Operations & Maintenance Inc.
Riverview Business Park
1850 Route 57
Fulton, NY 13069

Gary Mullen, Jr.
Project Manager
gmullenomi@gmail.com
315-378-5088

June 25, 2019

BY E-MAIL AND OVERNIGHT DELIVERY (For Original Signed PRR Only)

Michael Belveg, Assistant Engineer (Environmental)
New York State Department of Environmental Conservation
Division of Environmental Remediation
615 Erie Boulevard West
Syracuse, NY 13204
michael.belveg@dec.ny.gov

Re: Former Miller Container Site – Registry Site # 738029 (the "Site")
- Submission of Periodic Review Report (PRR)
Reporting Period: June 1, 2018 – May 31, 2019

Michael:

Enclosed are the following documents that make up the PRR submittal for the referenced Site for the 2018-2019 reporting period:

a) PRR signed by the Site Owner, Riccelli Fulton, LLC (copy of original). As discussed with the Department, Riccelli is certifying to the portion of the PRR that covers the Institutional Controls (ICs) associated with the Site;
b) PRR signed by Pat Martin, P.E. on behalf of the Remedial Party (RP), Miller Brewing Company (original signature). This PRR reflects revisions made to the form PRR to reflect the division of certification responsibility between the Site Owner and the RP. As discussed with the Department, the RP is certifying the portion of the PRR that covers the Engineering Controls (ECs) associated with the Site[1]; and
c) Year 22 Annual Groundwater Monitoring Report. This is in the same format that we have used in the course of the remediation. We will continue to use this format for PRR purposes as provided in the Site Management Plan (SMP) (October 2016) (see section 5.3 of the SMP). Appendices will be sent as an electronic copy only.

[1] Note that Box 3 in the RP version of the PRR makes reference to the recorded Declaration of Covenants and Restrictions as containing the existing ICs because that reflects our understanding of the scope of the ICs that are in effect. However, the RP is making no certification as to the ICs because that is the obligation of the Site Owner

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In accordance with the directions provided under the Department's April 15, 2019 email sent to Jay Eversman at the Anheuser-Busch Cos., LLC, all the enclosures will be forwarded to you by e-mail. In addition, the original paper copy of the PRR signed by Pat Martin will be sent to you by overnight delivery.

My additional comments follow.

Reporting Period for Future PRRs. Section 5.3 of the SMP states the following: "After NYSDEC approves the initial PRR, the deadline for subsequent PRR submittals will be July 1 to coincide with the preparation and submittal of the annual report." After review of the initial PRR, it was determined the second PRR reporting period would be adjusted to May 1, 2017 through May 31, 2018. This and future operating periods will remain, June 1 through May 31.

Regards,
OPERATIONS & MAINTENANCE, INC.

Gary Mullen
Digitally signed by Gary Mullen
DN: cn=Gary Mullen, o=OMI, ou, email=gmullenomi@gmail.com, c=US
Date: 2019.06.25 13:14:50 -04'00'

Gary Mullen
Project Manager

Enclosures
ecc: Margaret Sheen, Esq., NYSDEC Region 7
Harry Warner, NYSDEC Region 7
Eamonn O'Neil, NYSDOH
Maureen Schuck, NYSDOH
Greg Novitzki, Riccelli Fulton, LLC
Will Orton, Riccelli Fulton, LLC
Richard J. Riccelli, Riccelli Fulton, LLC
Jay Eversman, Esq. Anheuser-Busch Cos.,.LLC
William Buchan, OMI
Patrick Martin, P.E., Golder Associates

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 738029

Site Name Former Miller Container Site

Site Address: NY Route 57 Zip Code: 13069
City/Town: Volney
County: Oswego
Site Acreage: 12.704

Reporting Period: ~~April 30, 2017 to April 30, 2018~~ June 1, 2018 through May 31, 2019

	YES	NO
1. Is the information above correct?	☐	☒
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☒	☐
7. Are all ICs/~~EC~~s in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

SITE NO. 738029

BOX 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
	Riccelli Fulton, LLC	Ground Water Use Restriction

Description of Engineering Controls

BOX 4

Parcel	Engineering Control
Tax Map # 254.00-05-04.01	Groundwater Treatment System Air Sparging/Soil Vapor Extraction Groundwater Extraction System

Periodic Review Report (PRR) Certification Statements **BOX 5**

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☐	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or ~~Engineering control~~ listed in Boxes 3 ~~and/or 4,~~ I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or ~~Engineering Control(s)~~ employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 738029

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Richard J Riccelli at Riccelli-Fulton LLC,
print name print business address

am certifying as Owner (Owner ~~or Remedial Party~~)

for the Site named in the Site Details Section of this form.

Richard J Riccelli 6/21/19
Signature of Owner, ~~Remedial Party, or~~ Designated Representative Rendering Certification Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as a Professional Engineer for the _____
(Owner or Remedial Party)

_____ _____ _____

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

Date

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **738029**

Site Name **Former Miller Container Site**

Site Address: NY Route 57 Zip Code: 13069
City/Town: Volney
County: Oswego
Site Acreage: 12.704

Reporting Period: ~~April 30, 2017 to April 30, 2018~~ *June 1, 2018 through May 31, 2019*

	YES	NO
1. Is the information above correct?	❑	☒
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	❑	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	❑	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	❑	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	❑	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☒	❑
7. Are all ~~ICs~~/ECs in place and functioning as designed?	☒	❑

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

SITE NO. 738029 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
	Riccelli Fulton, LLC	Ground Water Use Restriction

NOT APPLICABLE to Remedial Party, ICs are the responsibility of the Site Owner as recorded in the Declaration of Covenants and Restrictions for the Site.

Box 4

Description of Engineering Controls

Parcel *Tax Map #*	Engineering Control
254.00-05-04.01	Groundwater Treatment System Air Sparging/Soil Vapor Extraction *Groundwater Extraction System*

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below ~~that:~~ *with the exception of Boxes 1, 2 & 3 that:*

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each ~~Institutional or~~ Engineering control listed in Box~~es 3 and/or~~ 4, I certify by checking "YES" below that all of the following statements are true:

(a) the ~~Institutional Control and/or~~ Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

~~(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;~~ *Site access is the responsibility of the Site Owner, not that of the Responsible Party*

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

(f) all Engineering Controls are in place and functioning as designed.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 738029

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as _____(Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

_____ _____
Signature of Owner, Remedial Party, or Designated Representative Date
Rendering Certification

~~IC~~/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I PATRICK J. MARTIN at 2430 N. FOREST RD, STE. 100, GETZVILLE, NY 14068
print name print business address

am certifying as a Professional Engineer for the REMEDIAL PARTY
(~~Owner or~~ Remedial Party)

Patrick J. Martin 6/19/19

Signature of Professional Engineer, for the ~~Owner or~~ Remedial Party, Rendering Certification | Stamp (Required for PE) | Date

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
   A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
   B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
   C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated

Annual Groundwater Monitoring Report Year 22 (June 2018- May 2019)

Miller Brewing Groundwater Recovery and Treatment System
NYSDEC Site # 7-38-029
Former Miller Container Site
Volney, New York

Submitted To:
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-1010

Prepared by:
Operations & Maintenance Inc.
1850 Route 57
Fulton, New York 13069

June 2019

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INTRODUCTION

Operations & Maintenance, Inc. (OMI) has prepared this Annual Groundwater Monitoring Report (AGWMR) on behalf of Miller Brewing Company (Remedial Party – RP) for submission to the New York State Department of Environmental Conservation (NYSDEC) for the Former Miller Container site (NYSDEC Site #7-38-029) located in Volney, NY. It reflects the progress made toward achieving the Remediation Goals identified at 6.0 of the Record of Decision (ROD) (dated March 1995) that was issued by NYSDEC for this Site and the associated Standards, Criteria, and Guidance (SCGs).

This report covers the period from June 1, 2018 through May 31, 2019 inclusive (operating year) and is organized in general accordance with the NYSDEC approved outline. This report is being submitted in conjunction with the completed "*Site Management Periodic Review Report Notice - Institutional and Engineering Controls Certification Form*" and the combined documents fulfill the requirements of the approved Site Management Plan (December 2016) for submittal of an annual Periodic Review Report (PRR).

The responsibilities for implementing the SMP are divided between the Site Owner and the RP, because the RP has no control over the Site Owner's activities on the Site. Therefore, as the RP, Miller Brewing Company is responsible for the three Engineering Controls (ECs) that are identified in the SMP (i.e., the Groundwater Extraction System, Groundwater Treatment Facility and Soil Vapor Extraction System). A detailed discussion of the RP responsibilities is included in Section 6.2 of the SMP. The Site Owner, currently Riccelli Fulton, LLC (Riccelli), is responsible for the Institutional Controls (ICs). The ICs are defined in Section 2.3 of the approved SMP and in the Declaration of Covenants and Restrictions recorded June 26, 2015 in the Oswego County Clerk's office.

This report is focused on the reporting of all relevant operations, monitoring and data reporting associated with the ECs to assess and support the certification that they are functioning correctly and continue to address the Remediation Goals for the Site.

OVERALL SITE PROGRESS

Monitoring well and recovery well sampling demonstrates that the contaminant plume on the Former Miller Container site continues to shrink. The contaminant levels reported in the outlying monitoring wells continue to trend downward. The VOC levels reported from the sampling of the source recovery wells also continue to decline.

Since November of 2013, the City of Fulton Water Treatment Facility has been mothballed because its operation was no longer necessary due to the drop of contaminant levels in municipal production well, M-2A. The RP does not conduct sampling of M-2A because water from this well is not being used by the City as a source of drinking water. Currently, water is being pumped from M-2A to the Oswego River in accordance with a NYSDEC Consent Order with Riccelli Fulton, LLC.

The Soil Vapor Extraction system continues to accelerate the site remediation by providing mass removal in conjunction with the groundwater recovery system. The SVE system is also providing additional protection against Soil Vapor Intrusion into the on-site structure.

Progress made toward achieving the Remediation Goals identified in the ROD for this Site is discussed under the Conclusions section of this report.

REMEDIAL TREATMENT SYSTEM OPERATION

GROUNDWATER RECOVERY SYSTEM

The current groundwater recovery system consists of nine (9) groundwater Recovery Wells (RWs). The nine Recovery Wells were in operation for the entire reporting period with minor exceptions when the system was off for maintenance or offline due to equipment malfunction. Operation of recovery well RW-10 was halted on August 19, 2015. The lack of flow from this recovery well and its impact on the recovery system's ability to mitigate off site migration is discussed below.

The following table summarizes the flow rates for the nine Recovery Wells for the 2018-2019 operating year.

May 31, 2018 - May 31, 2019

Well	Total (gallons)	GPD	GPM
RW-2	763533	2092	1.45
RW-3	124716	342	0.24
RW-4	235929	646	0.45
RW-5R	1207167	3307	2.30
RW-8	1653854	4531	3.15
RW-9	47594	130	0.09
RW-11	542747	1487	1.03
RW-12	1234896	3383	2.35
RW-13	546826	1498	1.04
Totals	**6,357,262**	**17,417**	**12.1**

Based on the individual recovery well totalizers, a total of 6,357,262 gallons of groundwater were recovered during the reporting period at an average flow rate of 12.1 gallons per minute to the treatment system. The production rates are constantly monitored throughout the year and adjustments are made to improve the rates from individual wells.

The flow to the Air Stripper Treatment (AST) system is also monitored using an electromechanical flow meter. This meter indicated a total of 7,101,188 gallons of water were treated at the Groundwater Treatment Facility (GWTF). The readings from the ATS influent flow meter are assumed to be more representative of the actual flow that passes through the treatment system. The daily totalizer readings from the AST flow meter are presented in Appendix A.

RECOVERY SYSTEM MONITORING RESULTS

The operating recovery wells were sampled four times during the reporting period. Samples were collected from the in-line taps and submitted for laboratory analysis. The results were reported to NYSDEC in the quarterly monitoring reports submitted for the site.

The following table summarizes the laboratory analytical results for the RW samples collected during the monitoring events this reporting period. The summary table includes all results for any compound reported at or above the Method Detection Limit (MDL) in any sample. All concentrations are presented in μg/l:

RECOVERY WELLS - USEPA Method 8260c

WELL	Date	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Vinyl Chloride
RW-2	11-Jul-18	**21**	**8.5**	**59**	**110**	**9.0**	**44**	**5.4**
	16-Oct-18	**17**	**7.3**	**58**	**120**	**8.3**	**35**	**5.3**
	23-Jan-19	**12**	**5.6**	**46**	**110**	**5.7**	**37**	**5.2**
	11-Apr-19	**12**	**5.8**	**48**	**110**	**5.6**	**41**	**7.9**
RW-3	11-Jul-18	**6.4**	<5	**29**	**24**	<5	**8.8**	<5
	16-Oct-18	4.7	4.0	**150**	**75**	**5.2**	**13**	1.9
	23-Jan-19	1.00	1.3	**21**	**46**	2.9	**4.4**	0.67
	11-Apr-19	2.8	2.7	**80**	**55**	3.8	**11**	2.4
RW-4	11-Jul-18	**25**	**6.5**	**68**	**100**	**13**	**8.2**	**6.8**
	16-Oct-18	**17**	4.8	**55**	**92**	**10.0**	**6.9**	**5.4**
	23-Jan-19	**55**	**7.0**	**42**	**86**	**6.7**	**6.3**	2.9
	11-Apr-19	**26**	**5.1**	**52**	**96**	**7.9**	**7.5**	**6.6**
RW-5R	11-Jul-18	3.8	4.7	**12**	**110**	4.1	**8.6**	<2
	16-Oct-18	2.4	2.6	**7.8**	**87**	2.6	**6.3**	<2
	23-Jan-19	2.4	2.6	**10.0**	**87**	2.5	**7.0**	<2
	11-Apr-19	2.2	2.4	**10.0**	**81**	2.1	**7.2**	2.5
RW-8	11-Jul-18	**9.4**	**5.2**	**77**	**17**	4.0	4.2	2.9
	16-Oct-18	**6.2**	3.3	**55**	**15**	2.8	2.7	2.5
	23-Jan-19	**3.3**	1.8	**23**	**9.4**	1.6	1.6	1.1
	11-Apr-19	4.1	2.3	**29**	**10**	1.8	2.0	2.5
RW-9	11-Jul-18	**43**	**53**	**200**	**27**	**10.0**	**36**	4.1
	16-Oct-18	**35**	**38**	**170**	**25**	**7.4**	**36**	3.8
	23-Jan-19	**43**	**38**	**240**	**15**	**6.0**	**43**	3.1
RW-11	11-Jul-18	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5
	16-Oct-18	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5
	23-Jan-19	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5
	11-Apr-19	<0.5	<0.5	<0.5	1.7	0.76	<0.5	<0.5
RW-12	11-Jul-18	0.78	<0.5	<0.5	2.1	0.76	<0.5	<0.5
	16-Oct-18	0.61	<0.5	<0.5	1.9	<0.5	<0.5	<0.5
	23-Jan-19	0.62	>0.5	<0.5	1.9	0.56	<0.5	<0.5
	11-Apr-19	0.70	0.55	<0.5	2.1	0.61	<0.5	<0.5
RW-13	11-Jul-18	**5.1**	4.5	4.1	1.9	4.2	**8.1**	<0.5
	16-Oct-18	3.3	3.3	2.7	2.3	3.5	**6.4**	<0.5
	23-Jan-19	3.2	3.4	1.6	**6.5**	2.7	3.6	<0.5
	11-Apr-19	3.1	3.1	1.4	5.9	2.1	2.8	<0.5

An estimate of the mass-removal of site related contaminants of concern was calculated for the reporting period by multiplying the total gallons recovered from each well by the average concentration of each compound reported. Based on the calculation method, a total of 2.095 kg (4.62 lbs) of contaminants were removed from the groundwater recovered from the RWs. The following table summarizes the calculations. The readings are presented in grams:

Updated for 2018-2019

WELL	Flow in Liters	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Vinyl Chloride	Total VOC
RW-2	2890278	45	20	152	325	21	113	17.2	693
RW-3	472100	1.8	1.3	33	24	1.9	4	0.8	67
RW-4	893086	27	5.2	48	84	8.4	6.5	4.8	184
RW-5R	4569610	12	14	45	417	13	33	11.4	546
RW-8	6260499	36	20	288	80	16	16	14	471
RW-9	180162	7.3	8	36.6	4	1.4	6.9	0.7	65
RW-11	2054514	0.0	0.0	0.0	3.5	1.6	0.0	0.0	5.1
RW-12	4674575	3.2	2.6	0.0	9.3	3.0	0.0	0.0	18.1
RW-13	2069955	7.6	7.4	5.1	9	6.5	11	0.0	46
Totals	24064780	140	78	609	955	72	192	49	2095

The table below represents the calculated mass removal since the startup of the GWTF (1997). Using these figures, an estimated 675 pounds of contaminants have been removed using the groundwater recovery well network.

Calculated Mass Removal (pounds)

Year	Calculated Mass	Year	Calculated Mass
1997-1998	180	2008-2009	6.8
1998-1999	100	2009-2010	7.9
1999-2000	50	2010-2011	16.8
2000-2001	35	2011-2012	30.8
2001-2002	47	2012-2013	24.6
2002-2003	37.4	2013-2014	16.5
2003-2004	27.9	2014-2015	17.3
2004-2005	32.4	2015-2016	8.9
2005-2006	10.4	2016-2017	7.6
2006-2007	3.7	2017-2018	6.1
2007-2008	3.5	2017-2018	4.6
		Total	675

GROUNDWATER TREATMENT SYSTEM

The groundwater treatment system processes the combined influent of the Recovery Wells through the air stripper prior to discharge. The system was in continuous operation throughout the reporting period except for brief periods of system maintenance. Based on the in-line flow meter, a total of 7,101,118 gallons of recovered groundwater were discharged after treatment. The flow rate through the facility varies slightly throughout the year from seasonal fluctuation in production.

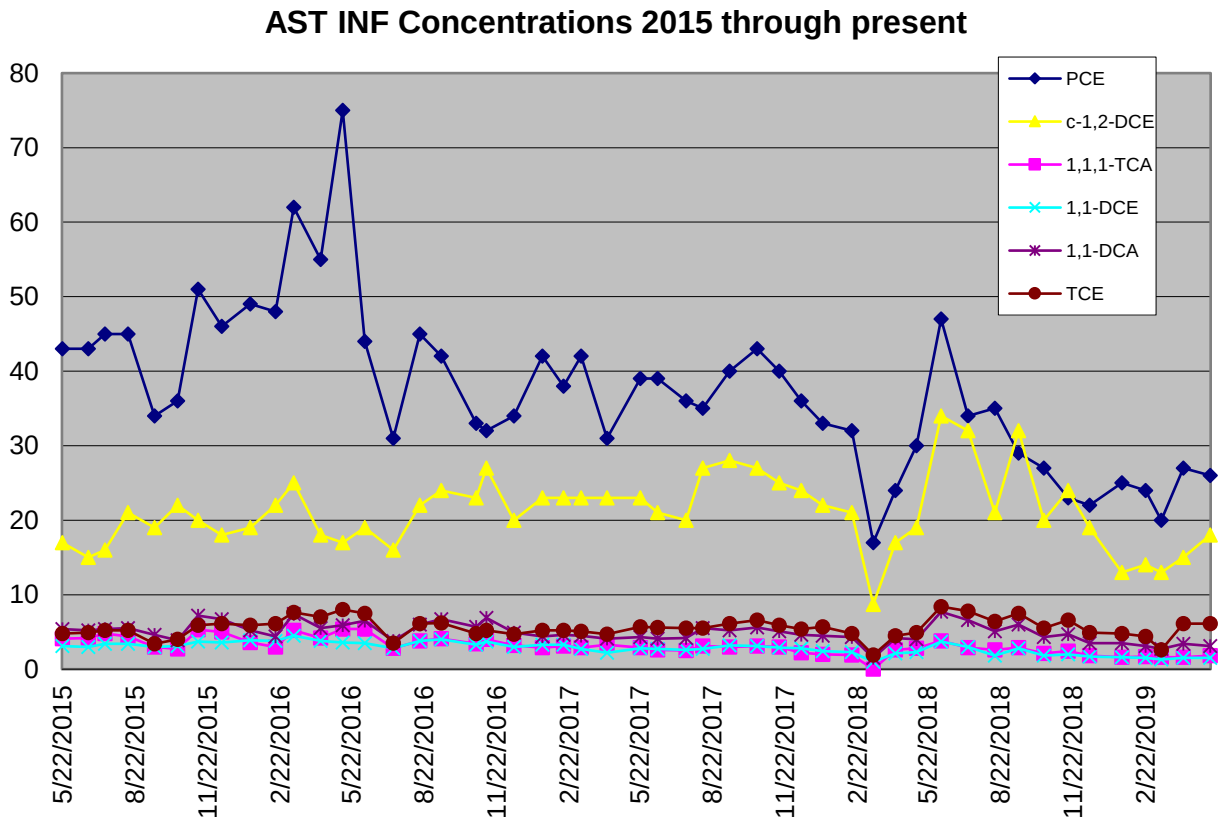
Influent and effluent samples from the Groundwater Treatment Facility (GWTF) are collected from the in-line sampling ports on a monthly basis and analyzed in accordance with the approved SMP. The influent sample is referred to as "AST INF" and the effluent is referred to as the "Final EFF." The results are reported to NYSDEC monthly.

Individual VOCs were reported in the AST INF samples at concentrations in excess of the MDL. The highest reported concentrations were PCE ranging from 20μg/l to 47μg/l and its daughter product, cis-1,2-DCE from 13μg/l to 34μg/l. Graphical analysis of the data indicates that the concentrations of individual and total VOCs continue to demonstrate variability over time with an overall declining trend.

The following table summarizes the AST INF sampling results for this reporting period. The line graph that follows the table represents the past five years of AST INF analytical data. All concentrations are presented in μg/l.

AST INFLUENT SAMPLE RESULTS SUMMARY

DATE	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	**TOTAL**
8-Jun-18	**7.7**	**3.7**	**34**	**47**	**3.8**	**8.4**	104.6
12-Jul-18	**6.6**	**3**	**32**	**34**	**2.9**	**7.8**	86.3
15-Aug-18	**5.1**	**1.8**	**21**	**35**	**2.6**	**6.4**	71.9
14-Sep-18	**6.0**	**2.8**	**32**	**29**	**2.9**	**7.5**	80.2
16-Oct-18	**4.3**	**1.8**	**20**	**27**	**2.1**	**5.5**	60.7
16-Nov-18	**4.7**	**2**	**24**	**23**	**2.4**	**6.6**	62.7
16-Nov-18	**4.7**	**2.0**	**24**	**23**	**2.4**	**6.6**	62.7
13-Dec-18	**3.5**	**1.7**	**19**	**22**	**1.8**	**4.9**	52.9
22-Feb-19	**3.1**	**1.5**	**14**	**24**	**1.7**	**4.4**	48.7
14-Mar-19	**2.7**	**1.3**	**13**	**20**	**1.6**	**2.6**	41.2
11-Apr-19	**3.4**	**1.5**	**15**	**27**	**1.6**	**6.1**	54.6
15-May-19	**3.1**	**1.5**	**18**	**26**	**1.8**	**6.1**	56.5



The treatment system continues to perform as intended. The VOCs in the recovered groundwater are removed by the air stripper prior to discharge. To date, there has been no reported concentration of any compound in excess of the discharge limits (see Appendix W of the SMP), for the Final EFF sample**.** The Air Stripper Treatment (AST) system continues to reduce the contaminant load to below the MDL of 1.0 µg/l from the recovered groundwater. The Liquid Phase Carbon treatment system remains on site as a back-up should the AST fail to provide sufficient treatment of the recovered water.

An additional requirement to monitor for Total Dissolved Solids (TDS) was placed on the Final EFF sample as part of the renewal of the substantive requirements of the SPDES program. Although listed as a limit on the substantive requirements, the requirement for TDS is one of monitor and report only. The GWTF does not have the ability to remove TDS from the recovered groundwater. The TDS, in mg/l, is reported to NYSDEC monthly. The declining trend noted in the previous annual report continued throughout this reporting period. The TDS levels ranged from 1300 mg/l to 2100 mg/l as seen in the following table.

DATE	2018-2019 TDS mg/l	2017-2018 TDS mg/l	2016-2017 TDS mg/l	2015-2016 TDS mg/l	2014-2015 TDS mg/l
June	2000	2600	2200	2300	1500
July	1900	2600	2200	2200	1400
August	2000	2200	2500	2100	1700
September	2100	2200	2300	2000	1400
October	1800	2000	2200	2300	1600
November	1400	1900	1800	2300	2000
December	1700	2100	1800	2300	1600
January	1700	2100	2200	2100	1900
February	1500	2100	2000	2200	1700
March	1400	2100	2300	2400	1700
April	1500	2000	2000	2400	1700
May	1300	2000	2100	2000	1700

REMEDIAL SYSTEM PERFORMANCE

The following table represents the annual average pumping rate, in gallons per minute, for each of the recovery wells. A decreasing trend in the total average flow from the recovery system is noted over the past five years consistent with the overall decrease in total gallons recovered during that time frame. This is attributed to the success of the system in capturing and depressing the ground water table in the area of influence of the wells. Seasonal variability is noted corresponding to changes in precipitation/recharge rates. The GWTF experienced a fault with the Programmable Logic Controller (PLC) programming and power supply module causing an extended shut down of production. Two separate time periods totaling approximately 25 days reduced the overall production by approximately 550,000-gallons. Taking this into consideration, the reduction in production from the last reporting period is consistent when observed over the past 5-year window.

Average Annual Flow Rate (GPM)

Well	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
RW-2	3.78	1.87	2.36	1.40	1.45
RW-3	0.96	0.28	0.23	0.29	0.24
RW-4	0.47	0.50	0.57	0.65	0.45
RW-5R	3.62	2.99	2.49	2.65	2.30
RW-8	4.37	3.80	3.48	3.34	3.15
RW-9	0.15	0.11	0.16	0.11	0.90
RW-11	1.06	1.15	1.24	1.30	1.03
RW-12	2.11	2.09	1.57	2.50	2.35
RW-13	2.44	2.61	1.72	0.77	1.04
System Flow Average	19.32	15.54	13.82	13.01	12.91

CITY OF FULTON WATER TREATMENT FACILITY (WTF)

The City of Fulton WTF remained off throughout the reporting period. As noted in the previous annual reports, the treatment system was shut May 20, 2012. At the time of shut-down, the water from M-2A was directed to the Oswego River and continues to be directed to the river under the SPDES permit obtained by Riccelli Fulton LLC. The City was given approval to use the water from K-1 without treatment on December 13, 2012.

