NAME: Pollution Abatement Services Site Oswego, New York

<u>PERIOD COVERED</u>: January – March 2015 (1st Quarter)

ACTIONS TAKEN DURING QUARTER:

- Leachate removal and site maintenance and monitoring activities were conducted at the Pollution Abatement Services (PAS) site (Site), in Oswego, New York by O'Brien & Gere Operations LLC, (O'Brien & Gere) consistent with the PAS Site Operation, Maintenance and Long-term Monitoring Plan (Work Plan).
- A total of 30,020 gallons of leachate were removed from the Site during the period of January, February and March 2015. Specific quantities of leachate removed included 10,015 gallons in January, 10,005 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 and February 2015 leachate was pumped from the PAS Site to the City of Oswego, New York sanitary sewer system, and was treated at the Oswego, New York Eastside Wastewater Treatment Facility located at 71 Mercer St. in Oswego, New York. During the month of March leachate was pumped into trucks. The leachate was shipped for disposal and treatment to the City of Auburn Publicly Owned Treatment Works Plant (POTW) located at 35 Bradley Street, Auburn, New York.
- Quarterly groundwater elevation monitoring was performed on February 4, 2015. 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:
 - Removed accumulated snowfall away from the site access gates, paved driveway and the wooden leachate pump shed.
 - Inspected the perimeter security fence of the Site. It was noted the fencing was pulled away from the posts by the weight of the snow from the clearing of the highway. Once



the snow is melted the fencing will be repaired. No additional discrepancies were reported at the time of the inspection.

- The Site single French drainage system and two (2) concrete troughs were inspected. Snow covered most of the area. 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. Snow covered most of the area. No damage to the cap was observed.
- Visually inspected the leachate collection system pumping equipment to verify proper operation. The field technician inspected each pump control panel to ensure control systems were generally free of rodents, and insects, and where properly operating. The leachate holding tank was visually inspected for integrity, as were the leachate tanks steel protective roof, and wood structure. No discrepancies were reported at the time of the inspection.
- The Site wooden utility shed and leachate pumping equipment, including centrifuge discharge pump, flow meter, suction hose, pump oils levels, heat trace power panel, interior lighting, exterior and interior shed structure, and main power distribution panel. The heat trace protection system was checked for operation, and remained in the "On" position during each leachate pump out event. The main power distribution panel was observed to have several inches of ice in the lower enclosure. It appeared that the water entered the enclosure through the conduit entering the bottom of the enclosure box. No additional discrepancies were reported at the time of the inspection.
- On January 12, February 4, and March 4, 2015, O'Brien & Gere performed the monthly leachate pre-pumping collection system inspection for leachate collection wells LCW-1, 2, 3 & 4, along with the inspection of the leachate discharge pumping system. In advance of the January and February leachate removal events, O'Brien & Gere informed the City of Oswego Eastside Wastewater Treatment Facility of the scheduled leachate discharge. Prior to each leachate discharge, the City of Oswego was notified. In advance of the March 4, 2015 event, O'Brien & Gere informed the City of Auburn POTW located at 35 Bradley Street, Auburn New York of the anticipated delivery of leachate tankers.
- Upon completing the monthly leachate collection system inspections, O'Brien & Gere 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 C-2)
- During the months of January, February and March 2015. O'Brien & Gere pumped a combined volume of 30,020 gallons of leachate from LCW-1, 2, 3 & 4 into the leachate collection tank. In January 10,015 gallons and in February 10,005 gallons were pumped for a total of 20,020 gallons discharged into the City of Oswego off-site sanitary sewer system. The leachate pumping system consists of one electrically powered centrifugal discharge pump, conveyance hose, discharge flow totalizer and leachate sampling port. This



discharge system is located within the confines of the projects wooden utility shed. The amount of leachate discharged during each removal event, along with discharge flow totalizer amounts, pH, pump priming times, and leachate water temperatures were recorded on the Leachate Disposal Checklist for each monthly removal event. In the month of March, 10,000 gallons were pumped into trucks and shipped to the City of Auburn POTW. The volume and flow rate of each leachate discharge was recorded onto the Leachate Disposal Checklist, as was leachate water pH, and temperature. For the March event the leachate pumping system consists of a leachate tank suction hose, gas powered trash pump, inline bag filter system, pressure gauge, leachate sampling port, and discharge hose to leachate tanker. The amount shipped was recorded onto the Leachate Disposal Checklist. (Attachment C-2)

- Upon completing each monthly leachate removal event the leachate discharge equipment was drained of residual leachate, and prepared for storage. The leachate collection tank enclosure and the wooden maintenance shed were secured and locked. When leaving the Site, the metal entrance gate was closed, with a chain and padlock installed.
- The PAS Oswego Site quarterly discharge reports for the 1st quarter of 2015 were submitted. The report to the City of Oswego was submitted on April 3, 2015 in accordance with renewed permit 6-2015-16, and the report to the City of Auburn was submitted on April 3, 2015 in accordance with permit 2014-01. The Treatability Study on PAS discharge to evaluate treatment of Arsenic and Selenium was submitted as an attachment to the April 3, 2015 City of Oswego report. (Attachment A-3)
- O'Brien & Gere performed a leachate filtration test on PAS leachate for Arsenic and Selenium on January 12, 2015. The results were communicated to the City of Oswego in January 2015. The results are provided in the April 3, 2015 quarterly discharge report.
- Based on the results of the Treatability Study and the filtration test for Arsenic and Selenium the City of Oswego discontinued accepting PAS leachate in March 2015 and leachate was shipped to Auburn under the approved Work Plan.

DOCUMENTATION OF REMOVAL ACTIVITIES FOR PREVIOUS QUARTER

- The Groundwater Pre-pumping Well Monitoring Level Form for January 12, 2015 is attached to this report. (Attachment C-1)
- Site Inspection Checklist for January 12, February 4, and March 4, 2015 are attached to this report. (Attachment C-2)
- Leachate Disposal Checklist for January 12, February 4, and March 4, 2015 are attached to this report. (Attachment C-2)
- The PAS Quarterly Discharge reports submitted on April 3, 2015 to the City of Oswego and April 3, 2105 to the City of Auburn are attached. (Attachment C-3)

ATTACHMENT C-1

GROUNDWATER ELEVATION DATA

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

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Date - 3 /5/2 Well	2014 2-4- Riser		Range Verific	Technician ation	-	Nonthly C	<u>Aartin Koe</u> Insite Field		ments	Month - F	etny	-March-20
Number	Elevation	Average Well Level	Low Well Level	High Well Level	Well Level (1st) Check	Well Level (2nd) Check	Well Wit	nin Range istorical well data)	Well Level Check (3rd) (If "NO" & well is not within targeted range)			TES
SWW1	289.33	8.82	8.30	9.48	9,74					<u> </u>		\backslash
SWW2	289.37	15.48	15.02	16.02	16,04				(well	RANGE	5 NOT
SWW3	286.50	16.83	16.52	17.38	17.40					The P	Light	ONES
SWW4	283.60	14.30	12.94	15.33	15:70							·
SWW5	277.02	12.87	12.32	13.46	13,96							
SWW6	273.06	8.37	7.68	8.92	8,68							
SWW7	277.93	7.84	7.28	8.20	8,28							
SWW8	278.24	3.97	3.66	4.31	4,18		-					
SWW9	285.55	16.86	16.12	17.75	18,72							
SWW10	280.43	10.50	9.54	12.26	12,53							
SWW11	273.50	8.90	8.20	9.60	10,16							
SWW12	272.82	8.53	7.80	9.00	8,98							
LCW-1	272.21	8.18	7.55	8.92	9,90							
LCW-2	274.44	10.43	9.80	11.15	12,14							
LCW-3	284.36	17.67	17.45	18.07	18,34							
LCW-4	285.70	18.22	17.48	19.16	18.62							
OS-1	272.10	0.00	0.00	0.00	10,94							
OI-1	272.00	0.00	0.00	0.00	11.80							
OS-3	277.89	0.00	0.00	0.00	15,38							
OD-3	277.85	0.00	0.00	0.00	15,16							
LD-3	278.62	0.00	0.00	0.00	4,30							
LD-4	279.25	0.00	0.00	0.00	11.40							·
LD-5	272.94	0.00	0.00	0.00	9.24							
LS-6	274.14	0.00	0.00	0.00	10,68							·
LD-6	274.03	0.00	0.00	0.00	10,82							
LD-8	272.83	0.00	0.00	0.00	9,05				1			
LR-2	289.85	0.00	0.00	0.00	13,30							
LR-3	278.06	0.00	0.00	0.00	8,00							
LR-6	274.39	0.00	0.00	0.00	10,98							·
LR-8	273.42	0.00	0.00	0.00	10.20							
M-21	272.32	0.00	0.00	0.00	9.76			· .				
M-22	273.88	0.00	0.00	0.00	10,94							
M-23	270.49	0.00	0.00	0.00	12.36							

ATTACHMENT C-2

SITE INSPECTION CHECKLIST AND LEACHATE DISPOSAL CHECKLIST



Site Inspection Checklist (V2)

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

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

Date /-/2-15

Field Technician MARTIN KOENNecke Weather Conditions SNOWING 30°

Inspection Features Remarks (indicate accomplishment of each maintenance task) Monthly Quarterly Land Cap \checkmark Signs of burrowing vermin NONE VISABLE Land cap irregularities (note V SNOW COVERED anomaly) French drainage system clear and function able 1 SNOW COVERED Concrete trough clear and V function able OK 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 \mathcal{V} 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 V (Applicable Oct - May) ON Flow totalizer operational. Flow

readings recorded onto Yes "Leachate Discharge Form" V Leachate Collection System Leachate holding tank visually V inspected for structural integrity OK Leachate holding tank metal roof V OK inspected for structural integrity _____

1

		1-12-15
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	WORK IN PROGRESS
Perimeter security fence intact &		•
free of damage	ν	OK
Site access driveway inspected &		
free on snow & damage	V	PLOWED DRIVE
Security access gates / Padlock &		
chain serviceable	レ	 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	Yes
PPE available and utilized as		Vec
required	V	Yes
Emergency contact information		N m c
posted within shed	V	Yes

Additional remarks (use separate sheet is required) PUMPED 10,000 GALLONS LEACHATE TO CITY of OSWEGO

TREATED	Leachate	with	501bs	CAUSTI	c SODA	Beyds	An	0.5 lbs Limp.
Pumped TI	Rragh O,	5 mic	BAG	FILTER	SKID			
Took	SAMPLE	for	FE, A	S, SE		· · · · ·		

2



Site Inspection Checklist (V2)

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

Date <u>2-4-15</u>

Time______8:30

Field Technician Ingrantin Koennecka

Weather Conditions SNOWING 25°

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

Inspection Features	Monthly	Quarterly	Remarks (indicate accomplishment of each maintenance task)				
Land Cap							
Signs of burrowing vermin	V		SNOW COVERED				
Land cap irregularities (note							
anomaly)	V		θK				
French drainage system clear and							
function able	\checkmark		SNOW COURCED				
Concrete trough clear and							
function able	\checkmark		SNOW COVERED				
Leachate Discharge System							
City of Oswego sanitary discharge							
valve positioned "Open"	V		Yes				
Discharge Pump inspected &							
operational	\checkmark		Yes				
Discharge pump oil level verified							
prior to use.	1		Yes				
Discharge pump drained of							
residual water (drained upon			N/c				
completion of monthly discharge)	V		Yes				
Heat trace system operational &							
verified in the "ON" position							
(Applicable Oct - May)	V		ON				
Flow totalizer operational. Flow							
readings recorded onto							
"Leachate Discharge Form"	V		Yes				
Leachate Collection System	V (^{Mag}	n george Standard Articles					
Leachate holding tank visually							
inspected for structural integrity	V		ok				
Leachate holding tank metal roof							
inspected for structural integrity	V		0K				

· 1

2-4-15

		T	
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		WORK IN PROGRESS
Perimeter security fence intact &			
free of damage	V		OK
Site access driveway inspected &			
free on snow & damage	\mathbf{V}		PLOWED DRIVE
Security access gates / Padlock &			
chain serviceable	V		Yes
Site gate signage intact	\checkmark		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		Yes
Additional remarks (use separate s	heet	is re	auired)
QUARTERIV well 1	Leve	ις .	PUMPED 10,000 gAL To
CITY of OSWEDD WAT	un .	TRE	PUMPED 10,000 gAL TO ATMENT PLANT,
PLOWED DRIVE			COVERED 24"- 36" SNOW



Site Inspection Checklist (V2)

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

Date <u>3-4-15</u>

7:15 Time

Field Technician MIARTIN KOENNe Ke

Weather Conditions <u>30</u>°

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

Inspection Features			Remarks (indicate accomplishment of each maintenance task)
	Monthly	erly	
	Mor	Quarterly	
		đ	
Land Cap			
Signs of burrowing vermin	~		SNOW COVERED
Land cap irregularities (note			
anomaly)	r		SMOW
French drainage system clear and			
function able	~		0K
Concrete trough clear and			
function able	V		SNOW COVERED
Leachate Discharge System			
City of Oswego sanitary discharge			
valve positioned "Open"	V	-	NA.
Discharge Pump inspected &			
operational	レ		NA
Discharge pump oil level verified			
prior to use.	V		NA,
Discharge pump drained of			
residual water (drained upon			
completion of monthly discharge)	V		NA.
Heat trace system operational &			
verified in the "ON" position			
(Applicable Oct - May)	V		ON
Flow totalizer operational. Flow			
readings recorded onto			
"Leachate Discharge Form"	\checkmark		NA,
Leachate Collection System	2		
Leachate holding tank visually			
inspected for structural integrity	V		OK
Leachate holding tank metal roof			
inspected for structural integrity	V		OK

1

3-4-15

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 M plogRass
Perimeter security fence intact &		
free of damage	V	OK
Site access driveway inspected &		0.
free on snow & damage	V	 PLOWED
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	\checkmark	Yes
Fire extinguisher serviceable,		
inspected, and inspection		
recorded	V	Yes
Spill control material inspected &		
adequate	V	STOCKED
PPE available and utilized as		
required	V	 Yes
Emergency contact information		
posted within shed	V	Yes

Additional remarks (use separate sheet is required)

PUMPE	D Lea	chate	10	TANK				
TREATED	PH	with	50Ks	CAUSTIL	SODH	BEHDS	AND 15	16 Line
To RAISE	PH To	DROP	OUT	IRON, L	ONDED	Two T	TANKER "	Trucks
Pumping .	Lengettat	E Thr	ough	BAG F	1 Hteres	opp	, 10,00	o gallous
				ATMENT				/

PLOWED SITE DRIVE



Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: 1~12-15

1

Time: 10:00

Field Technician MARTIN Koennecke

Weather Conditions SNOWINY 30°

Beginning Leachate		Pre-Discharge Well Pumping										
Hold Tank Elevation (Inches)	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank						
9.5"	LCW-1	10 15	11:40	43"	120	(Gallons) ノリ,ス / 8						
	LCW-2	10 15	11:40									
···· ··· ··	LCW-3	10 15	10:30									
	LCW-4	10 15	11:40									

Total 10,218

SAMPLE FOR IRON, AS, SE TAKEN AT 12:45

Discharge #	Start Time Stop Time		рН	pH Temp		Totalize I Flow Tot (End)	
Discharge #1	11:55	13:50	7.8	440	750195	760210	> 10,015
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
	87		Ø	Ø	-	•	
	Semi-Ar	nnual Le	achate Di	ischarge S	Sampling (Per the City of	Oswego Permit)
	Date	Sampl Locatio		nple S ume	Sample Time	рН	Temperature
Sample #1							

After TREATMENT 7.8 PH, IRON After 15 MIC, BAY filter - 4.4 My/L



Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: <u>2-4-15</u>

Time: <u>830</u>

Field Technician _MARTIN Koennecke

Weather Conditions <u>SNOWING</u> 25°

Beginning Leachate	Pre-Discharge Well Pumping											
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	1130	12:50	42,5"	124 GPM	9912						
	LCW-2	11:30	12:50			······································						
· · · · ·	LCW-3	11:30	11:40									
	LCW-4	11:30	12:50			· · · · · · · · · · · · · · · · · · ·						
	<u></u>	. .	• · · · · · · · · · · · · · · · · · · ·	, , , , , , , , , , , , , , , , , , ,	Total	9.912						

	Ма	onthly L	eachate D	Discharge	Pumping (1	o the City of Os	vego)
Discharge #	Start Time	Stop Time	рН	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1	13:15	15:15	6.8	48°	760210	770215	10,005
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
	83	25 MIN.	0	6"-8"			
•	Semi-Ar	nnual Le	achate Di	ischarge S	ampling (P	er the City of Os	wego Permit)
	Date	Sampl Locatio		·	ample Time	рН Т	emperature
Sample #1							,



Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: <u>3-4-15</u>

Time: 7:15

Field Technician ______K

. K

Weather Conditions 30°

Beginning Leachate		Pr	e-Discharge	Well Pumpi	ing	
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)
9,5	LCW-1	7.55	9:15	43,5	11	10,370
	LCW-2	7:55	9:15			•
	LCW-3	17:55	8:05			
	LCW-4	7:55	9:15			
	1				Total	

Total 10,370 Betine 6,8 +20 FE / Afex CAUSTIC + LIMU 8,5 PH, 4,2

Monthly Leachate Discharge Pumping (To the City of Oswego)

Discharge #	Start Time	Stop Time	рН	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1			8,5	42°			
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			
		-					

Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit)

•	Date	Sample Location	Sample Volume	Sample Time	рН	Temperature
Sample #1	· · · · · · · · · · · · · · · · · · ·					
H4:00	1ST LON ZND LON		-12:00 7500 13:15 2500 FAUBURN) = app water TR	о. 10,000 саттыен	gallons T PLANT

ATTACHMENT C-3

QUARTERLY POTW DISCHARGE REPORTS 1ST QUARTER 2015

= de maximis. inc.

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

Via electronic mail

April 3, 2015

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

Re: Quarterly Discharge Report – 1st Quarter 2015 Pollution Abatement Services Site – Oswego, New York City of Auburn Wastewater Discharge Permit 2014-01

Dear Mr. O'Brien:

This quarterly report is submitted in accordance with the City of Auburn Wastewater Discharge Permit 2014-01 (Permit) for discharge of leachate from the Pollution Abatement Services (PAS) Site into the City of Auburn Wastewater Treatment Facility. This report covers the reporting period from January 2015 through March 2015.

Leachate trucking to the Auburn Public Operated Treatment Plant (POTW) was revived on March 4, 2015. The total gallons of leachate discharged during the first quarter of 2015 were 10,000 gallons. The amount of leachate discharged during each monthly removal event is summarized in Table 1. A Leachate Discharge Form documenting the leachate pumping process and completed Straight Bills of Lading providing the quantity of leachate shipped during each leachate removal event are included in Attachment I. The discharge quantities, as well as date of each discharge event are provided on the Bills of Lading. Measurements for pH and temperature during each removal event are also recorded in the Leachate Discharge Form.

Please send all invoices to the following address:

Attn: Clay McClarnon de maximis, inc. 450 Montbrook Lane Knoxville, TN 37919

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

Sincerely, de maximis. inc. Clay McClarnow

Clay McClarnon

Attachments

cc: PAS Oswego Site Management Committee

F:\PROJECTS\3131 - PAS\Permits-POTW 10\2015\Auburn 1st qtr 2015 rpt 4-3-15.doc

ATTACHMENT I

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Discharge Quarter 1Q 2015 Date Discharged Galk Call Date Discharged Galk (temp/pH) Authomy 3/4/15 Authomy 3/4/15 Date Sampled 42/8.5 Antinomy 42/8.5 Antinomy Antinomy Arsenic Barium Chromium (total) Chromium (total) Chromium (total) Copper Iron Lead Not sar Nickel Selenium Silver Zinc	Gallons ischarged 10,000 10,000	2Q.2015 Date Discharged Ga (temp/pH) Disch	5 30 Gallons Date Discharged Discharged (temb/pH)	3Q 2015 ged Gallons Discharged	4Q 2015	
Date Discharged (temp/ph1) 3/4/15 3/4/15						015
	10,000 10,000				Date Discharged (temo/oH)	Gallons Discharged
	10,000 10,000					
3/4/15 3/4/15	10,000 10,000					1
3/4/15	10,000					
3/4/15	10,000					
128.5	10,000					
	10,000					
				ilariaketin ila		
				>*0		
	Not sampled			19th states		
	mg/L			য় সম্পূৰ্ণ ক		÷
Arsenic Barium Chromium (hex) Chromium (hex) Copper Copper Copper Iron Lead Mercury Nickel Selenium Silver Zinc				19 1 (2475		
Cadmium Chromium (hex) Chromium (total) Copper Iron Lead Mercury Nickel Selenium Silver Zinc				14-1-14-18-18		
Chromium (total) Copper Iron Lead Mercury Nickel Selenium Silver Zinc						
Copper Iron Lead Mercury Nickel Silver Zinc Zinc				on direct		
Lead Mercury Nickel Selenium Silver Zinc				-1))-1,		
Nickel Selenium Silver Zinc				2° manjasti		
Silver Zinc				one 		
Zinc						
Cyanide				-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		
		a de la companya de l La companya de la comp		97 973		
				<i></i>		
1117CF				2014 (c. m. in.		
Phenolics Toluene				contraction of		
				20.04		

ATTACHMENT I



Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: <u>3-4-15</u>

Time: 7:15

Field Technician ______

影

Weather Conditions 30°

Beginning Leachate		Pi	e-Discharge	e Well Pumpi	ing	
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)
9,5	LCW-1	7.55	9:15	43,5	11	10,370
	LCW-2	7:55	9:15			
	LCW-3	17:55	8:05			
	LCW-4	7:55	9:15			
	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			Total	

Total 10,370 Betune 6,8 +20 FE / Afex CAUSTIC + LIMU 805 PH, 4,2

	Μά	onthly L	eachate D	ischarge i	Pumping (T	o the City of Osw	ego)
Discharge #	Start Time	Stop Time	рН	Temp	Totalizer Flow Total (Start)	Totalizer Flow Total (End)	Gallons Discharge
Discharge #1			8,5	42°			
Pump Info	Flow Rate (GPM)	Prime Time	Pump Pressure	Pump Vacuum			•

Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit)

•	Date	Sample Location	Sample Volume	Sample Time	рH	Temperature
Sample #1	• • •					
1 0 ,00	187 Lon 2 mil Lon		-12:00 750 13:15 250 FAURURN	o = ap woter Tr	p. 10,000	o gallons IT PLANT

Shipper No. Coa of #	Carrier No. 7 <u>3–</u> 7 89	Data 3-4-15	s, inc	703 East Seatence Street	State NV Zp Coden 24	315-218-6905	Vehicle Number	WEIG (Subje	Ċ						COLD. FEE PREPAID CO COLLECT CI \$	te to be deterrand to the TOTAL availation can all four the CHARCES \$ set without perment of FFEIGAHT CHARCES FFEIGAHT CHARCES	excepts when box at a fight to to bo	foreform of each each party at any time helenested in all or any said property. That knowy service to proformed humaneth evelopies to all the fill of hafers summ and couldings in the growning class- stication the class of antiques must be a family with a large summa and couldings in the growning class. Stipper forefore configure and the same and could are a large grame and conditions in the summary class growning classification and the answer and could are a large grame and could one in the slipper and accepted for thread and the assigns.	Sun Environmental Corn.	hulle .		STVLE F370-4 © 2012 LABEL VASTER® (800) 621-5808 WWW.labelmaster.com
DING		(SCAC)	DeMarimis, Inc	703 East Su	6 <u>0</u> 0	ntact Tel. No.		TOTAL QUANTITY (Weight, Volume, Gallens, etc.)	1500						Amt: \$	t conditions. If this shipman on the consigner, the c the delivery of this shipm argue.	(Mgrutane of Consigned)	in party, al any time indere st streib be sviljeut to all the of shipment. Certifies that he is fami certifies that he is fami sond his assignes.	dun Enviro	· 116	1-15	2012 LABELINAS
T NEGOTIABLE	ital Cara.	carrier)	FROM: Shipper	Street	City OSWERS	24 hr. Emergency Contact Tel. No.		Packing Group	iquids					REMIT C.O.D. TO: ADDRESS	COD	Subject be stated, 7 of the cardithma, F this chipmant is to be observed to the consideration statement for the consigner with the consigner shall be the consigner shall be the cardit of the cardit chimage and chinage of this chipmant without payment of the cardit chimage.		thation and as to see be portionend iteration silication on the date Shipper heider Shipper heider governing clausificati accepted for titmeit	CARRIER	PER Lanie	we z-y-	STYLE F370-4 &
STRAIGHT BILL OF LADING ORIGINAL - NOT NEGOTIABLE	Sam Environmental Cara			Var dem Com trai Plane	y Street	State NW Zp Code 33825		BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	Non-RCRA, Non-DOT Regulated Liquids	(Lenchate % ater)		JOBH OB&G.067		NDERED: YES IN NO IN A CONSTRUCTION AND A CONSTRUMENT AND A CO	s instroty specifically related by the athipter is dearwing the proper stapping summer and a second stable stapping starts and a second stable subject athibter and the stapper dear instrument and abalangeaturant, and and subject and the stapper dear not relates. In all neverates in signation for the	The carried's license or calculars a studie, the cardita's fabrilly shall be itanized to the extent if brainsport according to a spontability in the provided by such provided by such provided by a such provided and trainsport of the statement o	st of such articles. Signature	PECEVTRA, support to the detections and the first function of the date of the states of the sup (Labru), the mark of perception databack in apprenting poor donde, reacts taus motion of examples and controllion of com- ternal of perception unreacted, consigning their contracts as indexated as the contract and and the state of the property transferred fragment that contract as modeling any person or compared to proceeding of the property transferred and agrees is anothing any person or compared to interface the property transferred and agrees is indexing the transferred of delaying at an advan- ting agreed as to each cardier of all or jany of, subject percent or compared and advan- ably agreed as to each cardier of all or jany of, subject percent or any portion of subject percen- tal agreed as to each cardier of all or jany of, subject percent or any portion of subject percen- ter and advances of the property and agrees is an advance of the advances of the advances of the subject of the term of the source of advances of the advances of the advances of the subject of the advances of the optimal of the advances of the advances of the advances of the subject of the optimal of the advances of the advances of the advances of the advances of the subject of the advances of the advances of the advances of the advances of the subject of the advances of the advances of the advances of the advances of the subject of the advances of the advances of the advances of the advances of the subject of the advances of the subject of the advances of the subject of the advances o	s inc.	a Agent Ser Do May 1405	3-4-	of shipper.
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	Page		On Collect on Delivery stripmants, the letters "COD" TO :	Consignee W	Street 151	City An	Route	No. of Units & Container Type						PLACA Note (1) When the R specifically in writing the s	agreeo or occiareo valua o be not acceeding (2) Whare the applicable far a release or a value deck	the carrier's lichibity or data provided by such providence (3) Commodities requiring, must be so marked and par litem 360, Bills of Lading, F	the Contract Terms and Co	HEAR there there there prove altron	SHIPPER	PER Media		Permanent post-office address of shipper.

