

July 2, 2019

Mr. John Feeney  
Wisconsin Department of Natural Resources  
1155 Pilgrim Road  
Plymouth, WI 53073-4294

**Subject: Request for Status Update  
Grafton Lime Kiln Park Landfill and Lime Kiln Park, Village of Grafton  
Green Bay and Falls Roads, Grafton, Wisconsin  
WDNR BRRTS No. 02-46-549906, FID No. 246036780  
WDNR BRRTS No. 02-46-000743, FID No. 246036780**

Dear Mr. Feeney:

AECOM is submitting this letter as a written response to items requested by the WDNR in a letter to the Village of Grafton dated May 1, 2019. That letter included three bulleted items under the heading of "Work Needed." These items are repeated here in italics followed by a response.

- *Pursuant to Wis. Admin. § NR 716.07(7), provide to the DNR a vapor intrusion screening of nearby receptors. The Manchester Drive subdivision is of concern because of a Wis. Admin. § NR 140.10 Enforcement Standard exceedance for TCE that was identified in water table well MW-8A. In addition, homes along Green Bay Avenue in the West Plume should be assessed for vapor intrusion potential. DNR guidance document RR-800 provides methods and considerations for making this evaluation.*

## **Response**

As discussed in the Site Investigation and Preliminary Remedial Action Identification report (dated February 2017), two groundwater contaminant plumes have been identified with chlorinated volatile organic compounds (CVOCs). The two plumes mix beneath the Manchester Drive area as shown on Figure 1. Contaminant concentrations from historical data as well as recent sampling events were examined to determine if the presence of the contaminants in the groundwater may pose a potential vapor intrusion risk in the Manchester Drive area and in homes along Green Bay Avenue (see Figure 2). The WDNR Remediation and Redevelopment Program Guidance Document RR-800 (*Addressing Vapor Intrusion at Remediation & Redevelopment Site in Wisconsin, January 2018*) was used in the screening process. Contaminants of concern are considered to be TCE, and vinyl chloride (VC).

### **Manchester Drive Area**

The residences in the Manchester Drive area downgradient from the Lime Kiln Park Landfill are located greater than 100 feet from the contaminant source area. In the Manchester Drive area, the water table is approximately 40 feet below ground surface (ft bgs) (based on measurements at MW-8A) and vertical flow gradients are downward. The groundwater in this residential area is not anticipated to be in contact with the structure foundations. However, the concentration of TCE and VC in groundwater exceeds the NR 140 ES in water table well MW-8A. Therefore, since the possibility of vapor intrusion cannot be ruled out, it is recommended that vapor intrusion testing be conducted at several residences along Manchester Drive. The initial testing will consist of concurrent collection of sub-slab vapor and indoor air samples from residential basements within the area of plume mixing (i.e., 1767, 1749, and 1741 Manchester Drive). Pending the results, testing may be expanded as necessary. At this time, it is proposed to prepare and submit a formal Work

Plan to the Department for review and approval. Upon approval, the Village will provide residents a notice informing them of the investigative activities and will coordinate and arrange access agreements to allow the vapor sampling to be conducted on private residential properties.

## **Green Bay Road Area**

The residences along Green Bay Road in the West Plume are located greater than 100 feet from a contaminant source area (source of the West Plume contamination is unknown). Along Green Bay Road, the water table is approximately 30 to 35 ft bgs within dolomite bedrock and vertical flow gradients are downward. The groundwater in this residential area is not anticipated to be in contact with structure foundations. In the West Area Plume, groundwater impacts occur deeper within the dolomite bedrock between approximately 55 and 235 ft bgs.

Based on the distribution of CVOCs and the stratigraphy, CVOCs within the West Plume appear to migrate with groundwater to the east-southeast and vertically downward in the bedrock aquifer. CVOCs in the West Plume tend to decrease in concentration moving downward, and to the southeast. These data suggest that the overlying shallow water table is preventing the migration of vapors into the vadose zone and that vapor sampling within residences along Green Bay Road is not necessary.

- *Pursuant to Wis. Admin. § NR 700.11(1)(a), submit an updated groundwater monitoring and progress report. Submit a groundwater monitoring and progress report annually thereafter, with both Lime Kiln Park Landfill and West Plume BRRTS activities addressed in the same report.*

## **Response**

The Village last submitted an updated progress report on 1/31/19, and recently received a system-generated e-mail from the Department. We will submit a progress report by July 30, 2019, in response to the system-generated e-mail. In addition, please see attached a summary of the most recent groundwater monitoring data for the Lime Kiln Park / West Plume Area collected in March and May 2019. In this summary, we have included a cumulative table of the analytical results to date.

- *Correct the errors, and resubmit (in electronic format) in the report, Site Investigation and Preliminary Remedial Action Identification, AECOM, February 2017. Two shallow wells, MW-2A, and MW-8A, as described on page 20 of the report, were mislabeled as piezometers with a "P" designation rather than "MW" in the tables, cross-section, and maps. Also, MW-8A and P-8B need to be labeled and indicated on Figures 7 and 8.*

## **Response**

Tables 4 and 8 through 11 have been edited to use the correct designation of "MW" for the water table wells 2A and 8A. Similarly, Figures 2, 5, 7, and 8 have been corrected. Please see attached revised tables and figures.



Please contact me at 920-406-3110 or [jeff.maletzke@aecom.com](mailto:jeff.maletzke@aecom.com) if additional information or further clarification is required.

Yours sincerely,

AECOM Technical Services, Inc.

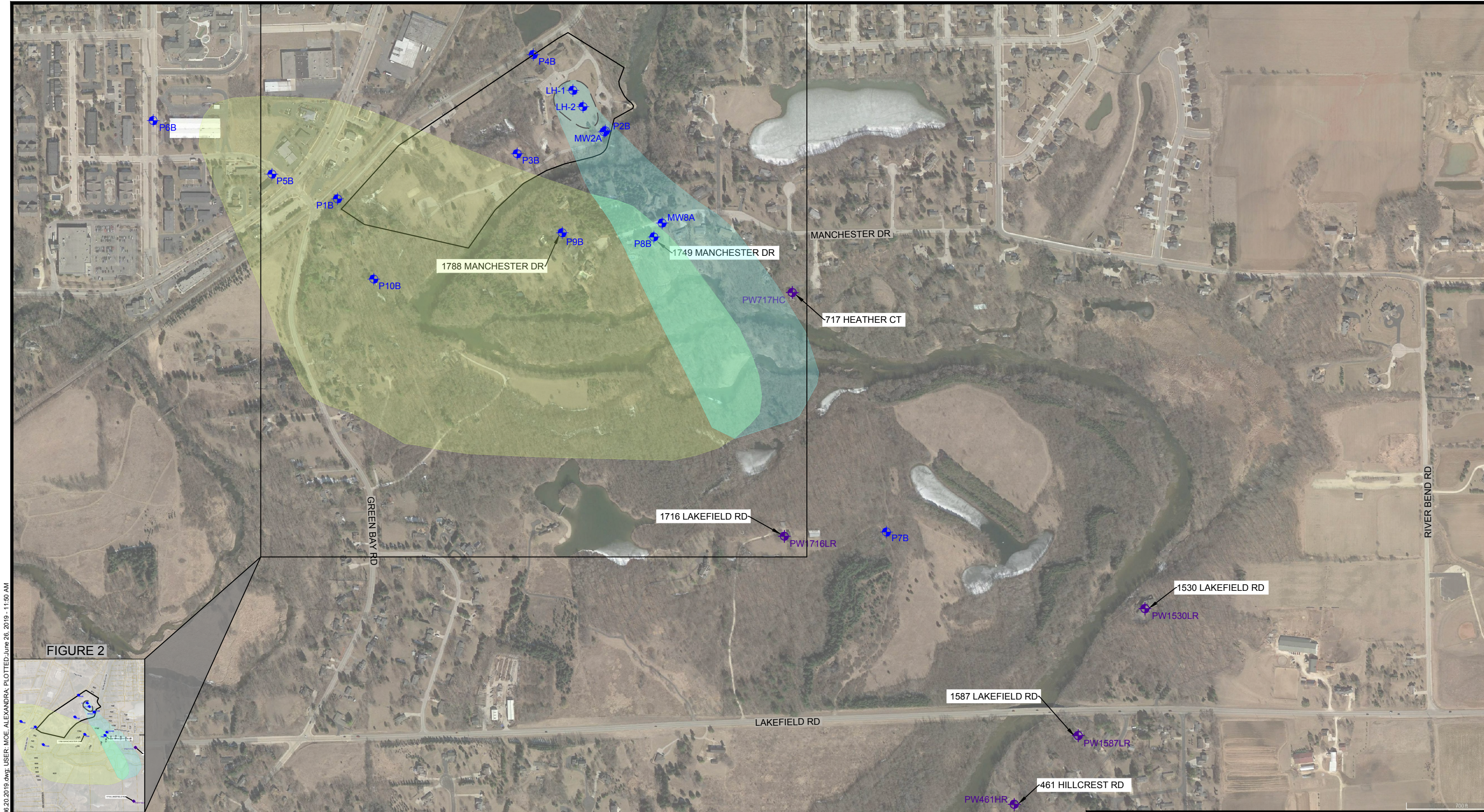
A handwritten signature in black ink that reads 'Jeffrey D. Maletzke'.

Jeffrey D. Maletzke, P.G.  
Project Manager

Enclosures:        As Noted

c:        Ms. Amber Thomas, Village of Grafton  
          Mr. David Buser, DNR WMM Program

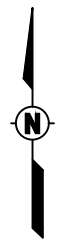
## **Figures**



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- LEGEND**
- ◆ PRIVATE WELLS
  - ◆ MONITORING WELLS
  - WEST PLUME LIMITS
  - LIME KILN PLUME LIMITS
  - PLUME INTERSECTION
  - LIME KILN PARK PROPERTY BOUNDARY
  - LIMITS OF WASTE (GEOPHYSICS AND GEOPROBE)

**NOTES:**  
AERIAL IMAGE DOWNLOADED JUNE 20, 2019, IMAGE DATED MARCH 16, 2018.



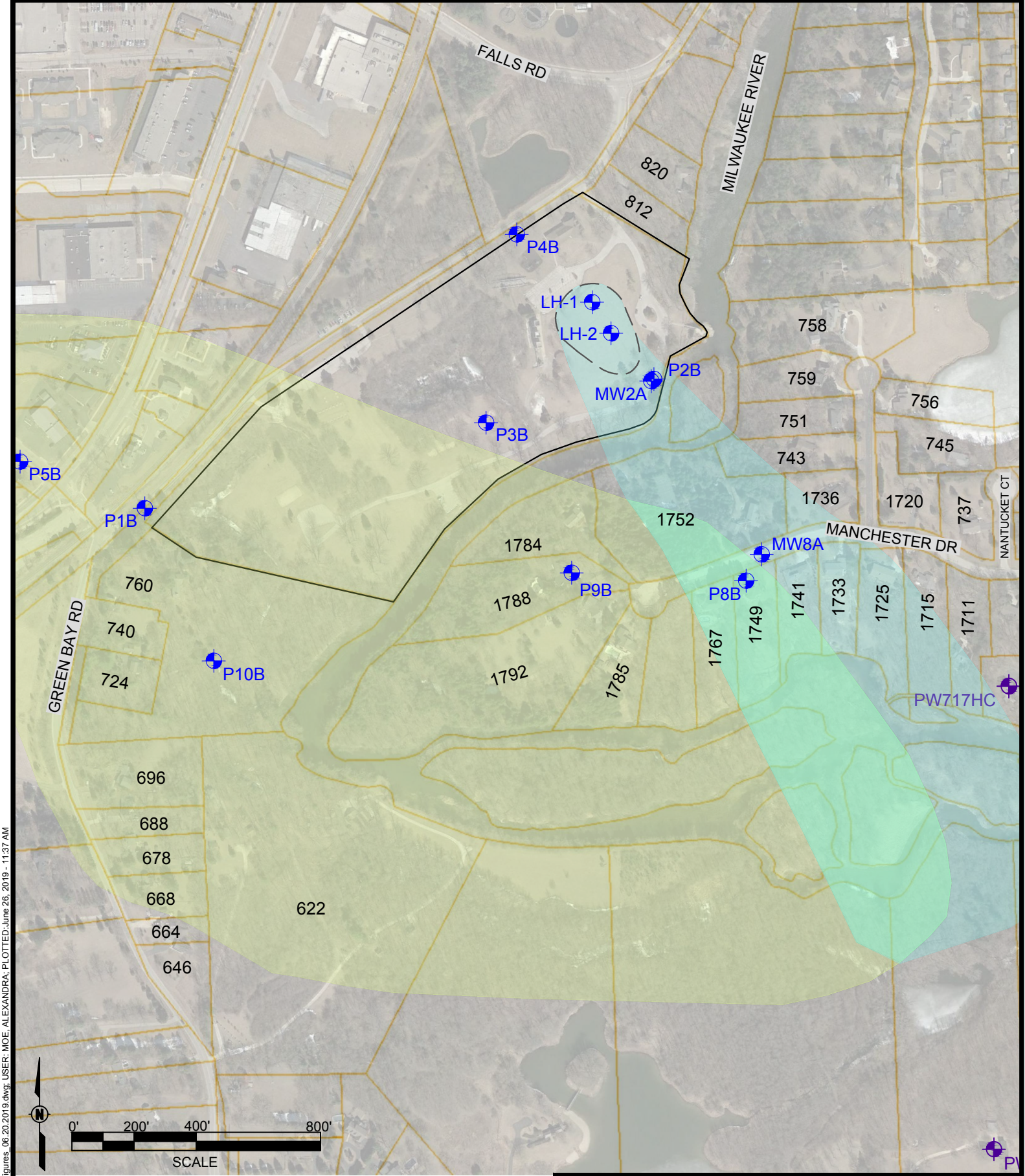
AECOM  
Milwaukee Office  
1555 RiverCenter Dr  
Milwaukee, WI  
414.944.6080



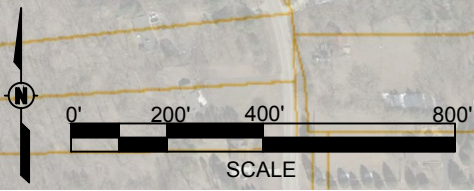
Village of Grafton  
Lime Kiln Park  
Grafton, WI 53024

SITE MAP

Project Number: 60600468	Drawn By: ANM	Date: 6/26/2019	Figure No. 1
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LEGEND	
	PRIVATE WELLS
	MONITORING WELLS
	LIME KILN PARK PROPERTY BOUNDARY
	LIMITS OF WASTE (GEOPHYSICS AND GEOPROBE)
	WEST PLUME LIMITS
	LIME KILN PLUME LIMITS
	PLUME INTERSECTION
622	PARCEL ID

AECOM  
 Milwaukee Office  
 1555 RiverCenter Dr  
 Milwaukee, WI  
 414.944.6080

Village of Grafton  
 Lime Kiln Park  
 Grafton, WI 53024

MANCHESTER DRIVE  
 AND GREEN BAY ROAD AREAS



Project Number: 60600468

Drawn By: ANM

Date: 6/26/2019

Figure No. 2

NOTES:  
 1. AERIAL IMAGE DOWNLOADED JUNE 20, 2019. IMAGE DATED MARCH 16, 2018.  
 2. PARCEL IMAGERY FROM [HTTPS://COZAUKEECO.AGS.RUEKERT-MIELKE.COM](https://cozaukeeco.ags.ruekert-mielke.com), DOWNLOADED JUNE 26, 2019.

**Corrected 2017 Tables**

**TABLE 4**  
**SUMMARY OF HYDRAULIC CONDUCTIVITY RESULTS**  
**VILLAGE OF GRAFTON, WISCONSIN**

Well No.	Test Type	Analysis Method	Screened Formation (USCS)	Hydraulic Conductivity (cm/sec)
MW2A	Rise Test	Bouwer & Rice	DL	3.6E-03
MW2A	Fall Test	Bouwer & Rice	DL	3.4E-03
P2B	Rise Test	Bouwer & Rice	DL	7.7E-04
P2B	Fall Test	Bouwer & Rice	DL	9.9E-04
P2B	Rise Test	Bouwer & Rice	DL	6.8E-04
P3B	Fall Test	Bouwer & Rice	DL	2.1E-03
P3B	Rise Test	Bouwer & Rice	DL	1.9E-03
P3B	Fall Test	Bouwer & Rice	DL	2.0E-03
P3B	Rise Test	Bouwer & Rice	DL	2.1E-03
P4B	Fall Test	Bouwer & Rice	DL	9.8E-04
P4B	Rise Test	Bouwer & Rice	DL	1.1E-03
P5B	Fall Test	Bouwer & Rice	DL	2.8E-03
P5B	Rise Test	Bouwer & Rice	DL	2.8E-03
P5B	Fall Test	Bouwer & Rice	DL	2.7E-03
P5B	Rise Test	Bouwer & Rice	DL	3.0E-03
Geometric Mean (cm/sec)				1.8E-03
<b>Notes:</b>				
The wells are weighted evenly in the calculation of the geometric mean. DL = Dolomite.				



TABLE 8

GROUNDWATER ANALYSIS RESULTS  
VILLAGE OF GRAFTON, WISCONSIN

	1,1,1-Trichloroethane	1,1,2-Trichlorotrifluoroethane	1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Bromodichloromethane	Carbon Disulfide	Chloromethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethene
<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
<b>PAL</b>	40		85	0.7	200	0.06	200	0.3	7	20	
<b>ES</b>	200		850	7	1,000	0.6	1,000	3	70	100	

Well Name	Collection Date	1,1,1-Trichloroethane	1,1,2-Trichlorotrifluoroethane	1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Bromodichloromethane	Carbon Disulfide	Chloromethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethene
P1B	27-Sep-11											
P1B	27-Sep-11	1.6	77.4							1.4		
P1B	30-Dec-11											
P1B	30-Dec-11	1.6	83.5							1.8		
P1B	27-Mar-12											
P1B	27-Mar-12	1.6	95.3		0.82					1.9		
P1B	27-Jul-12	1.3	78.7							1.8		
P1B	01-Oct-12		5					0.87				4.4
P1B	25-Mar-13	1.1	74.2							1.6		0.42
P1B	02-Aug-13	1.2	87.9	0.36						1.9		
P1C	27-Sep-11											
P1C	27-Sep-11	1.7	156		1.2					1.7		
P1C	30-Dec-11											
P1C	30-Dec-11		7.2					1.6	0.31			9.7
P1C	27-Mar-12											
P1C	27-Mar-12	1.2	83.8		0.9			0.84		1.9		1.3
P1C	27-Jul-12	0.95	61.1					0.91		1.9		2.2
P1C	01-Oct-12		26.2					2.4		0.93		7.1
P1C	25-Mar-13		56.9		0.62			1		1.6		1.3
P1C	02-Aug-13	0.67	11.6					1.8				0.57
P1D	27-Sep-11											
P1D	27-Sep-11		13					1.7				
P1D	30-Dec-11											
P1D	30-Dec-11		10.2					4.1				8.8
P1D	27-Mar-12											
P1D	27-Mar-12		9.2					2.4				6.4
P1D	27-Jul-12		11.2					2.5				1.7
P1D	01-Oct-12		3.7					1.1				5.4
P1D	25-Mar-13		9					1.9				1.7
P1D	02-Aug-13	1	65							1.2		
P3B	27-Sep-11											
P3B	27-Mar-12											
P3B	01-Oct-12											
P3B	26-Mar-13											
P3B	09-Apr-14											

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GROUNDWATER ANALYSIS RESULTS  
VILLAGE OF GRAFTON, WISCONSIN

	1,1,1-Trichloroethane	1,1,2-Trichlorotrifluoroethane	1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Bromodichloromethane	Carbon Disulfide	Chloromethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethene
<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
<b>PAL</b>	40		85	0.7	200	0.06	200	0.3	7	20	
<b>ES</b>	200		850	7	1,000	0.6	1,000	3	70	100	

Well Name	Collection Date	1,1,1-Trichloroethane	1,1,2-Trichlorotrifluoroethane	1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Bromodichloromethane	Carbon Disulfide	Chloromethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethene
P3B	28-Jan-15											
P3B	04-Jun-15											
P3B	04-Nov-15											
P3B	23-May-16											
P3B	15-Nov-16											
P5B	27-Sep-11											
P5B	27-Sep-11		67.9									
P5B	28-Dec-11											
P5B	28-Dec-11		62.3									
P5B	27-Mar-12											
P5B	27-Mar-12		62.4			6.4						
P5B	26-Jul-12		59.8									0.33
P5B	01-Oct-12		66.3									
P5B	18-Dec-12		200						1.3	1.3		
P5B	02-May-13		52.5						0.66			
P5B	02-Aug-13	0.58	56.2			4.5				1.5		
P6B	27-Sep-11											
P6B	29-Dec-11											
P6B	27-Mar-12											
P6B	27-Mar-12											0.9
P6B	26-Jul-12											0.46
P6B	01-Oct-12											
P6B	18-Dec-12											
P6B	25-Mar-13											
P6B	02-Aug-13											
P7B	27-Jan-11											
P7B	01-Aug-13					4.6						
P7B	29-Jan-14			3.8	0.57					149	3.4	
MW8A	27-Jan-11			6.1	0.58					15.6		
MW8A	27-Sep-11											
MW8A	27-Sep-11			0.85						3.2		
MW8A	29-Dec-11											
MW8A	29-Dec-11									1.9		
MW8A	28-Mar-12											
MW8A	28-Mar-12			5.2						15.9		

TABLE 8

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VILLAGE OF GRAFTON, WISCONSIN

	1,1,1-Trichloroethane	1,1,2-Trichlorotrifluoroethane	1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Bromodichloromethane	Carbon Disulfide	Chloromethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethene
<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
<b>PAL</b>	40		85	0.7	200	0.06	200	0.3	7	20	
<b>ES</b>	200		850	7	1,000	0.6	1,000	3	70	100	

Well Name	Collection Date	1,1,1-Trichloroethane	1,1,2-Trichlorotrifluoroethane	1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Bromodichloromethane	Carbon Disulfide	Chloromethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethene
MW8A	27-Jul-12			2.5						10.4		
MW8A	02-Oct-12			3.4						13.6		
MW8A	19-Dec-12			4.8				0.53		16.1		
MW8A	26-Mar-13	4.6		2.7						11.1		
MW8A	02-Aug-13			3.2						13.5	0.41	
MW8A	09-Apr-14			4.6						21.1		
MW8A	25-Nov-14	0.53		5.6	0.42					25.8	0.54	
MW8A	28-Jan-15			3.6		14.7				17.2		
MW8A	02-Apr-15			6						23.2		
MW8A	04-Jun-15			6.7						32.7		
MW8A	06-Aug-15			4.8						23		
MW8A	04-Nov-15			5.9						27.6		
MW8A	16-Mar-16	1.1		6.8						29.4		
MW8A	23-May-16			5.5						26.8		
MW8A	15-Aug-16			6						27.2		
MW8A	15-Nov-16			6.3						26.7		
P8B	27-Jan-11		3.1	2.2	1.9					283	8.8	
P8B	27-Sep-11											
P8B	27-Sep-11	1.9		2.7	1.4					278	7.8	
P8B	29-Dec-11											
P8B	29-Dec-11			3.2	1.9					323	8.7	
P8B	28-Mar-12											
P8B	28-Mar-12	2.1		4.2	2					346	9.8	
P8B	27-Jul-12			3.4	2.1					330	6.6	0.31
P8B	02-Oct-12	2		3.8	2.1					329	10.8	
P8B	19-Dec-12		10.8	1.5					0.98	139	4.1	
P8B	02-Aug-13	1.4		3.5	2	7.3				238	6.1	
P8B	29-Jan-14	1.9		3.7	2.5					218	2.1	
P8B	09-Apr-14	2		4	2.4					224	3.4	
P8B	16-Sep-14	1.5		3.4	1.6					188	9.4	
P8B	25-Nov-14	1.4		4.2	3					204	2.5	
P8B	28-Jan-15		4.4	1.7						117	3.2	
P8B	02-Apr-15			4						150	9.4	
P8B	04-Jun-15			2.9						195	4.2	
P8B	06-Aug-15			3.8	2.7					201	4.1	

TABLE 8

GROUNDWATER ANALYSIS RESULTS  
VILLAGE OF GRAFTON, WISCONSIN

	1,1,1-Trichloroethane	1,1,2-Trichlorotrifluoroethane	1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Bromodichloromethane	Carbon Disulfide	Chloromethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethene
<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
<b>PAL</b>	40		85	0.7	200	0.06	200	0.3	7	20	
<b>ES</b>	200		850	7	1,000	0.6	1,000	3	70	100	

Well Name	Collection Date										
P8B	04-Nov-15			3.2						158	4.3
P8B	16-Mar-16			2.5						107	2.5
P8B	23-May-16			3.4						138	3.5
P8B	15-Aug-16			3.6	2.9					145	
P8B	15-Nov-16			4.1						128	3.7
P9B	28-Sep-11										
P9B	28-Sep-11		53.6								
P9B	29-Dec-11										
P9B	29-Dec-11		38.9								
P9B	28-Mar-12										
P9B	28-Mar-12		47.9								
P9B	27-Jul-12		45.8								
P9B	02-Oct-12		49								
P9B	18-Dec-12		60.8					2.5			
P9B	26-Mar-13		44								
P9B	02-Aug-13	0.45	44.6								
P9B	09-Apr-14		57.1								
P9B	25-Nov-14		61.9						0.61		
P9B	02-Apr-15		66.7								
P9B	06-Aug-15		57.6								
P9B	16-Mar-16		46.7								
P9B	15-Aug-16		63.6								
P10B	29-Sep-11										
P10B	29-Sep-11		75.8								
P10B	28-Dec-11										
P10B	28-Dec-11		51								
P10B	27-Mar-12										
P10B	27-Mar-12		60.1								
P10B	26-Jul-12		56.8								
P10B	01-Oct-12		57.6								
P10B	17-Dec-12		71.3								
P10B	25-Mar-13		50								
P10B	02-Aug-13		48.9	0.36							
P10B	11-Nov-13		55.2	0.32							
P10B	09-Apr-14		60.9								

TABLE 8

GROUNDWATER ANALYSIS RESULTS  
VILLAGE OF GRAFTON, WISCONSIN

	1,1,1-Trichloroethane	1,1,2-Trichlorotrifluoroethane	1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Bromodichloromethane	Carbon Disulfide	Chloromethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethene
<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
<b>PAL</b>	40		85	0.7	200	0.06	200	0.3	7	20	
<b>ES</b>	200		850	7	1,000	0.6	1,000	3	70	100	

Well Name	Collection Date	1,1,1-Trichloroethane	1,1,2-Trichlorotrifluoroethane	1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Bromodichloromethane	Carbon Disulfide	Chloromethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethene
P10B	28-Jan-15		41.3									
P10B	04-Jun-15		44									
P10B	04-Nov-15		44.4			24.2						
P10B	23-May-16		44.5									
P10B	15-Nov-16		46.2									
PW1716LR	06-Aug-15								1.1			

**Notes:**  
 All detects reported from 2001 through 2016  
 Blank cells indicate no detect  
 value exceeds PAL

TABLE 8

GROUNDWATER ANALYSIS RESULTS  
VILLAGE OF GRAFTON, WISCONSIN

	Methylene Chloride	Tetrachloro-ethene	Tetra-hydrofuran	Toluene	Trichloro-ethene	Vinyl Chloride	Chloride	Sulfate
<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
<b>PAL</b>	0.5	0.5	10	200	0.5	0.02	125	125
<b>ES</b>	5	5	50	1,000	5	0.2	250	250

Well Name	Collection Date							
P1B	27-Sep-11						230	30.7
P1B	27-Sep-11				1.2	28.4		
P1B	30-Dec-11						246	32.9
P1B	30-Dec-11					42.1		
P1B	27-Mar-12						220	32.1
P1B	27-Mar-12					42.8		
P1B	27-Jul-12					35.5	211	32.1
P1B	01-Oct-12				1.8	1.6	237	38.1
P1B	25-Mar-13					38.1	218	32.7
P1B	02-Aug-13					46.5	227	33.6
P1C	27-Sep-11						102	29.4
P1C	27-Sep-11				1.3	39.4		
P1C	30-Dec-11						105	17.2
P1C	30-Dec-11			8.9	5.3	1.9	0.21	
P1C	27-Mar-12						101	30.8
P1C	27-Mar-12				2.4	25.5		
P1C	27-Jul-12				1.7	19.2	106	28.9
P1C	01-Oct-12				3.2	8	110	25.4
P1C	25-Mar-13				2.2	20.4	115	31.3
P1C	02-Aug-13				1.9	9.9	352	65.3
P1D	27-Sep-11						304	57.6
P1D	27-Sep-11				2.5	8		
P1D	30-Dec-11						312	63.4
P1D	30-Dec-11			6.8	6.1	4.9	0.2	
P1D	27-Mar-12						297	55.4
P1D	27-Mar-12			3	4.7	4.4		
P1D	27-Jul-12				3.1	8.5	303	57.3
P1D	01-Oct-12				1.9	1.4	316	56.4
P1D	25-Mar-13				3.2	7.1	298	58.4
P1D	02-Aug-13				0.44	34.5	212	33.5
P3B	27-Sep-11		2.5			45		
P3B	27-Mar-12		2.1			43.4		
P3B	01-Oct-12		2.2			41.5		
P3B	26-Mar-13		2.2			37.9		
P3B	09-Apr-14		2.1			36.6		

TABLE 8

GROUNDWATER ANALYSIS RESULTS  
VILLAGE OF GRAFTON, WISCONSIN

	Methylene Chloride	Tetrachloro-ethene	Tetra-hydrofuran	Toluene	Trichloro-ethene	Vinyl Chloride	Chloride	Sulfate
<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
<b>PAL</b>	0.5	0.5	10	200	0.5	0.02	125	125
<b>ES</b>	5	5	50	1,000	5	0.2	250	250

Well Name	Collection Date							
P3B	28-Jan-15		2.2			33.3		
P3B	04-Jun-15		2.3			36.3		
P3B	04-Nov-15		2			34.1		
P3B	23-May-16		2			28.7		
P3B	15-Nov-16		1.5			23.9		
P5B	27-Sep-11						11	56.5
P5B	27-Sep-11					1.3		
P5B	28-Dec-11						12	55.6
P5B	28-Dec-11					2.1		
P5B	27-Mar-12						12.8	55.9
P5B	27-Mar-12					4.2		
P5B	26-Jul-12					4.4	13.3	55.8
P5B	01-Oct-12					5	13.5	56.6
P5B	18-Dec-12					26.1	67.1	54.2
P5B	02-May-13					3.2	10	57.6
P5B	02-Aug-13					22.5	71.1	54.7
P6B	27-Sep-11						3.4	68
P6B	29-Dec-11						3.6	67.2
P6B	27-Mar-12						3.3	65.9
P6B	27-Mar-12							
P6B	26-Jul-12						3,400	64.8
P6B	01-Oct-12						3,500	66.7
P6B	18-Dec-12						3,500	70.1
P6B	25-Mar-13						3,400	65.6
P6B	02-Aug-13						4,300	67.5
P7B	27-Jan-11	0.5						
P7B	01-Aug-13							
P7B	29-Jan-14					45.3	86.6	
MW8A	27-Jan-11	0.46				16.5	4.6	
MW8A	27-Sep-11						35.7	30.6
MW8A	27-Sep-11					5.1	0.64	
MW8A	29-Dec-11						33.2	28.3
MW8A	29-Dec-11					2.2	0.4	
MW8A	28-Mar-12						70.6	40.7
MW8A	28-Mar-12					12.3	4.9	

TABLE 8

GROUNDWATER ANALYSIS RESULTS  
VILLAGE OF GRAFTON, WISCONSIN

	Methylene Chloride	Tetrachloro-ethene	Tetra-hydrofuran	Toluene	Trichloro-ethene	Vinyl Chloride	Chloride	Sulfate
<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
<b>PAL</b>	0.5	0.5	10	200	0.5	0.02	125	125
<b>ES</b>	5	5	50	1,000	5	0.2	250	250

Well Name	Collection Date							
MW8A	27-Jul-12				4.9	1.5	64	40
MW8A	02-Oct-12				6.3	2	66.9	40.9
MW8A	19-Dec-12				12.9	5.4	79.2	44
MW8A	26-Mar-13				6.5	1.6	566	48.4
MW8A	02-Aug-13				7	1.4	84.8	44.2
MW8A	09-Apr-14				6.7	2.2		
MW8A	25-Nov-14				8.6	4.2		
MW8A	28-Jan-15				5.8	1.9		
MW8A	02-Apr-15				7.6	3.5		
MW8A	04-Jun-15				9.2	4.4		
MW8A	06-Aug-15				6.6	1.2		
MW8A	04-Nov-15				9.8	3.6		
MW8A	16-Mar-16				10.6	4.2		
MW8A	23-May-16				7.5	3.1		
MW8A	15-Aug-16				8.2	3.2		
MW8A	15-Nov-16				6.7	2.3		
P8B	27-Jan-11				153	119		
P8B	27-Sep-11						38.1	34.1
P8B	27-Sep-11				218	70.3		
P8B	29-Dec-11						46.2	39
P8B	29-Dec-11				239	126		
P8B	28-Mar-12						47.8	38.7
P8B	28-Mar-12				253	145		
P8B	27-Jul-12	1.1			217	143	48	39
P8B	02-Oct-12				236	142	51.7	40.7
P8B	19-Dec-12				120	57.3	35.9	28
P8B	02-Aug-13				219	79.9	52.3	40.3
P8B	29-Jan-14				256	77.1		
P8B	09-Apr-14				239	65.4		
P8B	16-Sep-14				236	49.8		
P8B	25-Nov-14				234	57.3		
P8B	28-Jan-15				138	24.6		
P8B	02-Apr-15				222	42		
P8B	04-Jun-15				222	53.1		
P8B	06-Aug-15				233	59.8		



TABLE 8

GROUNDWATER ANALYSIS RESULTS  
VILLAGE OF GRAFTON, WISCONSIN

	Methylene Chloride	Tetrachloro-ethene	Tetra-hydrofuran	Toluene	Trichloro-ethene	Vinyl Chloride	Chloride	Sulfate
<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
<b>PAL</b>	0.5	0.5	10	200	0.5	0.02	125	125
<b>ES</b>	5	5	50	1,000	5	0.2	250	250

Well Name	Collection Date							
P8B	04-Nov-15				243	36		
P8B	16-Mar-16				123	25.1		
P8B	23-May-16				209	31.8		
P8B	15-Aug-16				199	35.6		
P8B	15-Nov-16				198	30.8		
P9B	28-Sep-11						66.6	25.6
P9B	28-Sep-11				4.1			
P9B	29-Dec-11						57.6	27
P9B	29-Dec-11				2.9			
P9B	28-Mar-12						65.6	26.2
P9B	28-Mar-12				4.3			
P9B	27-Jul-12				6.4		69	26.5
P9B	02-Oct-12				6.8		70.6	26.6
P9B	18-Dec-12				4.5		71.3	26.8
P9B	26-Mar-13				4.3		72.8	26.1
P9B	02-Aug-13				4.7		77.3	26.9
P9B	09-Apr-14				5.1			
P9B	25-Nov-14				6.1			
P9B	02-Apr-15				5.1			
P9B	06-Aug-15				5.9			
P9B	16-Mar-16				5.4			
P9B	15-Aug-16				6			
P10B	29-Sep-11						131	41.1
P10B	29-Sep-11				2.2			
P10B	28-Dec-11						142	49.2
P10B	28-Dec-11	1.1			1.8			
P10B	27-Mar-12						146	44.4
P10B	27-Mar-12				2.1			
P10B	26-Jul-12				2		143	44
P10B	01-Oct-12				2.3		147	43.4
P10B	17-Dec-12				2.3		142	44.7
P10B	25-Mar-13				2		155	44
P10B	02-Aug-13				2.2		159	44.4
P10B	11-Nov-13				2.1			
P10B	09-Apr-14				2.3			

**TABLE 8**

**GROUNDWATER ANALYSIS RESULTS  
VILLAGE OF GRAFTON, WISCONSIN**

	Methylene Chloride	Tetrachloro-ethene	Tetra-hydrofuran	Toluene	Trichloro-ethene	Vinyl Chloride	Chloride	Sulfate
<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
<b>PAL</b>	0.5	0.5	10	200	0.5	0.02	125	125
<b>ES</b>	5	5	50	1,000	5	0.2	250	250

Well Name	Collection Date							
P10B	28-Jan-15					1.8		
P10B	04-Jun-15					2.1		
P10B	04-Nov-15					2.1		
P10B	23-May-16					1.9		
P10B	15-Nov-16					1.6		
PW1716LR	06-Aug-15							

**Notes:**  
All detects repor  
Blank cells indic:  
[Redacted]

**TABLE 9**  
**TREND SUMMARY**  
**NATURAL ATTENUATION MONITORING**  
**WEST PLUME**  
**VILLAGE OF GRAFTON, WISCONSIN**

Compound Test Name	Upgradient P6B <sup>1</sup>	Plume Wells									Down- gradient P7B
		P5B <sup>1</sup>	P1B <sup>1</sup>	P1C <sup>1</sup>	P1D <sup>1</sup>	P9B	P10B	P3B <sup>2</sup>	MW8A <sup>2</sup>	P8B <sup>2</sup>	
1,1,1-Trichloroethane		--	--	--	--				--		
1,1-Dichloroethane			--						--	--	
1,1-Dichloroethene				--						↑	
cis-1,2-Dichloroethene		--	--	--					↓	--	
trans-1,2-Dichloroethene										↓	
Tetrachloroethene								--			
Trichloroethene		--	--	--	--	↑	--	--	↓	↑	
Vinyl chloride									↓	↑	

Exceeded PAL in 2016  
 ↑ Upward trend  
 ↓ Downward trend  
 -- Detected; no trend

Trends through 2016 (minimum 8 rounds of data collection.)  
<sup>1</sup> Trends through 2013; exceedances from 2013  
<sup>2</sup> Wells affected by Lime Kiln Park

Key	
↑	Rising Trend
↓	Falling Trend
--	Stable, detected
	Not detected
NA	No analysis
	Above PAL during 2016

TABLE 10

NATURAL ATTENUATION PARAMETERS  
 VILLAGE OF GRAFTON, WISCONSIN

Well	Depth	DO %	ORP milli- volts	Fe+2 ug/l	Mn ug/l	Nitrate mg/l	Sulfate mg/l	Ethane ug/l	Ethene ug/l	Methane ug/l
P6B		0.64	-13.3		79.9		65.9		0.9	
P5B		0.23	49.4		40.5		55.9			
P1B		1.77	60.5		6.2	0.81	32.1			
P1C		1.72	63.6		86.9		30.8		1.3	
P1D		1.75	1.3		5.9		55.4		6.4	
P3B		3.62	71.1							
P9B (1788)		0.43	56.6		9.4	1	26.2			
P10B		2.3	216.2		1.7	3.4	44.4			
MW8A		0.18	-48.6	0.019		0.51	40.7			
P8B (1749)		0.19	7.5		19.8	1.3	38.7			
P7B		5.35	53							

**Notes:**

\* Representative of entire borehole length.  
 Blank cells represent dates or depths where data is unavailable.

**TABLE 11**  
**RECOMMENDED MONITORING PLAN**  
**WEST PLUME**  
**VILLAGE OF GRAFTON, WISCONSIN**

**Parameter List**

Analysis A: VOCs  
Analysis C: Indicator Parameters - pH, Temperature, Conductivity, DO, ORP

**Well Groups**

Well List 1

MW2A - Downgradient of landfill  
P2B - Downgradient of landfill  
P7B - Downgradient of landfill  
MW8A - Downgradient of landfill  
P8B - (formerly PW1749) - Downgradient of both plumes  
P10B – Sidegradient of West Plume, west side  
PW1716LR – Watts Residence, downgradient of both plumes

Well List 2

P3B - Sidegradient of landfill, west side  
P9B - Sidegradient of Manchester Subdivision  
PW717HC - Sidegradient of plume, east side  
PW1530LR - Downgradient of plume  
PW1587LR - Downgradient of plume  
PW461HR - Downgradient of plume

Well List 3

LH1 - Groundwater within waste  
P4B - Upgradient of landfill

**Monitoring Plan**

Well List 1

Quarterly analysis of List A, C (February, May, August, November)

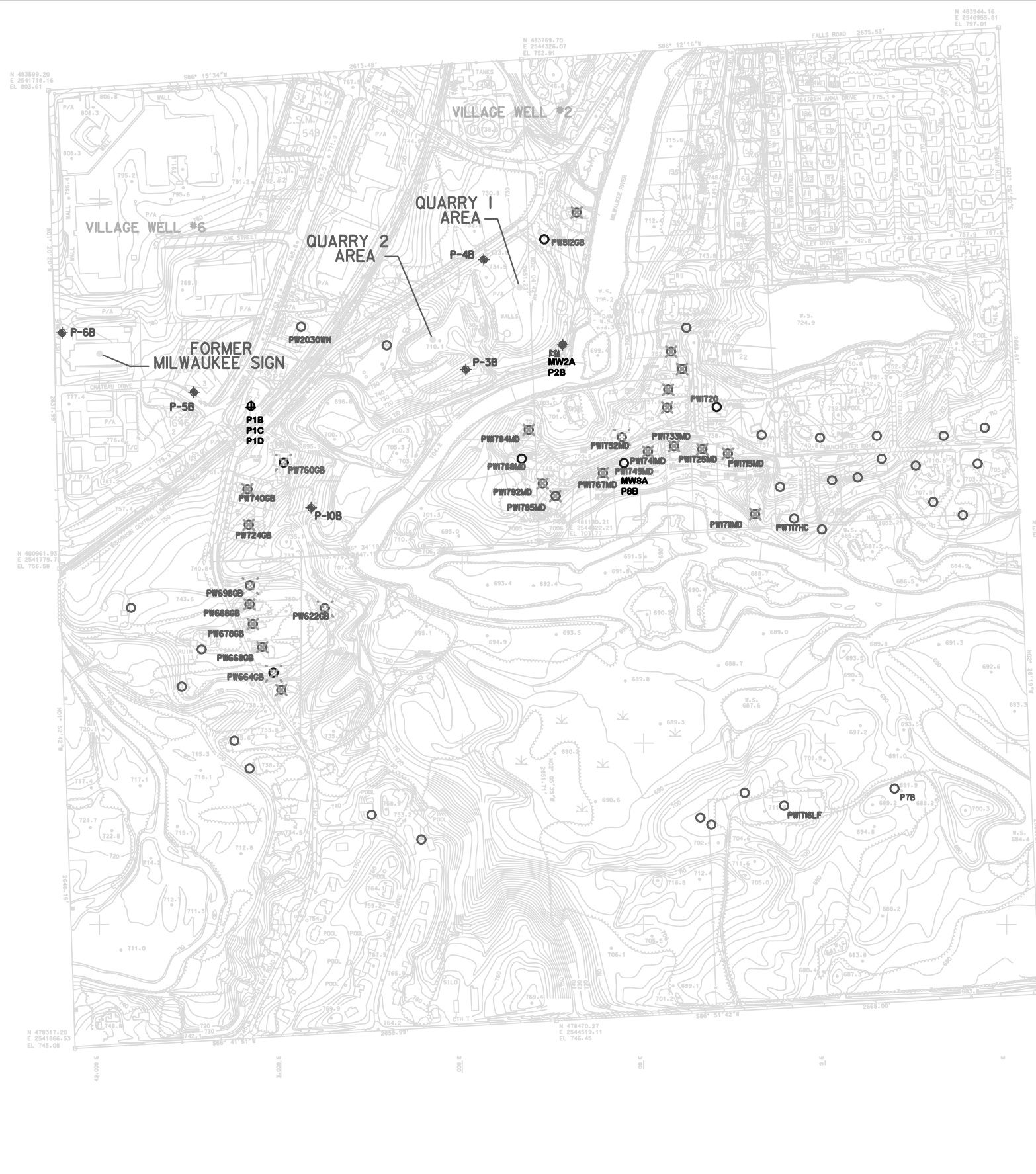
Well List 2

Semi-annual analysis of List A, C (February, August)

Well List 3

Annual analysis of List A, C (February)

**Corrected 2017 Figures**



EXPLANATION

-  PRIVATE WATER SUPPLY WELL TO BE ABANDONED
-  ABANDONED PRIVATE WATER SUPPLY WELL
-  PRIVATE WATER SUPPLY WELL THAT HAVE BEEN SAMPLED
-  SURFACE WATER SAMPLE
-  MONITORING WELL
-  LEACHATE WELL
-  MONITORING WELL NEST
-  STAFF GAUGE

NOTES:

1. TOPOGRAPHIC BASE MAP AND PRIVATE WELL LOCATIONS COMPILED FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES.
2. HORIZONTAL DATUM BASED ON STATE PLANE COORDINATES.