The NYSDEC provided a decision on the treatment requirement of the water from both K-1 and M-2A in a letter to the City of Fulton dated November 26, 2013 and in a letter to Miller Brewing Company dated January 10, 2014. The NYSDEC approved the trigger level of 50% of the MCL for individual compounds. The monitoring requirements were defined in the previously mentioned letters as follows:

a) annual sampling of the Early Warning Network (EWN) list of 22 monitoring wells until the Site is delisted from the Registry of Inactive Hazardous Waste Disposal Sites. A copy of this list of wells is included in Appendix B and the location of the wells is shown on Figure 1; and
b) quarterly monitoring of M-2A for one year if the water from M-2A is to be used for distribution. If any samples from M-2A indicate any Contaminant of Concern (COC)[1] at or above the trigger level of 50% of the Maximum Contaminant Level (MCL), the monitoring will continue, and the treatment of the water will resume as necessary.

Based on the NYSDEC determination, monitoring of K-1 and M-2A has been discontinued and monitoring of M-2A will resume only if the water from M-2A is to be used for distribution. The last sample from K-1 and M-2A taken by the RP was collected in December 2013.

The water from M-2A continued to be discharged directly to the Oswego River throughout this entire reporting period due to elevated chloride levels.

GROUNDWATER MONITORING RESULTS

Annual sampling of select groundwater monitoring wells, known as the Early Warning Network (EWN), and quarterly sampling of the active recovery wells is performed to evaluate the effectiveness of the groundwater recovery system.

For evaluation of the groundwater recovery system, the EWN, active RW wells are divided into six functional groups. They are the; Northern Operable Unit Source (NOU-S) and Plume (NOU-P) areas, the Southern Operable Unit Source (SOU-S) and Plume (SOU-P) areas, the Taylor Property (TP), and Municipal Well Field (MWF).

[1] The COCs are those individual contaminants of concern listed in paragraph IV of the 1991 IRM Order on Consent, that is, the following parameters: Benzene, 1,2-Dichloroethane, Ethylbenzene, Toluene, 1,1,1-Trichloroethane, Trichloroethylene, Chloroform, 1,1-Dichloroethane, Tetrachloroethylene, 1,1-Dichloroethylene, Xylenes, Total, Methylene Chloride and 1,2 Dichloroethylene (cis-and trans-).

The following table lists the wells and their sampling frequency (f), either annually (A) or quarterly (Q) in their functional monitoring groups.

FUNCTIONAL MONITORING GROUPS											
Northern Operable Unit				Southern Operable Unit				Taylor Property		Municipal Wells	
Source Area		Plume Area		Source Area		Plume Area					
Well	f	Well	f	Well	f	Well	f	Well	f	Well	f
MW-2S	A	MW-8I	A	MW-36S	A	MW-37I	A	MW-14D	A	MW-28S	A
MW-3D	A	MW-8D	A			MW-54I	A	MW-21S	A	MW-28I	A
MW-16D	A	MW-13D	A			RW-8	Q	MW-32D	A		
MW-38S	A	MW-17D	A			RW-9	Q	MW-33S	A		
RW-2	Q	MW-51D	A					MW-34D	A		
RW-3	Q	MW-56D	A					MW-35D	A		
RW-4	Q	MW-61D	A					RW-11	Q		
RW-5R	Q	RW-13	A					RW-12	Q		

The laboratory analytical results for the sampling of the RWs were reported in previous sections. The results for the functional monitoring groups are reported below. Figure 2 has been included as a reference to the location of the functional monitoring well groups. The Taylor Property has been included in the NOU-P area. The NOU-S area is shown in orange and the NOU-P is yellow. The SOU-S is pink, and SOU-P is a lighter shade of pink. The Municipal Well Field is shaded green. Figure 1 also depicts the location of monitoring and recovery wells referenced in this report with the exception of the replacement well RW-5R. Figure 3 depicts the location of the DPE wells, SVE wells and replacement RW-5R.

NORTHERN OPERABLE UNIT

NOU-Source Area

Four groundwater monitoring wells (MW-2S, MW-3D, MW-16D and MW-38S) are sampled annually and, three recovery wells (RW-3, RW-4, and RW-5R) are sampled quarterly to monitor and evaluate water quality in the NOU-Source area. The data from the April 2016 sampling through the April 2019 sampling is included in the table below for trend assessment.

The analytical results for each of the NOU-S monitoring wells are summarized in the following table. All concentrations are presented in μg/l:

MW-2S	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Vinyl Chloride	TOTAL VOCs
14-Apr-16	4.1	**5.5**	**400**	**39**	<5.0	**6.1**	4.9	460
10-Apr-17	<5	<5	**350**	**29**	<5.0	**6.1**	<5	385
23-Apr-18	<10	<10	**650**	**45**	<10	<10	**14**	709
16-Apr-19	<5	<5	**600**	**46**	<5	**6.5**	<5	653
MW-3D								
14-Apr-16	2.0	**6.3**	**19**	**170**	**18**	**6.6**	<2.0	222
10-Apr-17	<2	<2	**5.6**	**91**	4.2	**5.2**	<2.0	106
23-Apr-18	<2	3.6	**18**	**160**	**9.0**	**9.2**	3.0	203
16-Apr-19	<2	<2	2.8	**110**	<2	4.0	<2	117
MW-16D								
14-Apr-16	**11**	3.8	4.0	**26**	**14**	5.4	1.4	66
10-Apr-17	**9.6**	1.7	3.9	**13**	**6.0**	4.1	1.5	40
23-Apr-18	4.2	**5.0**	**8.0**	**28**	**15**	1.3	2.8	64
16-Apr-19	**6.4**	**4.9**	**19**	**55**	**17**	2.7	3.2	108
MW-38S								
14-Apr-16	**65**	**22**	**51**	**110**	**20**	**14**	<2	282
10-Apr-17	**78**	**24**	**47**	**86**	**11**	**13**	<2	259
23-Apr-18	**72**	**23**	**41**	**78**	**8.1**	**10.0**	<2	232
16-Apr-19	**95**	**27**	**58**	**83**	**12**	**13**	<2	288

A review of the data for this reporting period along with the past five years of historic data for each of these wells is discussed below.

MW-2S and MW-3D have shown improvements in the water quality over the past seven years; however, concentrations of certain compounds continue to fluctuate in these two wells over that time period. MW-2S has shown an increase in cis-1,2 DCE and MW-3D has shown fluctuations in PCE, making it difficult to establish trends in these wells for these individual compounds. The remaining COCs in these two wells clearly demonstrate a declining trend as noted on the line graphs of the past 8-year data set (Appendix C). The PCE concentrations in MW-3D appear to have stabilized over the past 5-years. The cis-1,2-DCE concentration reported in MW-2S appears to be increasing slightly. The alteration to the pumping regime with the activation of RW-5R (April 2011) may be contributing to these fluctuations in VOC contaminants in MW-2S and MW-3D. The Riccelli remedial action, which included the removal of the parking lot cover and impacted underlying soil, may also be a contributing factor in these fluctuations. It is anticipated that the declining trends noted for the majority of the compounds will continue and the cis-1,2 DCE and PCE concentrations in MW-2S and MW-3D respectively will eventually stabilize and decline as well. The VOC concentrations will continue to be monitored in these monitoring wells.

The VOC levels in MW-38S remained consistent from the previous sampling event in 2018. The decreasing trend noted in the previous 8-year time period is still noticeable. It is anticipated this downward trend will continue.

The results for MW-16D indicate the concentrations of 1,1-DCE and 1,1,1-TCA continue an overall downward trend. The PCE concentration continues to fluctuate over the past 5 years. Using the 8-year data set, a trend for PCE cannot be established. The line graph for MW-16D is included in Appendix C.

NOU-Plume Area

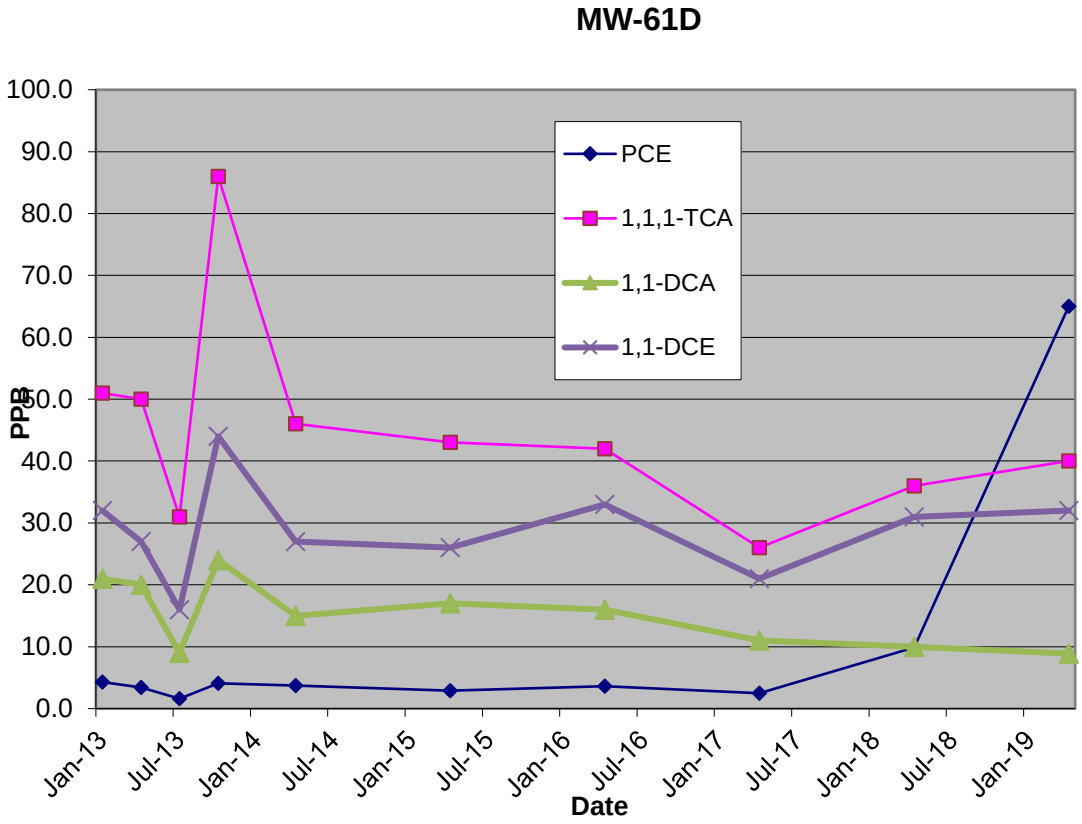
Seven groundwater monitoring wells (MW-8I, MW-8D, MW-13D, MW-17D, MW-51D, MW-56D, and MW-61D) are sampled annually and two recovery wells (RW-13 and RW-2) are sampled quarterly to monitor and evaluate water quality in NOU-P. No site related VOCs were detected at or above the SCG concentration of 5.0 µg/l during the reporting period in the samples collected from MW-8I, MW-13D, MW-51D, or MW-56D.

One or more VOCs were reported in samples collected from MW-8D, MW-17D and MW-61D at concentrations >5.0 µg/l for the April 2019 sampling event. The following table summarizes the results for these wells. All concentrations are presented in µg/l.

MW-8D	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	TOTAL
14-Apr-16	2.4	2.6	0.63	**19**	**6.7**	1.2	33
10-Apr-17	2.8	2.7	2.5	**9.3**	**5.6**	**10.0**	33
23-Apr-18	3.4	3.4	1.4	**17**	**7.1**	1.6	34
16-Apr-19	**6.2**	**5.1**	**5.8**	**19**	**11**	4.8	52
MW-17D	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	TOTAL
14-Apr-16	3.4	1.3	<0.5	1.7	4.1	<0.5	11
10-Apr-17	4.8	2.1	0.83	1.9	4.4	<0.5	14
23-Apr-18	**6.4**	2.7	1.3	2.0	**6.0**	<0.5	18
16-Apr-19	**5.8**	1.8	1.3	1.6	**5.2**	<0.5	16
MW-61D	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	TOTAL
14-Apr-16	**14**	**27**	**31**	3.6	**42**	<0.5	118
10-Apr-17	**11**	**21**	**24**	2.5	**26**	>0.5	85
23-Apr-18	**10.0**	**31**	**28**	**9.9**	**36**	1.00	116
16-Apr-19	**8.9**	**32**	**29**	**65**	**40**	3.3	178

Monitoring wells, MW-8I, MW-8D, MW-13D, MW-17D, MW-51D and MW-56D in NOU-P continue to demonstrate variable concentrations of site related VOCs with slowly declining trends. These trends indicate, that the recovery well network in this area is effectively reducing the overall VOC concentrations and, is achieving hydraulic control, preventing downgradient migration of the contaminants of concern.

The following graph depicts VOCs in MW-61D for the past six years. MW-61D contaminant concentrations have resumed a downward trend after pumping of RW-2 was resumed in April 2014. MW-61D is considered to be downgradient from RW-2. The recent spike in PCE concentrations will be closely watched in the coming year. At this point, we do not recommend additional recovery efforts beyond the operation of RW-2 to improve the VOC concentrations in the area of MW-61D.


MW-61D
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
PPB
PCE
1,1,1-TCA
1,1-DCA
1,1-DCE
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Jan-17
Jul-17
Jan-18
Jul-18
Jan-19
Date

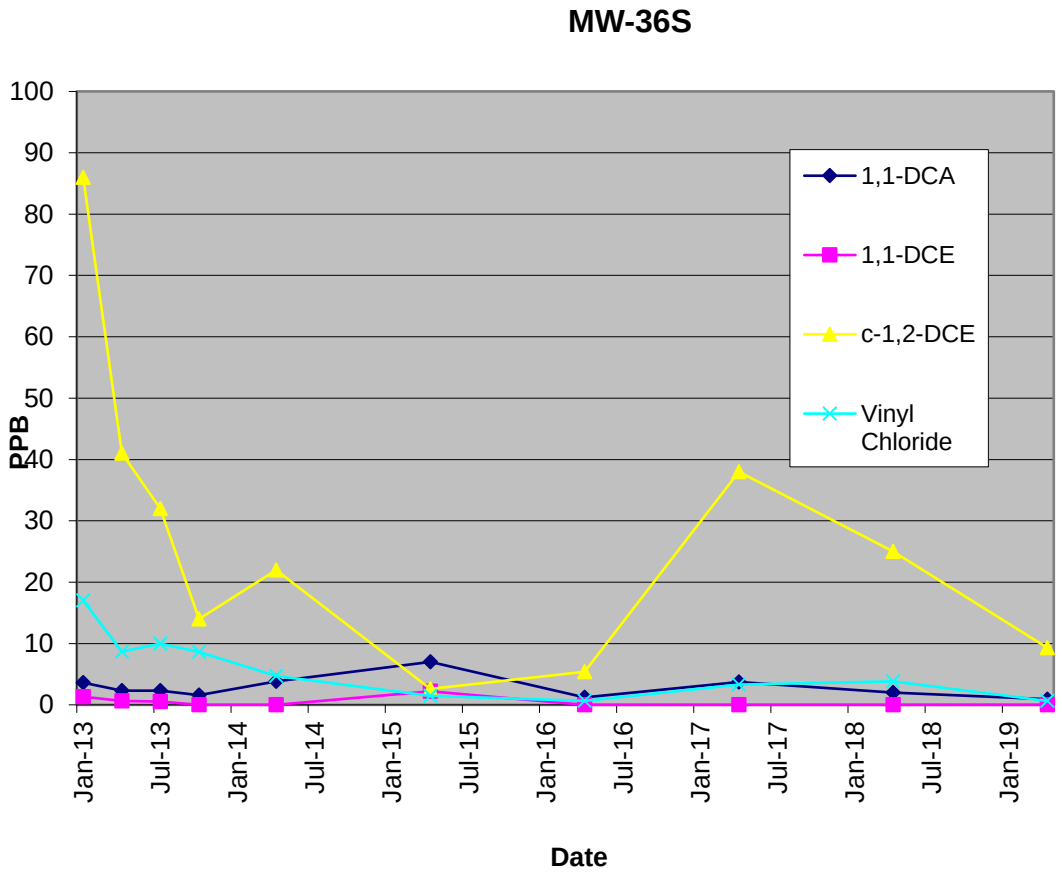
SOUTHERN OPERABLE UNIT

SOU-Source Area

SOU-S is evaluated by the annual sampling of MW-36S. A summary of the analytical results for samples collected from MW-36S is included in the following table. All concentrations are presented in μg/l.

MW-36S	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1 - TCA	TCE	Vinyl Chloride	TOTAL
14-Apr-16	1.2	<0.5	**5.4**	<0.5	<0.5	<0.5	0.65	**7.3**
10-Apr-17	3.7	<0.5	**38**	0.87	0.50	0.86	3.3	**47**
23-Apr-18	2.0	<0.5	**25**	<0.5	<0.5	0.68	3.8	**31**
16-Apr-19	0.92	<0.5	**9.3**	<0.5	<0.5	<0.5	0.63	**11**

A review of the data for MW-36S for the past seven years (see line graph below) indicates that the concentration of individual VOCs in the groundwater at this location demonstrate an overall declining trend with some minor fluctuations in c-1,2-DCE concentrations over the past three years that does not invalidate the overall conclusion of a long-term downward trend for this compound in the well.



SOU-Plume Area

SOU-P is monitored and evaluated by the annual sampling of MW-37I, MW-54I and the quarterly sampling of RW-8 and RW-9. No site related VOCs were reported in any samples collected from MW-54I at a concentration greater than the SCG of 5.0 µg/l. The results for MW-37I reported one VOC (PCE) in the 2019 annual sampling event at concentrations greater than 5.0 µg/l. The results for the three wells that reported levels above the SCGs are summarized in the table below. All concentrations are presented in µg/l.

MW-37I	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Vinyl Chloride	TOTAL
25-Oct-16	**8.5**	5.0	**35**	**46**	**12**	**6.1**	1.4	114
10-Apr-17	4.7	<0.5	**12**	**22**	0.92	1.1	0.83	42
19-Oct-17	2.8	<0.5	**5.9**	**17**	0.65	0.84	<0.5	27
23-Apr-18	1.2	<0.5	2.2	**5.2**	<0.5	<0.5	<0.5	8.6
16-Apr-19	1.3	<0.5	2.4	**7.4**	0.58	0.50	<0.5	12.2
RW-8	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Vinyl Chloride	TOTAL
11-Jul-18	**9.4**	**5.2**	**77**	**17**	4.0	4.2	2.9	120
16-Oct-18	**6.2**	3.3	**55**	**15**	2.8	2.7	2.5	88
23-Jan-19	3.3	1.8	**23**	**9.4**	1.6	1.6	1.1	42
11-Apr-19	4.1	2.3	**29**	**10**	1.8	2.0	2.5	52
RW-9	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Vinyl Chloride	TOTAL
17-Apr-18	**21**	**24**	**69**	**17**	**5.2**	**15**	<0.5	151
11-Jul-18	**43**	**53**	**200**	**27**	**10.0**	**36**	4.1	373
16-Oct-18	**35**	**38**	**170**	**25**	**7.4**	**36**	3.8	315
23-Jan-19	**43**	**38**	**240**	**15**	**6.0**	**43**	3.1	388

The analytical data for MW-37I has shown a decreasing trend over the past 7 years as noted on the line graph in Appendix C.

FORMER TAYLOR PROPERTY

The Former Taylor Property Monitoring Well network is directly upgradient of the City of Fulton Municipal Well M-2A. Groundwater quality on the Taylor Property is monitored and evaluated by the collection and analysis of groundwater samples from six monitoring wells (MW-14D, MW-21S, MW-32D, MW-33S, MW-34D, and MW-35D) annually, and two recovery wells, RW-11, and RW-12 quarterly. The declining trends noted at these wells in the past Annual Reports continue and indicate that hydraulic control is being maintained in this area and the recovery well network is protective of the municipal well field.

The concentrations reported for all Taylor Property wells, except MW-34D, now meet SCGs for the identified VOCs. The VOC concentrations reported in MW-34D continue to decline as noted in the table below and in the graph of analytical data from this well included in Appendix C.

As noted above, recovery operations from RW-10 were halted in August 2015 and the pump was allowed to remain off to determine if its operation is necessary to maintain the current downward trends noted in the surrounding monitoring wells (MW-21S, MW-33S, MW-34D and MW-35D). Line graphs of the analytical data for the past 8 years from these wells are included in Appendix C. The data supports allowing RW-10 to remain off-line since the concentrations in these monitoring wells are consistently below the SCGs and the concentration of PCE in MW-34D is stable and trending down. Continued monitoring of these wells on an annual basis will provide sufficient information to determine if resumption of pumping at RW-10 is required.

The results of the sampling of MW-34D are summarized in the following table. All concentrations are presented in μg/l.

MW-34D	1,1-DCA	1,1-DCE	PCE	1,1,1-TCA	TOTAL
14-Apr-16	0.64	0.96	**11**	3.4	16
10-Apr-17	0.58	0.77	**7.8**	2.7	12
23-Apr-18	0.67	0.81	**8.5**	2.6	13
16-Apr-19	0.70	0.68	**8.6**	3.0	13

CITY OF FULTON MUNICIPAL WELL FIELD

Early warning detection for the City of Fulton Well field is provided by the annual sampling of monitoring wells MW-28S and MW-28I. MW-28S has not reported any compounds above the MDL of 0.5 µg /l since October 2008. No compounds were reported in either sample collected in the 2019 sampling event at a concentration greater than the MDL of 0.5 µg/l.

Concentrations of PCE and 1.1.1-TCA reported in the samples collected from MW-28I since April 2016 are presented in the following table. All concentrations are presented in µg/l.

MW-28I	PCE	1,1,1-TCA
14-Apr-16	0.91	<0.5
10-Apr-17	0.51	0.60
23-Apr-18	<0.5	<0.5
16-Apr-19	<0.5	<0.5

SOIL VAPOR EXTRACTION SYSTEM

Two areas identified in a 2008 subsurface investigation have been under the influence of the SVE remedial system since February 2011. The operation of the SVE system is broken up into the Northern and Southern areas described below. The details of the installation can be found in the NYSDEC-approved Soil Vapor Extraction System Construction Completion Report prepared by AECOM (dated August 16, 2012) (Appendix T to the SMP).

The SVE system was in continuous operation this entire reporting period. Certain wells are utilized for extraction based on historical analytical data and physical location. The following table presents the previous cycling operation prior to September 2015 and denotes the wells being utilized.

Dates	01/14/15	03/13/15	04/14/15	06/03/15	07/01/15	08/14/15	09/29/15
Well	03/13/15	04/14/15	06/03/15	07/01/15	08/14/15	09/29/15	05/31/19
DPEN-1	**ON**	off	off	off	off	off	**ON**
DPEN-2	**ON**	off	**ON**	off	**ON**	off	**ON**
DPEN-3	**ON**	off	**ON**	off	**ON**	off	off
DPEN-4	**ON**	off	**ON**	off	**ON**	off	**ON**
DPEN-5	**ON**	off	**ON**	off	**ON**	off	off
SVEN-1	**ON**	off	**ON**	off	off	off	off
SVEN-2	**ON**	off	**ON**	off	**ON**	off	**ON**
SVEN-3	**ON**	off	---	off	off	off	off
SVEN-4	**ON**	off	---	off	off	off	off
SVEN-5	**ON**	off	off	off	off	off	off
SVEN-6	off	off	off	off	off	off	**ON**
SVEN-7	**ON**	off	off	off	off	off	**ON**
SVEN-8	**ON**	off	**ON**	off	**ON**	off	**ON**
SVEN-9	---	off	---	off	**ON**	off	off
SVEN-10	off	off	off	off	**ON**	off	**ON**
SVEN-11	off	off	**ON**	off	**ON**	off	**ON**
DPES-1	**ON**	off	**ON**	off	**ON**	off	off
SVES-1	**ON**	off	**ON**	off	**ON**	off	off

Generally, the system is operated to provide between 3.0” Hg to 5.0” Hg vacuum to all the active recovery points. Operational data is collected from the active recovery points as well as the combined influent to provide flow information for calculating mass removal rates. The analytical data from the sampling of certain recovery points and the operational data collected are reviewed to determine the operating strategy of the SVE system. Tables of the analytical data collected throughout the reporting period and the mass removal calculation tables are included in Appendix D.

Soil Vapor Extraction Southern area (SVES)

Vacuum was not applied to any recovery points in the southern area this reporting period. Due to the elevated water table in this area vapor recovery rates are minimal or nonexistent throughout the year therefore extraction was not attempted.

Soil Vapor Extraction Northern area (SVEN)

Samples were collected from a select list of operating vapor extraction wells in the Northern SVE area during this reporting period. The analytical data collected from the SVEN and DPEN wells since August 2012 are presented in the following table. The selection of wells operated this reporting period remained the same as the previous reporting period and were selected based on historical analytical data and physical location. Wells are selected for operation based on the geographic location to limit mounding of the water table and to target the higher level of contamination noted in previous analytical data.

Samples of recovered vapors were collected from DPEN-1, DPEN-2, DPEN-4 and SVEN-2 on four occasions this reporting period. The data indicates continued operation is providing enhanced mass removal of VOCs and additional protection against vapor intrusion into the on-site structure.

The average total VOC concentrations from each sample, in conjunction with the vapor recovery rate from the specific well were used to estimate the mass removal. Throughout the reporting period, the SVE system was in operation for 365 days and an estimated total of 5.94 pounds of VOC contaminants were removed with an average recovery rate of 0.016 pounds per day. The calculated mass removal rate increased slightly when compared to the previous reporting period.

Under the current guidance provided by NYSDOH*, if sub-slab vapors exceed threshold levels for certain compounds, regardless of indoor air concentrations, mitigation is required. The levels of cis-1,2-DCE, 1,1,1-TCA, PCE and TCE were reported for DPEN-4 and DPEN-2 at concentrations above the threshold levels established as noted in Table 1 at the end of this section. Once the levels of all VOC in the sub slab vapors being recovered drop below their respective levels, consideration will be given to moving the SVE system to a cyclical operation. If the cyclical operation of the SVE system indicates the levels of VOCs are remaining below the mitigation required levels for all compounds, indoor air quality samples will be collected as part of a Vapor Intrusion Investigation to determine if mitigation is required as directed by the DOH guidance.

Set forth below is a table of the data illustrating the downward trend of sub-slab vapor contaminant concentrations. The SVEN system will continue to be operated on a continuous basis.