		STRAIGHT BILL OF LADING ORIGINAL - NOT NEGOTIABLE	L OF LAD	DN	Shipper No. LUTID -17	TUNT	The Lee
Page of	야~네 생활	Sun Environmental Corp.	Cera.		Carrier No? A-709	-769	1
		(Name of carrier)	damier)	(SCAC)	Date _	5	4-15
On Caliact an Delivery shipmont TO:	nts, the let	On Collect on Delivery stipmonts, the letters "COD" must appear before consignee's rearie or as observice provided in tiam 430, 360.1. TO:	FROM: De De Shipper	De Maximis, Inc.			
Consignee Verates Patim	8 P.a	lm kian Comtrait Filowe		703 East Seneca Street	eet		
Street 35 Rev		35 Readley Street	City Osm	Oswega s	State NV	Zlp Code	
City Auburn	B	State NV Zp Code 1302	24 hr. Emergency Contact Tel. No.		315-218-6995	3	
Route					Vehicla		
No. of Units & Container Type	ΜH	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Liae Onivi
fing fing fing		Non-RCRA, Non-DOT Regulated Liquids	ds.	02500		P4	16
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		JOB#OB&C.0067					
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PLACARDS TENDE Nota (1) Where the rate is dependent on specificatly in whiting the agreed or declared v	In the second se	NDERED: YES	REMIT C.O.D. TO: ADDRESS				
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Permanent post-office address of shipper.	address	of shipper.	STYLE F3704 @ 20	STYLE F370-4 © 2012 LABEL) ASTER © (800) 521-5808 www.labelmaster.com	0) 621-5808 www.lat	belmaster.co	E

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de maximis, inc.

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

Via electronic mail

April 3, 2015

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

Re: Quarterly Discharge Report – 1st Quarter 2015 Pollution Abatement Services Site – Oswego, New York City of Oswego Wastewater Discharge Permit 6-2015-16

Dear Mr. Leotta:

This quarterly report is submitted in accordance with the City of Oswego Wastewater Discharge Permit 6-2015-16 (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 2015 through March 2015.

The total gallons of leachate discharged during the first quarter of 2015 were 20,020 gallons. The amount of leachate discharged during each monthly removal event is summarized in Table 1. A completed Leachate Discharge Form documenting the quantity of leachate discharged during each leachate removal event is included in Attachment I. The flow totalizer readings documenting quantities discharged, as well as date and time of each discharge event, is provided on this form. Measurements for pH and temperature during each removal event are also recorded in the Leachate Discharge Form. During the January 2015 removal event, caustic soda was added to raise the pH of the leachate followed by filtration to potentially reduce the Arsenic and Selenium concentrations in the leachate to the City of Oswego pre-treatment limits. The results of the test are provided as Attachment II. Discharge to the City of Oswego was discontinued in March 2015. The discharge pumping system was disconnected and is not operated under the current leachate removal system. Upon notification from the City of Oswego regarding any revision to the pre-treatment standards the system can be reconnected and operated as before.

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 the imprisonment for knowing violations.

de maximis

Quarterly Discharge Report 1st Quarter 2015 April 3, 2015 Page 2 of 2

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

(lay

Sincerelỳ, **de maximis, inc.**

Clay McClarnon

Attachments

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

f:\projects\3131 - pas\permits-potw 10\2015\oswego potw quart rpt 2015_1q_apr- 2- 2015.doc

		(Oswego SIU		iter uischarge	wastwater Discharge Permit No.6-2010-13	110-13)		
Discharge Quarter	2Q 2014	2014	3Q 2014	014	4Q 2014	014	10,2015	015
	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged
	4/9/14	20,000	7/9/14	20,095	10/8/14	20,000	1/12/15	10,015
	44/6.8		54/6.8		53/6.8		44/7.8	
	5/7/14	20,000	8/6/14	20,000	11/5/14	10,000	2/4/15	10,005
	46/6.8		54/6.8		52/6.8		48/6.8	
	6/4/14	10,000	9/10/14	20,005	12/3/14	10,000		
	50/6.8		54/6.8		48/6.8			
Total Discharged		50,000		60,100		40,000		20,020
Date Samuled*		A100/7/2		V FUC/ 3/ 8		Not complete		4 140 /004F
Analytes**		mg/L		mg/L		me/i		1/84
Antinomy		ND <0.00125		- /8		ND <0.0016		111 <u>6</u> / L
Arsenic Beryllium Cadmium Chromium (total) Copper Cyanide Lead		0.0198 ND <0.00125 ND <0.0010 ND <0.0085 0.0177 ND <0.0050 0.0218		0.105		0.024 ND <0.0004 ND <0.0006 0.0119 0.0134 ND <0.0044 0.0025		0.0186
Mercury Nickel Silver Thallium Zinc		0.00000314 0.339 0.0056 ND <0.00125 ND <0.0125 ND <0.0150		0.0		0.00008 0.435 0.435 0.0135 ND <0.0016 ND <0.0005 ND <0.0035		ND <0.0067

VOC**** SVOC**** BOD 5		NA NA 3.0				NA NA 43		NA NA NA
TSS Phenolics pH	TSS 65 Phenolics 0.103 PH 6.7	65 0.103 6.7				58 0.093 5.86		NA NA

Prpared by de maximis, inc. 4/2/2015

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

Analyte values in bold exceed limit

,

ATTACHMENT I



Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: 1~ 12-15

Time:______/0/00

Field Technician MARTIN KOENNELKE

Weather Conditions SNOW My 30°

Beginning Leachate		Pi	re-Discharge	: Well Pumpi	ing	
Hold Tank Elevation (Inches)	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped into Holding Tank
9.5"	LCW-1	10 15	11:40	43"	120	(Gallons) 10,218
	LCW-2	10 15	11:40			, 90010
	LCW-3	10 15	10:30			
	LCW-4	10 15	11:40			

Total 10,218

SAmple for IRON, AS. SE TAKEN AT 12:45

Pump Info Flow Rate Prime Pump Pump (GPM) Time Pressure Vacuum 87 Ø Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit, Date Sample Sample	Discharge #	Start Time	Stop Time	рН	Temp	Totalizer Flow Total (Start)	Totalizer Flow Tota (End)	
Pump Info Flow Rate Prime Pump Pump (GPM) Time Pressure Vacuum 8*7 Ø Ø Ø Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit, Date Sample Sample Sample	Discharge #1	11:55	13:50	7.8	440	750195	760210	10.015
Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit, Date Sample Sample Sample pH Temperatur	Pump Info	1.1 State 1.1 St			•			
Date Sample Sample Sample pH Temperatur		87		Ø	ø			
		Semi-Ar	nnual Le	achate Di	ischarge	Sampling (P	er the City of C	Oswego Permit)
Location Volume Time		Date	N			Sample Time	рН	Temperature
Sample #1	Sample #1						·····	

		<u>Leach</u>	ate Disposal (<u>Checklist</u>		
	Forme	er Pollution A	Abatement Se Oswego, N	•	Oswego)	• · · •
Date:	-4-15		19 ^{- 1}	Time:	8 30	
		ctiv Koeni	weeker	Weather	Conditions _	5NOWING 25
Beginning Leachate		P	re-Discharge	Well Pumpi	ng	
Hold Tank Elevation (Inches)	Pumping Well #	Pump Start Time	Pump Stop Time	Ending Tank Elevation	Flow Rate (est.)	Est. Leachate Pumped Into Holding Tank
10"	LCW-1	1130	12:50	42,5	124 GPM	(Gallons) 9912
1	LCW-2	11:30	12:50			
		11:30	11:40			
	LCW-3	11.00				
······	LCW-3 LCW-4	11:30	12:50			

.)	Semi-A	nnual Leach	ate Dischar	ge Sampling	(Per the City	of Oswego Permit)
1. ee						
	Date	Sample Location	Sample Volume	Sample Time	рН	Temperature
Sample #1				·		

48°

Pump

Vacuum

6"-8"

.

760210

770215

10,005

Discharge #1

Pump Info

se villa Se u di

15:15

Prime

Time

25 MIN.

6.8

Pump

Pressure

0

13:15

Flow Rate (GPM)

83

ATTACHMENT ||

Report Date: 23-Jan-15 12:41



🖌 Final Report

Re-Issued Report
 Revised Report

SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY Laboratory Report

O'Brien & Gere Engineers 7600 Morgan Road Liverpool, NY 13090 Attn: Mark Byrne

Project #: 51412

Project: PAS Oswego, NY

Laboratory ID	<u>Client Sample ID</u>	<u>Matrix</u>	Date Sampled	Date Received
SC02331-01	Leachate	Ground Water	12-Jan-15 12:45	13-Jan-15 21:00

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

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



Authorized by:

Africolo Leja

Nicole Leja Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 6 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

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Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

Data has been reported to the MDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 0.9 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

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

There is no relevant protocol-specific QC and/or performance standards non-conformances to report.

Sample Acceptance Check Form

Client:	O'Brien & Gere Engineers - Liverpool, NY
Project:	PAS Oswego, NY / 51412
Work Order:	SC02331
Sample(s) received on:	1/13/2015

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

Were custody seals present?

Were custody seals intact?

Were samples received at a temperature of $\leq 6^{\circ}$ C?

Were samples cooled on ice upon transfer to laboratory representative?

Were sample containers received intact?

Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?

Were samples accompanied by a Chain of Custody document?

Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?

Did sample container labels agree with Chain of Custody document?

Were samples received within method-specific holding times?

Sample Ic Leachate SC02331					<u>Project #</u> 412		<u>Matrix</u> Ground W		ection Date 2-Jan-15 12			ceived Jan-15	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Total Meta	als by EPA 200/6000	Series Methods											
	Preservation	Lab Preserved		N/A			1	EPA 200/6000 methods	15-Jan-15	15-Jan-15	DA	1500956	
Total Meta	als by EPA 6000/700	0 Series Methods											
7440-38-2	Arsenic	0.0186		mg/l	0.0040	0.0019	1	SW846 6010C	22-Jan-15	23-Jan-15	edt	1501132	х
7439-89-6	Iron	6.48		mg/l	0.0150	0.0122	1	11	11	u		"	x
7782-49-2	Selenium	< 0.0067	U	mg/l	0.0150	0.0067	[.] 1	"	u	*1	"	u	x

						·			
Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
		•		Pre	epared: 22	Jan-15 An	alvzed: 23-Ja	IN-15	
< 0.0122	U	mg/l	0.0122						
< 0.0067	U	mg/l	0.0067						
< 0.0019	U	mg/l	0.0019						
				Pre	pared: 22	lan-15 Ana	alyzed: 23-Ja	n-15	
1.34		mg/i	0.0122	1.25		108	85-115		
1.28		mg/l	0.0067	1.25		103	85-115		
1.26		mg/l	0.0019	1.25		101	85-115		
				Pre	pared: 22-J	an-15 Ana	alvzed: 23-Ja	<u>n-15</u>	
1.31		mg/l	0.0122	1.25		105	85-115	2	20
1.26		mg/l	0.0067	1.25		101	85-115	1	20
1.26		mg/l	0.0019	1.25		101	85-115	0.2	20
	< 0.0122 < 0.0067 < 0.0019 1.34 1.28 1.26 1.31 1.26	< 0.0122 U < 0.0067 U < 0.0019 U 1.34 1.28 1.26 1.31 1.26	 < 0.0122 U mg/l < 0.0067 U mg/l < 0.0019 U mg/l 1.34 mg/l 1.28 mg/l 1.26 mg/l 1.31 mg/l 1.26 mg/l 	 < 0.0122 < 0.0122 < 0.0067 < 0.0067 < 0.0019 	Result Flag Units *RDL Level < 0.0122	Result Flag Units *RDL Level Result < 0.0122	Result Flag Units *RDL Level Result %REC < 0.0122	Result Flag Units *RDL Level Result %REC Limits Prepared: 22-Jan-15 Analyzed: 23-Ja < 0.0122	$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Notes and Definitions

U Analyte included in the analysis, but not detected at or above the MDL.

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

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

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

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

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

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

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

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

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

Validated by: Nicole Leja

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Telephone #: 315-843-7034 Project Mgr: 17142K BYANE	P.O No.:	Quot	Quote/RQN:		Sampler(s):	magin +	loemer k.C	June
F=Field Filtered 1=Na ₂ S2O ₃ 2=HCI 3=H ₂ SO ₄ 4=HNO ₂ 2 7=CH3OH 8=NaHSO ₄ 9=Deionized Water 10=H ₃ PO ₄ 11=	5=NaOH 6=Ascorbic Acid = 12=	Acid		17 F	List Preservative Code below:	shelow:	QAQCRep QAQCRep	QA/QC/Reporting Notes: additional charges may apply
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2ND QUARTER REPORT 2015



QUARTERLY PROGRESS REPORT -2nd QUARTER 2015

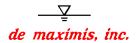
Operation, Maintenance and Long-term Monitoring Activities

PROJECT NAME: Pollution Abatement Services Site Oswego, New York

PERIOD COVERED: April 1st 2015 – June 30th 2015 (2nd Quarter)

ACTIONS TAKEN DURING QUARTER:

- Leachate removal, site maintenance and monitoring activities were conducted at the Pollution Abatement Services (PAS) site (Site), in Oswego, New York by O'Brien & Gere Operations LLC, (O'Brien & Gere) consistent with the PAS Site Operation, Maintenance and Long-term Monitoring Plan (Work Plan).
- A total of 50,625 gallons of leachate were removed from the Site during the period of April, May and June 2015. Specific quantities of leachate removed included 10,125 gallons in April 2015, 20,200 gallons in May and 20,300 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, May and June 2015, leachate was pumped into trucks. The leachate was shipped for disposal and treatment to the City of Auburn Publicly Owned Treatment Works Plant (POTW) located at 35 Bradley Street, Auburn New York.
- Quarterly groundwater elevation monitoring was performed on May 4, 2015. 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. It was noted the fencing was pulled away from the posts by the weight of the snow from the clearing of the highway. Once the snow is melted the fencing will be repaired. No additional discrepancies were reported at the time of the inspection.
 - The Site single French drainage system and two (2) concrete troughs were inspected. Snow covered most of the area. 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 damage to the cap was observed.
- Visually inspected the leachate collection system pumping equipment to verify proper operation. The field technician inspected each pump control panel to ensure control systems were generally free of rodents, and insects, and where properly operating. The leachate holding tank was visually inspected for integrity, as were the leachate tanks steel protective roof, and wood structure. No discrepancies were reported at the time of the inspection.
- The Site wooden utility shed and leachate pumping equipment, including centrifuge discharge pump, flow meter, suction hose, pump oils levels, heat trace power panel, interior lighting, exterior and interior shed structure, and main power distribution panel. The heat trace protection system was checked for operation, and remained in the "On" position during each leachate pump out event. No additional discrepancies were reported at the time of the inspection.
- On April 8, May 6 and June 2 & 17, 2015, O'Brien & Gere performed the monthly leachate pre-pumping system inspection for leachate collection wells LCW-1, 2,3 & 4, along with the inspection of the leachate discharge pumping system. In advance of this event, O'Brien & Gere informed the City of Auburn POTW located at 35 Bradley Street, Auburn, New York of the anticipated delivery of two leachate tankers. Note that on June 2nd Auburn POTW indicated that they were in "bypass" due to heavy rains, and could not take the leachate. The hauling was rescheduled and commenced on June 17th 2015.
- Upon completing the monthly leachate collection well inspection the technician manually energized the 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 D-2)
- During the months of April, May and June 2015, O'Brien & Gere pumped a combined volume of 50,625 gallons of leachate water from the LCW-1, 2, 3 & 4 to the leachate collection tank, were pumped into trucks and shipped to the City of Auburn 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 leachate pumping system consists of a leachate tank suction hose, gas powered trash pump, inline bag filter system, pressure gauge, leachate sampling port, and discharge hose to leachate tanker. The amount shipped was recorded onto the Leachate Disposal Checklist. (Attachment D-2)
- Upon completing each monthly leachate removal event the leachate discharge equipment was drained of residual leachate, and prepared for storage. The leachate collection tank enclosure and the wooden maintenance shed were secured and locked. When leaving the Site, the metal entrance gate was closed, with a chain and padlock installed.
- On June 17, 2015, the quarterly discharge sample required under the City of Auburn POTW permit was taken and hand delivered to Life Science Laboratories in East Syracuse New York for analysis.



 The PAS Oswego Site quarterly discharge report for the 2nd quarter of 2015 for the City of Auburn was submitted on June 1, 2015 in accordance with permit 2014-01. The City of Auburn quarters do not follow annual quarters. Therefore the quarterly report for Auburn includes March, April and May of 2015. The City of Auburn provided analysis of a leachate discharge sample meeting the quarterly sample permit criteria. These results are included with the quarterly report. (Attachment D-3)

DOCUMENTATION OF REMOVAL ACTIVITIES FOR PREVIOUS QUARTER

- The Groundwater Pre-pumping Well Monitoring Level Form for May 6, 2015 is attached to this report. (Attachment D-1)
- Site Inspection Checklist for April 8, May 6, and June 17, 2015 are attached to this report. (Attachment D-2)
- Leachate Disposal Checklist for April 12, May 4, and June 4, 2015 are attached to this report. (Attachment D-2)
- The PAS Quarterly Discharge report was submitted to the City of Auburn on June 1, 2015 is attached to this report. (Attachment D-3)
- Semi-annual well sampling for LR-6, LR-8 and M-21, M-22, and OD-3, and leachate collection wells LCW-2 and LCW-4 is attached. (Attachment D-4)

ATTACHMENT D-1

GROUNDWATER ELEVATION DATA

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

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Date - 5-	4-15			Technician	. MAR	TIN Koe	enneck	e		Month - May
Well	Riser	Well	Range Verific	ation		Monthly C	12 14 18 18	1. C. C. S.	ments	
Number	Elevation	Average Well Level	Low Well Level	High Well Level	Well Level (1st) Check	Wéll Level (2nd) Check	(based on h range	hin Range Istoi(cal well I data) NO	Well Level Check (3rd) (If 'No" & well is not within targeted range)	NOTES
SWW1	289.33	9.25	8.22	10.00	9.20		У			
SWW2	289.37	15.05	14.48	15.42	15,40		<u> </u>			
SWW3	286.50	16 <u>.61</u>	16.24	17.00	16.92		<u>Y</u>			
SWW4	283.60	14.70	12.62	15.94	15,20		<u>}</u>			
SWW5	277.02	12.67	11.74	13.28	13,46	13.46		N	13,46	
SWW6	273.06	8.60	7.58	9.21	8,85		<u> </u>			
SWW7	277.93	7.55	7.16	7.90	7.76		<u>y</u>			
SWW8	278.24	4.05	3.40	4.54	4.08		<u>y</u>			
SWW9	285.55	16.39	15.68	17.02	17.16	17.16		N	17.16	· · · · · · · · · · · · · · · · · · ·
SWW10	280.43	11.19	8.50	12.62	11.72		<u> </u>			
SWW11	273.50	8.55	7.50	9.17	9,50	9,50		N	9.50	
SWW12	272.82	8.65	7.58	9.23	8,76		У			
LCW-1	272.21	7.89	7.04	8.62	9.12	9.12		N	9.12	
LCW-2	274.44	10.15	9.27	10.90	11.36	11.36		N	11.36	• • • • • • • • • • • • • • • • • • •
LCW-3	284.36	17.66	17.24	18.05	17.91		<u> </u>			
LCW-4	285.70	17.64	16.82	18.56	18.06		Ý			
OS-1	272.10	8.80	6.40	11.40	10,14		Y Y			
OI-1	272.00	11.18	10.14	12.28	11,58		<u>Y</u>			
OS-3	277.89	14.06	11.70	15.30	14,84		<u>y</u>			· · · · · · · · · · · · · · · · · · ·
OD-3	277.85	13.90	11.58	15.12	14,68		<u>y</u>			
LD-3	278.62	4.24	3.78	4.64	4,44		У			
LD-4	279.25	10.63	8.68	11.79	11.20		<u> </u>			·
LD-5	272.94	8.71	7.84	9.42	9.02		<u> </u>			
LS-6	274.14	9.50	7.95	10.74	10.19		<u> </u>			
LD-6	274.03	9.94	9.32	10.65	10.34		У			· · · · · · · · · ·
LD-8	272.83	7.26	6.08	8.30	7,78		Y_	ļ		· · · · · · · · · · · · · · · · · · ·
LR-2	289.85	13.21	12.96	13.42	13,38		<u>Y</u>	<u> </u>		
LR-3	278.06	7.78	7.10	8.36	8,02		Y			
LR-6	274.39	10.11	9.44	10.66	10,60		<u>X</u>	_		
LR-8	273.42	9.78	9.04	10.35	10.26		<u> </u>	_		
M-21	272.32	9.44	8.75	10.00	10,02	10,02		N	10,02	
<u>M-22</u>	273.88	10.13	9.38	10.64	10,56		X_	 		
M-23	270.49	12.05	11.02	12.88	12.52		Ý			

ATTACHMENT D-2

SITE INSPECTION CHECKLIST AND LEACHATE DISPOSAL CHECKLIST



Site Inspection Checklist (V2)

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

Date 4-8-15

Time_____6:50_____

Field Technician MARTIN Koennecky

Weather Conditions <u>38° RAW SHowers</u>

There is such that the second side of the spectra and the second s

	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		NONEVISABLE
Land cap irregularities (note			
anomaly)	V		oK
French drainage system clear and			
function able	V		OK
Concrete trough clear and			
function able	V		OK
Leachate Discharge System			
City of Oswego sanitary discharge			
valve positioned "Open"			
Discharge Pump inspected &			
operational	-		
Discharge pump oil level verified			
prior to use.			
Discharge pump drained of			
residual water (drained upon	-		
completion of monthly discharge)			
Heat trace system operational &			
verified in the "ON" position			ON
(Applicable Oct - May)	V		
Flow totalizer operational. Flow			
readings recorded onto	_		
"Leachate Discharge Form"			
Leachate Collection System	<u> </u>		
Leachate holding tank visually			
inspected for structural integrity	V		OK
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	2	Yes
MW's marked & identifiable	1	oK
General Site Condition	· · · · · ·	
Trees & brush cleared off security		
fence	V	OK
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	~	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	OK
PPE available and utilized as		
required	V	Yes
Emergency contact information		Yes Yes
posted within shed	1	res

Additional remarks (use separate sheet is required)

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v causta	Soan	Beads To	DROP	OUT	TRON.	-
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CITY of	AUE	BURN W.	Γ₽,			

4-8-15



Site Inspection Checklist (V2)

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

Date 5-6-15

Time <u>6:45</u>

Field Technician MARTIN Koennecke

Weather Conditions SUMMY

	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	レ		NONE VISABLE
Land cap irregularities (note			
anomaly)	V		OK
French drainage system clear and			
function able	N		oK
Concrete trough clear and			
function able	V		Yes
Leachate Discharge System	-		
City of Oswego sanitary discharge			
valve positioned "Open"			NA
Discharge Pump inspected &			
operational	-		NA Bump Pump over
Discharge pump oil level verified			
prior to use.	~		ok
Discharge pump drained of			
residual water (drained upon			
completion of monthly discharge)	F		
Heat trace system operational &			
verified in the "ON" position			20
(Applicable Oct - May)			0ff
Flow totalizer operational. Flow			
readings recorded onto			
"Leachate Discharge Form"			NA
Leachate Collection System	· 1.		
Leachate holding tank visually			
inspected for structural integrity	V		OK
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		OK
General Site Condition			
Trees & brush cleared off security			
fence	~		0K
Perimeter security fence intact &			
free of damage	V		OK
Site access driveway inspected &			
free on snow & damage	\checkmark		OK
Security access gates / Padlock &			
chain serviceable	\vee		Yes
Site gate signage intact	\vee	-	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	\vee		Yes
Emergency contact information			
posted within shed	~		Yes
Additional remarks (use separate s QuANTERLY Well Leve		is re	quired) Sen: Annal well Samplag

QUARTERLY	well Level	s, semi	Annial	well	SAMPING
EVENT 5	-4-15 \$ 5-	5-15,	PUMP \$	TREAT	20,000 gAL
Leachate	SHIPPED	TO CITY	of AUBURI	v P07	W BY
	NIROMENTEL	······································			

5-6-15



Site Inspection Checklist (V2)

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

Date 6-17-15

Time___6:30

Field Technician MARTIN Koennecke

Weather Conditions SUNNY 58°

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

•	Ŵ		
Leachate tank access doors			
locked (post pump out)	V		Yes
Pump power panel(s) secured	ν		Yes
Monitoring Wells (MW)			
Locks installed	<i>√</i>		Yes
MW's marked & identifiable	V	1	OK
General Site Condition			
Trees & brush cleared off security			
fence	V		OK WORK IN PROGRESS
Perimeter security fence intact &			
free of damage	\checkmark	1	ok
Site access driveway inspected &			
free on snow & damage	V		ok
Security access gates / Padlock &			
chain serviceable	<i>.</i> ⁄		Yes 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			Ver
recorded	V		Yes
Spill control material inspected &			
adequate	i/		Yes
PPE available and utilized as			Vac
required	· •		Yes
Emergency contact information			Yes
posted within shed	1		145

6-17-15

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Additional remarks (use separate sheet is required)

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10	ak (DVANTERLY	Leach	Ta SAMO	to for	AUBUR	N POTW	Permit		

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PAS Site Oswego, New York

Leachate Disposal Checklist

Project Personnel: MARTIN KOENNecke

Transportation Subcontractor: <u>SUN ENVILA MENTH</u>

Leachate Destination: <u>C.Ty of AUBURN</u>

Date: 4-8-15

Field Technician: <u>MARTIN KOENNECKE</u>

	Leachate Co			ng Flow Rate lyses	Flow Rate	Remarks
Well	Start Time	Stop Time	Time	Tank Elev. (Perra)	Calculation	•
LCW-1	7:00	8:15	75 MIN	44"	1346Pm	10,065
LCW-2	7:00	8:15	75 min			
LCW-3	7:00	7:10	10 min			
LCW-4	7:00	8:15	75 MIN			
Leachate Ho	lding Tank: S	TART - 11"	1			
Initial Flow	Meter Reading: E	NO PUMping-	44" / AH	ter Pump out	- 11"	
Final Flow A	Actor Reading:	33"× 30	5 (DAllons = /	10,065 +	11 ["] 15міл. = 134	1 Gpm

		-Loading) Fanker	(Po	ost-Loading) Tanker	Destination	Remarks
Load	Time Start	Confirmed Clean	Time End	Tanker Volume (by Strick Mass)	Manifest	
Load #1	9:30	Yes	10.10	61.5 "	0004	EST 2650 EST 7475
Load #2	1025	Yes	11:40	50,5"	0003	EST 7475
Load #3						-
Load #4					TotAL =	10,125

PRE TREAT - PH - 7,0 POST TREATMENT PH 8,8 IRON - 202 MyL IRON - + 20 mgL Temp - 42° F.