\$\$\$DATE\$\$\$

###REF###  
###REF###  
###REF###  
###REF###

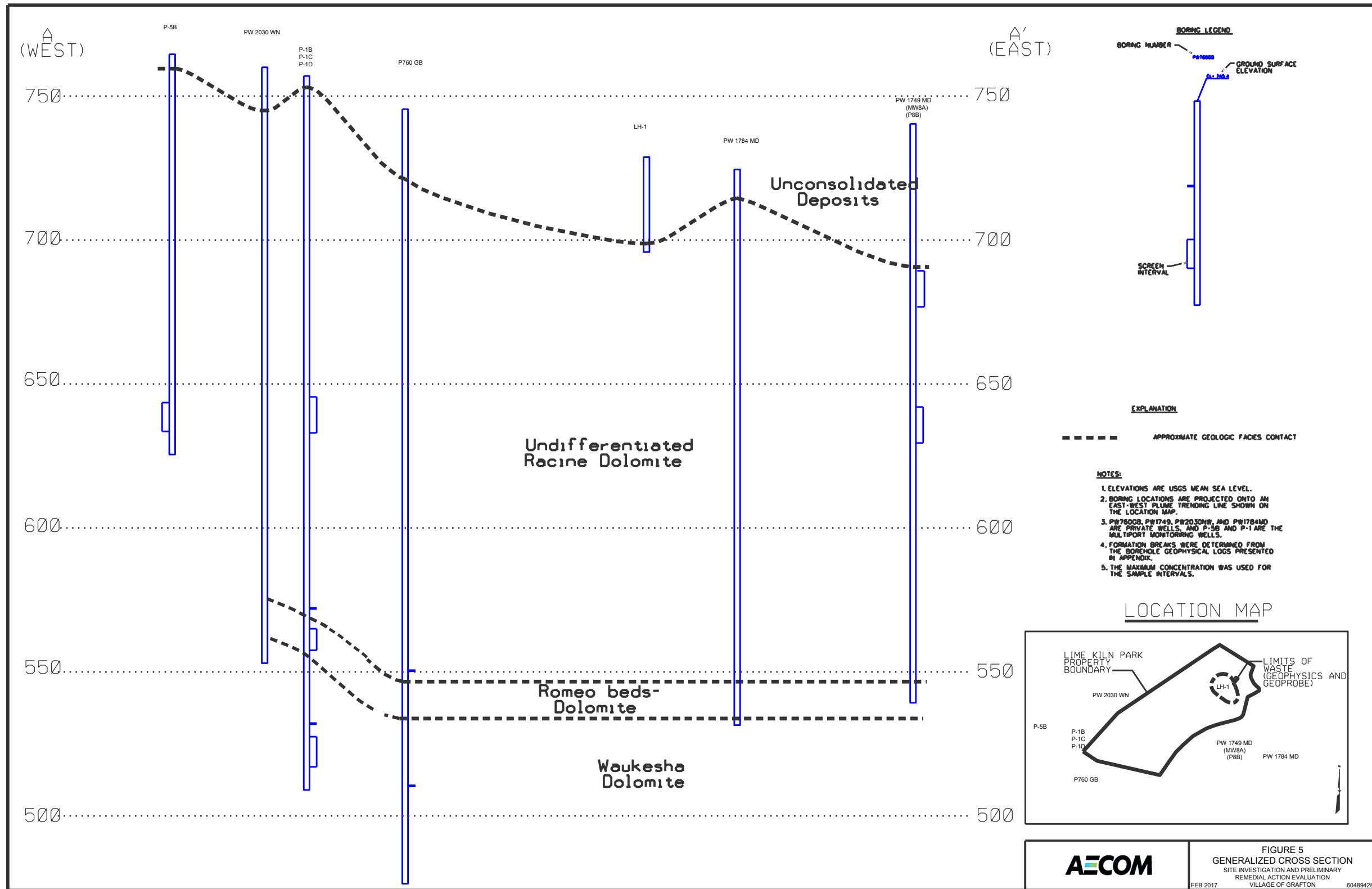
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###LEVEL###  
###DATE###  
###DGN###  
\$\$\$DGN\$\$\$



FIGURE 2  
EXISTING CONDITIONS  
SITE INVESTIGATION AND  
PRELIMINARY REMEDIAL ACTION IDENTIFICATION  
VILLAGE OF GRAFTON  
GRAFTON, WISCONSIN

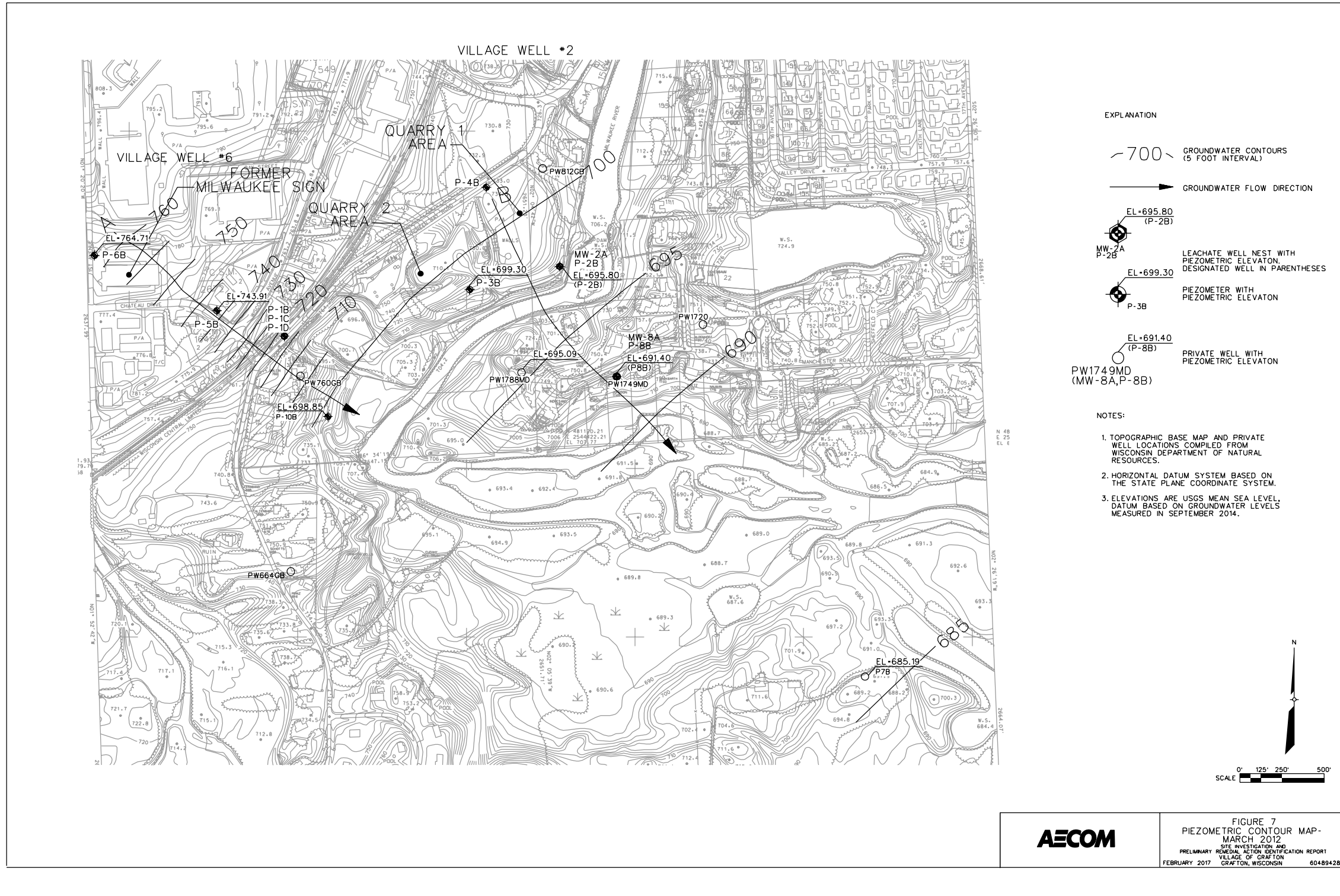
FEBRUARY 2017

60489428



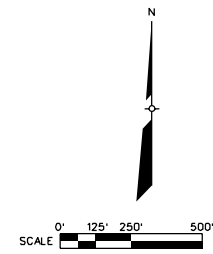
**FIGURE 5**  
**GENERALIZED CROSS SECTION**  
 SITE INVESTIGATION AND PRELIMINARY  
 REMEDIAL ACTION EVALUATION  
 VILLAGE OF GRAFTON      60489428  
 FEB 2017





- EXPLANATION**
- 700- GROUNDWATER CONTOURS (5 FOOT INTERVAL)
  - GROUNDWATER FLOW DIRECTION
  - EL-695.80 (P-2B)  
MW-2A P-2B LEACHATE WELL NEST WITH PIEZOMETRIC ELEVATION. DESIGNATED WELL IN PARENTHESES
  - EL-699.30  
P-3B PIEZOMETER WITH PIEZOMETRIC ELEVATION
  - EL-691.40 (P-8B)  
PW1749MD (MW-8A,P-8B) PRIVATE WELL WITH PIEZOMETRIC ELEVATION

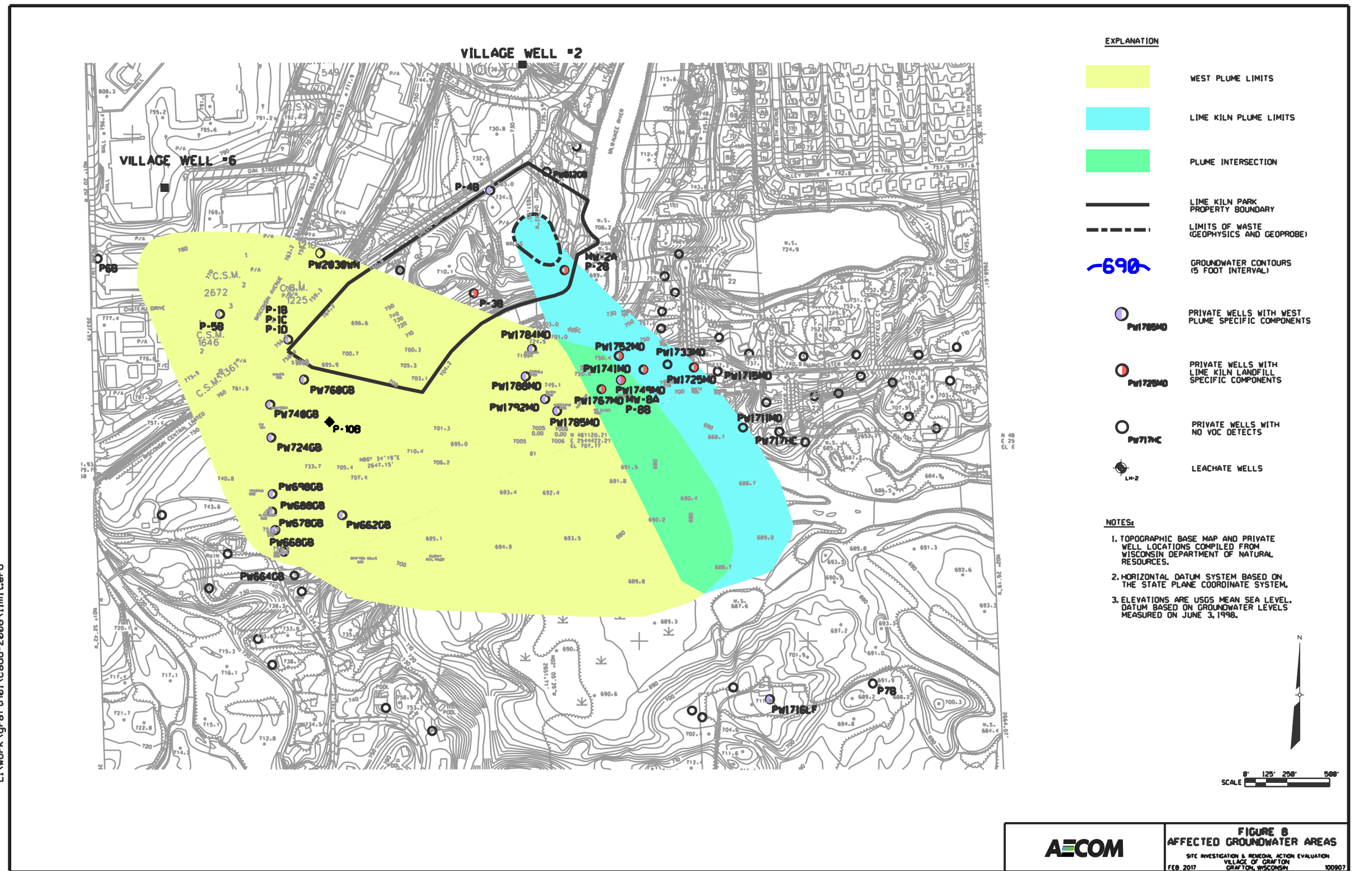
- NOTES:**
1. TOPOGRAPHIC BASE MAP AND PRIVATE WELL LOCATIONS COMPILED FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES.
  2. HORIZONTAL DATUM SYSTEM BASED ON THE STATE PLANE COORDINATE SYSTEM.
  3. ELEVATIONS ARE USGS MEAN SEA LEVEL, DATUM BASED ON GROUNDWATER LEVELS MEASURED IN SEPTEMBER 2014.



\$DATE\$ \$TIME\$  
 \$Pentable\$ \$PENTBL\$  
 \$Server\$ = US\$H8501  
 \$FILEL\$

<b>AECOM</b>	FIGURE 7 PIEZOMETRIC CONTOUR MAP - MARCH 2012
	SITE INVESTIGATION AND PRELIMINARY REMEDIAL ACTION IDENTIFICATION REPORT VILLAGE OF GRAFTON FEBRUARY 2017 GRAFTON, WISCONSIN 60489428

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- EXPLANATION**
- WEST PLUME LIMITS
  - LIME KILN PLUME LIMITS
  - PLUME INTERSECTION
  - LIME KILN PARK PROPERTY BOUNDARY
  - LIMITS OF WASTE (GEOPHYSICS AND GEOPROBE)
  - 690 GROUNDWATER CONTOURS (5 FOOT INTERVAL)
  - PRIVATE WELLS WITH WEST PLUME SPECIFIC COMPONENTS  
Pw1784MD
  - PRIVATE WELLS WITH LIME KILN LANDFILL SPECIFIC COMPONENTS  
Pw1729MD
  - PRIVATE WELLS WITH NO VOC DETECTS  
Pw1717MD
  - LEACHATE WELLS  
LW-2

- NOTES:**
1. TOPOGRAPHIC BASE MAP AND PRIVATE WELL LOCATIONS COMPILED FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES.
  2. HORIZONTAL DATUM SYSTEM BASED ON THE STATE PLANE COORDINATE SYSTEM.
  3. ELEVATIONS ARE USGS MEAN SEA LEVEL DATUM BASED ON GROUNDWATER LEVELS MEASURED ON JUNE 3, 1998.

**AECOM** **FIGURE 8**  
**AFFECTED GROUNDWATER AREAS**  
 SITE INVESTIGATION & REMEDIAL ACTION EVALUATION  
 VILLAGE OF GRAFTON  
 GRAFTON, WISCONSIN 53027

## **Groundwater Monitoring Data Summary**

AECOM  
2985 South Ridge Road, Suite B  
Green Bay, WI 54304  
aecom.com

Mr. John Feeney  
Wisconsin Department of Natural  
Resources  
1155 Pilgrim Parkway  
Plymouth, WI 53073

July 1, 2019

**AECOM Project No.**  
60600468

**Subject: Quarterly and Semi-Annual Groundwater Monitoring Results  
Grafton Lime Kiln Park Landfill/West Plume Area, WDNR License No. 3602**

Dear Mr. Feeney:

On behalf of the Village of Grafton, AECOM is submitting the March and May 2019 groundwater monitoring data for the Grafton Lime Kiln Park Landfill/West Plume Area.

The sampling was performed in accordance with the current monitoring program which consists of monitoring the Lime Kiln Landfill and the West Plume simultaneously as outlined in Table 11 of the Site Investigation and Preliminary Remedial Action Evaluation (2017). Natural attenuation at this site is progressing as most concentrations of chlorinated VOCs are decreasing in concentration; however, some locations are still above NR 140 groundwater quality limits.

### Groundwater Flow Patterns

Groundwater within the undifferentiated Racine Formation flows to the south-southeast near Lime Kiln Park while west of the park groundwater flows east-southeast.

### Monitoring Wells

VOC samples were collected from 5 downgradient wells, 3 sidegradient wells, and 1 upgradient well during the March and May 2018 monitoring events. Trend data indicates that most VOC concentrations are decreasing as summarized in the table below. However, two locations (P8B and P9B) that are in the middle of the plume show increasing concentrations. In addition, vinyl chloride for P2A is showing an increasing trend, while the parent constituents are showing decreasing concentrations. Wells P2B, P8A, and P10B continue to show decreasing trends.

Compound	P2A	P2B	P3B	P8A	P8B	P9B	P10B
Vinyl Chloride	↑	↓	nt	↓	↑	nt	--
1,1-Dichloroethane	↓	↓	--	↓	↑	--	--
1,1-Dichloroethene	--	--	--	↓	↑	--	--
cis-1,2-Dichloroethene	↓	↓	nt	↓	↓	nt	--
trans-1,2-Dichloroethene	↓	↓	--	↓	↑	--	--
Trichloroethene	↓	↓	nt	↓	↑	↑	nt
1,1,1-Trichloroethane	--	--	--	--	nt	--	--
1,1,2-Trichlorofluoroethane	--	--	--	--	--	↑	↓

↓ - decreasing trend

↑ - increasing trend

nt – no trend

-- not detected, or trace levels

Shading indicated concentration above PAL

Trend analysis was performed using Pro UCL Version 5.1 (EPA, 2016) and the ProUCL trend graphs can be found in Attachment 1. The Theil-Sen line slope indicator test was used to test for a linear trend, as it is insensitive to outliers, and more accurate than simple linear regression analysis. In some cases, the Theil-Sen line slope test indicated there was insufficient evidence in the data to identify a significant trend, and this is generally due to variability or a random spike in the data. The Sen's Slope Indicator test was performed at a 95-percent confidence level ( $\alpha = 0.05$ ).

A number of Preventive Action Limit (PAL) and Enforcement Standard (ES) exceedances occurred for chlorinated VOCs. Wells P2B and P8B were highest in overall concentration. Well 2B is highest in the intermediate cis-1,2-dichloroethene (cis-1,2-DCE) and the daughter product of reductive dechlorination vinyl chloride; while P8B is highest in the parent compound trichloroethene (TCE) and the intermediate cis-1,2-DCE. Please refer to the exceedance tables in Attachment 2 for specific information. Results were consistent with historical trends, and no anomalies in the data were identified with the exception that acetone and 2-butanone were more prevalent on the May 2019 sampling event. These compounds are common laboratory and field contaminants and the detections may not be site related. Table 1 summarizes detections in groundwater samples and laboratory reports for the March and May 2019 sampling are included as Attachment 3.

### Private Wells

VOC samples were collected from five private wells (PW1530LR, PW1587LR, PW1716LR, PW461HR, and PW717HC) in March 2019, and one private well (PW1716LR) in May 2019. These private wells are downgradient or sidegradient of the VOC plumes. VOCs were not detected in the private wells. Table 1 summarizes detections in groundwater samples and laboratory reports for the March and May 2019 sampling are included as Attachment 3.

### Groundwater Within Waste

A VOC sample was collected from one well located with the limits of waste (LH1) in May 2019. Decreasing trends were observed for vinyl chloride, cis-1,2-DCE, trans-1,2-DCE, and TCE as shown in the trend graphs included in Attachment 1. The current concentrations in LH1 are considerably lower than wells P2B and P8B, and vinyl chloride is the only compound exceeding the ES. Results were consistent with historical trends, and no anomalies in the data were identified with the exception that acetone and 2-butanone were more prevalent on the May 2019 sampling event. These compounds are common laboratory and field contaminants and the detections may not be site related. Table 1 summarizes detections in groundwater samples and laboratory reports for the March and May 2019 sampling are included as Attachment 3.

### Field Data Quality

Field quality control samples were collected to ensure that data quality objectives were met. Trip blanks were included in the coolers to monitor for contamination during shipping. Trip blank results were nondetect indicating contamination did not occur. Field duplicates were collected at well P8B for both the August and November sampling events. Field duplicate relative percent differences (RPDs) were low, or results were within  $\pm$  the limit of quantitation (LOQ), indicating acceptable field sampling precision

If you have any questions concerning the enclosed information, please do not hesitate to call me at 920.406.3110.

Yours sincerely,

AECOM Technical Services, Inc.

A handwritten signature in black ink, appearing to read "Jeffrey D. Maletzke". The signature is fluid and cursive, with a large initial "J" and "M".

Jeffrey D. Maletzke, P.G.  
Project Manager

cc: Amber Thomas, Village of Grafton



















**Table 1**  
**Analytes Detected in Groundwater**

Well Name	Collection Date	Metals (ug/L)			Natural Attenuation Parameters (mg/L)					
		Arsenic - Dissolved	Ferrous Iron	Manganese - Dissolved	Chloride	Ethene	Nitrogen, nitrate	Nitrogen, NO3 + NO2	Sulfate	TOC
		ES: PAL:								
		50 5	-- --	300 60	250 125	-- --	10 2	10 2	250 125	-- --
P1B	9/27/2011	3.8 J	<18	7.6	<u>230</u>	<0.30	0.96	NA	30.7	<0.072
	12/30/2011	2.5 J	<18	8.6	<u>246</u>	<0.30	NA	1	32.9	<0.072
	3/27/2012	<4.7	<18	6.2	<u>220</u>	<0.30	0.81	NA	32.1	NA
	7/27/2012	<u>5.2 J</u>	19 J	9.4	<u>211</u>	<0.3	NA	0.85	32.1	<0.072
	10/1/2012	<4.7	<18	4.4 J	<u>237</u>	4.4 J	0.45	NA	38.1	NA
	3/25/2013	<4.4	<21	10.0	<u>218</u>	0.42 J	1.1	NA	32.7	NA
	8/2/2013	<4.4	<21	13.2	<u>227</u>	<0.3	<0.15	NA	33.6	NA
P1C	9/27/2011	3.7 J	<18	<u>122</u>	102	<0.30	<0.20	NA	29.4	0.27 J
	12/30/2011	4.3 J	24 J	<u>129</u>	105	9.7	NA	<0.12	17.2	<0.072
	3/27/2012	<4.7	<18	<u>86.9</u>	101	1.3 J	<0.20	NA	30.8	NA
	7/27/2012	<4.7	<18	<u>85.9</u>	106	2.2 J	NA	<0.12	28.9	1.5
	10/1/2012	<4.7	<18	<u>91.1</u>	110	7.1	<0.2	NA	25.4	NA
	3/25/2013	<4.4	<21	<u>93.1</u>	115	1.3 J	<0.2	NA	31.3	NA
	8/2/2013	<u>7.2 J</u>	<21	7.1	<b>352</b>	0.57 J	0.2 J	NA	65.3	NA
P1D	9/27/2011	5.0 J	<18	5.8	<b>304</b>	<0.30	1.4	NA	57.6	0.18 J
	12/30/2011	2.5 J	<18	6.9	<b>312</b>	8.8	NA	0.33	63.4	0.64
	3/27/2012	<4.7	<18	5.9	<b>297</b>	6.4	<0.20	NA	55.4	NA
	7/27/2012	<4.7	<18	6.6	<b>303</b>	1.7 J	NA	1.5	57.3	0.088 J
	10/1/2012	<4.7	<18	6.9	<b>316</b>	5.4	<0.2	NA	56.4	NA
	3/25/2013	<4.4	<21	5.5	<b>298</b>	1.7 J	1.6	NA	58.4	NA
	8/2/2013	<4.4	<21	13.8	<u>212</u>	<0.3	<0.15	NA	33.5	NA
P2A	1/26/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/28/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/29/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/27/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/26/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/1/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/19/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/25/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/1/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/11/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/29/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/2/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/16/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
P2B	1/26/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/28/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/29/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/27/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/26/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/1/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/19/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/25/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/1/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/11/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/29/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA

**Table 1**  
**Analytes Detected in Groundwater**

Well Name	Collection Date	Metals (ug/L)			Natural Attenuation Parameters (mg/L)					
		Arsenic - Dissolved	Ferrous Iron	Manganese - Dissolved	Chloride	Ethene	Nitrogen, nitrate	Nitrogen, NO3 + NO2	Sulfate	TOC
		ES: PAL:	50 5	-- --	300 60	250 125	-- --	10 2	10 2	250 125
P2B	11/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/2/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/16/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	
P3B	9/27/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/27/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/1/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/26/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/28/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/9/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/15/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
11/19/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	
5/22/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	
P4B	12/28/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/17/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/15/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/9/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/15/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/22/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
P5B	9/27/2011	<u>6.2 J</u>	<18	9.9	11	<0.30	<0.20	NA	56.5	0.98
	12/28/2011	<u>5.9 J</u>	<18	16.3	12	<0.30	NA	<0.12	55.6	0.57
	3/27/2012	<4.7	<18	40.5	12.8	<0.30	<0.20	NA	55.9	NA
	7/26/2012	<u>6.6 J</u>	<18	34.7	13.3	0.33 J	NA	<0.12	55.8	0.86
	10/1/2012	<u>6.7 J</u>	<18	33.0	13.5	<0.3	NA	<0.12	56.6	NA
	12/18/2012	<4.7	85	26.7	67.1	<0.3	<0.2	NA	54.2	NA
	5/2/2013	<u>6.9 J</u>	<21	23.2	10	<0.3	<0.15	NA	57.6	NA
	8/2/2013	<u>7.7 J</u>	<21	29.6	71.1	<0.3	<0.15	NA	54.7	NA
P6B	9/27/2011	5.0 J	<18	<u>90.6</u>	3.4 J	<0.30	<0.20	NA	68	2.5
	12/29/2011	3.8 J	<18	<u>88.4</u>	3.6 J	<0.30	NA	<0.12	67.2	2.1
	3/27/2012	<4.7	<18	<u>79.9</u>	3.3 J	0.90 J	<0.20	NA	65.9	NA
	7/26/2012	<4.7	<18	<u>73.6</u>	3.4 J	0.46 J	NA	<0.12	64.8	2.2
	10/1/2012	<4.7	<18	<u>72.7</u>	3.5 J	<0.3	NA	<0.12	66.7	NA
	12/18/2012	<4.7	27 J	<u>75.4</u>	3.5 J	<0.3	<0.2	NA	70.1	NA
	3/25/2013	<4.4	<21	<u>72.2</u>	3.4 J	<0.3	<0.2	NA	65.6	NA
	8/2/2013	<4.4	<21	<u>75.9</u>	4.3	<0.3	<0.15	NA	67.5	NA



**Table 1**  
**Analytes Detected in Groundwater**

Well Name	Collection Date	Metals (ug/L)			Natural Attenuation Parameters (mg/L)					
		Arsenic - Dissolved	Ferrous Iron	Manganese - Dissolved	Chloride	Ethene	Nitrogen, nitrate	Nitrogen, NO3 + NO2	Sulfate	TOC
		ES:	50	--	300	250	--	10	10	250
PAL:	5	--	60	125	--	2	2	125	--	
P7B	1/27/2011	NA	NA	NA	NA	NA	NA	NA	NA	
	9/29/2011	NA	NA	NA	NA	NA	NA	NA	NA	
	12/29/2011	NA	NA	NA	NA	NA	NA	NA	NA	
	3/28/2012	NA	NA	NA	NA	NA	NA	NA	NA	
	7/27/2012	NA	NA	NA	NA	NA	NA	NA	NA	
	10/2/2012	NA	NA	NA	NA	NA	NA	NA	NA	
	12/18/2012	NA	NA	NA	NA	NA	NA	NA	NA	
	3/25/2013	NA	NA	NA	NA	NA	NA	NA	NA	
	8/1/2013	NA	NA	NA	NA	NA	NA	NA	NA	
	11/11/2013	NA	NA	NA	NA	NA	NA	NA	NA	
	1/29/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	9/15/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	11/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	1/28/2015	NA	NA	NA	NA	NA	NA	NA	NA	
	4/2/2015	NA	NA	NA	NA	NA	NA	NA	NA	
	6/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	
	8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	
	11/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	
	3/16/2016	NA	NA	NA	NA	NA	NA	NA	NA	
	5/23/2016	NA	NA	NA	NA	NA	NA	NA	NA	
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	
	11/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	
	3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	
	6/9/2017	NA	NA	NA	NA	NA	NA	NA	NA	
	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	
	11/14/2017	NA	NA	NA	NA	NA	NA	NA	NA	
	3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	
	5/15/2018	NA	NA	NA	NA	NA	NA	NA	NA	
	8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	
	11/19/2018	NA	NA	NA	NA	NA	NA	NA	NA	
	3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	
	5/22/2019	NA	NA	NA	NA	NA	NA	NA	NA	
P8A	1/27/2011	NA	NA	NA	NA	NA	NA	NA	NA	
	9/27/2011	2.2 J	<18	8.4	35.7	<0.30	0.71	NA	30.6	7.6
	12/29/2011	2.4 J	<18	19	33.2	<0.30	NA	0.75	28.3	4.9
	3/28/2012	<4.7	19 J	<0.14	70.6	<0.30	0.51	NA	40.7	NA
	7/27/2012	<4.7	<18	13.3	64	<0.3	NA	0.8	40	0.46 J
	10/2/2012	<4.7	<18	17.7	66.9	<0.3	0.76	NA	40.9	NA
	12/19/2012	<4.7	<18	13.8	79.2	<0.3	NA	0.22 J	44	NA
	3/26/2013	<4.4	<21	10.6	566	<0.3	1	NA	48.4	NA
	8/2/2013	5.8 J	<21	37.5	84.8	<0.3	0.5	NA	44.2	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/28/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/2/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/16/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/9/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA

**Table 1  
Analytes Detected in Groundwater**

		Metals (ug/L)			Natural Attenuation Parameters (mg/L)					
		Arsenic - Dissolved	Ferrous Iron	Manganese - Dissolved	Chloride	Ethene	Nitrogen, nitrate	Nitrogen, NO3 + NO2	Sulfate	TOC
ES:		50	--	300	250	--	10	10	250	--
PAL:		5	--	60	125	--	2	2	125	--
Well Name	Collection Date									
P8A	3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/15/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
P8B	5/22/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/27/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/27/2011	3.7 J	36 J	2.4 J	38.1	<0.30	1.2	NA	34.1	0.34 J
	12/29/2011	2.4 J	<18	21.1	46.2	<0.30	NA	1.4	39	0.87
	3/28/2012	<4.7	<18	19.8	47.8	<0.30	1.3	NA	38.7	NA
	7/27/2012	<4.7	22 J	3.9 J	48	0.31 J	NA	1.4	39	0.28 J
	10/2/2012	<4.7	<18	6.8	51.7	<0.3	1.3	NA	40.7	NA
	12/19/2012	<4.7	<18	6.2	35.9	<0.3	0.78 J	NA	28	NA
	8/2/2013	<4.4	<21	5.4	52.3	<0.3	1.3	NA	40.3	NA
	1/29/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/28/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/2/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/16/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/9/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	
5/15/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	
8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	
11/19/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	
3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	
5/22/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	
P8B DUP	1/27/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/29/2011	2.5 J	<18	19.3	46	<0.30	NA	1.3	39	0.77
	3/28/2012	<4.7	<18	10	47.4	<0.30	1.2	NA	38.4	NA
	7/27/2012	<4.7	<18	3.9 J	48	<0.3	NA	1.4	38.7	0.21 J
	10/2/2012	<4.7	<18	5.1	51.4	<0.3	1.3	NA	40.6	NA
	8/2/2013	<4.4	<21	5.2	52.3	<0.3	1.2	NA	40.3	NA
	1/29/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/28/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/16/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
11/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA	
3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	
6/9/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	

**Table 1**  
**Analytes Detected in Groundwater**

Well Name	Collection Date	Metals (ug/L)			Natural Attenuation Parameters (mg/L)					
		Arsenic - Dissolved	Ferrous Iron	Manganese - Dissolved	Chloride	Ethene	Nitrogen, nitrate	Nitrogen, NO3 + NO2	Sulfate	TOC
		ES: PAL:	50 5	-- --	300 60	250 125	-- --	10 2	10 2	250 125
P8B DUP	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/15/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/19/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/22/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
P9B	9/28/2011	3.7 J	<18	0.46 J	66.6	<0.30	0.95	NA	25.6	0.12 J
	12/29/2011	2.4 J	<18	1.4 J	57.6	<0.30	NA	1.1	27	0.53
	3/28/2012	<4.7	<18	9.4	65.6	<0.30	1	NA	26.2	NA
	7/27/2012	<4.7	<18	0.39 J	69	<0.3	NA	1.1	26.5	0.13 J
	10/2/2012	<4.7	<18	3.3 J	70.6	<0.3	0.99	NA	26.6	NA
	12/18/2012	<4.7	<18	0.92 J	71.3	<0.3	1.3	NA	26.8	NA
	3/26/2013	<4.4	<21	1.2 J	72.8	<0.3	1.2	NA	26.1	NA
	8/2/2013	4.8 J	<21	11.4	77.3	<0.3	0.99	NA	26.9	NA
	1/29/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/2/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/16/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
P10B	9/29/2011	3.2 J	<18	4.9 J	<u>131</u>	<0.30	<u>3.3</u>	NA	41.1	0.084 J
	12/28/2011	<2.0	<18	2.4 J	<u>142</u>	<0.30	NA	<u>3.8</u>	49.2	0.28 J
	3/27/2012	<4.7	<18	1.7 J	<u>146</u>	<0.30	<u>3.4</u>	NA	44.4	NA
	7/26/2012	<4.7	<18	1.5 J	<u>143</u>	<0.3	NA	<u>3.5</u>	44	<0.072
	10/1/2012	<4.7	<18	1.2 J	<u>147</u>	<0.3	NA	<u>3.4</u>	43.4	NA
	12/17/2012	<4.7	<18	17.0	<u>142</u>	<0.3	<u>3.1</u>	NA	44.7	NA
	3/25/2013	<4.4	<21	1.3 J	<u>155</u>	<0.3	<u>3.6</u>	NA	44	NA
	8/2/2013	5.0 J	<21	1.3 J	<u>159</u>	<0.3	<u>3.3</u>	NA	44.4	NA
	11/11/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/29/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/28/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/9/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/15/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/19/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/22/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA

**Table 1**  
**Analytes Detected in Groundwater**

Well Name	Collection Date	Metals (ug/L)			Natural Attenuation Parameters (mg/L)					
		Arsenic - Dissolved	Ferrous Iron	Manganese - Dissolved	Chloride	Ethene	Nitrogen, nitrate	Nitrogen, NO3 + NO2	Sulfate	TOC
		ES: PAL:	50 5	-- --	300 60	250 125	-- --	10 2	10 2	250 125
PW 717 HC	9/28/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/28/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/2/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/26/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/2/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/16/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	
3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PW1530LR	9/29/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/28/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/2/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/26/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/2/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/16/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	
3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PW1587LR	9/29/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/28/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/2/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/26/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/2/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/16/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	
3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PW1716LR	1/26/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/29/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/28/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/27/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/2/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/19/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/25/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/1/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/11/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/15/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/28/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/2/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	
11/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	

**Table 1  
Analytes Detected in Groundwater**

		Metals (ug/L)			Natural Attenuation Parameters (mg/L)					
		Arsenic - Dissolved	Ferrous Iron	Manganese - Dissolved	Chloride	Ethene	Nitrogen, nitrate	Nitrogen, NO3 + NO2	Sulfate	TOC
	ES:	50	--	300	250	--	10	10	250	--
	PAL:	5	--	60	125	--	2	2	125	--
Well Name	Collection Date									
PW1716LR	3/16/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/9/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/15/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/19/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/22/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PW461HR	9/28/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/6/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/8/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/20/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/14/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	
LH1	12/28/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/19/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/15/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/4/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/9/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/15/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/22/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Notes:  
 Analytes detected 1/1/2011 through  
 J - Estimated value.  
 NA - Not analyzed.  
 ES - Enforcement Standard, except  
 PAL - Preventive Action Limit, except

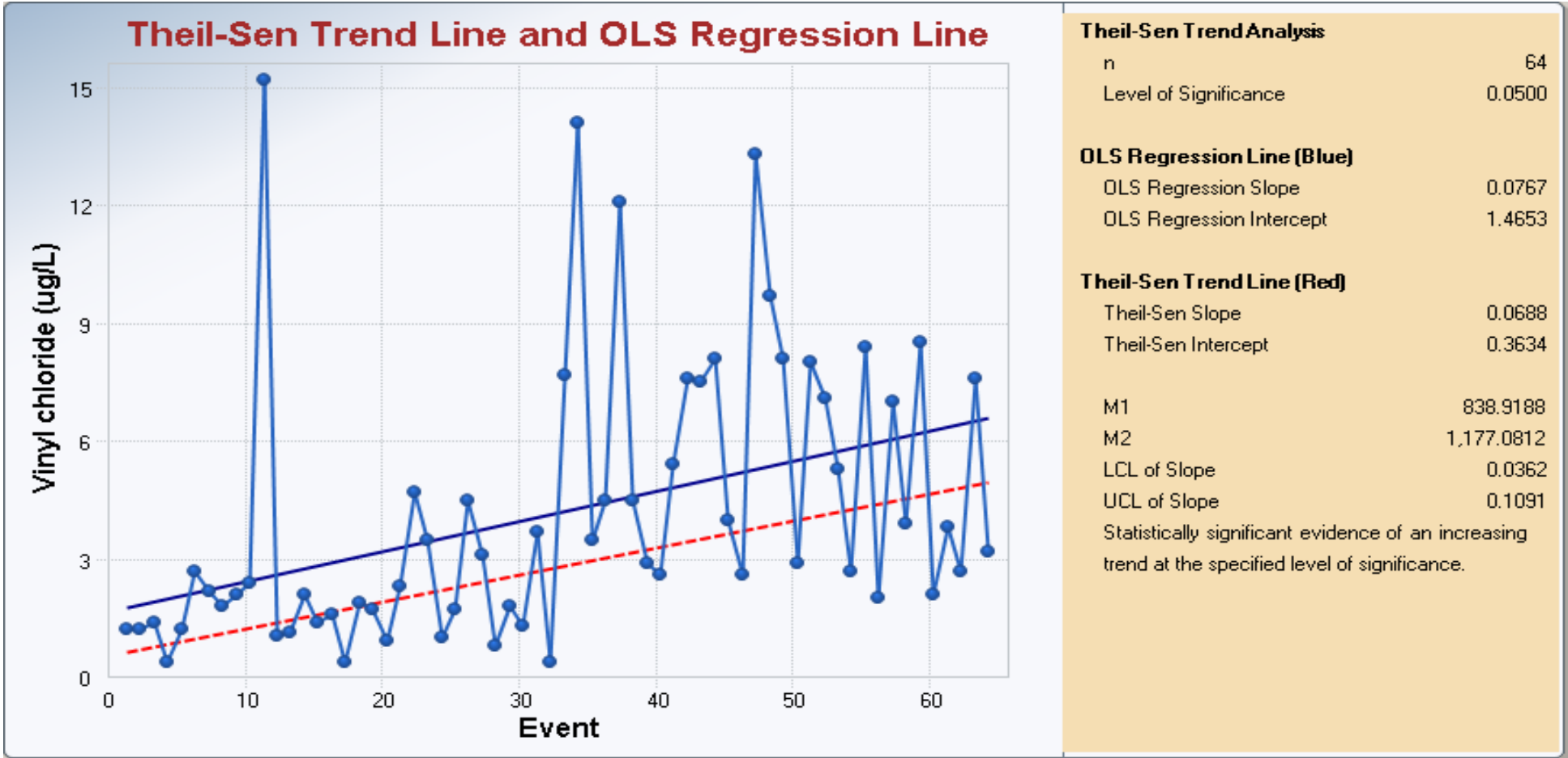
PAL and ES per NR140, Table 1

**Attachment 1**

**Trend Graphs**

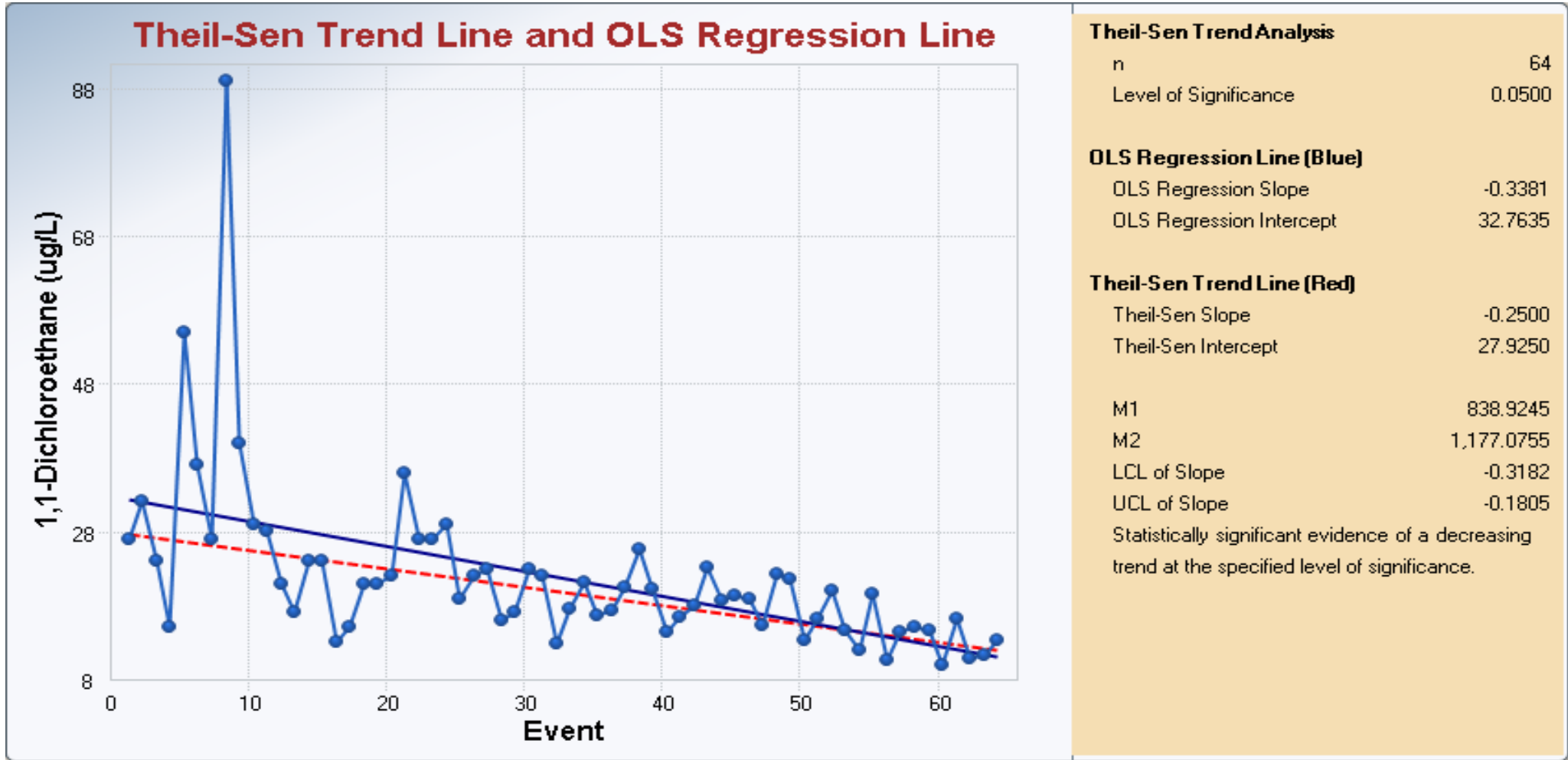
P2A

Grafton Lime Kiln Park Landfill/West Plume Area



P2A

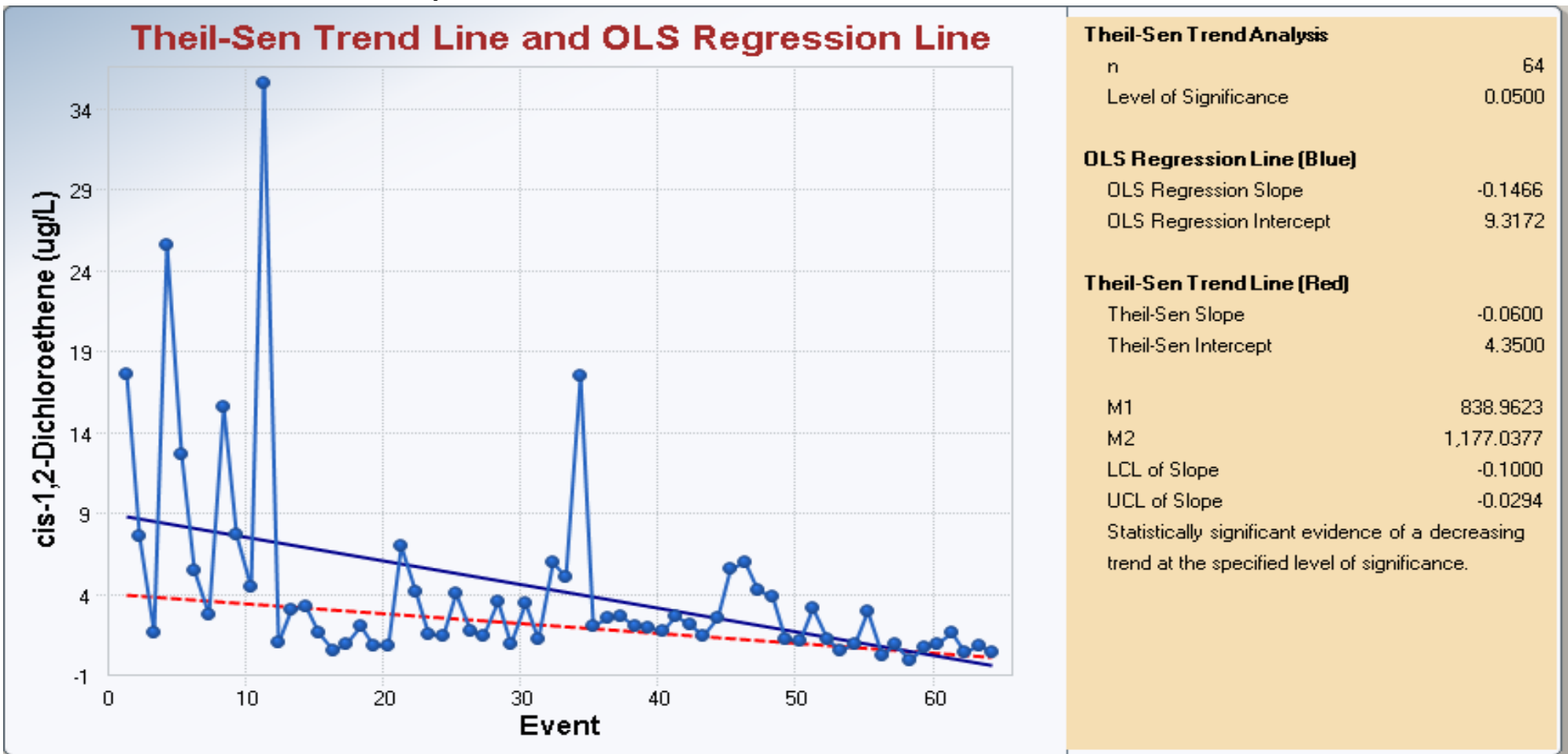
Grafton Lime Kiln Park Landfill/West Plume Area