Table 1

DATE	Location	1,1,1-TCA	*1,1-DCA	1,1-DCE	*1,4-Dioxane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
NYSDOH Matrix		B	N/A	A	N/A	A	B	B	A
Mitigation Req'd Action Level		1000 µg/m^3	1000 µg/m^3	60 µg/m^3	1000 µg/m^3	60 µg/m^3	1000 µg/m^3	1000 µg/m^3	60 µg/m^3
07/21/17	DPEN-1	12	6.5	1.1	<1.1	5.2	6.3	78	9
09/13/17	DPEN-1	21	4.8	1.5	<1.1	4.3	2.4	170	9.2
11/22/17	DPEN-1	5.7	2.1	0.99	<1.1	3.3	1.3	69	3.6
01/25/18	DPEN-1	2.4	1.3	0.52	<1.1	2.1	1.1	150	2.6
03/14/18	DPEN-1	2.3	0.85	0.4	0.97	1.5	0.38	110	0.27
06/08/18	DPEN-1	5.1	2.4	1.1	<1.1	4.2	<0.52	56	5.9
08/20/18	DPEN-1	8.4	5.4	2.6	0.36	21	0.38	120	8.7
11/20/18	DPEN-1	6.2	3.8	1.3	<1.1	33	<0.52	150	4.5
03/08/19	DPEN-1	5.9	3.7	0.56	<1.1	3.3	2.4	130	2.7
01/27/16	DPEN-2	83	6.9	1.8	120	67	1.00	1300	7.2
03/10/16	DPEN-2	52	6.2	<0.59	68	67	0.97	1200	4.7
04/28/16	DPEN-2	41	7.1	1	120	17	3.70	240	5.6
06/09/16	DPEN-2	63	13	1.7	140	30	0.90	1100	7.5
08/01/16	DPEN-2	60	31	1.9	120	65	1.30	2300	11
09/26/16	DPEN-2	77	16	2.4	140	140	1.40	5400	21
04/26/17	DPEN-2	29	3.6	0.83	24	5.5	0.83	180	<0.81
07/21/17	DPEN-2	29	7.5	1.9	21	9.1	2.50	170	4.8
09/13/17	DPEN-2	62	8.8	2.2	64	29	1.3	690	11
11/22/17	DPEN-2	45	6.1	1.3	11	44	0.87	310	5.2
01/25/18	DPEN-2	31	4.8	0.95	7.1	27	1.2	370	3.3
03/14/18	DPEN-2	26	3.6	0.99	4.0	18	1.00	230	2.0
06/08/18	DPEN-2	33	5.2	1.2	5.5	14	0.69	110	4.7
08/20/18	DPEN-2	52	7.4	1.3	39	83	0.63	1900	19
11/20/18	DPEN-2	29	3.8	0.75	3.0	39	2.7	1600	15
03/08/19	DPEN-2	11	2.1	0.5	<1.1	7.2	0.7	350	1
01/27/16	DPEN-4	4400	470	51	18	3000	38	3300	460
03/10/16	DPEN-4	3400	251	31	6.7	1200	17	3100	320
04/28/16	DPEN-4	1300	190	22	<1.1	900	18	1300	240
06/09/16	DPEN-4	4200	360	29	17	2300	25	3800	380
08/01/16	DPEN-4	3800	300	81	2.5	3300	49	4200	520
09/26/16	DPEN-4	8700	580	180	6.4	5000	64	6800	860
04/26/17	DPEN-4	460	140	6.4	<1.1	310	2.4	740	75
07/21/17	DPEN-4	810	190	8.3	<1.1	1000	31	1200	89

09/13/17	DPEN-4	1700	210	27	<1.1	1300	18	1500	300
11/22/17	DPEN-4	2000	320	18	3.0	1700	4.6	1800	330
01/25/18	DPEN-4	490	110	4.8	0.4	550	3.4	710	99
03/14/18	DPEN-4	350	79	1.3	<1.1	360	1.2	630	38
06/08/18	DPEN-4	800	190	12	<1.1	910	6.1	260	180
08/20/18	DPEN-4	5400	450	57	0.75	4000	15	3900	1000
11/20/18	DPEN-4	5700	340	39	4.3	3600	5.4	3400	1000
03/08/19	DPEN-4	580	100	5	<1.1	510	2.5	920	140
01/27/16	SVEN-2	19	1.3	<0.59	320	5.1	0.63	670	5.5
03/10/16	SVEN-2	6.4	<0.61	<0.59	110	3.4	1.2	850	4.7
04/28/16	SVEN-2	3.7	0.89	<0.59	330	2.5	8.5	180	7.8
06/09/16	SVEN-2	11	2.7	0.56	540	6.4	2.3	350	8.9
08/01/16	SVEN-2	29	12	4.7	0.72	21	3.8	270	10.0
09/26/16	SVEN-2	40	6.5	2.0	530	21	1.8	820	9.4
04/26/17	SVEN-2	1.7	<0.61	<.051	50	0.67	2.0	110	<0.81
07/21/17	SVEN-2	7.5	1.4	0.79	33	2.9	5.1	62	5.4
09/13/17	SVEN-2	8.8	1.3	0.71	150	3.4	1.3	410	7.3
11/22/17	SVEN-2	5.0	<0.61	<0.59	3.4	1.4	1.1	200	1.9
01/25/18	SVEN-2	2.0	<0.61	<0.59	120	0.67	1.2	140	1.00
03/14/18	SVEN-2	1.9	<0.61	<0.59	130	0.55	1.9	110	0.75
06/08/18	SVEN-2	2.8	0.65	<0.59	71	0.83	0.50	99	4.0
08/20/18	SVEN-2	7.1	2.2	0.75	400	2.4	0.38	440	16
11/20/18	SVEN-2	5.1	<0.61	0.48	240	1.5	0.45	270	2.3
03/08/19	SVEN-2	1.4	<0.61	<0.59	94	0.59	0.59	170	0.59

All readings in $\mu g/m^3$
* NYSDOH Guidance Document is entitled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (October 2006) (Revised May 2017)
** Matrix B is assumed for all compounds not specifically listed

Vapor Phase Carbon Treatment (VPC)

The VPC treatment system is utilized to reduce the VOC levels in the vapors recovered by the SVE system prior to discharge through the effluent stack. The system consists of two vessels with 10,000-pounds each of activated carbon, connected in series.

CONCLUSIONS

1. The following is a list of the Remediation Goals presented in section 6 of the ROD and a brief discussion of the progress that has been made in meeting those goals and associated SCGs.

    - "Eliminate to the extent practicable the contamination present within the on-site soils/waste (reduce soil contaminant levels to levels protective of groundwater as indicated in soil tables in section 4.3 [of the ROD])".
        - Initially, this goal was met by the removal of the Spill Containment Tank and surrounding soils in 1986. The soils beneath the floor of the former wastewater treatment area located in the southeast corner of the facility were also identified in the Remedial Investigation (RI) to have contamination in excess of the Soil Cleanup Levels found in the ROD (ROD SCOs). The soils in this area were remediated with the operation of a SVE system from 1997 through 1999. Confirmatory soil samples were collected, and it was determined that the soils beneath the facility in this area were in conformance with the levels noted in the ROD.
        - A subsurface investigation in 2008 identified other areas beneath the floor of the facility and a small area outside the footprint of the facility to the south that could potentially exceed the contaminant levels set forth in the ROD SCOs. These two areas are referenced in the text above as: SVEN (a large area beneath the floor of the facility) and SVES (a small area beneath the roadway to the south of the facility). Additional equipment was installed in 2011 including a new vacuum extraction unit and new extraction wells located throughout both SVEN and SVES. The SVE system is still in operation addressing the soils in the SVEN area. The vacuum extraction in the SVES area is ineffective for most of the year due to the elevated water table.
        - There is currently no other area of potential soil contamination or waste materials requiring a remedial response that has been identified at the site.
        - **Status: Ongoing.** As of October 2017, the ROD SCOs have been replaced by the Soil Cleanup Objectives for Commercial and Industrial uses that are found at 6 NYCRR 375-6.8 (b) (Part 375 SCOs). Attached as Appendix E is a copy of the Part 375 SCOs and they apply depending on the particular use.
    - "Eliminate the potential for direct human or animal contact with contaminated soils on-site"
        - The origination of the contamination on this site was below grade through leaking underground storage tanks and piping. With the removal of the Spill Containment Tank and surrounding soils, the threat of direct contact has been addressed.

- With respect to the remaining impacted soils that are beneath the facility floor, an SMP has been prepared for implementation under the recorded Declaration of Covenants and Restrictions that requires the use of an excavation work plan for any excavations within a designated area and specifies the actions to be taken to address potential exposure to the contaminants at issue.
- **Status: Complete with the approval of the SMP and reclassification of the Site from a Class 2 to a Class 4.**

- "Mitigate the impacts of contaminated groundwater to the environment"
  - The groundwater recovery system continues to effectively recover VOCs from the impacted aquifer and discharge of the treated groundwater has been in accordance with the substantive SPDES requirements developed by NYSDEC as shown in the monthly monitoring data submitted to NYSDEC during the reporting period.
  - **Status: Completed**
- "Prevent, to the extent practicable, migration of the contaminants in the source areas to groundwater"
  - The data indicates that the recovery well networks in the NOU and SOU source areas are effectively capturing the impacted groundwater at the source and preventing downgradient migration from those areas. Declining trends noted in the monitoring wells immediately downgradient of the source areas indicate successful hydraulic capture of the plume in the source areas.
  - The reduction in the concentrations noted in the outlying recovery wells and monitoring wells further downgradient indicate hydraulic control in the plume area. Residual concentrations in the plume area have dropped below SCGs in all monitoring wells, except MW-34D, downgradient from the perimeter recovery wells RW-10, RW-11 and RW-12 located adjacent to the former Taylor Property. Although one VOC reported for MW-34D remains above the SCGs, the declining trend noted supports the assumption of hydraulic control in this area. A copy of a graph of the VOC concentrations for MW-34D is included in Appendix C.
  - The installation in 2011 of the SVE system and subsequent operation is removing VOC mass from the vadose and fringe zones, thus preventing the migration of the contaminants from the source areas.
  - **Status: Completed**
- "To the extent practicable, provide for attainment of SGCs for groundwater quality at the limits of the area of concern (AOC). The AOC for the site is the area from the spill source locations to the Fulton municipal well field."
  - Using MW-28I as the "limit" of the AOC with respect to the plume's closest approach to the municipal wells, the concentration of each individual contaminant of concern has decreased steadily since operation of the remedial system began. No individual COC has been reported at the limit of the AOC at a concentration in excess of its respective SCG since February 2003. VOC concentrations within the AOC closer to the source areas continue to decline.
  - **Status: Ongoing**

2. The GWTF continues to perform as designed and is effectively removing the VOC contamination from the recovered groundwater to below the MDL of 1.0 μg/l. The current treatment process used includes the use of air stripping technology. The use of the Liquid Phase Carbon treatment is not necessary for the treatment of the groundwater.

3. The operation of RW-2 continues to provide a benefit to the remedial effort. The calculated mass removal rate for this well has increased slightly since the last reporting period and remains higher than many other recovery wells. The effects of the pumping at RW-2 appear to have a positive impact on downgradient monitoring wells MW-8D, MW-13D and MW-61D noted as declines in the contaminant concentrations. The fluctuations in PCE concentrations in MW-16D and MW-61D are not consistent with the remaining compounds reported. Trends for PCE in these two well cannot be established at this time however; the remaining compounds continue their downward trends. Line graphs of the analytical data for these wells are included in Appendix C. This recovery well will continue to be utilized and monitoring of the surrounding wells will also continue.

4. The production rate from RW-3 remained consistent from the previous year however the mass removal rate decreased due to the lower reported concentrations. The VOC concentrations in this Recovery Well remain above SCGs. The declining trend noted in previous Annual Reports continues for many of the compounds. The data reported for cis-1,2 DCE is inconsistent with the remaining compounds and a trend cannot be established with the current data set. Continued operation and monitoring of this recovery well will provide a benefit to the remedial effort and help to establish a trend for all compounds.

5. RW-4 production rate decreased slightly from the last reporting period. The levels of VOCs have shown variability over the past year. The variability in the VOC concentrations may be due to the remedial activities undertaken by Riccelli. Operation of this recovery well will continue, and the VOC concentrations will continue to be monitored.

6. The removal of the parking lot cover and underlying soil from the area that is upgradient from RW-3 and RW-4 may have altered the groundwater flow pattern and recharge rates of these wells. The altered surface conditions may be mobilizing VOC contaminants from areas where they were previously sheltered from the effects of precipitation recharge.

7. Replacement well RW-5R continues to outperform original RW-5 with respect to volume of water recovered and contaminant concentrations. The contaminant concentrations continue to decline in RW-5R; however, they are still higher than the levels reported from original RW-5, which was placed at the base of the aquifer in the Ablation Till as opposed to the location of RW-5R in the Glaciolacustrine Silt and Sands. These factors combined, increase the contaminant mass removal significantly. By recovering the contaminants as they exit the footprint of the facility, the downward migration of contamination is controlled and the lateral migration of contamination toward the municipal wells is prevented. Due to the material that RW-5R is screened in, the flow rate from RW-5R is regulated to reduce the amount of silt recovered. This operational limitation reduces the wear of the pump components, the creation of voids in the subsurface and limits silt build-up in the equalization tank and AST system.

8. RW-8 and RW-9 continue to maintain hydraulic control of the SOU-P area. The VOC concentrations in RW-8 continue to decline while concentrations in RW-9 fluctuate with the seasons and appear to be declining overall. The VOC concentrations in MW-54I, located within the cone of influence of RW-8, remain below the SCG of 5.0 μg/l. MW-37I is located between the SOU-S and RW-8 and RW-9. The decrease in contaminant levels experienced in MW-37I continued throughout this reporting period. Monitoring of MW-37I will continue as well as the operation of RW-8 and RW-9 over the next reporting period.

9. The perimeter recovery well RW-10 operation was halted in August 2015. The VOC concentrations at the time were well below the SCG. Since that time, no water has been recovered from this well. The surrounding monitoring wells, MW-21S, MW-33S and MW-35D continue to be monitored to assess the need for recovery operations in this well. The contaminant levels reported for MW-21S, MW-33S and MW-35D during the groundwater sampling event in 2019 remained consistent at levels below the SCG of 5.0 μg/l and support allowing RW-10 to remain off. Graphical presentation of the analytical data for these wells for the past 7 years are included in Appendix C.

10. The perimeter recovery wells (RW-11 and RW-12) located along the former Taylor Property boundary continue to function efficiently in preventing the migration of impacted ground water to the City of Fulton Well Field evidenced by the reducing trends experienced in all the monitoring wells located on the Former Taylor Property (MW-32D, MW-33S, MW-34D and MW-35D), and on the municipal well field property (MW-28I). The PCE concentration in both of these Recovery Wells is hovering around, and recently fallen below, 2.5 μg/l (50% of the SCGs for groundwater for all of the COCs other than benzene (1 μg/l) and chloroform (7 μg/l) (see http://www.dec.ny.gov/dos/water_pdf/togs111.pdf)). Only MW-34D, downgradient of these recovery wells, has reported concentrations of any COC above 5 μg/l. Analytical data from MW-34D is demonstrating a downward trend in contaminant levels. Line graphs of all the active Recovery Wells are in Appendix C.

11. RW-13 VOC concentrations continue to decline, VOC levels reported for the four sampling events were fluctuating near the SCG of 5.0 μg/l for PCE, 1,1-DCA and TCE. The production rate from this well increased slightly from 0.77 GPM to 1.04 GPM. The contaminant concentrations in the monitoring wells thought to be under the influence of RW-13 (MW-51D, MW-56D and MW-13D) continue to decline. MW-8D VOC levels experienced an unexpected slight increase. This slight rise does not invalidate the assumed downward trend when historical data is considered. Continued operation of RW-13 will further reduce the contaminant load in this area of the site.

12. The City of Fulton Water Treatment Facility (WTF) has been shut down and mothballed according to the approved mothball procedures. If, in the future, the City determines the chloride levels in M-2A are acceptable and wishes to introduce the water from M-2A into the distribution system, quarterly monitoring will be required for 4 consecutive quarters. Should any one individual COC, as defined in the IRM Order on Consent, reach or exceed a level of 50% of the MCL, treatment and monitoring requirements will resume.

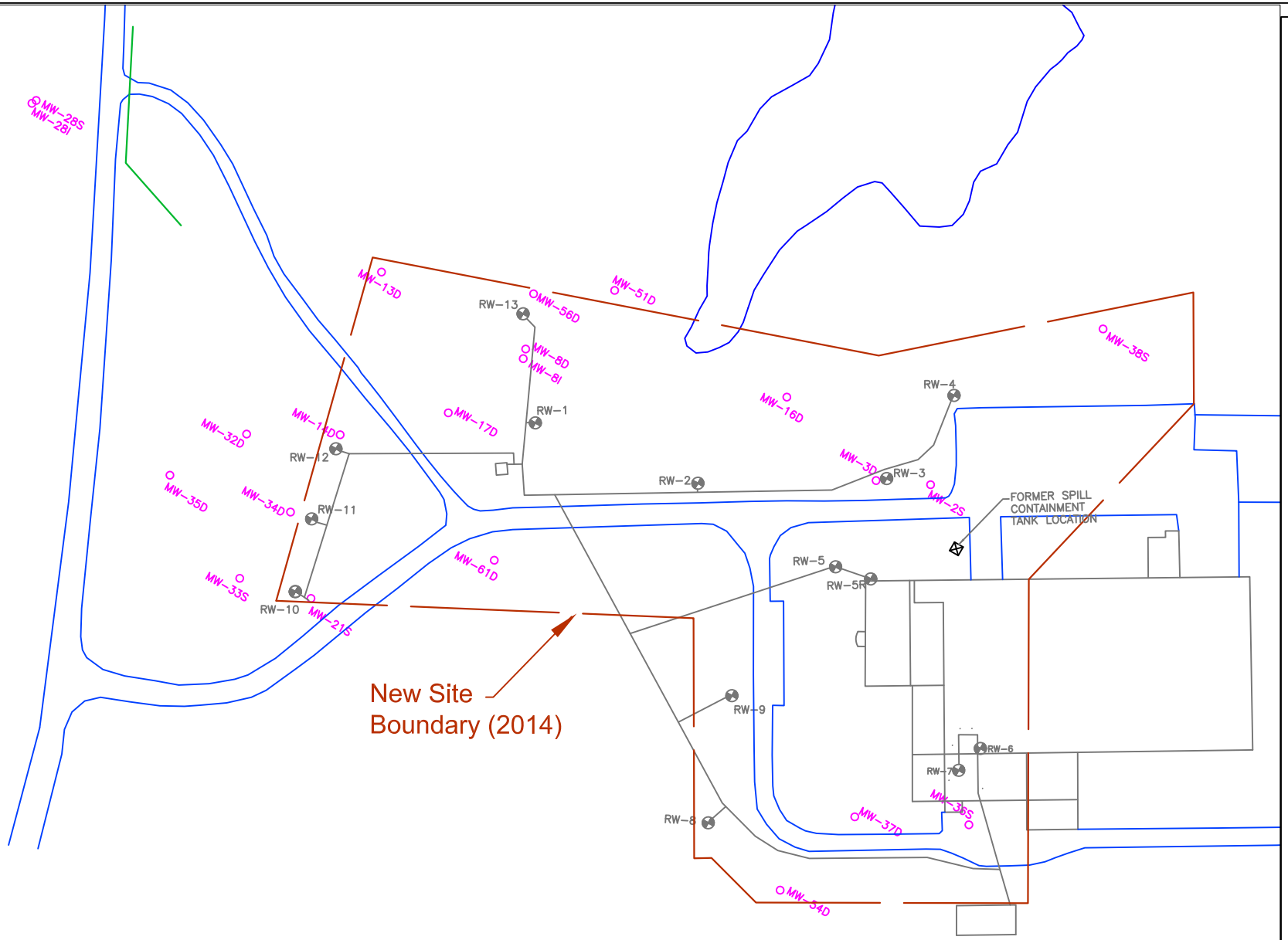
13. The Early Warning Network sampling schedule is annual based on the determination of NYSDEC. The annual sampling of these wells takes place in April so the data is available for the preparation of the annual reporting, period that currently ends on May 31.

14. SVES Operation
    The operation of the SVE system in the southern area ineffective due to the elevated water table. No vapors were recovered from any extraction points in the southern area this reporting period.

15. SVEN operation
    The SVEN system removed a significant mass of VOC from the vadose and fringe zone beneath the former can plant building in the eight years of operation. The estimated mass removal rate calculated for the 365 days of operation this year is 5.94 pounds. Periodic monitoring is indicating an overall decreasing trend in the VOC concentrations being recovered. The results from the sampling of DPEN-4 indicate the system should remain in continuous operation.

RECOMMENDATIONS

1. RW-2, RW-3 and RW-4 will continue operation throughout the next reporting period. No changes are recommended to these wells.
2. RW-5R will continue to operate at the restricted flow rate to prevent the removal of silt and sand from the screened zone in this well.
3. RW-8 and RW-9 will continue to operate throughout the next reporting period. Downgradient monitoring wells MW-53I and MW-53D will be sampled in April 2020 to compare with historical data and verify ongoing hydraulic control of the aquifer in this area.
4. RW-10 will remain off and the analytical data from MW-21S, MW-33S and MW-35D will be evaluated periodically. If the contaminant levels in these monitoring wells show an increasing trend, RW-10 will be brought back on-line.
5. RW-11, RW-12 and RW-13 will continue operation throughout the next reporting period. The contaminant levels in RW-11 and RW-12 are below the SCGs noted above and are nearing 50% of the SCGs. Once VOC levels are shown to be below the 50% level of the SCGs for four consecutive quarters, a request to cease operation of these wells will be considered. PCE, 1,1-DCA and TCE levels in RW-13 continue to fluctuate above the SCG of 5.0 μg/l. No changes are recommended for this area.
6. The operation of the SVE system in the Northern area will continue. The areas around DPEN-4 and DPEN-2 will continue to be the focus of the extraction effort. The extraction wells used this entire reporting period will continue to be utilized. Periodic sampling will determine if the operation will continue in the current state or if transition to cyclical operation is warranted. Once it is determined the SVE systems have reached their useful life, a Work Plan will be developed to justify permanently stopping the operation. The Work Plan will include a Soil Vapor Intrusion investigation and confirmatory soil sampling plan.



General Notes

RW-5 RECOVERY WELL

MW-16D MONITORING WELL

No.	Revision/Issue	Date

OMI

OPERATIONS & MAINTENANCE INC.
1850 ROUTE 57
FULTON, NY 13069

Project Name and Address

MILLER BREWING CO.
GROUNDWATER TREATMENT FACILITY
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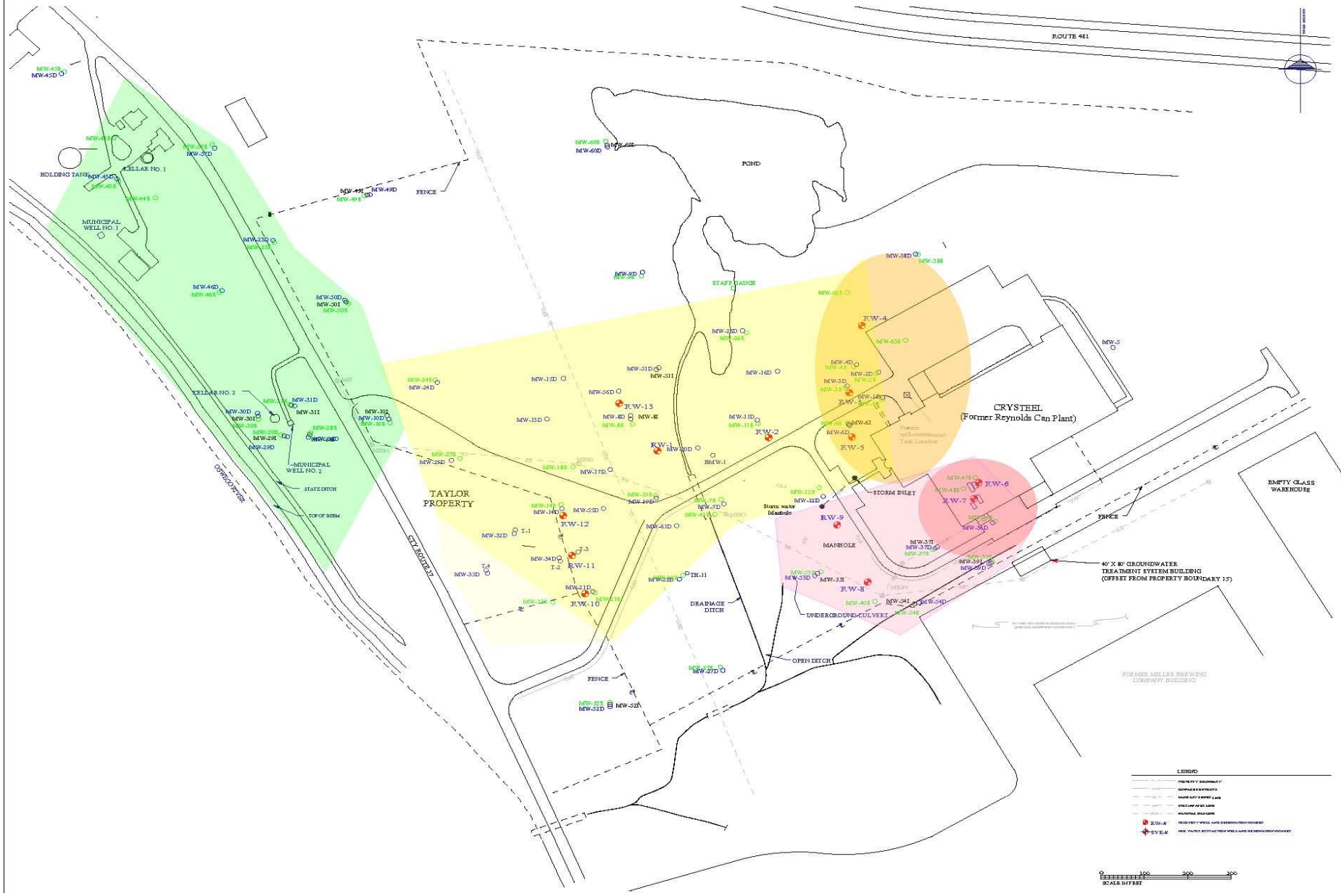
FULTON, NY 13069