C:\Users\byrnemr\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\WRK2X3HB\Leachate Disposal Checklist.docx

Time on-site: 6:50

is an acknowledgment that a Bill of Lading has been issued and is not Original Shipper No. Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.	End Carrier No. 7.8-769 Image: State End of Carrier State	beat before consignee's name or as otherwise provided in item 430, Sec.1. FROM: និវីវិស័ណ៍អ៊ីនាំនាន់វិស័ណ៍ខ្លីន, ទីវីវិស័ Shinner	er an Arai Wam r	దికి రాజులు State గ్రామాలు Zip Code	State 전자 Zip Code 불축용주 24 hr. Emerger	Vumber	BASIC DESCRIPTION TOTAL QUANTITY Weight, Volume, (Subjection of Name, Hazard Class, Packing Group TOTAL QUANTITY Weight, Volume, (Subjection of Subjection of Subje	ζ5	(Leachate Water)		JOB# OBSC1007		: YES INO II	consignment are fully and accurately described above by the proper shipping name and are classified, packaged; marked and labellet/placarded, and are .	The accession of the section of the conditions if this shipment is to be delivered to the TOTAL transport according "to applicable consigner without recourse on the consignor the consignor shall sign the CHARGES requires the consigner of this shipment without payment of FAEIGHT CH requirements. The shipment without payment of FAEIGHT CH regulations. Signature of all other lawful charges. Signature (CHARGES) according "to be according" to be according to a second to a second to be according to a second to be according to a second	of the issue of this Bill of Lading, invation and as to each party at any time interested in all or any said proup (combarts and condition of com- be performed hereunder shall be subject to all the bill of lading terms and condi- ing any person or competion in Shippen hereby certifies that he is familiar with all the lading term Shippen hereby certifies that he is familiar with all the lading term address distances. Shippen hereby certifies that he is familiar with all the lading term conditions are hereby age and destination. It is mutu- any portion of said route to des-	CARRIER	PER	DATE	
This Memorandum is an acknow Bill of Lading, Intended sole	1	On Collect on Delivery shipments, the letters "COD" must appear before cons	States Patter Kan Lank	44 Warrent an Stratch	Åត្តវិសតក្ខាខ្មា State							н. На с	 PLACARDS TENDERED: YES	zally in writing the agreed or declared value of the property at or declared value of the property is hereby specifically stated by exceeding a provisions specify a limitation of the carrier's receive a applicable intrifrorvisions specify a limitation of the carrier's	a release or a value detaction by the shipper and the shipper and does not release a release or a value detaction by the shipper and the shipper and the provided by such provisions. See NMIC, the carrier's liability shall be limited to the extant (3) Commonlise resturing special or additional care or attention in handling or stowing must be som marked and packaged as the snaure safe transportation. See Section 2(e) of firem 300, liability or classing the and statement of Shangas and Section 2(e) of the Contract Terms and Conditions for a tist of submitted.	RECEVED, subject to the classifications and larifls in the property described above in apparent good order the property described above in apparent good order (the word carrier being understood throughout the o possession of the poperty under the contract) agrees reached as to each carrier of all or any c, saddher ally agreed as to each carrier of all or any c, saddher	SHIPPER That conten to Tax.	Fr FAS Math Inc.		Dermanent nost-office address of shinner

This Memorandum	udum	is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filting or record.	issued and is not Ori	riginal and is	Shipper No.	Ň	4
Pade **	фа ң	Sun Zaviruan catal Corr	ata Cora.		Carrier No.		
		(Name of carrier)	carrier)	(SCAC)	Date	-70	08-15
On Collect on Delivery shipments, the le TO:	letters "COD"	On Collect on Delivery shipments, the letters "COD" must appear before consigned's name or as otherwise provided in litern 430, Sec.1. TO:	FROM: Shipper	DeMarimis, L			
Consignee 🐺 🖉 👬 👬 👬 🐉 🐉	State of the second	Control 73 and	Street	783 Last Demence Street	199. ago 275 a		
Street 34 20	125 125	LE DEPOSITE REPORT	City Ogy	OSWER	State NV	Zip Code	de
City <u>Antrone Rations and a city</u>	state	te * N Zip Code 53323	24 hr. Emergen	tact Tel. No.	63 24 ⁴ 1920 5975	218-695	(y)
Route		, kerte			Vehicle	ler Der	
No. of Units & Container Type	Σ	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 	Non-RCRA, Nan-DOT Regulated I		2650		53	
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	 	JOB# OB&C.0007					
PLACARDS TENDERED: Note — (1) When the state is dependent on value, sh	TENDE	RED: YES INO Internet in the subpersion of the contents of this internet we follows: The contents of this contents of the cont	REMIT C.O.D. TO: ADDRESS				
apreed on the inviting and the prop be not exceeding (2) Where the applicable tartif provisio a release or a value declaration the	perty is hereb per lons specify a	y specifically strategy the striper to classification and according y specifically strategy the striper to described shore sphere hythe proper stripping immediate the striper of the strategy of the stripping that and the strategy strategy and the stripping the stri	COD	Amt: \$	_	COD. FEE: PREPAID COLLECT C	
the carrier's liability or declare a value provided by such providents. See NMI (3) Commodifies requiring special or (3) Commodifies requiring special or must be so marked and packaged as item 360, BIIS of Lading, Freight BII the Contract Terms and Conditions for	We, the carrier MFC them 172. In additional c is to ensure si ils and Stater for a list of su	the carrier's liability or declare a value, the carrier's liability shall be limited to the extent iterarsport according to applicable provided by such providents. See NMC7 liam 172. (3) Commodifies requiring special care or adding rate are attention in handling or stowing regulations. See NMC7 liam 172. (3) Commodifies requiring special care or adding rate are attention in handling or stowing regulations. The mass of the according to the extent in a second regulations and reaction are or attention in the according or stowing regulations. The mass of the according to the extent are according to the extent and the according or stowing regulations. The mass of the according to th	Subject to Section 7 of the consignee without recourse. consignee without recourse. The carrier shall not mai freight and all other lawful che freight and all other lawful che	Subject to Sector, 7 of the conditions, if this subprant is to be delivered to the consignee without recurse. on the consignor, the consignor shall sign the consignee without moures on the consignor, the consignor shall sign the consignee shall not make delivery of this shipment without payment of freight and all other lawful charges. (Signature of Constance)		GES \$ FEIGHT CHAF PREPAID CI wen box at ecced	CHOTAL \$ CHARGES \$ FREIGHT CHARGES FREIGHT PREPAID Check tox if charges fights checked and are to be rights checked and and and and and and and and and an
REDEIVED sut the property des tents of package (the word same operation of the advant of on the advant of on the	ubject to the cla ascribed above ges unknown), er being under he property un route, otherwin to each carrier to each carrier	FECEIVED, subject to the classifications and tarifis in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (continent and continue the titles of packages unknown), matching, and testimote as indicated above which said carrier (the word carrier below) undescood throughough this contrade as meaning any person of corporation in possession of the property under the contrady gares to carry to its studied pack of the New at card and/or. If any the property under throws another carrier on the nucle to said destine dates ally agreed as to each carrier of all or any of, said property over all or any of, said property over all or any of, said	tination and as to each be performed hereunde stiftaction on the date c Shipper hereby governing dassificatio accepted for himself a	Instition and as to each party at any time interested in all or any said property, that every services to be performed beneurder shall be subject to all the bill of lading terms and conditions in the governing class- stification on the class of stypment. Shippen that the lading terms and conditions in the Shippen tenedy certified that his is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.	or any said property. that g terms and conditions in the little fading terms and s are hereby agreed to by s are hereby agreed to by	t every service t te governing clas conditions in th y the shipper an	0. WD
SHIPPER រីស្វើងប្បីការ៉ុន រីដស	52 822 8.5		CARRIER	Erron Trabalson armen and deal Prase	and the second		
PER free 145	11/10	nt Kom he	PER	24	NAME NO		V
Permanent post-office address of shipper	ress of shi	oper.	STYLE F370-4	© 2012 LABELI ^N LATER [©] (800) 621-5808		www.labelmaster.com	com
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PAS Site Oswego, New York

Leachate Disposal Checklist

Time on-site:

6:45

MARTIN KOENNecke

Project Personnel:

Transportation Subcontractor: <u>SUN ENVIROMENTAL</u> Leachate Destination: <u>CTy of AUBURN WWT</u>P Date: <u>5-6-15</u>

Field Technician: MAETIN KOENNecke

	Leac	hate Co Pum	llection ping	Well		ng Flow Rate lyses	Flow Rate	Remarks
Well	1	Time 5-6-15	Stop 5-5-15		Time	Tank Elev. (Down)	Calculation	
LCW-1	12:10	9:05	13:40	10:20			(128 6PM	- 5-5 15
LCW-2	12:10	9:05	13:40	10:20			(128 6PM (122 6PM	- 5-6-15)
LCW-2	12:10		12:20					
LCW-4		9:05						
Leachate Hold	ting Ta גע	nk: 5-15 10	0,5"-	48,5	5-0	6-15 6,5"	- 36,5 "/E	ND-11.5"
Initial Flow M	leter Re	ading:		- 11,59		- 9,150		
Final Flow M	eter Rea	ading:				,200 - S	HIPPED	

		-Loading) 'anker	(Po	ost-Loading) Tanker	Destination	Remarks
Load	Time Start	Confirmed Clean	Time End	Tanker Volume (by Strick Mass)	Manifest	
Load #1	7:00	Yes	8:00	51.5"	π1	25T 8,000
Load #2	8:25	Yes	9:05	56.5"	#2	4.1600
Load #3	11:30	Xes	1240	51,"	773	7,600
Load #4						

FE-1.6 PH- 7.8 FE-2.0 PH-8.2

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This Memorandum	andum	intended solely for filing o	an acknowledgment that a Bill of Lading has been issued and is not Original I of Lading, nor a copy or duplicate, covering the property named herein, and is tended solely for filling or record.	ssued and is not Originerty named herein, and	nal	Shipper No.		1 2. 73
Page 3	çursî		Jen Éavironneantai	mini (. m. n.		1		١
			(Name of carrier)	arrier)	(SCAC)	De	Date <u>> Ó</u>	<u>.</u>
On Collect on Delivery shipmen	its, the letters "COD"	on Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 490, Sec. 1. TO:		FROM: Shipper	Derfarins: Juc	3 M	i et	
signee	Thinkor Daliman	<u>સ હૈ</u> રે <u>ગયા કે '</u> ં <u>અભ લેજ હાર</u> ે ટેંગ્ કે ગયા ક	a ~~ -is i data	* Street	763 East Senence	ncs Street	et t	
Street 24	an Durallan Str	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		City Oswage	1 <u>1</u>	State	NVV ZIP (Zip Code
City An	A ark mere State	AN	Zip Code 13382	24 hr. Emergency Contact Tel. No.	ct Tel. No.	6157 7494 6177	314 218 6005	Ŷ.
Route						>z	Vehicle Number	
No. of Units & Container Type	MH	BA UN or NA Number, Proper S	BASIC DESCRIPTION or NA Number, Proper Shipping Name, Hazard Class, Packing Group	Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	n) RATE	E CHARGES (For Carrier Use Only)
dasant Ficera firera		Non-RCRA, Non	on-RCRA, Non-DOT Regulated I	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	CCC - 25-35		5	;e #4,
			(Leachate Water)		4			
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PLACAI	PLACARDS TENDERED Where the rate is dependent on value, s	ERED: YES INO IN value, shippers are required to state	I here'y declare that the contents of this	REMIT C.O.D. TO: ADDRESS				-
pecifically in writing the at greed or declared value of a not exceeding Where the applicable tarif	the property is here the property is here f provisions specify a	ratue of the property, as follows: "The by specifically stated by the shipper to a limitation of the carrier's liability absent	nsignment are fully and accurately scribed above by the proper shipping me and are classified, packaged, inked and labelled/placarded; and are	COD	Amt: \$	the second se	C.O.D. FEE: PREPAID [] COLLECT []	<u>,</u>
release or a value decla carrier's liability or decla orided by such provisions. I) Commodities requiring s ust be so marked and pad ust be so marked and pad e Contract Terms and Con	tration by the shipt re a value, the carris See NMFC item 17 pecial or additional l kaged as to ensure i eight Bills and Statre i ditions for a list of si	a release or a vulue declaration by the sylpher and the stripper for Rom Farebar on the exampler or the stripper for a stripper for the stripp	all respects in proper condution for naport according to applicable errational and national governmental gulations. Signature Signature	Subject to Section 7 of the c consigner without recourse or following statement: The cartier shall not make freight and all other tawful charg (S	Subject to Section 7 of the conditions, if this supment is to be defineted to the experiment methods in the conditions, if this consignor, shall sell the following statistical incomage definery of this subment withour payment of freight and all other leaved datages. (Supsume of Constituto)		TOTAL CHARGES FREIGHT CF FREIGHT FREIGHT CF FREIGHT FREIGHT FR	TOTAL CHARGES \$ FREIGHT CHARGES FREIGHT PREPAU Check box if charges inder is checked inder is checked
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SHIPPER	Beharinia Inc			CARRIER	6	100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100		
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Permanent post-office address of shipper.	e address of sh			STYLE F370-4 @2	STYLE F370-4 © 2012 LABEL ATER® (800) 621-5808 www.labelmaster.com	(800) 621-5808	www.labelmas	ster.com
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Shipper No. Las 2 2 Carrier No. 7A-789	Date 5/6/15	., <i>b</i>	B DEFEL	State TT Zip Code	415-218-600E	Vehicle 3/6/204	WEIGHT CHARGES (Subject to RATE (For Carrier Correction) Use Only)	the G		-		*			COD. FEE: PREPAID = COLLECT = \$		Ination and as to each party at any time interested in all or any said property, that every service to be performed interunder shall be subject to all the bill of lading terms and conditions in the governing das- stification on the date of shipment. Support hereby contracts that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and its assigns.	mizikana.	ţ ۱		LABEL ASTER © (800) 621-5808 www.labelmaster.com	
iginal and is	(SCAC)	Bellarimis, inc	103 I.St. New Co Mirrow	O WEE	ntact Tei. No.		TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	4600							Amt: \$	Subject to Section 7 of the conditions, if this shipment is to be delivered to the consigner, whole whole course on the condition, the constigner shall give the consequent whole requires the constraint of the shipment without payment of the and and all other lawlin therage.	ach party at any time interested in all the shell be subject to all the bill of lading to of athingment. To office that he is familiar with all four and the said terms and conditions f and his assigns.	Sun Inviroem ental Corn		1/5	© ² 2012 LABELMASTER® (8	
n acknowledgment that a Bill of Lading has been issued and is not Original of Lading, nor a copy or duplicate, covering the property named herein, and is ended solely for filing or record.	(Name of carrier)	Sec.1. FROM: Shipper	Street		호랑 2 hr. Emergency Contact Tel. No.		Class, Packing Group	ted Edgasde		20				AEMIT C.O.D. TO: C.O.D. TO:		notition for subject to Section 7 of th applicable consigner without recours remmental following statement following statement freight and all other lawuld Signature		CARRIER	PER	DATE	STYLE F370-4 @2012	•
that a Bill of Lading has been issued y or duplicate, covering the property n g or record.	N)	otherwise provi	feat		Zip Code		BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	I-NCRA, Nea-DOT Regulated	(Learnain & aim)	25			944 1	I have by factors that the contents of this	e consignment are fully and a described above by the proper name and are classified, p th marked and labelled/placarded	all respects in proper or insport according. to emational and national go gulations.	is issue of this Bill of Lading trants and condition of con- tants and condition of con- ad above which said carrie by person or corporation it said destination. It is mutu- said destination of said route to des portion of said route to des					200 1
is an acknowledgment Bill of Lading, nor a cop intended solely for filin		ust appear before consignee's name c	ies Carra Flar	1.261	AV.		UN or NA Number, Prope	Nui-NCRA, Na	E E E E		JOE# 03&C 0.07			RED: YES IN NO [ue of the property, as follows: "Th / specifically stated by the shipper t Imitation of the carrier's liability abser	a release or a value declaration by the supper and the shipper does not release in the carrier's lability vordease avelue, the carrier's lability shall be limited to the extent the provided by such providents. See NMMC them 172. (3) Commodities requiring special or additional care or datation in handling or sowing frequents are not attendent in the state and the additional care or datation. The special cardinal carrier attendent in the state are shown are supervised as the statements of the state are shown are and constructed as a or additional care or datation. The special cardinal care or attendent in the andling or sowing frequents are as a statements. If a state are shown are supervised as the supervised as the statements of the statements of the statement of the	FECEIVED with the set of packages the set of packages the set of t	B.C.	المراجع المراجع المراجع المراجع		oper.	
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	n o	On Collect on Delivery stilpments, the letters "COD" must app	signee	Street 35 E	City Anternation	Route	No. of Units & Container Type	1						PLACAR	specifically in writing the agn agneed or declared value of th be not exceeding	a release or a value declar the carnet's liability or declare provided by such provisions. S (3) Comodities requiring spa must be so marked and packe free mast, list of Lading, Frei two contract Tomes and Count	HECEV the properties of 1 the sum the work possessi and if	SHIPPER Den	PER		Permanent post-office address of shipper.	

Shipper No.		1.1	Bediarianis, Iac	763 East Semence Street	State NVV Zip Code	315-218 6995	Vehicle Number	TOTAL QUANTITY WEIGHT CHARGES (Meight, Volume, Gallons, etc.) (Subject to Correction) RATE (For Carrier Use Only)	U	· · · · ·	· · · · · · · · · · · · · · · · · · ·		 · · ·		1: \$ C.O.D. FEE: COLLECT 1: \$ COLLECT 1: \$ \$ 1: \$ COLLECT 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: \$ \$ 1: <th>thration and as to each party at any time interested in all or any said property, that every service to be performed interunder statements the satisfact of lating terms and conflictors in the governing data- stification on the cales of informent. The sit of lating terms and conflictors in the governing data- Stipper hereby certifies that he is familiar with all the lading terms and conflictors in the governing assertization and the sate familiar with all the lading terms and conflictors in the accepted for hinnest and his assignt.</th> <th>Car Zaisland Carp.</th> <th>LABELIÝASTER® (800) 621-5808 www.labelmaster.com</th> <th>11111 1421 EX ~ (000) 021-0000 WWW 181180181190</th>	thration and as to each party at any time interested in all or any said property, that every service to be performed interunder statements the satisfact of lating terms and conflictors in the governing data- stification on the cales of informent. The sit of lating terms and conflictors in the governing data- Stipper hereby certifies that he is familiar with all the lading terms and conflictors in the governing assertization and the sate familiar with all the lading terms and conflictors in the accepted for hinnest and his assignt.	Car Zaisland Carp.	LABELIÝASTER® (800) 621-5808 www.labelmaster.com	11111 1421 EX ~ (000) 021-0000 WWW 181180181190
is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.	Sun Eavir man min Care.	(Name of camer)	on Collect on Delivery shipments, the letters 'COD' must appear before consignee's name or as otherwise provided in Item 430, Sec.1. FROM: 54 20 20 20 20 20 20 20 20 20 20 20 20 20	e (************************************		정말 Zip Code 호전하철 24 hr. Emergency Contact Tel. No.		BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group Ga	Nee-RCRA, Non-DOT Regulated Liquids	51 "		0B# 0B&G.007] I here by declare that the	consignment are rulty and accurately described above by the proper stipping mane, and are classification and are marked and labeledylatented, and are in all respects in proper continor. It is all respects in proper continor is transport according. To applicable international and national governmental regulations.	of the issue of this BBI of Lading, bickened above which said carrier bickened above which said carrier any present or copportion in lading have of chevery at said desi- land place of chevery at said desi- any portion of said rowle to des- any portion of said rowle to des-	CARRIER		SITLE F3/04 © 2012
This Memorandum Bill	Page 🚽 of 🙀		On Collect on Delivery shipments, the letters "COD" must a TO.:	Consignee 73 action 2 calles that	Street 25 Rama 2 ray 2 Amage	City Azzerse State	Route	No. of Units & Container Type						PLACARDS TENDERED: More — (1) Where the rate is dependent on value st	specificative in whith vise agreed or delated value of the property as tollows. The agreed reactive duals of the property is hereby specifically stated by the stripper to be intracreaseding value of the property is hereby specifically stated by the stripper to CW Where the specifical stripper value into a stripper and the stripper does not reases a value stripper value deplation by the stripper addition of the stripper does not reases to consider by such provisions. See MMFC item 172. So that the stripper value is provided by such provisions. See MMFC item 172. So the stripper does not reases by Committee requires previate a value. The camer's liability shall be infined to the extent provided by such provisions. See MMFC item 172. The specifical stripper value is the stripper value in handling or slowing the comment is required as to preview as the transportation. See Section 2(c) of must be so marked and packaged as to the stripper and such and the stripper at the mass of command is required by a such and stripper and stripper at the mass of command is required by a such and a such and a such and the mass of stripper of conditions for a list of study and the mass of conduct is required by a such and the mass of conduct is and conditions for a list of study and the the conduct is formation.	RECEIVED, subject to the classifications, the property descripted advowe in approared to the property descripted advowe in approared to the property under the competing under the competing under the comp possession of the property under the competing under the comp advig agreed as to eash carrier of advowe advig agreed as to eash carrier of advowe	SHIPPER SHIPPER PER	Province tractaffices addresse of shitnee	Permanent post-office address of shipper.



PAS Site Oswego, New York

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Leachate Disposal Checklist

MARTIN KOENNECKE

Project Personnel:

Time on-site: 9:30

Transportation Subcontractor:

Leachate Destination:

Date: $l_{\rho} - \lambda - 15$

Field Technician: MARTIN KOENNECKE

	Leachate Co Pum		-	ng Flow Rate lyses	Flow Rate	Remarks
Well	Start Time	Stop Time	Time	Tank Elev. (Down)	Calculation	
LCW-1	9:50	11:20		48"	125	
LCW-2	9:50	11:20				
LCW-3	9:50	10:00				
LCW-4	9:50	11:20				
Leachate Hold	ling Tank: START 1	/"	END 48	F1		
Initial Plow W	feter Reading:	PH-6.	8 , FE	- +20 mgL	, 52° F	
Final Elew M	eter Reading: ADDED C	AUSTIC SODA	40165 + 5 L	IME PH-	8.6, FE-0.	4,54°F

T		-Loading) Fanker	(P	ost-Loading) Tanker	Destination	Remarks
Load	Time Start	Confirmed Clean	Time End	Tanker Volume (by Strick Mass)	Manifest	
Load #1						
Load #2		· · · · · · · · · · · · · · · · · · ·				
Load #3						
Load #4						



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PAS Site Oswego, New York

Leachate Disposal Checklist

Project Personnel: <u>MARTIN Koennecke</u> Time on-site:	6:30
Transportation Subcontractor: SUN ENVIRONMENTAL COMP	
Leachate Destination: EPOTW AURBURN NY	
Date: 6-17-15	
Field Technician: MARTIN KOENNecke	

	Leachate Co Pum	-	Well Pumpir Anal	ng Flow Rate lyses	Flow Rate	Remarks
Well	Start Time	Stop Time	Time	Tank Elev. (Down)	Calculation	
LCW-1	9:25	10:25		33,5"	137	
LCW-2	9:25	10:25				
LCW-3	9:25	9:35				
LCW-4	9:25	10:25				
Leachate Hold	ling Tank: STANT	6,5"	END 33,	5″		
	feter Reading:	PH-6,8		20 mly	Temp-52	b
Final F low-M ADDED 2	eter Reading: 75 165 CAUSTIC	PH- 7.8	, FE 3.	Omly, T	Temp 540	

		Loading) anker	(Po	st-Loading) Tanker	Destination	Remarks
Load	Time Start	Confirmed Clean	Time End	Tanker Volume (by Strick Mass)	Manifest	-251
Load #1	7:30	Yes	830	49,5"	#1	7500 gal
Load #2	8:40	Yes	9:20	60,25"	# J	5,000 gal
Load #3	11:50	Yes	13:05	50"	#3	7,800 gol
Load #4						

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ATTACHMENT D-3

QUARTERLY POTW DISCHARGE REPORTS 2ND QUARTER 2015

de maximis, inc.

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

June 1, 2015

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

Re: 2nd Quarter PAS Oswego Discharge Report 2015

Dear Mr. O'Brien,

This quarterly report is submitted in accordance with the City of Auburn Wastewater Discharge Permit 2014-01 (Permit) for discharge of leachate from the Pollution Abatement Services (PAS) Site into the City of Auburn Wastewater Treatment Facility. This report covers the reporting period from March 2015 through May 2015.

Leachate trucking to the Auburn Public Operated Treatment Plant (POTW) was revived on March 4, 2015. The total number of gallons of leachate discharged during each month of the quarter is summarized in Table 1. The Leachate Discharge Form documenting the leachate pumping process and completed bills of lading providing the quantities shipped during each discharge event are included in Attachment I. The discharge quantities, as well as date of each discharge event are provided on the bills of lading. Measurements for pH and temperature during the removal event are also recorded on the discharge forms.

