Technical Memorandum

TO: Robin Harrover and Neal Hines, Washington State Department of Ecology
James Bet and James Swortz, The Boeing Company

FROM: Jennifer Wynkoop and Sarah Fees, LG

DATE: June 21, 2016

RE: **Phase VII Interim Groundwater Monitoring Program**
Boeing Auburn Facility
Auburn, Washington
Project No. 0025164.130.109

Introduction

This memorandum presents updates to the site-wide groundwater monitoring program [currently titled Phase VI (i.e., six) Interim Groundwater Monitoring Program] being conducted at and near The Boeing Company (Boeing) Auburn property in Auburn, Washington. Included in this memorandum are proposed modifications to the program and the rationale for these proposed changes. The plan has been reviewed by Washington State Department of Ecology (Ecology) and has been modified based on Ecology's requests (Ecology 2016). Once the final program is approved by Ecology, the updated program will be titled the Phase VII (i.e., seven) Interim Groundwater Monitoring Program. The Phase VII Interim Groundwater Monitoring Program is expected to take effect in June 2016.

Background

The Phase VI groundwater monitoring program has been in effect since the December 2014 semi-annual sampling event (LAI 2014b). When approved, the Phase VI monitoring plan included 197 wells and 255 active sampling points[1] (i.e., well screens). The Ecology-approved modifications presented in the Phase VI groundwater monitoring program included:

- Reducing frequency of U.S. Environmental Protection Agency (EPA) Method 8260C selected ion monitoring (SIM; Method 8260 SIM) analysis at wells where there are no detections of vinyl chloride (VC) by this method during the last four sampling events, except at 12 sampling locations as requested by Ecology via an email from Robin Harrover to Jim Bet dated November 26, 2014
- Reducing sampling frequency from quarterly or semi-annually to annually at wells that have data from at least the last four sampling events below the detection limits, except at seven sampling locations as requested by Ecology via the email dated November 26, 2014
- Reducing sampling frequency from quarterly to semi-annually at wells that have sufficient data (i.e., at least 4 quarters), except at 10 sampling locations as requested by Ecology via the email dated November 26, 2014 and another email from Robin Harrover to Jennifer Wynkoop of Landau Associates, Inc. (LAI) dated December 5, 2014.

[1] Each multi-channel well in the previous sampling program was sampled from three screens (one in the shallow, one in the intermediate, and one in the deep aquifer zones).

Since the Phase VI program was finalized, 21 new wells have been installed and added to the Phase VI program. The Phase VI program currently includes 213 wells and 263 active sampling points (i.e., well screens). The current monitoring well network is presented on Figure 1 and the current Phase VI sampling matrix is presented in Table 1.

Additional changes that have been incorporated since the Phase VI program was finalized include:

- Continuous multi-channel tubing well channel selection at a number of wells (AGW241, AGW247, AGW248, AGW249, and AGW254),
- Elimination of sampling at Washington State Department of Transportation (WSDOT) wells APP-069 and APP-058 and reduction in sampling frequency at WSDOT well APP-057, and
- Adding natural attenuation (NA) sampling to a number of wells to monitor the effectiveness of the Algona, Washington enhanced NA pilot test.

These changes are reflected in Table 1.

Objectives

The proposed Phase VII program reflects the status of the remedial investigation (RI) and helps to focus data collection where it is most needed. Overall, these are conservative changes intended to improve site-wide monitoring and data management. The Phase VII program emphasizes the following data objectives:

- Continue to monitor the volatile organic compound (VOC) plumes of trichloroethene (TCE) and its breakdown products cis-1,2-dichloroethene (cis-1,2-DCE) and VC, that originate on Boeing property and extend off Boeing property to the north and northwest
- Continue to document contaminant concentrations in groundwater at specific solid waste management units and areas of concern , and in the vicinity of the City of Pacific water supply wells (at sentry wells)
- Continue to monitor the effectiveness of the Algona-enhanced NA pilot test completed in September 2015.

Modifications

The Phase VII monitoring program revises the existing Phase VI program with several proposed modifications. Proposed modifications are intended to improve data management and reduce sampling resources (both field and laboratory) while maintaining overall data quality to meet RI and feasibility study (FS) objectives. The proposed modifications are identified in the bullet points below; each of the proposed modifications are then further described in the following sections. The proposed program modifications include:

- Discontinue sampling of tetrachloroethene (PCE) by Method 8260 SIM at all locations.