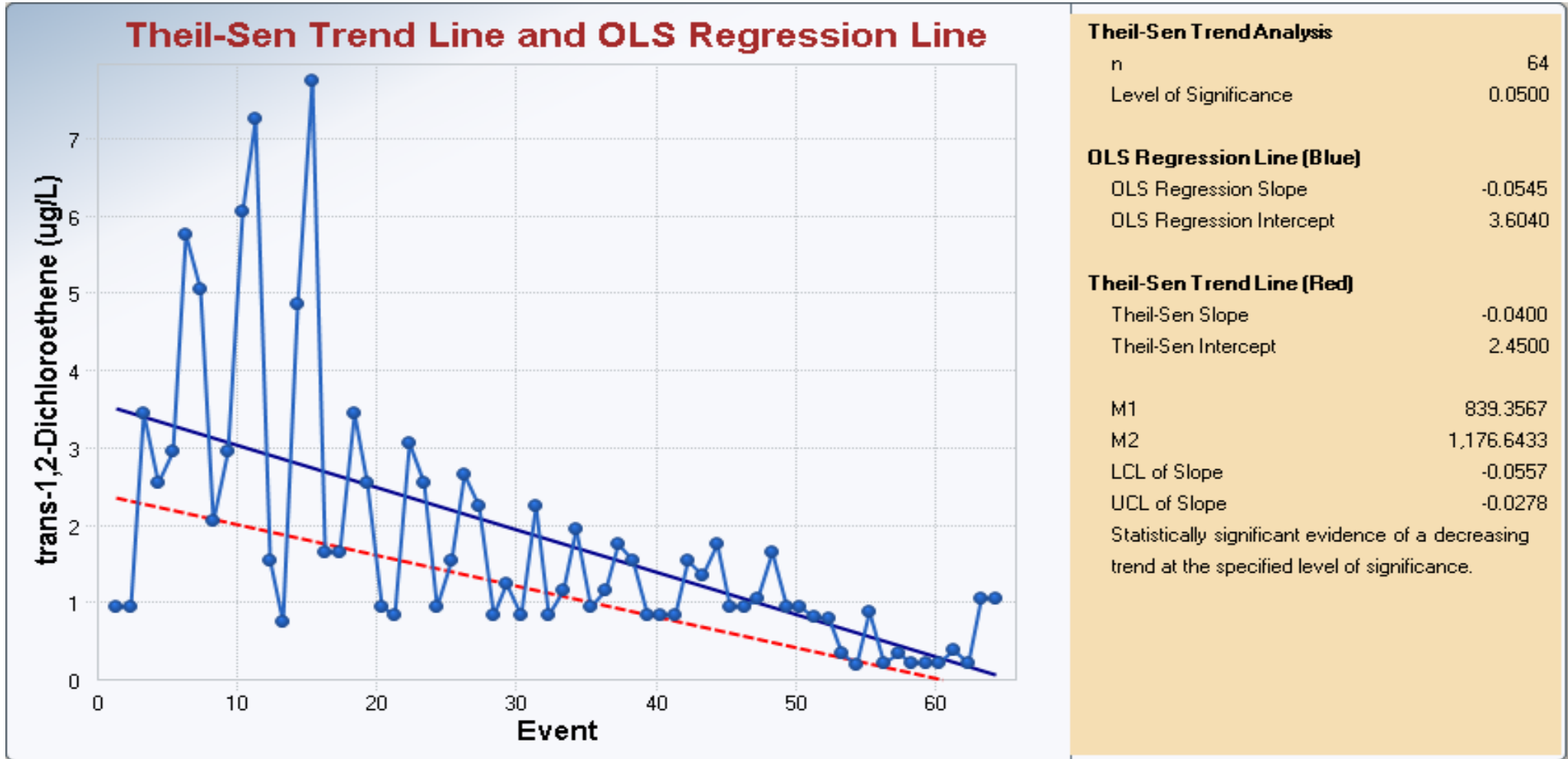
## P2A

### Grafton Lime Kiln Park Landfill/West Plume Area



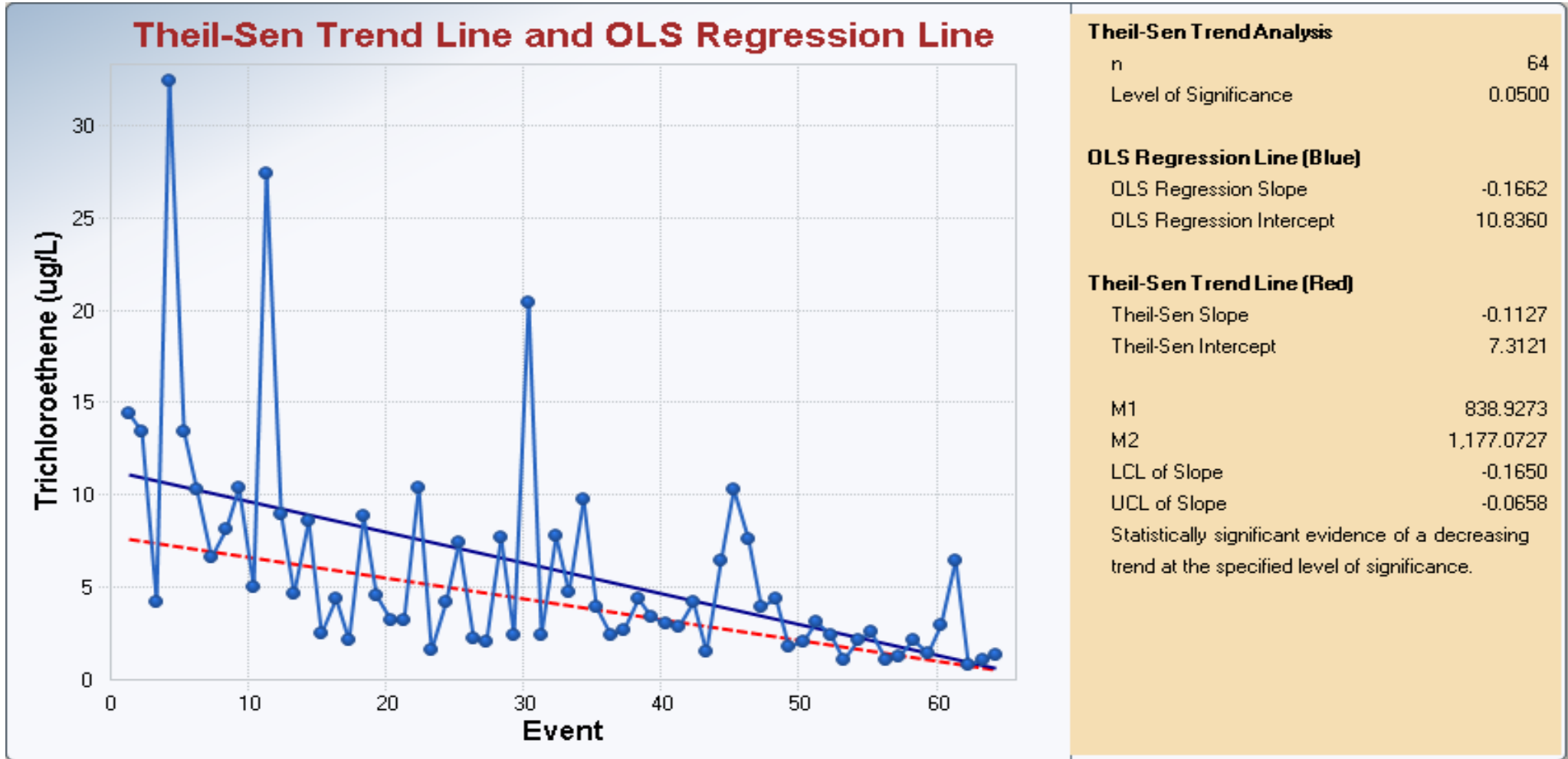
P2A

Grafton Lime Kiln Park Landfill/West Plume Area



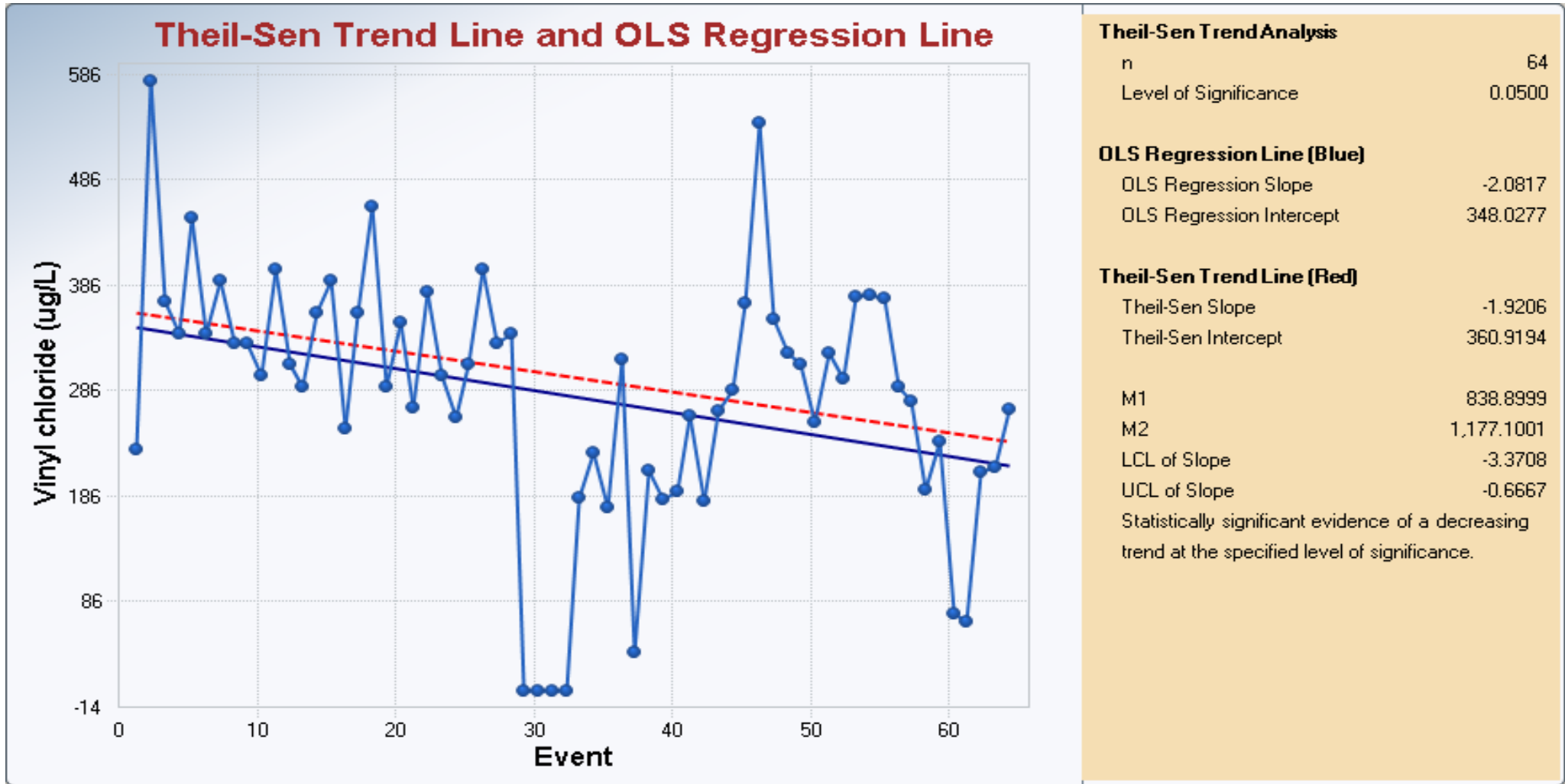
P2A

Grafton Lime Kiln Park Landfill/West Plume Area



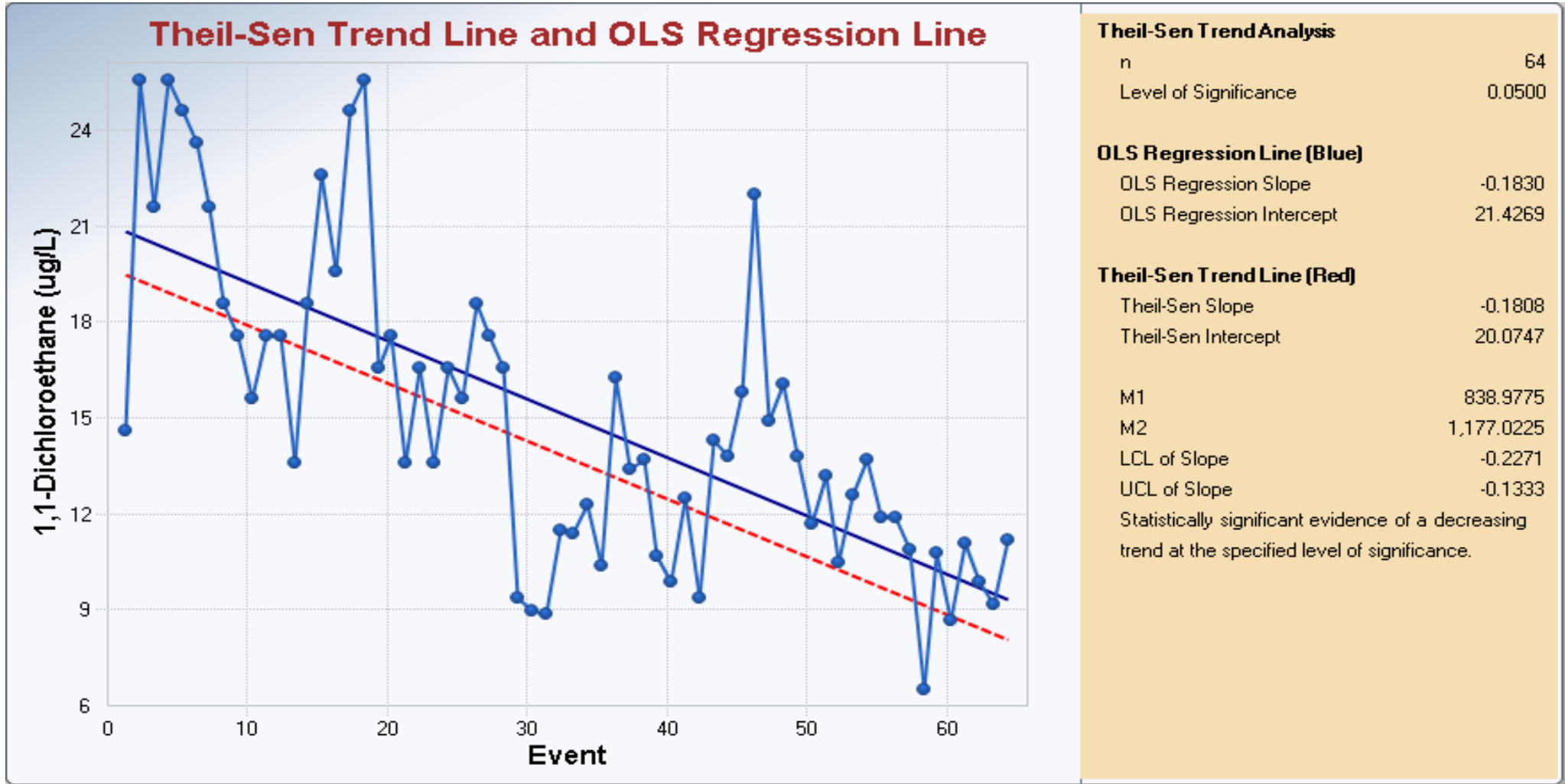
## P2B

### Grafton Lime Kiln Park Landfill/West Plume Area



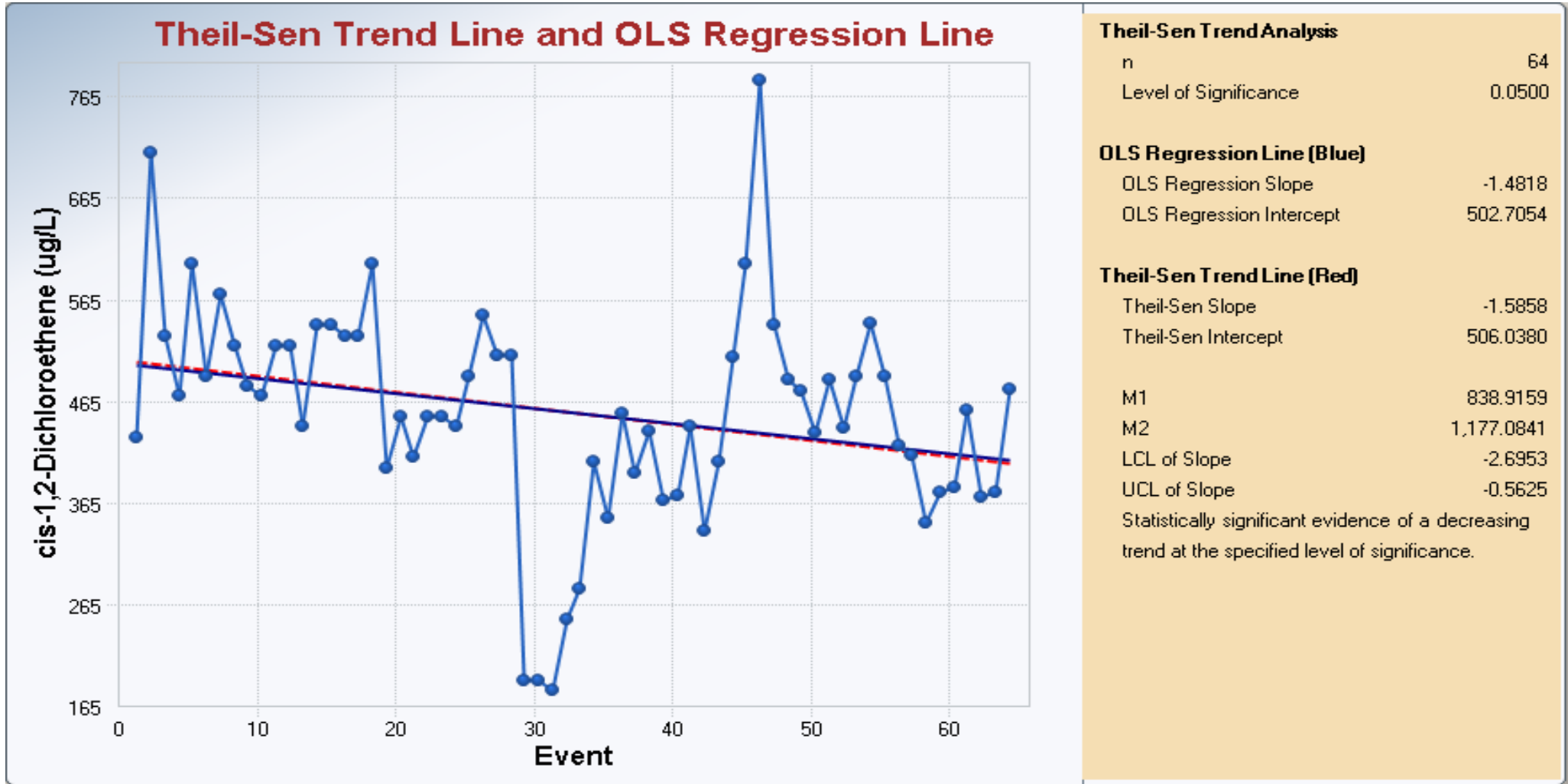
P2B

Grafton Lime Kiln Park Landfill/West Plume Area



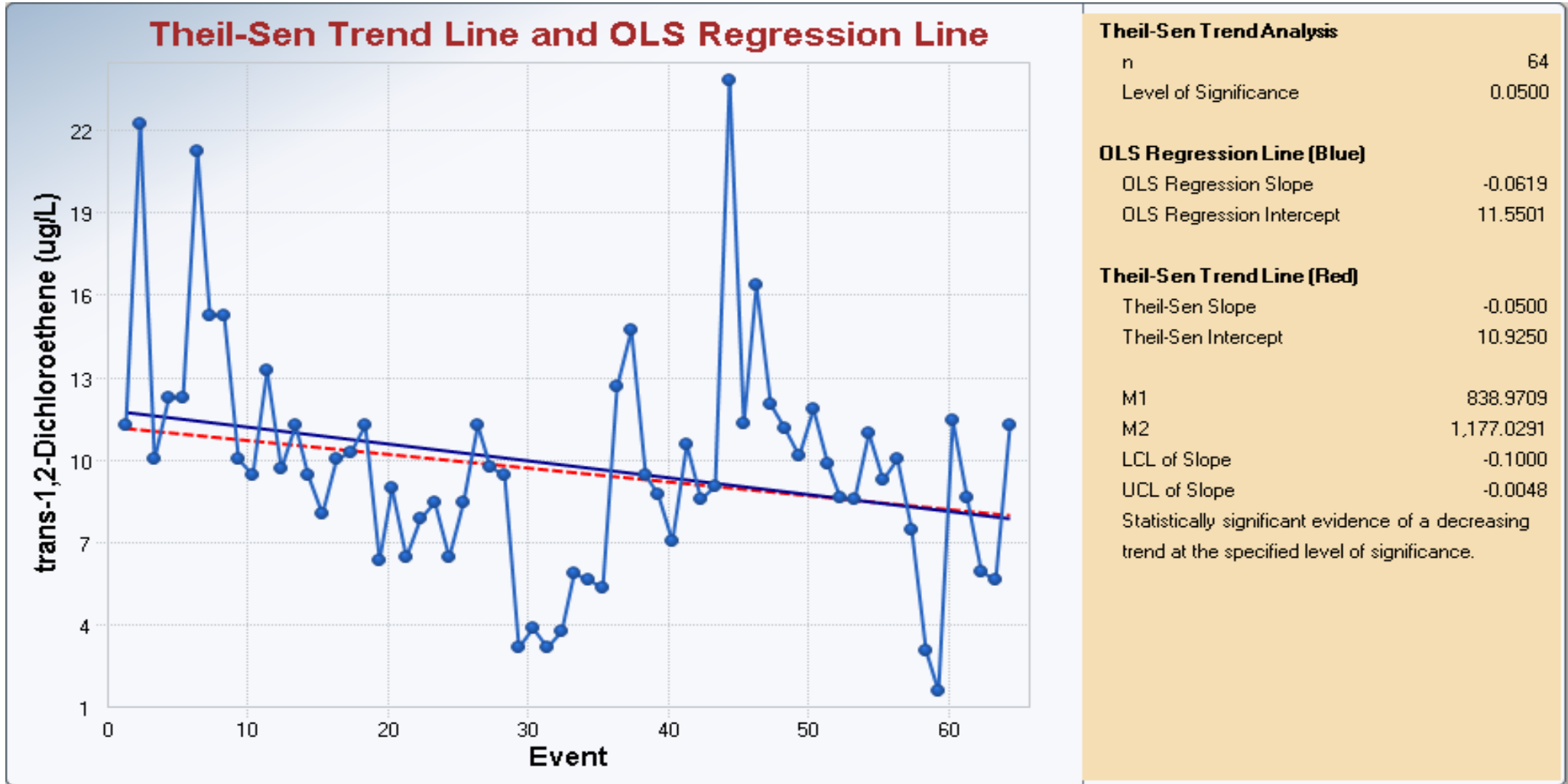
P2B

Grafton Lime Kiln Park Landfill/West Plume Area



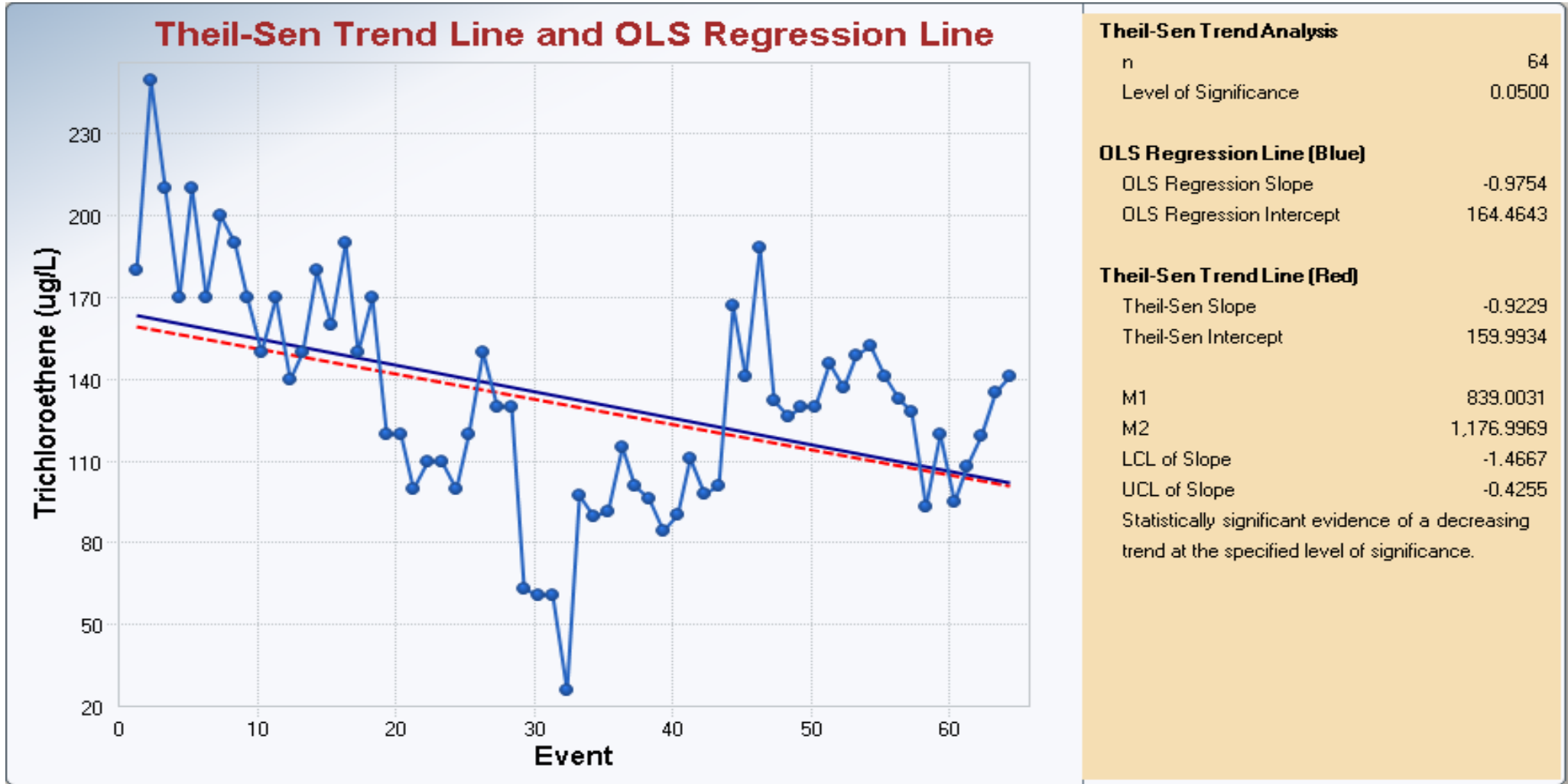
P2B

Grafton Lime Kiln Park Landfill/West Plume Area



P2B

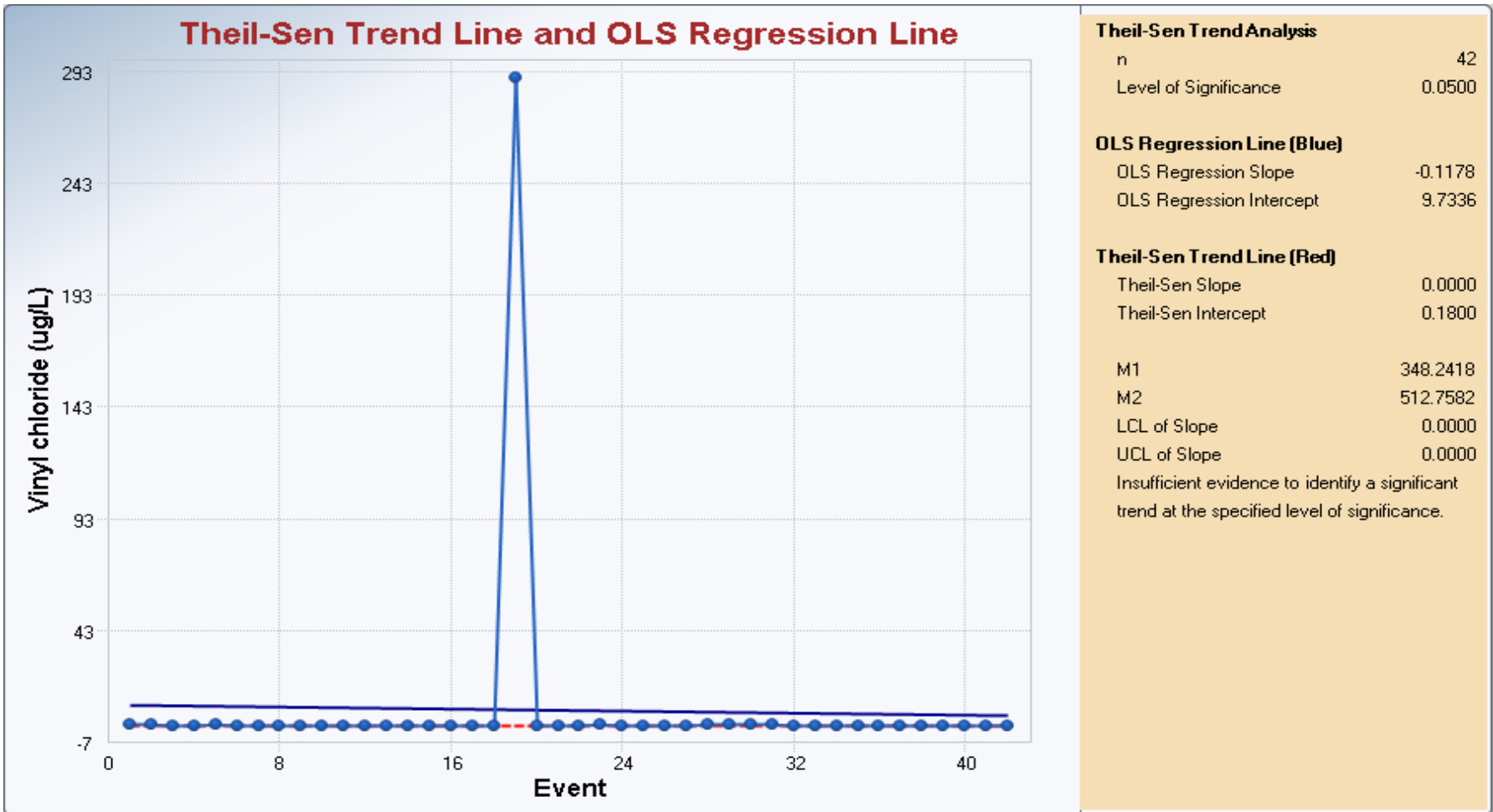
Grafton Lime Kiln Park Landfill/West Plume Area