The quarterly compliance sampling for the permit was performed by the City of Auburn during the March discharge event. Those results indicated all parameters were below the permitted criteria.

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

Sincerely, de maximis, inc.

Clay Me Vanno

Clay McClarnon

Attachment

CMC/akw

cc: PAS Management Committee

PAPER

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Date Discharged (news/pit) Gallons Date Discharged (news/pit) Date Discharged Date Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Discharged Disch	Discharge Quarter	202	STOX	3Q 2	.015	4Q 2	015	1d 2()16
Image: Solution of the state of the stat		Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged	Date Discharged (temp/pH)	Gallons Discharged
		3/4/15	10,000						
		42/8.5							
		4/8/15	10,125						
		42/7.5							
		5/6/15	20,200						
		52/8.0							-
	Total								
	Discharged		40,325						
	Date Sampled*		3/4/2015 **						
	Analytes		mg/L						
	Antinomy Arsenic		0.018						
	Barium		0.25						
	Chromium (Hex)								
	Chromium (total)		0.13						
	tron		4.3 ND						
	Mercury		0.002						
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Prpared by de maximis, inc. 5/29/2015

Analyte values in bold exceed limit



ATTACHMENT 1

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Leachate Disposal Checklist

Former Pollution Abatement Services (PAS Oswego) Oswego, NY

Date: <u>3-4-15</u>

Time: 7:15

Field Technician _______

Weather Conditions 30°

Beginning Leachate		Pi	re-Discharge	e Well Pumpi	ng	•
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)
9,5	LCW-1	755	9:15	43,5	11	10,370
	LCW-2	7:55	9:15			
	LCW-3	17:55	8:05			
,,	LCW-4	7:55	9:15			
	J				Total	10,370

Betwhe 618 +20 FE Afex CAUSTIC + LIMK 805 PH, 42

Monthly Leachate Discharge Pumping (To the City of Oswego) **Discharge**# Gallons Totalizer Start Time Stop Totalizer pН Temp **Flow Total** Discharge **Flow Total** Time (Start) (End) Discharge #1 8,5 4 እ° Pump Pump Pump Info **Flow Rate** Prime Time Vacuum (GPM) Pressure

Semi-Annual Leachate Discharge Sampling (Per the City of Oswego Permit)

· ·	Date	Sample Location	Sample Volume	Sample Time	рH	Temperature
Sample #1					\$ 7	
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of carrier)	(SCAC)	Date	5-4	-/5		
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City Osy	vego	State MY	Zip Cog	91126		
24 hr. Emergency C	ontact Tel. No			<u></u>		
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s, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGE (For Carrie Use Only)		
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		Signature		(Signature of Consigner)		except when bo right is checked		
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PAS Site Oswego, New York

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Time on-site: 6:50

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Leachate Disposal Checklist

Project Personnel:

MARTIN KOENNECKE

Transportation Subcontractor: <u>SUN ENVIRAMENTIAL</u>

Leachate Destination: <u>CiTy & AUBURN</u>

Date: <u>4-8-15</u>

Field Technician: <u>MARTIN KOENNECKE</u>

	•	llection Well ping		ng Flow Rate lyses	Flow Rate	Remarks
Well	Start Time	Stop Time	Time	Tank Elev. (Denn)	Calculation	:
LCW-1	17:00	8:15	75 MIN	44 "	1346Pm	10,065
LCW-2	7:00	8:15	75 min			
LCW-3	7:00	7:10	ID MIN			
LCW-4	7:00	8:15	75 mil			
Leachate Ho	olding Tank: S	TART - //"			<u> </u>	
Initial Flow	Mcter Reading: E	NO PUMpiny-	44" Af	ter Pump out		· · · · · · · · · · · · ·
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T T		-Loading) Fanker	(Po	ost-Loading) Tanker	Destination	Remarks
Load	Time Start	Confirmed Clean	Time End	Tanker Volume (by Strick Mass)	Manifest	
Load #1	9:30	Yes	10.10	61.5 ~	0004	<i>EST 2</i> 650
Load #2	1025	Yes	11:40	50,5 "	0003	EST 7475
Load #3						
Load #4					Total =	10,125

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PAS Site Oswego, New York

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	Leachate Disposal Check	<u>clist</u>	
Project Personnel:	MARTIN Koenneckie	Time on-site:	6:45
Transportation Subcont	tractor: <u>SUN ENVIROMENTAL</u>		
Leachate Destination:	CITY of AUBURN WI	<u>wt</u> P	
Date: <u>5-6-15</u>			
Field Technician:	MAETIN KOENNecke		

	Leac	hate Co Pum	llection ping	Well		oing Flow Rate alyses	Flow Rate	Remarks
Well		Time 5-6-15	Stop 5-5-15		Time	Tank Eley. (Down)	Calculation	· .
LCW-1	12:10	9:05	13:40	10:20			(128 6PM) (122 6PM)	- 5-5 15
LCW-2	12:10	9:05	13:40	10:20			(122 6PM	- 5-6-15)
LCW-2	12:10		12:20					
LCW-4	12:10	9:05	13:40	10.20				
Leachate Hol	ding Ta	nk: 5-15 10	o,5"-	48,5"	5	-6-15 6,5"	- 36,5"/E	70-11.5"
Initial Flow N	Meter Re			. 11,59		"-9,150		
Final Flow M	leter Rea					0,200 - 5	HIPPED	

× 3		-Loading) 'anker	(Po	ost-Loading) Tanker	Destination	Remarks
Load	Time Start	Confirmed Clean	Time End	Tanker Volume (by Strick Mass)	Manifest	
Load #1	7:00	Yes	8:00	51.5"	<i>#</i>	\$,000
Load #2	8:25	Yes	9:05	56.5"	#2	4.1000
Load #3	11:30	Xes	1240	51,"	#3	7,600
Load #4						

FE-1.6 PH - 9.8 Temp 52° FE-2.0 PH - 8.2

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Shipper No. 144 2 2 Carrier No. 7A-709	Date 5/2/25		aca Serect	State AVX Zip Code	315-218-6995	Vehicle 3/6/704	WEIGHT CHARGES (Subject to RATE (For Carrier Correction) Les Only	Ċ						C.O.D. FEE PREPAID CI COLLECT CI S	TOTAL CHARGES FREIGHT FREPAID FREIGHT FREPAID	fination and as to each party at any time histoched in sil or any said property, that every service to to pottomed intervale stall be subject as if the bill of ballog terms and conditions in the governing data. Sityper hereix of statistic statistic is a statiliar with all the taking terms and conditions in the governing care. Sityper hereix of statistic statist	teatal Corn.			(600) 621-5808 www.labelmaster.com
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is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicatie, covering the property named herein, and is intended solely for filing or record. និដីជា អំដាល់និង សំដីនាំង សំដីនាំង បែនដែរដំ ំំនោះ បែន ពួ	(Name of carrier)	otherwise provided in Nem 450, Sec.1. FFROM: Shipper	Street	CAY ONNESS	NY Zp Code 33451 24 hr. Emergency Contact Tel. No.		BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	Non-RCRA, Non-DOI Regulated Liquids	(Leachate Water)	58.5%	30007		areby declars that the	to a support to described above by the proper lakeping to the support of the supp	all respects in program condition for maport (according, to applicable emational and pational governmental guilational. Signatures	a issue of the Bill of Lading, there and condition of corre- tations and correction of corre- rey person or corporation in two of databation. It's much- sead doctavation. It's much- portion of said route to dos-	CARRIER	PER	DATE 5/6	STYLE F370-4 6
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Life Science Laboratories, Inc.

Tim O'Brien Auburn, City of Department of Municipal Utilities 35 Bradley Street Auburn, NY 13021 Phone: (315) 253-6511 FAX: (315) 255-4148

Laboratory Analysis Report

Prepared For

Auburn, City of

Client Project ID:

PAS Leachate

LSL Project ID: 1502919

Receive Date/Time: 03/05/15 17:43

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LSL MidLakes Office Canandaigua, NY Tel. (585) 728-3320

3/18/15 Date:

Reviewed by:

David J. Prichard, Director of Tech. Services

A copy of this report was sent to:

-- LABORATORY ANALYSIS REPORT --

Sample ID:	Truck Grab		LSL Sa	mple ID:	1502919-0	01
Location:						
Sampled:	03/04/15 13:50	Sampled By: AK				
Sample Matrix	: NPW	• •				
Analytical Met			Prep Method	Prep	Analysis	Analys
Analyte		Result	Units	Date	Date & Time	Initial
) EPA 365.1,F	Rev. 2.0 Total Phosphorus					
Phospha	erus, Total as P		mg/l	3/9/15	3/10/15	JIC
	ELAC regulation, disclosure of t stablished limit.	he fallowing condition is requ	ired; The result of a continu	ing calibration cl	heck sample was great	er
() EPA 1664A (Oil & Grease(HEM) by L					ODT
Oil & Gi	rease	19	mg/l		3/13/15	CRT
U EPA 200.7 M	fetals		EPA 200.2			
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Cyanide	, Total	<0.01	mg/l	3/13/15	3/13/15	
り EPA 351.2.R	ev.2.0 TKN as N					
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	ccoverable Phenolics ML					
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Analysis performed at: (1) LSL Central Lab, (2) LSL North Lab, (3) LSL Finger Lakes Lab

Life Science Laboratories, Inc.

oratories, Inc.	NY 13057 CHAIL OF CUSTOUY RECORD V(SUSOFF 1502919	Telefax # (315) 445-1104 Contact Person: LSL Project #: AuburnCityWWTP	Phone # (315) 253-6511 3099	Telefax # Tim 0'Brien Client's Site LD.:	dontremes PAS Leachate	Authorization: Cleent's Project I.D.:	Sample Sample Type Preserv. Contatners	Identifications Used 11206 2120 comp. matrix Accord # 520,1790 Analyses Gheck Truck 34/15 1.50ph X None 1 500 mL BOD, 18S, Com	X H2SO4 1 250 mL	X HN03 1 250 mL As,Ba,Cr,Cu,Fe,Pb,Hg,Ni,Zn <u>2</u>	X H2S04 1 Litor(g) Oll & Grease	X H2S04 1 Liter(g) Phenois	Cn	X HCL 2 40 шL *601/602* (by 624) 40 шL 1000000000000000000000000000000000000	V X None 1 Liter(2) PCB (8082) / Mr. Cap ON	(Bottle)	155m HI= 2.55 (3) 4.9°	HCL 2 40 mL Trip Blank		ons: Custody Transfers Date Time	prostitivience. Sampled By: (1 reduce Lever 1, Received By:	Reliterational Re-	Received for Lab By: R. Dune has	
Life Science Laboratories, Inc.	5854 Butternut Urive East Syracuse, NY 13057		Phone #		Aubura, N.Y. 13021	Authorizati		34115							^					entifications:	.2 dichloroethylene,	l'altranat		
Life Sc		Phone # (315) 445-1900	Client: City of Auburn	Address: 24 South St.	Auburn, N			LSL Sample Number	مر		A	11		04	- - -			002 AB		Notes and Hazard identifications:	Trichtoroethylene. 1.2 dichloroethylene,	Mathulana Chinnida - Tutuana [*]		

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*ddms

DATA VALIDATION

FOR

WATER MONITORING PAS Oswego OSWEGO, NEW YORK

ORGANIC ANALYSIS DATA Volatiles in Water Laboratory Job No. K1505039

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

June 5, 2015

1547-3131/psn PAS\K1505039Voa

**ddms

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. K1505039. The following samples were reported:

Equipment Blank	M-21	LR-8	OD-3	X-1
LR-6	M-22	LCW-2	LCW-4	Trip Blank

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

- Results for methylene chloride in the equipment blank, trip blank, LR-8, LCW-2, and LCW-4 and for acetone in M-21, LR-8, LR-6, and M-22 were qualified as not detected (U) at the analyte-specific reporting limit.
- Results for methylcyclohexane were qualified estimated (J+) in M-21, LR-8, X-1, and LCW-4 and may be biased high.
- Results for 1,4-dichlorobenzene in M-21, X-1, and LCW-4 were qualified as not detected (U) at the reporting limit.

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.

****ddms**

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 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 a sample collection date of May 4, 2015. The samples were hand delivered to the laboratory on May 5, 2015. The temperature of the cooler on receipt at the laboratory was outside the acceptance criteria (1.0° C; criteria 4.0° C \pm 2.0° C). However, since the samples were not frozen, no data were qualified on this basis. Acceptable preservation of samples (pH <2) was noted on the injection log and was also included in the narrative. The samples were analyzed on May 13, 2015, within the 14-day holding time for preserved samples.

II. GC/MS Instrument Performance Check

A summary form was provided for two bromofluorobenzene (BFB) instrument performance check run on instrument "MSN76", 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 many 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.

<u>A. Initial Calibration (IC)</u>

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. All average RRF values were acceptable.

B. Continuing Calibration (CC)

One CC was performed on May 13, 2015. All RRF values were acceptable and percent difference values were acceptable with the exception of 4-methyl-2-pentanone (20.4%D; criteria < 20%D) and 1,2-dibromo-3-chloropropane (20.2%D). Since these

were slight excursions and because these analytes were not reported 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 was detected in the method blank (0.57 μ g/L), the trip blank (0.24 μ g/L), and the equipment blank (0.28 μ g/L). Acetone was detected in the equipment blank (1.44 μ g/L). Results less than five times the amount detected in any blank are qualified as not detected at the reporting limit or reported value, whichever is greater. Results for methylene chloride in the equipment blank, trip blank, LR-8, LCW-2, and LCW-4 and for acetone in M-21, LR-8, LR-6, and M-22 were qualified as not detected (U) at the analyte-specific reporting limit due to associated 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-8. All percent recoveries were acceptable with the exception of methylcyclohexane in the MS and MSD (129%R; criteria 75-125%). Results for methylcyclohexane were qualified estimated (J+) in M-21, LR-8, X-1, and LCW-4 and may be biased high.

B. Blank Spike

Two blank spikes were reported with these samples. All percent recoveries were acceptable with the exception of methylcyclohexane (128%R; criteria 80-120%). Results for methylcyclohexane were qualified estimated (J+) in M-21, LR-8, X-1, and LCW-4 and may be biased high.

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VII. Field Duplicate

Sample M-21 was collected as a blind field duplicate of Sample X-1. Following qualification based on associated blank contamination, RPDs between paired results were acceptable.

VIII. Internal Standard Performance

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

IX. Target Compound Identification

Target analytes were detected in nine of these samples and an acceptable mass spectrum was provided for most 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. Results for 1,4-dichlorobenzene in M-21, X-1, and LCW-4 were qualified as not detected (U) at the reporting limit due to unacceptable ion ratios.

X. Compound Quantitation and Reporting Limits

Target compound concentrations and reporting limits (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.

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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 narrative indicated that the samples were analyzed in accordance with SW-846 Method 8260C. The Sample Control Record cited the analytical method as 8260B.
- 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:

- Results for methylene chloride in the equipment blank, trip blank, LR-8, LCW-2, and LCW-4 and for acetone in M-21, LR-8, LR-6, and M-22 were qualified as not detected (U) at the analyte-specific reporting limit due to associated blank contamination.
- Results for methylcyclohexane were qualified estimated (J+) in M-21, LR-8, X-1, and LCW-4 and may be biased high due to MS/MSD and blank spike recoveries.

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• Results for 1,4-dichlorobenzene in M-21, X-1, and LCW-4 were qualified as not detected (U) at the reporting limit due to unacceptable ion ratios.

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.

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ATTACHMENT A

DATA SUMMARY FORMS Laboratory Job No. K1505039 Volatiles in Water DATA SUMMARY FORM: VOLATILES 1 WATER SAMPLES (ug/L)

Site Name: PAS Oswego Semi Annual Well Sampling

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Laboratory Job No. K1505039

Sampling Date: May 4, 2015

ddms Project No. 1547-3131

Sample Location	Equipment Blank	M-21	LR-8	0D-3	X-1	LR-6	M-22
Lab Sample ID	K1505039-001A	K1505039-002A	K1505039-003A	K1505039-004A	K1505039-005A	K1505039-006A	K1505039-007A
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0
RL							
1.00 Dichlorodifluoromethane							
1.00 Chloromethane							
1.00 Vinyl Chloride							
1.00 Bromomethane							
1.00 Chloroethane		2.01	4.71		2.04		
1.00 Trichlorodluoromethane							
0.50 1,1-Dichloroethene							
0.50 1,1,2-Trichloro-1,2,2-trifluoroethane	le						
10.0 Acetone	1.44]	10.01	U 10.0 U			10.0 U	10.0 U
0.50 Carbon disulfide							
5.00 Methyl acetate							
2.00 Methylene Chloride	2.00 U		2.00 U				
0.50 trans-1,2-Dichloroethene							
1.00 Methyl tert-butyl ether							
0.50 1,1-Dichloroethane						0.68	0.12 J
0.50 cis-1,2-Dichloroethene							
10.0 2-Butanone							
0.50 Chloroform							-
0.50 1,1,1-Trichloroethane							_
0.50 Cyclohexane		1.77	3.07		1.75		
0.50 Carbon Tetrachloride							
0.50 Benzene		0.19	J 1.51		0.18 J		
0.50 1,2-Dichloroethane							
0.50 Trichloroethene						0.13 J	
0.50 Methylcyclohexane		0.25 J	J+ 0.37 J+		0.26 J+		
0.50 1,2-Dichloropropane							
0.50 Bromodichloromethane							
0.50 cis-1,3-Dichloropropene							

DATA SUMMARY FORM: VOLATILES 2 WATER SAMPLES (ug/L)

Site Name: PAS Oswego Semi Annual Well Sampling

Laboratory Job No. K1505039

ddms Project No. 1547-3131

Sampling Date: May 4, 2015

Sample Location	Equipment Blank	M-21	LR-8	0D-3	X-1	LR-6	M-22
Lab Sample ID	K1505039-001A	K1505039-002A	K1505039-003A	K1505039-004A	K1505039-005A	K1505039-006A	K1505039-007A
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0
<u> </u>							
5.00 4-Methyl-2-pentanone							
		0.25 J	0.32 J		0.23 J		
0.50 trans-1,3-Dichloropropene							
0.50 1,1,2-Trichloroethane							
0.50 Tetrachloroethene							
0.50 Dibromochloromethane							
0.50 1,2-Dibromomethane							
		5.64	13.2		5.55		
			0.41 J				
0.50 Isopropylbenzene		0.83	1.19		0.81		
0.50 1,1,2,2-Tetrachloroethane							
0.50 1,3-Dichlorobenzene			0.14 J				
0.50 1,4-Dichlorobenzene		0.50 U	0.80		0.50 U		
0.50 1,2-Dichlorobenzene		0.57	0.49 J		0.57		
5.00 1,2-Dibromo-3-chloropropane				-			
1.00 1,2,4-Trichlorobenzene							
		-					

DATA SUMMARY FORM: VOLATILES I WATER SAMPLES (ug/L)

Site Name: PAS Oswego Semi Annual Well Sampling

Laboratory Job No. K1505039

Sampling Date: May 4, 2015

ddms Project No. 1547-3131

Sample Location	LCW-2	LCW-4	Trip Blank	
Lab Sample ID	K1505039-008A	K1505039-009A	K1505039-010	
Dilution Factor	20	20	1.0	
RL				
1.00 Dichlorodifluoromethane				
1.00 Chloromethane				
1.00 Vinyl Chloride	36.8	21.2		
1.00 Bromomethane				
1.00 Chloroethane	18.2 J	73.6		
1.00 Trichlorodluoromethane				
0.50 1,1-Dichloroethene				
0.50 1,1,2-Trichloro-1,2,2-trifluoroethane	le			
10.0 Acetone				
0.50 Carbon disulfide				
5.00 Methyl acetate				
2.00 Methylene Chloride	40.0 U	40.0	U	
0.50 trans-1,2-Dichloroethene				
1.00 Methyl tert-butyl ether				-
0.50 1,1-Dichloroethane	13.4	8.00	J	
0.50 cis-1,2-Dichloroethene	14.8	26.0		
10.0 2-Butanone				
0.50 Chloroform				
0.50 1,1,1-Trichloroethane	6.00 J			
0.50 Cyclohexane		6.00	J	
0.50 Carbon Tetrachloride				
0.50 Benzene	378	414		
0.50 1,2-Dichloroethane				
0.50 Trichloroethene	4.60 J			
0.50 Methylcyclohexane		3.00 J		
0.50 1,2-Dichloropropane				
0.50 Bromodichloromethane				
0.50 cis-1,3-Dichloropropene				_

DATA SUMMARY FORM: VOLATILES 2 WATER SAMPLES (ug/L)

Site Name: PAS Oswego Semi Annual Well Sampling

Laboratory Job No. K1505039

ddms Project No. 1547-3131

Sampling Date: May 4, 2015

		-																									
Trip Blank	K1505039-010	1.0																									
_	009A	1.0			22.8							294	151	757			5.00 J			10.0 U	30.6						
LCW-4	K1505039-009A	1			22							20	1:	μ.			5.(10	30						
LCW-2	K1505039-008A	1.0						6.80 J				84.8	21.0	10.6 J			6.00 J				7.20 J						
Sample Location	Lab Sample ID	Dilution Factor		5.00 4-Methyl-2-pentanone	luene	0.50 trans-1,3-Dichloropropene	0.50 1,1,2-Trichloroethane	0.50 Tetrachloroethene	5.00 2-Hexanone	0.50 Dibromochloromethane	0.50 1,2-Dibromomethane	0.50 Chlorobenzene	0.50 Ethylbenzene	1.00 Xylenes (total)	vrene	1.00 Bromoform	0.50 Isopropylbenzene	0.50 1,1,2,2-Tetrachloroethane	0.50 1,3-Dichlorobenzene	0.5 1,4-Dichlorobenzene	0.50 1,2-Dichlorobenzene	5.00 1,2-Dibromo-3-chloropropane	1.00 1,2,4-Trichlorobenzene				
			RL	5.00 4-1	0.50 Toluene	0.50 tra	0.50 1,1	0.50 Te	5.00 2-1	0.50 Di	0.50 1,2	0.50 Ch	0.50 Ett	1.00 Xy	0.50 Styrene	1.00 Br	0.50 Isc	0.50 1,1	0.50 1,5	0.5 1,4	0.50 1,2	5.00 1,2	1.00 1,2				

****ddms**

ATTACHMENT B

ORGANIC ANALYSIS REPORT SHEETS Laboratory Job No. K1505039 Volatiles in Water

.

	ast Syracuse, NY 13	(313)	445-1900			stateCertNo:										
CLIENT	O'Brien & Gere Ope	rations, LLC		Lab ID: K1505039-001A												
Project:PAS Oswego-Semi-W Order:K1505039Matrix:WATER QInst. ID:MSN_76ColumnID:Rtx-VMS		i-Annual Well Sampling Sample Size 10 mL %Moisture:		Collection Date: Date Received: PrepDate:		<i>Equipment Blank 5/4/15</i> 05/04/15 10:45 05/05/15 16:15										
									BatchNo:		R28389 1-SAMP-n2706.D					
									Revision: Col Type:	05/19/15 15:54	TestCode:	8260W_OLM42	FileID:		1-5AIVIP-112	U,00)
									Analyte		Result Q	ual PQL	MDL	Uni	ts DF	Date Analyzed
				VOLATILE C	DRGANIC COMPOUN	IDS BY GC/MS			SW	B260C/5030C						
Dichlorodifluoro	omethane	ND	1.00	0.10	µg/L	° 1	05/13/15 17:59									
Chloromethane		ND	1.00	0.33	µg/L		05/13/15 17:59									
Vinyl chloride		ND	1.00	0.33	µg/L	1	05/13/15 17:59									
Bromomethane	1 -	ND	1.00	0.33	µg/L	1	05/13/15 17:59									
Chloroethane		ND	1.00	0.33	µg/L	1	05/13/15 17:59									
Trichlorofluoromethane			1.00	0.10	μg/L	1	05/13/15 17:59									
1,1-Dichloroethene			0.50	0.16	µg/L	1	05/13/15 17:59									
	-1,2,2-trifluoroethane	ND 1.44 J	0.50	0.10	µg/L	1	05/13/15 17:59									
Acetone			10.0	1.00	µg/L	1	05/13/15 17:59									
Carbon disulfide			0.50	0.11	µg/L	1	05/13/15 17:59									
Methyl acetate			5.00	1.00	µg/L	1	05/13/15 17:59									
Methylene chloride 2.00 W -				0.16	µg/L	1	05/13/15 17:59									
trans-1,2-Dichloroethene			0.50	0.10	µg/L	1	05/13/15 17:59									
Methyl tert-butyl ether			1.00	0.16	µg/L	1	05/13/15 17:59 05/13/15 17:59									
1,1-Dichloroethane cis-1,2-Dichloroethene			0.50 0.50	0.10 0.10	µg/L	1	05/13/15 17:59									
-Butanone	Jeulelle	AND	10.0	1.00	µg/L µg/L	1	05/13/15 17:59									
Chloroform		Hew ND ND S 2015 ND ND ND ND	0.50	0.10	ha\r ha\r	1	05/13/15 17:59									
,1,1-Trichloroe	athano	NON NO	0.50	0.10	μg/L	1	05/13/15 17:59									
yclohexane			0.50	0.10	µg/L	1	05/13/15 17:59									
Carbon tetrachi	loride 1/W	JUND	0.50	0.10	µg/L	1	05/13/15 17:59									
lenzene	$(), \mathcal{V}^{\vee}()$	ND ND	0.50	0.10	μg/L	1	05/13/15 17:59									
,2-Dichloroeth		⇒\ ND	0.50	0.16	μg/L	1	05/13/15 17:59									
richloroethene		ND	0.50	0.10	µg/L	1	05/13/15 17:59									
Nethylcyclohex		ND	0.50	0.10	µg/L	1	05/13/15 17:59									
,2-Dichloropro	pane	ND	0.50	0.16	µg/L	1	05/13/15 17:59									
Bramodichiaror	nethane	ND	0.50	0.10	µg/L	1	05/13/15 17:59									
is-1,3-Dichlor	opropene	ND	0.50	0.16	μ g /L	1	05/13/15 17:59									
-Methyl-2-pen	tanone	ND	5.00	1.00	µg/L	1	05/13/15 17:59									
oluene		ND	0.50	0,10	μg/L	1	05/13/15 17:59									
ans-1,3-Dichl	• •	ND	0.50	0.16	µg/L	1	05/13/15 17:59									
,1,2-Trichloro		ND	0.50	0.16	μ g /L	1	05/13/15 17:59									
etrachioroethe	ene	ND	0.50	0.10	µg/L	1	05/13/15 17:59									
2-Hexanone		ND	5.00	1.00	µg/L	1	05/13/15 17:59									
Dibromochloro	methane	ND	0.50	0.10	µg/L	1	05/13/15 17:59									
Qualifiers:	* Value may exceed the	ne Acceptable Level	·····	B Analyte detected in the associated Method Blank												
•	E Value exceeds the instrument calibration range			H Holding times for preparation or analysis exceeded												
	J Analyte detected below the PQL			ND Not Detected at the Practical Quantitation Limit (PQL) S Spike Recovery outside accepted recovery limits												