EWN WELLS

Date 07-14-15

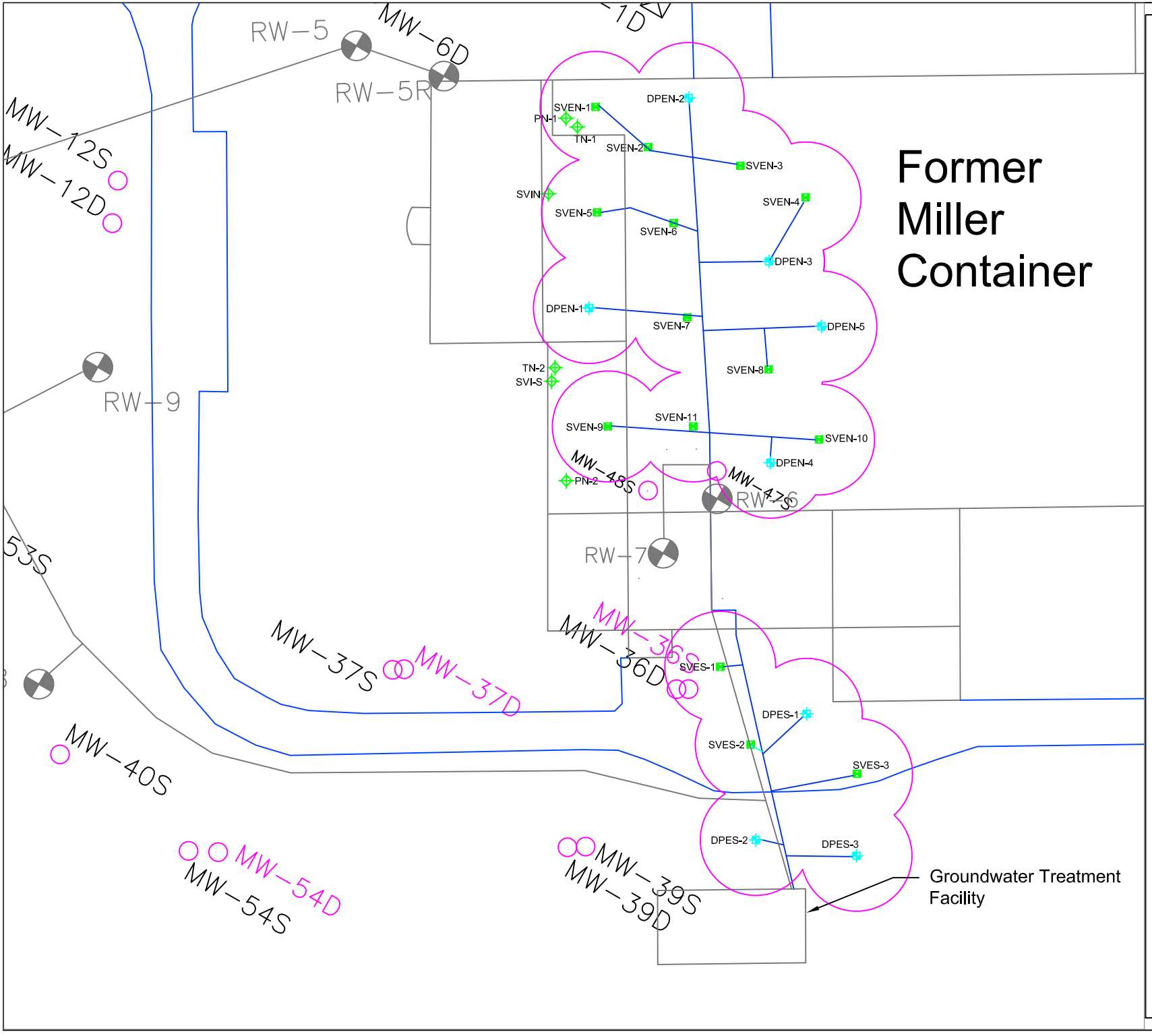
Scale 1"=200'

Sheet FIGURE 1



2018-2019 Annual Report

Functional Monitoring Groups
Figure 2



General Notes

RW-5 RECOVERY WELL

SVEN-5 SOIL VAPOR EXTRACTION WELL

DPEN-1 DUAL PHASE EXTRACTION WELL

SVI-S SOIL VAPOR EXTRACTION MONITORING POINT

No.	Revision/Issue	Date

OMI

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MILLER BREWING CO.
GROUNDWATER TREATMENT FACILITY
1850 ROUTE 57
FULTON, NY 13069

2010 SVE SYSTEM

Date 02-14-14

Scale 1"=70'

Sheet FIGURE 3

FORMER MILLER CONTAINER SITE
NYSDEC Site # 7-38-029
GWTF TOTALIZER READINGS

June 1, 2018 through May 31, 2019

Jun-18		Daily Gallons
1	28174950	21749
2	28196699	19534
3	28216233	22535
4	28238768	22533
5	28261301	22537
6	28283838	21880
7	28305718	19343
8	28325061	22510
9	28347571	22536
10	28370107	21269
11	28391376	23815
12	28415191	22667
13	28437858	22662
14	28460520	21291
15	28481811	20293
16	28502104	22657
17	28524761	20488
18	28545249	16598
19	28561847	18480
20	28580327	22213
21	28602540	18482
22	28621022	22731
23	28643753	18871
24	28662624	22712
25	28685336	22667
26	28708003	21561
27	28729564	20001
28	28749565	22646
29	28772211	22677
30	28794888	19412
Total for Month	619938	
Daily Average	20664.60	
Average GPM	14.35	

Jul-18		Daily Gallons
1	28814300	25428
2	28839728	15110
3	28854838	22600
4	28877438	22582
5	28900020	18846
6	28918866	22647
7	28941513	22630
8	28964143	21595
9	28985738	23808
10	29009546	18901
11	29028447	22733
12	29051180	22766
13	29073946	22724
14	29096670	22762
15	29119432	22751
16	29142183	15181
17	29157364	21915
18	29179279	23636
19	29202915	18616
20	29221531	18772
21	29240303	3436
22	29243739	0
23	29243739	14947
24	29258686	22609
25	29281295	23079
26	29304374	23069
27	29327443	23124
28	29350567	23163
29	29373730	23163
30	29396893	23116
31	29420009	23171
Total for Month	625121	
Daily Average	20165.19	
Average GPM	14.00	

FORMER MILLER CONTAINER SITE
NYSDEC Site # 7-38-029
GWTF TOTALIZER READINGS

June 1, 2018 through May 31, 2019

Aug-18		Daily Gallons
1	29443180	23184
2	29466364	23179
3	29489543	23298
4	29512841	23316
5	29536157	22306
6	29558463	21988
7	29580451	21873
8	29602324	23349
9	29625673	23373
10	29649046	23381
11	29672427	23392
12	29695819	23348
13	29719167	23411
14	29742578	22373
15	29764951	20729
16	29785680	23061
17	29808741	23426
18	29832167	23375
19	29855542	23309
20	29878851	20790
21	29899641	18216
22	29917857	23343
23	29941200	23376
24	29964576	23314
25	29987890	22919
26	30010809	23232
27	30034041	23553
28	30057594	23357
29	30080951	23443
30	30104394	22379
31	30126773	20611
Total for Month	706764	
Daily Average	22798.84	
Average GPM	15.83	

Sep-18		Daily Gallons
1	30147384	23468
2	30170852	23479
3	30194331	9655
4	30203986	0
5	30203986	0
6	30203986	0
7	30203986	0
8	30203986	0
9	30203986	0
10	30203986	16502
11	30220488	21898
12	30242386	22988
13	30265374	22986
14	30288360	22280
15	30310640	19155
16	30329795	22897
17	30352692	26745
18	30379437	21015
19	30400452	20966
20	30421418	19066
21	30440484	22932
22	30463416	19059
23	30482475	22845
24	30505320	22832
25	30528152	19051
26	30547203	22823
27	30570026	20295
28	30590321	21530
29	30611851	22835
30	30634686	18970
Total for Month	507913	
Daily Average	16930.43	
Average GPM	11.76	

FORMER MILLER CONTAINER SITE
NYSDEC Site # 7-38-029
GWTF TOTALIZER READINGS

June 1, 2018 through May 31, 2019

Oct-18		Daily Gallons
1	30653656	18962
2	30672618	22786
3	30695404	19033
4	30714437	22838
5	30737275	22317
6	30759592	19473
7	30779065	22930
8	30801995	22997
9	30824992	19207
10	30844199	22943
11	30867142	19072
12	30886214	22931
13	30909145	19171
14	30928316	19975
15	30948291	21658
16	30969949	22812
17	30992761	14897
18	31007658	18775
19	31026433	23060
20	31049493	19346
21	31068839	22747
22	31091586	19457
23	31111043	20269
24	31131312	21507
25	31152819	20848
26	31173667	24326
27	31197993	19125
28	31217118	22876
29	31239994	19035
30	31259029	22860
31	31281889	19105
Total for Month	647203	
Daily Average	20877.52	
Average GPM	14.50	

Nov-18		Daily Gallons
1	31300994	23049
2	31324043	22924
3	31346967	19081
4	31366048	22929
5	31388977	22863
6	31411840	19153
7	31430993	22774
8	31453767	18857
9	31472624	22759
10	31495383	18915
11	31514298	22741
12	31537039	18992
13	31556031	22837
14	31578868	19371
15	31598239	22560
16	31620799	22984
17	31643783	20109
18	31663892	22114
19	31686006	23051
20	31709057	23021
21	31732078	19142
22	31751220	22933
23	31774153	22938
24	31797091	19229
25	31816320	23052
26	31839372	27695
27	31867067	23300
28	31890367	19153
29	31909520	23057
30	31932577	23040
Total for Month	650688	
Daily Average	21689.60	
Average GPM	15.06	

FORMER MILLER CONTAINER SITE
NYSDEC Site # 7-38-029
GWTF TOTALIZER READINGS

June 1, 2018 through May 31, 2019

Dec-18		Daily Gallons
1	31955617	20800
2	31976417	21047
3	31997464	18760
4	32016224	18657
5	32034881	18671
6	32053552	18584
7	32072136	18534
8	32090670	18608
9	32109278	18611
10	32127889	18633
11	32146522	18595
12	32165117	19020
13	32184137	22768
14	32206905	19013
15	32225918	22758
16	32248676	18974
17	32267650	19056
18	32286706	22490
19	32309196	22658
20	32331854	13990
21	32345844	3693
22	32349537	0
23	32349537	0
24	32349537	0
25	32349537	0
26	32349537	0
27	32349537	0
28	32349537	0
29	32349537	0
30	32349537	0
31	32349537	22234
Total for Month	416960	
Daily Average	13450.32	
Average GPM	9.34	

Jan-19		Daily Gallons
1	32371771	18391
2	32390162	22462
3	32412624	14923
4	32427547	13324
5	32440871	18721
6	32459592	22393
7	32481985	18768
8	32500753	1204
9	32501957	0
10	32501957	0
11	32501957	0
12	32501957	0
13	32501957	0
14	32501957	0
15	32501957	0
16	32501957	11321
17	32513278	25153
18	32538431	8922
19	32547353	22573
20	32569926	18498
21	32588424	22793
22	32611217	20882
23	32632099	20637
24	32652736	18991
25	32671727	22666
26	32694393	22621
27	32717014	18824
28	32735838	22568
29	32758406	19056
30	32777462	22303
31	32799765	22590
Total for Month	450228	
Daily Average	14523.48	
Average GPM	10.09	

FORMER MILLER CONTAINER SITE
NYSDEC Site # 7-38-029
GWTF TOTALIZER READINGS

June 1, 2018 through May 31, 2019

Feb-19		Daily Gallons
1	32822355	18955
2	32841310	22562
3	32863872	18868
4	32882740	22527
5	32905267	18637
6	32923904	18669
7	32942573	22582
8	32965155	18650
9	32983805	18615
10	33002420	18599
11	33021019	19344
12	33040363	21760
13	33062123	18636
14	33080759	18670
15	33099429	18601
16	33118030	18624
17	33136654	18591
18	33155245	18599
19	33173844	18634
20	33192478	18635
21	33211113	22700
22	33233813	22756
23	33256569	18955
24	33275524	22898
25	33298422	18951
26	33317373	22708
27	33340081	18936
28	33359017	22747

Total for Month	559252
Daily Average	19973.29
Average GPM	13.87

Mar-19		Daily Gallons
1	33381764	18932
2	33400696	22703
3	33423399	18920
4	33442319	22038
5	33464357	19550
6	33483907	18835
7	33502742	18834
8	33521576	18792
9	33540368	18810
10	33559178	22603
11	33581781	18815
12	33600596	18626
13	33619222	18684
14	33637906	22472
15	33660378	18559
16	33678937	18443
17	33697380	18406
18	33715786	18464
19	33734250	18724
20	33752974	18445
21	33771419	16297
22	33787716	20629
23	33808345	18758
24	33827103	8795
25	33835898	18595
26	33854493	22432
27	33876925	19763
28	33896688	23168
29	33919856	23178
30	33943034	23169
31	33966203	23168

Total for Month	607186
Daily Average	19586.65
Average GPM	13.60

FORMER MILLER CONTAINER SITE
NYSDEC Site # 7-38-029
GWTF TOTALIZER READINGS

June 1, 2018 through May 31, 2019

Apr-19		Daily Gallons
1	33989371	23160
2	34012531	23059
3	34035590	22089
4	34057679	21930
5	34079609	21231
6	34100840	23003
7	34123843	23059
8	34146902	20769
9	34167671	20813
10	34188484	23046
11	34211530	22962
12	34234492	19176
13	34253668	22967
14	34276635	22838
15	34299473	18966
16	34318439	22762
17	34341201	18904
18	34360105	22702
19	34382807	21908
20	34404715	19727
21	34424442	18867
22	34443309	22563
23	34465872	19020
24	34484892	19006
25	34503898	21997
26	34525895	19779
27	34545674	22806
28	34568480	20157
29	34588637	21538
30	34610175	22411

Total for Month	643972
Daily Average	21465.73
Average GPM	14.91

May-19		Daily Gallons
1	34632586	19346
2	34651932	22743
3	34674675	18978
4	34693653	22770
5	34716423	18905
6	34735328	22629
7	34757957	18856
8	34776813	22587
9	34799400	18898
10	34818298	22696
11	34840994	18738
12	34859732	18802
13	34878534	22773
14	34901307	18891
15	34920198	18865
16	34939063	19771
17	34958834	22502
18	34981336	20065
19	35001401	22104
20	35023505	22979
21	35046484	19115
22	35065599	19183
23	35084782	23029
24	35107811	19140
25	35126951	22960
26	35149911	19180
27	35169091	22938
28	35192029	19145
29	35211174	22948
30	35234122	19106
31	35253228	22910
6/1/2019	35276138	

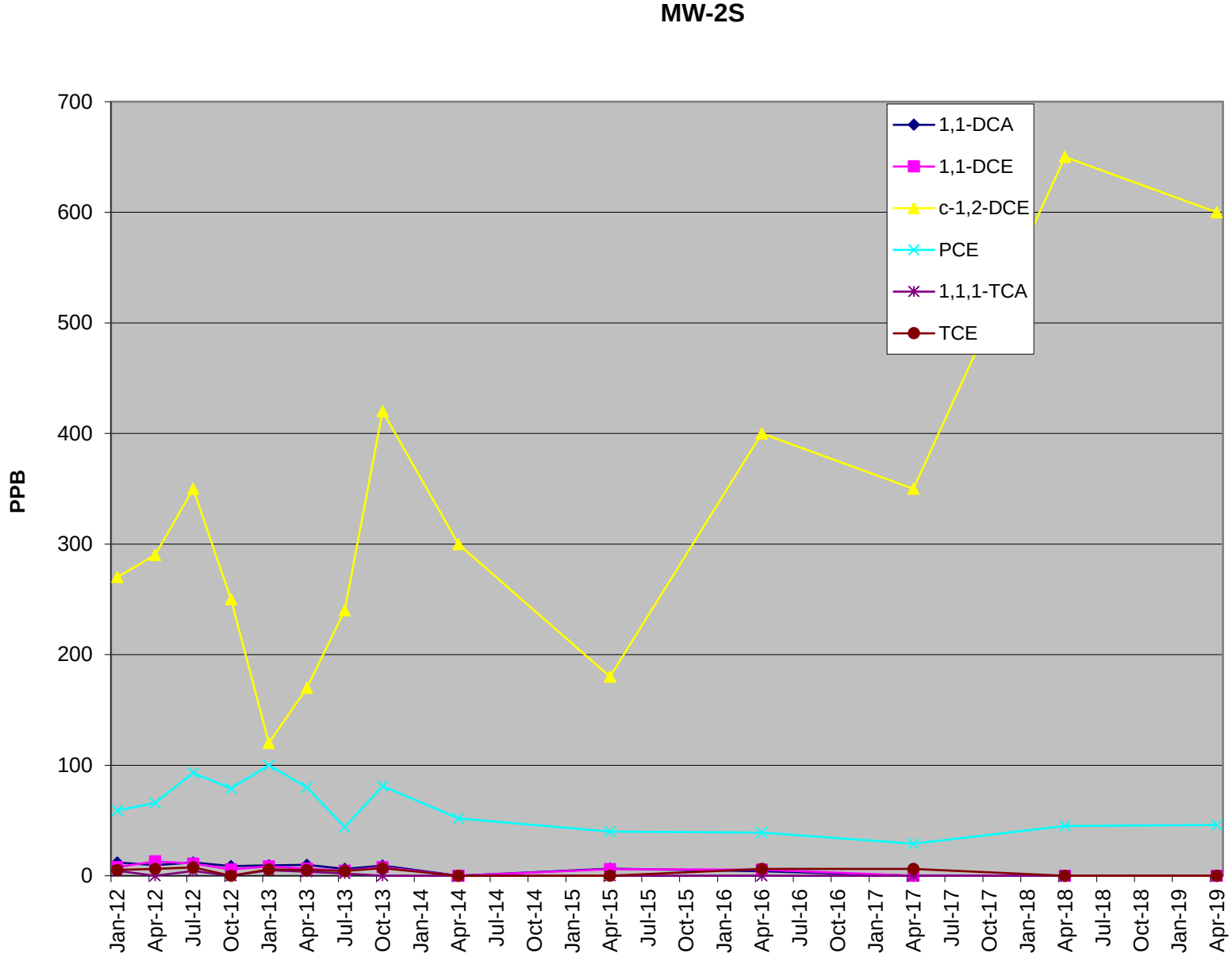
Total for Month	643053
Daily Average	20743.65
Average GPM	14.41

Miller Brewing Company

Fulton Can Plant Site Fulton, NY

Early Warining Network July 2015

Well ID	Location	Elevation of Measuring Point	Date of Installation
MW-2S	Northern Unit	377.10	9/24/1986
MW-3D	Northern Unit	376.52	7/14/1986
MW-8I	West of Pond	368.12	11/15/1991
MW-8D	West of Pond	368.30	9/18/1986
MW-13D	West of Pond	365.27	12/17/1986
MW-14D	Taylor & Vicinity	380.19	12/18/1986
MW-16D	Northern Unit	366.29	12/12/1989
MW-17D	West of Pond	372.74	4/11/1990
MW-21S	Taylor & Vicinity	379.26	4/23/1990
MW-28S	M-2A	356.94	8/22/1990
MW-28I	M-2A	357.44	8/22/1990
MW-32D	Taylor & Vicinity	377.76	9/12/1990
MW-33S	Taylor & Vicinity	383.23	9/13/1990
MW-34D	Taylor & Vicinity	385.08	9/14/1990
MW-35D	Taylor & Vicinity	381.36	9/18/1990
MW-36S	Southern Unit	376.61	9/14/1990
MW-37I	Southern Unit	377.30	11/15/1990
MW-38S	Northern Unit	373.61	11/26/1990
MW-51D	West of Pond	367.37	11/5/1991
MW-54I	South of Road	372.45	10/31/1991
MW-56D	West of Pond	367.73	12/9/1991
MW-61D	South of Road	368.60	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600
500
400
300
200
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1,1-DCE
c-1,2-DCE
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1,1,1-TCA
TCE
Jan-12
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Jan-13
Apr-13
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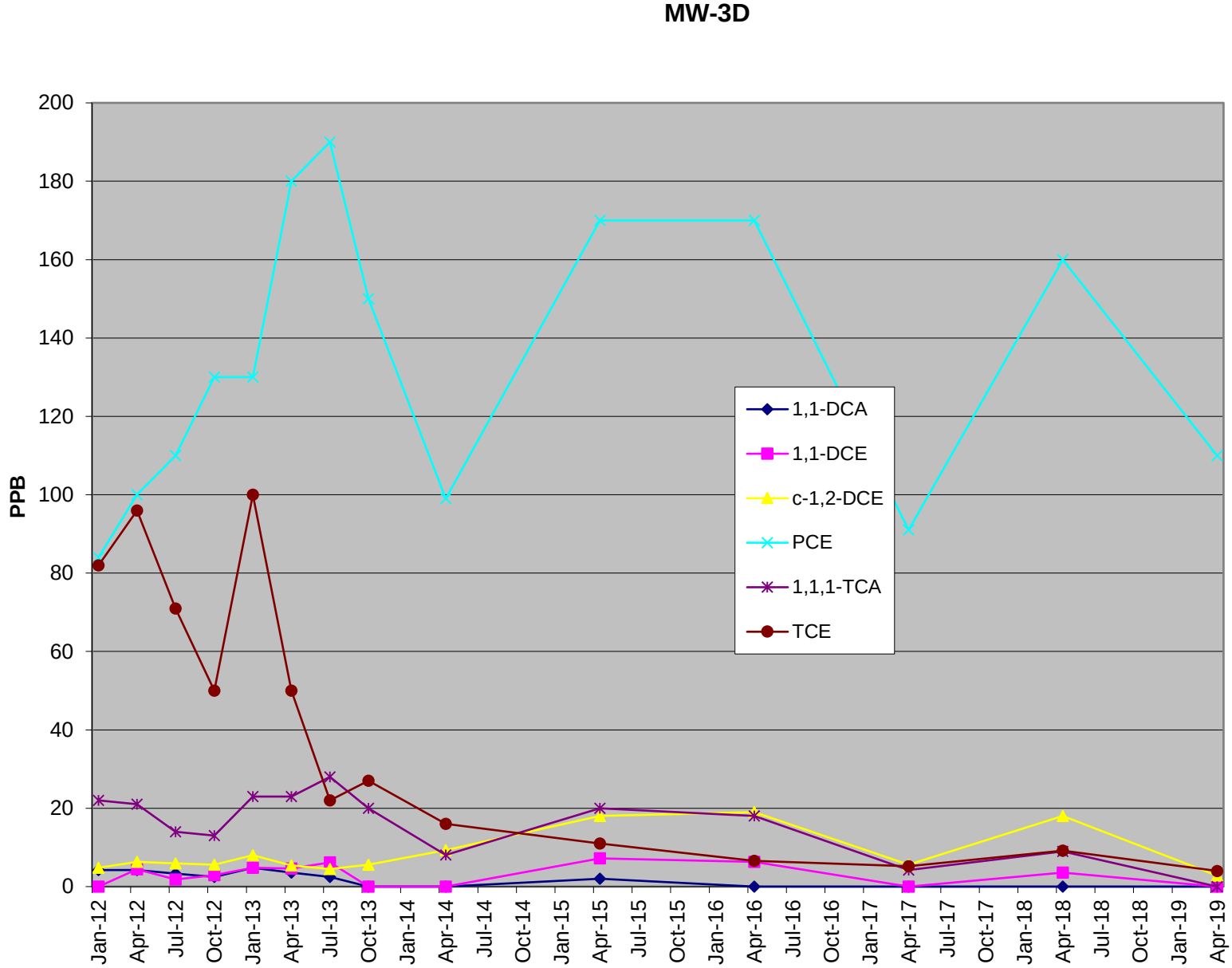
Jan-19
Apr-19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120
100
80
60
40
20
0
Jan-12
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Jan-13
Apr-13
Jul-13
Oct-13
Jan-14
Apr-14
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Oct-14
Jan-15
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Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
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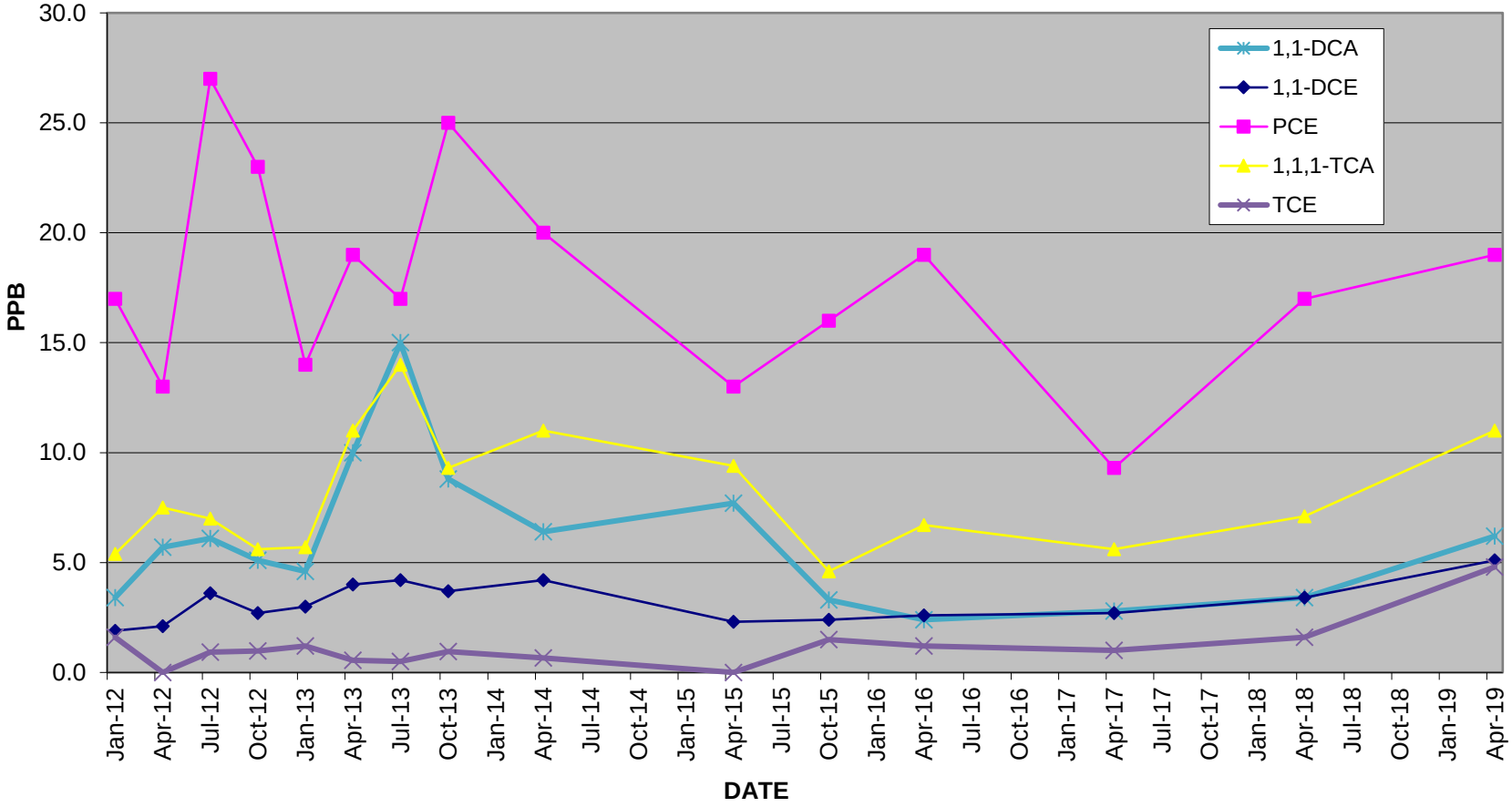
1,1-DCE
c-1,2-DCE
PCE
1,1,1-TCA
TCE