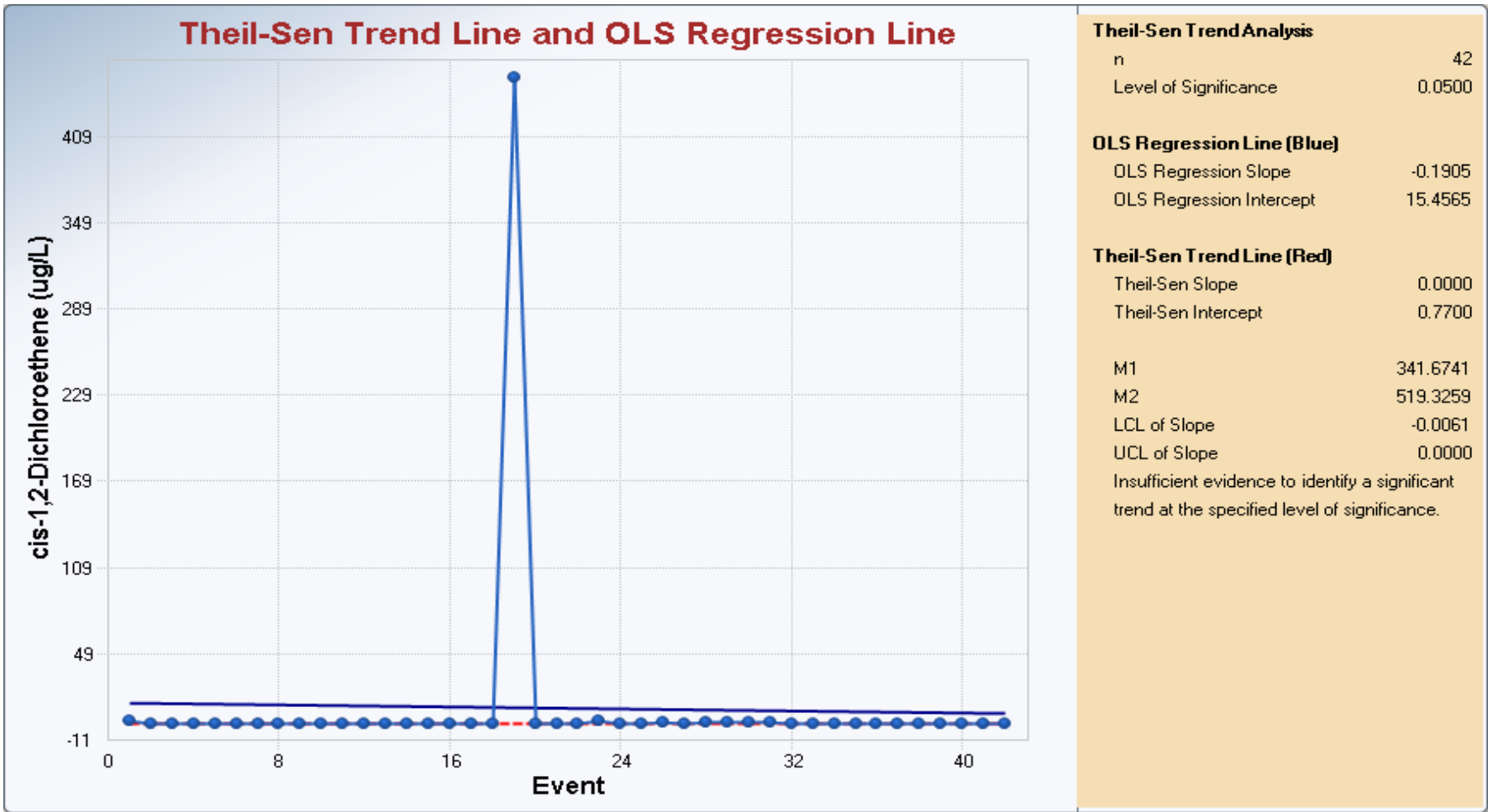
# P3B

## Grafton Lime Kiln Park Landfill/West Plume Area



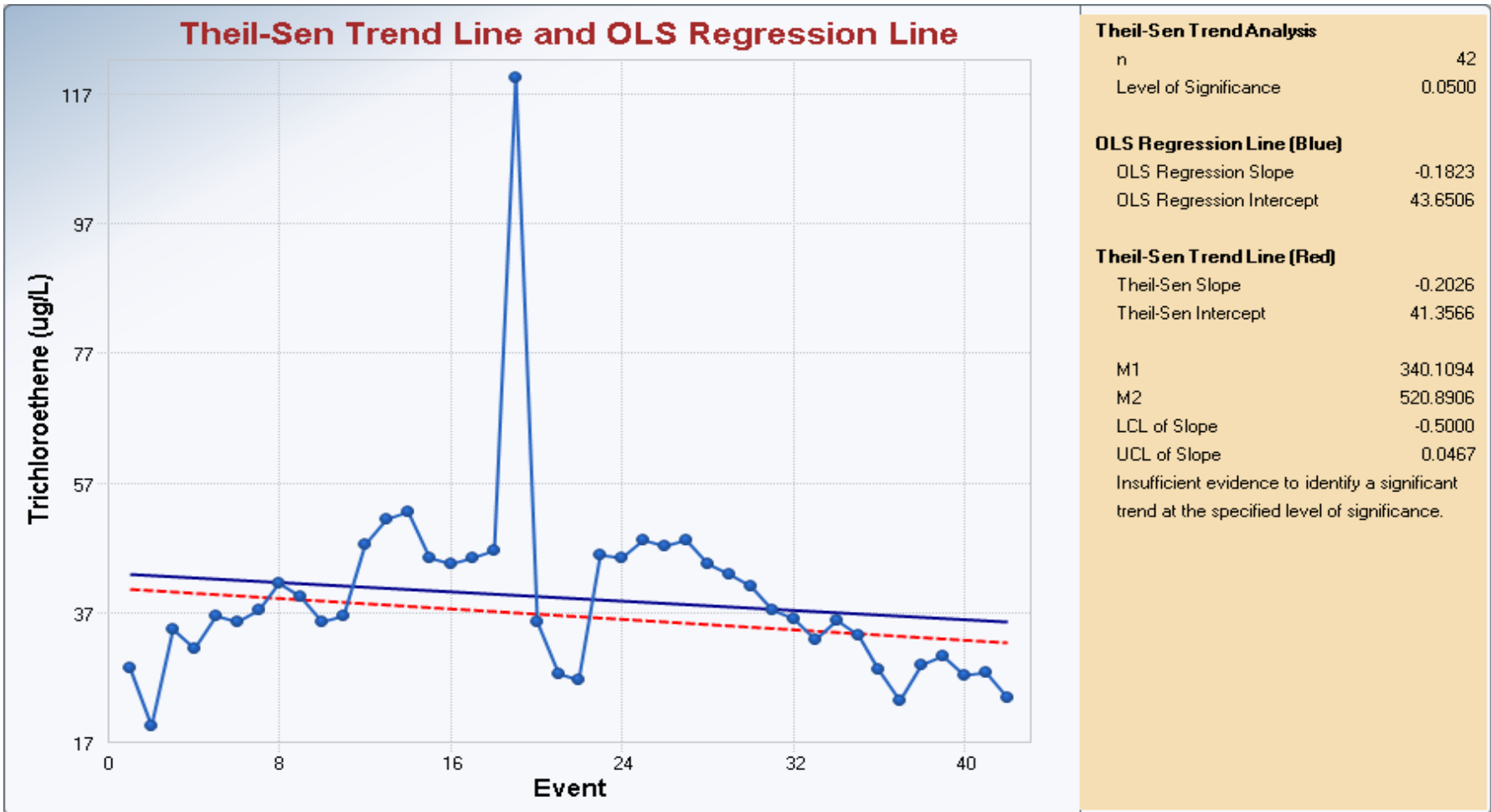
### P3B

### Grafton Lime Kiln Park Landfill/West Plume Area



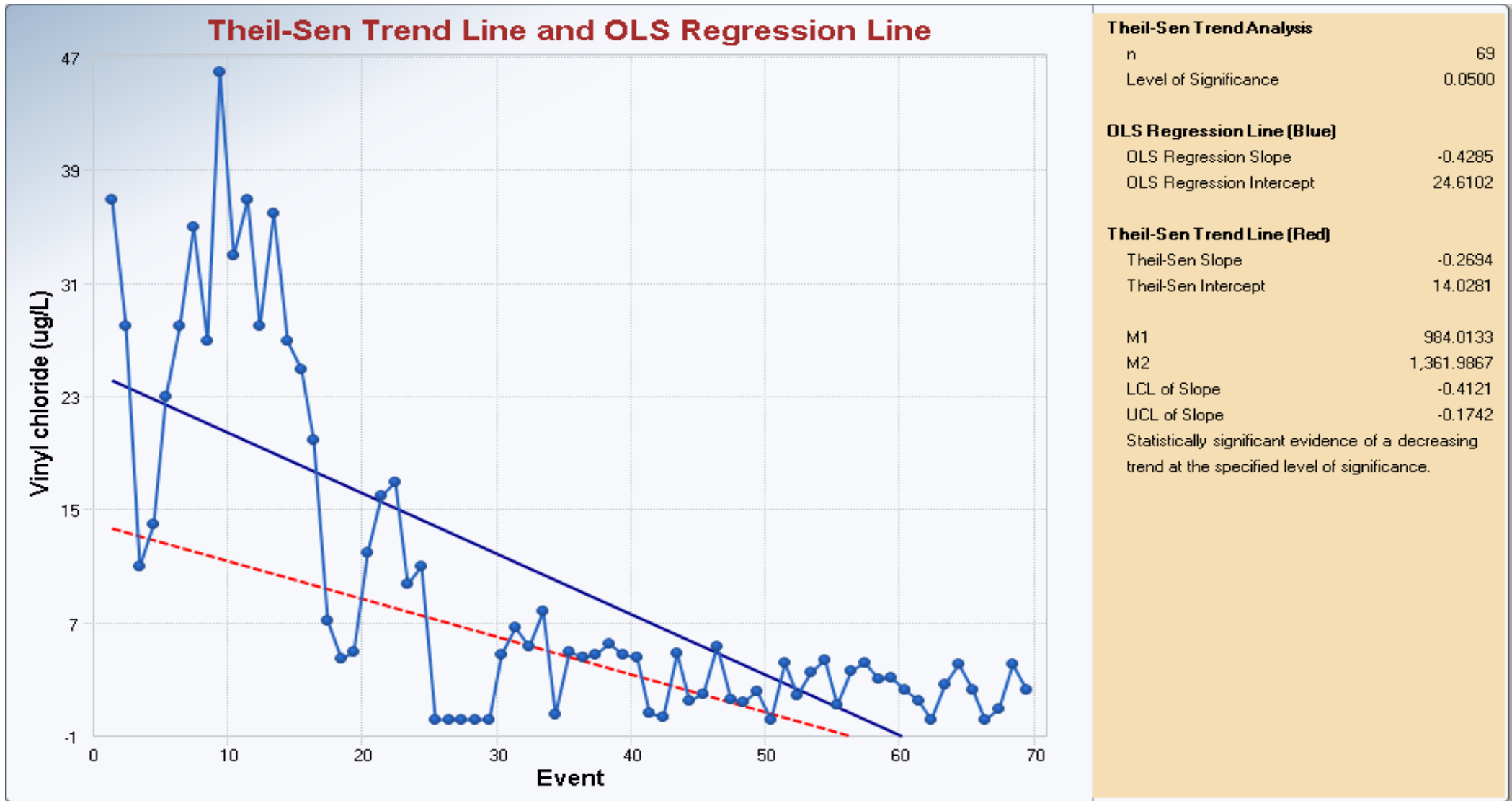
# P3B

## Grafton Lime Kiln Park Landfill/West Plume Area



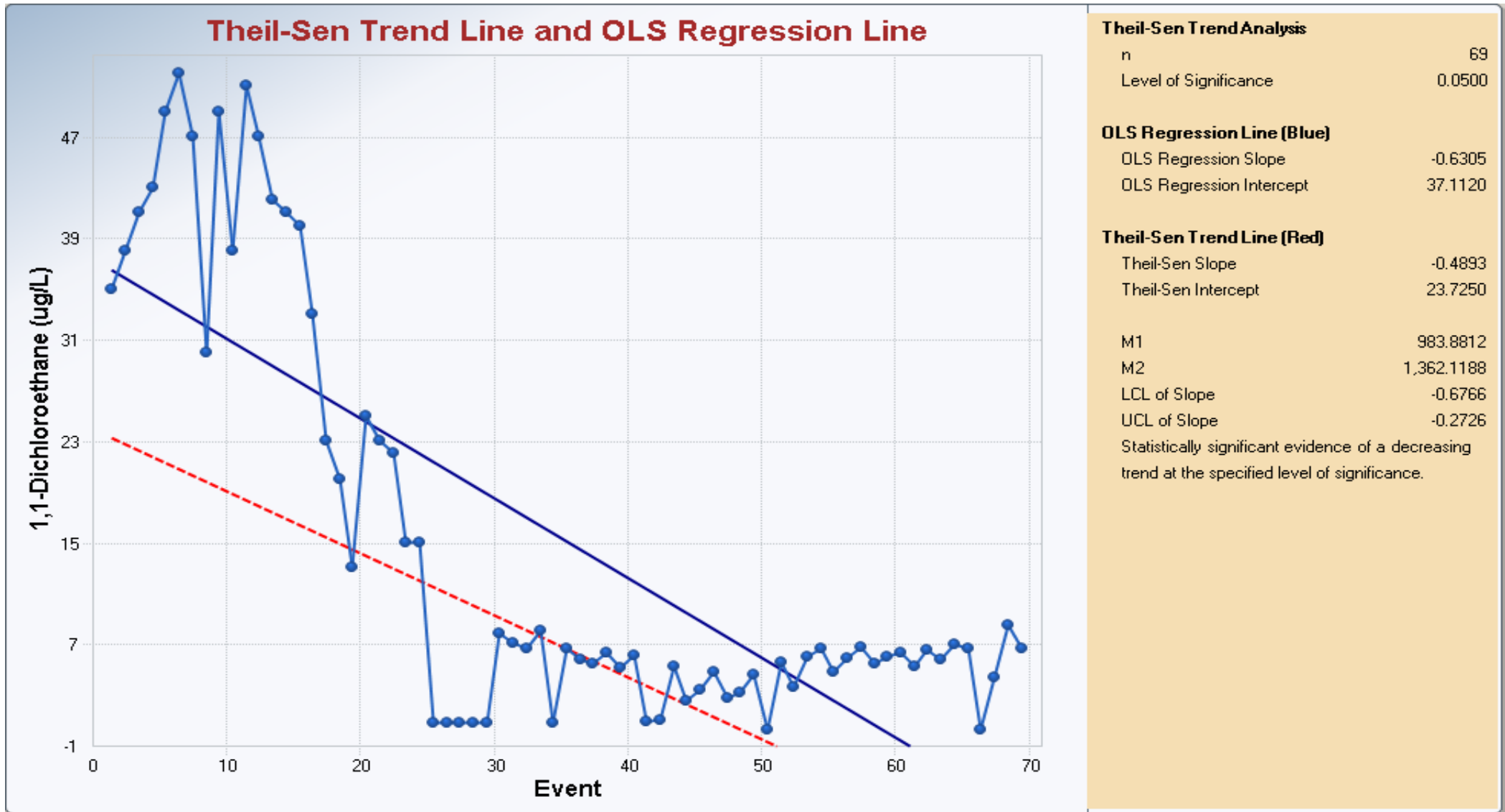
# P8A

## Grafton Lime Kiln Park Landfill/West Plume Area



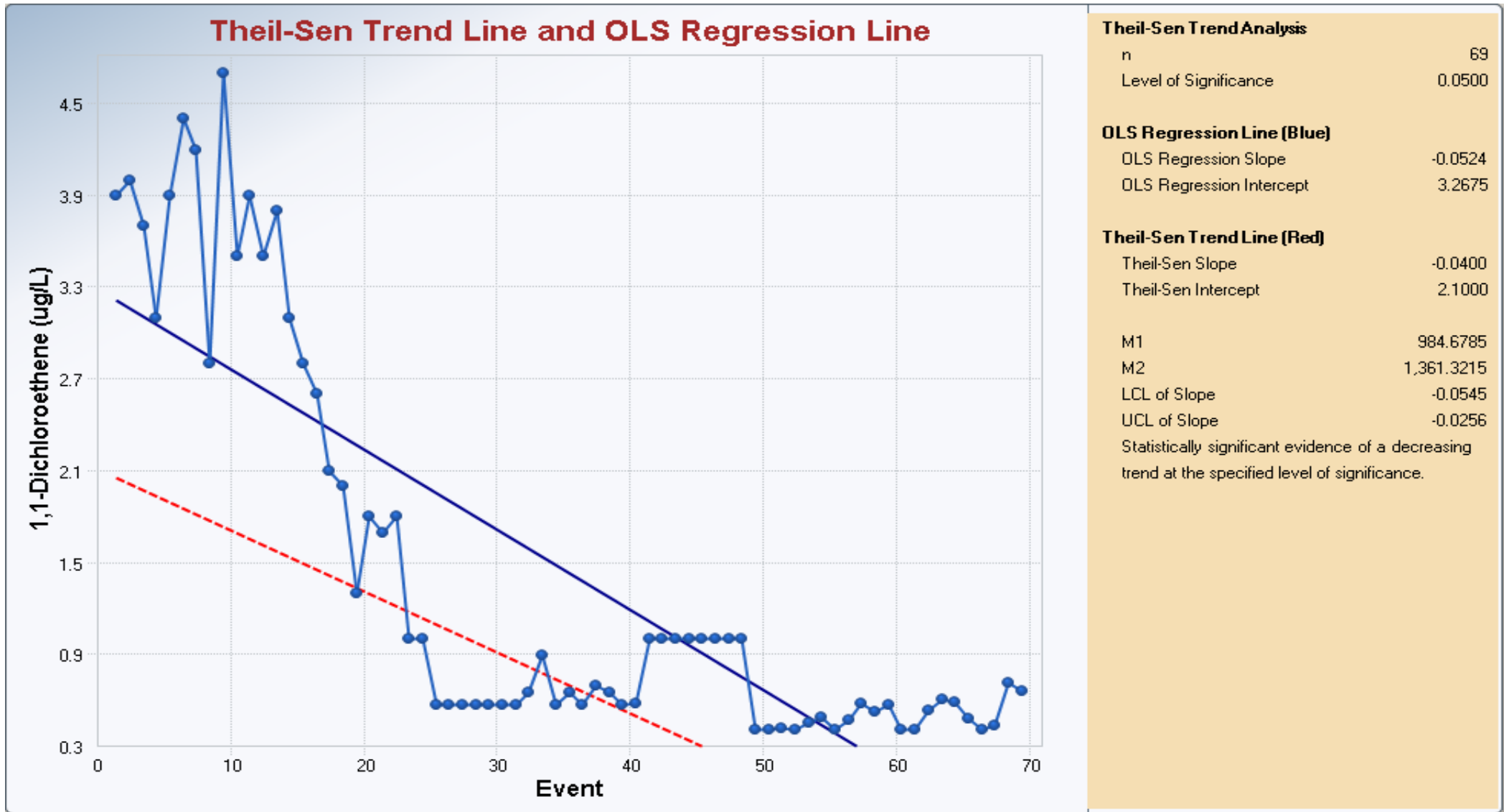
P8A

Grafton Lime Kiln Park Landfill/West Plume Area



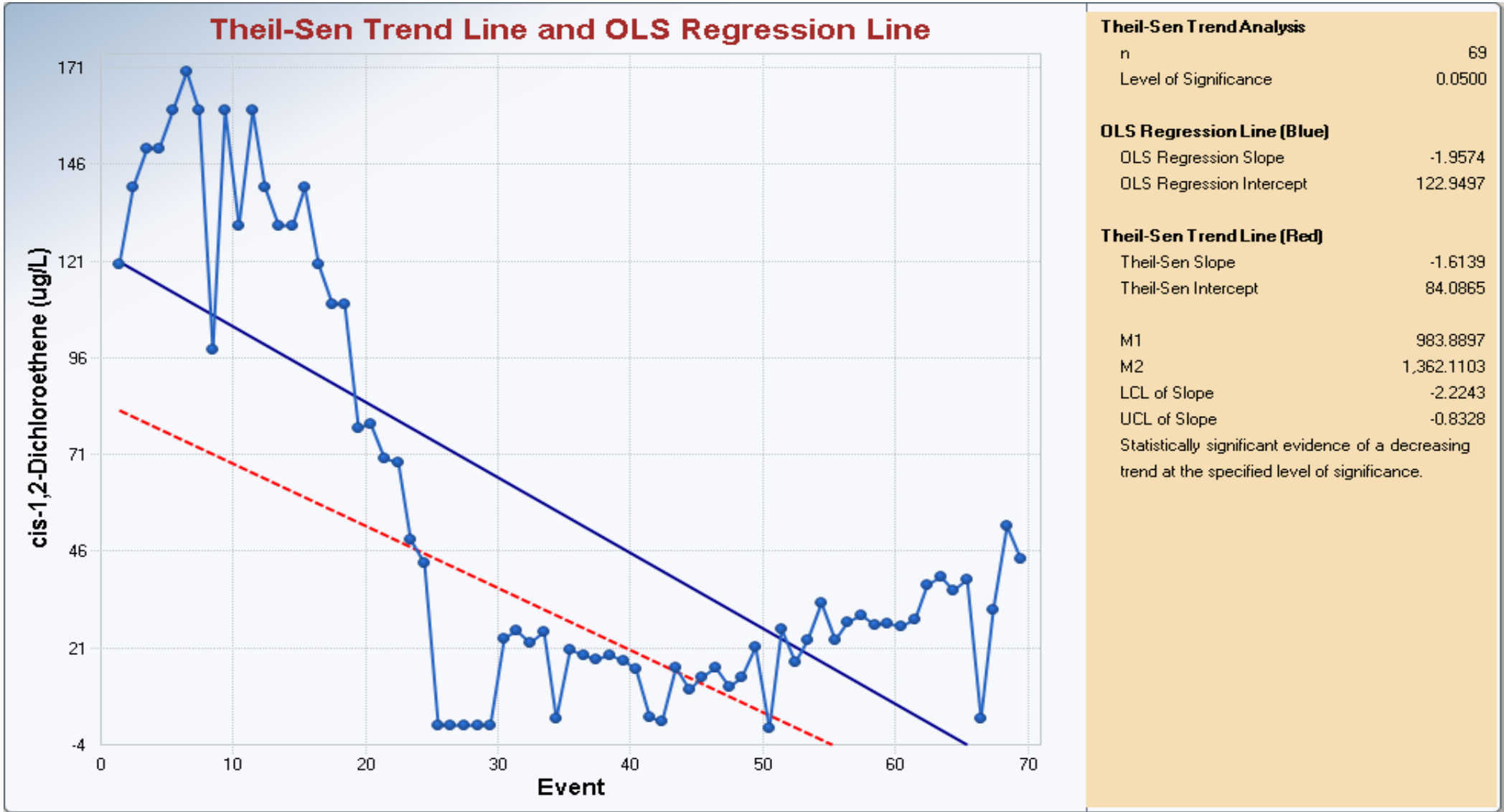
P8A

Grafton Lime Kiln Park Landfill/West Plume Area



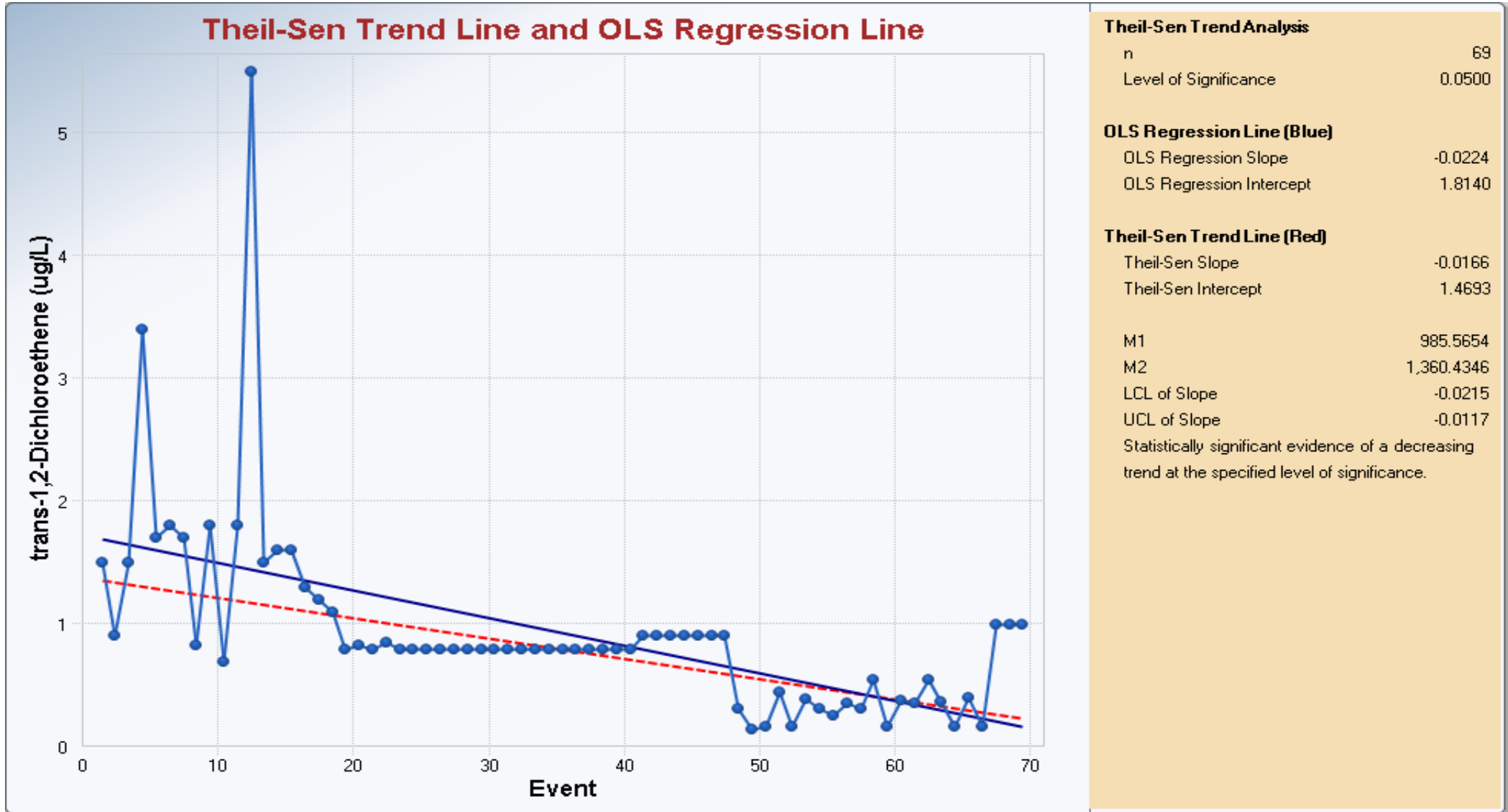
P8A

Grafton Lime Kiln Park Landfill/West Plume Area



P8A

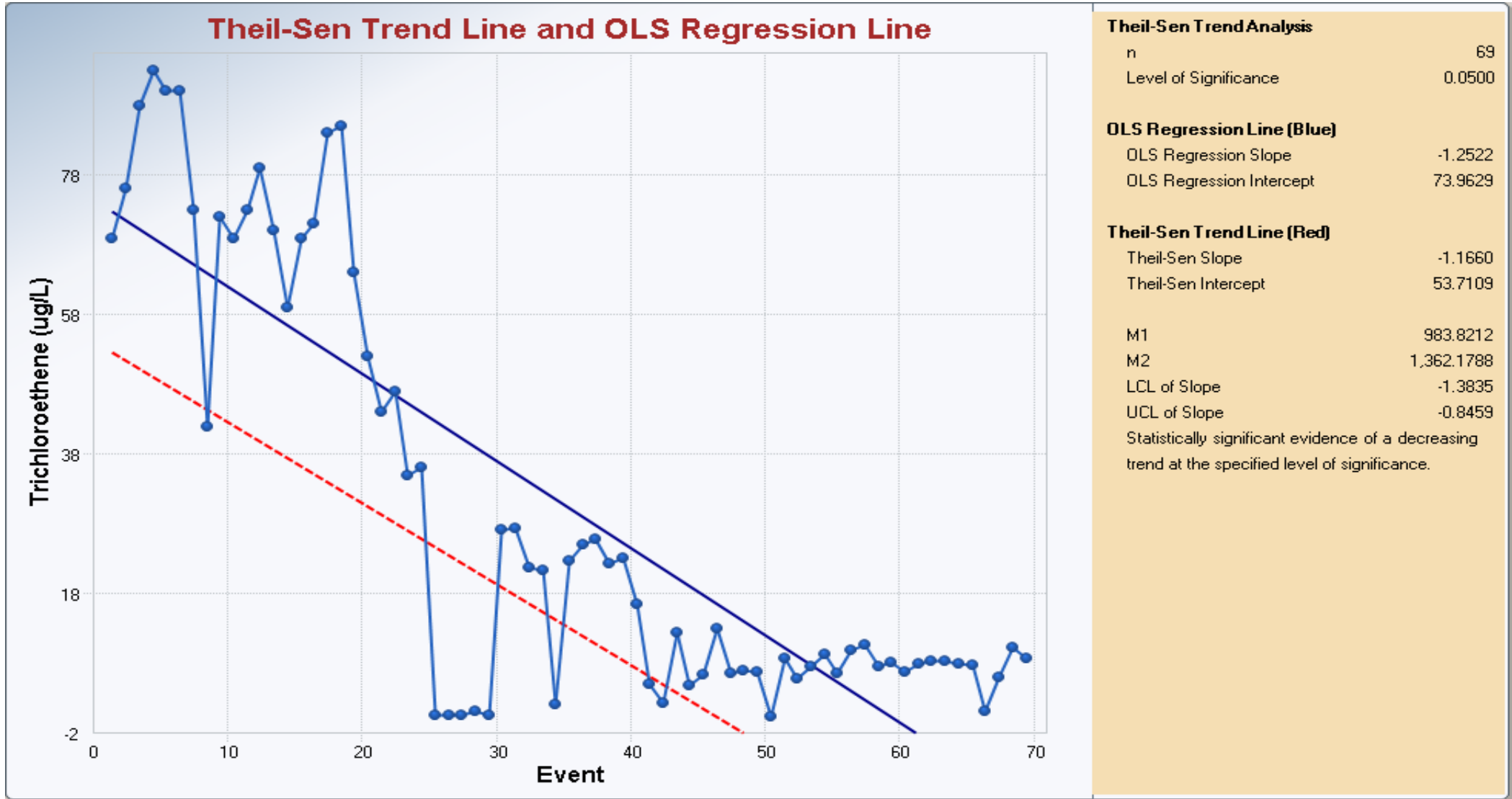
Grafton Lime Kiln Park Landfill/West Plume Area





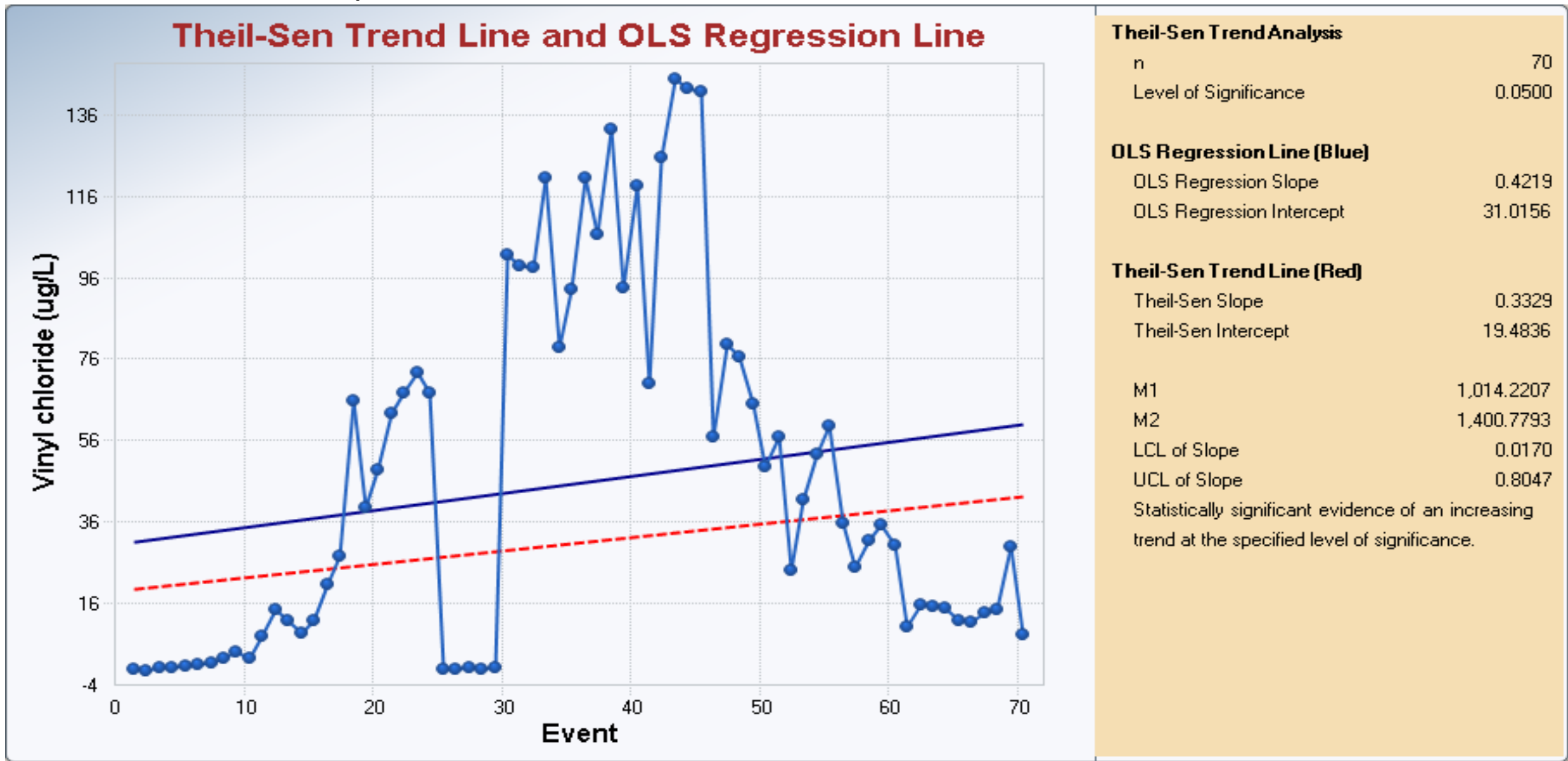
# P8A

## Grafton Lime Kiln Park Landfill/West Plume Area



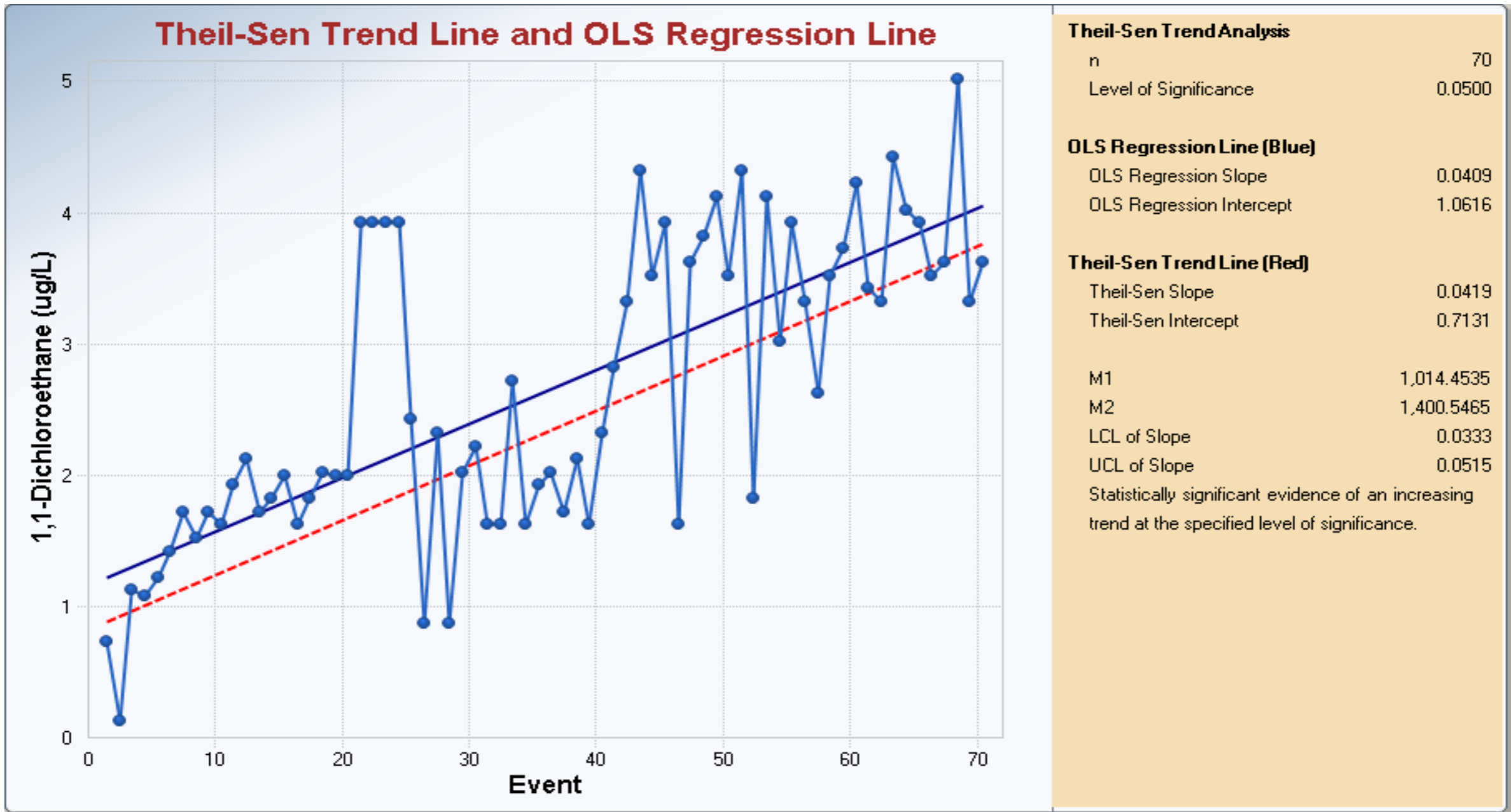
P8B

Grafton Lime Kiln Park Landfill/West Plume Area



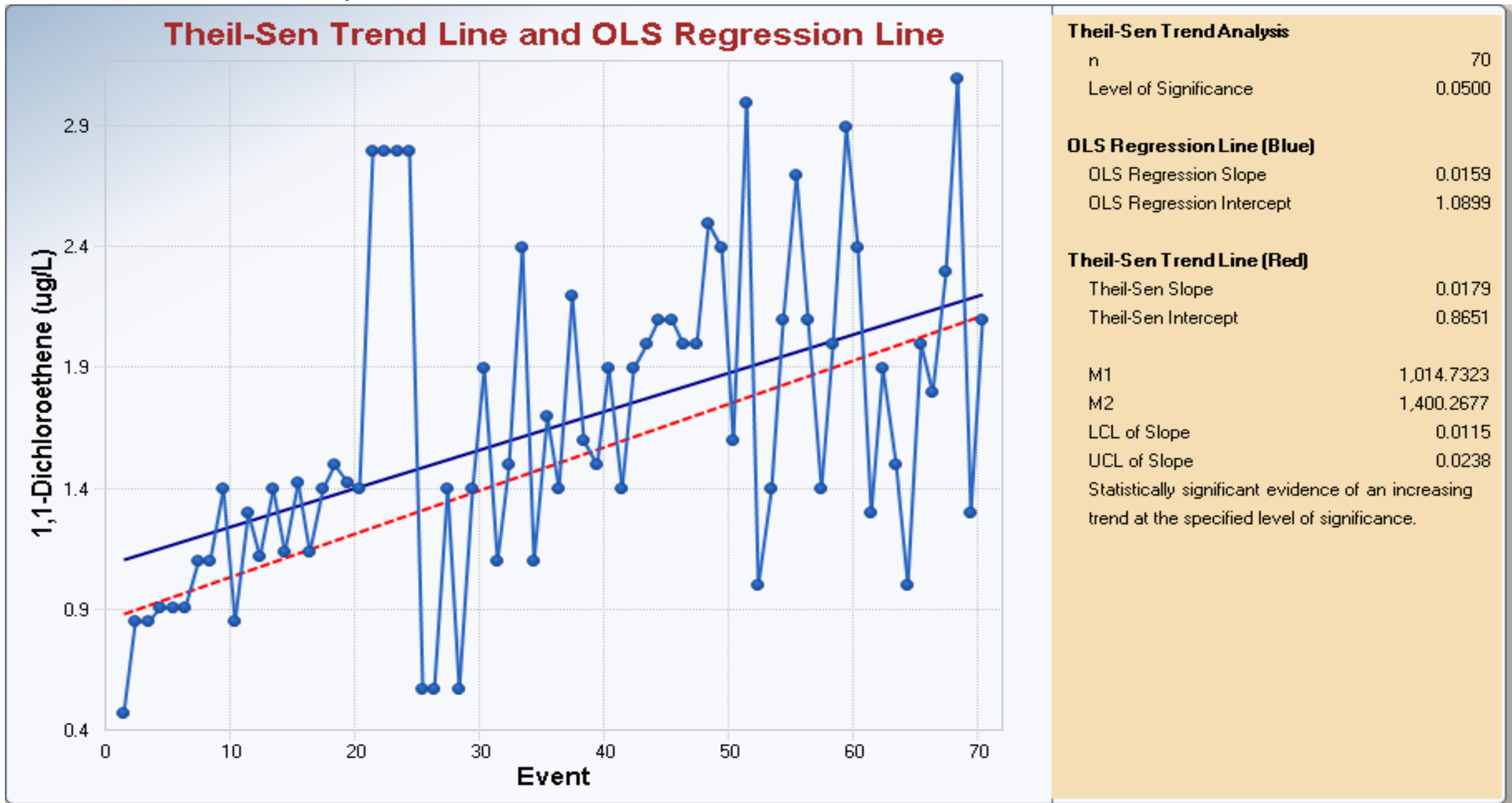
P8B

Grafton Lime Kiln Park Landfill/West Plume Area



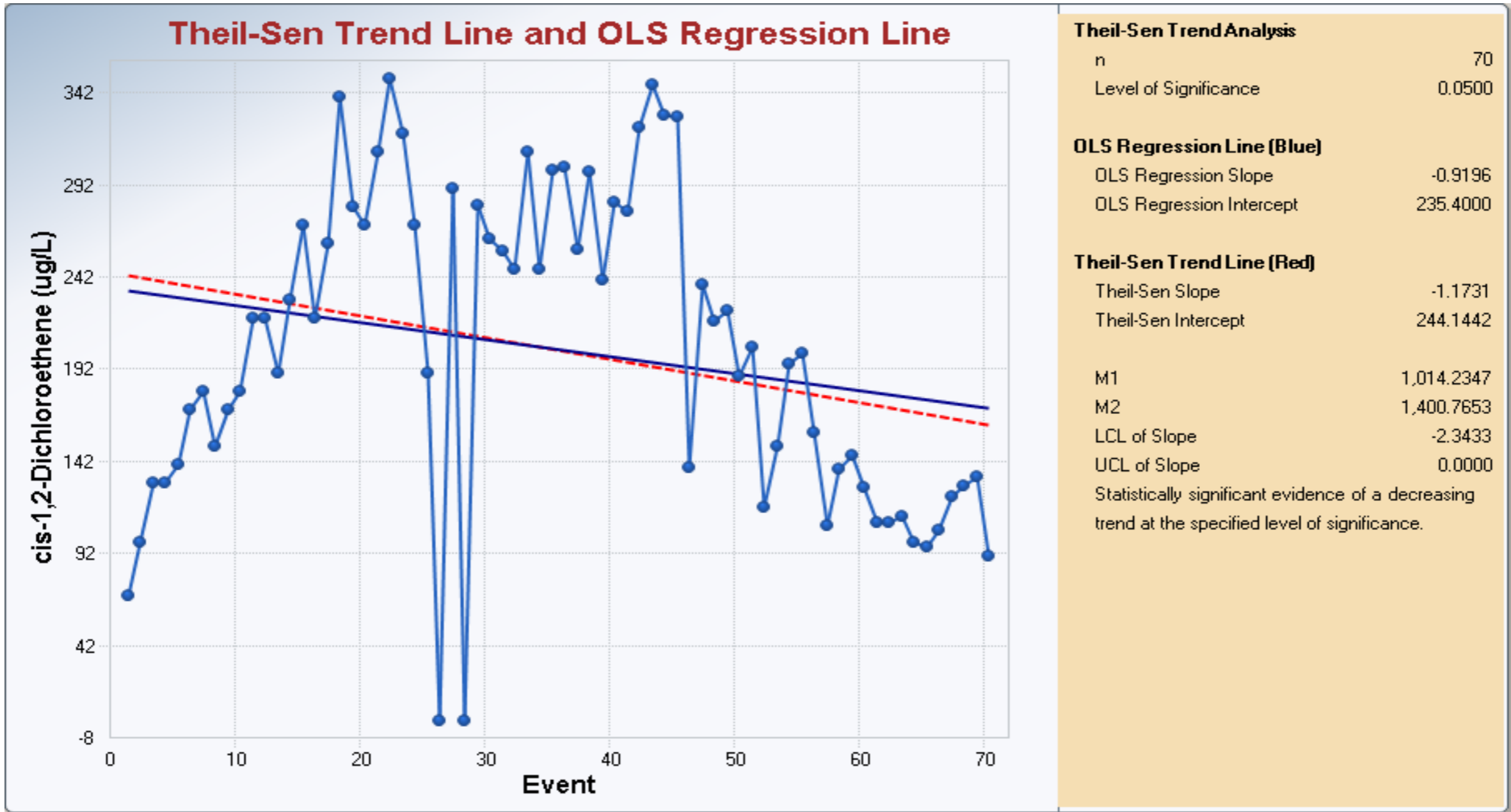
P8B

Grafton Lime Kiln Park Landfill/West Plume Area



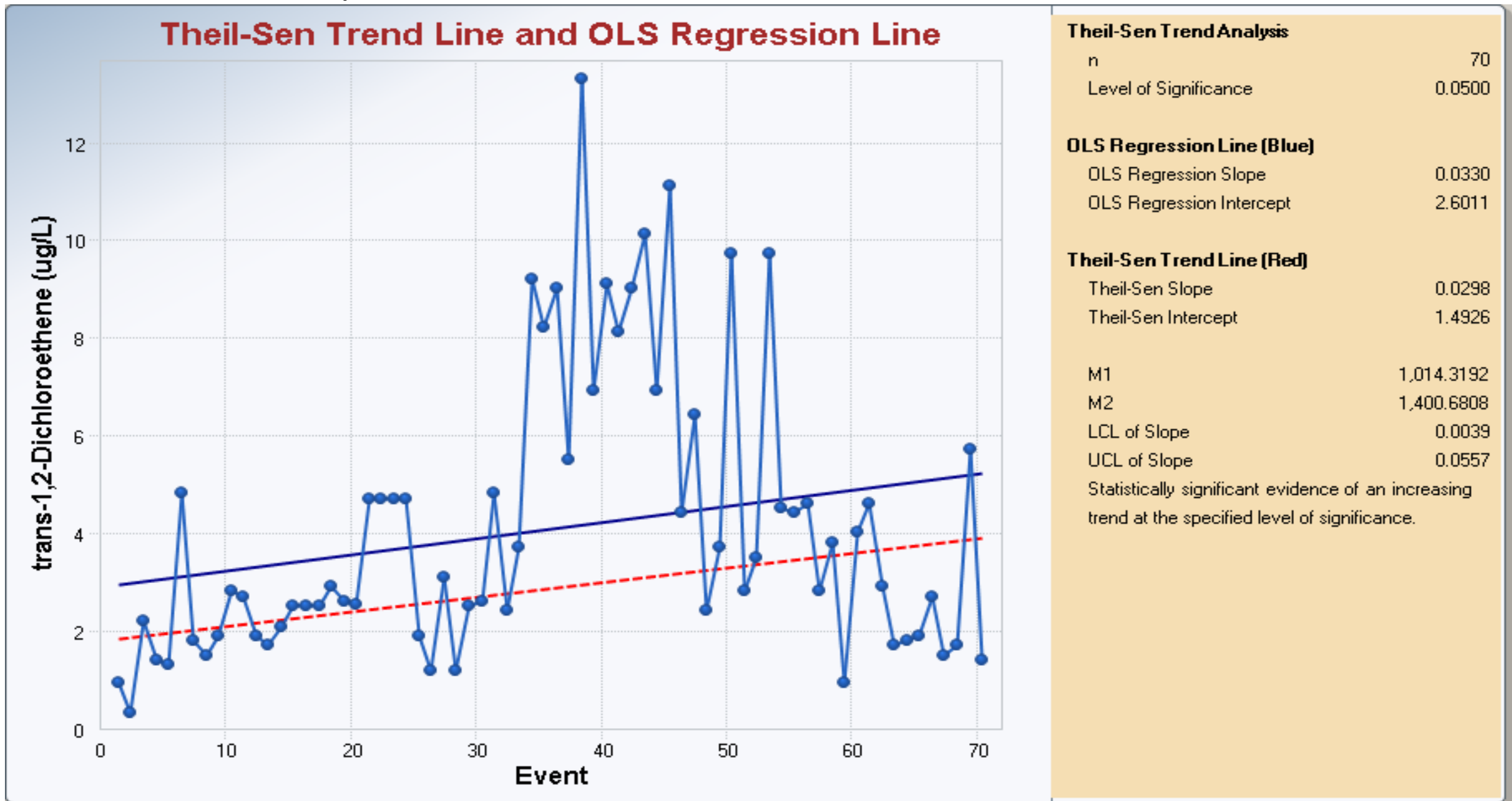
P8B

Grafton Lime Kiln Park Landfill/West Plume Area



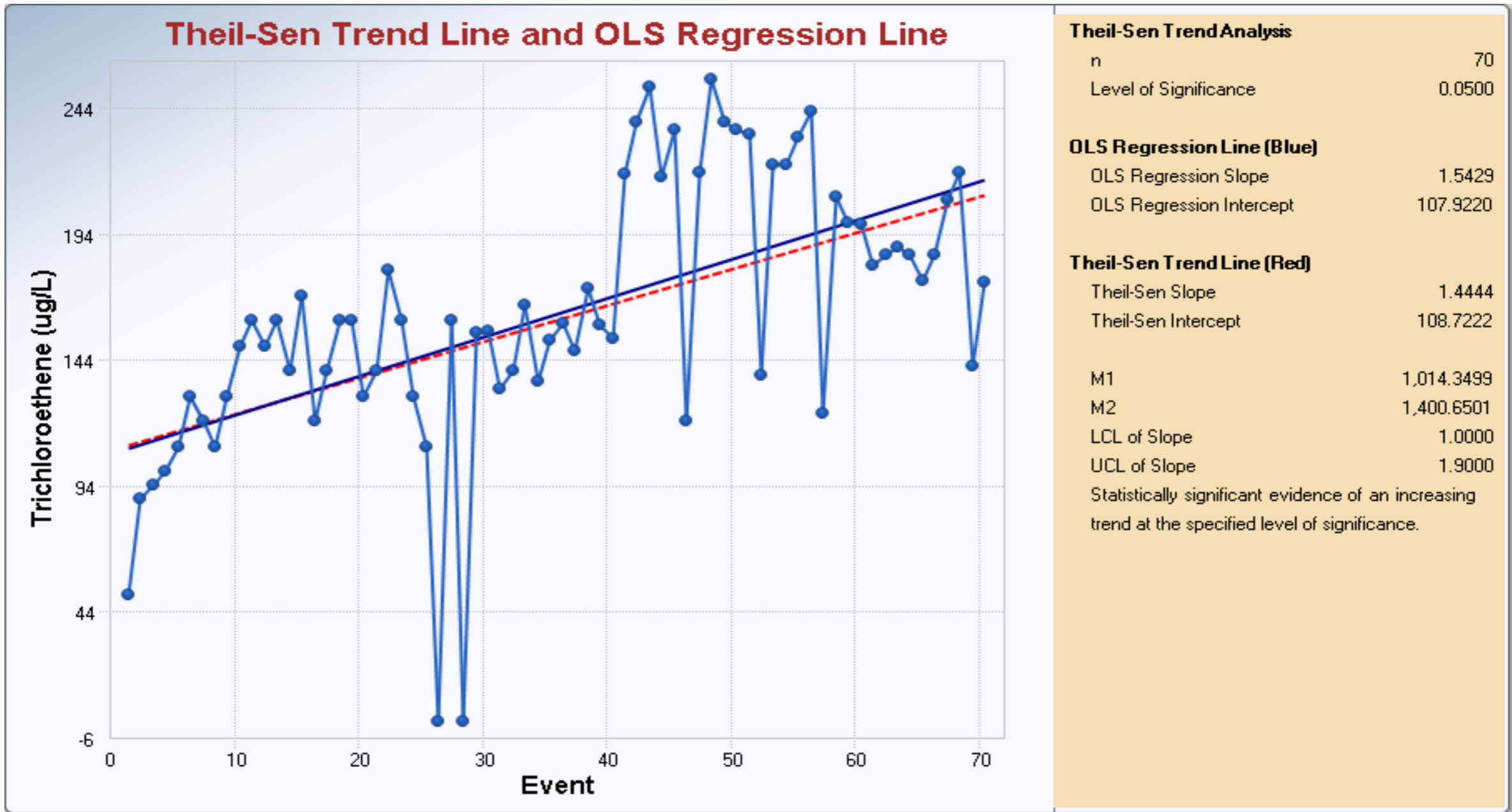
P8B

Grafton Lime Kiln Park Landfill/West Plume Area



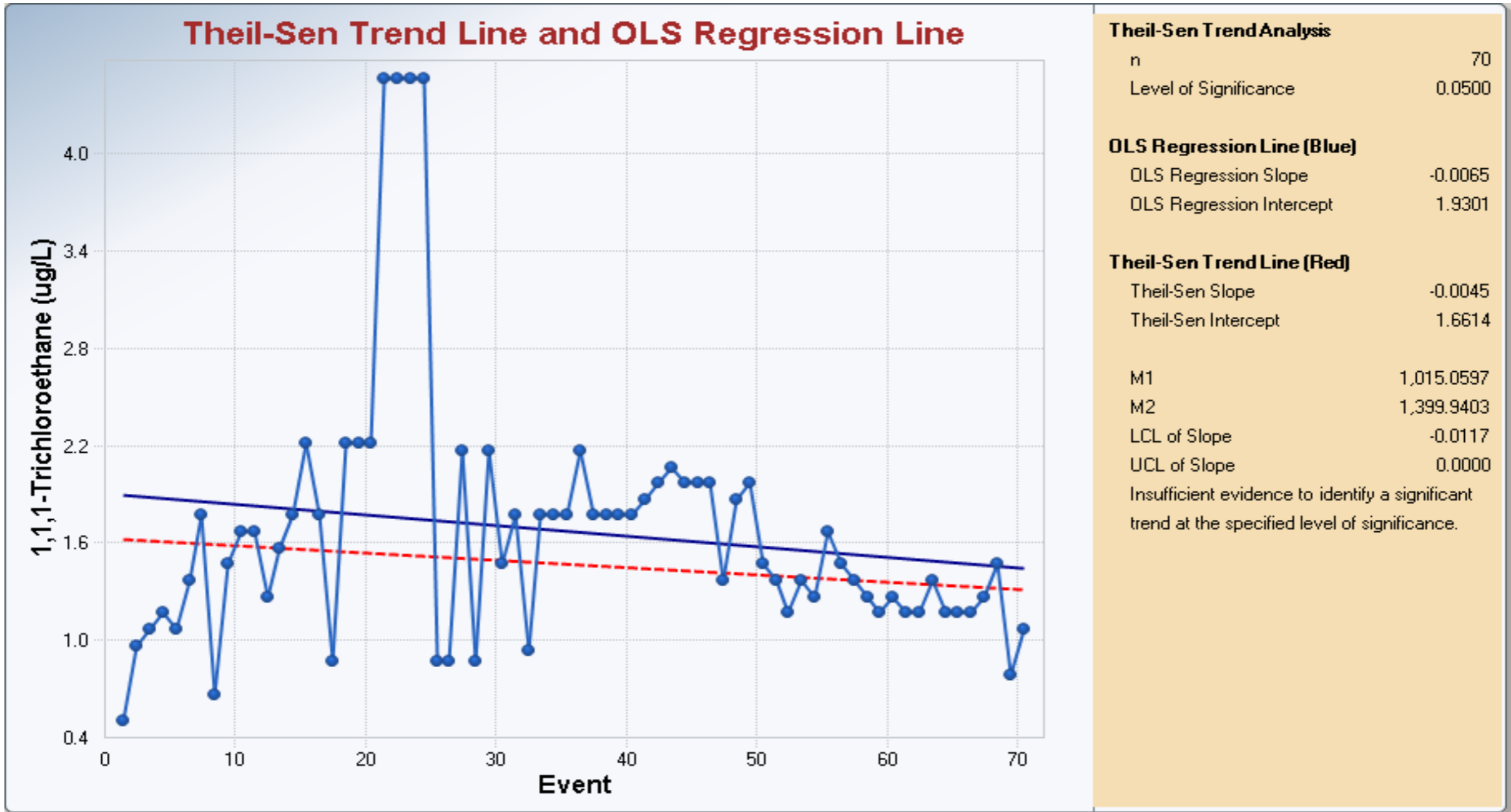
P8B

Grafton Lime Kiln Park Landfill/West Plume Area



P8B

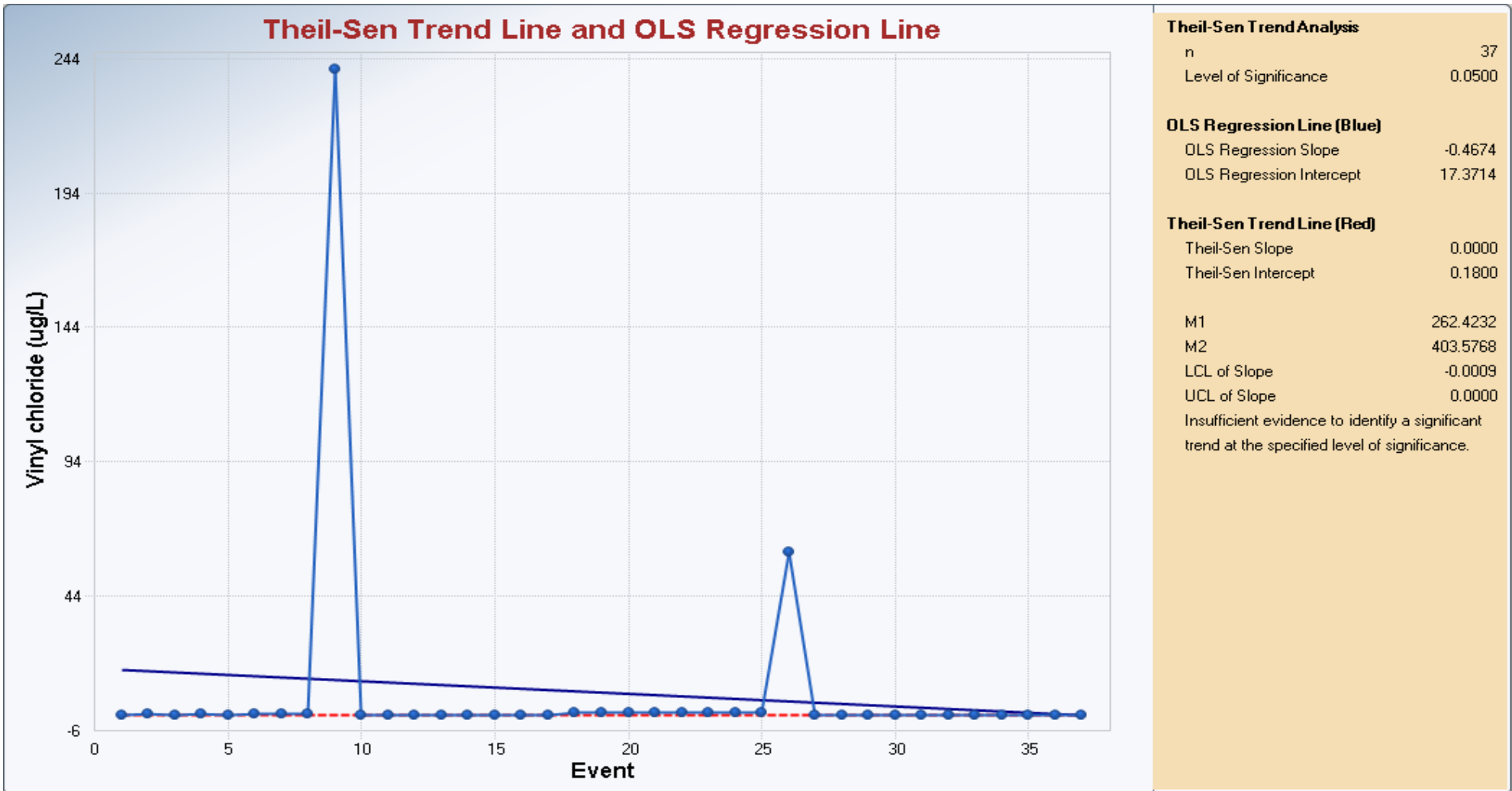
Grafton Lime Kiln Park Landfill/West Plume Area