E	ast Syracuse, NY 13	057 (315)	445-1900		Sta	teCertNo:	10248	
CLIENT O'Brien & Gere Opera Project: PAS Oswego-Semi-Ar			• •			05/04/15 10:45 05/05/15 16:15		
W Order: Matrix: Inst. ID: ColumnID:	K1505039 WATER Q MSN_76	Sample Size %Moisture:	Collection Date: Date Received: PrepDate:					
Columnity: Revision: Col Type:	05/19/15 15:54	%ivioisture: TestCode:	8260W_OLM42	BatchNo: FileID:		R28389 1-SAMP-n2706.D		
Analyte		Result Q	ual PQL	MDL 1	J nits	DF	Date Analyzed	
VOLATILE (ORGANIC COMPOUN	IDS BY GC/MS		8	SW82	60C/5030C	· · · · · · · · · · · · · · · · · · ·	
1,2-Dibromoeti	nane	ND	0.50	0.16 J	ıg/L	1	05/13/15 17:59	
Chlorobenzene	É	ND	0.50	0,10 F	ıg/L	1	05/13/15 17:59	
Ethylbenzene		ND	0.50	0.10 H	g/L	1	05/13/15 17:59	
Xylenes (total)		ND	1.00	0.30 µ	ig/L	1	05/13/15 17:59	
Styrene		ND	0.50	0.10 µ	g/L	1	05/13/15 17:59	
Bromoform		ND	1.00	0.33 µ	g/L	1	05/13/15 17:59	
Isopropyibenzene		ND	0.50	0.10 µ	μg/L 1		05/13/15 17:59	
1,1,2,2-Tetrachloroethane		ND	0.50	•	μg/L		05/13/15 17:59	
1,3-Dichlorobenzene		ND	0.50	0.10 µ	µg/L		05/13/15 17:59	
1,4-Dichlorobenzene		ND	0.50	•	g/L	1	05/13/15 17:59	
1,2-Dichlorobenzene		ND	0.50	0.10 µ	g/L	1	05/13/15 17:59	
,2-Dibromo-3-chloropropane		ND	5.00	•	g/L	1	05/13/15 17:59	
,2,4-Trichlorol		ND	1.00	•	g/L	1	05/13/15 17:59	
	chloroethane-d4	95	75-130		GREC	1	05/13/15 17:59	
Surr: Toluene-d8		103	75-125	0.10 9	6REC	1	05/13/15 17:59	
	nofluorobenzene	104	75-125	0.10 9	REC	1	05/13/15 17:59	

	P 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	H	Holding times for preparation or analysis exceeded		
Qualifiers:	*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank		

CLIENT	East Syracuse, NY 13057 (315) 445-190				StateCertNo: 10248				
	O'Brien & Gere Opera	tions, LLC		Lab ID: K1505039-002A					
Project:	PAS Oswego-Semi-A		ling	Client Sample ID: M-21 5/4/15					
W Order:	K1505039			Collection Date: 05/04/15 12:05					
Matrix: WATER				Date Received: 05/05/15 16:15					
Inst. ID:	MSN_76	Sample Size	10 mL	PrepDate:					
ColumnID:		%Moisture:		BatchNo:		28389			
Revision:	05/19/15 15:54	TestCode:	8260W_OLM42	FileID:	1-	SAMP-n27	07.D		
Col Type:									
Analyte		Result Qu	al PQL	MDL	Units	DF	Date Analyzed		
	DRGANIC COMPOUNI	DS BY GC/MS			SW826	30C/5030C			
Dichlorodifluor		ND	1.00	0.10	µg/L	1	05/13/15 18:34		
Chloromethane)	ND	1.00	0.33	µg/L_	1	05/13/15 18:34		
/inyt chloride		ND	1.00	0.33	μ g /L	_1	05/13/15 18:34		
Bromomethane		ND	1.00	0.33	µg/L	1	05/13/15 18:34		
Chloroethane		2.01	1.00	0.33	µg/L	1	05/13/15 18:34		
richlorofluoror		ND	1.00	0.10	μg/L	1	05/13/15 18:34		
,1-Dichloroeth		ND	0.50	0.16	μg/L	1	05/13/15 18:34		
, r,z- memoro- cetone	-1,2,2-trifluoroethane	ND	0.50	0.10	µg/L	1	05/13/15 18:34 05/13/15 18:34		
celone Carbon disulfid	.	10,61 M3.03-1	10.0 0.50	1.00 0.11	µg/L	1	05/13/15 18:34		
lethyl acetate		ND	5.00	1.00	µg/L	1	05/13/15 18:34		
lethylene chlo	rida	ND ND	2.00	0.16	μg/L μg/L	1	05/13/15 18:34		
ans-1,2-Dichl		ND	0.50	0.10	μg/L	1	05/13/15 18:34		
lethyl tert-buty		ND	1.00	0.16	μg/L	1	05/13/15 18:34		
,1-Dichloroeth		1 ND	0.50	0.10	μg/L	1	05/13/15 18:34		
is-1,2-Dichlor	osthona	ND.	0.50	0.10	µg/L	1	05/13/15 18:34		
Butanone		A N ND	10.0	1.00	μg/L	1	05/13/15 18:34		
Chloroform		ND ND	0.50	0.10	µg/L	1	05/13/15 18:34		
,1,1-Trichloro	ethane	NO ND	0.50	0.10	µg/L	1	05/13/15 18:34		
Cyclohexane	· · ·	1.77	0.50	0.10	μg/L	1	05/13/15 18:34		
arbon tetrach	loride a W	ND S	0.50	0.10	µg/∟	1	05/13/15 18:34		
Benzene	$O_{\rm v}$	Peru ND ND ND ND ND ND ND ND ND	0.50	0.10	μg/L	1	05/13/15 18:34		
,2-Dichloroeth		DN ND	0.50	0.16	µg/L	1	05/13/15 18:34		
richloroethene	2 V V	ND	0.50	0.10	µg/L	1	05/13/15 18:34		
lethylcyclohex		0.25 J -	- 0.50	0.10	µg/L	1	05/13/15 18:34		
,2-Dichloropro	•	ND	0.50	0.16	µg/L	1	05/13/15 18:34		
Iromodichloror		ND	0.50	0.10	µg/L	1	05/13/15 18:34		
is-1,3-Dichlon		ND	0.50	0.16	µg/L	1	05/13/15 18:34		
-Methyl-2-pen	tanone	ND	5.00	1.00	µg/L	1	05/13/15 18:34		
oluene		0.25 J	0.50	0.10	μg/L	1	05/13/15 18:34 05/13/15 18:34		
ans-1,3-Dichl 1,2-Trichloro	• •	ND	0.50	0.16 0.16	μg/L.	1	05/13/15 18:34		
, 1,2- i ricnioro etrachioroethi		ND	0.50	0.16	µg/L ug/l	1	05/13/15 18:34		
-Hexanone	3115	ND ND	0.50 5.00	1.00	μg/L μg/L	1	05/13/15 18:34		
Dibromochloro	methane	ND	0.50 0.50	0.10	μg/L	1	05/13/15 18:34		
	 * Value may exceed the 					associated Me			
Qualifiers:		rument calibration ran	ec.			uration or analy			
	J Analyte detected below						tion Limit (PQL)		

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Life Science Laboratories, Inc.

Analytical Results

CLIENT Project:	O'Brien & Gere Ope PAS Oswego-Semi-		ing	Lab ID: Client Sam		K1505039- <i>M-21 5/4/</i>		
W Order: K1505039 Matrix: WATER								
Inst. ID: ColumnID: Revision: Col Type:	amnID: Rtx-VMS%Moisture:BatchNo:ision:05/19/15 15:54TestCode:8260W_OLM42FileID:			R28389 1-SAMP-n2707.D				
Analyte		Result Qu	al PQL	MDL	Unit	s DF	Date Analyzed	
VOLATILE (ORGANIC COMPOU	NDS BY GC/MS	·		SW8	260C/5030C	;	
1,2-Dibromoeti	nane	ND	0.50	0.16	µg/L	1	05/13/15 18:34	
Chlorobenzene	•	5.64	0.50	0.10	µg/L	۰ t	05/13/15 18:34	
Ethylbenzene		ND	0.50	0.10	µg/L	1	05/13/15 18:34	
(ylenes (total)		NÐ	1.00	0.30	μg/L	1	05/13/15 18:34	
Styrene		ND	0.50	0.10	µg/L	1	05/13/15 18:34	
Bromoform		ND	1.00	0.33	μg/L	1	05/13/15 18:34	
sopropylbenze		0.83	0.50	0.10	μg/L	1	05/13/15 18:34	
1,2,2-Tetrach	nloroethane	ND	0.50	0.10	μg/L	1	05/13/15 18:34	
,3-Dichlorobe	nzene	ND	0.50	0.10	µg/L	1	05/13/15 18:34	
,4-Dichlorobe	nzene	0,504 033 +	0.50	0.16	μg/L	1	05/13/15 18:34	
,2-Dichlorobei	nzene	0.57	0.50	0.10	µg/L	1	05/13/15 18:34	
,2-Dibromo-3-	chloropropane	ND	5.00	1.00	μg/L	1	05/13/15 18:34	
,2,4-Trichlorol		ND	1.00	0.10	µg/L	1	05/13/15 18:34	
Surr: 1,2-Dic	chloroethane-d4	95	75-130	0.16	%REC	; 1	05/13/15 18:34	
Surr: Toluen	e-d8	. 101	75-125	0.10	%REC	3 1	05/13/15 18:34	
Surr: 4-Brom	ofluorobenzene	102	75-125	0.10	%REC	\$1	05/13/15 18:34	
	Joll	S-Newrod 16/5/2015	d					

Oualifiers :	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
C	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

CLIENT O'Brien & Gere Oper PAS Oswego-Semi-A			StateCertNo: 10248				
roject: PAS Oswego-Semi-A	ations, LLC		Lab ID:	K	K1505039-003A		
- John Ting Course Down 1	nnual Well Samp	ling	Client Sam	ple ID: L	D: LR-8 5/4/15		
V Order: K1505039				Date: 0	05/04/15 13:30		
fatrix: WATER			Date Receiv	ved: 05	05/05/15 16:15		
nst. ID: MSN_76	Sample Size	10 mL	PrepDate:				
ColumnID: Rtx-VMS	%Moisture:		BatchNo:		8389		
Revision: 05/19/15 15:54	TestCode:	8260W_OLM42	FileID:	1-	SAMP-n2	703.D	
ol Type:			•				
nalyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed	
OLATILE ORGANIC COMPOUN	DS BY GC/MS				/8260C/5030C		
ichlorodifluoromethane	ND	1.00	0.10	µg/L	1	05/13/15 16:14	
hloromethane	ND	1.00	0.33	µg/L	1	05/13/15 16:14	
nyl chloride romomethane	ND	1.00	0.33	µg/L	1	05/13/15 16:14	
nomemane hloroethane	ND	1.00	0.33	µg/L	1	05/13/15 16:14	
ichlorofluoromethane	4.71	1.00	0.33	µg/L	1	05/13/15 16:14	
1-Dichloroethene	ND ND	1.00 0.50	0.10	µg/L	1	05/13/15 16:14	
1,2-Trichloro-1,2,2-trifluoroethane	ND	0.50	0.16 0.10	μg/L μg/L	1 1	05/13/15 16:14 05/13/15 16:14	
etone	10.04 -439-1	10.0	1.00	μg/L	1	05/13/15 16:14	
arbon disulfide	ND	0.50	0.11	μg/L	1	05/13/15 16:14	
ethyl acetate	ND	5.00	1.00	μg/L	1	05/13/15 16:14	
•	2,00U -0.16J	2.00	0.16	μg/L	1	05/13/15 16:14	
Ins-1,2-Dichloroethene	ND	0.50	0.10	μg/L	1	05/13/15 16:14	
ethyl tert-butyl ether	, ND	1.00	0.16	μg/L	1	05/13/15 16:14	
1-Dichloroethane	ND ND	0.50	0.10	µg/L	1	05/13/15 16:14	
-1,2-Dichloroethene	LA ND	0.50	0.10	µg/L	1	05/13/15 16:14	
Butanone	ND ND	10.0	1.00	µg/L	1	05/13/15 16:14	
loroform	ND ND	0.50	0.10	µg/L	1	05/13/15 16:14	
1,1-Trichloroethane	JAC ND	0.50	0.10	µg/L	1	05/13/15 16:14	
rclohexane 🛛 👘 🕅	3.07 JUN 3.07	0.50	0.10	μg/L	1	05/13/15 16:14	
irbon tetrachloride	MJ ND	0.50	0.10	µg/L	1	05/13/15 16:14	
	ND ND ND ND 3.07 ND 1.51	0.50	0.10	µg/L	1	05/13/15 16:14	
	\ ND	0.50	0.16	μg/L	1	05/13/15 16:14	
chloroethene	ND	0.50	0.10	µg/L	1	05/13/15 16:14	
thylcyclohexane	0.37 J-†		0.10	µg/L	1	05/13/15 16:14	
2-Dichloropropane	ND	0.50	0.16	μg/L	1	05/13/15 16:14	
omodichloromethane	ND	0.50	0.10	hâ\r	1	05/13/15 16:14	
-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	05/13/15 16:14	
Methyl-2-pentanone luene	ND 0.20 J	5.00	1.00	µg/L	1	05/13/15 16:14	
ns-1,3-Dichloropropene	0.32 J	0.50	0.10	µg/L	1	05/13/15 16:14	
.2-Trichioroethane	ND ND	0.50 0.50	0.16 0.16	µg/L	1 1	05/13/15 16:14 05/13/15 16:14	
trachloroethene	ND	0.50	0.10	μg/L μg/L	1	05/13/15 16:14	
lexanone	ND ND	5.00	1.00	μg/L μg/L	1	05/13/15 16:14	
promochloromethane	ND	0.50	0.10	μg/L	1	05/13/15 16:14	
ualifiers: * Value may exceed the		· · ·	· · · · · · ·	tected in the			
	rument calibration rang	je		mes for prepa			

712470

Project Supervisor: Anthony Crescenzi

	854 Butternut Drive ast Syracuse, NY 1	-	445-1900	StateCertNo: 10248				
CLIENT	O'Brien & Gere Op			Lab ID: K1505039-003A				
Project:	PAS Oswego-Semi	-Annual Well Sam	pling	Client Sample ID: LR-8 5/4/15				
W Order:	K1505039			Collection Date: 05/04/15 13:30				
Matrix:	WATER			Date Received: 05/05/15 16:15				
Inst. ID: ColumnID:				R	R28389			
Revision: Col Type:	05/19/15 15:54	TestCode:	8260W_OLM42	FileID:	1-	SAMP-n27	'03.D	
Analyte		Result Q	ual PQL	MDL	Units	DF	Date Analyze	
	DRGANIC COMPOL	INDS BY GC/MS			SW82	60C/5030C		
1,2-Dibromoeti	hane	ND	0.50	0.16	μg/L	1	05/13/15 16:14	
Chlorobenzene)	13.2	0.50	0.10	µg/L	1	05/13/15 16:14	
Ethylbenzene		ND	0.50	0.10	µg/L	1	05/13/15 16:14	
(vienes (total)		0.41 J	1.00	0.30	µg/L	1	05/13/15 16:14	
Styrene		ND	0.50	0.10	µg/L	1	05/13/15 16:14	
Bromoform		ND	1.00	0.33	µg/L	1	05/13/15 16:14	
sopropylbenze	ne	1.19	0.50	0.10	µg/L	1	05/13/15 16:14	
1,2,2-Tetrach		ND	0.50	0.10	μ g/L	1	05/13/15 16:14	
,3-Dichlorobei		0.14 J	0.50	0.10	μg/L	1	05/13/15 16:14	
,4-Dichlorobei	nzene	0.80	0,50	0.16	µg/L	1	05/13/15 16:14	
,2-Dichlorober		0.49 J	0.50	0.10	µg/L	1	05/13/15 16:14	
,2-Dibromo-3-	chloropropane	ND	5.00	1.00	µg/L	1	05/13/15 16:14	
,2,4-Trichlorol		ND	1.00	0.10	µg/L	1	05/13/15 16:14	
	hloroethane-d4	92	75-130	0.16	%REC	1	05/13/15 16:14	
	- d0 .	102	75-125	0.10	%REC	1	05/13/15 16:14	
Surr: Toluen	e-ao 10fluorobenzene	102	10-120	0.10	70ILEO	1	00/10/10/10.14	

Qualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
-	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	8	Spike Recovery outside accepted recovery limits

	ast Syracuse, NY 13	<u> </u>	445-1900	StateCertNo: 10248				
CLIENT	O'Brien & Gere Oper			Lab ID:		(1505039-		
· · · · · · · · · · · · · · · · · · ·		nnual Well Sampling		Client Sample ID: OD-3 5/4/15				
W Order:	K1505039			Collection Date: 05/04/15 14:45				
Matrix: WATER Inst. ID: MSN_76		Sample Size 10 mL		Date Received: 05/05/15 16:15			:15	
				PrepDate:	_			
ColumnID:		%Moisture:		BatchNo:		28389	100 5	
Revision: Col Type:	05/19/15 15:54	TestCode:	8260W_OLM42	FileD:	1-	SAMP-n2	/08.D	
Analyte		Basult O		NEDY	TTm 24.0	1017	Doto Analama	
		Result Q	uai PQL	MDL	Units	DF	Date Analyze	
Dichlorodifluor			· •• ·	• • •		BOC/5030C		
Chloromethan		ND	1.00	0.10	µg/L	1	05/13/15 19:08	
/invi chloride	,	ND	1.00	0.33	μg/L	1	05/13/15 19:08	
Bromomethane		ND ND	1.00	0.33 0.33	µg/L	1 1	05/13/15 19:08	
Chloroethane	2	ND	1.00 1.00	0.33	μg/L μg/L	1	05/13/15 19:08 05/13/15 19:08	
richlorofluoro	methane	ND	1.00	0.33	μg/L	1	05/13/15 19:08	
,1-Dichloroeth		ND	0.50	0.16	μg/L	1	05/13/15 19:08	
	-1,2,2-trifluoroethane	ND	0.50	0.10	µg/L	י 1	05/13/15 19:08	
cetone	, , , .	ND	10.0	1.00	μg/L	1	05/13/15 19:08	
arbon disulfid	le	ND	0.50	0.11	μg/L	1	05/13/15 19:08	
lethyl acetate		ND	5.00	1.00	µg/L	1	05/13/15 19:08	
lethylene chlo	ride	ND	2.00	0.16	μg/L	1	05/13/15 19:08	
ans-1,2-Dichl	oroethene	ND	0.50	0.10	μ g /L	1	05/13/15 19:08	
lethyi tert-butyi ether		ND	1.00	0.16	µg/L	1	05/13/15 19:08	
,1-Dichloroethene		ND	0.50	0.10	μg/L	1	05/13/15 19:08	
is-1,2-Dichlor	oethene	ND	0.50	0.10	µg/L	1	05/13/15 19:08	
-Butanone		ND	10.0	1.00	µg/L	1	05/13/15 19:08	
hloroform		ND	0.50	0.10	µg/L	1	05/13/15 19:08	
1,1-Trichloro	ethane	ND	0.50	0.10	μg/L	1	05/13/15 19:08	
yclohexane		ND	0.50	0.10	µg/L	1	05/13/15 19:08	
arbon tetrach	loride	ND	0.50	0.10	µg/L	1	05/13/15 19:08	
enzene O Diskissor ()		ND	0.50	0.10	µg/L	1	05/13/15 19:08	
2-Dichloroeth		ND	0,50	0.16	µg/L	1	05/13/15 19:08	
richloroethene		ND	0.50	0.10	µg/L	1	05/13/15 19:08	
ethylcycionex 2-Dichloropro		ND ND	0.50	0.10 0.16	µg/L uai/l	1 1	05/13/15 19:08 05/13/15 19:08	
romodichloro	•		0.50 0.50	0.10	µg/L ug/l	1	05/13/15 19:08	
s-1,3-Dichlor		ND ND	0.50	0.10	µg/L	1	05/13/15 19:08	
Methyl-2-pen	• •	ND	5.00	1.00	µg/L µg/L	1	05/13/15 19:08	
oluene		ND	0.50	0.10	μg/L	1	05/13/15 19:08	
ans-1,3-Dichi	oropropene	ND	0.50	0.16	μg/L	1	05/13/15 19:08	
1,2-Trichloro	• • •	ND	0.50	0.16	µg/L	1	05/13/15 19:08	
etrachloroeth		ND	0.50	0.10	μg/L	1	05/13/15 19:08	
Hexanone		ND	5.00	1.00	μg/L	1	05/13/15 19:08	
ibromochloro	methane	ND	0.50	0.10	μg/L	1	05/13/15 19:08	
Qualifiers:	* Value may exceed th	e Acceptable Level		B Analyte de	etected in the	associated Me	thod Blank	
2		trument calibration rat	ige	-		iration or anal		
	J Analyte detected belo		150	-			ation Limit (PQL)	
	P Prim./Conf. column	%D or RPD exceeds lin	nit	S Spike Rec	overy outside	accepted reco	overy limits	

Print Date: 05/19/15 15:56

MAN

712475 Project Supervisor: Anthony Crescenzi

.

E	ast Syracuse, NY 13	505 7 (315)	445-1900	StateCertNo: 10248				
CLIENT Project:	O'Brien & Gere Ope PAS Oswego-Semi-A		pling	Lab ID: K1505039-004A Client Sample ID: <i>OD-3 5/4/15</i>				
W Order: Matrix: Inst. ID: ColumnID: Revision: Col Type:	K1505039 WATER MSN_76 Rtx-VMS 05/19/15 15:54	Sample Size %Moisture: TestCode:	10 mL 8260W_OLM42	Collection Da Date Receive PrepDate: BatchNo: FileID:	d: 0 R	5/04/15 14: 5/05/15 16: 28389 -SAMP-n27	15	
Analyte		Result Q	ual PQL	MDL	Units	DF	Date Analyze	
VOLATILE (DRGANIC COMPOUN	IDS BY GC/MS			SW82	60C/5030C		
1,2-Dibromoeti	nane	ND	0.50	0.16	µg/L	t	05/13/15 19:08	
Chlorobenzene	•	ND	0.50	0.10	µg/L	1	05/13/15 19:08	
Ethylbenzene		ND	0.50	0.10	µg/L	1	05/13/15 19:08	
Kylenes (total)		ND	1.00	0.30	μg/L	1	05/13/15 19:08	
Styrene		ND	0.50	0.10	µg/L	1	05/13/15 19:08	
Bromoform		ND	1.00	0.33	µg/L	1	05/13/15 19:08	
sopropylbenze		ND	0.50	0.10	μg/L	1	05/13/15 19:08	
,1,2,2-Tetrach		ND	0.50	0.10	μg/L	1	05/13/15 19:08	
,3-Dichlorober		ND	0.50	0.10	µg/L	1	05/13/15 19:08	
,4-Dichlorobei		ND	0.50	0.16	µg/L	1	05/13/15 19:08	
,2-Dichlorober		ND	0.50	0.10	µg/L	1	05/13/15 19:08	
	chloropropane	ND	5.00	1.00	µg/L	1	05/13/15 19:08	
2,4-Trichlorol		ND	1.00	0.10	µg/L	1	05/13/15 19:08	
	hloroethane-d4	95	75-130	0.16	%REC	1	05/13/15 19:08	
Sur: Toluen	e-d8	102	75-125	0.10	%REC	1	05/13/15 19:08	
· · ·	ofluorobenzene	102	75-125	0.10				

Qualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
-	Ē	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