MW-8D
2012-Present



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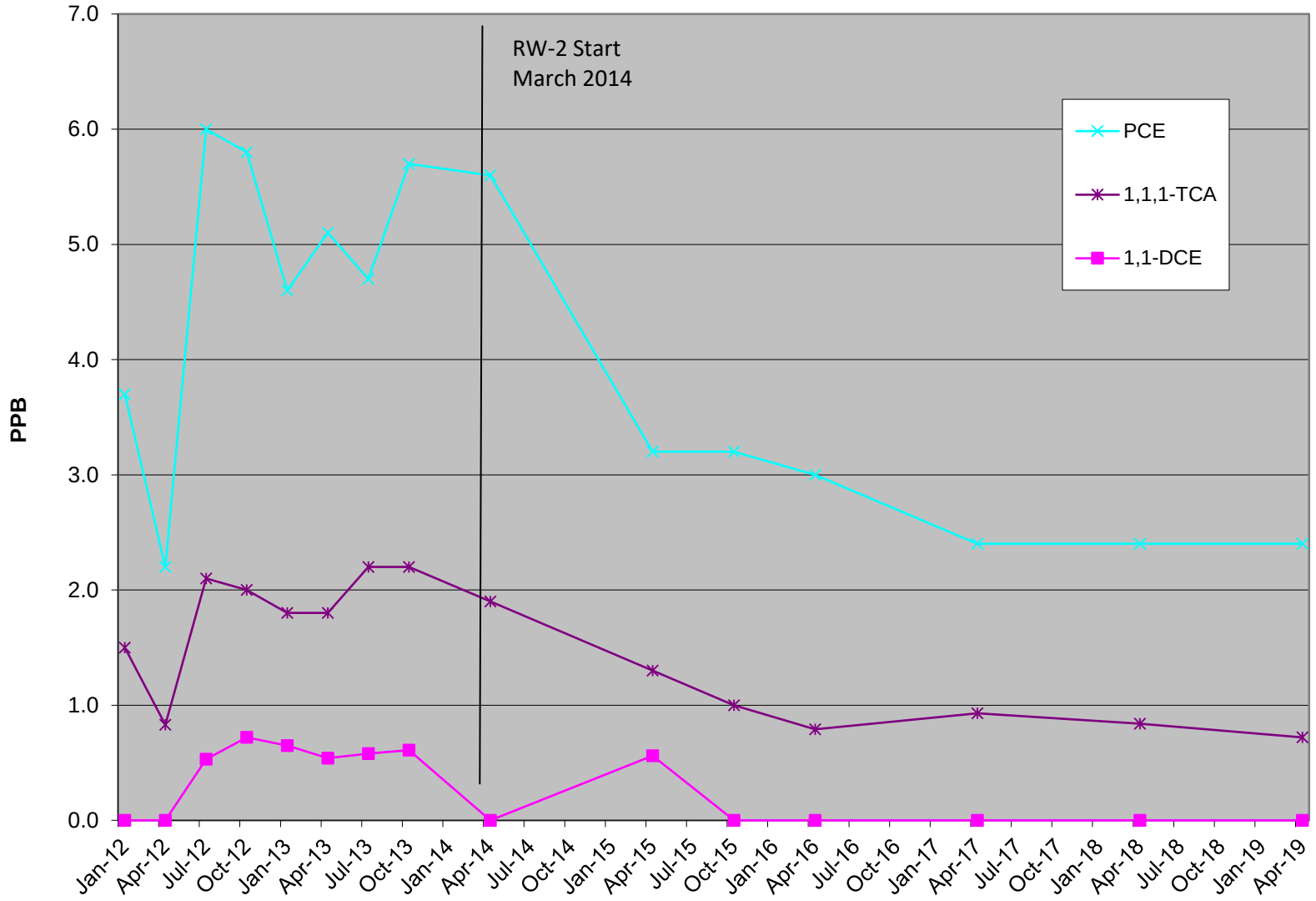
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RW-2 Start
March 2014
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1,1-DCE
Jan-12
Apr-12
Jul-12
Oct-12
Jan-13
Apr-13
Jul-13
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Jan-14
Apr-14
Jul-14
Oct-14
Jan-15
Apr-15
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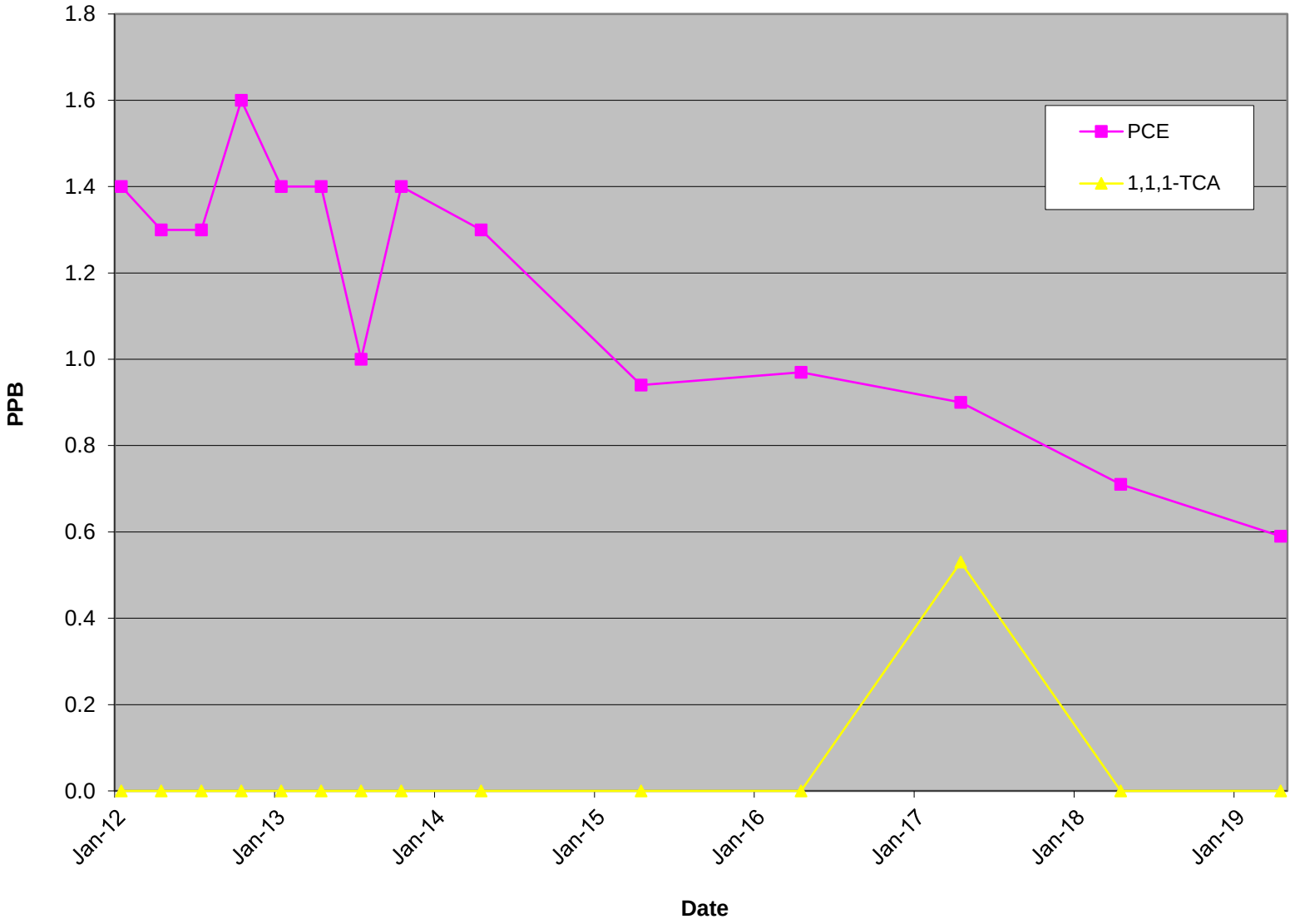
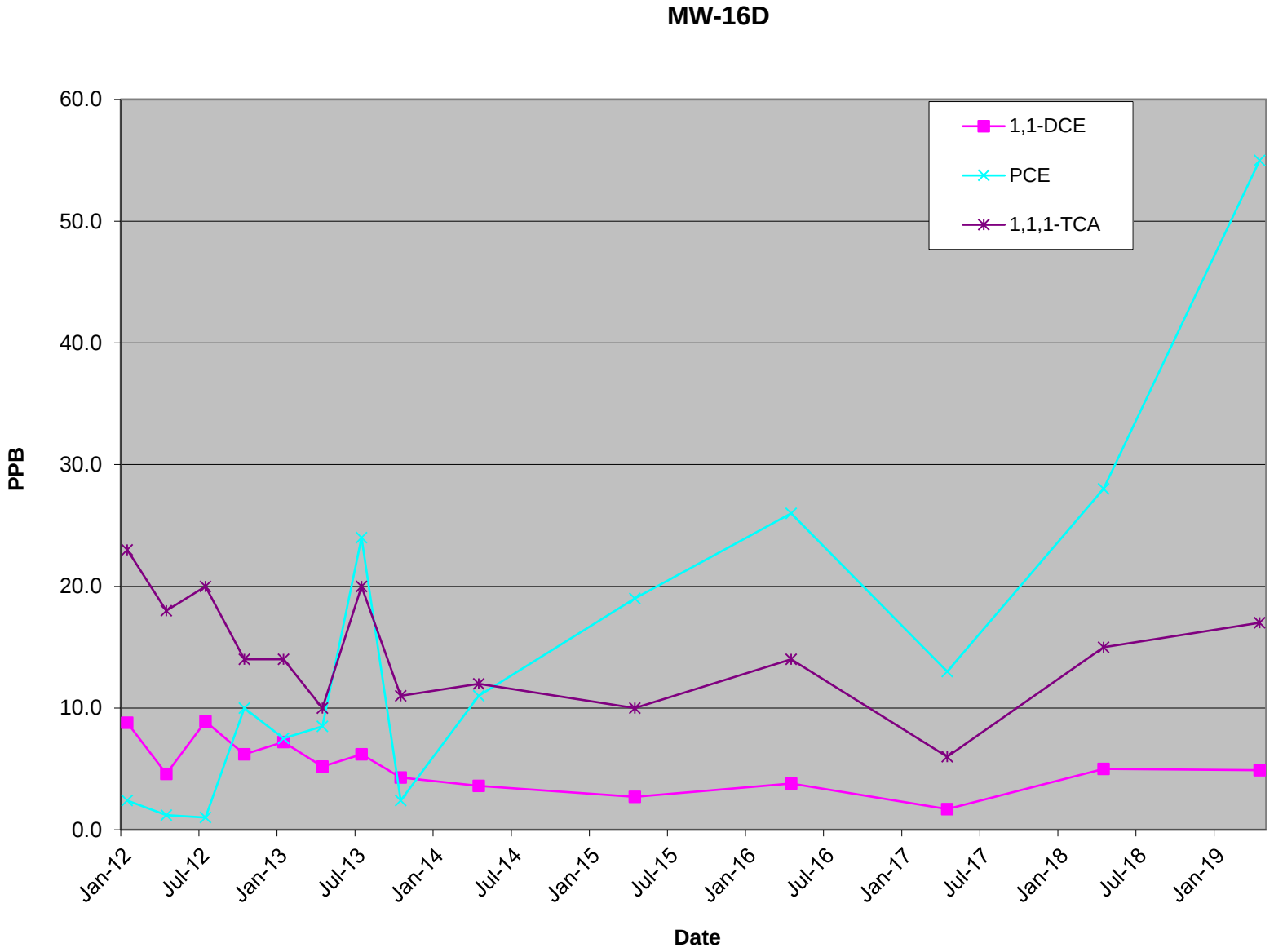
Apr-19

MW-14D 2012-Present

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Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
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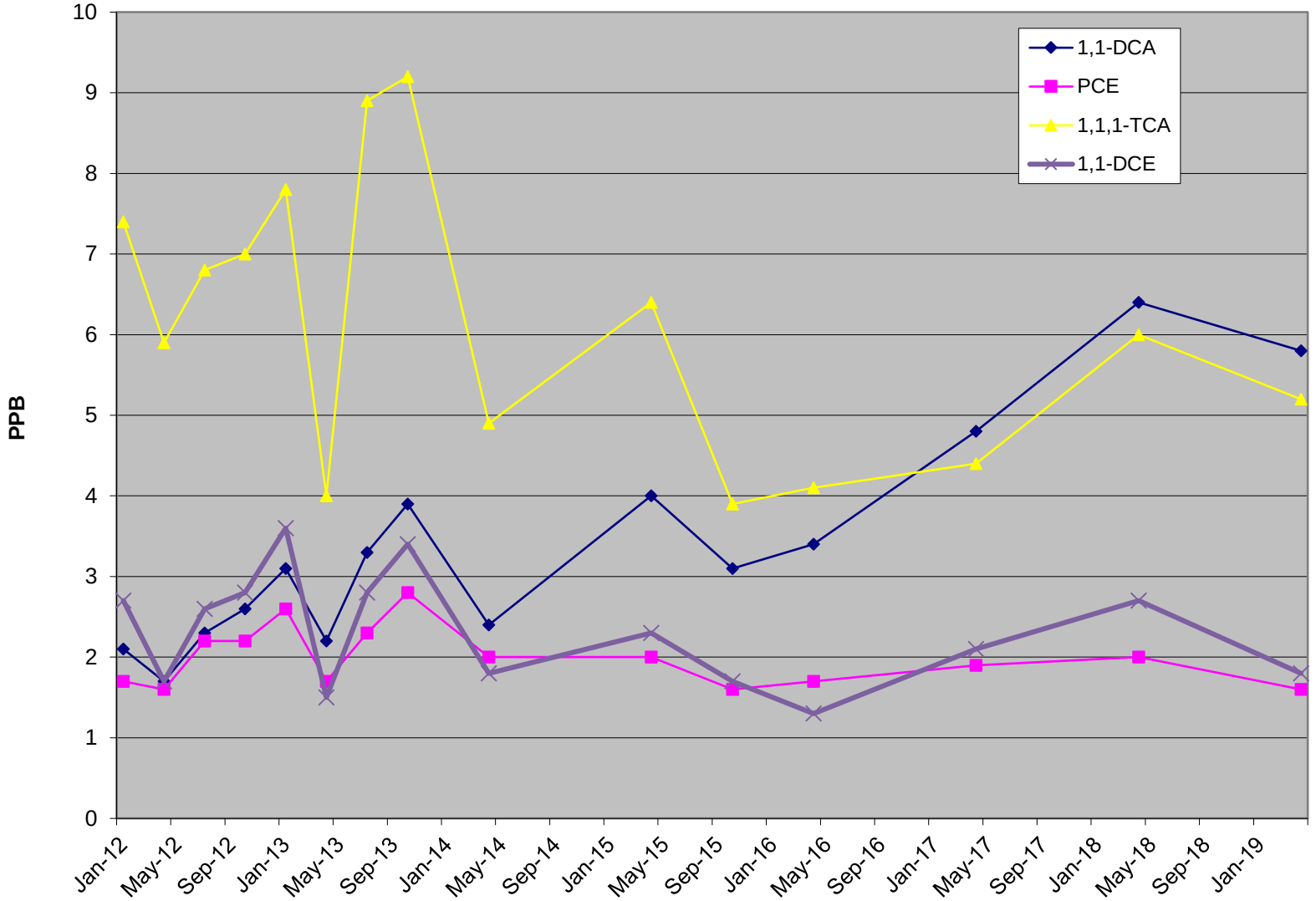
Jul-18
Jan-19
Date

MW-17D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1,1,1-TCA
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May-14
Sep-14
Jan-15
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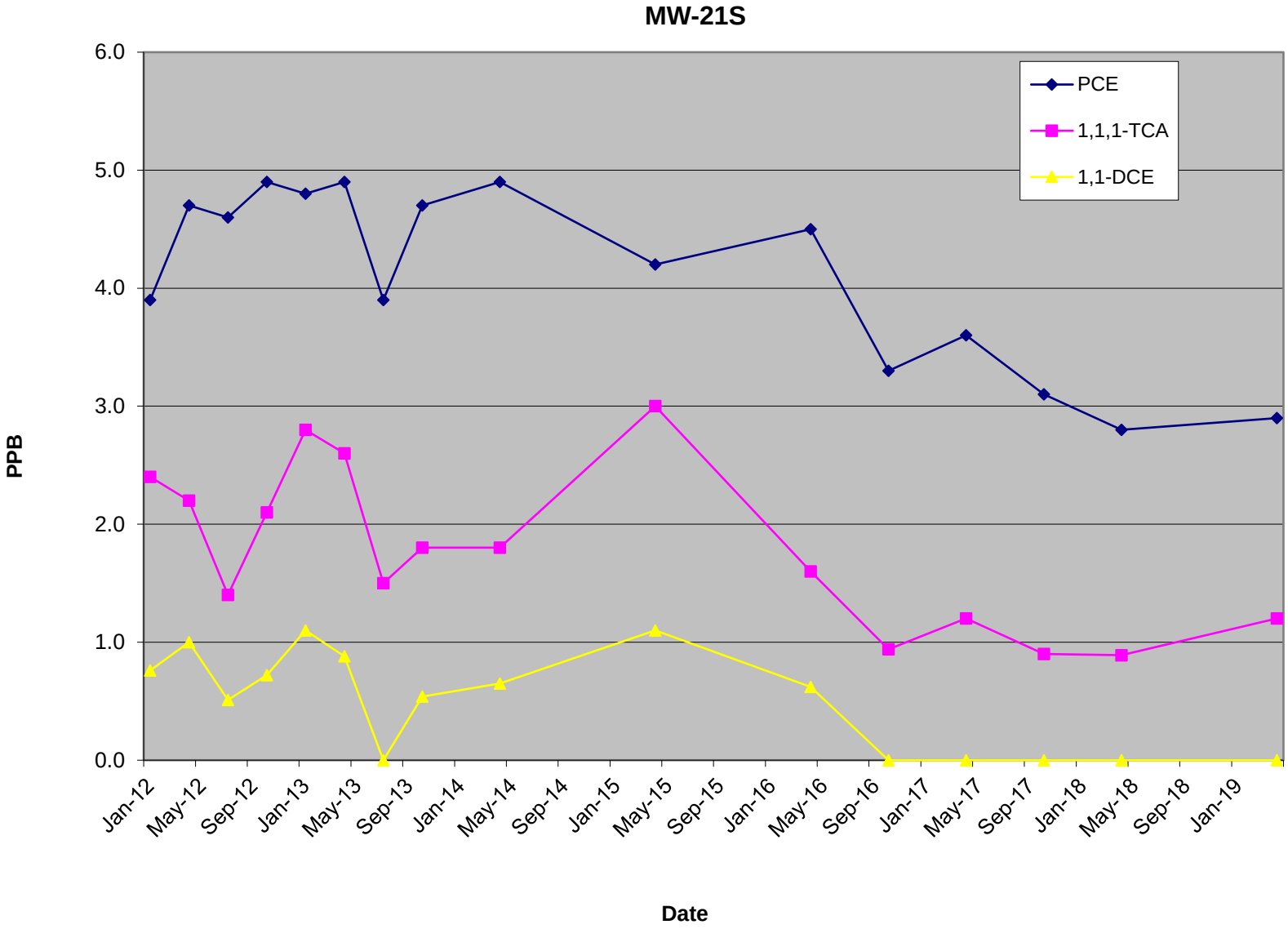
Jan-19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May-12
Sep-12
Jan-13
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Sep-13
Jan-14
May-14
Sep-14
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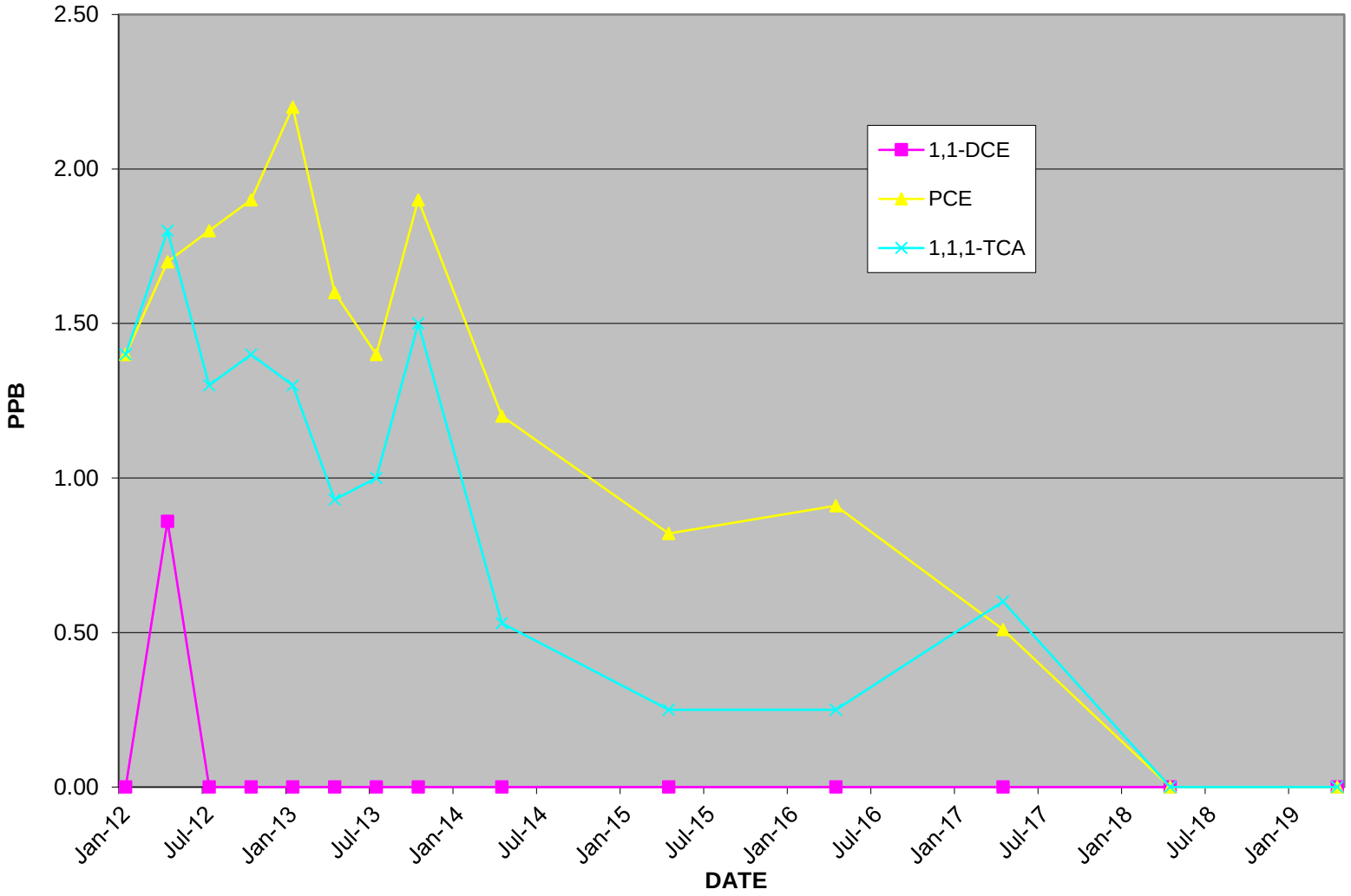
Sep-18
Jan-19
Date