- Reduce sampling frequency from quarterly to semi-annually at wells that have sufficient data (i.e., at least 4 quarters); except at locations where Ecology has requested an alternate sampling frequency.
- Reduce frequency of Method 8260 SIM analysis to an annual frequency at wells where there are no detections of VC by this method during the last four sampling events; except at locations where Ecology has requested continued quarterly or semi-annual analysis of VC by Method 8260 SIM.
- Discontinue collecting NA parameters at select wells that have been previously monitored, not including those monitored for the Algona enhanced NA pilot test.

Boeing also proposed to discontinue sampling at wells that are outside of the plume boundary that have had no detections but Ecology denied this request. For wells with a proposed change in sampling frequency, VOC constituents (PCE, TCE, cis-1,2-DCE, and VC) and NA parameters were evaluated to determine the potential impact on the overall data set. The proposed Phase VII sampling plan is provided in Table 2[2].

Discontinue Sampling of Tetrachloroethene by Selected Ion Monitoring Analysis

Boeing proposes to analyze for PCE by EPA Method 8260c (Method 8260 scan) only. Boeing previously proposed this change in the Amendment to the Phase V Groundwater Monitoring Program (LAI 2014a). Ecology responded to these proposed changes via an email from Robin Harrover to James Bet dated May 23, 2014. Ecology reviewed the data for PCE on a well-by-well basis and required continued analysis of PCE using Method 8260 SIM at select wells. In addition, Ecology required that all newly installed wells be analyzed for PCE using Method 8260 SIM. Ecology's request was predicated on determining whether PCE was present at the lowest possible detection limit.

The purpose of Method 8260 SIM analysis is to achieve a lower detection limit when the Method 8260 scan detection limit is insufficiently low to meet the screening criteria for a particular constituent. In September 2012, the cleanup levels for PCE in Ecology's Cleanup Level and Risk Calculations database were updated to reflect updated toxicity information. The previous Model Toxics Control Act Method B groundwater, carcinogen standard formula value was 0.081micrograms per liter (µg/L). This value was updated to 21 µg/L in September 2012. The current screening level for PCE in groundwater is 5 µg/L which reflects the state and federal maximum contaminant level. Since the Method 8260 scan reporting limit of 0.2 µg/L is less than the screening level, Method 8260 SIM analysis for PCE is no longer needed. To date PCE has been analyzed by Method 8260 SIM at least twice at all wells to determine if PCE is present, even at low concentrations.

[2] Table 2 shows the continuous multi-channel tubing well channel selection at AGW276, which was discussed between Ecology and Boeing separately from this document.

Boeing requests that Method 8260 SIM analysis for PCE be eliminated from the groundwater monitoring program for the following reasons:

- PCE screening levels have increased above the Method 8260 scan reporting limit
- Method 8260 SIM analysis for PCE has been completed at least twice at all wells
- In the context of completing the RI, further analysis of PCE by Method 8260 SIM does not provide additional insight in evaluating the nature and extent of the VOC plumes or cleanup options.

Changes to the PCE Method 8260 SIM sampling program are presented in Table 2.

Reduction in Volatile Organic Compound Sampling Frequency

Boeing proposes to reduce sampling frequency for wells that are sampled for VOCs quarterly to a semi-annual sampling schedule. Wells AGW237 through AGW276 and select wells[3] identified by Ecology are sampled on a quarterly basis. Boeing proposes that sampling frequency be reduced from quarterly to semi-annually at all wells except the wells with less than 4 quarters of sample results (AGW269 through AGW276) and wells that are sampled as part of the 2015 Algona-enhanced NA pilot test. Wells selected for NA data collection related to the 2015 Algona-enhanced NA pilot test are not included in this request; quarterly sampling for VOCs using Method 8260 scan and VC by Method 8260 SIM is proposed for the remainder of the pilot test monitoring program. The time series plots for wells proposed for sampling frequency reduction are presented in Attachment A.

Ecology requested that four of the proposed locations (AGW191, AGW192, AGW262, and AGW263) remain on a quarterly sampling frequency. These four locations will continue to be sampled quarterly. Changes to the VOC sampling frequency are presented in Table 2.