East Syracuse, NY 13057 (315) 445-1900						eCertNo;			
CLIENT	O'Brien & Gere Oper	ations, LLC		Lab ID: K1505039-005A					
Project:	PAS Oswego-Semi-A	nnual Well Sam	pling	Client Sample ID: X-1 5/4/15					
W Order:	K1505039		· · ·		Collection Date: 05/04/15 0:00				
Matrix: WATER					Date Received: 05/05/15 16:15				
Inst. ID:	MSN_76	Sample Size	10 mL	PrepDate:			•		
ColumnID:		%Moisture:		BatchNo:		8389			
Revision:	05/19/15 15:54	TestCode:	8260W_OLM42	FileID:	1-8	SAMP-n27	709.D		
Col Type:									
Analyte		Result Q	ual PQL	MDL	Units	DF	Date Analyzed		
	RGANIC COMPOUN	DS BY GC/MS			SW826	0C/5030C			
ichlorodifluoro		ND	1.00	0.10	µg/L	1	05/13/15 19:43		
hloromethane	ł	ND	1.00	0.33	µg/L	1	05/13/15 19:43		
/inyl chloride		ND	1.00	0.33	μg/L	1	05/13/15 19:43		
romomethane	I.	ND	1.00	0.33	µg/L	1	05/13/15 19:43		
hloroethane		2.04	1.00	0.33	µg/L	1	05/13/15 19:43		
richlorofluoror		ND	1.00	0.10	µg/L	1	05/13/15 19:43		
1-Dichloroeth		ND	0.50	0.16	µg/L	1	05/13/15 19:43		
	1,2,2-trifluoroethane	ND	0.50	0.10	µg/L	1	05/13/15 19:43		
cetone arbon disulfid	-	ND	10.0	1.00	µg/L	1	05/13/15 19:43		
	e	ND	0.50	0.11	µg/L	1	05/13/15 19:43		
ethyl acetate ethylene chlor	fide	ND	5.00	1.00	µg/L.	1	05/13/15 19:43		
ans-1,2-Dichl		ND	2.00	0.16	µg/L	1 1	05/13/15 19:43		
ethyl tert-buty			0.50 1.00	0.10 0.16	μg/L μg/L	1	05/13/15 19:43 05/13/15 19:43		
1-Dichloroeth	ana [.]		0.50	0.10	μg/L	1	05/13/15 19:43		
s-1,2-Dichlord		A ND	0.50	0.10	μg/L	1	05/13/15 19:43		
-Butanone		ND	10.0	1.00	μg/L	1	05/13/15 19:43		
hloroform	. }	у _{ND}	0.50	0.10	μg/L	1	05/13/15 19:43		
1,1-Trichloroe	ethane (W	5 ND	0.50	0.10	µg/L	1	05/13/15 19:43		
vclohexane		1.75	0.50	0.10	μg/L	1	05/13/15 19:43		
arbon tetrachi	oride	T ND	0.50	0.10	μg/L	1	05/13/15 19:43		
enzene	00 45	0.18 J	0.50	0.10	µg/L	1	05/13/15 19:43		
2-Dichloroeth	ane 🚺 🚺	ND	0.50	0.16	µg/L	1	05/13/15 19:43		
richloroethene		ND	0.50	0.10	µg/L	1	05/13/15 19:43		
ethylcyclohex	ane	0.26 J-	- 0.50	0.10	μg/L	1	05/13/15 19:43		
2-Dichloropro	pane	ND	0.50	0.16	µg/L	1	05/13/15 19:43		
romodichloror		ND	0.50	0.10	µg/L	1	05/13/15 19:43		
s-1,3-Dichloro	propene	ND	0.50	0.16	µg/L	1	05/13/15 19:43		
Methyl-2-pen	tanone	ND	5.00	1.00	µg/L	1	05/13/15 19:43		
oluene		0.23 J	0.50	0.10	µg/L	1	05/13/15 19:43		
ins-1,3-Dichl	propropene	ND	0.50	0.16	µg/L	1	05/13/15 19:43		
1,2-Trichloroe	ethane	ND	0.50	0.16	µg/L	1	05/13/15 19:43		
trachloroethe	ene	ND	0.50	0.10	µg/L	1	05/13/15 19:43		
Hexanone		ND	5.00	1.00	µg/L	1	05/13/15 19:43		
ibromochioror	nethane	ND	0.50	0.10	µg/L	1	05/13/15 19:43		
Qualifiers:	* Value may exceed the	Acceptable Level		B Analyte de	tected in the a	ssociated Me	thod Blank		
-	E Value exceeds the inst	rument calibration ra	nge		mes for prepar				
	J Analyte detected belo	w the POL		ND Not Detec	ed at the Prac	tical Ouantita	ation Limit (POL)		

Project Supervisor: Anthony Crescenzi

CLIENT Project: W Order: Matrix: Inst. ID:	ast Syracuse, NY 1 O'Brien & Gere Op PAS Oswego-Semi- K1505039 WATER MSN 76	erations, LLC	-	Lab ID: K1505039-005A Client Sample ID: X-1 5/4/15 Collection Date: 05/04/15 0:00 Date Received: 05/05/15 16:15 PrepDate: Collection Date:				
ColumnID: Revision: Col Type:	Rtx-VMS 05/19/15 15:54	%Moisture:	8260W_OLM42	BatchNo:		8389 SAMP-n27	709.D	
Analyte		Result Qı	al PQL	MDL	Units	DF.	Date Analyze	
	RGANIC COMPOU	NDS BY GC/MS			SW826	0C/5030C		
1,2-Dibromoeth	ane	ND	0.50	0,16	µg/L	1	05/13/15 19:43	
Chlorobenzene		5.55	0.50	0.10	μg/L	1	05/13/15 19:43	
Ethylbenzene		ND	0.50	0.10	µg/L	1	05/13/15 19:43	
(ylenes (total)		ND	1.00	0.30	µg/L	1	05/13/15 19:43	
Styrene		ND	0.50	0.10	µg/L	1	05/13/15 19:43	
Bromoform		ND	1.00	0.33	µg/L	1	05/13/15 19:43	
sopropylbenzei		0.81	0.50	0.10	µg/L	1	05/13/15 19:43	
,1,2,2-Tetrach		ND	0.50	0.10	μg/L	1	05/13/15 19:43	
,3-Dichloroben		ND	0.50	0.10	μg/L	1	05/13/15 19:43	
,4-Dichloroben		0,504 -0.337	0.50	0.16	µg/L	1	05/13/15 19:43	
,2-Dichloroben		0.57	0.50	0.10	µg/L	1	05/13/15 19:43	
,2-Dibromo-3-(ND	5.00	1.00	µg/L	1	05/13/15 19:43	
,2,4-Trichlorob		ND	1.00	0.10	µg/L	1	05/13/15 19:43	
	nloroethane-d4	. 98	75-130	0.16	%REC	1	05/13/15 19:43	
Surr: Toluene		101	75-125	0.10	%REC	1	05/13/15 19:43	
Surr: 4-Brom	ofluorobenzene	101	75-125 Λ	0.10	%REC	1	05/13/15 19:43	
		45. New Sol 1512015	d					
		NS. Vto 5						

Qualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
	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)
	P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

East Syracuse, NY 130	57 (315)	445-1900	StateCertNo: 10248				
CLIENT O'Brien & Gere Opera		· · ·	Lab ID: K1505039-006A				
Project: PAS Oswego-Semi-An	nual Well Samp	oling	Client Sam	ple ID: L	R-6 5/5/1	5	
W Order: K1505039			Collection I		/05/15 8;25		
Matrix: WATER	a		Date Receiv	ed: 05	/05/15 16:1	15	
Inst. ID: MSN_76	Sample Size	10 mL	PrepDate:				
ColumnID: Rtx-VMS Revision: 05/19/15 15:54	%Moisture:	00/0337 OI) / 40	BatchNo:		8389 SAMP-n27	10.17	
Col Type:	TestCode:	8260W_OLM42	fhcl <i>D</i> ;	1-1 -	5711117-1127	10.12	
Analyte	Result Q	ual PQL	MDL	Units	DF	Date Analyzed	
VOLATILE ORGANIC COMPOUND	S BY GC/MS		SW8260C/5030C				
Dichlorodifluoromethane	ND	1.00	0.10	μg/L	1	05/13/15 20:19	
Chloromethane	ND	1.00	0.33	μg/L	1	05/13/15 20:19	
vinyi chloride	ND	1.00	0.33	μg/L	1	05/13/15 20:19	
Bromomethane	ND	1.00	0.33	µg/L	1	05/13/15 20:19	
Chloroethane	ND	1.00	0.33	µg/L	1	05/13/15 20:19	
Trichlorofluoromethane	ND	1.00	0.10	µg/L	1	05/13/15 20:19	
,1-Dichloroethene	ND	0.50	0.16	μ g/L	1	05/13/15 20:19	
,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.50	0.10	µg/L	1	05/13/15 20:19	
cetone	10.0 4 -1.60 J	10.0	1.00	μg/L	1	05/13/15 20:19	
arbon disulfide lethyl acetate lethylene chloride ans-1,2-Dichloroethene lethyl tert-butyl ether ,1-Dichloroethane is-1,2-Dichloroethene -Butanone thloroform	AND ND	0.50	0.11	μg/L	1	05/13/15 20:19	
Aethyl acetate	A WND	5.00	1.00	μg/L	1	05/13/15 20:19	
flethylene chloride rans-1,2-Dichloroethene		2.00	0.16	µg/L	1	05/13/15 20:19	
Althyl tert-butyl ether	A ND	0.50 1.00	0.10 0.16	µg/L	1 1	05/13/15 20:19 05/13/15 20:19	
,1-Dichloroethane		0.50	0.10	μg/L μg/L	1	05/13/15 20:19	
is-1,2-Dichloroethene	ND ND	0.50	0.10	μg/L	1	05/13/15 20:19	
-Butanone		10.0	1.00	µg/L	1	05/13/15 20:19	
Chloroform	ND	0.50	0.10	μg/L	1	05/13/15 20:19	
,1,1-Trichioroethane	ND	0.50	0.10	μg/L	1	05/13/15 20:19	
Cyclohexane	ND	0.50	0.10	μg/L	1	05/13/15 20:19	
arbon tetrachloride	ND	0.50	0.10	μg/L	1	05/13/15 20:19	
enzene	ND	0.50	0.10	µg/L	1	05/13/15 20:19	
,2-Dichloroethane	ND	0.50	0.16	μg/L	1	05/13/15 20:19	
richloroethene	0.13 J	0.50	0.10	µg/L	1	05/13/15 20:19	
<i>lethylcyclohexane</i>	ND	0.50	0.10	µg/L	1	05/13/15 20:19	
,2-Dichloropropane	ND	0.50	0.16	μg/L	1	05/13/15 20:19	
romodichloromethane	ND	0.50	0.10	µg/L	1	05/13/15 20:19	
is-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1.	05/13/15 20:19	
-Methyl-2-pentanone	ND	5.00	1.00	µg/L	1	05/13/15 20:19	
oluene	ND	0.50	0.10	µg/L	1	05/13/15 20:19	
ans-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	05/13/15 20:19	
1,2-Trichloroethane	ND	0.50	0.16	µg/L	1	05/13/15 20:19	
etrachloroethene	ND	0.50	0.10	µg/L	1	05/13/15 20:19	
-Hexarione	ND	5.00	1.00	µg/L	1	05/13/15 20:19	
libromochloromethane	ND	0.50	0.10	µg/L	1	05/13/15.20:19	
Qualifiers: * Value may exceed the A	-				ssociated Met		
E Value exceeds the instru		ige			ation or analy		
J Analyte detected below P Prim./Conf. column %I	•			ted at the Prac		ion Limit (PQL)	

E	ast Syracuse, NY 1	3057 (315)	445-1900	·····	Sta	teCertNo:	10248
CLIENT Project:	O'Brien & Gere Op PAS Oswego-Semi-		nlina	Lab ID: Client Sample		(1505039-	
W Order: K1505039 Matrix: WATER Inst. ID: MSN_76 ColumnID: Rtx-VMS Revision: 05/19/15 15:54 Col Type:		Sample Size 10 mL %Moisture: TestCode: 8260W_OLM42		Collection Date Date Received: PrepDate: BatchNo:	llection Date: 05/05/15 8:25 te Received: 05/05/15 16:15 epDate: 1000000000000000000000000000000000000		
Analyte		Result Q	ual PQL	MDL	Units	DF	Date Analyze
VOLATILE	ORGANIC COMPOU	NDS BY GC/MS			SW82	60C/5030C	
1,2-Dibromoeti	hane	ND	0.50	0.16	µg/L	1	05/13/15 20:19
Chlorobenzene)	ND	0.50	0.10	µg/L	1 .	05/13/15 20:19
Ethylbenzene		ND	0.50	0.10	µg/L	1	05/13/15 20:19
(ylenes (total)		ND	1.00	0.30	µg/L	1	05/13/15 20:19
Styrene		ND	0.50	0.10	u g/L	1	05/13/15 20:19
Bromoform		ND	1.00	0.33	µg/L	1	05/13/15 20:19
sopropylbenze		ND	0.50	0.10	ug/L	1	05/13/15 20:19
,1,2,2-Tetrach		ND	0.50	0.10	ug/L	1	05/13/15 20:19
,3-Dichlorober		ND	0.50	0.10	ug/L	1	05/13/15 20:19
,4-Dichlorober		ND	0.50	0.16	ug/L	1	05/13/15 20:19
,2-Dichlorober		ND	0.50	0.10	ıg/L	1	05/13/15 20:19
	chloropropane	ND	5.00	1.00	ıg/L	1	05/13/15 20:19
,2,4-Trichlorol		ND	1.00	0.10	ıg/L	1	05/13/15 20:19
	chloroethane-d4	99	75-130	0.16	%REC	1	05/13/15 20:19
Surr: Toluen		101	75-125	0.10	%REC	1	05/13/15 20:19
	ofluorobenzene	101	75-125	0.10	%REC	1	05/13/15 20:19

Qualifiers:	*	Value may exceed the Acceptable Level	В	Analyte detected in the associated Method Blank
	E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	1	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 130		45-1900			eCertNo:	
CLIENT O'Brien & Gere Opera Project: PAS Oswego-Semi-An		ina	Lab ID: Client Sam		1505039-0	
W Order: K1505039	ndai wen bamp	ung	Client Sample ID: M-22 5/5/15 Collection Date: 05/05/15 9:45			
Matrix: WATER	•		Date Receiv		/05/15 9;4: /05/15 16:	
Inst. ID: MSN_76	Sample Size	0 mī	PrepDate:	veu: US	03/13 10.	13 -
ColumnID: Rtx-VMS	%Moisture:	.0 mL	BatchNo:	R2	8389	
Revision: 05/19/15 15:54		260W_OLM42			AMP-n27	11.D
Col Type:		_				
Analyte	Result Qu	al PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND	S BY GC/MS			SW826	DC/5030C	
Dichlorodifluoromethane	ND	1.00	0.10	µg/L	1.	05/13/15 20:55
Chloromethane	ND	1.00	0.33	μg/L	1	05/13/15 20:55
Vinyl chloride	ND	1.00	0.33	µg/L	1	05/13/15 20:55
Bromomethane	ND	1.00	0.33	µg/L	1	05/13/15 20:55
Chloroethane	ND	1.00	0.33	µg/L	1	05/13/15 20:55
Frichlorofluoromethane	ND	1.00	0.10	µg/L	1	05/13/15 20:55
,1-Dichloroethene	ND	0.50	0.16	µg/L	1	05/13/15 20:55
,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.50	0.10	µg/L	1	05/13/15 20:55
cetone //	0.04 -1.16J	10.0	1.00	µg/L	1	05/13/15 20:55
arbon disulfide 1ethyl acetate		0.50	0.11	µg/L	1	05/13/15 20:55
arbon disulfide fethyl acetate fethylene chloride ans-1,2-Dichloroethene fethyl tert-butyl ether n-Dichloroethane is-1,2-Dichloroethene Butanone hloroform 1,1-Trichloroethane	A CI ND	5.00	1.00	µg/L	1	05/13/15 20:55
ans-1,2-Dichloroethene		2.00	0.16	µg/L	1	05/13/15 20:55
lethyl tert-butyl ether	ND ND	0.50 1.00	0.10 0.16	µg/L	1	05/13/15 20:55
,1-Dichloroethane	0121	0.50	0.10	µg/L	1	05/13/15 20:55 05/13/15 20:55
is-1,2-Dichloroethene	ND 0.123	0.50	0.10	µg/L µg/L	1	05/13/15 20:55
-Butanone		10.0	1.00	µg/L	1	05/13/15 20:55
hloroform	ND	0.50	0.10	µg/L	1	05/13/15 20:55
1,1-Trichloroethane	ND	0.50	0.10	μg/L	1	05/13/15 20:55
yclohexane	ND	0.50	0.10	μg/L	1	05/13/15 20:55
arbon tetrachloride	ND	0.50	0.10	µg/L	1	05/13/15 20:55
enzene	ND	0.50	0.10	µg/L	1	05/13/15 20:55
,2-Dichloroethane	ND	0.50	0.16	µg/L	1	05/13/15 20:55
richloroethene	ND	0.50	0.10	µg/L	1	05/13/15 20:55
lethylcyclohexane	ND	0.50	0.10	µg/L	1	05/13/15 20:55
2-Dichloropropane	ND	0.50	0.16	µg/L	1	05/13/15 20:55
romodichloromethane	NĎ	0.50	0.10	µg/L	1	05/13/15 20:55
is-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	05/13/15 20:55
-Methyl-2-pentanone	ND	5.00	1.00	µg/L	1	05/13/15 20:55
oluene	ND	0.50	0.10	µg/L	1	05/13/15 20:55
ans-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1	05/13/15 20:55
1,2-Trichloroethane	ND	0.50	0.16	µg/L	1	05/13/15 20:55
etrachloroethene	ND	0.50	0.10	µg/L	1	05/13/15 20:55
	ND	5.00	1.00	µg/L	1	05/13/15 20:55
ibromochloromethane	ND	0.50	0.10	µg/L	1	05/13/15 20:55
Qualifiers: * Value may exceed the A E Value exceeds the instri		-		tected in the as		
I Analyte detected below	· · · ·	8	-	nes for prepara	-	ion Limit (PQL)
J Pasaryle detected below	uto rQL		ND Not Detect	ee at the Pract	icai Quantilat	ion Lunit (PQL)

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E	ast Syracuse, NY 1	3057 (315)	445-1900		S	tateCertNo:	10248
CLIENT Project:	O'Brien & Gere Ope PAS Oswego-Semi-	erations, LLC Annual Well Sam	pling	Lab ID: Client Sample		K1505039-	
W Order: Matrix: Inst. ID: ColumnID: Revision: Col Type:	K1505039 WATER MSN_76 Rtx-VMS 05/19/15 15:54	Sample Size %Moisture: TestCode:	10 mL 8260W_OLM42	Collection Da Date Received PrepDate: BatchNo:	te: 1:	05/05/15 9:4 05/05/15 16: R28389 1-SAMP-n27	5 15
Analyte		Result Q	ual PQL	MDL	Unit	s DF	Date Analyze
	RGANIC COMPOU	NDS BY GC/MS			SW8	260C/5030C	
1,2-Dibromoeth		ND	0.50	0.16	µġ/L	⁺ 1	05/13/15 20:55
Chlorobenzene		ND	0.50	0.10	µg/L	1	05/13/15 20:55
Ethylbenzene		ND	0.50	0.10	µg/L	1	05/13/15 20:55
Kylenes (total)		ND	1.00	0.30	µg/L	1	05/13/15 20:55
Styrene		ND	0.50	0.10	µg/L	1	05/13/15 20:55
Bromoform		ND	1.00	0.33	µg/L	1	05/13/15 20:55
sopropylbenzei		ND	0.50	0.10	µg/L	1	05/13/15 20:55
1,2,2-Tetrach		ND	0.50	0.10	µg/L	1	05/13/15 20:55
,3-Dichlorober		ND	0.50	0.10	µg/L	1	05/13/15 20:55
,4-Dichlorober		ND	0.50	0.16	µg/L	1	05/13/15 20:55
,2-Dichloroben		ND	0.50	0.10	µg/L	1	05/13/15 20:55
,2-Dibromo-3-(,2,4-Trichlorob		ND	5.00	1.00	µg/L	1	05/13/15 20:55
		ND	1.00		μg/L	1	05/13/15 20:55
Sur: 1,2-Dici	hloroethane-d4	99	75-130	0.16	%REC	-	05/13/15 20:55
		102	75-125	0.10	%REC		05/13/15 20:55
Surr: 4-Brom	ofiuorobenzene	103	75-125	0.10	%REC	; 1	05/13/15 20

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

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East Syracuse, NY 130		445-1900	StateCertNo: 10248					
CLIENT O'Brien & Gere Opera Project: PAS Oswego-Semi-An			Lab ID: K1505039-008A Client Sample ID: LCW-2 5/5/15					
	muai wen sam	pung						
W Order: K1505039			Collection		/05/15 11:			
Matrix: WATER					/05/15 16:	15		
Inst. ID: MSN_76 ColumnID: Rtx-VMS				PrepDate:				
Revision: 05/19/15 15:54			BatchNo:		8389			
Col Type:	TestCode:	8260W_OLM42	FileID:	1-8	SAMP-n27	U4.D		
Analyte	Result Q	ual PQL	MDL	Units	DF	Date Analyze		
VOLATILE ORGANIC COMPOUND	S BY GC/MS			SW826	0C/5030C			
Dichlorodifluoromethane	ND	20.0	2.00	µg/L	20	05/13/15 16:50		
Chloromethane	ND	20.0	6.60	µg/L	20	05/13/15 16:50		
Vinyl chloride	36.8	20.0	6.60	μg/L	20	05/13/15 16:50		
Bromomethane	ND	20.0	6.60	µg/L	20	05/13/15 16:50		
Chloroethane	18.2 J	20.0	6.60	· μg/L	20	05/13/15 16:50		
Frichlorofluoromethane	ND	20.0	2.00	μg/L	20	05/13/15 16:50		
,1-Dichloroethene	ND	10.0	3.20	µg/L	20	05/13/15 16:50		
,1,2-Trichloro-1,2,2-trifluoroethane	ND	10.0	2.00	µg/L	20	05/13/15 16:50		
Acetone	ND	200	20.0	µg/L	20	05/13/15 16:50		
Carbon disulfide	ND	10.0	2.20	µg/L	20	05/13/15 16:50		
fethyl acetate	ND	100	20.0	µg/L	20	05/13/15 16:50		
	0,0 (1 -11.8 J	40.0	3.20	µg/L	20	05/13/15 16:50		
rans-1,2-Dichloroethene	ND	10.0	2.00	µg/L	20	05/13/15 16:50		
lethyl tert-butyl ether	, ND	20.0	3.20	µg/L	20	05/13/15 16:50		
,1-Dichloroethane	13.4	10.0	2.00	µg/L	20	05/13/15 16:50		
is-1,2-Dichloroethene	14.8	10.0	2.00	µg/L	20	05/13/15 16:50		
Butanone	∭° ND	200	20.0	µg/L	20	05/13/15 16:50		
,1-Dichloroethane eis-1,2-Dichloroethane P-Butanone Chloroform ,1,1-Trichloroethane Cyclohexane Carbon tetrachloride	K ND	10.0	2.00	µg/L	20	05/13/15 16:50		
,1,1-Trichloroethane	0 ¹ 6.00 J	10.0	2.00	µg/L	20	05/13/15 16:50		
vclohexane V6 45	ND	10.0	2.00	μg/L	20	05/13/15 16:50		
Carbon tetrachloride 0	ND	10.0	2.00	µg/L	20	05/13/15 16:50		
lenzene	378	10.0	2.00	µg/L	20	05/13/15 16:50		
,2-Dichloroethane	ND	10.0	3.20	µg/L	20	05/13/15 16:50		
richloroethene	4.60 J	10.0	2.00	µg/L	20	05/13/15 16:50		
tethylcyclohexane	ND	10.0	2.00	μg/L	20	05/13/15 16:50		
,2-Dichloropropane	ND	10.0	3.20	µg/L	20	05/13/15 16:50		
romodichloromethane	ND	10.0	2.00	µg/L	20	05/13/15 16:50		
is-1,3-Dichloropropene	ND	10.0	3.20	µg/L	20	05/13/15 16:50		
Methyl-2-pentanone	ND	100	20.0	μg/L	20	05/13/15 16:50		
oluene	ND	10.0	2.00	µg/L	20	05/13/15 16:50		
ans-1,3-Dichloropropene	ND	10.0	3.20	µg/L	20	05/13/15 16:50		
,1,2-Trichloroethane	ND	10.0	3.20	µg/L	20	05/13/15 16:50		
etrachloroethene	6.80 J	10.0	2.00	µg/L	20	05/13/15 16:50		
-Hexanone	ND	100	20.0	µg/L	20	05/13/15 16:50		
Ibromochloromethane	ND	10.0	2.00	µg/L	20	05/13/15 16:50		
Qualifiers: * Value may exceed the A	-		B Analyte d	etected in the as	sociated Meth	iod Blank		
E Value exceeds the instru		ige	H Holding ti	imes for prepara	tion or analys	sis exceeded		
J Analyte detected below	the POL		ND Not Detec	ted at the Practi	cal Onantitat	ion Limit (PQL)		

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B	ast Syracuse, NY 13	057 (315)	445-1900		Sta	teCertNo:	10248		
CLIENT Project:	O'Brien & Gere Oper PAS Oswego-Semi-A					K1505039-008A nple ID: <i>LCW-2 5/5/15</i>			
W Order: Matrix: Inst. ID: ColumnID: Revision: Col Type:	K1505039 WATER MSN_76 Rtx-VMS 05/19/15 15:54	Sample Size %Moisture: TestCode:	10 mL 8260W_OLM42	Collection Da Date Receive PrepDate: BatchNo: FileID:	d: 0 R	5/05/15 11 5/05/15 16 28389 SAMP-n2'	15		
Analyte		Result Q	ual PQL	MDL	Units	DF	Date Analyzed		
	DRGANIC COMPOUN	DS BY GC/MS			SW82	BOC/5030C			
1,2-Dibromoeti		ND	10.0	3.20	µg/L	20	05/13/15 16:50		
Chlorobenzene	1	84.8	10.0	2.00	µg/L	20	05/13/15 16:50		
Ethylbenzene		21.0	10.0	2.00	µg/L	20	05/13/15 16:50		
Kylenes (total)		10.6 J	20.0	6.00	µg/L	20	05/13/15 16:50		
Styrene		ND	10.0	2.00	µg/L	20	05/13/15 16:50		
Bromoform		ND	20.0	6.60	µg/L	20	05/13/15 16:50		
sopropylbenze		6.00 J		2.00	µg/L	20	05/13/15 16:50		
,1,2,2-Tetrach		ND	10.0	2.00	µg/L	20	05/13/15 16:50		
,3-Dichlorober		ND	10.0	2.00	µg/L	20	05/13/15 16:50		
,4-Dichlorober		ND	10.0	3.20	µg/L	20	05/13/15 16:50		
,2-Dichlorober		7.20 J	10.0	2.00	µg/L	20	05/13/15 16:50		
,2-Dibromo-3-4 ,2,4-Trichlorob		ND	100	20.0	µg/L	20	05/13/15 16:50		
		ND	20.0	2.00	µg/L	20	05/13/15 16:50		
Surr: 1,2-Dic	hloroethane-d4	94	75-130	3.20	%REC	20	05/13/15 16:50		
	ofiuorobenzene	103	75-125	2.00	%REC	20	05/13/15 16:50		
- 000 - H-DIOM	ondorobenzene	103	75-125	2.00	%REC	20	05/13/15 16:50		