MW-28I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Jul-12
Jan-13
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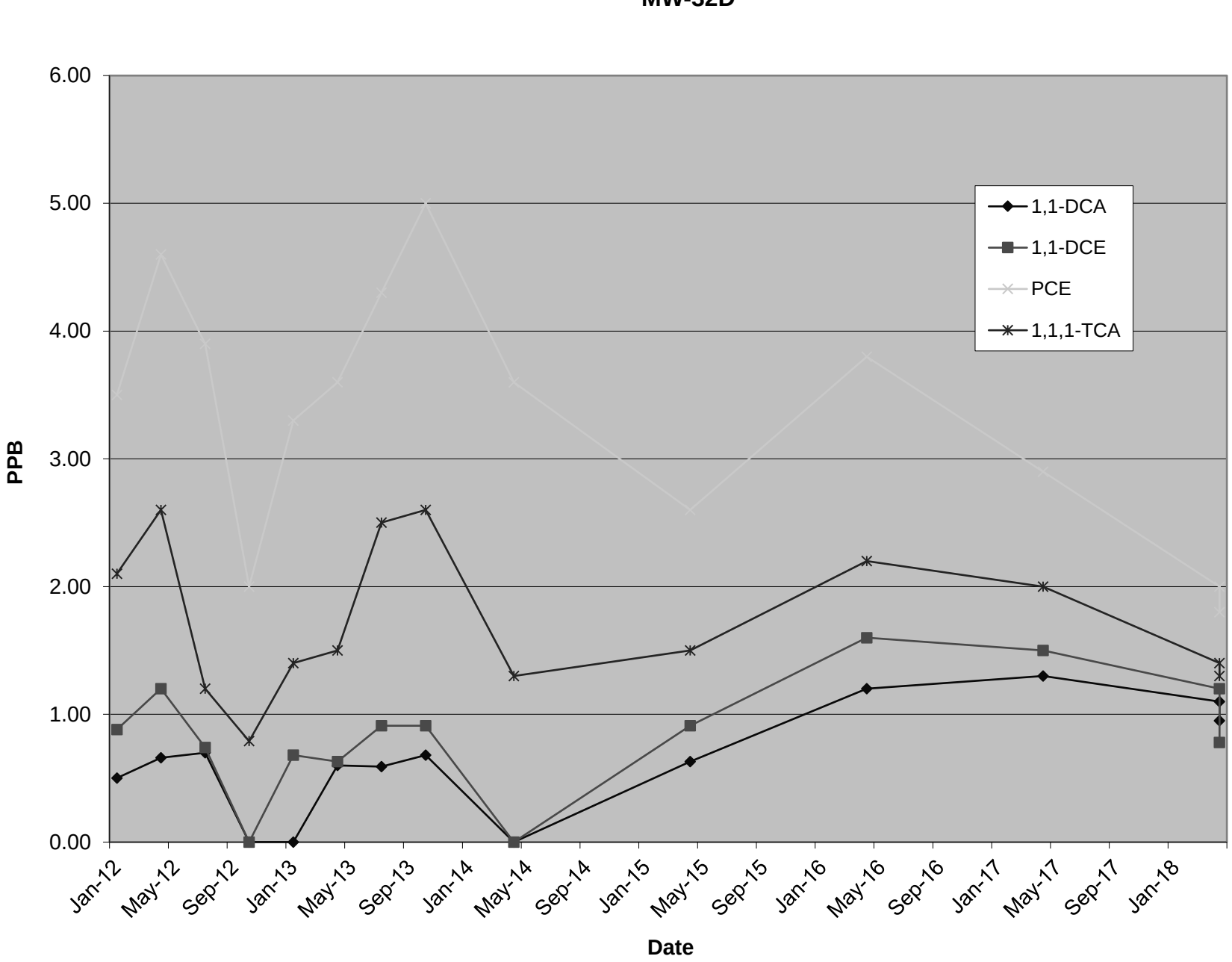
Jul-17
Jan-18
Jul-18
Jan-19
DATE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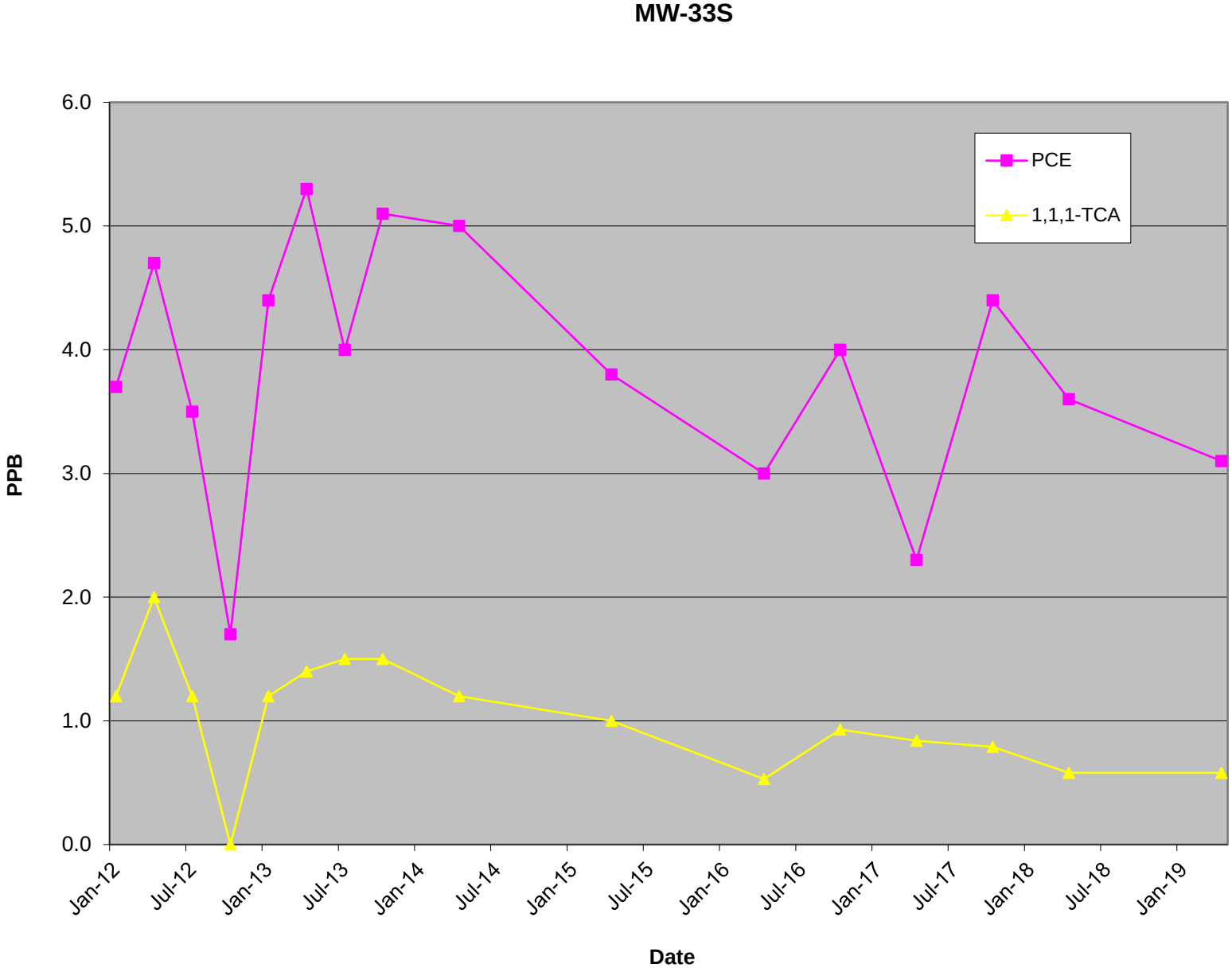
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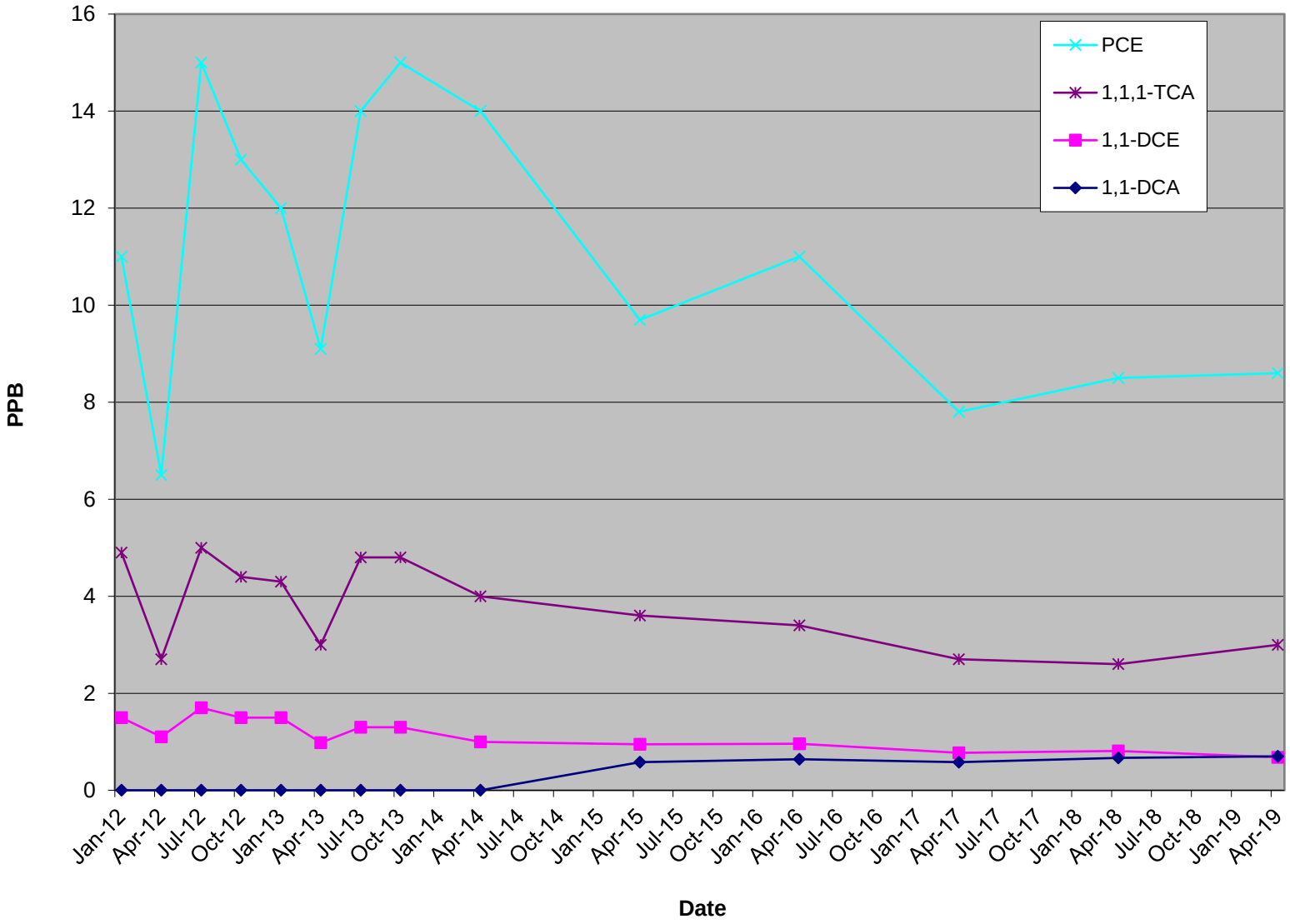
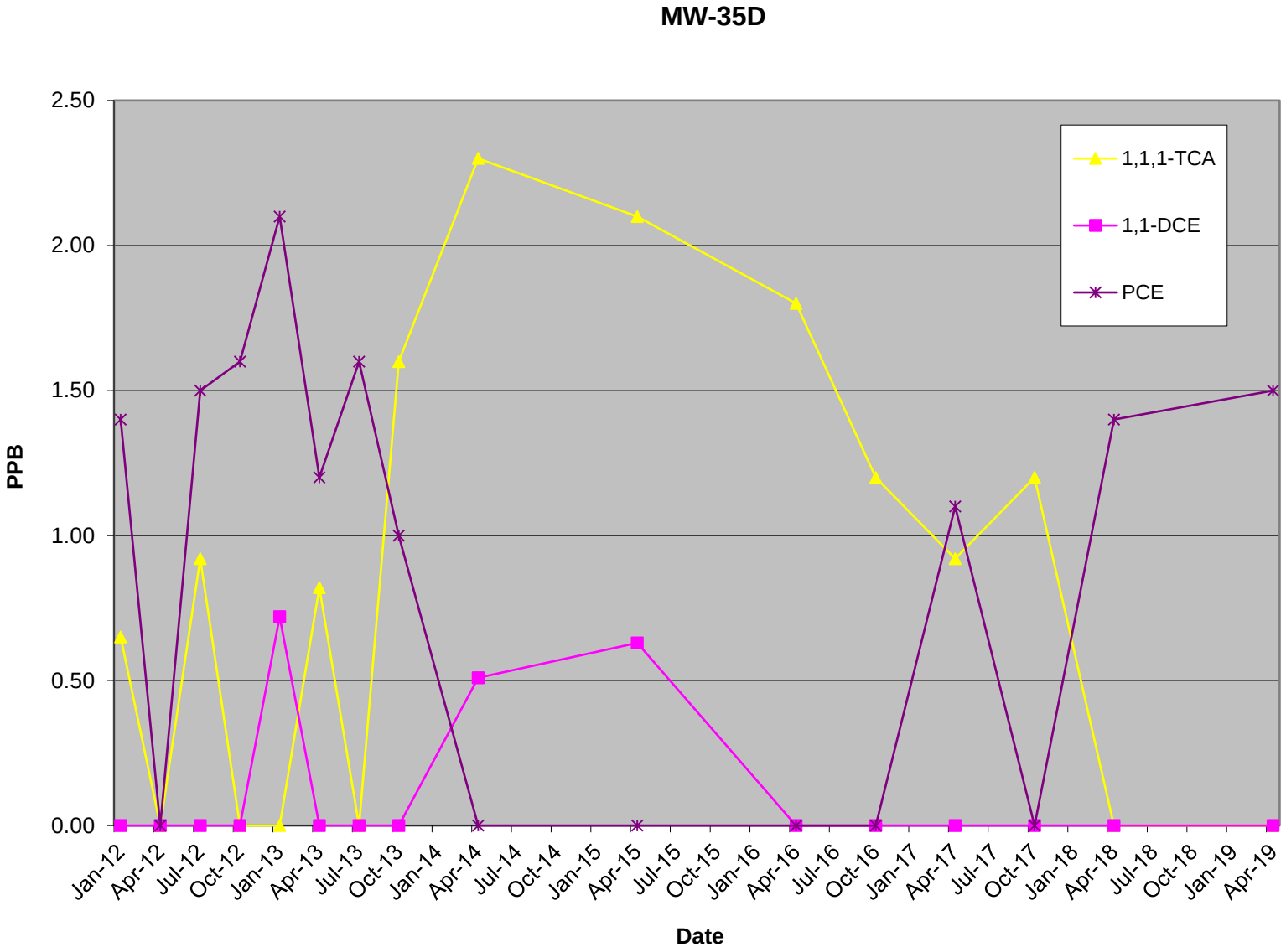
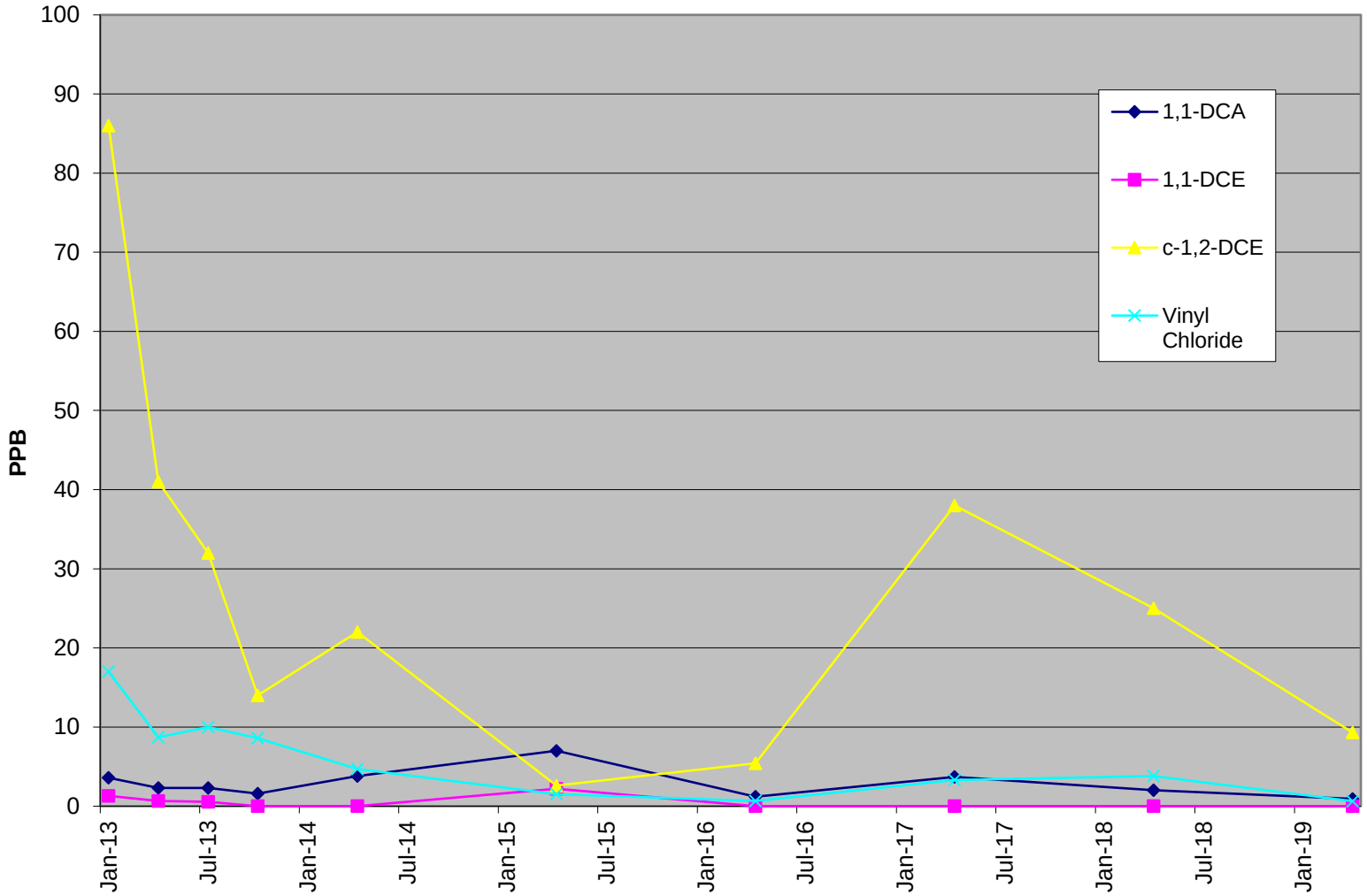
Jan-18
Jul-18
Jan-19
Date

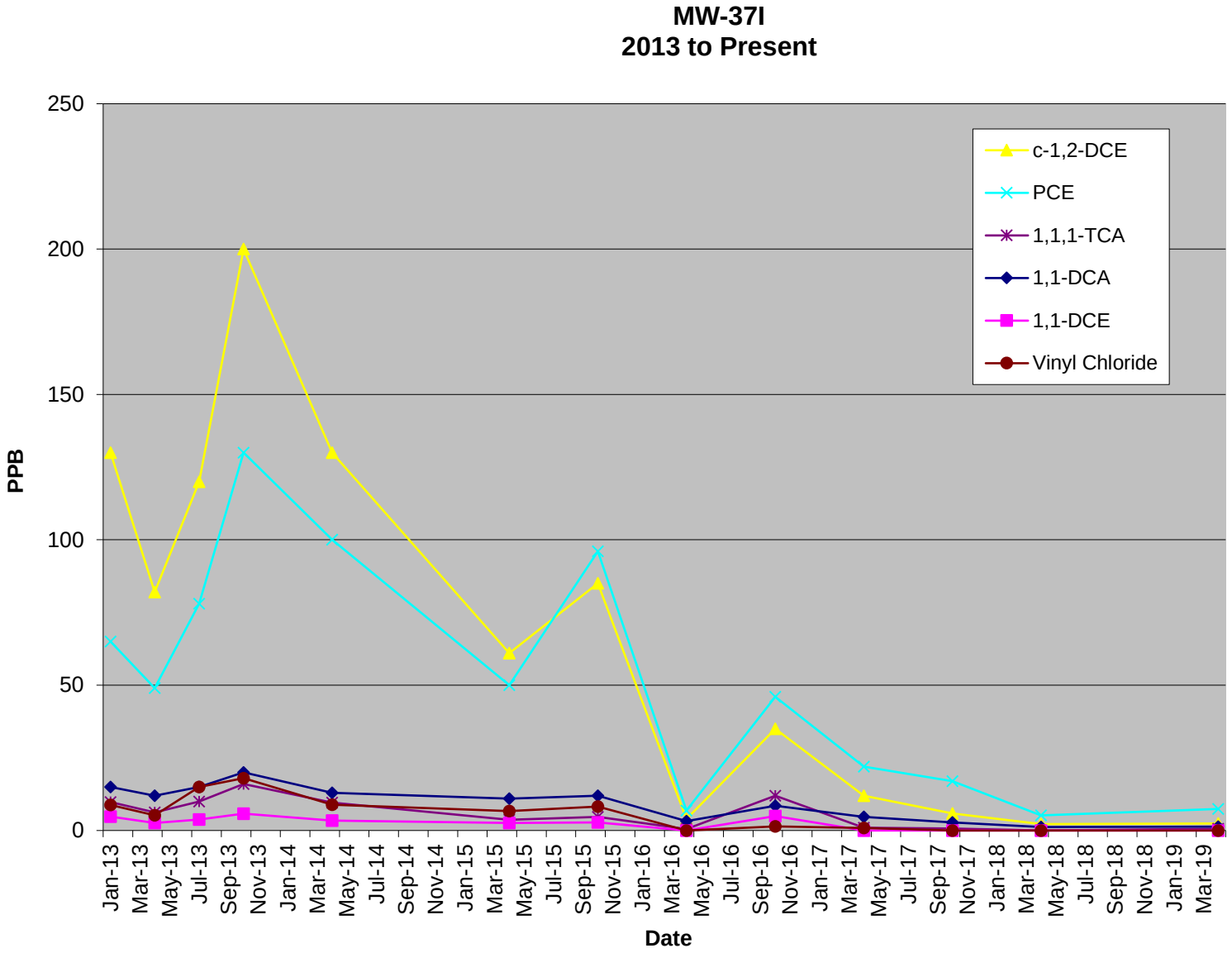
MW-34D


PPB
16
14
12
10
8
6
4
2
0
PCE
1,1,1-TCA
1,1-DCE
1,1-DCA
Jan-12
Apr-12
Jul-12
Oct-12
Jan-13
Apr-13
Jul-13
Oct-13
Jan-14
Apr-14
Jul-14
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Apr-17
Jul-17
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
Date

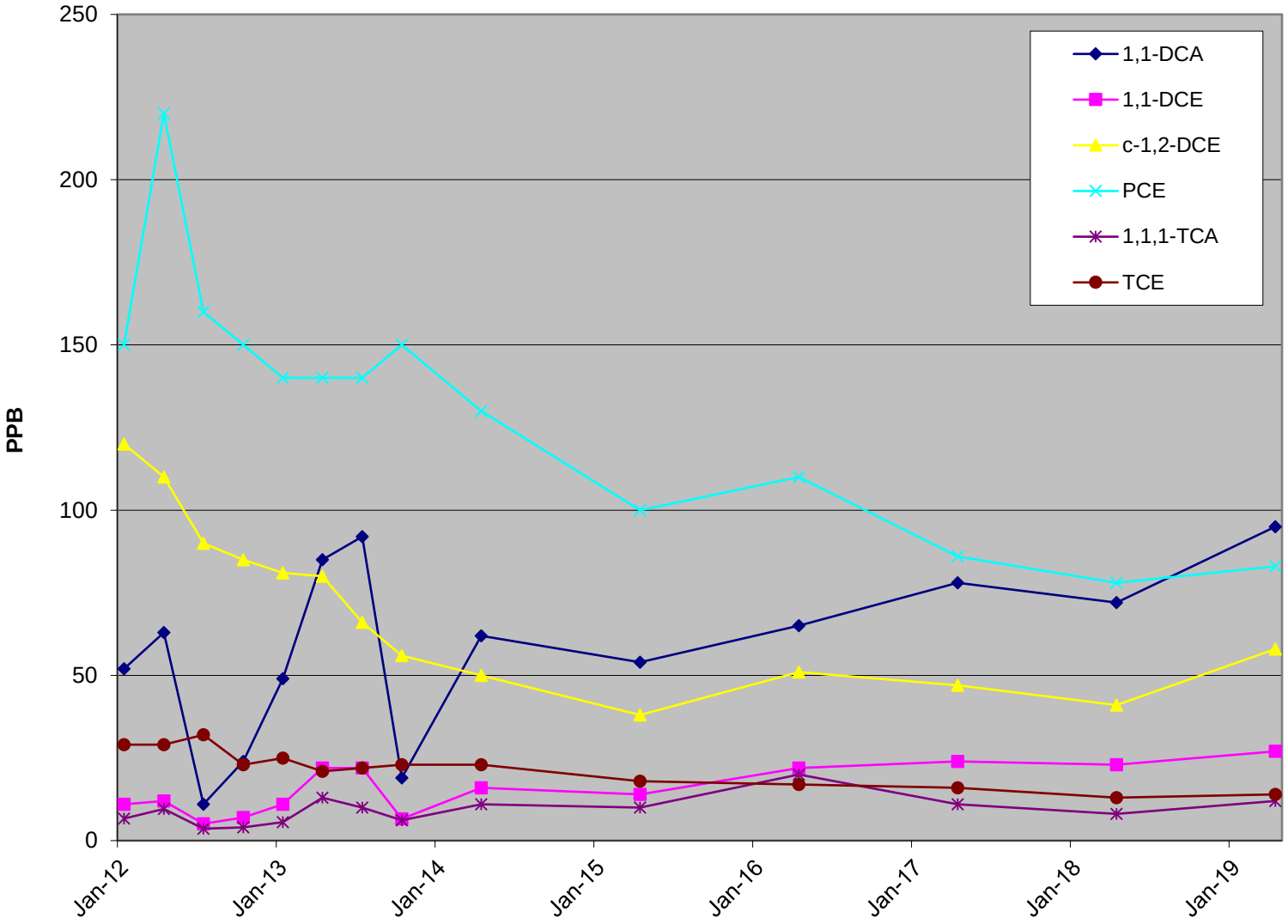

MW-35D
2.50
2.00
1.50
1.00
0.50
0.00
PPB
1,1,1-TCA
1,1-DCE
PCE
Jan-12
Apr-12
Jul-12
Oct-12
Jan-13
Apr-13
Jul-13
Oct-13
Jan-14
Apr-14
Jul-14
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Apr-17
Jul-17
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
Date

MW-36S

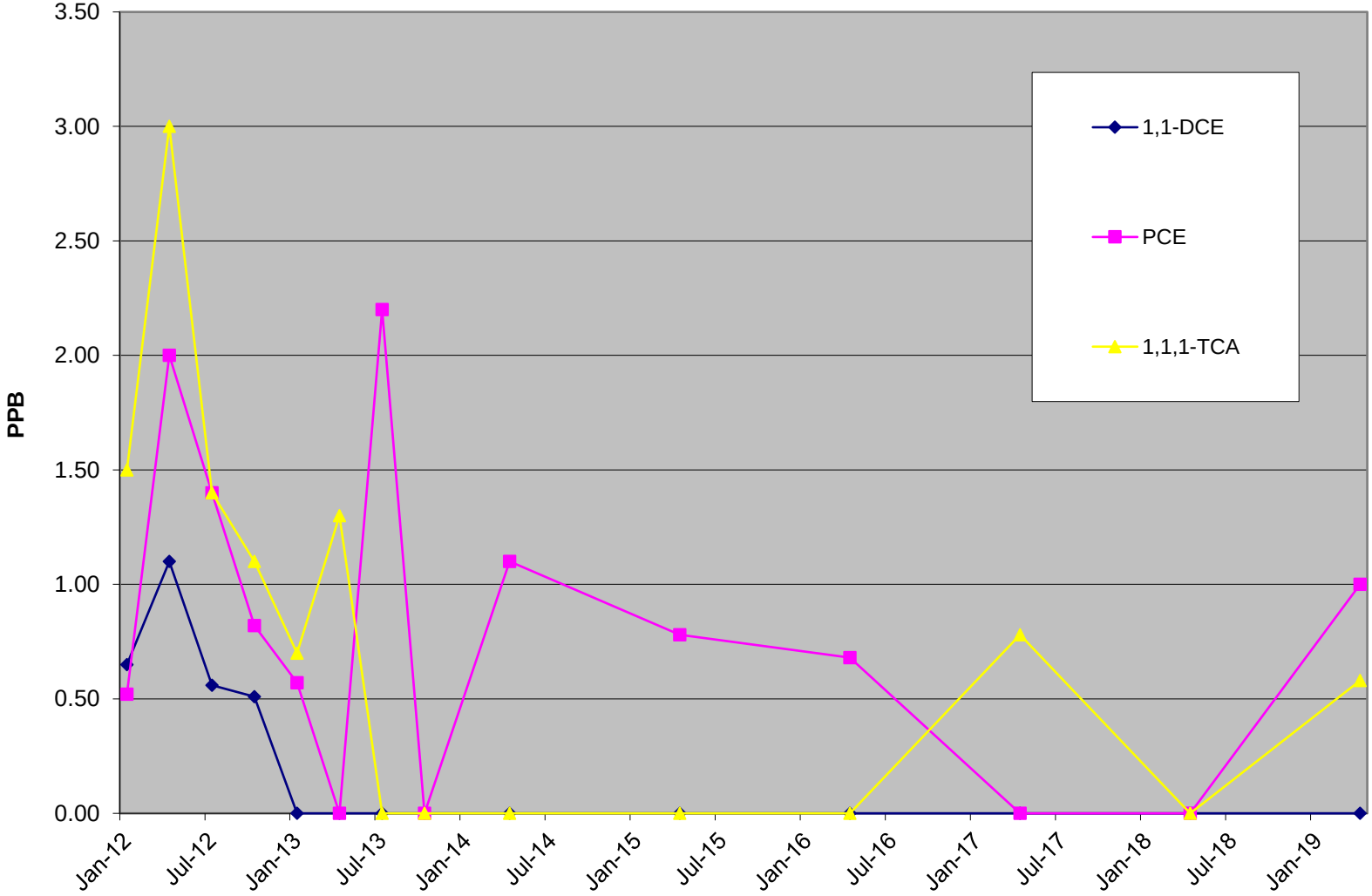

100
90
80
70
60
50
40
30
20
10
0
PPB
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Jan-17
Jul-17
Jan-18
Jul-18
Jan-19
1,1-DCA
1,1-DCE
c-1,2-DCE
Vinyl Chloride