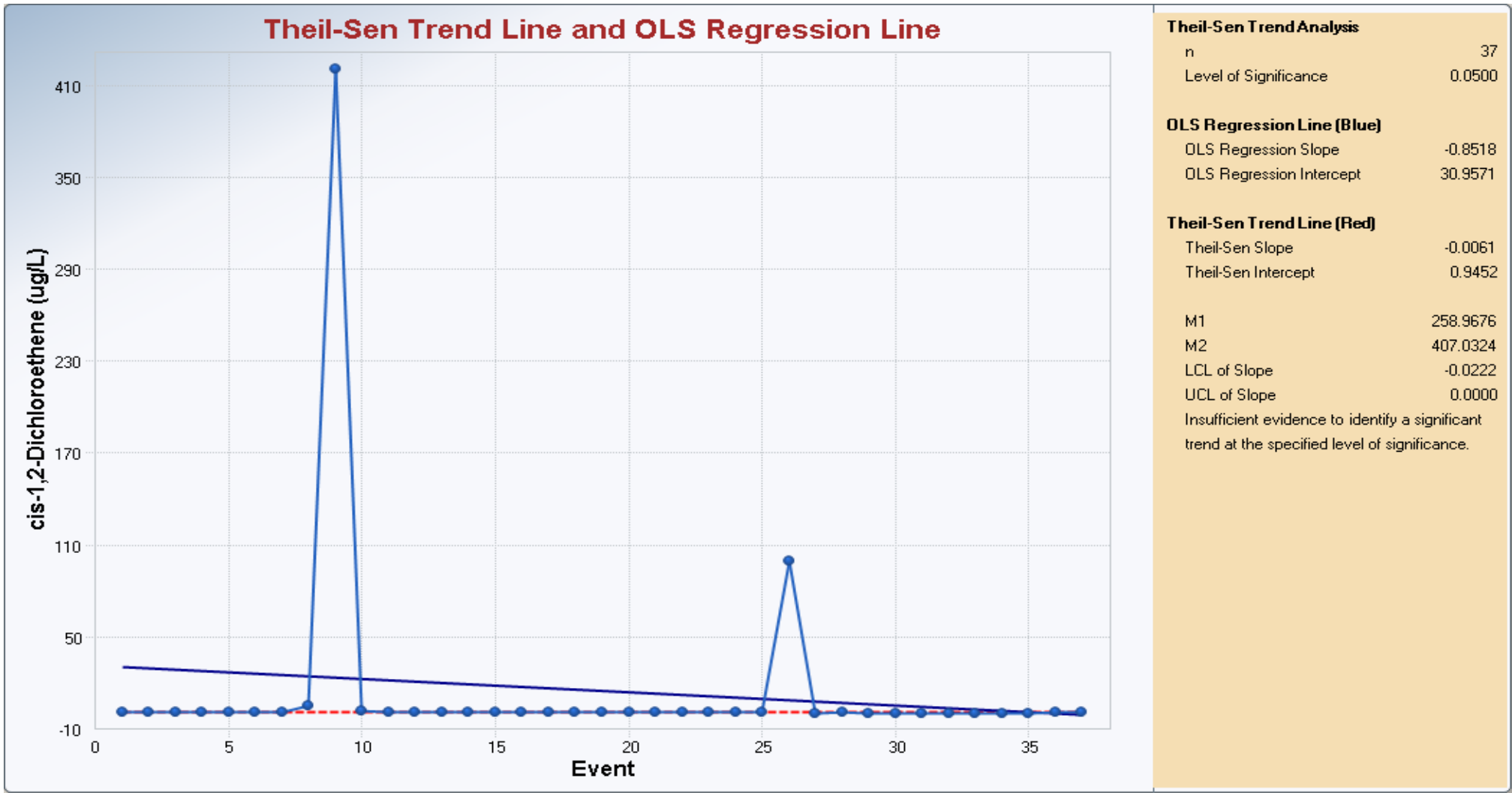
# P9B

## Grafton Lime Kiln Park Landfill/West Plume Area



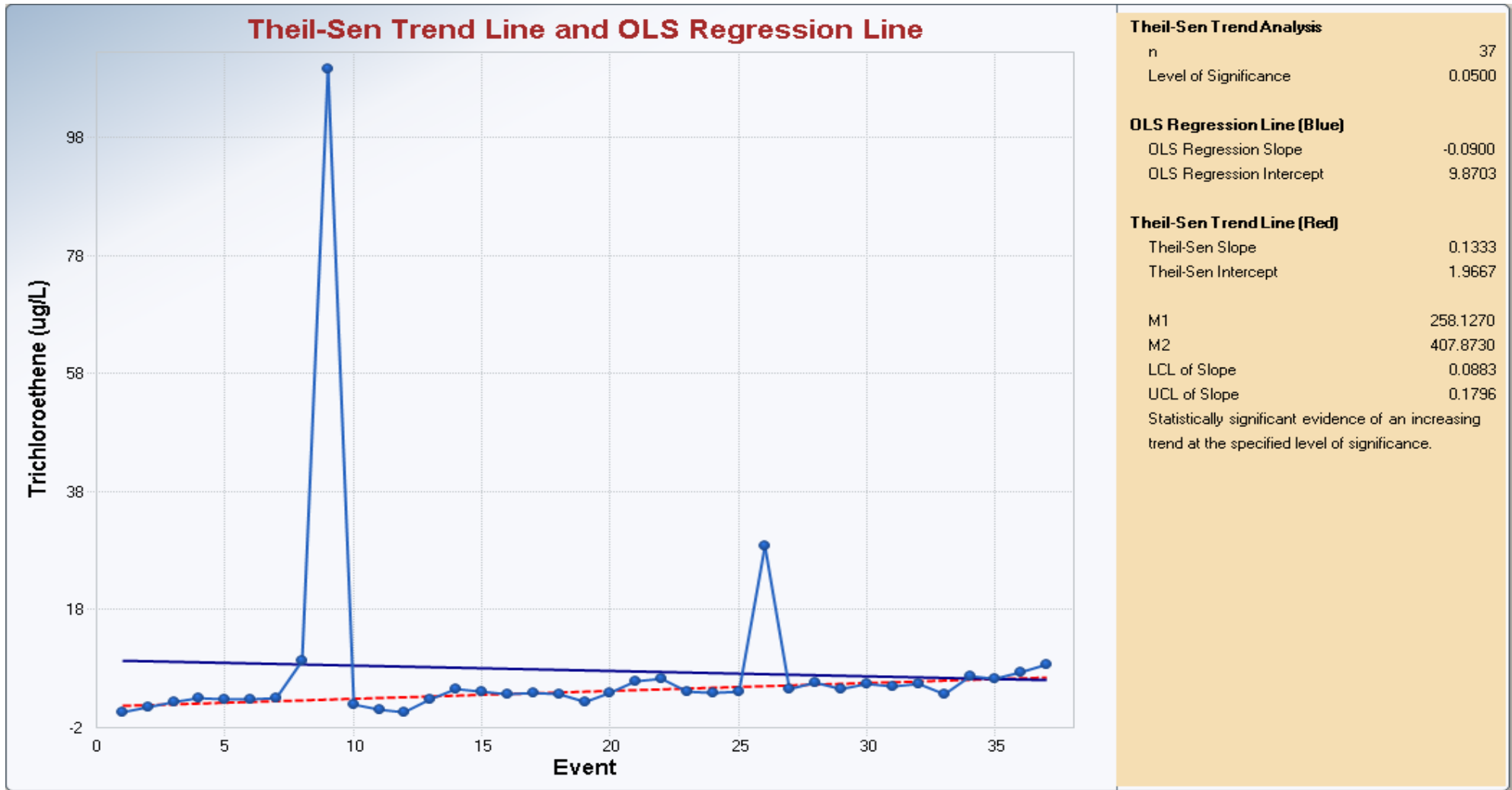
P9B

Grafton Lime Kiln Park Landfill/West Plume Area



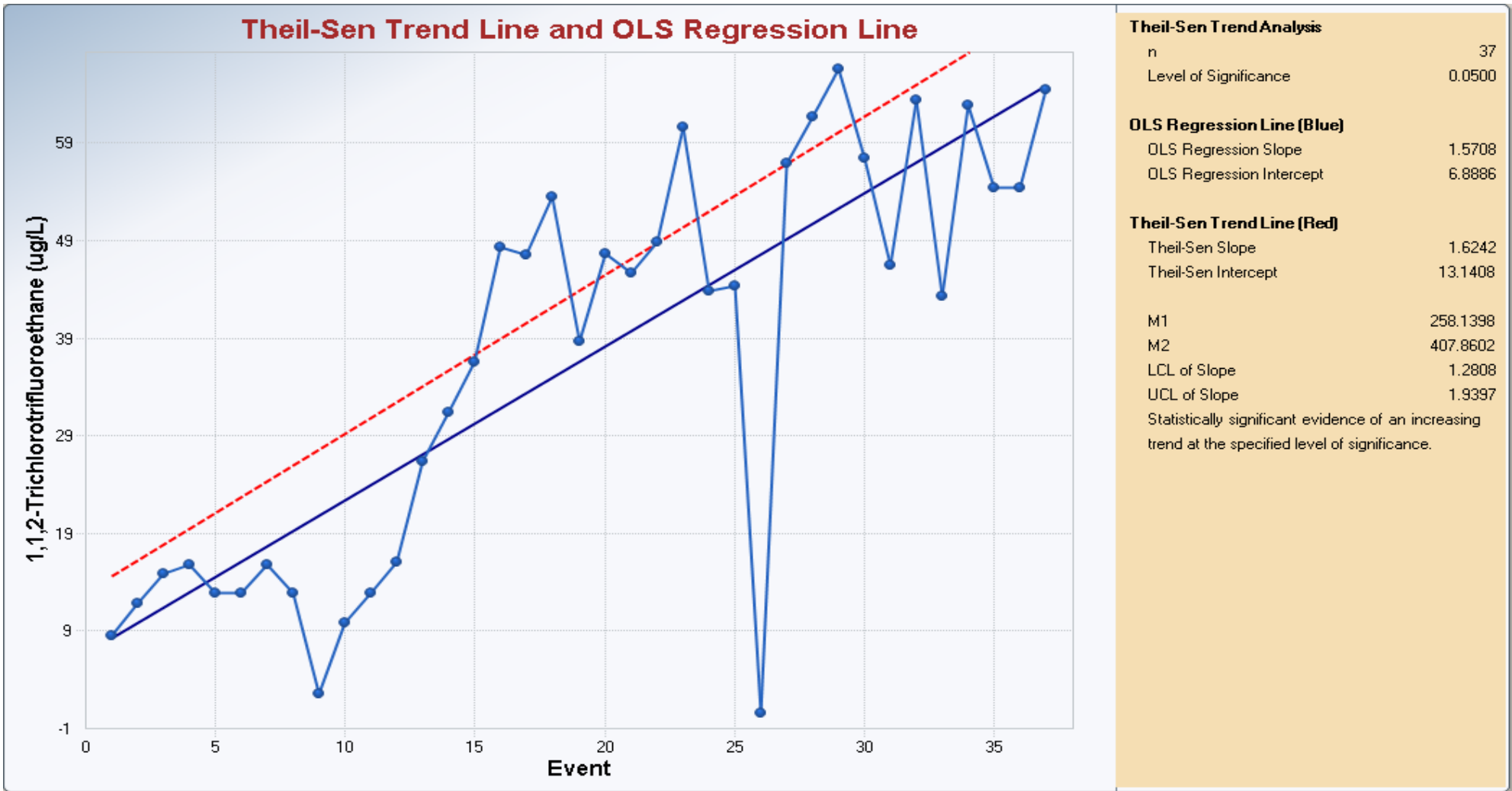
# P9B

## Grafton Lime Kiln Park Landfill/West Plume Area



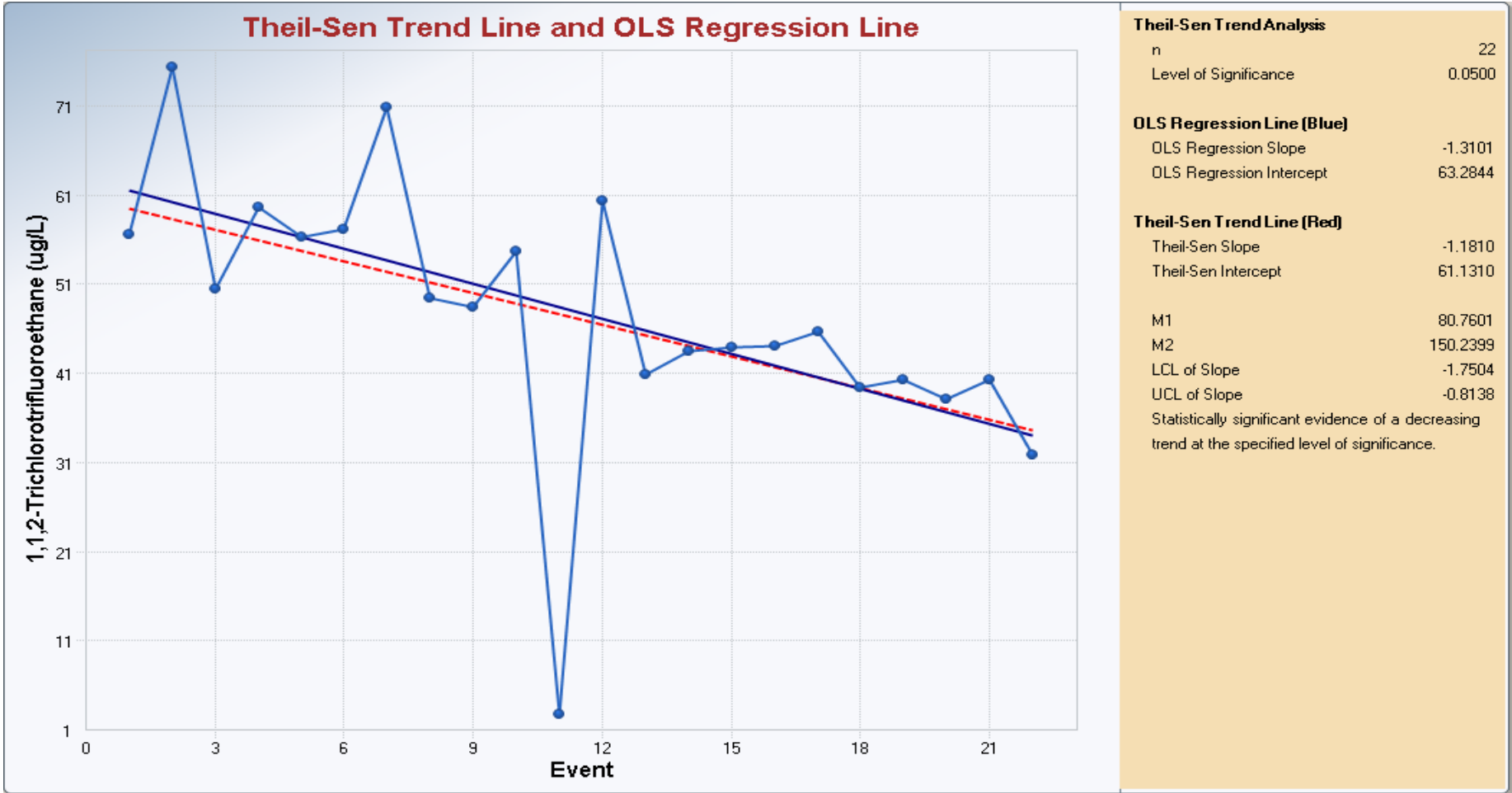
# P9B

## Grafton Lime Kiln Park Landfill/West Plume Area



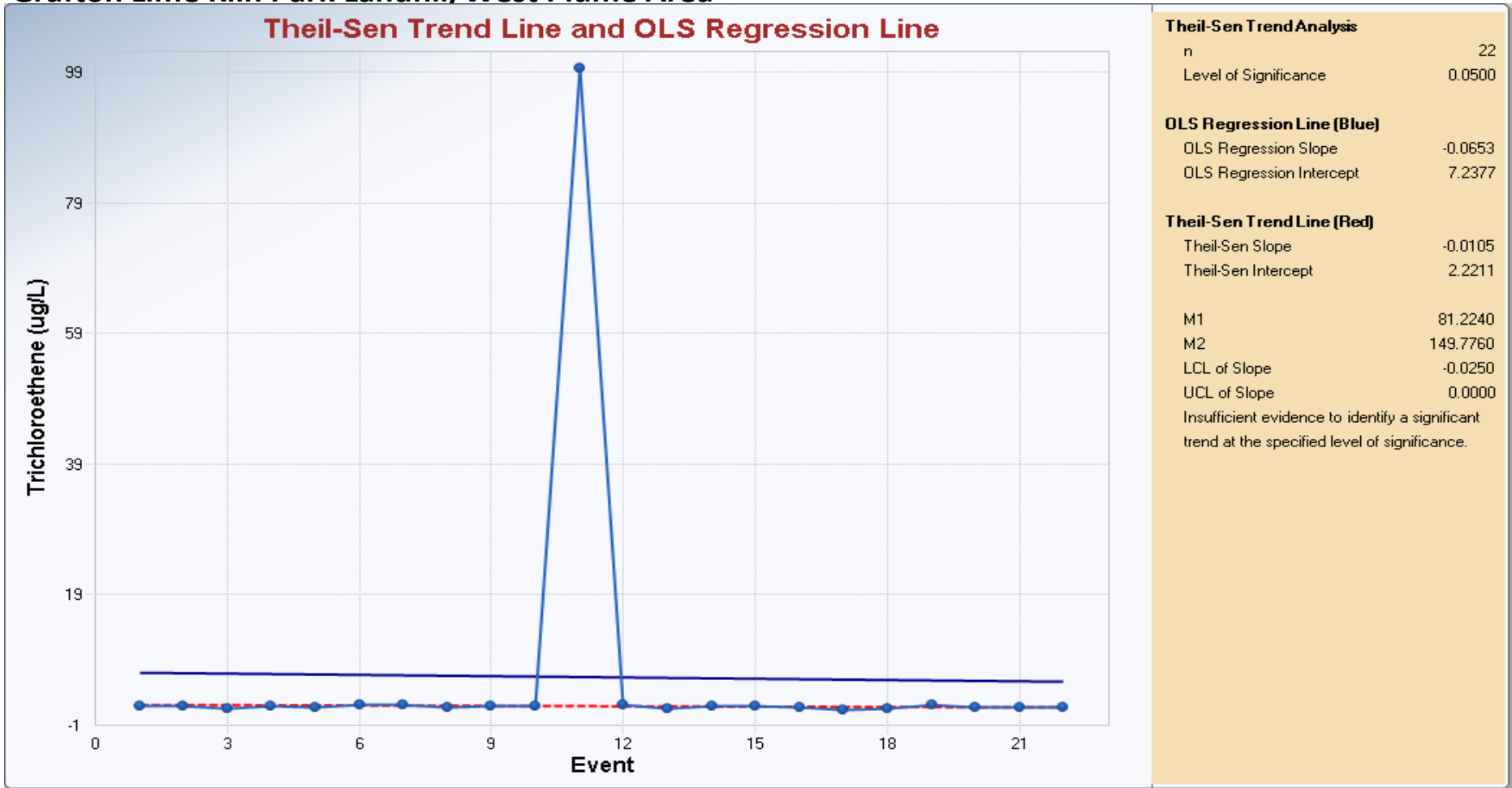
# P10B

## Grafton Lime Kiln Park Landfill/West Plume Area



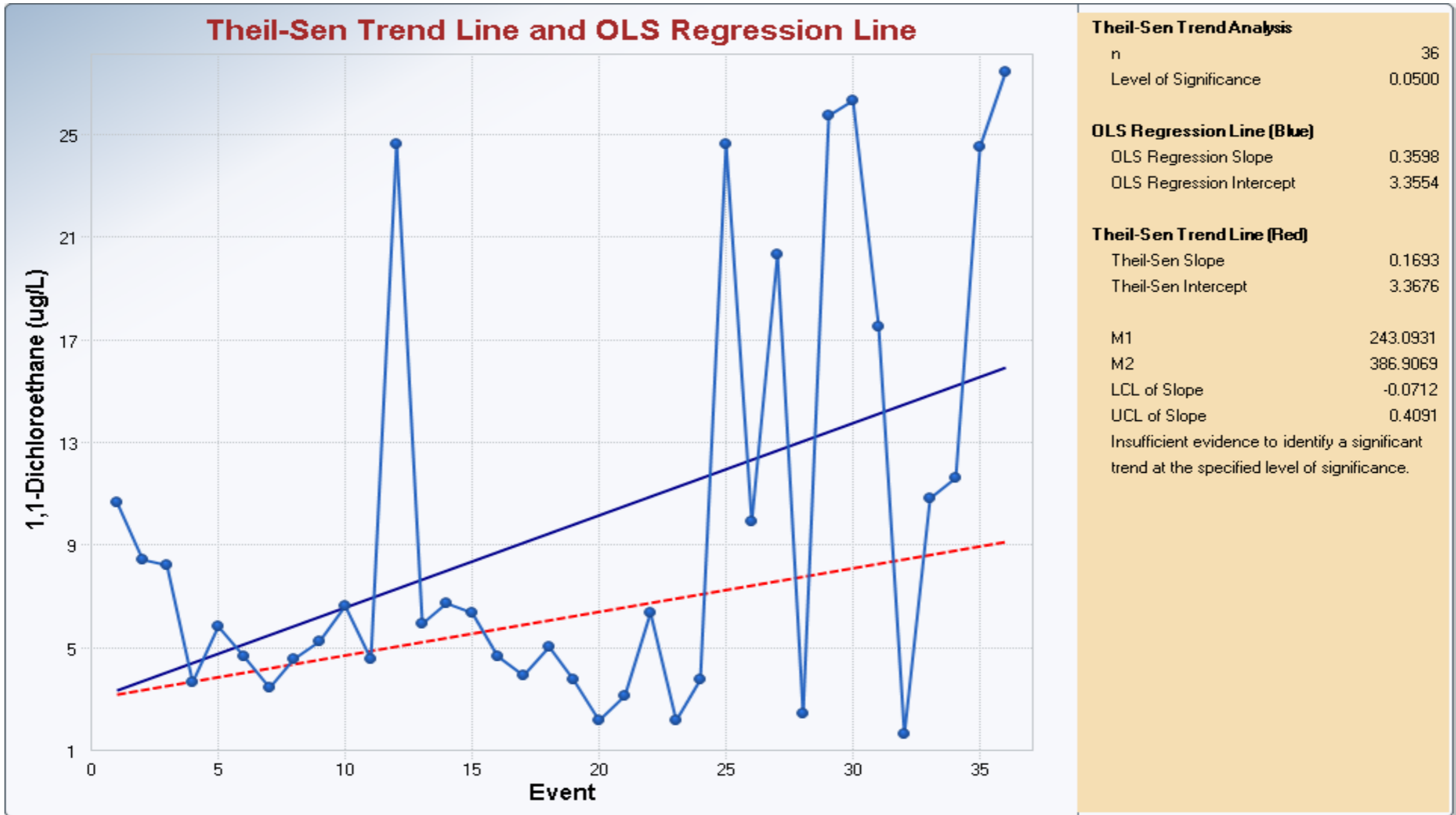
# P10B

## Grafton Lime Kiln Park Landfill/West Plume Area



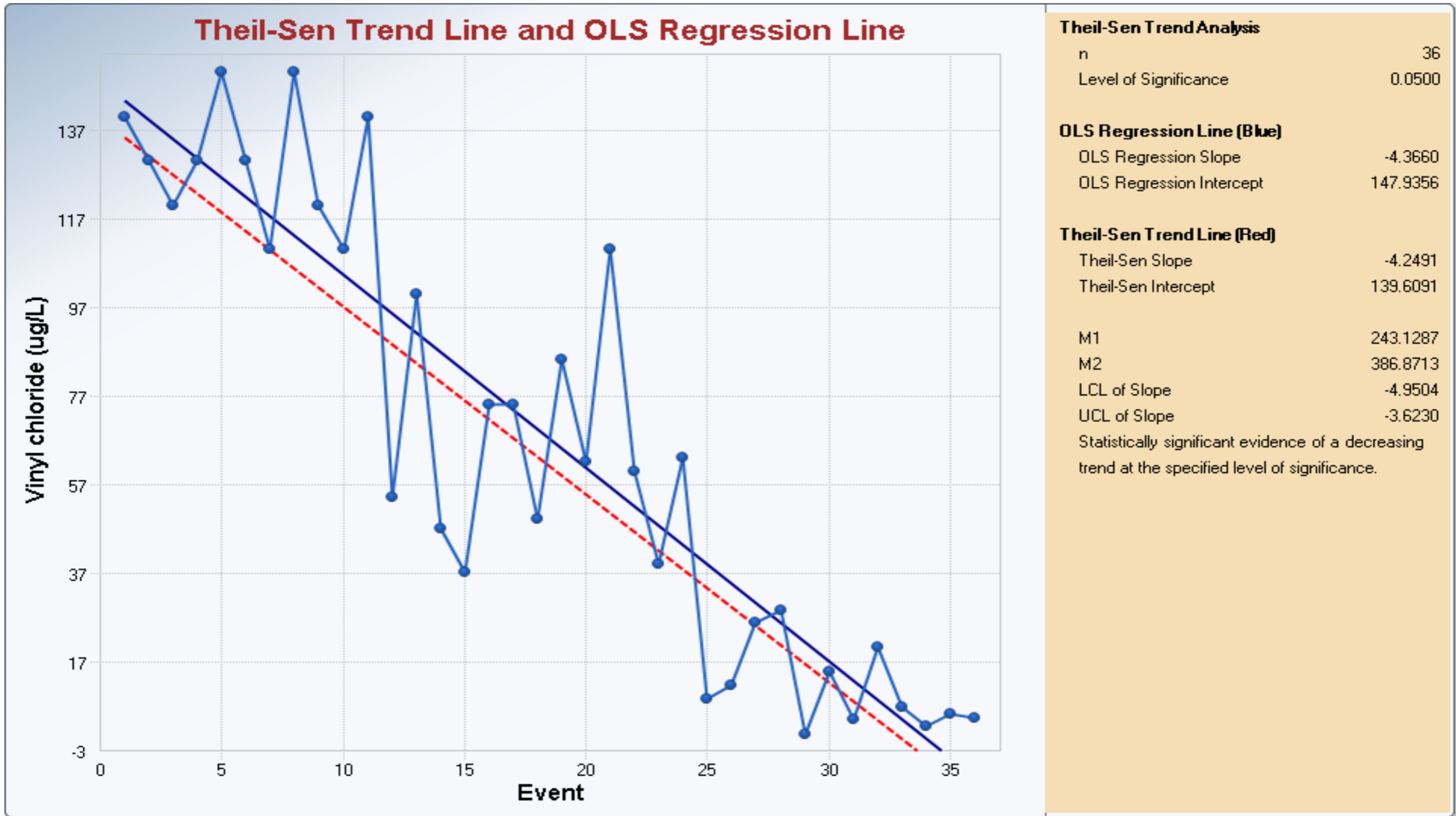
LH1

Grafton Lime Kiln Park Landfill/West Plume Area



LH1

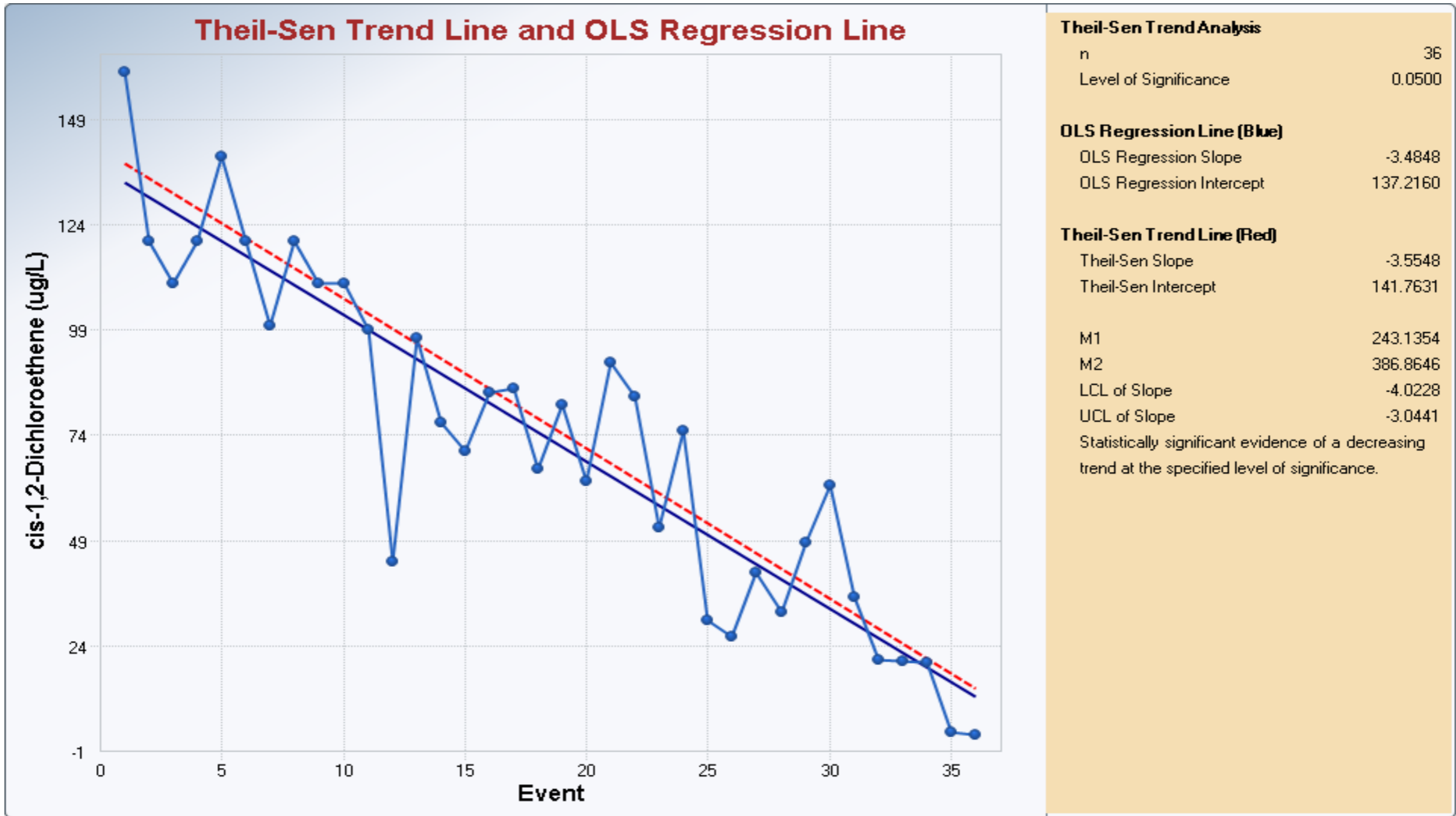
Grafton Lime Kiln Park Landfill/West Plume Area





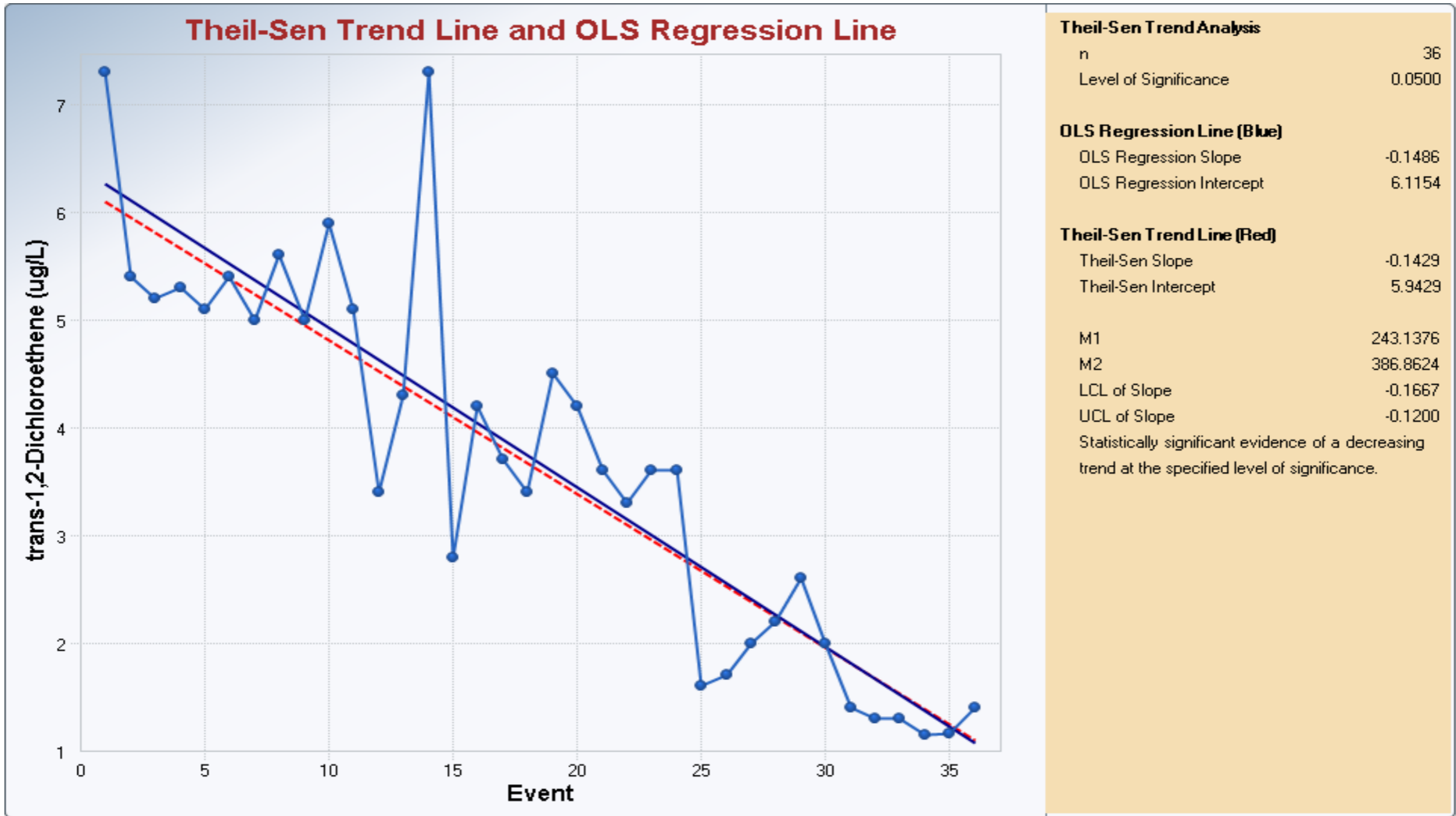
LH1

Grafton Lime Kiln Park Landfill/West Plume Area



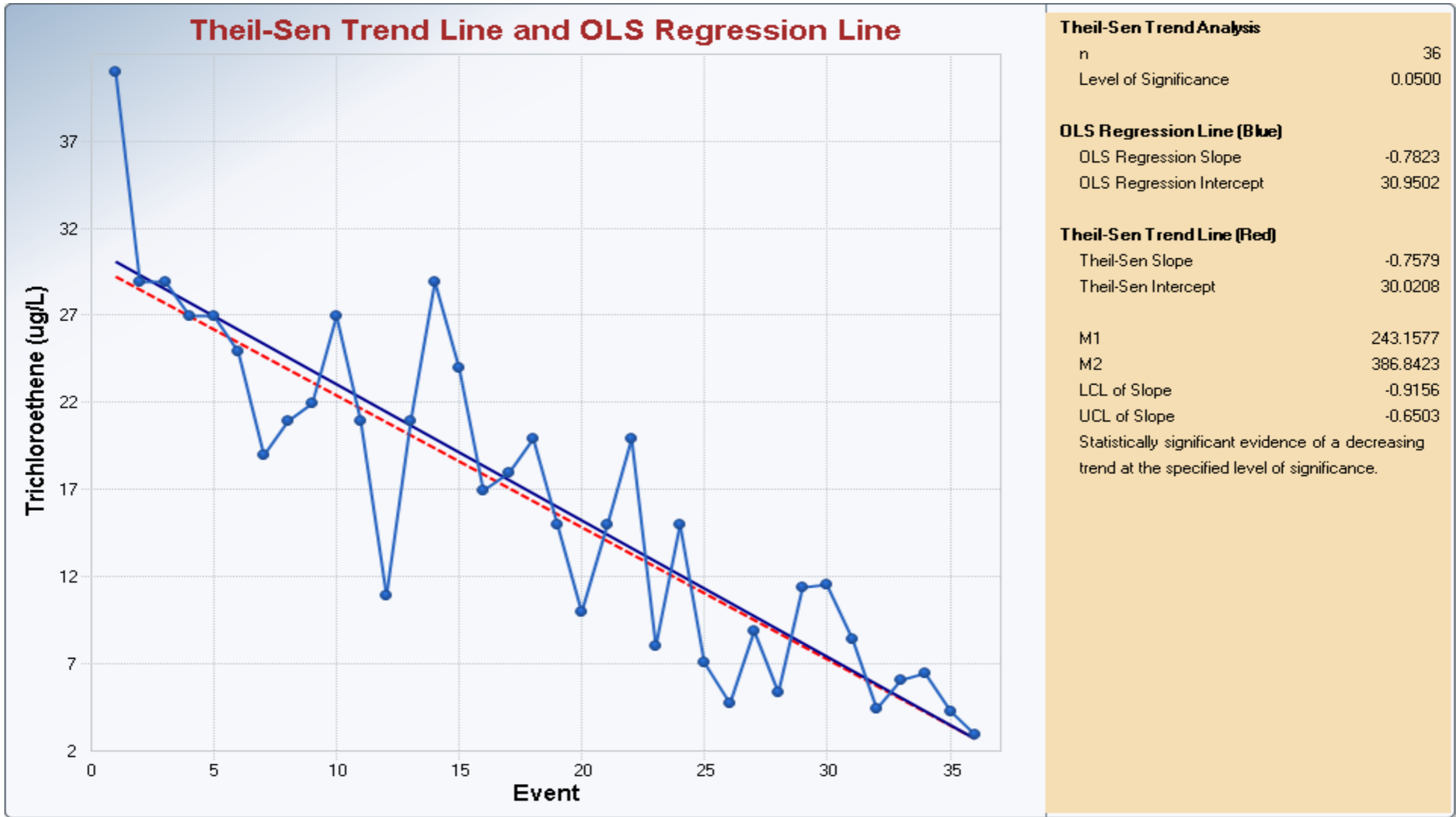
LH1

Grafton Lime Kiln Park Landfill/West Plume Area



LH1

Grafton Lime Kiln Park Landfill/West Plume Area



**Attachment 2**  
**Exceedance Summary**

Smp Date	SPN	PCN	RV	Units	Type	Location	Lab Number	Sample ID	MSI	Parameter	PAL	ES
3/21/2019	001	39180	J 0.96	ug/L	PAL		184650001	P2A	01	Trichloroethene	0.5	5
3/21/2019	001	39175	3	ug/L	ES		184650001	P2A	01	Vinyl chloride	0.02	0.2
3/21/2019	003	34501	J 2.4	ug/L	PAL		184650002	P2B	01	1,1-Dichloroethene	0.7	7
3/21/2019	003	77093	477	ug/L	ES		184650002	P2B	01	cis-1,2-Dichloroethene	7	70
3/21/2019	003	39180	141	ug/L	ES		184650002	P2B	01	Trichloroethene	0.5	5
3/21/2019	003	39175	268	ug/L	ES		184650002	P2B	01	Vinyl chloride	0.02	0.2
3/21/2019	015	34501	J 0.72	ug/L	PAL		184650004	P8A	01	1,1-Dichloroethene	0.7	7
3/21/2019	015	77093	52.7	ug/L	PAL		184650004	P8A	01	cis-1,2-Dichloroethene	7	70
3/21/2019	015	39180	10.3	ug/L	ES		184650004	P8A	01	Trichloroethene	0.5	5
3/21/2019	015	39175	4.1	ug/L	ES		184650004	P8A	01	Vinyl chloride	0.02	0.2
3/21/2019	017	34501	J 1.8	ug/L	PAL		184650012	P8B	02	1,1-Dichloroethene	0.7	7
3/21/2019	017	34501	J 1.3	ug/L	PAL		184650005	P8B	01	1,1-Dichloroethene	0.7	7
3/21/2019	017	77093	134	ug/L	ES		184650005	P8B	01	cis-1,2-Dichloroethene	7	70
3/21/2019	017	77093	144	ug/L	ES		184650012	P8B	02	cis-1,2-Dichloroethene	7	70
3/21/2019	017	39180	142	ug/L	ES		184650005	P8B	01	Trichloroethene	0.5	5
3/21/2019	017	39180	146	ug/L	ES		184650012	P8B	02	Trichloroethene	0.5	5
3/21/2019	017	39175	33.9	ug/L	ES		184650012	P8B	02	Vinyl chloride	0.02	0.2
3/21/2019	017	39175	30.4	ug/L	ES		184650005	P8B	01	Vinyl chloride	0.02	0.2
3/21/2019	019	39180	9.2	ug/L	ES		184650006	P9B	01	Trichloroethene	0.5	5

Exceedance type: PAL-Preventive Action Limit; ES-Enforcement Standard; \*-EnforcementStandard Within DMZ; ACL-Alternative Concentration Limit.  
 MSI: 01-Sample; 02-Sample Duplicate; 03-SampleTripligate; 09-Non-field Lab Replicate  
 < qualifier indicates reported value (RV) was not detected at or above the MDL.

Smp Date	SPN	PCN	RV	Units	Type	Location	Lab Number	Sample ID	MSI	Parameter	PAL	ES
5/22/2019	005	34475	1.8	ug/L	PAL		188244001	P3B	01	Tetrachloroethene	0.5	5
5/22/2019	005	39180	24.3	ug/L	ES		188244001	P3B	01	Trichloroethene	0.5	5
5/22/2019	009	34030	J 0.78	ug/L	PAL		188244008	LH1	01	Benzene	0.5	5
5/22/2019	009	39180	3	ug/L	PAL		188244008	LH1	01	Trichloroethene	0.5	5
5/22/2019	009	39175	4.1	ug/L	ES		188244008	LH1	01	Vinyl chloride	0.02	0.2
5/22/2019	015	77093	43.9	ug/L	PAL		188244004	P8A	01	cis-1,2-Dichloroethene	7	70
5/22/2019	015	39180	8.7	ug/L	ES		188244004	P8A	01	Trichloroethene	0.5	5
5/22/2019	015	39175	2.3	ug/L	ES		188244004	P8A	01	Vinyl chloride	0.02	0.2
5/22/2019	017	34501	2.1	ug/L	PAL		188244009	P8B	02	1,1-Dichloroethene	0.7	7
5/22/2019	017	34501	2.1	ug/L	PAL		188244005	P8B	01	1,1-Dichloroethene	0.7	7
5/22/2019	017	77093	89.4	ug/L	ES		188244009	P8B	02	cis-1,2-Dichloroethene	7	70
5/22/2019	017	77093	90.2	ug/L	ES		188244005	P8B	01	cis-1,2-Dichloroethene	7	70
5/22/2019	017	39180	175	ug/L	ES		188244005	P8B	01	Trichloroethene	0.5	5
5/22/2019	017	39180	185	ug/L	ES		188244009	P8B	02	Trichloroethene	0.5	5
5/22/2019	017	39175	8.8	ug/L	ES		188244005	P8B	01	Vinyl chloride	0.02	0.2
5/22/2019	017	39175	9.8	ug/L	ES		188244009	P8B	02	Vinyl chloride	0.02	0.2
5/22/2019	310	39180	1.9	ug/L	PAL		188244006	P10B	01	Trichloroethene	0.5	5

Exceedance type: PAL-Preventive Action Limit; ES-Enforcement Standard; \*-EnforcementStandard Within DMZ; ACL-Alternative Concentration Limit.

MSI: 01-Sample; 02-Sample Duplicate; 03-SampleTriplictate; 09-Non-field Lab Replicate

< qualifier indicates reported value (RV) was not detected at or above the MDL.