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

LIENT O'Brien & Gere Opera			StateCertNo: 10248					
Project: PAS Oswego-Semi-A			Lab ID: K1505039-009A Client Sample ID: LCW-4 5/5/15					
W Order: K1505039	unuar wen sampu	IIIB						
Aatrix: WATER			Collection Date: 05/05/15 12:05					
nst. ID: MSN_76	Sample Size 1	` T	Date Recei PrepDate:					
ColumnID: Rtx-VMS	Sample Size 10 %Moisture:		BatchNo:	R	R28389			
Revision: 05/19/15 15:54		260W_OLM42			SAMP-n2	705.D		
col Type:					· · · · ·	· · · · · ·		
nalyte	Result Qua	d PQL.	MDL	Units	DF	Date Analyzed		
OLATILE ORGANIC COMPOUNI	DS BY GC/MS			SW826	OC/50300			
ichlorodifluoromethane	ND	20.0	2.00	µg/L	20	05/13/15 17:24		
hloromethane	ND	20.0	6,60	µg/L	20	05/13/15 17:24		
inyl chloride	21.2	20.0	6.60	µg/L	20	05/13/15 17:24		
romomethane	ND	20.0	6.60	µg/L	20	05/13/15 17:24		
hloroethane	73.6	20.0	6.60	µg/L	20	05/13/15 17:24		
richlorofluoromethane	ND	20.0	2.00	µg/L	20	05/13/15 17:24		
1-Dichloroethene	ND	10.0	3.20	µg/L	20	05/13/15 17:24		
1,2-Trichloro-1,2,2-trifluoroethane cetone	ND	10.0	2.00	µg/L	20	05/13/15 17:24		
arbon disulfide	ND	200	20.0	µg/L	20	05/13/15 17:24		
ethyl acetate	ND	10.0	2.20	µg/L	20	05/13/15 17:24		
	ND .04 .122 ј	100	20.0	μg/L	20	05/13/15 17:24		
ins-1,2-Dichloroethene	ND	40.0 10.0	3.20 2.00	µg/L	20	05/13/15 17:24		
nthut fort husha at an		20.0	3.20	μg/L μg/L	20 20	05/13/15 17:24 05/13/15 17:24		
1-Dichloroethane	L 00.8 M	10.0	2.00	μg/L	20	05/13/15 17:24		
-1,2-Dichloroethene	10 26.0	10.0	2.00	μg/L	20	05/13/15 17:24		
Butanone	ND ND	200	20.0	μg/L	20	05/13/15 17:24		
iloroform <	X ND	10.0	2.00	μg/L	20	05/13/15 17:24		
1,1-Trichloroethane	ND ND	10.0	2.00	µg/L	20	05/13/15 17:24		
rclohexane	∂ 6.00 J	10.0	2.00	μg/L	20	05/13/15 17:24		
Irbon tetrachloride	ND 8.00 J 26.0 ND 5 ND 0 ¹ ND 7 6.00 J ND 414	10.0	2.00	µg/L	20	05/13/15 17:24		
nzene	414	10.0	2.00	µg/L	20	05/13/15 17:24		
2-Dichloroethane	ND	10.0	3.20	µg/L	20	05/13/15 17:24		
chloroethene	ND	10.0	2.00	µg/L	20	05/13/15 17:24		
thylcyclohexane	3.00 J+	10.0	2.00	µg/L	20	05/13/15 17:24		
2-Dichloropropane	ND	10.0	3.20	µg/L	20	05/13/15 17:24		
omodichloromethane	ND	10.0	2.00	µg/L	20	05/13/15 17:24		
-1,3-Dichloropropene Methyl-2-pentanone	ND	10.0	3.20	µg/L	20	05/13/15 17:24		
luene	ND 22.8	100	20.0	µg/L	20	05/13/15 17:24		
ns-1,3-Dichloropropene	22.8 ND	10.0	2.00	µg/L	20 20	05/13/15 17:24		
,2-Trichloroethane	ND ND	10.0 10.0	3.20 3.20	µg/L µg/l	20 20	05/13/15 17:24 05/13/15 17:24		
irachioroethene	ND	10.0	3.20 2.00	µg/L µg/L	20 20	05/13/15 17:24		
texanone	ND	100	2.00	µg/L	20	05/13/15 17:24		
promochloromethane	ND	10.0	2.00	μg/L	20	05/13/15 17:24		
ualifiers: * Value may exceed the				tected in the a				
	ument calibration range		-	mes for prepar		1		
J Analyte detected below			-			tion Limit (PQL)		

CLIENT Project: W Order: Matrix: Inst. ID;	O'Brien & Gere Oper PAS Oswego-Semi-A K1505039 WATER MSN_76	Annual Well S	ampling ize 10 mL	Collection Date Rece	Client Sample ID: LCW-4 5/5/15 Collection Date: 05/05/15 12:05 Date Received: 05/05/15 16:15 PrepDate: 05/05/15 16:15				
ColumnID: Revision: Col Type:	Rtx-VMS 05/19/15 15:54	%Moistu TestCode		BatchNo: LM42 FileID:		8389 SAMP-n27	705.D		
Analyte		Resul	t Qual PQL	MDL	Units	DF	Date Analyzed		
	DRGANIC COMPOUN	IDS BY GC/M	S		SW826	0C/5030C			
,2-Dibromoet		N	D 10.0	3.20	μg/L	20	05/13/15 17:24		
hlorobenzene	3	- 29	10.0	2.00	μg/L	20	05/13/15 17:24		
thylbenzene	•	15	10.0	2.00	μg/L	20	05/13/15 17:24		
ylenes (total)		75	7 20.0	6.00	µg/L	20	05/13/15 17:24		
tyrene		Ň	D 10.0	2.00	µg/L	20	05/13/15 17:24		
romoform		N	D 20.0	6.60	µg/L	20	05/13/15 17:24		
opropylbenze		5.0	0 J 10.0	2.00	µg/L	20	05/13/15 17:24		
1,2,2-Tetraci		N	D 10.0	2.00	µg/L	20	05/13/15 17:24		
3-Dichlorobe		N	D 10.0	2.00	µg/L	20	05/13/15 17:24		
4-Dichlorobe	nzene	10,000 -4.2	0 J 10.0	3.20	µg/L	20	05/13/15 17:24		
2-Dichlorobe		30.	6 10.0	2.00	µg/L	20	05/13/15 17:24		
2-Dibromo-3-	chloropropane	N	D 100	20.0	μg/L	20	05/13/15 17:24		
2,4-Trichloro	benzene	NI	20.0	2.00	µg/L	20	05/13/15 17:24		
Surr: 1,2-Dic	hioroethane-d4	9	3 75-130	3.20	%REC	20	05/13/15 17:24		
Surr: Toluen		10	1 75-125	2.00	%REC	20	05/13/15 17:24		
Surr: 4-Bron	iofluorobenzenę	10 بر	2 75-125	2.00	%REC	20	05/13/15 17:24		
	Polly	5. Aeur 1512015							

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

72 Project Supervisor: Anthony Crescenzi

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VOLATILE ORGANIC COMPOUNDS BY GC/MS SW8260C/5030C Dichizordiffuoromethane ND 1.00 0.10 µg/L 1 05/13/15 21: Chloromethane Chloromethane ND 1.00 0.33 µg/L 1 05/13/15 21: Chloromethane Bronomethane ND 1.00 0.33 µg/L 1 05/13/15 21: Chloroethane Chloroethane ND 1.00 0.33 µg/L 1 05/13/15 21: Chloroethane 1,1-Dichoroethane ND 0.50 0.16 µg/L 1 05/13/15 21: Chloroethane 1,12-Trichloro-1,2,2:triffuoroethane ND 0.50 0.10 µg/L 1 05/13/15 21: Chloroethane Acetone ND 0.50 0.11 µg/L 1 05/13/15 21: Chloroethane Methyl acetate ND 0.50 0.10 µg/L 1 05/13/15 21: Chloroethane Methyl acetate ND 0.50 0.10 µg/L 1 05/13/15 21: Chloroethane ND 0.50 0.10 µg/L 1		ast Syracuse, NY 13	057 (315)	445-1900		S	tateCertNo	: 10248
W Order: K 1505039 Collection Date: Qd 29/15 0:00 Matrix: WATER Q Date Received: 05/05/15 16:15 Inst. ID:: MNN 76 Sample Size 10 mL PrepDate: Revision: 05/19/15 15:34 TestCode: 8260W_OLM42 FileID: 1-SAMP-n2712.D Col Type: Analyte Result Qual PQL MDL Units DF Date Analyte Col Type: ND 1.00 0.10 µg/L 1 05/13/15 21: Analyte Result Qual PQL MDL Units DF Date Analyte Col Type: ND 1.00 0.33 µg/L 1 05/13/15 21: Chioromsthane ND 1.00 0.33 µg/L 1 05/13/15 21: Chooromsthane ND 1.00 0.33 µg/L 1 05/13/15 21: Chooromsthane ND 1.00 0.33 µg/L 1 05/13/15 21: Chooromsthane ND 0.50 0.10 µg/L 1 05/13/15 21: <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>K1505039</th> <th>-010A</th>							K1505039	-010A
Matrix: WATER Q Date Received: 05/05/15 16:15 Inst. D: MSN_76 Sample Size 10 mL PrepDate: BatchNo: R28389 ColumnDI: KV-VMS %Moisture: BatchNo: R28389 IssAMP-n2712.D Analyte Result Qual PQL MDL Units DF Date Analytic Analyte Result Qual PQL MDL Units DF Date Analytic Analyte Result Qual PQL MDL Units DF Date Analytic Analyte Result Qual PQL MDL Units DF Date Analytic Analyte Result Qual PQL MDL Units DF Date Analytic Analytic Result Qual PQL MDL Units DF Date Analytic ColumnDiff and ND 1.00 0.33 µgL 1 Osf13/15 21.2 Indication ND 1.00 0.33 µgL 1 Osf13/15 21.2 Indication ND 1.00 0.33 µgL 1	-	PAS Oswego-Semi-A	Innual Well Sam	pling	Client Sam	ple ID:	QC Trip 1	Blank 5/5/15
Matrix: WATER Q Date Received: 05/05/15 16:15 CohmmuD: REV-765 Sample Size 10 mL PrepDate: R23389 Revision: 05/19/15 15:54 TestCode: 8260W_OLM42 FileID: 1-SAMP-n2712.D Analyte Result Qual PQL MDL Units DF Date Analyte Analyte Result Qual PQL MDL Units DF Date Analyte Analyte Result Qual PQL MDL Units DF Date Analyte OLATILE ORGANIC COMPOUNDS BY GC/MS SW828007/5030C SW82807/5030C SW82807/5030C Dichlorodiffuormethane ND 1.00 0.33 µg/L 1 05/13/15 21: Informethane ND 1.00 0.33 µg/L 1 05/13/15 21: Informethane ND 1.00 0.33 µg/L 1 05/13/15 21: Informethane ND 0.50 0.16 µg/L 1 05/13/15 21: Informethane ND 0.50 0.10 µg/L 1 </th <th></th> <th></th> <th></th> <th></th> <th>Collection</th> <th>Date:</th> <th>04/29/15 0:</th> <th>00</th>					Collection	Date:	04/29/15 0:	00
ColumnD: Rix-VMS YMS YMS Revision: Rate Non- Bate Non- Status R28389 Revision: 05/19/15 15:54 TestCode: 8260W_OLM42 FileID: 1-SAMP-n2712.D Analyte Result Qual PQL MDL Units DF Date Analyte Analyte Result Qual PQL MDL Units DF Date Analyte Analyte Result Qual PQL MDL Units DF Date Analyte Analyte Result Qual PQL MDL Units DF Date Analyte Analyte Result Qual PQL MDL Units DF Date Analyte Michard Manae ND 1.00 0.33 µg/L 1 05/13/15.21.2 Michard Manae ND 1.00 0.33 µg/L 1 05/13/15.21.2 Michard Manae ND 0.50 0.16 µg/L 1 05/13/15.21.2 Michard Manae ND 0.50 0.10 µg/L 1 05/13/15.21.2 Michard Manae		-			Date Recei	ved:	05/05/15 16	:15
Revision: 05/19/15 15:54 TestCode: 8260W_OLM42 FileID: 1-SAMP-n2712.D Analyte Result Qual PQL MDL Units DF Date Analyte Analyte Result Qual PQL MDL Units DF Date Analyte Analyte Result Qual PQL MDL Units DF Date Analyte Analyte Result Qual PQL MDL Units DF Date Analyte Oldnordfluoromethane ND 1.00 0.33 µg/L 1 05/13/15 21:3 Ordnordfluoromethane ND 1.00 0.33 µg/L 1 05/13/15 21:3 Ordnordfluoromethane ND 1.00 0.33 µg/L 1 05/13/15 21:3 Othoromethane ND 0.50 0.18 µg/L 1 05/13/15 21:3 Oblower ND 0.50 0.10 µg/L 1 05/13/15 21:3 Othoromethane ND 0.50 0.10 µg/L 1 05/13/15 21:3 Othoromethane <th></th> <th></th> <th></th> <th>10 mL</th> <th>PrepDate:</th> <th></th> <th></th> <th></th>				10 mL	PrepDate:			
Col Type: Analyte Result Qual PQL MDL Units DF Date Analyte Analyte Result Qual PQL MDL Units DF Date Analyte VolATILE ORGANIC COMPOUNDS BY GC/MS SW8260C/5030C SW8260C/5030C SW8260C/5030C Ichioromethane ND 1.00 0.33 µg/L 1 05/13/15 21: informethane ND 0.50 0.18 µg/L 1 05/13/15 21: informethane ND 0.50 0.10 µg/L 1 05/13/15 21: informethane ND 0.50 0.11 µg/L 1 05/13/15 21: informethane ND 0.50 0.11 µg/L 1 05/13/15 21: informethane <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>· · ·</th>								· · ·
ODALTILE ORGANIC COMPOUNDS BY GC/MS SW8260C/5030C Jichlorodiffuoromethane ND 1.00 0.33 µg/L 1 05/13/15 21: 10/13/15 21: 11/13/15/15/15/15/15/15/15/15/15/15/15/15/15/		05/19/15 15:54	TestCode:	8260W_OLM42	FileID:		1-SAMP-n2	712.D
VOLATILE ORGANIC COMPOUNDS BY GC/MS SW8260C/5030C Dichtorodifluoromethane ND 1.00 0.33 µg/L 1 05/13/15 21: Choromethane ND 1.00 0.33 µg/L 1 05/13/15 21: Inforrethane ND 1.00 0.33 µg/L 1 05/13/15 21: Inforcethane ND 1.00 0.33 µg/L 1 05/13/15 21: Inforcethane ND 1.00 0.33 µg/L 1 05/13/15 21: Inforcethane ND 0.50 0.10 µg/L 1 05/13/15 21: Infolorontethane ND 0.50 0.10 µg/L 1 05/13/15 21: I_2-Trichotro-1_2_2-Zriffuoroethane ND 0.50 0.10 µg/L 1 05/13/15 21: I_2-Trichotro-1_2_2-Zriffuoroethane ND 0.50 0.10 µg/L 1 05/13/15 21: I_2-Trichotro-1_2_2-Zriffuoroethane ND 0.50 0.10 µg/L 1 05/13/15 21:	Analyte		Result O	ual POL	MDL	Unit	s DF	Date Analyzed
ND 1.00 0.10 µg/L 1 06/13/15 21: 3horomethane ND 1.00 0.33 µg/L 1 06/13/15 21: 305 Informethane ND 1.00 0.33 µg/L 1 05/13/15 21: 305 Inforethane ND 1.00 0.33 µg/L 1 05/13/15 21: 305 Inforethane ND 1.00 0.33 µg/L 1 05/13/15 21: 305 Inforethane ND 1.00 0.10 µg/L 1 05/13/15 21: 305 Inforethane ND 0.50 0.10 µg/L 1 05/13/15 21: 305 Inforiorethane	OLATILE C	RGANIC COMPOUN	in the second					
hbromethane ND 1.00 0.33 µg/L 1 05/13/15 21: 05/13/15 21: 05/1				1.00	0.10			
Invit chloride ND 1.00 0.33 µg/L 1 06/13/15 21:2 tromomethane ND 1.00 0.33 µg/L 1 05/13/15 21:2 tchlorofluoromethane ND 1.00 0.33 µg/L 1 05/13/15 21:2 tchlorofluoromethane ND 1.00 0.30 µg/L 1 05/13/15 21:2 1-Dichloro-1,2,2-triffuorosthane ND 0.50 0.16 µg/L 1 05/13/15 21:2 arbon disulfide ND 0.50 0.11 µg/L 1 05/13/15 21:2 ethore ND 5.00 1.00 µg/L 1 05/13/15 21:2 ethylacethate ND 5.00 1.00 µg/L 1 05/13/15 21:2 ethylacethate ND 0.50 0.16 µg/L 1 05/13/15 21:2 ethylacethate ND 1.00 0.16 µg/L 1 05/13/15 21:2 ethylacethate ND 0.50 0.10 µg/L 1 <td< td=""><td>hloromethane</td><td></td><td></td><td></td><td></td><td></td><td></td><td>05/13/15 21:29</td></td<>	hloromethane							05/13/15 21:29
normomethane ND 1.00 0.33 µg/L 1 05/13/15 21:2 hioroethane ND 1.00 0.33 µg/L 1 05/13/15 21:2 hioroethane ND 1.00 0.10 µg/L 1 05/13/15 21:2 1-Dichloroothene ND 0.50 0.16 µg/L 1 05/13/15 21:2 1-Dichloroothene ND 0.50 0.10 µg/L 1 05/13/15 21:2 1-Dichloroothene ND 0.50 0.10 µg/L 1 05/13/15 21:2 action disulfide ND 5.00 1.00 µg/L 1 05/13/15 21:2 ethyl acetate ND 5.00 0.10 µg/L 1 05/13/15 21:2 ethyl acetate ND 0.50 0.10 µg/L 1 05/13/15 21:2 ethyl acetate ND 0.50 0.10 µg/L 1 05/13/15 21:2 ethyl acetate ND 0.50 0.10 µg/L 1 05/13/15 21:2	inyl chloride							05/13/15 21:29
Intervention ND 1.00 0.33 µg/L 1 05/13/15 21:2 tichforofluoromethane ND 1.00 0.10 µg/L 1 05/13/15 21:2 1,2-Trichforo-1,2,2-triffluoroethane ND 0.50 0.16 µg/L 1 05/13/15 21:2 arbon disulfide ND 0.50 0.11 µg/L 1 05/13/15 21:2 arbon disulfide ND 0.50 0.11 µg/L 1 05/13/15 21:2 arbon disulfide ND 0.50 0.11 µg/L 1 05/13/15 21:2 arbon disulfide 0/24 J 2.00 0.16 µg/L 1 05/13/15 21:2 arbon disulfide 0/24 J 2.00 0.16 µg/L 1 05/13/15 21:2 arbon disulfide 0/24 J 2.00 0.16 µg/L 1 05/13/15 21:2 arbon disulfide ND 0.50 0.10 µg/L 1 05/13/15 21:2 arbon disulfide ND 0.50 0.10 µg/L	romomethane							05/13/15 21:29
Ichlorofluoromethane ND 1.00 0.10 µg/L 1 05/13/15 21:2 1-Dichloroethane ND 0.50 0.16 µg/L 1 05/13/15 21:2 2-Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 vetone ND 10.0 1.00 µg/L 1 05/13/15 21:2 vetone ND 0.50 0.11 µg/L 1 05/13/15 21:2 vetone ND 5.00 1.00 µg/L 1 05/13/15 21:2 vetone ND 0.50 0.10 µg/L 1 05/13/15 21:2 vetone ND 0.50 0.10 µg/L 1 05/13/15 21:2 vetonethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 -12-Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 -12-Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2			•	1.00	0.33			05/13/15 21:29
1-Dichloroethene ND 0.50 0.16 µg/L 1 05/13/15 21:2 1,2-Trichloro-1,2,2-trifluoroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 arbon disulfide ND 0.50 0.11 µg/L 1 05/13/15 21:2 athor disulfide ND 0.50 0.11 µg/L 1 05/13/15 21:2 athyl acetate ND 5.00 1.00 µg/L 1 05/13/15 21:2 athyl acetate ND 0.50 0.10 µg/L 1 05/13/15 21:2 astrip lenchloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 I-Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 I-Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 Isorform ND 0.50 0.10 µg/L 1 05/13/15 21:2 Isorform ND 0.50 0.10 µg/L 1			ND	1.00	0.10		1	05/13/15 21:29
ND 10.0 1.00 µg/L 1 05/13/15 21:2 arbon disulfide ND 0.50 0.11 µg/L 1 05/13/15 21:2 athyl acetate ND 5.00 1.00 µg/L 1 05/13/15 21:2 athyl acetate ND 5.00 0.16 µg/L 1 05/13/15 21:2 athyl acetate ND 0.50 0.10 µg/L 1 05/13/15 21:2 athyl fert-butyl ether ND 0.50 0.10 µg/L 1 05/13/15 21:2 athyl fert-butyl ether ND 0.50 0.10 µg/L 1 05/13/15 21:2 athyl fert-butyl ether ND 0.50 0.10 µg/L 1 05/13/15 21:2 athyl foroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 athyl foroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 athyl foroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2			ND	0.50	0.16		1	05/13/15 21:29
Arbon disulfide ND 0.50 0.10 µg/L 1 05/13/15 21:2 athylene chloride ND 5.00 1.00 µg/L 1 05/13/15 21:2 athylene chloride 0.24 J 2.00 0.16 µg/L 1 05/13/15 21:2 athylene chloride 0.24 J 2.00 0.16 µg/L 1 05/13/15 21:2 athylene chloride ND 0.50 0.10 µg/L 1 05/13/15 21:2 athylene chloride there ND 0.50 0.10 µg/L 1 05/13/15 21:2 athylene chloride there ND 0.50 0.10 µg/L 1 05/13/15 21:2 Jobiloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 Jatanone ND 0.50 0.10 µg/L 1 05/13/15 21:2 Joroform ND 0.50 0.10 µg/L 1 05/13/15 21:2 Joroform ND 0.50 0.10 µg/L 1		1,2,2-trifiuoroethane	ND	0.50	0.10	μg/L	1	05/13/15 21:29
ND 6.00 0.11 µg/L 1 0.5/13/15 21:2 athylene chloride 0.24 J 2.00 0.16 µg/L 1 0.5/13/15 21:2 athylene chloride 0.24 J 2.00 0.16 µg/L 1 0.5/13/15 21:2 athyle chloroethane ND 0.50 0.10 µg/L 1 0.5/13/15 21:2 -Dichloroethane ND 0.50 0.10 µg/L 1 0.5/13/15 21:2 -1.2-Dichloroethane ND 0.50 0.10 µg/L 1 0.5/13/15 21:2 -1.2-Dichloroethane ND 0.50 0.10 µg/L 1 0.5/13/15 21:2 Jachane ND 0.50 0.10 µg/L 1 0.5/13/15 21:2 Jachane ND 0.50 0.10 µg/L 1 0.5/13/15 21:2 Ioroform ND 0.50 0.10 µg/L 1 0.5/13/15 21:2 Ioroform ND 0.50 0.10 µg/L 1 0.5/13/15 21:2			ND	10.0	1.00	μg/L	1	05/13/15 21:29
athylene chloride 0.24 J 2.00 0.16 µg/L 1 0.01/01/5 21:2 ns-1,2-Dichloroethene ND 0.50 0.10 µg/L 1 0.5/13/15 21:2 athyl tert-butyl ether ND 1.00 0.16 µg/L 1 0.5/13/15 21:2 I-Dichloroethane ND 0.50 0.10 µg/L 1 0.5/13/15 21:2 I-Dichloroethane ND 0.50 0.10 µg/L 1 0.5/13/15 21:2 I-Dichloroethane ND 0.50 0.10 µg/L 1 0.5/13/15 21:2 Ioroform ND 0.50 0.10 µg/L 1 0.5/13/1)	ND	0.50	0.11	µg/L	1	05/13/15 21:29
ns-1,2-Dichloroethene ND 0.50 0.10 µg/L 1 05/13/15 21:2 athyl tert-butyl ether ND 0.00 0.16 µg/L 1 05/13/15 21:2 I-Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 I-Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 I-Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 Idorform ND 0.50 0.10 µg/L 1 05/13/15 21:2 Icho tetrachloride ND 0.50 0.10 µg/L 1 05/13/15 21:2 Ichoroethane ND 0.50 0.10 µg/L 1 05/13/15 21:2 <td></td> <td></td> <td>ND</td> <td>5.00</td> <td>1.00</td> <td>μg/L</td> <td>1</td> <td>05/13/15 21:29</td>			ND	5.00	1.00	μg/L	1	05/13/15 21:29
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Butanone ND 1.00 1.00 µg/L 1 0.01/1.01/1.21/1.21/1.21/1.21/1.21/1.21/		9 C C		0.50	0.10	µg/L	1	05/13/15 21:29
ND ND 0.00 1.00 µg/L 1 05/13/15 21.2 Aloroform ND 0.50 0.10 µg/L 1 05/13/15 21.2 1,1-Trichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21.2 clohexane ND 0.50 0.10 µg/L 1 05/13/15 21.2 ribon tetrachloride ND 0.50 0.10 µg/L 1 05/13/15 21.2 ribon tetrachloride ND 0.50 0.10 µg/L 1 05/13/15 21.2 -Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21.2 -Dichloroethane ND 0.50 0.16 µg/L 1 05/13/15 21.2 -Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21.2 -thyloyclohexane ND 0.50 0.10 µg/L 1 05/13/15 21.2 -Dichloropropane ND 0.50 0.16 µg/L 1 05/13/15 21.2 <td>17 F</td> <td>elhene</td> <td></td> <td>0.50</td> <td>0.10</td> <td>µg/L</td> <td>1 -</td> <td>05/13/15 21:29</td>	17 F	elhene		0.50	0.10	µg/L	1 -	05/13/15 21:29
ND 0.50 0.10 µg/L 1 05/13/15 21.2 i, 1-Trichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21.2 iclohexane ND 0.50 0.10 µg/L 1 05/13/15 21.2 irbon tetrachloride ND 0.50 0.10 µg/L 1 05/13/15 21.2 nzene ND 0.50 0.10 µg/L 1 05/13/15 21.2 2-Dichloroethane ND 0.50 0.16 µg/L 1 05/13/15 21.2 2-Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21.2 2-Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21.2 2-Dichloroethane ND 0.50 0.10 µg/L 1 05/13/15 21.2 2-Dichloropropane ND 0.50 0.16 µg/L 1 05/13/15 21.2 2-Dichloropropene ND 0.50 0.16 µg/L 1 05/13/15 21.2 <tr< td=""><td></td><td></td><td></td><td></td><td>1.00</td><td></td><td>1</td><td>05/13/15 21:29</td></tr<>					1.00		1	05/13/15 21:29
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ND 0.50 0.10 µg/L 1 05/13/15 21:2 nzene ND 0.50 0.10 µg/L 1 05/13/15 21:2 Point strachloride ND 0.50 0.10 µg/L 1 05/13/15 21:2 Point strachloride ND 0.50 0.16 µg/L 1 05/13/15 21:2 Point strachloride ND 0.50 0.16 µg/L 1 05/13/15 21:2 Point strachloride ND 0.50 0.10 µg/L 1 05/13/15 21:2 Point strachloride ND 0.50 0.10 µg/L 1 05/13/15 21:2 Point strachloride ND 0.50 0.16 µg/L 1 05/13/15 21:2 Point strachloride ND 0.50 0.16 µg/L 1 05/13/15 21:2 Point strachloride ND 0.50 0.16 µg/L 1 05/13/15 21:2 Point strachloride ND 0.50 0.16 µg/L 1 05/13/15 21:2		inane					1	05/13/15 21:29
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ND 0.50 0.10 µg/L 1 05/13/15 21:22 chloroethane ND 0.50 0.16 µg/L 1 05/13/15 21:22 chloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:22 chloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:22 chloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:22 -Dichloropropane ND 0.50 0.16 µg/L 1 05/13/15 21:22 -Dichloropropane ND 0.50 0.16 µg/L 1 05/13/15 21:22 -1,3-Dichloropropane ND 0.50 0.16 µg/L 1 05/13/15 21:22 //ethyl-2-pentanone ND 0.50 0.16 µg/L 1 05/13/15 21:22 //ethyl-2-pentanone ND 0.50 0.16 µg/L 1 05/13/15 21:22 //ethyl-2-pentanone ND 0.50 0.16 µg/L 1 05/13/15 21:22		nde						05/13/15 21:29
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ND 0.50 0.16 µg/L 1 05/13/15 21:22 omodichloromethane ND 0.50 0.10 µg/L 1 05/13/15 21:22 i-1,3-Dichloropropene ND 0.50 0.16 µg/L 1 05/13/15 21:22 Methyl-2-pentanone ND 5.00 1.00 µg/L 1 05/13/15 21:22 Iuene ND 0.50 0.16 µg/L 1 05/13/15 21:22 Iuene ND 0.50 0.10 µg/L 1 05/13/15 21:22 Iuene ND 0.50 0.10 µg/L 1 05/13/15 21:22 Iuene ND 0.50 0.16 µg/L 1 05/13/15 21:22 ,2-Trichloropropene ND 0.50 0.16 µg/L 1 05/13/15 21:22 trachloroethane ND 0.50 0.10 µg/L 1 05/13/15 21:22 texanone ND 5.00 1.00 µg/L 1 05/13/15 21:22 oromochl		DA						05/13/15 21:29
ND 0.50 0.10 µg/L 1 05/13/15 21:21 -1,3-Dichloropropene ND 0.50 0.16 µg/L 1 05/13/15 21:21 Methyl-2-pentanone ND 5.00 1.00 µg/L 1 05/13/15 21:22 Methyl-2-pentanone ND 5.00 1.00 µg/L 1 05/13/15 21:22 Nue ND 0.50 0.16 µg/L 1 05/13/15 21:22 Nue ND 0.50 0.10 µg/L 1 05/13/15 21:22 Nue ND 0.50 0.10 µg/L 1 05/13/15 21:22 Nue 0.50 0.16 µg/L 1 05/13/15 21:22 ,2-Trichloroethane ND 0.50 0.16 µg/L 1 05/13/15 21:22 trachloroethene ND 0.50 0.10 µg/L 1 05/13/15 21:22 texanone ND 5.00 1.00 µg/L 1 05/13/15 21:22 promochloromethane ND								a mana status a si ta a
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x2-Trichloroethane ND 0.50 0.16 µg/L 1 05/13/15 21:24 rachloroethene ND 0.50 0.10 µg/L 1 05/13/15 21:24 iexanone ND 5.00 1.00 µg/L 1 05/13/15 21:24 iexanone ND 5.00 1.00 µg/L 1 05/13/15 21:24 romochloromethane ND 0.50 0.10 µg/L 1 05/13/15 21:24		ropropene						
rachloroethene ND 0.50 0.10 µg/L 1 05/13/15 21:25 lexanone ND 5.00 1.00 µg/L 1 05/13/15 21:25 romochloromethane ND 0.50 0.10 µg/L 1 05/13/15 21:25								
Itexanone ND 5.00 5.10 µg/L 1 05/13/15 21:23 Iexanone ND 5.00 1.00 µg/L 1 05/13/15 21:23 Irromochloromethane ND 0.50 0.10 µg/L 1 05/13/15 21:23								
promochloromethane ND 0.50 0.10 µg/L 1 05/13/15 21:20								
		ethane						
		* Value may exceed the		***				
malifiers: * Value may exceed the Acceptable Level B Analyte detected in the associated Method Blank E Value exceeds the instrument calibration range H Holding times for preparation or analysis exceeded	muners:			~~	-			
	•	J Analyte detected below	v the POL		ND Not Detect	ed at the D-	actional Channel	tion Limit (PQL)