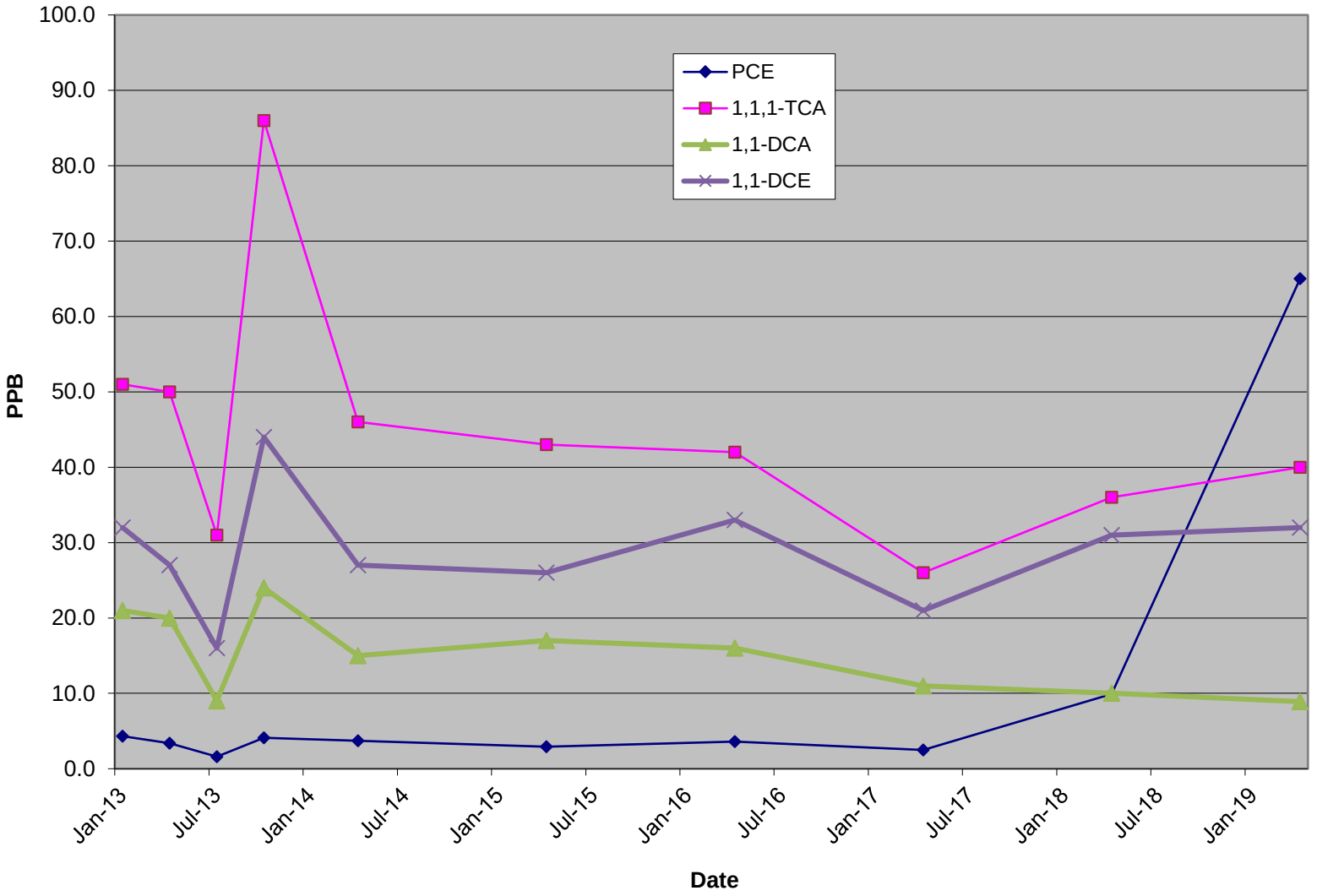

MW-37I
2013 to Present
PPB
250
200
150
100
50
0
Jan-13
Mar-13
May-13
Jul-13
Sep-13
Nov-13
Jan-14
Mar-14
May-14
Jul-14
Sep-14
Nov-14
Jan-15
Mar-15
May-15
Jul-15
Sep-15
Nov-15
Jan-16
Mar-16
May-16
Jul-16
Sep-16
Nov-16
Jan-17
Mar-17
May-17
Jul-17
Sep-17
Nov-17
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
Date
c-1,2-DCE
PCE
1,1,1-TCA
1,1-DCA
1,1-DCE
Vinyl Chloride

MW-38S

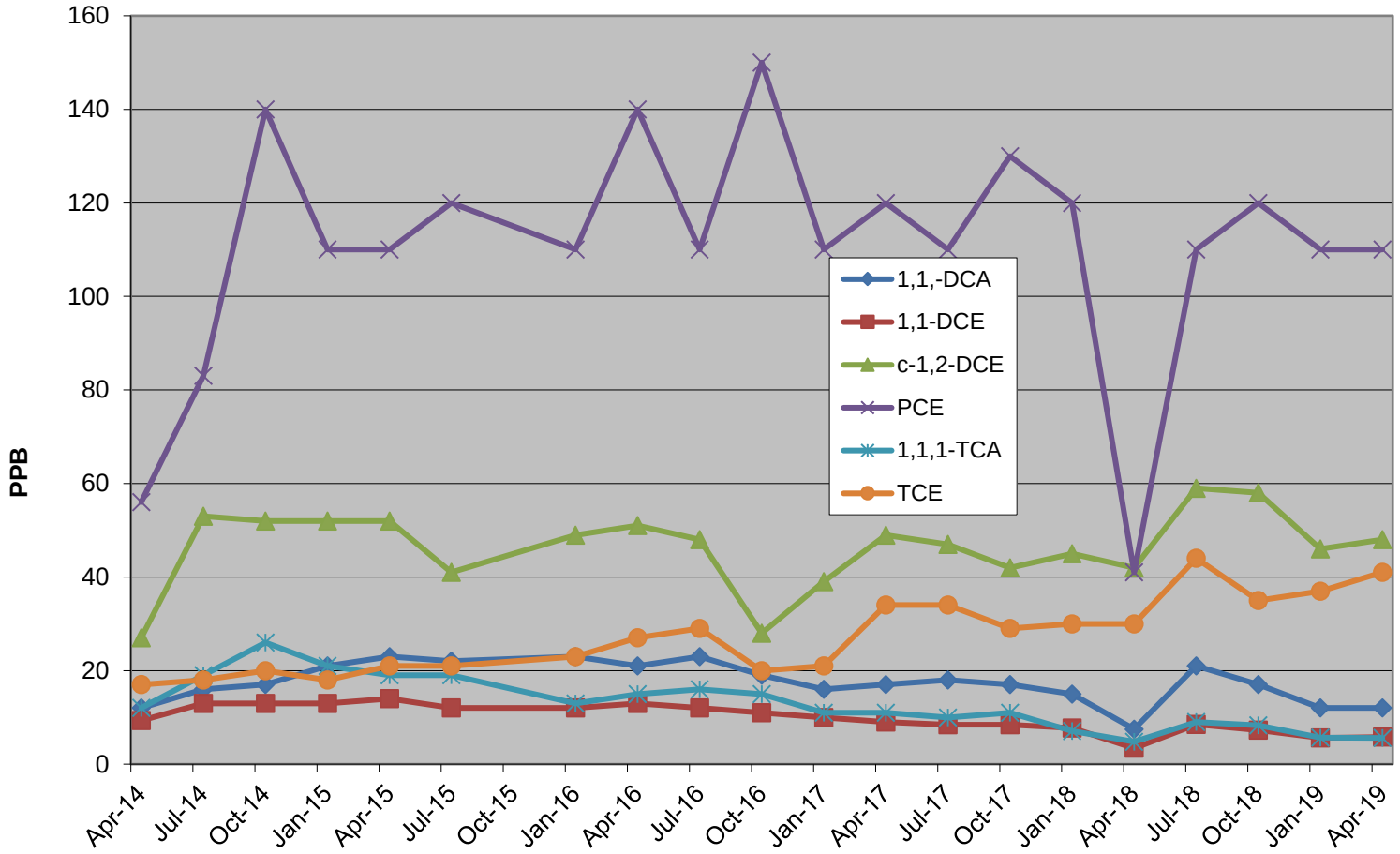

PPB
250
200
150
100
50
0
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
Jan-17
Jan-18
Jan-19
1,1-DCA
1,1-DCE
c-1,2-DCE
PCE
1,1,1-TCA
TCE

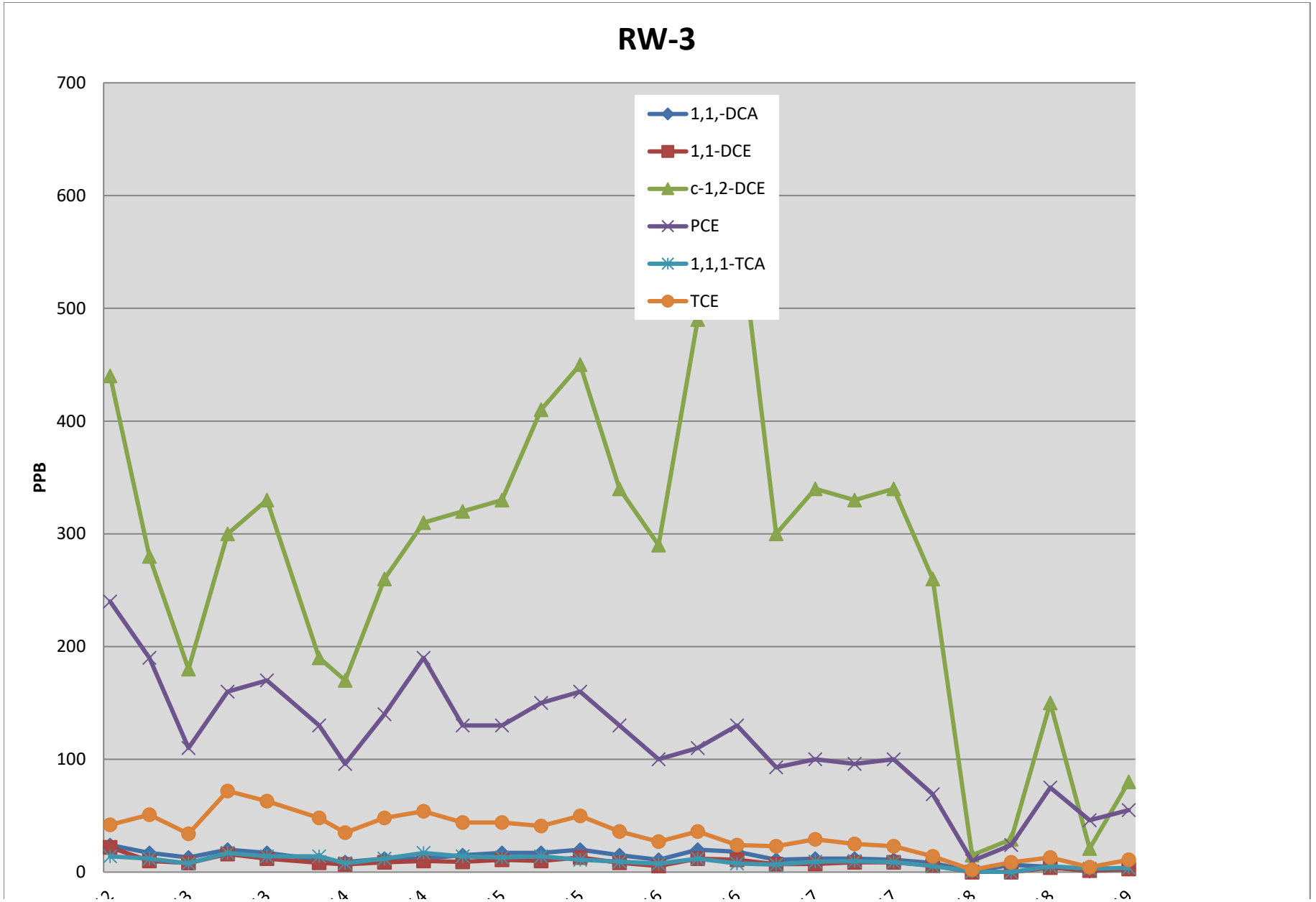
MW-56D
2012-Current



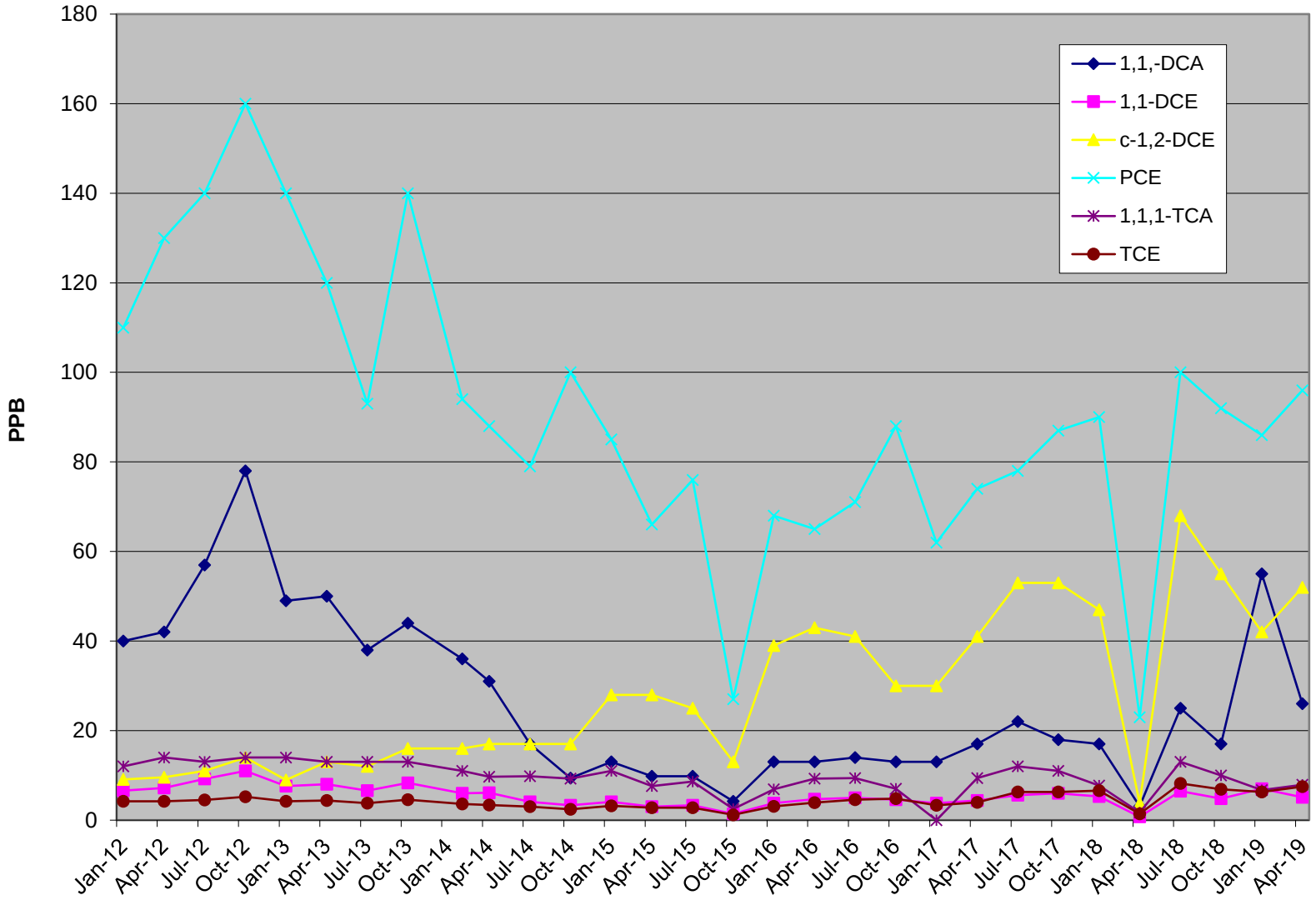

MW-61D
PCE
1,1,1-TCA
1,1-DCA
1,1-DCE
PPB
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Jan-17
Jul-17
Jan-18
Jul-18
Jan-19
Date

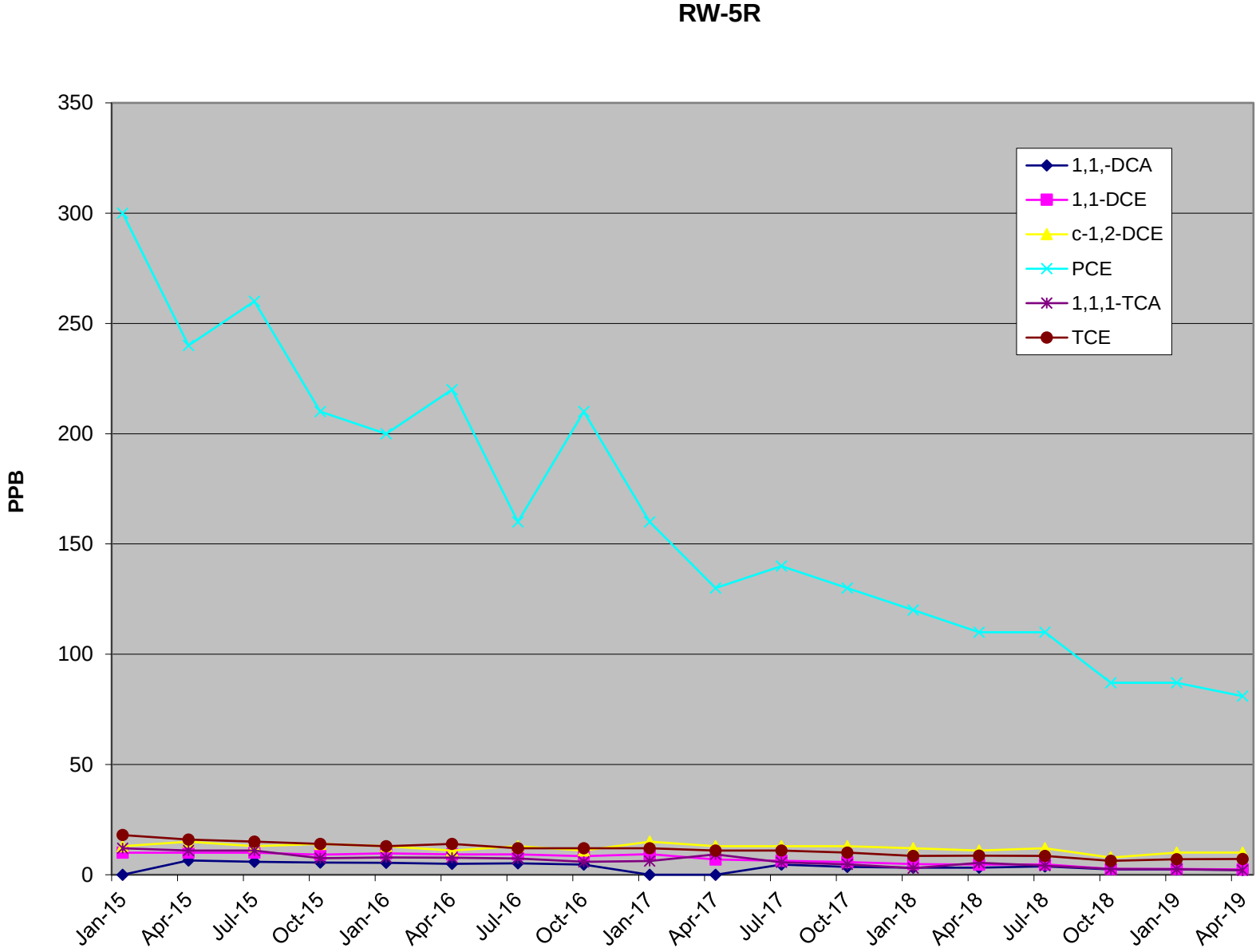
RW-2


PPB
160
140
120
100
80
60
40
20
0
Apr-14
Jul-14
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Apr-17
Jul-17
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
1,1,-DCA
1,1-DCE
c-1,2-DCE
PCE
1,1,1-TCA
TCE