**Attachment 3**  
**Laboratory Reports**

June 10, 2019

Jeff Maletzke  
AECOM  
2985 South Ridge Rd  
Green Bay, WI 54304

RE: Project: 60600468 LIMEKILN PARK/GRAFTON  
Pace Project No.: 40188244

Dear Jeff Maletzke:

Enclosed are the analytical results for sample(s) received by the laboratory on May 24, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40188244001	P3B	Water	05/22/19 10:45	05/24/19 09:18
40188244002	P4B	Water	05/22/19 12:25	05/24/19 09:18
40188244003	P7B	Water	05/22/19 15:30	05/24/19 09:18
40188244004	P8A	Water	05/22/19 14:35	05/24/19 09:18
40188244005	P8B	Water	05/22/19 09:50	05/24/19 09:18
40188244006	P10B	Water	05/22/19 13:35	05/24/19 09:18
40188244007	PW1716LR	Water	05/22/19 15:50	05/24/19 09:18
40188244008	LH1	Water	05/22/19 11:30	05/24/19 09:18
40188244009	P8B DUP	Water	05/22/19 09:50	05/24/19 09:18
40188244010	TRIP BLANK	Water	05/22/19 08:00	05/24/19 09:18

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40188244001	P3B	EPA 8260	LAP	73	PASI-G
			CDH	6	PASI-G
40188244002	P4B	EPA 8260	LAP	73	PASI-G
			CDH	6	PASI-G
40188244003	P7B	EPA 8260	LAP	73	PASI-G
			CDH	6	PASI-G
40188244004	P8A	EPA 8260	LAP	73	PASI-G
			CDH	6	PASI-G
40188244005	P8B	EPA 8260	LAP	73	PASI-G
			CDH	6	PASI-G
40188244006	P10B	EPA 8260	LAP	73	PASI-G
			CDH	6	PASI-G
40188244007	PW1716LR	EPA 8260	LAP	73	PASI-G
40188244008	LH1	EPA 8260	LAP	73	PASI-G
			CDH	6	PASI-G
40188244009	P8B DUP	EPA 8260	LAP	73	PASI-G
			CDH	6	PASI-G
40188244010	TRIP BLANK	EPA 8260	LAP	73	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: 60600468 LIMEKILN PARK/GRAFTON

Peace Project No.: 40188244

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>40188244001</b>	<b>P3B</b>					
EPA 8260	Acetone	3.0J	ug/L	20.0	05/30/19 13:20	
EPA 8260	2-Butanone (MEK)	3.2J	ug/L	20.0	05/30/19 13:20	
EPA 8260	Tetrachloroethene	1.8	ug/L	1.1	05/30/19 13:20	
EPA 8260	Trichloroethene	24.3	ug/L	1.0	05/30/19 13:20	
	Field pH	7.07	Std. Units		05/22/19 10:45	
	Field Specific Conductance	945.87	umhos/cm		05/22/19 10:45	
	Oxygen, Dissolved	3.63	mg/L		05/22/19 10:45	
	REDOX	55.2	mV		05/22/19 10:45	
	Turbidity	0	no units		05/22/19 10:45	
	Temperature, Water (C)	10.19	deg C		05/22/19 10:45	
<b>40188244002</b>	<b>P4B</b>					
EPA 8260	Acetone	3.1J	ug/L	20.0	05/30/19 13:42	
	Field pH	7.02	Std. Units		05/22/19 12:25	
	Field Specific Conductance	1130.7	umhos/cm		05/22/19 12:25	
	Oxygen, Dissolved	4.10	mg/L		05/22/19 12:25	
	REDOX	25.6	mV		05/22/19 12:25	
	Turbidity	0	no units		05/22/19 12:25	
	Temperature, Water (C)	11.10	deg C		05/22/19 12:25	
<b>40188244003</b>	<b>P7B</b>					
EPA 8260	Acetone	3.9J	ug/L	20.0	05/30/19 14:05	
	Field pH	6.97	Std. Units		05/22/19 15:30	
	Field Specific Conductance	609.01	umhos/cm		05/22/19 15:30	
	Oxygen, Dissolved	5.31	mg/L		05/22/19 15:30	
	REDOX	76.4	mV		05/22/19 15:30	
	Turbidity	0	no units		05/22/19 15:30	
	Temperature, Water (C)	9.90	deg C		05/22/19 15:30	
<b>40188244004</b>	<b>P8A</b>					
EPA 8260	Acetone	3.2J	ug/L	20.0	05/30/19 14:27	
EPA 8260	1,1-Dichloroethane	6.6	ug/L	1.0	05/30/19 14:27	
EPA 8260	1,2-Dichloroethene (Total)	44.3	ug/L	7.4	05/30/19 14:27	
EPA 8260	1,1-Dichloroethene	0.66J	ug/L	1.0	05/30/19 14:27	
EPA 8260	cis-1,2-Dichloroethene	43.9	ug/L	1.0	05/30/19 14:27	
EPA 8260	1,1,1-Trichloroethane	0.65J	ug/L	1.0	05/30/19 14:27	
EPA 8260	Trichloroethene	8.7	ug/L	1.0	05/30/19 14:27	
EPA 8260	Vinyl chloride	2.3	ug/L	1.0	05/30/19 14:27	
	Field pH	7.07	Std. Units		05/22/19 14:35	
	Field Specific Conductance	733.35	umhos/cm		05/22/19 14:35	
	Oxygen, Dissolved	0.03	mg/L		05/22/19 14:35	
	REDOX	60.3	mV		05/22/19 14:35	
	Turbidity	0	no units		05/22/19 14:35	
	Temperature, Water (C)	12.63	deg C		05/22/19 14:35	
<b>40188244005</b>	<b>P8B</b>					
EPA 8260	Acetone	3.9J	ug/L	20.0	05/30/19 14:50	
EPA 8260	1,1-Dichloroethane	3.5	ug/L	1.0	05/30/19 14:50	
EPA 8260	1,2-Dichloroethene (Total)	91.0	ug/L	7.4	05/30/19 14:50	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>40188244005</b>	<b>P8B</b>					
EPA 8260	1,1-Dichloroethene	2.1	ug/L	1.0	05/30/19 14:50	
EPA 8260	cis-1,2-Dichloroethene	90.2	ug/L	1.0	05/30/19 14:50	
EPA 8260	1,1,1-Trichloroethane	1.1	ug/L	1.0	05/30/19 14:50	
EPA 8260	Trichloroethene	175	ug/L	1.0	05/30/19 14:50	
EPA 8260	Trichlorofluoromethane	0.35J	ug/L	1.0	05/30/19 14:50	
EPA 8260	Vinyl chloride	8.8	ug/L	1.0	05/30/19 14:50	
	Field pH	7.10	Std. Units		05/22/19 09:50	
	Field Specific Conductance	767.86	umhos/cm		05/22/19 09:50	
	Oxygen, Dissolved	0.39	mg/L		05/22/19 09:50	
	REDOX	-24.3	mV		05/22/19 09:50	
	Turbidity	0	no units		05/22/19 09:50	
	Temperature, Water (C)	10.97	deg C		05/22/19 09:50	
<b>40188244006</b>	<b>P10B</b>					
EPA 8260	Acetone	5.1J	ug/L	20.0	05/30/19 16:52	
EPA 8260	1,1-Dichloroethane	0.35J	ug/L	1.0	05/30/19 16:52	
EPA 8260	Trichloroethene	1.9	ug/L	1.0	05/30/19 16:52	
EPA 8260	1,1,2-Trichlorotrifluoroethane	32.3	ug/L	5.0	05/30/19 16:52	
	Field pH	6.93	Std. Units		05/22/19 13:35	
	Field Specific Conductance	1150.4	umhos/cm		05/22/19 13:35	
	Oxygen, Dissolved	1.78	mg/L		05/22/19 13:35	
	REDOX	51.1	mV		05/22/19 13:35	
	Turbidity	0	no units		05/22/19 13:35	
	Temperature, Water (C)	10.74	deg C		05/22/19 13:35	
<b>40188244008</b>	<b>LH1</b>					
EPA 8260	Acetone	3.5J	ug/L	20.0	05/30/19 17:37	
EPA 8260	Benzene	0.78J	ug/L	1.0	05/30/19 17:37	
EPA 8260	2-Butanone (MEK)	4.4J	ug/L	20.0	05/30/19 17:37	
EPA 8260	1,1-Dichloroethane	27.8	ug/L	1.0	05/30/19 17:37	
EPA 8260	1,2-Dichloroethene (Total)	3.1J	ug/L	7.4	05/30/19 17:37	
EPA 8260	cis-1,2-Dichloroethene	2.8	ug/L	1.0	05/30/19 17:37	
EPA 8260	Trichloroethene	3.0	ug/L	1.0	05/30/19 17:37	
EPA 8260	Vinyl chloride	4.1	ug/L	1.0	05/30/19 17:37	
	Field pH	7.20	Std. Units		05/22/19 11:30	
	Field Specific Conductance	3152.3	umhos/cm		05/22/19 11:30	
	Oxygen, Dissolved	0.12	mg/L		05/22/19 11:30	
	REDOX	-96.1	mV		05/22/19 11:30	
	Turbidity	0	no units		05/22/19 11:30	
	Temperature, Water (C)	11.68	deg C		05/22/19 11:30	
<b>40188244009</b>	<b>P8B DUP</b>					
EPA 8260	Acetone	3.8J	ug/L	20.0	05/30/19 17:59	
EPA 8260	1,1-Dichloroethane	3.5	ug/L	1.0	05/30/19 17:59	
EPA 8260	1,2-Dichloroethene (Total)	90.3	ug/L	7.4	05/30/19 17:59	
EPA 8260	1,1-Dichloroethene	2.1	ug/L	1.0	05/30/19 17:59	
EPA 8260	cis-1,2-Dichloroethene	89.4	ug/L	1.0	05/30/19 17:59	
EPA 8260	1,1,1-Trichloroethane	1.2	ug/L	1.0	05/30/19 17:59	
EPA 8260	Trichloroethene	185	ug/L	1.0	05/30/19 17:59	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40188244009</b>	<b>P8B DUP</b>					
EPA 8260	Trichlorofluoromethane	0.34J	ug/L	1.0	05/30/19 17:59	
EPA 8260	Vinyl chloride	9.8	ug/L	1.0	05/30/19 17:59	
	Field pH	7.10	Std. Units		05/22/19 09:50	
	Field Specific Conductance	767.86	umhos/cm		05/22/19 09:50	
	Oxygen, Dissolved	0.39	mg/L		05/22/19 09:50	
	REDOX	-24.3	mV		05/22/19 09:50	
	Turbidity	0	no units		05/22/19 09:50	
	Temperature, Water (C)	10.97	deg C		05/22/19 09:50	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Sample Project No.: 40188244

Sample: P3B Lab ID: 40188244001 Collected: 05/22/19 10:45 Received: 05/24/19 09:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	3.0J	ug/L	20.0	2.7	1		05/30/19 13:20	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		05/30/19 13:20	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		05/30/19 13:20	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		05/30/19 13:20	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		05/30/19 13:20	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		05/30/19 13:20	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		05/30/19 13:20	74-83-9	
2-Butanone (MEK)	3.2J	ug/L	20.0	2.9	1		05/30/19 13:20	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 13:20	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		05/30/19 13:20	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		05/30/19 13:20	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		05/30/19 13:20	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		05/30/19 13:20	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 13:20	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		05/30/19 13:20	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		05/30/19 13:20	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		05/30/19 13:20	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		05/30/19 13:20	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		05/30/19 13:20	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		05/30/19 13:20	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		05/30/19 13:20	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		05/30/19 13:20	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		05/30/19 13:20	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		05/30/19 13:20	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 13:20	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		05/30/19 13:20	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		05/30/19 13:20	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		05/30/19 13:20	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 13:20	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 13:20	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		05/30/19 13:20	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		05/30/19 13:20	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		05/30/19 13:20	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		05/30/19 13:20	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		05/30/19 13:20	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		05/30/19 13:20	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		05/30/19 13:20	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		05/30/19 13:20	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		05/30/19 13:20	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		05/30/19 13:20	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		05/30/19 13:20	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		05/30/19 13:20	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		05/30/19 13:20	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		05/30/19 13:20	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		05/30/19 13:20	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		05/30/19 13:20	75-09-2	

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## ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

**Sample: P3B**      **Lab ID: 40188244001**      Collected: 05/22/19 10:45      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		05/30/19 13:20	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		05/30/19 13:20	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		05/30/19 13:20	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		05/30/19 13:20	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		05/30/19 13:20	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 13:20	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 13:20	79-34-5	
Tetrachloroethene	1.8	ug/L	1.1	0.33	1		05/30/19 13:20	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		05/30/19 13:20	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		05/30/19 13:20	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		05/30/19 13:20	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		05/30/19 13:20	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		05/30/19 13:20	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		05/30/19 13:20	79-00-5	
Trichloroethene	24.3	ug/L	1.0	0.26	1		05/30/19 13:20	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		05/30/19 13:20	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		05/30/19 13:20	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		05/30/19 13:20	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		05/30/19 13:20	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		05/30/19 13:20	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/30/19 13:20	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		05/30/19 13:20	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		05/30/19 13:20	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		05/30/19 13:20	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	103	%	70-130		1		05/30/19 13:20	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1		05/30/19 13:20	2037-26-5	
4-Bromofluorobenzene (S)	104	%	70-130		1		05/30/19 13:20	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	7.07	Std. Units			1		05/22/19 10:45		
Field Specific Conductance	945.87	umhos/cm			1		05/22/19 10:45		
Oxygen, Dissolved	3.63	mg/L			1		05/22/19 10:45	7782-44-7	
REDOX	55.2	mV			1		05/22/19 10:45		
Turbidity	0	no units			1		05/22/19 10:45		
Temperature, Water (C)	10.19	deg C			1		05/22/19 10:45		

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## ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Sample Project No.: 40188244

**Sample: P4B**      **Lab ID: 40188244002**      Collected: 05/22/19 12:25      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	3.1J	ug/L	20.0	2.7	1		05/30/19 13:42	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		05/30/19 13:42	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		05/30/19 13:42	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		05/30/19 13:42	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		05/30/19 13:42	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		05/30/19 13:42	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		05/30/19 13:42	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		05/30/19 13:42	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 13:42	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		05/30/19 13:42	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		05/30/19 13:42	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		05/30/19 13:42	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		05/30/19 13:42	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 13:42	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		05/30/19 13:42	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		05/30/19 13:42	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		05/30/19 13:42	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		05/30/19 13:42	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		05/30/19 13:42	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		05/30/19 13:42	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		05/30/19 13:42	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		05/30/19 13:42	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		05/30/19 13:42	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		05/30/19 13:42	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 13:42	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		05/30/19 13:42	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		05/30/19 13:42	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		05/30/19 13:42	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 13:42	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 13:42	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		05/30/19 13:42	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		05/30/19 13:42	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		05/30/19 13:42	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		05/30/19 13:42	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		05/30/19 13:42	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		05/30/19 13:42	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		05/30/19 13:42	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		05/30/19 13:42	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		05/30/19 13:42	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		05/30/19 13:42	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		05/30/19 13:42	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		05/30/19 13:42	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		05/30/19 13:42	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		05/30/19 13:42	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		05/30/19 13:42	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		05/30/19 13:42	75-09-2	

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## ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

**Sample: P4B**      **Lab ID: 40188244002**      Collected: 05/22/19 12:25      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		05/30/19 13:42	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		05/30/19 13:42	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		05/30/19 13:42	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		05/30/19 13:42	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		05/30/19 13:42	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 13:42	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 13:42	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		05/30/19 13:42	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		05/30/19 13:42	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		05/30/19 13:42	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		05/30/19 13:42	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		05/30/19 13:42	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		05/30/19 13:42	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		05/30/19 13:42	79-00-5	
Trichloroethene	<0.26	ug/L	1.0	0.26	1		05/30/19 13:42	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		05/30/19 13:42	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		05/30/19 13:42	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		05/30/19 13:42	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		05/30/19 13:42	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		05/30/19 13:42	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/30/19 13:42	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		05/30/19 13:42	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		05/30/19 13:42	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		05/30/19 13:42	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	103	%	70-130		1		05/30/19 13:42	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		05/30/19 13:42	2037-26-5	
4-Bromofluorobenzene (S)	105	%	70-130		1		05/30/19 13:42	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	7.02	Std. Units			1		05/22/19 12:25		
Field Specific Conductance	1130.7	umhos/cm			1		05/22/19 12:25		
Oxygen, Dissolved	4.10	mg/L			1		05/22/19 12:25	7782-44-7	
REDOX	25.6	mV			1		05/22/19 12:25		
Turbidity	0	no units			1		05/22/19 12:25		
Temperature, Water (C)	11.10	deg C			1		05/22/19 12:25		

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Sample Project No.: 40188244

Sample: P7B Lab ID: 40188244003 Collected: 05/22/19 15:30 Received: 05/24/19 09:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	3.9J	ug/L	20.0	2.7	1		05/30/19 14:05	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		05/30/19 14:05	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		05/30/19 14:05	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		05/30/19 14:05	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		05/30/19 14:05	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		05/30/19 14:05	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		05/30/19 14:05	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		05/30/19 14:05	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 14:05	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		05/30/19 14:05	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		05/30/19 14:05	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		05/30/19 14:05	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		05/30/19 14:05	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 14:05	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		05/30/19 14:05	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		05/30/19 14:05	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		05/30/19 14:05	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		05/30/19 14:05	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		05/30/19 14:05	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		05/30/19 14:05	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		05/30/19 14:05	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		05/30/19 14:05	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		05/30/19 14:05	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		05/30/19 14:05	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 14:05	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		05/30/19 14:05	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		05/30/19 14:05	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		05/30/19 14:05	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 14:05	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 14:05	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		05/30/19 14:05	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		05/30/19 14:05	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		05/30/19 14:05	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		05/30/19 14:05	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		05/30/19 14:05	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		05/30/19 14:05	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		05/30/19 14:05	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		05/30/19 14:05	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		05/30/19 14:05	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		05/30/19 14:05	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		05/30/19 14:05	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		05/30/19 14:05	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		05/30/19 14:05	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		05/30/19 14:05	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		05/30/19 14:05	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		05/30/19 14:05	75-09-2	

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## ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

**Sample: P7B**      **Lab ID: 40188244003**      Collected: 05/22/19 15:30      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		05/30/19 14:05	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		05/30/19 14:05	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		05/30/19 14:05	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		05/30/19 14:05	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		05/30/19 14:05	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 14:05	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 14:05	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		05/30/19 14:05	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		05/30/19 14:05	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		05/30/19 14:05	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		05/30/19 14:05	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		05/30/19 14:05	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		05/30/19 14:05	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		05/30/19 14:05	79-00-5	
Trichloroethene	<0.26	ug/L	1.0	0.26	1		05/30/19 14:05	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		05/30/19 14:05	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		05/30/19 14:05	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		05/30/19 14:05	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		05/30/19 14:05	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		05/30/19 14:05	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/30/19 14:05	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		05/30/19 14:05	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		05/30/19 14:05	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		05/30/19 14:05	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	102	%	70-130		1		05/30/19 14:05	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		05/30/19 14:05	2037-26-5	
4-Bromofluorobenzene (S)	107	%	70-130		1		05/30/19 14:05	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	6.97	Std. Units			1		05/22/19 15:30		
Field Specific Conductance	609.01	umhos/cm			1		05/22/19 15:30		
Oxygen, Dissolved	5.31	mg/L			1		05/22/19 15:30	7782-44-7	
REDOX	76.4	mV			1		05/22/19 15:30		
Turbidity	0	no units			1		05/22/19 15:30		
Temperature, Water (C)	9.90	deg C			1		05/22/19 15:30		

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Sample Project No.: 40188244

Sample: P8A Lab ID: 40188244004 Collected: 05/22/19 14:35 Received: 05/24/19 09:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	3.2J	ug/L	20.0	2.7	1		05/30/19 14:27	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		05/30/19 14:27	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		05/30/19 14:27	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		05/30/19 14:27	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		05/30/19 14:27	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		05/30/19 14:27	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		05/30/19 14:27	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		05/30/19 14:27	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 14:27	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		05/30/19 14:27	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		05/30/19 14:27	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		05/30/19 14:27	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		05/30/19 14:27	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 14:27	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		05/30/19 14:27	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		05/30/19 14:27	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		05/30/19 14:27	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		05/30/19 14:27	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		05/30/19 14:27	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		05/30/19 14:27	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		05/30/19 14:27	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		05/30/19 14:27	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		05/30/19 14:27	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		05/30/19 14:27	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 14:27	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		05/30/19 14:27	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		05/30/19 14:27	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		05/30/19 14:27	75-71-8	
1,1-Dichloroethane	6.6	ug/L	1.0	0.27	1		05/30/19 14:27	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 14:27	107-06-2	
1,2-Dichloroethene (Total)	44.3	ug/L	7.4	0.51	1		05/30/19 14:27	540-59-0	
1,1-Dichloroethene	0.66J	ug/L	1.0	0.24	1		05/30/19 14:27	75-35-4	
cis-1,2-Dichloroethene	43.9	ug/L	1.0	0.27	1		05/30/19 14:27	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		05/30/19 14:27	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		05/30/19 14:27	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		05/30/19 14:27	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		05/30/19 14:27	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		05/30/19 14:27	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		05/30/19 14:27	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		05/30/19 14:27	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		05/30/19 14:27	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		05/30/19 14:27	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		05/30/19 14:27	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		05/30/19 14:27	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		05/30/19 14:27	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		05/30/19 14:27	75-09-2	

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## ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

**Sample: P8A**      **Lab ID: 40188244004**      Collected: 05/22/19 14:35      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		05/30/19 14:27	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		05/30/19 14:27	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		05/30/19 14:27	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		05/30/19 14:27	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		05/30/19 14:27	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 14:27	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 14:27	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		05/30/19 14:27	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		05/30/19 14:27	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		05/30/19 14:27	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		05/30/19 14:27	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		05/30/19 14:27	120-82-1	
1,1,1-Trichloroethane	0.65J	ug/L	1.0	0.24	1		05/30/19 14:27	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		05/30/19 14:27	79-00-5	
Trichloroethene	8.7	ug/L	1.0	0.26	1		05/30/19 14:27	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		05/30/19 14:27	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		05/30/19 14:27	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		05/30/19 14:27	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		05/30/19 14:27	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		05/30/19 14:27	108-67-8	
Vinyl chloride	2.3	ug/L	1.0	0.17	1		05/30/19 14:27	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		05/30/19 14:27	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		05/30/19 14:27	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		05/30/19 14:27	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	102	%	70-130		1		05/30/19 14:27	1868-53-7	
Toluene-d8 (S)	97	%	70-130		1		05/30/19 14:27	2037-26-5	
4-Bromofluorobenzene (S)	100	%	70-130		1		05/30/19 14:27	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	7.07	Std. Units			1		05/22/19 14:35		
Field Specific Conductance	733.35	umhos/cm			1		05/22/19 14:35		
Oxygen, Dissolved	0.03	mg/L			1		05/22/19 14:35	7782-44-7	
REDOX	60.3	mV			1		05/22/19 14:35		
Turbidity	0	no units			1		05/22/19 14:35		
Temperature, Water (C)	12.63	deg C			1		05/22/19 14:35		

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Sample Project No.: 40188244

Sample: P8B Lab ID: 40188244005 Collected: 05/22/19 09:50 Received: 05/24/19 09:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	3.9J	ug/L	20.0	2.7	1		05/30/19 14:50	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		05/30/19 14:50	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		05/30/19 14:50	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		05/30/19 14:50	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		05/30/19 14:50	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		05/30/19 14:50	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		05/30/19 14:50	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		05/30/19 14:50	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 14:50	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		05/30/19 14:50	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		05/30/19 14:50	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		05/30/19 14:50	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		05/30/19 14:50	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 14:50	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		05/30/19 14:50	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		05/30/19 14:50	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		05/30/19 14:50	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		05/30/19 14:50	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		05/30/19 14:50	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		05/30/19 14:50	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		05/30/19 14:50	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		05/30/19 14:50	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		05/30/19 14:50	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		05/30/19 14:50	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 14:50	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		05/30/19 14:50	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		05/30/19 14:50	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		05/30/19 14:50	75-71-8	
1,1-Dichloroethane	3.5	ug/L	1.0	0.27	1		05/30/19 14:50	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 14:50	107-06-2	
1,2-Dichloroethene (Total)	91.0	ug/L	7.4	0.51	1		05/30/19 14:50	540-59-0	
1,1-Dichloroethene	2.1	ug/L	1.0	0.24	1		05/30/19 14:50	75-35-4	
cis-1,2-Dichloroethene	90.2	ug/L	1.0	0.27	1		05/30/19 14:50	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		05/30/19 14:50	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		05/30/19 14:50	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		05/30/19 14:50	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		05/30/19 14:50	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		05/30/19 14:50	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		05/30/19 14:50	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		05/30/19 14:50	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		05/30/19 14:50	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		05/30/19 14:50	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		05/30/19 14:50	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		05/30/19 14:50	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		05/30/19 14:50	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		05/30/19 14:50	75-09-2	

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## ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

**Sample: P8B**      **Lab ID: 40188244005**      Collected: 05/22/19 09:50      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		05/30/19 14:50	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		05/30/19 14:50	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		05/30/19 14:50	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		05/30/19 14:50	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		05/30/19 14:50	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 14:50	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 14:50	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		05/30/19 14:50	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		05/30/19 14:50	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		05/30/19 14:50	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		05/30/19 14:50	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		05/30/19 14:50	120-82-1	
1,1,1-Trichloroethane	1.1	ug/L	1.0	0.24	1		05/30/19 14:50	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		05/30/19 14:50	79-00-5	
Trichloroethene	175	ug/L	1.0	0.26	1		05/30/19 14:50	79-01-6	
Trichlorofluoromethane	0.35J	ug/L	1.0	0.21	1		05/30/19 14:50	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		05/30/19 14:50	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		05/30/19 14:50	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		05/30/19 14:50	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		05/30/19 14:50	108-67-8	
Vinyl chloride	8.8	ug/L	1.0	0.17	1		05/30/19 14:50	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		05/30/19 14:50	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		05/30/19 14:50	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		05/30/19 14:50	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	105	%	70-130		1		05/30/19 14:50	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		05/30/19 14:50	2037-26-5	
4-Bromofluorobenzene (S)	105	%	70-130		1		05/30/19 14:50	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	7.10	Std. Units			1		05/22/19 09:50		
Field Specific Conductance	767.86	umhos/cm			1		05/22/19 09:50		
Oxygen, Dissolved	0.39	mg/L			1		05/22/19 09:50	7782-44-7	
REDOX	-24.3	mV			1		05/22/19 09:50		
Turbidity	0	no units			1		05/22/19 09:50		
Temperature, Water (C)	10.97	deg C			1		05/22/19 09:50		

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Sample Project No.: 40188244

Sample: P10B Lab ID: 40188244006 Collected: 05/22/19 13:35 Received: 05/24/19 09:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	5.1J	ug/L	20.0	2.7	1		05/30/19 16:52	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		05/30/19 16:52	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		05/30/19 16:52	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		05/30/19 16:52	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		05/30/19 16:52	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		05/30/19 16:52	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		05/30/19 16:52	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		05/30/19 16:52	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 16:52	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		05/30/19 16:52	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		05/30/19 16:52	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		05/30/19 16:52	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		05/30/19 16:52	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 16:52	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		05/30/19 16:52	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		05/30/19 16:52	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		05/30/19 16:52	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		05/30/19 16:52	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		05/30/19 16:52	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		05/30/19 16:52	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		05/30/19 16:52	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		05/30/19 16:52	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		05/30/19 16:52	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		05/30/19 16:52	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 16:52	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		05/30/19 16:52	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		05/30/19 16:52	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		05/30/19 16:52	75-71-8	
1,1-Dichloroethane	0.35J	ug/L	1.0	0.27	1		05/30/19 16:52	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 16:52	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		05/30/19 16:52	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		05/30/19 16:52	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		05/30/19 16:52	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		05/30/19 16:52	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		05/30/19 16:52	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		05/30/19 16:52	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		05/30/19 16:52	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		05/30/19 16:52	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		05/30/19 16:52	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		05/30/19 16:52	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		05/30/19 16:52	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		05/30/19 16:52	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		05/30/19 16:52	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		05/30/19 16:52	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		05/30/19 16:52	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		05/30/19 16:52	75-09-2	

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

**Sample: P10B**      **Lab ID: 40188244006**      Collected: 05/22/19 13:35      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		05/30/19 16:52	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		05/30/19 16:52	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		05/30/19 16:52	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		05/30/19 16:52	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		05/30/19 16:52	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 16:52	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 16:52	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		05/30/19 16:52	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		05/30/19 16:52	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		05/30/19 16:52	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		05/30/19 16:52	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		05/30/19 16:52	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		05/30/19 16:52	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		05/30/19 16:52	79-00-5	
Trichloroethene	1.9	ug/L	1.0	0.26	1		05/30/19 16:52	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		05/30/19 16:52	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		05/30/19 16:52	96-18-4	
1,1,2-Trichlorotrifluoroethane	32.3	ug/L	5.0	0.54	1		05/30/19 16:52	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		05/30/19 16:52	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		05/30/19 16:52	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/30/19 16:52	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		05/30/19 16:52	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		05/30/19 16:52	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		05/30/19 16:52	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	102	%	70-130		1		05/30/19 16:52	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		05/30/19 16:52	2037-26-5	
4-Bromofluorobenzene (S)	106	%	70-130		1		05/30/19 16:52	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	6.93	Std. Units			1		05/22/19 13:35		
Field Specific Conductance	1150.4	umhos/cm			1		05/22/19 13:35		
Oxygen, Dissolved	1.78	mg/L			1		05/22/19 13:35	7782-44-7	
REDOX	51.1	mV			1		05/22/19 13:35		
Turbidity	0	no units			1		05/22/19 13:35		
Temperature, Water (C)	10.74	deg C			1		05/22/19 13:35		

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Sample Project No.: 40188244

**Sample: PW1716LR**      **Lab ID: 40188244007**      Collected: 05/22/19 15:50      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		05/30/19 17:15	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		05/30/19 17:15	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		05/30/19 17:15	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		05/30/19 17:15	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		05/30/19 17:15	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		05/30/19 17:15	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		05/30/19 17:15	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		05/30/19 17:15	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 17:15	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		05/30/19 17:15	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		05/30/19 17:15	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		05/30/19 17:15	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		05/30/19 17:15	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 17:15	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		05/30/19 17:15	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		05/30/19 17:15	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		05/30/19 17:15	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		05/30/19 17:15	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		05/30/19 17:15	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		05/30/19 17:15	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		05/30/19 17:15	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		05/30/19 17:15	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		05/30/19 17:15	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		05/30/19 17:15	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 17:15	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		05/30/19 17:15	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		05/30/19 17:15	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		05/30/19 17:15	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 17:15	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 17:15	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		05/30/19 17:15	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		05/30/19 17:15	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		05/30/19 17:15	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		05/30/19 17:15	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		05/30/19 17:15	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		05/30/19 17:15	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		05/30/19 17:15	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		05/30/19 17:15	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		05/30/19 17:15	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		05/30/19 17:15	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		05/30/19 17:15	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		05/30/19 17:15	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		05/30/19 17:15	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		05/30/19 17:15	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		05/30/19 17:15	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		05/30/19 17:15	75-09-2	

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

**Sample: PW1716LR**      **Lab ID: 40188244007**      Collected: 05/22/19 15:50      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		05/30/19 17:15	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		05/30/19 17:15	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		05/30/19 17:15	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		05/30/19 17:15	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		05/30/19 17:15	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 17:15	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 17:15	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		05/30/19 17:15	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		05/30/19 17:15	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		05/30/19 17:15	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		05/30/19 17:15	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		05/30/19 17:15	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		05/30/19 17:15	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		05/30/19 17:15	79-00-5	
Trichloroethene	<0.26	ug/L	1.0	0.26	1		05/30/19 17:15	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		05/30/19 17:15	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		05/30/19 17:15	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		05/30/19 17:15	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		05/30/19 17:15	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		05/30/19 17:15	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/30/19 17:15	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		05/30/19 17:15	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		05/30/19 17:15	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		05/30/19 17:15	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	102	%	70-130		1		05/30/19 17:15	1868-53-7	
Toluene-d8 (S)	97	%	70-130		1		05/30/19 17:15	2037-26-5	
4-Bromofluorobenzene (S)	102	%	70-130		1		05/30/19 17:15	460-00-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Sample Project No.: 40188244

**Sample: LH1**      **Lab ID: 40188244008**      Collected: 05/22/19 11:30      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>									
Analytical Method: EPA 8260									
Acetone	3.5J	ug/L	20.0	2.7	1		05/30/19 17:37	67-64-1	
Benzene	0.78J	ug/L	1.0	0.25	1		05/30/19 17:37	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		05/30/19 17:37	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		05/30/19 17:37	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		05/30/19 17:37	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		05/30/19 17:37	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		05/30/19 17:37	74-83-9	
2-Butanone (MEK)	4.4J	ug/L	20.0	2.9	1		05/30/19 17:37	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 17:37	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		05/30/19 17:37	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		05/30/19 17:37	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		05/30/19 17:37	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		05/30/19 17:37	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 17:37	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		05/30/19 17:37	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		05/30/19 17:37	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		05/30/19 17:37	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		05/30/19 17:37	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		05/30/19 17:37	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		05/30/19 17:37	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		05/30/19 17:37	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		05/30/19 17:37	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		05/30/19 17:37	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		05/30/19 17:37	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 17:37	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		05/30/19 17:37	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		05/30/19 17:37	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		05/30/19 17:37	75-71-8	
1,1-Dichloroethane	27.8	ug/L	1.0	0.27	1		05/30/19 17:37	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 17:37	107-06-2	
1,2-Dichloroethene (Total)	3.1J	ug/L	7.4	0.51	1		05/30/19 17:37	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		05/30/19 17:37	75-35-4	
cis-1,2-Dichloroethene	2.8	ug/L	1.0	0.27	1		05/30/19 17:37	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		05/30/19 17:37	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		05/30/19 17:37	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		05/30/19 17:37	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		05/30/19 17:37	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		05/30/19 17:37	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		05/30/19 17:37	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		05/30/19 17:37	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		05/30/19 17:37	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		05/30/19 17:37	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		05/30/19 17:37	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		05/30/19 17:37	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		05/30/19 17:37	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		05/30/19 17:37	75-09-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

**Sample:** LH1      **Lab ID:** 40188244008      Collected: 05/22/19 11:30      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		05/30/19 17:37	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		05/30/19 17:37	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		05/30/19 17:37	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		05/30/19 17:37	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		05/30/19 17:37	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 17:37	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 17:37	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		05/30/19 17:37	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		05/30/19 17:37	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		05/30/19 17:37	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		05/30/19 17:37	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		05/30/19 17:37	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		05/30/19 17:37	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		05/30/19 17:37	79-00-5	
Trichloroethene	3.0	ug/L	1.0	0.26	1		05/30/19 17:37	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		05/30/19 17:37	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		05/30/19 17:37	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		05/30/19 17:37	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		05/30/19 17:37	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		05/30/19 17:37	108-67-8	
Vinyl chloride	4.1	ug/L	1.0	0.17	1		05/30/19 17:37	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		05/30/19 17:37	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		05/30/19 17:37	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		05/30/19 17:37	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	103	%	70-130		1		05/30/19 17:37	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1		05/30/19 17:37	2037-26-5	
4-Bromofluorobenzene (S)	106	%	70-130		1		05/30/19 17:37	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	7.20	Std. Units			1		05/22/19 11:30		
Field Specific Conductance	3152.3	umhos/cm			1		05/22/19 11:30		
Oxygen, Dissolved	0.12	mg/L			1		05/22/19 11:30	7782-44-7	
REDOX	-96.1	mV			1		05/22/19 11:30		
Turbidity	0	no units			1		05/22/19 11:30		
Temperature, Water (C)	11.68	deg C			1		05/22/19 11:30		

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Sample Project No.: 40188244

Sample: P8B DUP Lab ID: 40188244009 Collected: 05/22/19 09:50 Received: 05/24/19 09:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	3.8J	ug/L	20.0	2.7	1		05/30/19 17:59	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		05/30/19 17:59	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		05/30/19 17:59	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		05/30/19 17:59	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		05/30/19 17:59	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		05/30/19 17:59	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		05/30/19 17:59	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		05/30/19 17:59	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 17:59	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		05/30/19 17:59	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		05/30/19 17:59	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		05/30/19 17:59	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		05/30/19 17:59	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 17:59	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		05/30/19 17:59	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		05/30/19 17:59	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		05/30/19 17:59	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		05/30/19 17:59	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		05/30/19 17:59	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		05/30/19 17:59	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		05/30/19 17:59	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		05/30/19 17:59	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		05/30/19 17:59	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		05/30/19 17:59	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 17:59	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		05/30/19 17:59	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		05/30/19 17:59	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		05/30/19 17:59	75-71-8	
1,1-Dichloroethane	3.5	ug/L	1.0	0.27	1		05/30/19 17:59	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 17:59	107-06-2	
1,2-Dichloroethene (Total)	90.3	ug/L	7.4	0.51	1		05/30/19 17:59	540-59-0	
1,1-Dichloroethene	2.1	ug/L	1.0	0.24	1		05/30/19 17:59	75-35-4	
cis-1,2-Dichloroethene	89.4	ug/L	1.0	0.27	1		05/30/19 17:59	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		05/30/19 17:59	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		05/30/19 17:59	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		05/30/19 17:59	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		05/30/19 17:59	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		05/30/19 17:59	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		05/30/19 17:59	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		05/30/19 17:59	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		05/30/19 17:59	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		05/30/19 17:59	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		05/30/19 17:59	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		05/30/19 17:59	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		05/30/19 17:59	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		05/30/19 17:59	75-09-2	

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## ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

**Sample: P8B DUP**      **Lab ID: 40188244009**      Collected: 05/22/19 09:50      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		05/30/19 17:59	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		05/30/19 17:59	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		05/30/19 17:59	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		05/30/19 17:59	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		05/30/19 17:59	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 17:59	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 17:59	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		05/30/19 17:59	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		05/30/19 17:59	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		05/30/19 17:59	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		05/30/19 17:59	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		05/30/19 17:59	120-82-1	
1,1,1-Trichloroethane	1.2	ug/L	1.0	0.24	1		05/30/19 17:59	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		05/30/19 17:59	79-00-5	
Trichloroethene	185	ug/L	1.0	0.26	1		05/30/19 17:59	79-01-6	
Trichlorofluoromethane	0.34J	ug/L	1.0	0.21	1		05/30/19 17:59	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		05/30/19 17:59	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		05/30/19 17:59	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		05/30/19 17:59	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		05/30/19 17:59	108-67-8	
Vinyl chloride	9.8	ug/L	1.0	0.17	1		05/30/19 17:59	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		05/30/19 17:59	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		05/30/19 17:59	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		05/30/19 17:59	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	104	%	70-130		1		05/30/19 17:59	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		05/30/19 17:59	2037-26-5	
4-Bromofluorobenzene (S)	105	%	70-130		1		05/30/19 17:59	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	7.10	Std. Units			1		05/22/19 09:50		
Field Specific Conductance	767.86	umhos/cm			1		05/22/19 09:50		
Oxygen, Dissolved	0.39	mg/L			1		05/22/19 09:50	7782-44-7	
REDOX	-24.3	mV			1		05/22/19 09:50		
Turbidity	0	no units			1		05/22/19 09:50		
Temperature, Water (C)	10.97	deg C			1		05/22/19 09:50		

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Sample Project No.: 40188244

**Sample: TRIP BLANK**      **Lab ID: 40188244010**      Collected: 05/22/19 08:00      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		05/30/19 12:35	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		05/30/19 15:12	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		05/30/19 12:35	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		05/30/19 12:35	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		05/30/19 12:35	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		05/30/19 12:35	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		05/30/19 12:35	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		05/30/19 12:35	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 12:35	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		05/30/19 12:35	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		05/30/19 12:35	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		05/30/19 12:35	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		05/30/19 12:35	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 12:35	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		05/30/19 12:35	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		05/30/19 12:35	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		05/30/19 12:35	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		05/30/19 12:35	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		05/30/19 12:35	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		05/30/19 12:35	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		05/30/19 12:35	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		05/30/19 12:35	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		05/30/19 12:35	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		05/30/19 12:35	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		05/30/19 12:35	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		05/30/19 12:35	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		05/30/19 12:35	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		05/30/19 12:35	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 12:35	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 12:35	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		05/30/19 12:35	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		05/30/19 12:35	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		05/30/19 12:35	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		05/30/19 12:35	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		05/30/19 12:35	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		05/30/19 12:35	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		05/30/19 12:35	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		05/30/19 12:35	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		05/30/19 12:35	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		05/30/19 12:35	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		05/30/19 12:35	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		05/30/19 15:12	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		05/30/19 12:35	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		05/30/19 12:35	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		05/30/19 12:35	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		05/30/19 12:35	75-09-2	

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### ANALYTICAL RESULTS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

**Sample: TRIP BLANK**      **Lab ID: 40188244010**      Collected: 05/22/19 08:00      Received: 05/24/19 09:18      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		05/30/19 12:35	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		05/30/19 12:35	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		05/30/19 12:35	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		05/30/19 12:35	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		05/30/19 12:35	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		05/30/19 12:35	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		05/30/19 12:35	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		05/30/19 12:35	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		05/30/19 12:35	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		05/30/19 15:12	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		05/30/19 12:35	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		05/30/19 12:35	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		05/30/19 12:35	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		05/30/19 12:35	79-00-5	
Trichloroethene	<0.26	ug/L	1.0	0.26	1		05/30/19 12:35	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		05/30/19 12:35	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		05/30/19 12:35	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		05/30/19 12:35	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		05/30/19 12:35	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		05/30/19 12:35	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/30/19 12:35	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		05/30/19 15:12	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		05/30/19 15:12	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		05/30/19 15:12	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	103	%	70-130		1		05/30/19 12:35	1868-53-7	HS
Toluene-d8 (S)	98	%	70-130		1		05/30/19 12:35	2037-26-5	
4-Bromofluorobenzene (S)	107	%	70-130		1		05/30/19 12:35	460-00-4	

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### QUALITY CONTROL DATA

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

QC Batch: 322688 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Oxygenates  
 Associated Lab Samples: 40188244001, 40188244002, 40188244003, 40188244004, 40188244005, 40188244006, 40188244007, 40188244008, 40188244009, 40188244010

METHOD BLANK: 1874299 Matrix: Water  
 Associated Lab Samples: 40188244001, 40188244002, 40188244003, 40188244004, 40188244005, 40188244006, 40188244007, 40188244008, 40188244009, 40188244010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	1.0	05/30/19 06:12	
1,1,1-Trichloroethane	ug/L	<0.24	1.0	05/30/19 06:12	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	05/30/19 06:12	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	05/30/19 06:12	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.54	5.0	05/30/19 06:12	
1,1-Dichloroethane	ug/L	<0.27	1.0	05/30/19 06:12	
1,1-Dichloroethene	ug/L	<0.24	1.0	05/30/19 06:12	
1,1-Dichloropropene	ug/L	<0.54	1.8	05/30/19 06:12	
1,2,3-Trichlorobenzene	ug/L	<0.63	5.0	05/30/19 06:12	
1,2,3-Trichloropropane	ug/L	<0.59	5.0	05/30/19 06:12	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	05/30/19 06:12	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	05/30/19 06:12	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	05/30/19 06:12	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	05/30/19 06:12	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	05/30/19 06:12	
1,2-Dichloroethane	ug/L	<0.28	1.0	05/30/19 06:12	
1,2-Dichloroethene (Total)	ug/L	<0.51	7.4	05/30/19 06:12	
1,2-Dichloropropane	ug/L	<0.28	1.0	05/30/19 06:12	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	05/30/19 06:12	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	05/30/19 06:12	
1,3-Dichloropropane	ug/L	<0.83	2.8	05/30/19 06:12	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	05/30/19 06:12	
2,2-Dichloropropane	ug/L	<2.3	7.6	05/30/19 06:12	
2-Butanone (MEK)	ug/L	<2.9	20.0	05/30/19 06:12	
2-Chloroethylvinyl ether	ug/L	<1.0	10.0	05/30/19 06:12	
2-Chlorotoluene	ug/L	<0.93	5.0	05/30/19 06:12	
4-Chlorotoluene	ug/L	<0.76	2.5	05/30/19 06:12	
4-Methyl-2-pentanone (MIBK)	ug/L	<1.5	5.1	05/30/19 06:12	
Acetone	ug/L	<2.7	20.0	05/30/19 06:12	
Benzene	ug/L	<0.25	1.0	05/30/19 06:12	
Bromobenzene	ug/L	<0.24	1.0	05/30/19 06:12	
Bromochloromethane	ug/L	<0.36	5.0	05/30/19 06:12	
Bromodichloromethane	ug/L	<0.36	1.2	05/30/19 06:12	
Bromoform	ug/L	<4.0	13.2	05/30/19 06:12	
Bromomethane	ug/L	<0.97	5.0	05/30/19 06:12	
Carbon disulfide	ug/L	<0.37	5.0	05/30/19 06:12	
Carbon tetrachloride	ug/L	<0.17	1.0	05/30/19 06:12	
Chlorobenzene	ug/L	<0.71	2.4	05/30/19 06:12	
Chloroethane	ug/L	<1.3	5.0	05/30/19 06:12	
Chloroform	ug/L	<1.3	5.0	05/30/19 06:12	

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### QUALITY CONTROL DATA

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

METHOD BLANK: 1874299

Matrix: Water

Associated Lab Samples: 40188244001, 40188244002, 40188244003, 40188244004, 40188244005, 40188244006, 40188244007, 40188244008, 40188244009, 40188244010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	ug/L	<2.2	7.3	05/30/19 06:12	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	05/30/19 06:12	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	05/30/19 06:12	
Dibromochloromethane	ug/L	<2.6	8.7	05/30/19 06:12	
Dibromomethane	ug/L	<0.94	3.1	05/30/19 06:12	
Dichlorodifluoromethane	ug/L	<0.50	5.0	05/30/19 06:12	
Diisopropyl ether	ug/L	<1.9	6.3	05/30/19 06:12	
Ethylbenzene	ug/L	<0.22	1.0	05/30/19 06:12	
Hexachloro-1,3-butadiene	ug/L	<1.2	5.0	05/30/19 06:12	
Isopropylbenzene (Cumene)	ug/L	<0.39	5.0	05/30/19 06:12	
m&p-Xylene	ug/L	<0.47	2.0	05/30/19 06:12	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	05/30/19 06:12	
Methylene Chloride	ug/L	<0.58	5.0	05/30/19 06:12	
n-Butylbenzene	ug/L	<0.71	2.4	05/30/19 06:12	
n-Propylbenzene	ug/L	<0.81	5.0	05/30/19 06:12	
Naphthalene	ug/L	<1.2	5.0	05/30/19 06:12	
o-Xylene	ug/L	<0.26	1.0	05/30/19 06:12	
p-Isopropyltoluene	ug/L	<0.80	2.7	05/30/19 06:12	
sec-Butylbenzene	ug/L	<0.85	5.0	05/30/19 06:12	
Styrene	ug/L	<0.47	1.6	05/30/19 06:12	
tert-Butylbenzene	ug/L	<0.30	1.0	05/30/19 06:12	
Tetrachloroethene	ug/L	<0.33	1.1	05/30/19 06:12	
Tetrahydrofuran	ug/L	<2.3	20.0	05/30/19 06:12	
Toluene	ug/L	<0.17	5.0	05/30/19 06:12	
trans-1,2-Dichloroethene	ug/L	<1.1	3.6	05/30/19 06:12	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	05/30/19 06:12	
Trichloroethene	ug/L	<0.26	1.0	05/30/19 06:12	
Trichlorofluoromethane	ug/L	<0.21	1.0	05/30/19 06:12	
Vinyl chloride	ug/L	<0.17	1.0	05/30/19 06:12	
Xylene (Total)	ug/L	<1.5	3.0	05/30/19 06:12	
4-Bromofluorobenzene (S)	%	110	70-130	05/30/19 06:12	
Dibromofluoromethane (S)	%	105	70-130	05/30/19 06:12	
Toluene-d8 (S)	%	95	70-130	05/30/19 06:12	

LABORATORY CONTROL SAMPLE: 1874300

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	58.6	117	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	46.2	92	70-130	
1,1,2-Trichloroethane	ug/L	50	53.5	107	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	56.6	113	50-150	
1,1-Dichloroethane	ug/L	50	57.0	114	73-150	
1,1-Dichloroethene	ug/L	50	54.7	109	73-138	

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### QUALITY CONTROL DATA

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

LABORATORY CONTROL SAMPLE: 1874300

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	48.5	97	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.8	98	64-129	
1,2-Dibromoethane (EDB)	ug/L	50	55.3	111	70-130	
1,2-Dichlorobenzene	ug/L	50	54.0	108	70-130	
1,2-Dichloroethane	ug/L	50	57.0	114	75-140	
1,2-Dichloroethene (Total)	ug/L		115			
1,2-Dichloropropane	ug/L	50	55.1	110	73-135	
1,3-Dichlorobenzene	ug/L	50	54.3	109	70-130	
1,4-Dichlorobenzene	ug/L	50	55.6	111	70-130	
Benzene	ug/L	50	58.1	116	70-130	
Bromodichloromethane	ug/L	50	52.4	105	70-130	
Bromoform	ug/L	50	51.4	103	68-129	
Bromomethane	ug/L	50	51.3	103	18-159	
Carbon disulfide	ug/L	50	54.0	108	69-132	
Carbon tetrachloride	ug/L	50	60.4	121	70-130	
Chlorobenzene	ug/L	50	55.6	111	70-130	
Chloroethane	ug/L	50	50.9	102	53-147	
Chloroform	ug/L	50	58.7	117	74-136	
Chloromethane	ug/L	50	47.0	94	29-115	
cis-1,2-Dichloroethene	ug/L	50	55.8	112	70-130	
cis-1,3-Dichloropropene	ug/L	50	55.8	112	70-130	
Dibromochloromethane	ug/L	50	56.3	113	70-130	
Dichlorodifluoromethane	ug/L	50	40.0	80	10-130	
Ethylbenzene	ug/L	50	59.2	118	80-124	
Isopropylbenzene (Cumene)	ug/L	50	63.9	128	70-130	
m&p-Xylene	ug/L	100	126	126	70-130	
Methyl-tert-butyl ether	ug/L	50	51.7	103	54-137	
Methylene Chloride	ug/L	50	54.2	108	73-138	
o-Xylene	ug/L	50	63.3	127	70-130	
Styrene	ug/L	50	63.4	127	70-130	
Tetrachloroethene	ug/L	50	55.2	110	70-130	
Toluene	ug/L	50	55.3	111	80-126	
trans-1,2-Dichloroethene	ug/L	50	58.7	117	73-145	
trans-1,3-Dichloropropene	ug/L	50	56.5	113	70-130	
Trichloroethene	ug/L	50	58.0	116	70-130	
Trichlorofluoromethane	ug/L	50	57.9	116	76-147	
Vinyl chloride	ug/L	50	48.4	97	51-120	
Xylene (Total)	ug/L	150	190	127	70-130	
4-Bromofluorobenzene (S)	%			111	70-130	
Dibromofluoromethane (S)	%			107	70-130	
Toluene-d8 (S)	%			101	70-130	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