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Project Supervisor: Anthony Crescenzi

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E	ast Syracuse, NY 1	3057 (315)	445-1900		S	tateCertNo:	10248
CLIENT Project: W Order: Matrix: Inst. ID:	O'Brien & Gere Op PAS Oswego-Semi- K1505039 WATER Q MSN 76			Lab ID: Client Sample Collection Da Date Received PrepDate:	te:	K1505039- QC Trip B 04/29/15 0:0 05/05/15 16:	lank 5/5/15 0
ColumnID: Revision: Col Type:		%Moisture: TestCode:	8260W_OLM42	BatchNo: FileID:		R28389 1-SAMP-n27	12.D
Analyte		Result Q	ual PQL	MDL.	Unit	ts DF	Date Analyze
	DRGANIC COMPOU	NDS BY GC/MS			SW8	260C/5030C	
1,2-Dibromoeth		ND	0.50	0.16	µg/L	1	05/13/15 21:29
Chlorobenzene	н ^т	ND	0.50	0.10	µg/L	1	05/13/15 21:29
Ethylbenzene		ND	0.50	0.10	µg/L	1	05/13/15 21:29
(ylenes (total)		ND	1.00	0.30	µg/L	1	05/13/15 21:29
Styrene		ND	0.50	0.10	µg/L	1	05/13/15 21:29
Bromoform		ND	1.00	0.33	µg/L	1	05/13/15 21:29
sopropylbenze		ND	0.50	0.10	µg/L	1	05/13/15 21:29
,1,2,2-Tetrach		ND	0.50	0.10	µg/L	1	05/13/15 21:29
,3-Dichlorober	·····•	ND	0.50	0.10	µg/L	1	05/13/15 21:29
,4-Dichlorober		ND	0.50	0.16	µg/L	1	05/13/15 21:29
2-Dichloroben		ND	0.50	0.10	µg/L	1	05/13/15 21:29
,2-Dibromo-3-		ND	5.00	1.00	µg/L	1	05/13/15 21:29
,2,4-Trichlorob		ND	1.00	0.10	µg/L	1	05/13/15 21:29
-	hloroethane-d4	102	75-130	0.16	%REG	C 1	05/13/15 21:29
Surr: Toluene		. 101	75-125	0.10	%REC	C 1	05/13/15 21:29
Surr: 4-Brom	ofluorobenzene	100	75-125	0.10	%REC	C 1	05/13/15 21:29

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

ATTACHMENT D-4

SEMI-ANNUAL LEACHATE AND GROUNDWATER MONITORING MAY 2015

LSL 5854 Butternut Drive

Chain of Custody Record

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)	r East Syra	East Syracuse, NY 13057										
	Phone # (315) 445-1900	5) 445-1900	Telefax # (315) 445-1104	:15) 445-11	04	Cont	Contact Person:		LSL Project	ict #:		
Client:	CBRIEN	OBRIEN & GERE	Phone #	315-956	315-956 - 6100	MARK	X .					
Address:	333 WE	333 WEST WASHINGTON ST. Fax #	Fax #			DYRNE	20°C	0	Client's Site L.D.:	LD.:		
	Syencese NV.	SENV. 13202				MARK.	MARK, BYRNE @		ЪA	PAS OSwego Semi Aravel well sampling	al canal	14
						OBC, LOM	Lom,	<u>l</u>				
		•	Authorization:	ij		315-9	315-942-7024		Client's Project I.D.:	ject LD.: $\int c \eta \eta f$		
LSL Sample Number	Number	clients sample identifications	Sample Date	Sample	grab comp.	···	Preserv. Added	3 *	Containers f size/type	Analyses	Free CI (mg/l)	Pres.
		Equipment Brink	5-4-15	10 45	Ē	3	HcL	3	40 mC	8260		
			5-4-15	12 io5	Q	EV.	HCL		40 2.0	8260		
		LR-8 m5/m5D 5-4-15	54-15	13:30		3	HcL	6	HOAL	8260		
		CD-3	5-4-15	14:45		ß	Her	αŊ	HONE	8260		
		X	5-4-65			3	AcL		HOME	8260		
		LR-6	5-5-15	8:25		3	HeL	3	40 ml	8260		
		M-33	5-5-15	9:45		3	Her		yom C	0708		
		1 cm - 3	5-5-15	11:00		3	HCL		Home	8760		
		LCW-4	5-5-15	12:05		3	HcL	3	Home	8260		
-												
				_								
Notes and 1	Notes and Hazard identifications:	ications:					Cus	stody	Custody Transfers	S	Date	Time
*******				Sampled B	sampled By: MAETin Keiwahu	Tin Kee		Receiv	Received By:			
				Relinquish	Relinquished By: Mart frinn	ent for	Y	Receiv	Received By:		5-5-15	16:15
				Relinquished By:	ed By:		Recei	ived for	Received for Lab By:	R. Dunbar	5.5.12	16:15
				Shipment Method:		HAND.		ŝ	umples Rec	Samples Received Intact: V N 5		

GROUND WATER SAMPLING LOG

5

Date	5-4-15	Weather	SUNNY 75'
Site Name	PAS Oswego	Well #	OD-3
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

1

Depth of Well	ft	44.70		· · · · · · ·	Water Vol/ft for:
Depth of Water		4,68	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	1
Did Well go dry?	······································	1

	Vell Casting	Protective Casting	Other:
--	--------------	--------------------	--------

INSTRUMENT CALIBRATION YSI 556 MPS

pH Buffer Readings	Conductivity Standard Ratings	
4.0 Standard	84 S Standard	. į
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 14:05

Time	Depth to Water	Temperature	рН	Conductivity MS/cM	ORP	DO (%)	Turbidity (NTU)	Flow Rate
5 min	1450	9.90	7,92	0.189	61,5	5,42	2,00	300 Ml
10 MIN	111 Mm	9,95	7,82	0,187	64.9	5,35	1,40	300 ml
15min	14,75	9,90	7.73	- • • • .	67,4	5,54	1,21	3 ound
DOMIN	, 14,76		7.64	0,187	70,8	5,67	0,81	Soopl
25 MIN		9,89	7,61	0,187	71.4	5,69	1,10	300 ml
PO MIN	14.75	9,90	7.52	0,187	74,6	5,7&	0.65	300 ml
35 min	14.15	9.90	7,51	0.187	74,5	5.73	0,62	300 pl

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GROUND WATER SAMPLING LOG

.

WATER SAMPLE OD

OD-3

5-4-15

Time Collected: 14;45

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

SAMPLES COLLECTED

PID - 0.0

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	gluss	3		HCL	·
······································			· · · · · · · · · · · · · · · · · · ·		
		• • • • • • • • • • • • • • • • • • • •			

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GROUND WATER SAMPLING LOG

Date	5-5-15	Weather	OVERCANT FOG 55°
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			

WELL INFORMATION

Depth of Well	ft			Water Vol/ft for:
Depth of Water	ft 10,64	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 gol	
Did Well go dry?	NO	

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 7:50

Time	Depth to Water	Temperature	рН	Conductivity Ms/cm	ORP	mg/L DO (獨)	Turbidity (NTU)	Flow Rate
Smin	11,60	9.62	7.80	1.012	11.8	1,37	3,53	300 ml
10 minu	11.58	9,82	7.61	1.041	-7.1	0,66	1.64	300
15min	11.60	9.91	7.49	1.048	-11.8	0,42	0.84	300
20 min	11.62	9.92	7,48	1,048	- 13.0	0.40	0,72	300
as min	11.60	9,95	7.42	1.050	- 12.6	0.34	0.59	300
30min	11,62	9.96	7.42	1,051	- 13,a	0.33	0.60	300
		•	1		:			1
			2	·.	· · · ·	. 1		

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OBRIEN 5 GERE

WATER SAMPLE LR-6

5-5-**15**

Time Collected: 8:25

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	clear	clear
Odor	NO	NU
Turbidity <100 (NTU)	NO	NO
Sheen/Free Product	<i>N.o</i>	NO

SAMPLES COLLECTED

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
Hom	igless	3		HCL	
					· · · · · · · · · · · · · · · ·

NOTES

PID - 0.0 PPM

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GROUND WATER SAMPLING LOG

Date	5-4-15	Weather	SUNNY 75°
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. Koenwecke		

WELL INFORMATION

Depth of Well	ft	· · · · · · · · · · · · · · · · · · ·		Water Vol/ft for:
Depth of Water	ft 10,26	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 3,5 gok
Did Well go dry?	No

Measurements Taken From:	Well Casting	Protective Casting	Other:	
Incusul cintenes raken from				

INSTRUMENT CALIBRATION

1

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	•	
	Conductivity Standard	
pH Buffer Readings	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 ノみらつ

Time	Depth to Water	Temperature	pН	Conductivity MS/CM	ORP	M9/L DO (95)	Turbidity (NTU)	Flow Rate
5 min	10.16	9.72	8.41	0,790	= 37.9	0,72	10,3	350
10 mm	10.05	10.72	7.84	0,909	-90,8	0.35	2.11	300
15 MIN	10.05	10,79	7,64	0.954	- 94,1	0.29	1,12	300
20 phill	10.05	10.50	7.54	0.960	~ 914	0.24	0.78	300
25 min		10,40	7.49		- 88.2	0.19	1,06	300
30 NIN	-	10,45	7,46	0.967	- 87.2	0.18	0,97	300
35 min		10,40	7,45	0,968	-86,9	0,17	1,05	300

360° Engineering and Project Delivery Solutions

5-4-15

WATER SAMPLE LR-8

Time Collected: 13:30

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	cleve	clear
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	glass	9		HCL	
· · · · · · · · · · · · · · · · · · ·		· · · · ·	· · · · · · · · · · · · · · · · · · ·		
	· · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·

NOTES

PID - 0.0 MS/MSD Collected

GROUND WATER SAMPLING LOG

Date	5-4-15	Weather	SUNN TO
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	M. KOENNERKIE		

WELL INFORMATION

Depth of Well	ft	•••	• • • • • • • • • • • • • • • • • • •	Water Vol/ft for:
Depth of Water	ft 10,	o 2 2" Diameter Wel	= 0.163 X LWC	
Length of Water Column	ft	4" Diameter Wel	= 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 We	= 2.282 X LWC	

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

Well Casting Measurements Taken From:

Protective Casting Other:

INSTRUMENT CALIBRATION

PID READING - 0,0

	<u>v</u>
	Conductivity Standard
pH Buffer Readings	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 11:30

Time	Depth to Water	Temperature C	рH	Conductivity	ORP	DO (25)	Turbidity (NTU)	Flow Rate
Smil	10,05	9.99 C	7.75	0-929	-81.2	8.02	1.51	300 ML
10 mw	10,02	9.98	7.71	10,927	- 84,7	5,84	1.21	300 ml
15 MIN	10.00	9,99	7.67	0.926	-86.9	5,43	1,02	300ml
ZOMIN	10.00	9,99	7.65	0.932	- 87,5	4,40	1000	Soonl
25mm		9,99	7.63	0,931	- 89,1	4.17	0.54	Suonl
BO MIN	•	9,99	7,62		- 89,6	3,98	0,52	300 ml

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WATER SAMPLE 11-21 5-4-15

Time Collected: 12:05

Characteristics	Physical Appearance At Start	Physical Appearance At Sampling
Color	clem	cleve
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	glass	B		ALL	~
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					· · · ·
		···· ··· ··· ··· ··· ··· ··· ··· ··· ·			· · · · · · · · · · · · · · · · · · ·

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	J DITELL & GELE EUGINEERS, INC.				LOW FIOW GROUND Water Sampling Log					
Date	5-5-15	Perso	nnel	M. F	õem he	Weather	SUNNY	620		
Site Name	PAS	Evaci	uation Method	GRUN	ès Pirmp	Well #	Lew -			
Site Location		Samp	ling Method		FLOW	Project #				
iformatio	on:	<u></u>	<u> </u>		· · · · · · · · · · · · · · · · · · ·		de e orden i gineri			
Depth of Well *		ft.		* Measure	ements taken from	n_				
Depth to Water	• 11.3	62 ft.		14''	X	Top of Well Ca	sing			
Length of Water		ft.				Top of Protectiv	e Casing			
						(Other, Spècify))			
Start Purge Time	a: 10.'15			/////////////////////////////////////						
	Depth		1	and	Oxidation	Dissolved		T		
Elapsed	То			ms/cm	Reduction	Oxygen	Turbidity	Flow		
Time	Water	Temperature	pH	Conductivity	Potential	(mg/l)	(NTU)	Rate (ml/min).		
5 mar	11,32	8,78	7,31	1.676	- 83,5	0.58	13.8	300		
10min	11,32 11,32	8,82	7.27	1.671	- 85.2	0.48	3,94	300		
15 Mill	11. 32	8,85	7,23	1.659	-89,2	0,40	4.08	300		
20 min	11.32	8.86	7,19	1.639	-94.4	0.30	3,47	300		
25min	11.32	8,67	7,18	1.622	- 97,3	0.22	3,29	300		
JOmm	N.32	8,61	7.17	1,608	- 100,1	0.15	3.17	300		
35 MIN	11.32	8,60	7.17	1,598	- 99,3	0.09	3.05	300		
HOMIN	11.32	8,61	7.17	1.595	- 99,5	0.08	3,11	300		
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						,				
End Purge Time:	10:55							ι		
Water sample:		· · · · · · · · · · · · · · · · · · ·								
Time collected:	11:00		-	Total volume of r	ourged water remo	wad	25	al		
					-					
Physical appearan				•	Physical appeara	Color	3,5 q SLight Ye SLight	llens		
.Co .Od		11000				Odor	SLIGHT TE			
Sheen/Free Produ				•	Sheen/Free		- BLIGHT			
Sheen/Fiee Floud						Fibuaci				
Field Test Resul	ter Dissolved	ferrous iron:								
, iein 1 est Resuli	Dissolved		-	<i>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</i>						
		total manganese:								
	Diggolydu	and manyancod.	-		•					
Analytical Param	eters: VOCs	D	<u>ک</u> ک	/ mam						
- '7		<u> </u>	· · · ·	6 PPM	-		19 <u>2</u> 11000			
Container Size	Contair	Ier: I ype	# Collecter	a:::::::::::::::::::::::::::::::::::::	d Filtered	Preservat		Container pH		
· · · · · · · · · · · · · · · · · · ·										
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April 25, 1997

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Date -	5-5-15	-		Mitor	nche	Weather	P.SUNNY	60
Site Name	PAS		ation Method	GRIN	fos Rimp	Well #	LCW-L	<u>{</u>
Site Location	OSWEGO NY	Samp	ling Method	LowF	fos Rimp Low	Project #	E	
iformatio		<u></u>		<u> </u>				
Depth of Well *		ft.		* Measure	ments taken from			
Depth to Water	• /8	,05 ft.		14 "	X	Top of Well Ca	sing	
Length of Water		ft.				Top of Protectiv	-	
	- <u></u>					(Other, Specify)	-	
Start Purge Tim	e: 11:25							
	Depth			, ,	Oxidation	Dissolved	1	1
Elapsed	Το			ms/can	Reduction	Oxygen	Turbidity	Flow
Time	Water	Temperature	pH	Conductivity	Potentiai -	(mg/l)	(NTU)	Rate (mi/min).
5 MIN	18,05	10,27	7.18	2,835	-106,5	0.74	8,83	300
IOMIN	18,05	10.17	7.12	2,737	- 119.0	0,13	4,90	300
15 min	18,05	10,15	.7,12	2.718	- 120.3	0,13	4.50	300
ZOMIN	18.05	10.14	7,12	2.705	- 121,0	0,11	5,07	300
25 MIN	18.05	10,14	7.12	2.675	- 122.0	0,08	4,55	300
30 MIN	18.05	10,13	7,12	2,660	- 123,1	0.07	4.68	300
35 m 11	18,05	10,12	7,12	2,656	- 123.4	0,07	4,86	300
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nd Purge Time:	12:0	0			hannen an			1
ater sample:	10 1 . F							
ime collected:	12:05			Total volume of p	ourged water remov	ved:	gol	
hysical appeara	nce at start	0	•		Physical appeara		<u>3 gol</u> Yellowih	
.Co		LHU .				Color	Yellowich	
· Oc	<u> </u>	.7				Odor	<u>SLight</u>	
heen/Free Produ	uct <u>NO</u>				Sheen/Free	Product	No	
ield Test Resul	ts: Dissolved	ferrous iron:						
	Dissolved		-					•
		otal manganese:						
	Dissolved	.୦.ସା ମାସମଧ୍ରସମିକଥିଟି.	-		· ·			
nalytical Paran	neters: VOCs	F	°1D - 0	.0 PPM				
Container Size	Contain	әг Туре	# Collecte		d Filtered	Preservat	ve C	ontaiher pH
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April 25, 1997

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Date	5-5-15	Pers	onnel		nhe		SUNNY 5	5
Site Name	PAS	Evac	uation Method			Con Well #	M-22	
Site Location	Osweyd	Sam	oling Method		LOW / GRAS			
			-					
formatio	on: E	-						
Depth of Well *		ft.		* Measure	ments taken from			
Depth to Water		<u>,94</u> ft.		6"	X	Top of Well Cas	-	
Length of Water		ft.				Top of Protective (Other, Specify)		
			<u></u>					
Start Purge Tim	e: <u>8:55</u>	-						
	Depth	1			Oxidation	Dissolved	1	
Elapsed	То			ms/cm	Reduction	Oxygen	Turbidity	Flow
Time	Water	Temperature	рН (Conductivity	Potential	(mg/l)	(NTU)	Rate (ml/min).
5 MIN	11,42	8,102	8,13	1.029	60.0	8,33	9.12	300
10 Min	71.95	8,84	8,16	1.034	48.60	7.68	7.60	300
15 MIN	12.10	9,07	. 8,22		37.4	7.58	7,18	300
DO mon	12,25	9,24	8,23	1.042	37.9	to==37.44		300
25 MIN	12.30	9,40	8.24 8.24	1.044	38.8.	7,33	6,60	300
30 min 35 min	12.35	9,41	8.25	1,046	40:4	7.27	5,59	300
40 min	12.35	9,36	8,25	1.046	41.8	7.26	5,14	300
45 min	12.35	9.41	8,25	1.046	42.1	7,27	5,12	300
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		L	× .					
nd Purge Time:	9:4	10	,					,
Vater sample:	·····	······································						
"ime collected:	9:45			Total volume of n	urged water rem	wed	3.500	
							3,5 grl	
hysical appearar Co					Physical appear	ance at sampling Color	Olean	
.Od		·				Odor _	NO	- '
Sheen/Free Produ					Sheen/Fre	-	NO	-
						-		-
ield Test Resul	ts: Dissolved	ferrous iron:						
	Dissolved	total iron:						
	Dissolved	total manganese:						
nalytical Param	leters: VOCs	PIL) - 0.0	p ppm				
Container Size		nerType	# Collecter		d Filtered	Preservativ	2	
40 ml	glo		3		<u></u>	Heservauv HCL		Container pH
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April 25, 1997

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FUTURE REPORT

2015 - 2016



ANNUAL PROGRESS REPORT – Future

Operation, Maintenance and Long-term Monitoring Activities

PROJECT NAME: Pollution Abatement Services Site Oswego, New York

PERIOD COVERED: JULY 2015 – JUNE 2016

ACTIONS PLANNED FOR THE YEAR

- Leachate removal activities will be performed during the period July 2015 through June 2016 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 for the winter and spring months November through April.
- The leachate will be discharged to the City of Auburn New York Wastewater Treatment Plant under an approved permit consistent with the schedule presented below. However, the Oswego New York Eastside Waste Water Treatment Plant (Oswego WWTP) 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 Auburn Wastewater Treatment Plant under the approved permit.
- Quarterly ground-water elevation monitoring is scheduled to be conducted on August 3, 2015, November 2, 2015, February 8, 2016 and May 2, 2016.
- 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 2, 2015 and May 2, 2016. Based on the results for OD-3 and MW-22 we propose to discontinue monitoring MW-22 which was at or near detection for all performance standards in past sampling events. Continued monitoring of OD-3 is recommended for the next reporting period. Also, LR-6 has been at or near detection levels for all performance standards other than 1,1 dichloroethane and below the performance standard for 1,1 dichloroethane since 2000. Therefore, we propose annual sampling of LR-6 in the fall of each year instead of semi-annual sampling.
- 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 2015/2016								
	July 2015 Removal Events		August 2015 Removal Events		September 2015 Removal Events				
	First Event		First Event		First Event				
Removal	July 15		Aug 5		Sep 9				

	GROUND-WATER REMOVAL EVENT SCHEDULE 2015/2016									
	October 2015 Removal Events		November 20 Eve		December 2015 Removal Events					
	First Event		First Event		First Event					
Removal	Oct 7		Nov 4		Dec 9					

	GROUND-WATER REMOVAL EVENT SCHEDULE 2015/2016									
	January 2016 Removal Events		February 202 Eve		March 2016 Removal Events					
	First Event		First Event		First Event					
Removal	Jan 6		Feb 10		Mar 9					

	GROUND-WATER REMOVAL EVENT SCHEDULE 2015/2016									
	April 2016 Removal Events		May 2016 Removal Events		June 2016 Removal Events					
	First Event		First Event		First Event					
Removal	Apr 6		May 4		June 8					