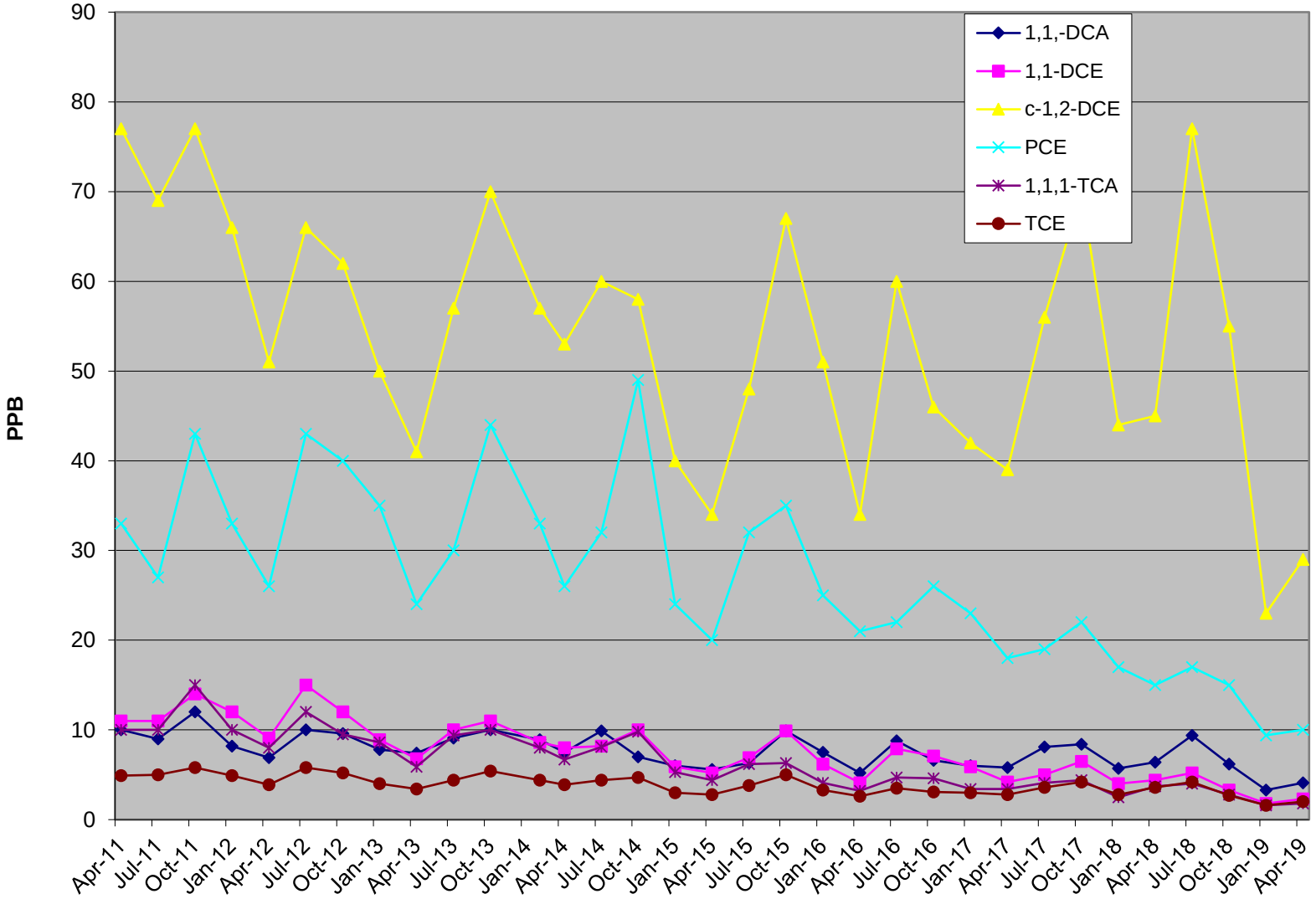

RW-3
700
600
500
400
300
200
100
0
PPB
1,1,-DCA
1,1-DCE
c-1,2-DCE
PCE
1,1,1-TCA
TCE

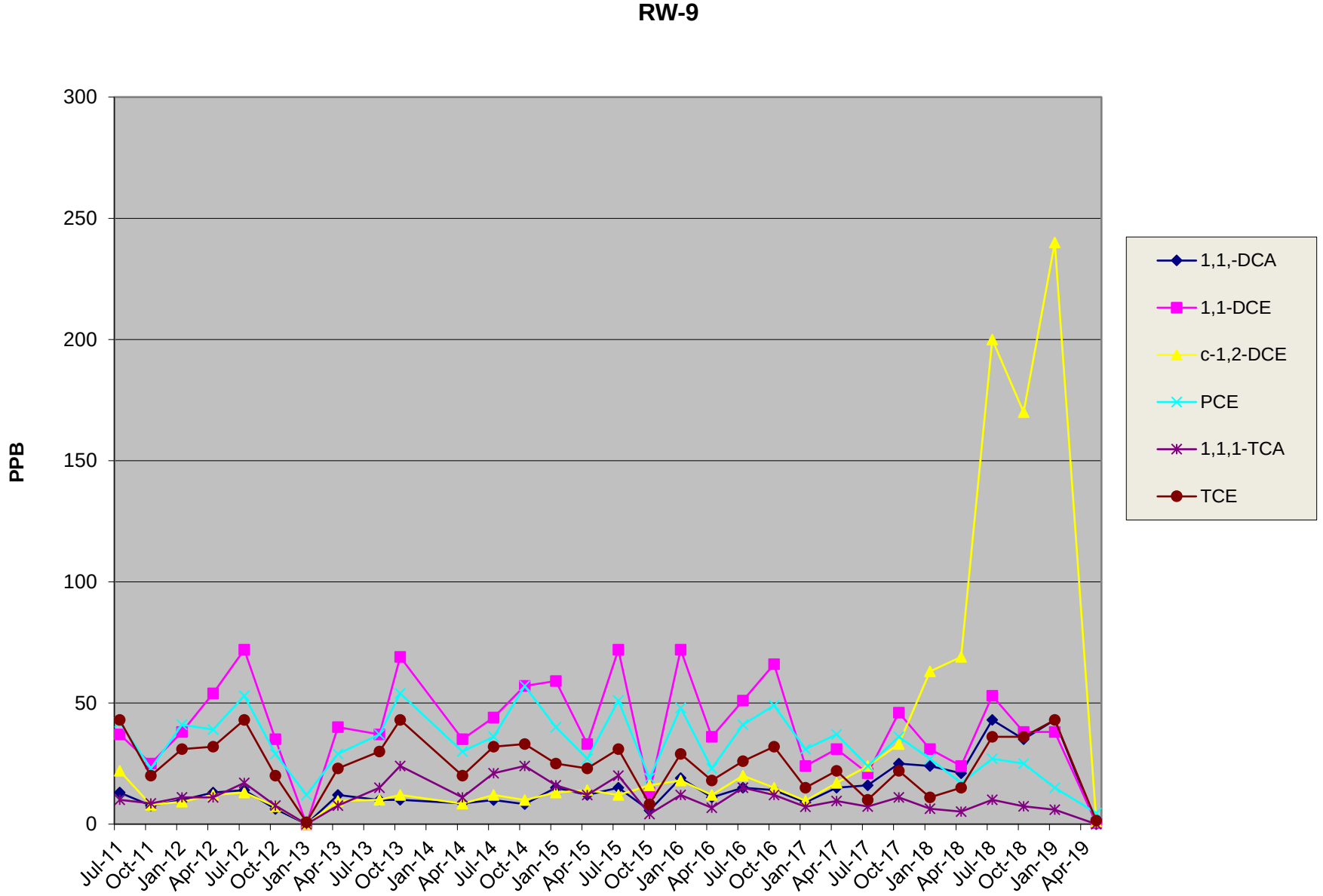
RW-4

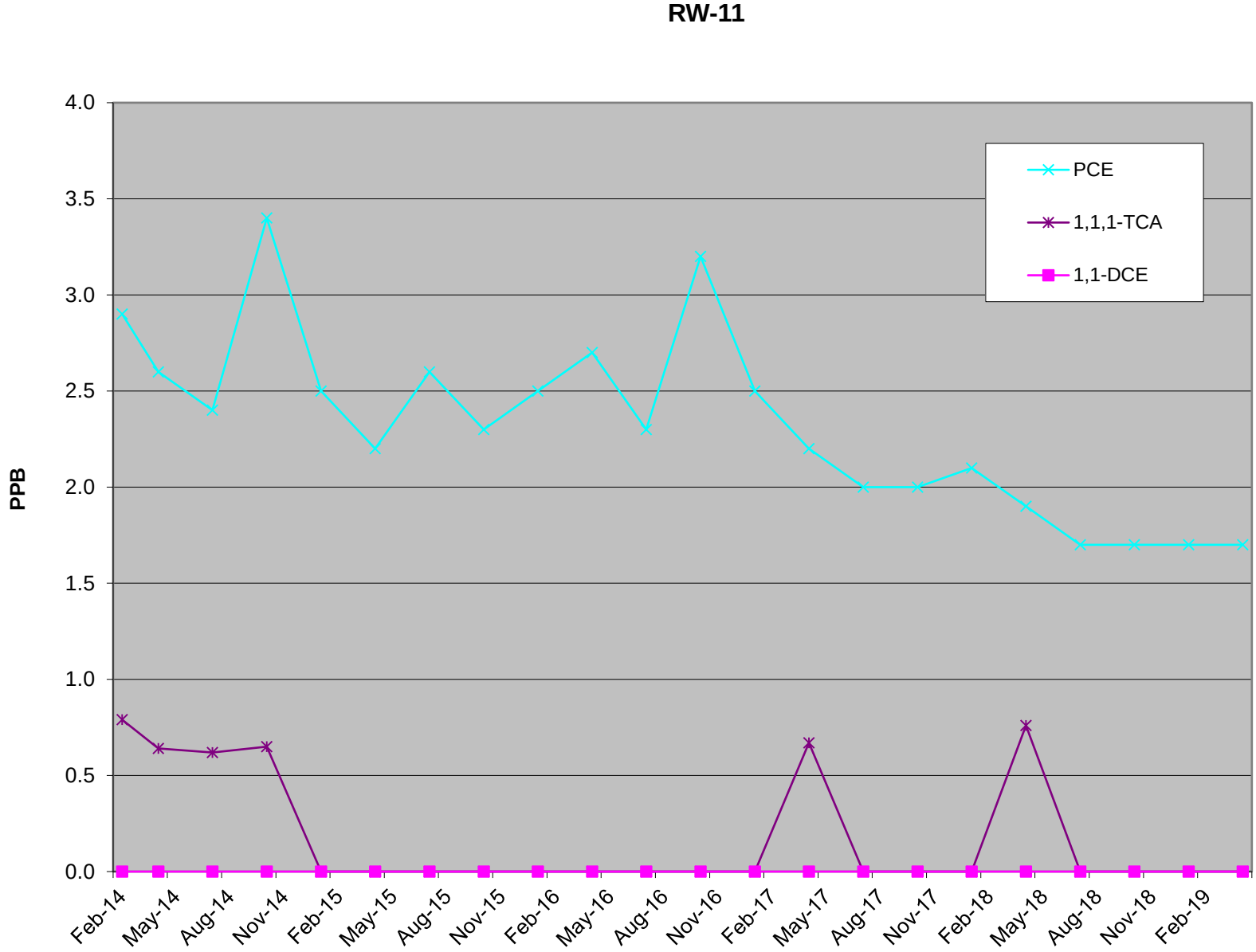

PPB
180
160
140
120
100
80
60
40
20
0
Jan-12
Apr-12
Jul-12
Oct-12
Jan-13
Apr-13
Jul-13
Oct-13
Jan-14
Apr-14
Jul-14
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Apr-17
Jul-17
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
1,1,-DCA
1,1-DCE
c-1,2-DCE
PCE
1,1,1-TCA
TCE


RW-5R
PPB
350
300
250
200
150
100
50
0
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Apr-17
Jul-17
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
1,1,-DCA
1,1-DCE
c-1,2-DCE
PCE
1,1,1-TCA
TCE

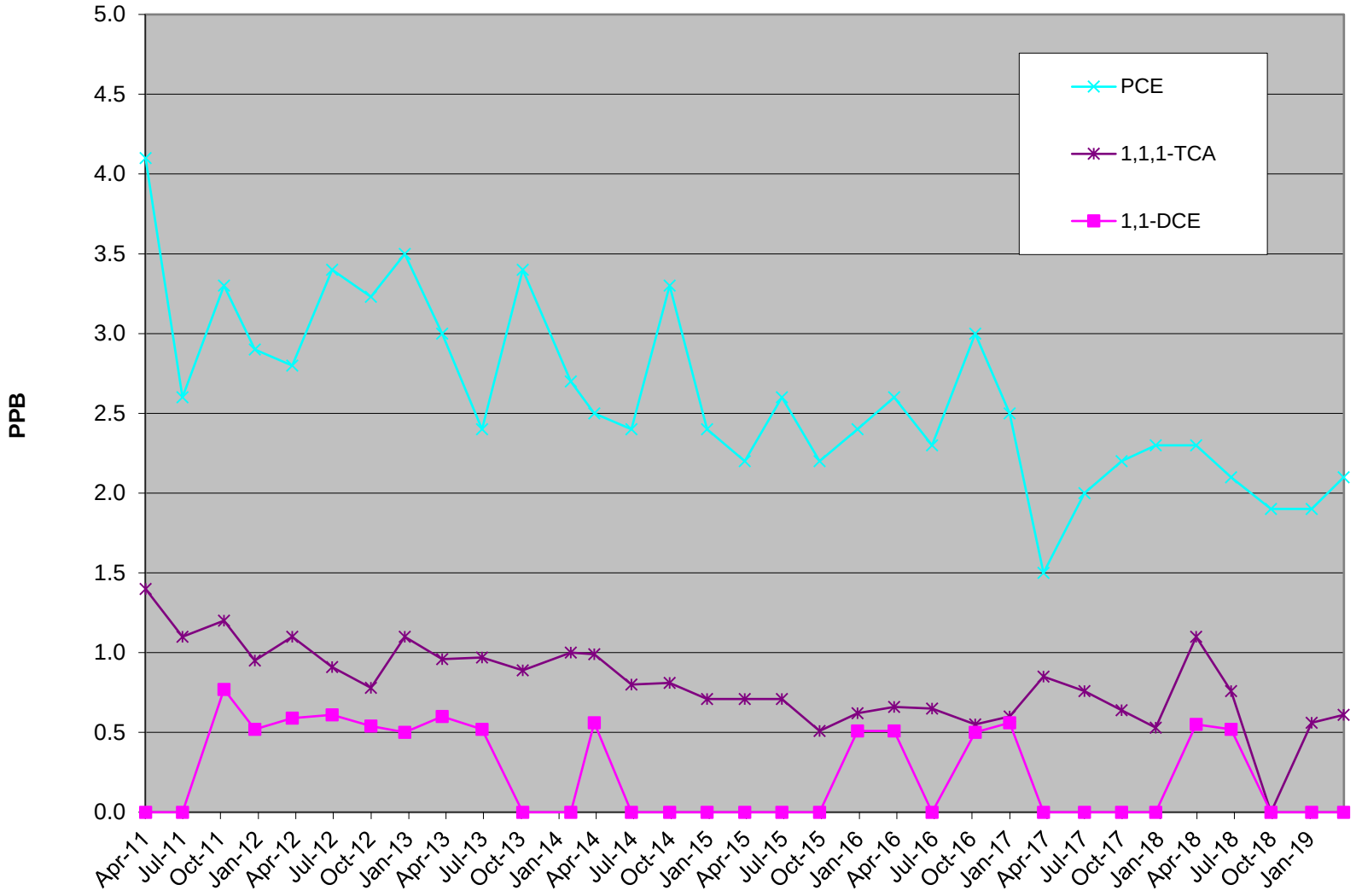
RW-8


PPB
90
80
70
60
50
40
30
20
10
0
Apr-11
Jul-11
Oct-11
Jan-12
Apr-12
Jul-12
Oct-12
Jan-13
Apr-13
Jul-13
Oct-13
Jan-14
Apr-14
Jul-14
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Apr-17
Jul-17
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
1,1,-DCA
1,1-DCE
c-1,2-DCE
PCE
1,1,1-TCA
TCE


RW-9
PPB
300
250
200
150
100
50
0
Jul-11
Oct-11
Jan-12
Apr-12
Jul-12
Oct-12
Jan-13
Apr-13
Jul-13
Oct-13
Jan-14
Apr-14
Jul-14
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Apr-17
Jul-17
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
1,1,-DCA
1,1-DCE
c-1,2-DCE
PCE
1,1,1-TCA
TCE


RW-11
PPB
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
PCE
1,1,1-TCA
1,1-DCE
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Aug-15
Nov-15
Feb-16
May-16
Aug-16
Nov-16
Feb-17
May-17
Aug-17
Nov-17
Feb-18
May-18
Aug-18
Nov-18
Feb-19

RW-12


PPB
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
PCE
1,1,1-TCA
1,1-DCE
Apr-11
Jul-11
Oct-11
Jan-12
Apr-12
Jul-12
Oct-12
Jan-13
Apr-13
Jul-13
Oct-13
Jan-14
Apr-14
Jul-14
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Apr-17
Jul-17
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19

RW-13

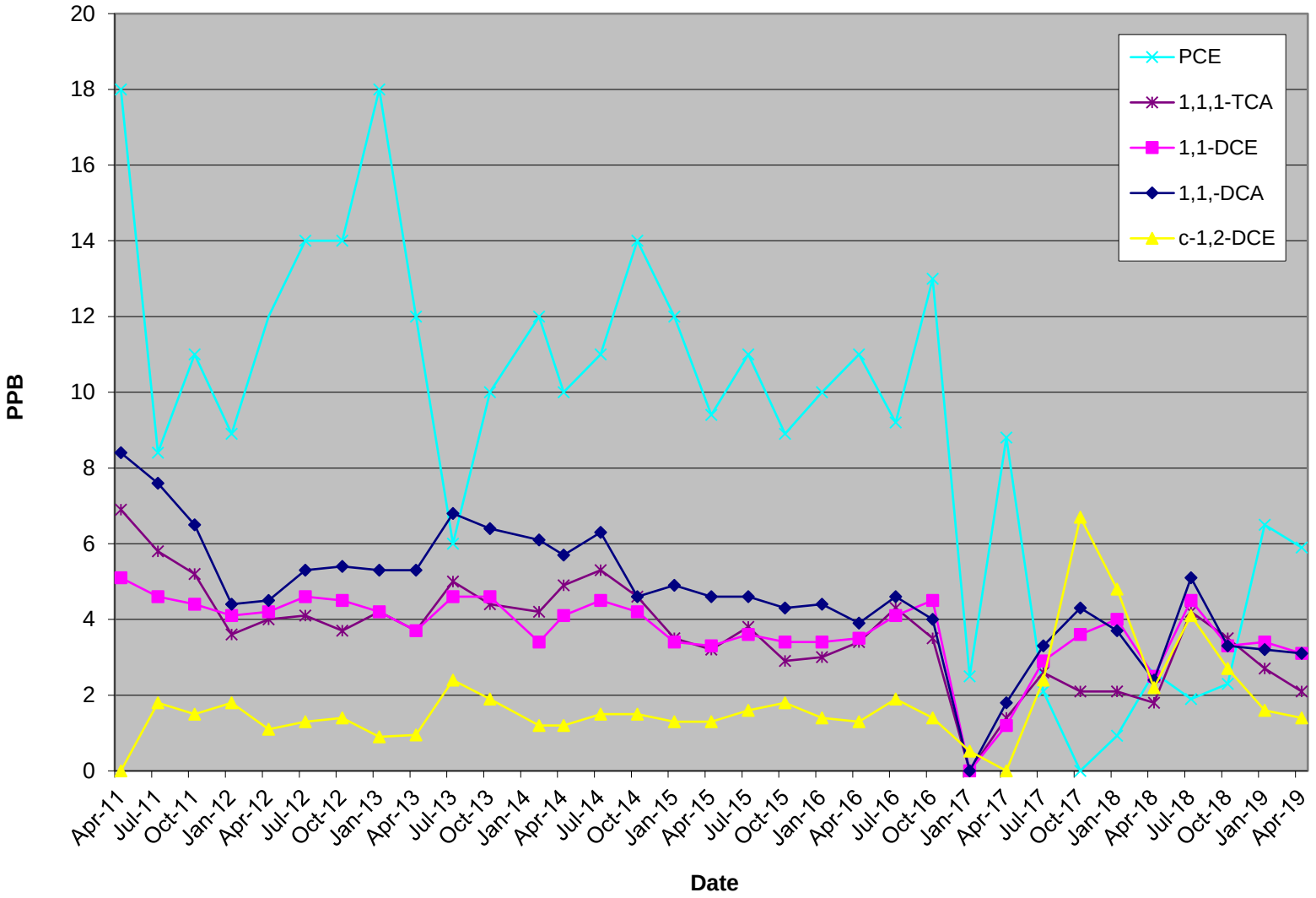

PPB
20
18
16
14
12
10
8
6
4
2
0
PCE
1,1,1-TCA
1,1-DCE
1,1,-DCA
c-1,2-DCE
Apr-11
Jul-11
Oct-11
Jan-12
Apr-12
Jul-12
Oct-12
Jan-13
Apr-13
Jul-13
Oct-13
Jan-14
Apr-14
Jul-14
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Apr-17
Jul-17
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
Date

Table-1
Soil Vapor Extraction Sampling
FORMER MILLER CONTAINER FACILITY

NYSDEC SITE # 7-38-029

DATE: June 8, 2018

Centek Report No.: C1806023

Location	1,1,1-TCA	*1,1-DCA	1,1-DCE	*1,4-Dioxane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
NYSDOH Matrix	B	N/A	A	N/A	A	B	B	A
Mitigation Req'd Action Level	1000 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$	1000 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$
DPEN-1	5.1	2.4	1.10	<1.1	4.2	<0.52	56	5.9
DPEN-2	33	5.2	1.20	5.5	14	0.69	110	4.7
DPEN-4	800	190	12	<1.1	910	6.1	260	180
SVEN-2	2.8	0.65	<0.59	71	0.83	0.5	99	4.00

All readings in $\mu g/m^3$

* Matrix B is assumed for all compounds not specifically listed

TABLE-2
FORMER MILLER CONTAINER FACILITY
SVE SYSTEM MONITORING
June 8, 2018

Well	Delta p	SCFM	Cu M/day	Total VOC ug/m3	ug/day	g/day
DPEN-1	0.37	33.7	1375	75	103141	0.10
DPEN-2	0.83	50.5	2060	174	358391	0.36
DPEN-4	0.11	18.4	750	2358	1768108	1.77
SVEN-2	0.14	20.7	846	179	151421	0.15
SVEN-6	0.01	5.5	226		0	0.00
SVEN-7	0.02	7.8	320		0	0.00
SVEN-8	0.00	0.0	0		0	0.00
SVEN-10	0.05	12.4	506		0	0.00
SVEN-11	0.00	0.0	0		0	0.00
Total Cubic meters per day			6082.04		Grams per day	2.38
					Pounds per day	0.005
					Pounds per month	0.15
					Pounds per year	1.92

Flow rates are calculated using the formula $Q(SCFM)=128.8*K*D^2*SQRT(P*DP/(T+460*S_s))$ from Dwyer where k is flow coeficient for standard Operating ranges

K values	1-Inch	1.5-Inch	2-Inch	3-Inch	4-Inch	6-inch
	0.52	0.58	0.64	0.67	0.67	0.71

Dp differential pressure expressed in inches of Water Column
D inside diameter of pipe expressed in inches
P static line pressure expressed in (psia)
S_s $S_p G_r$ at 60 deg F
The above table applies only to air flowing under standard atmospheric conditions

Table-1
Soil Vapor Extraction Sampling
FORMER MILLER CONTAINER FACILITY

NYSDEC SITE # 7-38-029

DATE: August 20, 2018

Centek Report No.: C1806054

Location	1,1,1-TCA	*1,1-DCA	1,1-DCE	*1,4-Dioxane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
NYSDOH Matrix	B	N/A	A	N/A	A	B	B	A
Mitigation Req'd Action Level	1000 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$	1000 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$
DPEN-1	8.4	5.4	2.6	0.36	21	0.38	120	8.7
DPEN-2	52	7.4	1.3	39	83	0.63	1900	19
DPEN-4	5400	450	57	1.5	4000	15	3900	1000
SVEN-2	7.1	2.2	0.75	400	2.4	0.38	440	16

All readings in $\mu g/m^3$

* Matrix B is assumed for all compounds not specifically listed

TABLE-2
FORMER MILLER CONTAINER FACILITY
SVE SYSTEM MONITORING
August 20, 2018

Well	Delta p	SCFM	Cu M/day	Total VOC ug/m3	ug/day	g/day
DPEN-1	0.40	35.1	1430	166	237360	0.24
DPEN-2	0.93	53.5	2180	2102	4582925	4.58
DPEN-4	0.08	15.7	639	14823	9478719	9.48
SVEN-2	0.07	14.7	598	868	519203	0.52
SVEN-6	0.01	5.5	226		0	0.00
SVEN-7	0.02	7.8	320		0	0.00
SVEN-8	0.00	0.0	0		0	0.00
SVEN-10	0.05	12.4	506		0	0.00
SVEN-11	0.00	0.0	0		0	0.00
Total Cubic meters per day			5899.12		Grams per day	14.82
					Pounds per day	0.033
					Pounds per month	0.95
					Pounds per year	11.92

Flow rates are calculated using the formula $Q(SCFM)=128.8*K*D^2*SQRT(P*DP/(T+460*S_s))$ from Dwyer where k is flow coeficient for standard Operating ranges

K values	1-Inch	1.5-Inch	2-Inch	3-Inch	4-Inch	6-inch
	0.52	0.58	0.64	0.67	0.67	0.71

Dp differential pressure expressed in inches of Water Column
D inside diameter of pipe expressed in inches
P static line pressure expressed in (psia)
S_s $S_p G_r$ at 60 deg F
The above table applies only to air flowing under standard atmospheric conditions

Table-1
Soil Vapor Extraction Sampling
FORMER MILLER CONTAINER FACILITY

NYSDEC SITE # 7-38-029

DATE: November 20, 2018

Centek Report No.: C1811040

Location	1,1,1-TCA	*1,1-DCA	1,1-DCE	*1,4-Dioxane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
NYSDOH Matrix	B	N/A	A	N/A	A	B	B	A
Mitigation Req'd Action Level	1000 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$	1000 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$
DPEN-1	6.2	3.8	1.3	<1.1	33	<0.52	150	4.5
DPEN-2	29	3.8	0.8	3.0	39	2.7	1600	15
DPEN-4	5700	340	39	4.3	3600	5.4	3400	1000
SVEN-2	5.1	<0.61	0.48	240	1.5	0.45	270	2.3

All readings in $\mu g/m^3$

* Matrix B is assumed for all compounds not specifically listed

TABLE-2
FORMER MILLER CONTAINER FACILITY
SVE SYSTEM MONITORING
November 20, 2018

Well	Delta p	SCFM	Cu M/day	Total VOC ug/m3	ug/day	g/day
DPEN-1	0.40	35.1	1430	199	284545	0.28
DPEN-2	0.93	53.5	2180	1694	3693375	3.69
DPEN-4	0.08	15.7	639	14088	9008716	9.01
SVEN-2	0.07	14.7	598	520	311043	0.31
SVEN-6	0.01	5.5	226		0	0.00
SVEN-7	0.02	7.8	320		0	0.00
SVEN-8	0.00	0.0	0		0	0.00
SVEN-10	0.05	12.4	506		0	0.00
SVEN-11	0.00	0.0	0		0	0.00
Total Cubic meters per day			5899.12		Grams per day	13.30
					Pounds per day	0.029
					Pounds per month	0.85
					Pounds per year	10.70

Flow rates are calculated using the formula $Q(SCFM)=128.8*K*D^2*SQRT(P*DP/(T+460*S_s))$ from Dwyer where k is flow coeficient for standard Operating ranges

K values	1-Inch	1.5-Inch	2-Inch	3-Inch	4-Inch	6-inch
	0.52	0.58	0.64	0.67	0.67	0.71

Dp differential pressure expressed in inches of Water Column
D inside diameter of pipe expressed in inches
P static line pressure expressed in (psia)
S_s $S_p G_r$ at 60 deg F
The above table applies only to air flowing under standard atmospheric conditions

Table-1
Soil Vapor Extraction Sampling
FORMER MILLER CONTAINER FACILITY

NYSDEC SITE # 7-38-029

DATE: March 8, 2019

Centek Report No.: C1903015

Location	1,1,1-TCA	*1,1-DCA	1,1-DCE	*1,4-Dioxane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
NYSDOH Matrix	B	N/A	A	N/A	A	B	B	A
Mitigation Req'd Action Level	1000 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$	1000 $\mu g/m^3$	1000 $\mu g/m^3$	60 $\mu g/m^3$
DPEN-1	5.9	3.7	0.56	<1.1	3.3	2.4	130	2.7
DPEN-2	11	2.1	0.5	<1.1	7.2	0.69	350	1.2
DPEN-4	580	100	5.0	<1.1	510	2.5	920	140
SVEN-2	1.4	<0.61	<0.59	94	0.59	0.59	170	0.59

All readings in $\mu g/m^3$

* Matrix B is assumed for all compounds not specifically listed

TABLE-2
FORMER MILLER CONTAINER FACILITY
SVE SYSTEM MONITORING
March 8, 2019

Well	Delta p	SCFM	Cu M/day	Total VOC ug/m3	ug/day	g/day
DPEN-1	0.40	35.1	1430	149	213052	0.21
DPEN-2	0.93	53.5	2180	372	811060	0.81
DPEN-4	0.08	15.7	639	2258	1443901	1.44
SVEN-2	0.07	14.7	598	267	159709	0.16
SVEN-6	0.01	5.5	226		0	0.00
SVEN-7	0.02	7.8	320		0	0.00
SVEN-8	0.00	0.0	0		0	0.00
SVEN-10	0.05	12.4	506		0	0.00
SVEN-11	0.00	0.0	0		0	0.00
Total Cubic meters per day			5899.12		Grams per day	2.63
					Pounds per day	0.006
					Pounds per month	0.17
					Pounds per year	2.11

Flow rates are calculated using the formula $Q(SCFM)=128.8*K*D^2*SQRT(P*DP/(T+460*S_s))$ from Dwyer where k is flow coeficient for standard Operating ranges

K values	1-Inch	1.5-Inch	2-Inch	3-Inch	4-Inch	6-inch
	0.52	0.58	0.64	0.67	0.67	0.71

Dp differential pressure expressed in inches of Water Column
D inside diameter of pipe expressed in inches
P static line pressure expressed in (psia)
S_s $S_p G_r$ at 60 deg F
The above table applies only to air flowing under standard atmospheric conditions

Appendix E

6 NYCRR PART 375		
Environmental Remediation Programs		
Table 375-6.8 (b)		
	Soil Clean-up Levels (PPM)	
Compound	Commercial	Industrial
1,1-Dichloroethane	240	480
Acetone	500	1000
1,1-Dichloroethene	500	1000
1.2-Dichloroethene (cis-1,2-Dichloroethene)	500	1000
1,1,1-Trichloroethane	150	300
Tetrachloroethylene	150	300
Methylene Chloride	500	1000
Trichloroethylene	200	400
Benzene	44	89
Toluene	500	1000
Xylenes	500	1000
Methyl Isobutyl Ketone	NS	NS
Methyl Butyl Ketone	NS	NS
Methyl Amyl Ketone	NS	NS
4-Methyl-2-Pentanol	NS	NS
alpha-Pinene	NS	NS
Phenanthrene	NS	NS
2-Octanone	NS	NS
Ethylbenzene	390	780

NS - Not Specified