Parameter	Units	1874669		1874670		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40188244001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
1,1,1-Trichloroethane	ug/L	<0.24	50	50	54.1	49.4	108	99	70-130	9	20		
1,1,2,2-Tetrachloroethane	ug/L	<0.28	50	50	46.2	45.8	92	92	70-130	1	20		
1,1,2-Trichloroethane	ug/L	<0.55	50	50	51.5	48.3	103	97	70-137	6	20		
1,1,2-Trichlorotrifluoroethane	ug/L	<0.54	50	50	52.8	49.3	106	99	50-150	7	20		
1,1-Dichloroethane	ug/L	<0.27	50	50	53.2	48.6	106	97	73-153	9	20		
1,1-Dichloroethene	ug/L	<0.24	50	50	51.4	46.0	103	92	73-138	11	20		
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	47.8	46.0	96	92	70-130	4	20		
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	48.8	49.4	98	99	58-129	1	20		
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	51.6	49.6	103	99	70-130	4	20		
1,2-Dichlorobenzene	ug/L	<0.71	50	50	51.2	48.7	102	97	70-130	5	20		
1,2-Dichloroethane	ug/L	<0.28	50	50	54.5	49.9	109	100	75-140	9	20		
1,2-Dichloroethene (Total)	ug/L	<0.51			105	97.7				7	20		
1,2-Dichloropropane	ug/L	<0.28	50	50	51.7	48.1	103	96	71-138	7	20		
1,3-Dichlorobenzene	ug/L	<0.63	50	50	51.6	48.5	103	97	70-130	6	20		
1,4-Dichlorobenzene	ug/L	<0.94	50	50	53.1	49.5	106	99	70-130	7	20		
Benzene	ug/L	<0.25	50	50	54.5	49.5	109	99	70-130	10	20		
Bromodichloromethane	ug/L	<0.36	50	50	50.8	46.3	102	93	70-130	9	20		
Bromoform	ug/L	<4.0	50	50	47.9	45.7	96	91	68-129	5	20		
Bromomethane	ug/L	<0.97	50	50	49.3	44.9	99	90	15-170	10	20		
Carbon disulfide	ug/L	<0.37	50	50	50.7	45.9	101	92	66-145	10	20		
Carbon tetrachloride	ug/L	<0.17	50	50	56.8	50.7	114	101	70-130	11	20		
Chlorobenzene	ug/L	<0.71	50	50	52.1	48.9	104	98	70-130	6	20		
Chloroethane	ug/L	<1.3	50	50	47.5	43.6	95	87	51-148	9	20		
Chloroform	ug/L	<1.3	50	50	54.7	49.2	109	98	74-136	11	20		
Chloromethane	ug/L	<2.2	50	50	43.2	38.8	86	78	23-115	11	20		
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	50.8	47.6	102	95	70-131	7	20		
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	53.1	48.8	106	98	70-130	8	20		
Dibromochloromethane	ug/L	<2.6	50	50	51.6	49.8	103	100	70-130	3	20		
Dichlorodifluoromethane	ug/L	<0.50	50	50	37.0	32.2	74	64	10-132	14	20		
Ethylbenzene	ug/L	<0.22	50	50	55.5	50.1	111	100	80-125	10	20		
Isopropylbenzene (Cumene)	ug/L	<0.39	50	50	58.7	51.6	117	103	70-130	13	20		
m&p-Xylene	ug/L	<0.47	100	100	116	102	116	102	70-130	12	20		
Methyl-tert-butyl ether	ug/L	<1.2	50	50	50.9	47.0	102	94	51-145	8	20		
Methylene Chloride	ug/L	<0.58	50	50	50.9	46.6	102	93	73-140	9	20		
o-Xylene	ug/L	<0.26	50	50	58.0	51.4	116	103	70-130	12	20		
Styrene	ug/L	<0.47	50	50	58.2	51.8	116	104	70-130	12	20		
Tetrachloroethene	ug/L	1.8	50	50	54.1	49.4	105	95	70-130	9	20		
Toluene	ug/L	<0.17	50	50	52.5	48.7	105	97	80-131	7	20		
trans-1,2-Dichloroethene	ug/L	<1.1	50	50	54.3	50.1	109	100	73-148	8	20		
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	53.3	49.8	107	100	70-130	7	20		
Trichloroethene	ug/L	24.3	50	50	78.7	73.4	109	98	70-130	7	20		
Trichlorofluoromethane	ug/L	<0.21	50	50	52.4	48.0	105	96	74-147	9	20		
Vinyl chloride	ug/L	<0.17	50	50	45.3	42.2	91	84	41-129	7	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1874669		1874670		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40188244001 Result	MS Spike Conc.	MSD Spike Conc.									
Xylene (Total)	ug/L	<1.5	150	150	174	154	116	102	70-130	12	20		
4-Bromofluorobenzene (S)	%						107	102	70-130				
Dibromofluoromethane (S)	%						104	101	70-130				
Toluene-d8 (S)	%						100	101	70-130				

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## QUALIFIERS

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

---

### DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### ANALYTE QUALIFIERS

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

c2 Acid preservation may not be appropriate for the analysis of 2-Chloroethylvinyl ether.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60600468 LIMEKILN PARK/GRAFTON

Pace Project No.: 40188244

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40188244001	P3B	EPA 8260	322688		
40188244002	P4B	EPA 8260	322688		
40188244003	P7B	EPA 8260	322688		
40188244004	P8A	EPA 8260	322688		
40188244005	P8B	EPA 8260	322688		
40188244006	P10B	EPA 8260	322688		
40188244007	PW1716LR	EPA 8260	322688		
40188244008	LH1	EPA 8260	322688		
40188244009	P8B DUP	EPA 8260	322688		
40188244010	TRIP BLANK	EPA 8260	322688		
40188244001	P3B				
40188244002	P4B				
40188244003	P7B				
40188244004	P8A				
40188244005	P8B				
40188244006	P10B				
40188244008	LH1				
40188244009	P8B DUP				

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(Please Print Clearly)



UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

Company Name: AECOM  
 Branch/Location: Milwaukee  
 Project Contact: Jeff Maletzke  
 Phone: 920-406-3110  
 Project Number: 60600468  
 Project Name: Lime Kiln Park/Grafton Landfill  
 Project State: WI  
 Sampled By (Print): Alex Moe  
 Sampled By (Sign): *alex*

PO #: Regulatory Program:

**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Y/N	Pick Letter	Analyses Requested	VOCs 8260
		DATE	TIME					
001	P3B	5/22/19	1045	W	N	B		X
002	P4B	5/22/19	1225	W				X
003	P7B	5/22/19	1530	W				X
004	P8A	5/22/19	1435	W				X
005	P8B	5/22/19	0950	W				X
006	P10B	5/22/19	1335	W				X
007	PW1716LR	5/22/19	1550	W				X
	<del>PW1716U</del>			W				X <i>ann 5/22/17</i>
008	LH1	5/22/19	1130	W				X
009	DUP	5/22/19	0950	W				X
010	TRIP BLANK	5/22/19	0800	W				X

**CHAIN OF CUSTODY**

**\*Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=Dil Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED? (YES/NO)  
 PRESERVATION (CODE)\*

COC No. *40188244*

Quote #: N/A  
 Mail To Contact: Jeff Maletzke  
 Mail To Company: AECOM  
 Mail To Address: 2985 South Ridge Road, Suite B, Green Bay, WI 54304  
 Invoice To Contact: Jeff Maletzke  
 Invoice To Company: AECOM  
 Invoice To Address: 2985 South Ridge Road, Suite B, Green Bay, WI 54304  
 Invoice To Phone: 920-406-3110

CLIENT COMMENTS LAB COMMENTS (Lab Use Only) Profile #

*AP*

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)  
 Date Needed:  
 Transmit Prelim Rush Results by (complete what you want):  
 Email #1:  
 Email #2:  
 Telephone:  
 Fax:

Relinquished By: *Alex Moe / AECOM* Date/Time: *5/23/19 1015*  
 Relinquished By: *Alex Moe / AECOM* Date/Time: *5/23/19 1500*  
 Relinquished By: *CS Logistics* Date/Time: *05/24/19 0918*  
 Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received By: *Mary Fanni* Date/Time: *5/23/19 9:43*  
 Received By: *Mary Fanni* Date/Time: \_\_\_\_\_  
 Received By: *Christina Lee* Date/Time: *05/24/19 0918*  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

PACE Project No. *40188244*  
 Receipt Temp = *RO* °C  
 Sample Receipt pH OK / Adjusted  
 Cooler Custody Seal Present / Not Present Intact / Not Intact

# Sample Preservation Receipt Form

Pace Analytical Services, LLC  
 1241 Bellevue Street, Suite 97  
 Green Bay, WI 54303

Client Name: Aecom

Project # 4018244

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Initial when completed:

Date/Time:

Lab Lot# of pH paper:

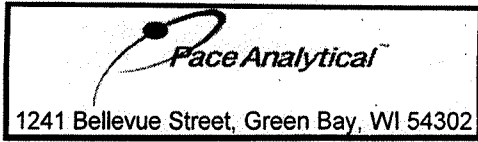
Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass							Plastic						Vials					Jars			General			VOA Vials (>6mm) *	H <sub>2</sub> SO <sub>4</sub> pH ≤	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO <sub>3</sub> pH ≤	pH after adjusted	Volume (mL)													
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T								ZPLC	GN											
001																																										2.5 / 5 / 10		
002																																										2.5 / 5 / 10		
003																																										2.5 / 5 / 10		
004																																										2.5 / 5 / 10		
005																																										2.5 / 5 / 10		
006																																										2.5 / 5 / 10		
007																																										2.5 / 5 / 10		
008																																										2.5 / 5 / 10		
009																																										2.5 / 5 / 10		
010																																											2.5 / 5 / 10	
011																																											2.5 / 5 / 10	
012																																											2.5 / 5 / 10	
013																																											2.5 / 5 / 10	
014																																											2.5 / 5 / 10	
015																																											2.5 / 5 / 10	
016																																												2.5 / 5 / 10
017																																												2.5 / 5 / 10
018																																											2.5 / 5 / 10	
019																																												2.5 / 5 / 10
020																																												2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WIDRO, Phenolics, Other: \_\_\_\_\_

Headspace in VOA Vials (>6mm):  Yes  No  N/A \*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO <sub>3</sub>	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H <sub>2</sub> SO <sub>4</sub>	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3B	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH		
AG2S	500 mL amber glass H <sub>2</sub> SO <sub>4</sub>	BP3N	250 mL plastic HNO <sub>3</sub>	VG9D	40 mL clear vial DI	SP5T	120 mL plastic Na Thiosulfate
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H <sub>2</sub> SO <sub>4</sub>			ZPLC	ziploc bag
						GN:	



Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 25Apr2018
Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

Client Name: Accom

Project # **WO# : 40188244**

Courier:  CS Logistics  Fed-Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - NA Type of Ice:  Wet  Blue  Dry  None

Samples on ice, cooling process has begun

Cooler Temperature Uncorr: \_\_\_\_\_ /Corr: R01

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
Date: 5/24/19  
Initials: [Signature]

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>423</u>		

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments   
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 5/24/19

April 02, 2019

Jeff Maletzke  
AECOM  
2985 South Ridge Rd  
Green Bay, WI 54304

RE: Project: 60489428 LIMEKILN PARK/GRAFTON  
Pace Project No.: 40184650

Dear Jeff Maletzke:

Enclosed are the analytical results for sample(s) received by the laboratory on March 22, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40184650001	P2A	Water	03/21/19 13:00	03/22/19 14:55
40184650002	P2B	Water	03/21/19 13:40	03/22/19 14:55
40184650003	P7B	Water	03/21/19 14:45	03/22/19 14:55
40184650004	P8A	Water	03/21/19 09:55	03/22/19 14:55
40184650005	P8B	Water	03/21/19 10:50	03/22/19 14:55
40184650006	P9B	Water	03/21/19 11:50	03/22/19 14:55
40184650007	PW1716LR	Water	03/21/19 15:00	03/22/19 14:55
40184650008	PW717HC	Water	03/21/19 12:05	03/22/19 14:55
40184650009	PW1530LR	Water	03/21/19 15:35	03/22/19 14:55
40184650010	PW1587LR	Water	03/21/19 15:25	03/22/19 14:55
40184650011	PW461HR	Water	03/21/19 15:30	03/22/19 14:55
40184650012	P8B DUP	Water	03/21/19 10:50	03/22/19 14:55
40184650013	TRIP BLANK	Water	03/21/19 08:00	03/22/19 14:55

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40184650001	P2A	EPA 8260	LAP	73	PASI-G
			RMW	6	PASI-G
40184650002	P2B	EPA 8260	LAP	73	PASI-G
			RMW	6	PASI-G
40184650003	P7B	EPA 8260	LAP	73	PASI-G
			RMW	6	PASI-G
40184650004	P8A	EPA 8260	LAP	73	PASI-G
			RMW	6	PASI-G
40184650005	P8B	EPA 8260	LAP	73	PASI-G
			RMW	6	PASI-G
40184650006	P9B	EPA 8260	LAP	73	PASI-G
			RMW	6	PASI-G
40184650007	PW1716LR	EPA 8260	LAP	73	PASI-G
40184650008	PW717HC	EPA 8260	LAP	73	PASI-G
40184650009	PW1530LR	EPA 8260	LAP	73	PASI-G
40184650010	PW1587LR	EPA 8260	LAP	73	PASI-G
40184650011	PW461HR	EPA 8260	LAP	73	PASI-G
40184650012	P8B DUP	EPA 8260	LAP	73	PASI-G
			RMW	6	PASI-G
40184650013	TRIP BLANK	EPA 8260	LAP	73	PASI-G

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

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**Method:** EPA 8260

**Description:** 8260 MSV Oxygenates

**Client:** AECOM, Inc. - Green Bay

**Date:** April 02, 2019

**General Information:**

13 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 60489428 LIMEKILN PARK/GRAFTON  
Pace Project No.: 40184650

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**Method:**

**Description:** Field Data

**Client:** AECOM, Inc. - Green Bay

**Date:** April 02, 2019

**General Information:**

7 samples were analyzed for . All samples were received in acceptable condition with any exceptions noted below or on the chain-of-custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: P2A**      **Lab ID: 40184650001**      Collected: 03/21/19 13:00      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		03/25/19 21:45	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		03/25/19 21:45	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		03/25/19 21:45	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		03/25/19 21:45	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		03/25/19 21:45	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		03/25/19 21:45	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		03/25/19 21:45	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		03/25/19 21:45	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 21:45	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		03/25/19 21:45	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		03/25/19 21:45	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		03/25/19 21:45	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		03/25/19 21:45	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 21:45	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		03/25/19 21:45	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		03/25/19 21:45	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/19 21:45	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		03/25/19 21:45	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		03/25/19 21:45	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		03/25/19 21:45	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		03/25/19 21:45	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		03/25/19 21:45	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		03/25/19 21:45	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		03/25/19 21:45	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 21:45	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		03/25/19 21:45	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		03/25/19 21:45	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		03/25/19 21:45	75-71-8	
1,1-Dichloroethane	13.2	ug/L	1.0	0.27	1		03/25/19 21:45	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 21:45	107-06-2	
1,2-Dichloroethene (Total)	0.77J	ug/L	7.4	0.51	1		03/25/19 21:45	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		03/25/19 21:45	75-35-4	
cis-1,2-Dichloroethene	0.77J	ug/L	1.0	0.27	1		03/25/19 21:45	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		03/25/19 21:45	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		03/25/19 21:45	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		03/25/19 21:45	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		03/25/19 21:45	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		03/25/19 21:45	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		03/25/19 21:45	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		03/25/19 21:45	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		03/25/19 21:45	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		03/25/19 21:45	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		03/25/19 21:45	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		03/25/19 21:45	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		03/25/19 21:45	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		03/25/19 21:45	75-09-2	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: P2A**      **Lab ID: 40184650001**      Collected: 03/21/19 13:00      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		03/25/19 21:45	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		03/25/19 21:45	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		03/25/19 21:45	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		03/25/19 21:45	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		03/25/19 21:45	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 21:45	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 21:45	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		03/25/19 21:45	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		03/25/19 21:45	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		03/25/19 21:45	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		03/25/19 21:45	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		03/25/19 21:45	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		03/25/19 21:45	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		03/25/19 21:45	79-00-5	
Trichloroethene	0.96J	ug/L	1.0	0.26	1		03/25/19 21:45	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		03/25/19 21:45	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		03/25/19 21:45	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		03/25/19 21:45	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		03/25/19 21:45	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		03/25/19 21:45	108-67-8	
Vinyl chloride	3.0	ug/L	1.0	0.17	1		03/25/19 21:45	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		03/25/19 21:45	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		03/25/19 21:45	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		03/25/19 21:45	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	114	%	70-130		1		03/25/19 21:45	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		03/25/19 21:45	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		1		03/25/19 21:45	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	7.34	Std. Units			1		03/21/19 13:00		
Field Specific Conductance	1874.6	umhos/cm			1		03/21/19 13:00		
Oxygen, Dissolved	0.31	mg/L			1		03/21/19 13:00	7782-44-7	
REDOX	-0.1	mV			1		03/21/19 13:00		
Turbidity	0	NTU			1		03/21/19 13:00		
Temperature, Water (C)	8.81	deg C			1		03/21/19 13:00		

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## ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: P2B**      **Lab ID: 40184650002**      Collected: 03/21/19 13:40      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b> Analytical Method: EPA 8260									
Acetone	<11.0	ug/L	80.0	11.0	4		03/26/19 01:04	67-64-1	
Benzene	<0.99	ug/L	4.0	0.99	4		03/26/19 01:04	71-43-2	
Bromobenzene	<0.96	ug/L	4.0	0.96	4		03/26/19 01:04	108-86-1	
Bromochloromethane	<1.4	ug/L	20.0	1.4	4		03/26/19 01:04	74-97-5	
Bromodichloromethane	<1.5	ug/L	4.8	1.5	4		03/26/19 01:04	75-27-4	
Bromoform	<15.9	ug/L	53.0	15.9	4		03/26/19 01:04	75-25-2	
Bromomethane	<3.9	ug/L	20.0	3.9	4		03/26/19 01:04	74-83-9	
2-Butanone (MEK)	<11.7	ug/L	80.0	11.7	4		03/26/19 01:04	78-93-3	
n-Butylbenzene	<2.8	ug/L	9.4	2.8	4		03/26/19 01:04	104-51-8	
sec-Butylbenzene	<3.4	ug/L	20.0	3.4	4		03/26/19 01:04	135-98-8	
tert-Butylbenzene	<1.2	ug/L	4.1	1.2	4		03/26/19 01:04	98-06-6	
Carbon disulfide	<1.5	ug/L	20.0	1.5	4		03/26/19 01:04	75-15-0	
Carbon tetrachloride	<0.66	ug/L	4.0	0.66	4		03/26/19 01:04	56-23-5	
Chlorobenzene	<2.8	ug/L	9.5	2.8	4		03/26/19 01:04	108-90-7	
Chloroethane	<5.4	ug/L	20.0	5.4	4		03/26/19 01:04	75-00-3	
2-Chloroethylvinyl ether	<4.0	ug/L	40.0	4.0	4		03/26/19 01:04	110-75-8	c2
Chloroform	<5.1	ug/L	20.0	5.1	4		03/26/19 01:04	67-66-3	
Chloromethane	<8.8	ug/L	29.2	8.8	4		03/26/19 01:04	74-87-3	
2-Chlorotoluene	<3.7	ug/L	20.0	3.7	4		03/26/19 01:04	95-49-8	
4-Chlorotoluene	<3.0	ug/L	10.1	3.0	4		03/26/19 01:04	106-43-4	
1,2-Dibromo-3-chloropropane	<7.1	ug/L	23.5	7.1	4		03/26/19 01:04	96-12-8	
Dibromochloromethane	<10.4	ug/L	34.7	10.4	4		03/26/19 01:04	124-48-1	
1,2-Dibromoethane (EDB)	<3.3	ug/L	11.1	3.3	4		03/26/19 01:04	106-93-4	
Dibromomethane	<3.7	ug/L	12.5	3.7	4		03/26/19 01:04	74-95-3	
1,2-Dichlorobenzene	<2.8	ug/L	9.4	2.8	4		03/26/19 01:04	95-50-1	
1,3-Dichlorobenzene	<2.5	ug/L	8.4	2.5	4		03/26/19 01:04	541-73-1	
1,4-Dichlorobenzene	<3.8	ug/L	12.6	3.8	4		03/26/19 01:04	106-46-7	
Dichlorodifluoromethane	<2.0	ug/L	20.0	2.0	4		03/26/19 01:04	75-71-8	
1,1-Dichloroethane	11.6	ug/L	4.0	1.1	4		03/26/19 01:04	75-34-3	
1,2-Dichloroethane	<1.1	ug/L	4.0	1.1	4		03/26/19 01:04	107-06-2	
1,2-Dichloroethene (Total)	488	ug/L	29.4	2.0	4		03/26/19 01:04	540-59-0	
1,1-Dichloroethene	2.4J	ug/L	4.0	0.98	4		03/26/19 01:04	75-35-4	
cis-1,2-Dichloroethene	477	ug/L	4.0	1.1	4		03/26/19 01:04	156-59-2	
trans-1,2-Dichloroethene	11.0J	ug/L	14.5	4.4	4		03/26/19 01:04	156-60-5	
1,2-Dichloropropane	<1.1	ug/L	4.0	1.1	4		03/26/19 01:04	78-87-5	
1,3-Dichloropropane	<3.3	ug/L	11.0	3.3	4		03/26/19 01:04	142-28-9	
2,2-Dichloropropane	<9.1	ug/L	30.2	9.1	4		03/26/19 01:04	594-20-7	
1,1-Dichloropropene	<2.2	ug/L	7.2	2.2	4		03/26/19 01:04	563-58-6	
cis-1,3-Dichloropropene	<14.5	ug/L	48.4	14.5	4		03/26/19 01:04	10061-01-5	
trans-1,3-Dichloropropene	<17.5	ug/L	58.3	17.5	4		03/26/19 01:04	10061-02-6	
Diisopropyl ether	<7.6	ug/L	25.2	7.6	4		03/26/19 01:04	108-20-3	
Ethylbenzene	<0.87	ug/L	4.0	0.87	4		03/26/19 01:04	100-41-4	
Hexachloro-1,3-butadiene	<4.7	ug/L	20.0	4.7	4		03/26/19 01:04	87-68-3	
Isopropylbenzene (Cumene)	<1.6	ug/L	20.0	1.6	4		03/26/19 01:04	98-82-8	
p-Isopropyltoluene	<3.2	ug/L	10.7	3.2	4		03/26/19 01:04	99-87-6	
Methylene Chloride	<2.3	ug/L	20.0	2.3	4		03/26/19 01:04	75-09-2	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

Sample: P2B Lab ID: 40184650002 Collected: 03/21/19 13:40 Received: 03/22/19 14:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<6.1	ug/L	20.4	6.1	4		03/26/19 01:04	108-10-1	
Methyl-tert-butyl ether	<5.0	ug/L	16.6	5.0	4		03/26/19 01:04	1634-04-4	
Naphthalene	<4.7	ug/L	20.0	4.7	4		03/26/19 01:04	91-20-3	
n-Propylbenzene	<3.2	ug/L	20.0	3.2	4		03/26/19 01:04	103-65-1	
Styrene	<1.9	ug/L	6.2	1.9	4		03/26/19 01:04	100-42-5	
1,1,1,2-Tetrachloroethane	<1.1	ug/L	4.0	1.1	4		03/26/19 01:04	630-20-6	
1,1,2,2-Tetrachloroethane	<1.1	ug/L	4.0	1.1	4		03/26/19 01:04	79-34-5	
Tetrachloroethene	<1.3	ug/L	4.4	1.3	4		03/26/19 01:04	127-18-4	
Tetrahydrofuran	<9.3	ug/L	80.0	9.3	4		03/26/19 01:04	109-99-9	
Toluene	<0.69	ug/L	20.0	0.69	4		03/26/19 01:04	108-88-3	
1,2,3-Trichlorobenzene	<2.5	ug/L	20.0	2.5	4		03/26/19 01:04	87-61-6	
1,2,4-Trichlorobenzene	<3.8	ug/L	20.0	3.8	4		03/26/19 01:04	120-82-1	
1,1,1-Trichloroethane	<0.98	ug/L	4.0	0.98	4		03/26/19 01:04	71-55-6	
1,1,2-Trichloroethane	<2.2	ug/L	20.0	2.2	4		03/26/19 01:04	79-00-5	
Trichloroethene	141	ug/L	4.0	1.0	4		03/26/19 01:04	79-01-6	
Trichlorofluoromethane	<0.86	ug/L	4.0	0.86	4		03/26/19 01:04	75-69-4	
1,2,3-Trichloropropane	<2.4	ug/L	20.0	2.4	4		03/26/19 01:04	96-18-4	
1,1,2-Trichlorotrifluoroethane	<2.1	ug/L	20.0	2.1	4		03/26/19 01:04	76-13-1	
1,2,4-Trimethylbenzene	<3.4	ug/L	11.2	3.4	4		03/26/19 01:04	95-63-6	
1,3,5-Trimethylbenzene	<3.5	ug/L	11.6	3.5	4		03/26/19 01:04	108-67-8	
Vinyl chloride	268	ug/L	4.0	0.70	4		03/26/19 01:04	75-01-4	
Xylene (Total)	<6.0	ug/L	12.0	6.0	4		03/26/19 01:04	1330-20-7	
m&p-Xylene	<1.9	ug/L	8.0	1.9	4		03/26/19 01:04	179601-23-1	
o-Xylene	<1.0	ug/L	4.0	1.0	4		03/26/19 01:04	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	114	%	70-130		4		03/26/19 01:04	1868-53-7	
Toluene-d8 (S)	100	%	70-130		4		03/26/19 01:04	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		4		03/26/19 01:04	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	7.11	Std. Units			1		03/21/19 13:40		
Field Specific Conductance	1226.6	umhos/cm			1		03/21/19 13:40		
Oxygen, Dissolved	0.17	mg/L			1		03/21/19 13:40	7782-44-7	
REDOX	4.2	mV			1		03/21/19 13:40		
Turbidity	0	NTU			1		03/21/19 13:40		
Temperature, Water (C)	10.60	deg C			1		03/21/19 13:40		

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Sample Project No.: 40184650

Sample: P7B Lab ID: 40184650003 Collected: 03/21/19 14:45 Received: 03/22/19 14:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		03/25/19 21:23	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		03/25/19 21:23	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		03/25/19 21:23	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		03/25/19 21:23	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		03/25/19 21:23	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		03/25/19 21:23	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		03/25/19 21:23	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		03/25/19 21:23	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 21:23	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		03/25/19 21:23	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		03/25/19 21:23	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		03/25/19 21:23	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		03/25/19 21:23	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 21:23	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		03/25/19 21:23	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		03/25/19 21:23	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/19 21:23	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		03/25/19 21:23	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		03/25/19 21:23	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		03/25/19 21:23	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		03/25/19 21:23	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		03/25/19 21:23	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		03/25/19 21:23	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		03/25/19 21:23	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 21:23	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		03/25/19 21:23	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		03/25/19 21:23	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		03/25/19 21:23	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 21:23	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 21:23	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		03/25/19 21:23	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		03/25/19 21:23	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		03/25/19 21:23	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		03/25/19 21:23	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		03/25/19 21:23	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		03/25/19 21:23	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		03/25/19 21:23	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		03/25/19 21:23	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		03/25/19 21:23	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		03/25/19 21:23	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		03/25/19 21:23	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		03/25/19 21:23	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		03/25/19 21:23	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		03/25/19 21:23	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		03/25/19 21:23	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		03/25/19 21:23	75-09-2	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON  
Pace Project No.: 40184650

**Sample: P7B**      **Lab ID: 40184650003**      Collected: 03/21/19 14:45      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		03/25/19 21:23	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		03/25/19 21:23	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		03/25/19 21:23	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		03/25/19 21:23	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		03/25/19 21:23	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 21:23	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 21:23	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		03/25/19 21:23	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		03/25/19 21:23	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		03/25/19 21:23	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		03/25/19 21:23	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		03/25/19 21:23	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		03/25/19 21:23	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		03/25/19 21:23	79-00-5	
Trichloroethene	<0.26	ug/L	1.0	0.26	1		03/25/19 21:23	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		03/25/19 21:23	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		03/25/19 21:23	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		03/25/19 21:23	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		03/25/19 21:23	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		03/25/19 21:23	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		03/25/19 21:23	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		03/25/19 21:23	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		03/25/19 21:23	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		03/25/19 21:23	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	115	%	70-130		1		03/25/19 21:23	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		03/25/19 21:23	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		1		03/25/19 21:23	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	7.04	Std. Units			1		03/21/19 14:45		
Field Specific Conductance	625.95	umhos/cm			1		03/21/19 14:45		
Oxygen, Dissolved	5.26	mg/L			1		03/21/19 14:45	7782-44-7	
REDOX	-7.6	mV			1		03/21/19 14:45		
Turbidity	0	NTU			1		03/21/19 14:45		
Temperature, Water (C)	8.66	deg C			1		03/21/19 14:45		

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON  
Pace Project No.: 40184650

**Sample: P8A**      **Lab ID: 40184650004**      Collected: 03/21/19 09:55      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		03/25/19 22:07	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		03/25/19 22:07	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		03/25/19 22:07	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		03/25/19 22:07	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		03/25/19 22:07	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		03/25/19 22:07	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		03/25/19 22:07	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		03/25/19 22:07	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 22:07	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		03/25/19 22:07	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		03/25/19 22:07	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		03/25/19 22:07	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		03/25/19 22:07	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 22:07	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		03/25/19 22:07	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		03/25/19 22:07	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/19 22:07	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		03/25/19 22:07	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		03/25/19 22:07	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		03/25/19 22:07	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		03/25/19 22:07	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		03/25/19 22:07	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		03/25/19 22:07	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		03/25/19 22:07	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 22:07	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		03/25/19 22:07	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		03/25/19 22:07	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		03/25/19 22:07	75-71-8	
1,1-Dichloroethane	8.5	ug/L	1.0	0.27	1		03/25/19 22:07	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 22:07	107-06-2	
1,2-Dichloroethene (Total)	53.4	ug/L	7.4	0.51	1		03/25/19 22:07	540-59-0	
1,1-Dichloroethene	0.72J	ug/L	1.0	0.24	1		03/25/19 22:07	75-35-4	
cis-1,2-Dichloroethene	52.7	ug/L	1.0	0.27	1		03/25/19 22:07	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		03/25/19 22:07	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		03/25/19 22:07	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		03/25/19 22:07	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		03/25/19 22:07	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		03/25/19 22:07	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		03/25/19 22:07	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		03/25/19 22:07	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		03/25/19 22:07	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		03/25/19 22:07	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		03/25/19 22:07	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		03/25/19 22:07	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		03/25/19 22:07	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		03/25/19 22:07	75-09-2	

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## ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: P8A**      **Lab ID: 40184650004**      Collected: 03/21/19 09:55      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		03/25/19 22:07	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		03/25/19 22:07	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		03/25/19 22:07	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		03/25/19 22:07	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		03/25/19 22:07	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 22:07	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 22:07	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		03/25/19 22:07	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		03/25/19 22:07	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		03/25/19 22:07	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		03/25/19 22:07	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		03/25/19 22:07	120-82-1	
1,1,1-Trichloroethane	0.70J	ug/L	1.0	0.24	1		03/25/19 22:07	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		03/25/19 22:07	79-00-5	
Trichloroethene	10.3	ug/L	1.0	0.26	1		03/25/19 22:07	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		03/25/19 22:07	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		03/25/19 22:07	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		03/25/19 22:07	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		03/25/19 22:07	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		03/25/19 22:07	108-67-8	
Vinyl chloride	4.1	ug/L	1.0	0.17	1		03/25/19 22:07	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		03/25/19 22:07	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		03/25/19 22:07	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		03/25/19 22:07	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	114	%	70-130		1		03/25/19 22:07	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		03/25/19 22:07	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		1		03/25/19 22:07	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	6.96	Std. Units			1		03/21/19 09:55		
Field Specific Conductance	771.28	umhos/cm			1		03/21/19 09:55		
Oxygen, Dissolved	0.01	mg/L			1		03/21/19 09:55	7782-44-7	
REDOX	58.6	mV			1		03/21/19 09:55		
Turbidity	0	NTU			1		03/21/19 09:55		
Temperature, Water (C)	10.55	deg C			1		03/21/19 09:55		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: P8B**      **Lab ID: 40184650005**      Collected: 03/21/19 10:50      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<5.5	ug/L	40.0	5.5	2		03/26/19 00:42	67-64-1	
Benzene	<0.49	ug/L	2.0	0.49	2		03/26/19 00:42	71-43-2	
Bromobenzene	<0.48	ug/L	2.0	0.48	2		03/26/19 00:42	108-86-1	
Bromochloromethane	<0.72	ug/L	10.0	0.72	2		03/26/19 00:42	74-97-5	
Bromodichloromethane	<0.73	ug/L	2.4	0.73	2		03/26/19 00:42	75-27-4	
Bromoform	<7.9	ug/L	26.5	7.9	2		03/26/19 00:42	75-25-2	
Bromomethane	<1.9	ug/L	10.0	1.9	2		03/26/19 00:42	74-83-9	
2-Butanone (MEK)	<5.9	ug/L	40.0	5.9	2		03/26/19 00:42	78-93-3	
n-Butylbenzene	<1.4	ug/L	4.7	1.4	2		03/26/19 00:42	104-51-8	
sec-Butylbenzene	<1.7	ug/L	10.0	1.7	2		03/26/19 00:42	135-98-8	
tert-Butylbenzene	<0.61	ug/L	2.0	0.61	2		03/26/19 00:42	98-06-6	
Carbon disulfide	<0.75	ug/L	10.0	0.75	2		03/26/19 00:42	75-15-0	
Carbon tetrachloride	<0.33	ug/L	2.0	0.33	2		03/26/19 00:42	56-23-5	
Chlorobenzene	<1.4	ug/L	4.7	1.4	2		03/26/19 00:42	108-90-7	
Chloroethane	<2.7	ug/L	10.0	2.7	2		03/26/19 00:42	75-00-3	
2-Chloroethylvinyl ether	<2.0	ug/L	20.0	2.0	2		03/26/19 00:42	110-75-8	c2
Chloroform	<2.5	ug/L	10.0	2.5	2		03/26/19 00:42	67-66-3	
Chloromethane	<4.4	ug/L	14.6	4.4	2		03/26/19 00:42	74-87-3	
2-Chlorotoluene	<1.9	ug/L	10.0	1.9	2		03/26/19 00:42	95-49-8	
4-Chlorotoluene	<1.5	ug/L	5.0	1.5	2		03/26/19 00:42	106-43-4	
1,2-Dibromo-3-chloropropane	<3.5	ug/L	11.8	3.5	2		03/26/19 00:42	96-12-8	
Dibromochloromethane	<5.2	ug/L	17.3	5.2	2		03/26/19 00:42	124-48-1	
1,2-Dibromoethane (EDB)	<1.7	ug/L	5.5	1.7	2		03/26/19 00:42	106-93-4	
Dibromomethane	<1.9	ug/L	6.2	1.9	2		03/26/19 00:42	74-95-3	
1,2-Dichlorobenzene	<1.4	ug/L	4.7	1.4	2		03/26/19 00:42	95-50-1	
1,3-Dichlorobenzene	<1.3	ug/L	4.2	1.3	2		03/26/19 00:42	541-73-1	
1,4-Dichlorobenzene	<1.9	ug/L	6.3	1.9	2		03/26/19 00:42	106-46-7	
Dichlorodifluoromethane	<1.0	ug/L	10.0	1.0	2		03/26/19 00:42	75-71-8	
1,1-Dichloroethane	3.2	ug/L	2.0	0.55	2		03/26/19 00:42	75-34-3	
1,2-Dichloroethane	<0.56	ug/L	2.0	0.56	2		03/26/19 00:42	107-06-2	
1,2-Dichloroethene (Total)	139	ug/L	14.7	1.0	2		03/26/19 00:42	540-59-0	
1,1-Dichloroethene	1.3J	ug/L	2.0	0.49	2		03/26/19 00:42	75-35-4	
cis-1,2-Dichloroethene	134	ug/L	2.0	0.54	2		03/26/19 00:42	156-59-2	
trans-1,2-Dichloroethene	5.4J	ug/L	7.3	2.2	2		03/26/19 00:42	156-60-5	
1,2-Dichloropropane	<0.57	ug/L	2.0	0.57	2		03/26/19 00:42	78-87-5	
1,3-Dichloropropane	<1.7	ug/L	5.5	1.7	2		03/26/19 00:42	142-28-9	
2,2-Dichloropropane	<4.5	ug/L	15.1	4.5	2		03/26/19 00:42	594-20-7	
1,1-Dichloropropene	<1.1	ug/L	3.6	1.1	2		03/26/19 00:42	563-58-6	
cis-1,3-Dichloropropene	<7.3	ug/L	24.2	7.3	2		03/26/19 00:42	10061-01-5	
trans-1,3-Dichloropropene	<8.7	ug/L	29.1	8.7	2		03/26/19 00:42	10061-02-6	
Diisopropyl ether	<3.8	ug/L	12.6	3.8	2		03/26/19 00:42	108-20-3	
Ethylbenzene	<0.44	ug/L	2.0	0.44	2		03/26/19 00:42	100-41-4	
Hexachloro-1,3-butadiene	<2.4	ug/L	10.0	2.4	2		03/26/19 00:42	87-68-3	
Isopropylbenzene (Cumene)	<0.79	ug/L	10.0	0.79	2		03/26/19 00:42	98-82-8	
p-Isopropyltoluene	<1.6	ug/L	5.3	1.6	2		03/26/19 00:42	99-87-6	
Methylene Chloride	<1.2	ug/L	10.0	1.2	2		03/26/19 00:42	75-09-2	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: P8B**      **Lab ID: 40184650005**      Collected: 03/21/19 10:50      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<3.1	ug/L	10.2	3.1	2		03/26/19 00:42	108-10-1	
Methyl-tert-butyl ether	<2.5	ug/L	8.3	2.5	2		03/26/19 00:42	1634-04-4	
Naphthalene	<2.4	ug/L	10.0	2.4	2		03/26/19 00:42	91-20-3	
n-Propylbenzene	<1.6	ug/L	10.0	1.6	2		03/26/19 00:42	103-65-1	
Styrene	<0.93	ug/L	3.1	0.93	2		03/26/19 00:42	100-42-5	
1,1,1,2-Tetrachloroethane	<0.54	ug/L	2.0	0.54	2		03/26/19 00:42	630-20-6	
1,1,2,2-Tetrachloroethane	<0.55	ug/L	2.0	0.55	2		03/26/19 00:42	79-34-5	
Tetrachloroethene	<0.65	ug/L	2.2	0.65	2		03/26/19 00:42	127-18-4	
Tetrahydrofuran	<4.6	ug/L	40.0	4.6	2		03/26/19 00:42	109-99-9	
Toluene	<0.34	ug/L	10.0	0.34	2		03/26/19 00:42	108-88-3	
1,2,3-Trichlorobenzene	<1.3	ug/L	10.0	1.3	2		03/26/19 00:42	87-61-6	
1,2,4-Trichlorobenzene	<1.9	ug/L	10.0	1.9	2		03/26/19 00:42	120-82-1	
1,1,1-Trichloroethane	<b>0.82J</b>	ug/L	2.0	0.49	2		03/26/19 00:42	71-55-6	
1,1,2-Trichloroethane	<1.1	ug/L	10.0	1.1	2		03/26/19 00:42	79-00-5	
Trichloroethene	<b>142</b>	ug/L	2.0	0.51	2		03/26/19 00:42	79-01-6	
Trichlorofluoromethane	<0.43	ug/L	2.0	0.43	2		03/26/19 00:42	75-69-4	
1,2,3-Trichloropropane	<1.2	ug/L	10.0	1.2	2		03/26/19 00:42	96-18-4	
1,1,2-Trichlorotrifluoroethane	<b>4.5J</b>	ug/L	10.0	1.1	2		03/26/19 00:42	76-13-1	
1,2,4-Trimethylbenzene	<1.7	ug/L	5.6	1.7	2		03/26/19 00:42	95-63-6	
1,3,5-Trimethylbenzene	<1.7	ug/L	5.8	1.7	2		03/26/19 00:42	108-67-8	
Vinyl chloride	<b>30.4</b>	ug/L	2.0	0.35	2		03/26/19 00:42	75-01-4	
Xylene (Total)	<3.0	ug/L	6.0	3.0	2		03/26/19 00:42	1330-20-7	
m&p-Xylene	<0.93	ug/L	4.0	0.93	2		03/26/19 00:42	179601-23-1	
o-Xylene	<0.52	ug/L	2.0	0.52	2		03/26/19 00:42	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	117	%	70-130		2		03/26/19 00:42	1868-53-7	
Toluene-d8 (S)	100	%	70-130		2		03/26/19 00:42	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		2		03/26/19 00:42	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	<b>7.14</b>	Std. Units			1		03/21/19 10:50		
Field Specific Conductance	<b>692.03</b>	umhos/cm			1		03/21/19 10:50		
Oxygen, Dissolved	<b>0.01</b>	mg/L			1		03/21/19 10:50	7782-44-7	
REDOX	<b>34.8</b>	mV			1		03/21/19 10:50		
Turbidity	<b>0</b>	NTU			1		03/21/19 10:50		
Temperature, Water (C)	<b>10.23</b>	deg C			1		03/21/19 10:50		

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## ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: P9B**      **Lab ID: 40184650006**      Collected: 03/21/19 11:50      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		03/25/19 22:29	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		03/25/19 22:29	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		03/25/19 22:29	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		03/25/19 22:29	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		03/25/19 22:29	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		03/25/19 22:29	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		03/25/19 22:29	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		03/25/19 22:29	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 22:29	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		03/25/19 22:29	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		03/25/19 22:29	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		03/25/19 22:29	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		03/25/19 22:29	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 22:29	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		03/25/19 22:29	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		03/25/19 22:29	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/19 22:29	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		03/25/19 22:29	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		03/25/19 22:29	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		03/25/19 22:29	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		03/25/19 22:29	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		03/25/19 22:29	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		03/25/19 22:29	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		03/25/19 22:29	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 22:29	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		03/25/19 22:29	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		03/25/19 22:29	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		03/25/19 22:29	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 22:29	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 22:29	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		03/25/19 22:29	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		03/25/19 22:29	75-35-4	
cis-1,2-Dichloroethene	0.38J	ug/L	1.0	0.27	1		03/25/19 22:29	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		03/25/19 22:29	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		03/25/19 22:29	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		03/25/19 22:29	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		03/25/19 22:29	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		03/25/19 22:29	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		03/25/19 22:29	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		03/25/19 22:29	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		03/25/19 22:29	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		03/25/19 22:29	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		03/25/19 22:29	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		03/25/19 22:29	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		03/25/19 22:29	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		03/25/19 22:29	75-09-2	

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## ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: P9B**      **Lab ID: 40184650006**      Collected: 03/21/19 11:50      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		03/25/19 22:29	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		03/25/19 22:29	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		03/25/19 22:29	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		03/25/19 22:29	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		03/25/19 22:29	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 22:29	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 22:29	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		03/25/19 22:29	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		03/25/19 22:29	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		03/25/19 22:29	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		03/25/19 22:29	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		03/25/19 22:29	120-82-1	
1,1,1-Trichloroethane	0.48J	ug/L	1.0	0.24	1		03/25/19 22:29	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		03/25/19 22:29	79-00-5	
Trichloroethene	9.2	ug/L	1.0	0.26	1		03/25/19 22:29	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		03/25/19 22:29	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		03/25/19 22:29	96-18-4	
1,1,2-Trichlorotrifluoroethane	64.7	ug/L	5.0	0.54	1		03/25/19 22:29	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		03/25/19 22:29	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		03/25/19 22:29	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		03/25/19 22:29	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		03/25/19 22:29	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		03/25/19 22:29	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		03/25/19 22:29	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	115	%	70-130		1		03/25/19 22:29	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		03/25/19 22:29	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		1		03/25/19 22:29	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	7.14	Std. Units			1		03/21/19 11:50		
Field Specific Conductance	878.82	umhos/cm			1		03/21/19 11:50		
Oxygen, Dissolved	0.12	mg/L			1		03/21/19 11:50	7782-44-7	
REDOX	40.7	mV			1		03/21/19 11:50		
Turbidity	0	NTU			1		03/21/19 11:50		
Temperature, Water (C)	10.06	deg C			1		03/21/19 11:50		

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Project No.: 40184650

Sample: **PW1716LR** Lab ID: **40184650007** Collected: 03/21/19 15:00 Received: 03/22/19 14:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		03/25/19 19:54	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		03/25/19 19:54	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		03/25/19 19:54	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		03/25/19 19:54	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		03/25/19 19:54	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		03/25/19 19:54	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		03/25/19 19:54	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		03/25/19 19:54	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 19:54	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		03/25/19 19:54	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		03/25/19 19:54	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		03/25/19 19:54	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		03/25/19 19:54	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 19:54	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		03/25/19 19:54	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		03/25/19 19:54	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/19 19:54	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		03/25/19 19:54	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		03/25/19 19:54	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		03/25/19 19:54	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		03/25/19 19:54	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		03/25/19 19:54	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		03/25/19 19:54	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		03/25/19 19:54	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 19:54	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		03/25/19 19:54	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		03/25/19 19:54	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		03/25/19 19:54	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 19:54	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 19:54	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		03/25/19 19:54	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		03/25/19 19:54	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		03/25/19 19:54	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		03/25/19 19:54	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		03/25/19 19:54	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		03/25/19 19:54	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		03/25/19 19:54	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		03/25/19 19:54	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		03/25/19 19:54	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		03/25/19 19:54	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		03/25/19 19:54	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		03/25/19 19:54	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		03/25/19 19:54	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		03/25/19 19:54	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		03/25/19 19:54	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		03/25/19 19:54	75-09-2	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

Sample: **PW1716LR** Lab ID: **40184650007** Collected: 03/21/19 15:00 Received: 03/22/19 14:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		03/25/19 19:54	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		03/25/19 19:54	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		03/25/19 19:54	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		03/25/19 19:54	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		03/25/19 19:54	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 19:54	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 19:54	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		03/25/19 19:54	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		03/25/19 19:54	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		03/25/19 19:54	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		03/25/19 19:54	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		03/25/19 19:54	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		03/25/19 19:54	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		03/25/19 19:54	79-00-5	
Trichloroethene	<0.26	ug/L	1.0	0.26	1		03/25/19 19:54	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		03/25/19 19:54	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		03/25/19 19:54	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		03/25/19 19:54	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		03/25/19 19:54	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		03/25/19 19:54	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		03/25/19 19:54	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		03/25/19 19:54	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		03/25/19 19:54	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		03/25/19 19:54	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	113	%	70-130		1		03/25/19 19:54	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		03/25/19 19:54	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		1		03/25/19 19:54	460-00-4	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON  
Pace Project No.: 40184650

Sample: PW717HC Lab ID: 40184650008 Collected: 03/21/19 12:05 Received: 03/22/19 14:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		03/25/19 20:16	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		03/25/19 20:16	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		03/25/19 20:16	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		03/25/19 20:16	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		03/25/19 20:16	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		03/25/19 20:16	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		03/25/19 20:16	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		03/25/19 20:16	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 20:16	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		03/25/19 20:16	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		03/25/19 20:16	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		03/25/19 20:16	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		03/25/19 20:16	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 20:16	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		03/25/19 20:16	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		03/25/19 20:16	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/19 20:16	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		03/25/19 20:16	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		03/25/19 20:16	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		03/25/19 20:16	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		03/25/19 20:16	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		03/25/19 20:16	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		03/25/19 20:16	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		03/25/19 20:16	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 20:16	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		03/25/19 20:16	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		03/25/19 20:16	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		03/25/19 20:16	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 20:16	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 20:16	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		03/25/19 20:16	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		03/25/19 20:16	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		03/25/19 20:16	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		03/25/19 20:16	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		03/25/19 20:16	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		03/25/19 20:16	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		03/25/19 20:16	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		03/25/19 20:16	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		03/25/19 20:16	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		03/25/19 20:16	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		03/25/19 20:16	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		03/25/19 20:16	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		03/25/19 20:16	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		03/25/19 20:16	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		03/25/19 20:16	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		03/25/19 20:16	75-09-2	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: PW717HC**      **Lab ID: 40184650008**      Collected: 03/21/19 12:05      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		03/25/19 20:16	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		03/25/19 20:16	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		03/25/19 20:16	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		03/25/19 20:16	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		03/25/19 20:16	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 20:16	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 20:16	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		03/25/19 20:16	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		03/25/19 20:16	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		03/25/19 20:16	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		03/25/19 20:16	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		03/25/19 20:16	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		03/25/19 20:16	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		03/25/19 20:16	79-00-5	
Trichloroethene	<0.26	ug/L	1.0	0.26	1		03/25/19 20:16	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		03/25/19 20:16	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		03/25/19 20:16	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		03/25/19 20:16	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		03/25/19 20:16	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		03/25/19 20:16	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		03/25/19 20:16	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		03/25/19 20:16	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		03/25/19 20:16	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		03/25/19 20:16	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	112	%	70-130		1		03/25/19 20:16	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		03/25/19 20:16	2037-26-5	
4-Bromofluorobenzene (S)	91	%	70-130		1		03/25/19 20:16	460-00-4	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: PW1530LR**      **Lab ID: 40184650009**      Collected: 03/21/19 15:35      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		03/25/19 20:39	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		03/25/19 20:39	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		03/25/19 20:39	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		03/25/19 20:39	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		03/25/19 20:39	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		03/25/19 20:39	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		03/25/19 20:39	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		03/25/19 20:39	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 20:39	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		03/25/19 20:39	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		03/25/19 20:39	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		03/25/19 20:39	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		03/25/19 20:39	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 20:39	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		03/25/19 20:39	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		03/25/19 20:39	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/19 20:39	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		03/25/19 20:39	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		03/25/19 20:39	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		03/25/19 20:39	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		03/25/19 20:39	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		03/25/19 20:39	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		03/25/19 20:39	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		03/25/19 20:39	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 20:39	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		03/25/19 20:39	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		03/25/19 20:39	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		03/25/19 20:39	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 20:39	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 20:39	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		03/25/19 20:39	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		03/25/19 20:39	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		03/25/19 20:39	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		03/25/19 20:39	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		03/25/19 20:39	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		03/25/19 20:39	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		03/25/19 20:39	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		03/25/19 20:39	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		03/25/19 20:39	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		03/25/19 20:39	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		03/25/19 20:39	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		03/25/19 20:39	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		03/25/19 20:39	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		03/25/19 20:39	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		03/25/19 20:39	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		03/25/19 20:39	75-09-2	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: PW1530LR**      **Lab ID: 40184650009**      Collected: 03/21/19 15:35      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		03/25/19 20:39	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		03/25/19 20:39	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		03/25/19 20:39	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		03/25/19 20:39	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		03/25/19 20:39	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 20:39	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 20:39	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		03/25/19 20:39	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		03/25/19 20:39	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		03/25/19 20:39	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		03/25/19 20:39	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		03/25/19 20:39	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		03/25/19 20:39	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		03/25/19 20:39	79-00-5	
Trichloroethene	<0.26	ug/L	1.0	0.26	1		03/25/19 20:39	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		03/25/19 20:39	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		03/25/19 20:39	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		03/25/19 20:39	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		03/25/19 20:39	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		03/25/19 20:39	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		03/25/19 20:39	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		03/25/19 20:39	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		03/25/19 20:39	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		03/25/19 20:39	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	114	%	70-130		1		03/25/19 20:39	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		03/25/19 20:39	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		1		03/25/19 20:39	460-00-4	

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## ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

Sample: **PW1587LR** Lab ID: **40184650010** Collected: 03/21/19 15:25 Received: 03/22/19 14:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		03/25/19 16:36	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		03/25/19 16:36	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		03/25/19 16:36	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		03/25/19 16:36	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		03/25/19 16:36	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		03/25/19 16:36	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		03/25/19 16:36	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		03/25/19 16:36	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 16:36	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		03/25/19 16:36	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		03/25/19 16:36	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		03/25/19 16:36	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		03/25/19 16:36	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 16:36	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		03/25/19 16:36	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		03/25/19 16:36	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/19 16:36	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		03/25/19 16:36	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		03/25/19 16:36	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		03/25/19 16:36	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		03/25/19 16:36	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		03/25/19 16:36	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		03/25/19 16:36	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		03/25/19 16:36	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 16:36	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		03/25/19 16:36	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		03/25/19 16:36	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		03/25/19 16:36	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 16:36	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 16:36	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		03/25/19 16:36	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		03/25/19 16:36	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		03/25/19 16:36	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		03/25/19 16:36	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		03/25/19 16:36	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		03/25/19 16:36	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		03/25/19 16:36	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		03/25/19 16:36	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		03/25/19 16:36	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		03/25/19 16:36	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		03/25/19 16:36	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		03/25/19 16:36	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		03/25/19 16:36	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		03/25/19 16:36	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		03/25/19 16:36	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		03/25/19 16:36	75-09-2	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: PW1587LR**      **Lab ID: 40184650010**      Collected: 03/21/19 15:25      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		03/25/19 16:36	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		03/25/19 16:36	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		03/25/19 16:36	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		03/25/19 16:36	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		03/25/19 16:36	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 16:36	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 16:36	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		03/25/19 16:36	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		03/25/19 16:36	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		03/25/19 16:36	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		03/25/19 16:36	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		03/25/19 16:36	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		03/25/19 16:36	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		03/25/19 16:36	79-00-5	
Trichloroethene	<0.26	ug/L	1.0	0.26	1		03/25/19 16:36	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		03/25/19 16:36	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		03/25/19 16:36	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		03/25/19 16:36	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		03/25/19 16:36	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		03/25/19 16:36	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		03/25/19 16:36	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		03/25/19 16:36	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		03/25/19 16:36	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		03/25/19 16:36	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	114	%	70-130		1		03/25/19 16:36	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		03/25/19 16:36	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		1		03/25/19 16:36	460-00-4	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: PW461HR**      **Lab ID: 40184650011**      Collected: 03/21/19 15:30      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		03/25/19 21:01	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		03/25/19 21:01	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		03/25/19 21:01	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		03/25/19 21:01	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		03/25/19 21:01	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		03/25/19 21:01	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		03/25/19 21:01	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		03/25/19 21:01	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 21:01	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		03/25/19 21:01	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		03/25/19 21:01	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		03/25/19 21:01	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		03/25/19 21:01	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 21:01	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		03/25/19 21:01	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		03/25/19 21:01	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/19 21:01	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		03/25/19 21:01	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		03/25/19 21:01	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		03/25/19 21:01	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		03/25/19 21:01	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		03/25/19 21:01	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		03/25/19 21:01	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		03/25/19 21:01	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 21:01	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		03/25/19 21:01	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		03/25/19 21:01	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		03/25/19 21:01	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 21:01	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 21:01	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		03/25/19 21:01	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		03/25/19 21:01	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		03/25/19 21:01	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		03/25/19 21:01	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		03/25/19 21:01	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		03/25/19 21:01	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		03/25/19 21:01	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		03/25/19 21:01	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		03/25/19 21:01	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		03/25/19 21:01	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		03/25/19 21:01	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		03/25/19 21:01	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		03/25/19 21:01	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		03/25/19 21:01	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		03/25/19 21:01	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		03/25/19 21:01	75-09-2	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: PW461HR**      **Lab ID: 40184650011**      Collected: 03/21/19 15:30      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		03/25/19 21:01	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		03/25/19 21:01	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		03/25/19 21:01	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		03/25/19 21:01	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		03/25/19 21:01	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 21:01	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 21:01	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		03/25/19 21:01	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		03/25/19 21:01	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		03/25/19 21:01	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		03/25/19 21:01	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		03/25/19 21:01	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		03/25/19 21:01	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		03/25/19 21:01	79-00-5	
Trichloroethene	<0.26	ug/L	1.0	0.26	1		03/25/19 21:01	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		03/25/19 21:01	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		03/25/19 21:01	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		03/25/19 21:01	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		03/25/19 21:01	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		03/25/19 21:01	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		03/25/19 21:01	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		03/25/19 21:01	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		03/25/19 21:01	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		03/25/19 21:01	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	114	%	70-130		1		03/25/19 21:01	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		03/25/19 21:01	2037-26-5	
4-Bromofluorobenzene (S)	88	%	70-130		1		03/25/19 21:01	460-00-4	

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## ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: P8B DUP**      **Lab ID: 40184650012**      Collected: 03/21/19 10:50      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<5.5	ug/L	40.0	5.5	2		03/26/19 06:52	67-64-1	
Benzene	<0.49	ug/L	2.0	0.49	2		03/26/19 06:52	71-43-2	
Bromobenzene	<0.48	ug/L	2.0	0.48	2		03/26/19 06:52	108-86-1	
Bromochloromethane	<0.72	ug/L	10.0	0.72	2		03/26/19 06:52	74-97-5	
Bromodichloromethane	<0.73	ug/L	2.4	0.73	2		03/26/19 06:52	75-27-4	
Bromoform	<7.9	ug/L	26.5	7.9	2		03/26/19 06:52	75-25-2	
Bromomethane	<1.9	ug/L	10.0	1.9	2		03/26/19 06:52	74-83-9	
2-Butanone (MEK)	<5.9	ug/L	40.0	5.9	2		03/26/19 06:52	78-93-3	
n-Butylbenzene	<1.4	ug/L	4.7	1.4	2		03/26/19 06:52	104-51-8	
sec-Butylbenzene	<1.7	ug/L	10.0	1.7	2		03/26/19 06:52	135-98-8	
tert-Butylbenzene	<0.61	ug/L	2.0	0.61	2		03/26/19 06:52	98-06-6	
Carbon disulfide	<0.75	ug/L	10.0	0.75	2		03/26/19 06:52	75-15-0	
Carbon tetrachloride	<0.33	ug/L	2.0	0.33	2		03/26/19 06:52	56-23-5	
Chlorobenzene	<1.4	ug/L	4.7	1.4	2		03/26/19 06:52	108-90-7	
Chloroethane	<2.7	ug/L	10.0	2.7	2		03/26/19 06:52	75-00-3	
2-Chloroethylvinyl ether	<2.0	ug/L	20.0	2.0	2		03/26/19 06:52	110-75-8	c2
Chloroform	<2.5	ug/L	10.0	2.5	2		03/26/19 06:52	67-66-3	
Chloromethane	<4.4	ug/L	14.6	4.4	2		03/26/19 06:52	74-87-3	
2-Chlorotoluene	<1.9	ug/L	10.0	1.9	2		03/26/19 06:52	95-49-8	
4-Chlorotoluene	<1.5	ug/L	5.0	1.5	2		03/26/19 06:52	106-43-4	
1,2-Dibromo-3-chloropropane	<3.5	ug/L	11.8	3.5	2		03/26/19 06:52	96-12-8	
Dibromochloromethane	<5.2	ug/L	17.3	5.2	2		03/26/19 06:52	124-48-1	
1,2-Dibromoethane (EDB)	<1.7	ug/L	5.5	1.7	2		03/26/19 06:52	106-93-4	
Dibromomethane	<1.9	ug/L	6.2	1.9	2		03/26/19 06:52	74-95-3	
1,2-Dichlorobenzene	<1.4	ug/L	4.7	1.4	2		03/26/19 06:52	95-50-1	
1,3-Dichlorobenzene	<1.3	ug/L	4.2	1.3	2		03/26/19 06:52	541-73-1	
1,4-Dichlorobenzene	<1.9	ug/L	6.3	1.9	2		03/26/19 06:52	106-46-7	
Dichlorodifluoromethane	<1.0	ug/L	10.0	1.0	2		03/26/19 06:52	75-71-8	
1,1-Dichloroethane	3.1	ug/L	2.0	0.55	2		03/26/19 06:52	75-34-3	
1,2-Dichloroethane	<0.56	ug/L	2.0	0.56	2		03/26/19 06:52	107-06-2	
1,2-Dichloroethene (Total)	145	ug/L	14.7	1.0	2		03/26/19 06:52	540-59-0	
1,1-Dichloroethene	1.8J	ug/L	2.0	0.49	2		03/26/19 06:52	75-35-4	
cis-1,2-Dichloroethene	144	ug/L	2.0	0.54	2		03/26/19 06:52	156-59-2	
trans-1,2-Dichloroethene	<2.2	ug/L	7.3	2.2	2		03/26/19 06:52	156-60-5	
1,2-Dichloropropane	<0.57	ug/L	2.0	0.57	2		03/26/19 06:52	78-87-5	
1,3-Dichloropropane	<1.7	ug/L	5.5	1.7	2		03/26/19 06:52	142-28-9	
2,2-Dichloropropane	<4.5	ug/L	15.1	4.5	2		03/26/19 06:52	594-20-7	
1,1-Dichloropropene	<1.1	ug/L	3.6	1.1	2		03/26/19 06:52	563-58-6	
cis-1,3-Dichloropropene	<7.3	ug/L	24.2	7.3	2		03/26/19 06:52	10061-01-5	
trans-1,3-Dichloropropene	<8.7	ug/L	29.1	8.7	2		03/26/19 06:52	10061-02-6	
Diisopropyl ether	<3.8	ug/L	12.6	3.8	2		03/26/19 06:52	108-20-3	
Ethylbenzene	<0.44	ug/L	2.0	0.44	2		03/26/19 06:52	100-41-4	
Hexachloro-1,3-butadiene	<2.4	ug/L	10.0	2.4	2		03/26/19 06:52	87-68-3	
Isopropylbenzene (Cumene)	<0.79	ug/L	10.0	0.79	2		03/26/19 06:52	98-82-8	
p-Isopropyltoluene	<1.6	ug/L	5.3	1.6	2		03/26/19 06:52	99-87-6	
Methylene Chloride	<1.2	ug/L	10.0	1.2	2		03/26/19 06:52	75-09-2	

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON  
Pace Project No.: 40184650

**Sample: P8B DUP**      **Lab ID: 40184650012**      Collected: 03/21/19 10:50      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<3.1	ug/L	10.2	3.1	2		03/26/19 06:52	108-10-1	
Methyl-tert-butyl ether	<2.5	ug/L	8.3	2.5	2		03/26/19 06:52	1634-04-4	
Naphthalene	<2.4	ug/L	10.0	2.4	2		03/26/19 06:52	91-20-3	
n-Propylbenzene	<1.6	ug/L	10.0	1.6	2		03/26/19 06:52	103-65-1	
Styrene	<0.93	ug/L	3.1	0.93	2		03/26/19 06:52	100-42-5	
1,1,1,2-Tetrachloroethane	<0.54	ug/L	2.0	0.54	2		03/26/19 06:52	630-20-6	
1,1,2,2-Tetrachloroethane	<0.55	ug/L	2.0	0.55	2		03/26/19 06:52	79-34-5	
Tetrachloroethene	<0.65	ug/L	2.2	0.65	2		03/26/19 06:52	127-18-4	
Tetrahydrofuran	<4.6	ug/L	40.0	4.6	2		03/26/19 06:52	109-99-9	
Toluene	<0.34	ug/L	10.0	0.34	2		03/26/19 06:52	108-88-3	
1,2,3-Trichlorobenzene	<1.3	ug/L	10.0	1.3	2		03/26/19 06:52	87-61-6	
1,2,4-Trichlorobenzene	<1.9	ug/L	10.0	1.9	2		03/26/19 06:52	120-82-1	
1,1,1-Trichloroethane	0.84J	ug/L	2.0	0.49	2		03/26/19 06:52	71-55-6	
1,1,2-Trichloroethane	<1.1	ug/L	10.0	1.1	2		03/26/19 06:52	79-00-5	
Trichloroethene	146	ug/L	2.0	0.51	2		03/26/19 06:52	79-01-6	
Trichlorofluoromethane	<0.43	ug/L	2.0	0.43	2		03/26/19 06:52	75-69-4	
1,2,3-Trichloropropane	<1.2	ug/L	10.0	1.2	2		03/26/19 06:52	96-18-4	
1,1,2-Trichlorotrifluoroethane	4.4J	ug/L	10.0	1.1	2		03/26/19 06:52	76-13-1	
1,2,4-Trimethylbenzene	<1.7	ug/L	5.6	1.7	2		03/26/19 06:52	95-63-6	
1,3,5-Trimethylbenzene	<1.7	ug/L	5.8	1.7	2		03/26/19 06:52	108-67-8	
Vinyl chloride	33.9	ug/L	2.0	0.35	2		03/26/19 06:52	75-01-4	
Xylene (Total)	<3.0	ug/L	6.0	3.0	2		03/26/19 06:52	1330-20-7	
m&p-Xylene	<0.93	ug/L	4.0	0.93	2		03/26/19 06:52	179601-23-1	
o-Xylene	<0.52	ug/L	2.0	0.52	2		03/26/19 06:52	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	116	%	70-130		2		03/26/19 06:52	1868-53-7	
Toluene-d8 (S)	101	%	70-130		2		03/26/19 06:52	2037-26-5	
4-Bromofluorobenzene (S)	89	%	70-130		2		03/26/19 06:52	460-00-4	
<b>Field Data</b>		Analytical Method:							
Field pH	7.14	Std. Units			1		03/21/19 10:50		
Field Specific Conductance	692.03	umhos/cm			1		03/21/19 10:50		
Oxygen, Dissolved	0.01	mg/L			1		03/21/19 10:50	7782-44-7	
REDOX	34.8	mV			1		03/21/19 10:50		
Turbidity	0	NTU			1		03/21/19 10:50		
Temperature, Water (C)	10.23	deg C			1		03/21/19 10:50		

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## ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Sample Project No.: 40184650

**Sample: TRIP BLANK**      **Lab ID: 40184650013**      Collected: 03/21/19 08:00      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
Acetone	<2.7	ug/L	20.0	2.7	1		03/25/19 16:14	67-64-1	
Benzene	<0.25	ug/L	1.0	0.25	1		03/25/19 16:14	71-43-2	
Bromobenzene	<0.24	ug/L	1.0	0.24	1		03/25/19 16:14	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		03/25/19 16:14	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		03/25/19 16:14	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		03/25/19 16:14	75-25-2	
Bromomethane	<0.97	ug/L	5.0	0.97	1		03/25/19 16:14	74-83-9	
2-Butanone (MEK)	<2.9	ug/L	20.0	2.9	1		03/25/19 16:14	78-93-3	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 16:14	104-51-8	
sec-Butylbenzene	<0.85	ug/L	5.0	0.85	1		03/25/19 16:14	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		03/25/19 16:14	98-06-6	
Carbon disulfide	<0.37	ug/L	5.0	0.37	1		03/25/19 16:14	75-15-0	
Carbon tetrachloride	<0.17	ug/L	1.0	0.17	1		03/25/19 16:14	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 16:14	108-90-7	
Chloroethane	<1.3	ug/L	5.0	1.3	1		03/25/19 16:14	75-00-3	
2-Chloroethylvinyl ether	<1.0	ug/L	10.0	1.0	1		03/25/19 16:14	110-75-8	c2
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/19 16:14	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		03/25/19 16:14	74-87-3	
2-Chlorotoluene	<0.93	ug/L	5.0	0.93	1		03/25/19 16:14	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		03/25/19 16:14	106-43-4	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		03/25/19 16:14	96-12-8	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		03/25/19 16:14	124-48-1	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		03/25/19 16:14	106-93-4	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		03/25/19 16:14	74-95-3	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		03/25/19 16:14	95-50-1	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		03/25/19 16:14	541-73-1	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		03/25/19 16:14	106-46-7	
Dichlorodifluoromethane	<0.50	ug/L	5.0	0.50	1		03/25/19 16:14	75-71-8	
1,1-Dichloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 16:14	75-34-3	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 16:14	107-06-2	
1,2-Dichloroethene (Total)	<0.51	ug/L	7.4	0.51	1		03/25/19 16:14	540-59-0	
1,1-Dichloroethene	<0.24	ug/L	1.0	0.24	1		03/25/19 16:14	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/L	1.0	0.27	1		03/25/19 16:14	156-59-2	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		03/25/19 16:14	156-60-5	
1,2-Dichloropropane	<0.28	ug/L	1.0	0.28	1		03/25/19 16:14	78-87-5	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		03/25/19 16:14	142-28-9	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		03/25/19 16:14	594-20-7	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		03/25/19 16:14	563-58-6	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		03/25/19 16:14	10061-01-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		03/25/19 16:14	10061-02-6	
Diisopropyl ether	<1.9	ug/L	6.3	1.9	1		03/25/19 16:14	108-20-3	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		03/25/19 16:14	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	5.0	1.2	1		03/25/19 16:14	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	5.0	0.39	1		03/25/19 16:14	98-82-8	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		03/25/19 16:14	99-87-6	
Methylene Chloride	<0.58	ug/L	5.0	0.58	1		03/25/19 16:14	75-09-2	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

**Sample: TRIP BLANK**      **Lab ID: 40184650013**      Collected: 03/21/19 08:00      Received: 03/22/19 14:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Oxygenates</b>		Analytical Method: EPA 8260							
4-Methyl-2-pentanone (MIBK)	<1.5	ug/L	5.1	1.5	1		03/25/19 16:14	108-10-1	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		03/25/19 16:14	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		03/25/19 16:14	91-20-3	
n-Propylbenzene	<0.81	ug/L	5.0	0.81	1		03/25/19 16:14	103-65-1	
Styrene	<0.47	ug/L	1.6	0.47	1		03/25/19 16:14	100-42-5	
1,1,1,2-Tetrachloroethane	<0.27	ug/L	1.0	0.27	1		03/25/19 16:14	630-20-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	1.0	0.28	1		03/25/19 16:14	79-34-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		03/25/19 16:14	127-18-4	
Tetrahydrofuran	<2.3	ug/L	20.0	2.3	1		03/25/19 16:14	109-99-9	
Toluene	<0.17	ug/L	5.0	0.17	1		03/25/19 16:14	108-88-3	
1,2,3-Trichlorobenzene	<0.63	ug/L	5.0	0.63	1		03/25/19 16:14	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		03/25/19 16:14	120-82-1	
1,1,1-Trichloroethane	<0.24	ug/L	1.0	0.24	1		03/25/19 16:14	71-55-6	
1,1,2-Trichloroethane	<0.55	ug/L	5.0	0.55	1		03/25/19 16:14	79-00-5	
Trichloroethene	<0.26	ug/L	1.0	0.26	1		03/25/19 16:14	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		03/25/19 16:14	75-69-4	
1,2,3-Trichloropropane	<0.59	ug/L	5.0	0.59	1		03/25/19 16:14	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.54	ug/L	5.0	0.54	1		03/25/19 16:14	76-13-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		03/25/19 16:14	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		03/25/19 16:14	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		03/25/19 16:14	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		03/25/19 16:14	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		03/25/19 16:14	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		03/25/19 16:14	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	111	%	70-130		1		03/25/19 16:14	1868-53-7	HS
Toluene-d8 (S)	102	%	70-130		1		03/25/19 16:14	2037-26-5	
4-Bromofluorobenzene (S)	91	%	70-130		1		03/25/19 16:14	460-00-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

QC Batch: 316310 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Oxygenates  
Associated Lab Samples: 40184650001, 40184650002, 40184650003, 40184650004, 40184650005, 40184650006, 40184650007, 40184650008, 40184650009, 40184650010, 40184650011, 40184650012, 40184650013

METHOD BLANK: 1839973 Matrix: Water  
Associated Lab Samples: 40184650001, 40184650002, 40184650003, 40184650004, 40184650005, 40184650006, 40184650007, 40184650008, 40184650009, 40184650010, 40184650011, 40184650012, 40184650013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	1.0	03/25/19 14:24	
1,1,1-Trichloroethane	ug/L	<0.24	1.0	03/25/19 14:24	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	03/25/19 14:24	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	03/25/19 14:24	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.54	5.0	03/25/19 14:24	
1,1-Dichloroethane	ug/L	<0.27	1.0	03/25/19 14:24	
1,1-Dichloroethene	ug/L	<0.24	1.0	03/25/19 14:24	
1,1-Dichloropropene	ug/L	<0.54	1.8	03/25/19 14:24	
1,2,3-Trichlorobenzene	ug/L	<0.63	5.0	03/25/19 14:24	
1,2,3-Trichloropropane	ug/L	<0.59	5.0	03/25/19 14:24	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	03/25/19 14:24	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	03/25/19 14:24	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	03/25/19 14:24	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	03/25/19 14:24	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	03/25/19 14:24	
1,2-Dichloroethane	ug/L	<0.28	1.0	03/25/19 14:24	
1,2-Dichloroethene (Total)	ug/L	<0.51	7.4	03/25/19 14:24	
1,2-Dichloropropane	ug/L	<0.28	1.0	03/25/19 14:24	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	03/25/19 14:24	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	03/25/19 14:24	
1,3-Dichloropropane	ug/L	<0.83	2.8	03/25/19 14:24	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	03/25/19 14:24	
2,2-Dichloropropane	ug/L	<2.3	7.6	03/25/19 14:24	
2-Butanone (MEK)	ug/L	<2.9	20.0	03/25/19 14:24	
2-Chloroethylvinyl ether	ug/L	<1.0	10.0	03/25/19 14:24	
2-Chlorotoluene	ug/L	<0.93	5.0	03/25/19 14:24	
4-Chlorotoluene	ug/L	<0.76	2.5	03/25/19 14:24	
4-Methyl-2-pentanone (MIBK)	ug/L	<1.5	5.1	03/25/19 14:24	
Acetone	ug/L	<2.7	20.0	03/25/19 14:24	
Benzene	ug/L	<0.25	1.0	03/25/19 14:24	
Bromobenzene	ug/L	<0.24	1.0	03/25/19 14:24	
Bromochloromethane	ug/L	<0.36	5.0	03/25/19 14:24	
Bromodichloromethane	ug/L	<0.36	1.2	03/25/19 14:24	
Bromoform	ug/L	<4.0	13.2	03/25/19 14:24	
Bromomethane	ug/L	<0.97	5.0	03/25/19 14:24	
Carbon disulfide	ug/L	<0.37	5.0	03/25/19 14:24	
Carbon tetrachloride	ug/L	<0.17	1.0	03/25/19 14:24	
Chlorobenzene	ug/L	<0.71	2.4	03/25/19 14:24	
Chloroethane	ug/L	<1.3	5.0	03/25/19 14:24	
Chloroform	ug/L	<1.3	5.0	03/25/19 14:24	

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### QUALITY CONTROL DATA

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

METHOD BLANK: 1839973

Matrix: Water

Associated Lab Samples: 40184650001, 40184650002, 40184650003, 40184650004, 40184650005, 40184650006, 40184650007, 40184650008, 40184650009, 40184650010, 40184650011, 40184650012, 40184650013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	ug/L	<2.2	7.3	03/25/19 14:24	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	03/25/19 14:24	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	03/25/19 14:24	
Dibromochloromethane	ug/L	<2.6	8.7	03/25/19 14:24	
Dibromomethane	ug/L	<0.94	3.1	03/25/19 14:24	
Dichlorodifluoromethane	ug/L	<0.50	5.0	03/25/19 14:24	
Diisopropyl ether	ug/L	<1.9	6.3	03/25/19 14:24	
Ethylbenzene	ug/L	<0.22	1.0	03/25/19 14:24	
Hexachloro-1,3-butadiene	ug/L	<1.2	5.0	03/25/19 14:24	
Isopropylbenzene (Cumene)	ug/L	<0.39	5.0	03/25/19 14:24	
m&p-Xylene	ug/L	<0.47	2.0	03/25/19 14:24	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	03/25/19 14:24	
Methylene Chloride	ug/L	<0.58	5.0	03/25/19 14:24	
n-Butylbenzene	ug/L	<0.71	2.4	03/25/19 14:24	
n-Propylbenzene	ug/L	<0.81	5.0	03/25/19 14:24	
Naphthalene	ug/L	<1.2	5.0	03/25/19 14:24	
o-Xylene	ug/L	<0.26	1.0	03/25/19 14:24	
p-Isopropyltoluene	ug/L	<0.80	2.7	03/25/19 14:24	
sec-Butylbenzene	ug/L	<0.85	5.0	03/25/19 14:24	
Styrene	ug/L	<0.47	1.6	03/25/19 14:24	
tert-Butylbenzene	ug/L	<0.30	1.0	03/25/19 14:24	
Tetrachloroethene	ug/L	<0.33	1.1	03/25/19 14:24	
Tetrahydrofuran	ug/L	<2.3	20.0	03/25/19 14:24	
Toluene	ug/L	<0.17	5.0	03/25/19 14:24	
trans-1,2-Dichloroethene	ug/L	<1.1	3.6	03/25/19 14:24	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	03/25/19 14:24	
Trichloroethene	ug/L	<0.26	1.0	03/25/19 14:24	
Trichlorofluoromethane	ug/L	<0.21	1.0	03/25/19 14:24	
Vinyl chloride	ug/L	<0.17	1.0	03/25/19 14:24	
Xylene (Total)	ug/L	<1.5	3.0	03/25/19 14:24	
4-Bromofluorobenzene (S)	%	91	70-130	03/25/19 14:24	
Dibromofluoromethane (S)	%	110	70-130	03/25/19 14:24	
Toluene-d8 (S)	%	100	70-130	03/25/19 14:24	

LABORATORY CONTROL SAMPLE: 1839974

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.4	101	70-133	
1,1,2,2-Tetrachloroethane	ug/L	50	60.5	121	67-130	
1,1,2-Trichloroethane	ug/L	50	61.5	123	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	49.6	99	50-150	
1,1-Dichloroethane	ug/L	50	61.7	123	70-134	
1,1-Dichloroethene	ug/L	50	52.4	105	75-132	

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### QUALITY CONTROL DATA

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

LABORATORY CONTROL SAMPLE: 1839974

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	48.1	96	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.6	97	60-126	
1,2-Dibromoethane (EDB)	ug/L	50	55.9	112	70-130	
1,2-Dichlorobenzene	ug/L	50	54.6	109	70-130	
1,2-Dichloroethane	ug/L	50	57.8	116	73-134	
1,2-Dichloroethene (Total)	ug/L		116			
1,2-Dichloropropane	ug/L	50	61.5	123	79-128	
1,3-Dichlorobenzene	ug/L	50	54.4	109	70-130	
1,4-Dichlorobenzene	ug/L	50	56.5	113	70-130	
Benzene	ug/L	50	62.9	126	69-137	
Bromodichloromethane	ug/L	50	55.2	110	70-130	
Bromoform	ug/L	50	44.0	88	64-133	
Bromomethane	ug/L	50	43.8	88	29-123	
Carbon disulfide	ug/L	50	50.5	101	67-153	
Carbon tetrachloride	ug/L	50	52.2	104	73-142	
Chlorobenzene	ug/L	50	56.9	114	70-130	
Chloroethane	ug/L	50	51.5	103	59-133	
Chloroform	ug/L	50	58.5	117	80-129	
Chloromethane	ug/L	50	30.5	61	27-125	
cis-1,2-Dichloroethene	ug/L	50	58.1	116	70-134	
cis-1,3-Dichloropropene	ug/L	50	49.7	99	70-130	
Dibromochloromethane	ug/L	50	51.5	103	70-130	
Dichlorodifluoromethane	ug/L	50	20.5	41	12-127	
Ethylbenzene	ug/L	50	57.8	116	86-127	
Isopropylbenzene (Cumene)	ug/L	50	57.1	114	70-130	
m&p-Xylene	ug/L	100	117	117	70-131	
Methyl-tert-butyl ether	ug/L	50	40.4	81	65-136	
Methylene Chloride	ug/L	50	57.6	115	72-133	
o-Xylene	ug/L	50	56.7	113	70-130	
Styrene	ug/L	50	60.2	120	70-130	
Tetrachloroethene	ug/L	50	52.6	105	70-130	
Toluene	ug/L	50	57.5	115	84-124	
trans-1,2-Dichloroethene	ug/L	50	57.9	116	70-133	
trans-1,3-Dichloropropene	ug/L	50	47.4	95	67-130	
Trichloroethene	ug/L	50	57.3	115	70-130	
Trichlorofluoromethane	ug/L	50	48.2	96	69-147	
Vinyl chloride	ug/L	50	43.1	86	48-134	
Xylene (Total)	ug/L	150	174	116	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			107	70-130	
Toluene-d8 (S)	%			102	70-130	

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### QUALITY CONTROL DATA

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

Parameter	Units	40184650010		1840306		1840307		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
1,1,1-Trichloroethane	ug/L	<0.24	50	50	50.3	51.6	101	103	70-136	3	20		
1,1,2,2-Tetrachloroethane	ug/L	<0.28	50	50	59.3	59.8	119	120	67-133	1	20		
1,1,2-Trichloroethane	ug/L	<0.55	50	50	60.2	63.2	120	126	70-130	5	20		
1,1,2-Trichlorotrifluoroethane	ug/L	<0.54	50	50	49.0	50.2	98	100	50-150	3	20		
1,1-Dichloroethane	ug/L	<0.27	50	50	60.8	62.2	122	124	70-139	2	20		
1,1-Dichloroethene	ug/L	<0.24	50	50	51.8	53.4	104	107	72-137	3	20		
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	46.4	49.6	93	99	68-130	7	20		
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	47.2	48.7	94	97	60-130	3	21		
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	55.6	56.7	111	113	70-130	2	20		
1,2-Dichlorobenzene	ug/L	<0.71	50	50	53.1	56.0	106	112	70-130	5	20		
1,2-Dichloroethane	ug/L	<0.28	50	50	57.1	58.8	114	118	71-137	3	20		
1,2-Dichloroethene (Total)	ug/L	<0.51			111	115				4	20		
1,2-Dichloropropane	ug/L	<0.28	50	50	60.9	63.3	122	127	78-130	4	20		
1,3-Dichlorobenzene	ug/L	<0.63	50	50	53.3	55.8	107	112	70-130	5	20		
1,4-Dichlorobenzene	ug/L	<0.94	50	50	54.8	57.5	110	115	70-130	5	20		
Benzene	ug/L	<0.25	50	50	61.8	63.5	124	127	66-143	3	20		
Bromodichloromethane	ug/L	<0.36	50	50	54.2	57.0	108	114	70-130	5	20		
Bromoform	ug/L	<4.0	50	50	43.4	44.9	87	90	64-134	3	20		
Bromomethane	ug/L	<0.97	50	50	46.6	49.9	93	100	29-136	7	25		
Carbon disulfide	ug/L	<0.37	50	50	50.3	51.9	101	104	67-156	3	21		
Carbon tetrachloride	ug/L	<0.17	50	50	52.5	53.6	105	107	73-142	2	20		
Chlorobenzene	ug/L	<0.71	50	50	55.8	57.3	112	115	70-130	3	20		
Chloroethane	ug/L	<1.3	50	50	49.7	51.6	99	103	58-138	4	20		
Chloroform	ug/L	<1.3	50	50	58.4	59.9	117	120	80-131	2	20		
Chloromethane	ug/L	<2.2	50	50	30.5	31.6	61	63	24-125	4	20		
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	57.0	58.9	114	118	68-137	3	22		
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	49.6	51.1	99	102	70-130	3	20		
Dibromochloromethane	ug/L	<2.6	50	50	51.5	52.5	103	105	70-131	2	20		
Dichlorodifluoromethane	ug/L	<0.50	50	50	19.2	19.5	38	39	10-127	1	20		
Ethylbenzene	ug/L	<0.22	50	50	57.1	58.8	114	118	81-136	3	20		
Isopropylbenzene (Cumene)	ug/L	<0.39	50	50	55.7	58.5	111	117	70-132	5	20		
m&p-Xylene	ug/L	<0.47	100	100	115	120	115	120	70-135	4	20		
Methyl-tert-butyl ether	ug/L	<1.2	50	50	47.7	48.7	95	97	58-142	2	23		
Methylene Chloride	ug/L	<0.58	50	50	56.0	59.0	112	118	69-137	5	20		
o-Xylene	ug/L	<0.26	50	50	55.2	57.7	110	115	70-132	4	20		
Styrene	ug/L	<0.47	50	50	58.9	61.3	118	123	70-130	4	20		
Tetrachloroethene	ug/L	<0.33	50	50	51.3	53.5	103	107	70-132	4	20		
Toluene	ug/L	<0.17	50	50	56.9	58.8	114	118	81-130	3	20		
trans-1,2-Dichloroethene	ug/L	<1.1	50	50	53.8	56.5	108	113	70-136	5	20		
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	47.1	48.2	94	96	67-130	2	20		
Trichloroethene	ug/L	<0.26	50	50	56.2	58.4	112	117	70-131	4	20		
Trichlorofluoromethane	ug/L	<0.21	50	50	47.8	48.2	96	96	66-150	1	20		
Vinyl chloride	ug/L	<0.17	50	50	41.5	42.9	83	86	46-134	3	20		
Xylene (Total)	ug/L	<1.5	150	150	170	177	113	118	70-134	4	20		
4-Bromofluorobenzene (S)	%						99	99	70-130				

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1840306		1840307		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40184650010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result										
Dibromofluoromethane (S)	%									107	107	70-130			
Toluene-d8 (S)	%									101	102	70-130			

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

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### DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### ANALYTE QUALIFIERS

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

c2 Acid preservation may not be appropriate for the analysis of 2-Chloroethylvinyl ether.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60489428 LIMEKILN PARK/GRAFTON

Pace Project No.: 40184650

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40184650001	P2A	EPA 8260	316310		
40184650002	P2B	EPA 8260	316310		
40184650003	P7B	EPA 8260	316310		
40184650004	P8A	EPA 8260	316310		
40184650005	P8B	EPA 8260	316310		
40184650006	P9B	EPA 8260	316310		
40184650007	PW1716LR	EPA 8260	316310		
40184650008	PW717HC	EPA 8260	316310		
40184650009	PW1530LR	EPA 8260	316310		
40184650010	PW1587LR	EPA 8260	316310		
40184650011	PW461HR	EPA 8260	316310		
40184650012	P8B DUP	EPA 8260	316310		
40184650013	TRIP BLANK	EPA 8260	316310		
40184650001	P2A				
40184650002	P2B				
40184650003	P7B				
40184650004	P8A				
40184650005	P8B				
40184650006	P9B				
40184650012	P8B DUP				

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

**Company Name:** AECOM  
**Branch/Location:** Milwaukee  
**Project Contact:** Jeff Maletzke  
**Phone:** 920-406-3110  
**Project Number:** 60489428  
**Project Name:** Lime Kiln Park/Grafton Landfill  
**Project State:** WI  
**Sampled By (Print):** Alex Moe  
**Sampled By (Sign):** *alex*

**PO #:** \_\_\_\_\_ **Regulatory Program:** \_\_\_\_\_

**Data Package Options (billable)**  
 EPA Level III  
 EPA Level IV

**MS/MSD (billable)**  
 On your sample  
 NOT needed on your sample

**Matrix Codes**  
A = Air W = Water  
B = Biota DW = Drinking Water  
C = Charcoal GW = Ground Water  
O = Oil SW = Surface Water  
S = Soil WW = Waste Water  
SI = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	P2A	3/21/19	1300	W
002	P2B	3/21/19	1340	W
003	P7B	3/21/19	1445	W
004	P8A	3/21/19	0955	W
005	P8B	3/21/19	1050	W
006	P9B	3/21/19	1150	W
007	PW1716LR	3/21/19	1500	W
	<del>PW4716U</del>			W
008	PW717HC	3/21/19	1205	W
009	PW1530LR	3/21/19	1535	W
010	PW1587LR	3/21/19	1525	W
011	PW461HR	3/21/19	1530	W
012	DUP	3/21/19	1050	W

**Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)**  
**Date Needed:** \_\_\_\_\_

Transmit Prelim Rush Results by (complete what you want):

**Email #1:** \_\_\_\_\_  
**Email #2:** \_\_\_\_\_  
**Telephone:** \_\_\_\_\_  
**Fax:** \_\_\_\_\_

Samples on HOLD are subject to special pricing and release of liability

Relinquished By: *alex/AECOM* Date/Time: *3/22/19 1000am*

Relinquished By: *Mary Fannin* Date/Time: *3/22/19 1210*

Relinquished By: *pac* Date/Time: *3/22/19 1455*

Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received By: *Mary Fannin* Date/Time: *3/22/19 11:00*

Received By: *[Signature]* Date/Time: *3/22/19 1210*

Received By: *[Signature]* Date/Time: *3/22/19 1455*

Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

**PACE Project No.** 40184650

Receipt Temp = *201* °C

Sample Receipt pH **OK / Adjusted**

Cooler Custody Seal **Present / Not Present**  
**Intact / Not Intact**



UPPER MIDWEST REGION  
 MN: 612-607-1700 WI: 920-469-2436

COC No. *40184650*

# CHAIN OF CUSTODY

**\*Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED? (YES/NO)  
 PRESERVATION (CODE)\*

Y/N	N																			
Pick Letter	B																			
Analyses Requested	NR507 VOCs 8260																			

**Quote #:** N/A

**Mail To Contact:** Jeff Maletzke

**Mail To Company:** AECOM

**Mail To Address:** 2985 South Ridge Road, Suite B, Green Bay, WI 54304

**Invoice To Contact:** Jeff Maletzke

**Invoice To Company:** AECOM

**Invoice To Address:** 2985 South Ridge Road, Suite B, Green Bay, WI 54304

**Invoice To Phone:** 920-406-3110

**CLIENT COMMENTS** | **LAB COMMENTS (Lab Use Only)** | **Profile #**



### Sample Preservation Receipt Form

Client Name: AECOM

Project # 40184650

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when completed:

Date/Time:

Pace Lab #	Glass						Plastic						Vials				Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)				
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU								WPFU	SP5T	ZPLC	GN
001																	3																2.5 / 5 / 10
002																	3																2.5 / 5 / 10
003																	3																2.5 / 5 / 10
004																	3																2.5 / 5 / 10
005																	3																2.5 / 5 / 10
006																	3																2.5 / 5 / 10
007																	3																2.5 / 5 / 10
008																	3																2.5 / 5 / 10
009																	3																2.5 / 5 / 10
010																	3																2.5 / 5 / 10
011																	3																2.5 / 5 / 10
012																	3																2.5 / 5 / 10
013																	3																2.5 / 5 / 10
014																	2								2								2.5 / 5 / 10
015																																	2.5 / 5 / 10
016																																	2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm) :  Yes  No  N/A \*If yes look in headspace column

<b>AG1U</b>	1 liter amber glass	<b>BP1U</b>	1 liter plastic unpres	<b>DG9A</b>	40 mL amber ascorbic	<b>JGFU</b>	4 oz amber jar unpres
<b>AG1H</b>	1 liter amber glass HCL	<b>BP2N</b>	500 mL plastic HNO3	<b>DG9T</b>	40 mL amber Na Thio	<b>WGFU</b>	4 oz clear jar unpres
<b>AG4S</b>	125 mL amber glass H2SO4	<b>BP2Z</b>	500 mL plastic NaOH, Znact	<b>VG9U</b>	40 mL clear vial unpres	<b>WPFU</b>	4 oz plastic jar unpres
<b>AG4U</b>	120 mL amber glass unpres	<b>BP3U</b>	250 mL plastic unpres	<b>VG9H</b>	40 mL clear vial HCL		
<b>AG5U</b>	100 mL amber glass unpres	<b>BP3C</b>	250 mL plastic NaOH	<b>VG9M</b>	40 mL clear vial MeOH	<b>SP5T</b>	120 mL plastic Na Thiosulfate
<b>AG2S</b>	500 mL amber glass H2SO4	<b>BP3N</b>	250 mL plastic HNO3	<b>VG9D</b>	40 mL clear vial DI	<b>ZPLC</b>	ziploc bag
<b>BG3U</b>	250 mL clear glass unpres	<b>BP3S</b>	250 mL plastic H2SO4			<b>GN:</b>	



1241 Bellevue Street, Green Bay, WI 54302

Document Name:  
Sample Condition Upon Receipt (SCUR)

Document No.:  
F-GB-C-031-Rev.07

Document Revised: 25Apr2018

Issuing Authority:  
Pace Green Bay Quality Office

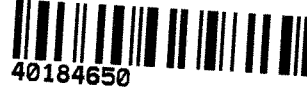
### Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: AECOM

WO#: **40184650**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - NA Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 20.1 / Corr: \_\_\_\_\_

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C.

Person examining contents:  
Date: 3/22/19  
Initials: ML

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>416</u>		

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

A for Gell

Date: 3/23/19