Reduction in Volatile Organic Compound Select Ion Monitoring Analysis Frequency for Vinyl Chloride

Boeing proposes to reduce Method 8260 SIM analysis to annual frequency for wells where VC concentrations have been below the Method 8260 SIM detection limit of 0.02 µg/L for at least the last four sampling events. Ecology previously requested that the sentry wells located on the Safeway property continue to be sampled by Method 8260 scan and Method 8260 SIM on a semi-annual basis. Therefore, the eight sentry wells (AGW074, AGW087, AGW088, AGW089, AGW090, AGW091, AGW119, and AGW120) are not included in the proposal for reducing sampling frequency for Method 8260 SIM below.

[3] Wells AGW183, AGW191, AGW192, AGW215, AGW227, AGW228, AGW235-2, and AGW235-4.

There are 14[4] sampling points where VC has not been detected at or above the Method 8260 SIM detection limit of 0.02 µg/L for at least the last four sampling events. A summary of wells that meet this condition and associated VC data is presented in Table 3. Boeing proposed modifying the VC Method 8260 SIM analysis frequency for all 14 wells to an annual basis regardless of the current well sampling frequency. However, Ecology requested that 7 of the 14 sampling points (AGW238, AGW241-1, AGW244, AGW246, AGW250-1, AGW254-1, and AGW254-5) remain on a semi-annual schedule for analysis of VC by Method 8260 SIM. In addition, at the four locations where Ecology requested continued quarterly well sampling frequency (AGW191, AGW192, AGW262, and AGW263), Ecology requested quarterly analysis of VC by Method 8260 SIM at AGW191 and AGW192 and semi-annual analysis of VC by Method 8260 SIM at AGW262 and AGW263. Changes to the VC Method 8260 SIM sampling program are presented in Table 2.

Discontinuation of Sampling for Natural Attenuation Parameters

Boeing proposes to discontinue sampling for NA parameters at select Area 1 well locations and at other previously monitored locations. No changes are proposed to the NA parameter sampling for the Algona pilot test. The proposed changes discussed below will allow for continued monitoring of the interim remedial action at Area 1 but will discontinue sampling for NA parameters where sufficient data has been collected. In addition, Boeing has proposed a site-wide NA sampling program for June 2016, which will assess NA conditions throughout the site, the proposed wells selected for this program will be submitted to Ecology in a separate work plan.

There are currently six wells (AGW002R, AGW066, AGW106R, AGW110R, AGW125, and AGW126) where NA parameters are collected to monitor the effectiveness of the Area 1 interim remedial actions that took place in 2004 through 2005. Ongoing treatment appears to be occurring at the three wells closest to the injection area (AGW002R, AGW106R, and AGW110R) as demonstrated by elevated methane concentrations, low to moderate sulfate, and total organic carbon concentrations above background conditions. Boeing proposes to continue to sample NA parameters at these three wells; however, reducing the collection of NA parameters to an annual frequency will be sufficient to monitor the ongoing effects of the Area 1 remediation. NA results from AGW125 and AGW126 indicate that the injection treatment area did not reach these wells; aquifer redox conditions and total organic carbon concentrations have remained consistent at these wells over time. Boeing proposes to discontinue sampling NA parameters at AGW125 and AGW126. AGW066 continues to be sampled for ferrous iron[5]; however, concentrations have remained consistent over time and ongoing testing of ferrous iron is not providing additional information about aquifer redox conditions. Boeing proposes

[4] The 14 sampling points where VC concentrations are below the SIM detection limit, and are proposed to be sampled for SIM for VC annually are AGW238, AGW241-1, AGW242-2, AGW242-5, AGW243-3, AGW243-5, AGW244, AGW246, AGW250-1, AGW254-1, AGW254-5, AGW256, AGW257, and AGW258.

[5] Other NA parameters besides ferrous iron are not analyzed at AGW066.

to discontinue sampling for ferrous iron at AGW066. Proposed changes to the NA sampling frequency for these six Area 1 wells are presented in Table 2.

Four wells (AGW131, AGW145, AGW148, and AGW152) were proposed for NA sampling as part of the Phase IV groundwater monitoring plan (LAI 2009, 2010). Wells AGW131 and AGW152 were monitored to evaluate relatively high VC concentration at SWMU S-18/Building 17-35 and to determine if conditions were conducive to complete reductive dechlorination of VC. Declining trends in VC, consistently low concentrations of sulfate, and the presence of methane (indicating methanogenic conditions) at both wells indicated that aquifer redox conditions are conducive to the complete breakdown of VC at both wells. NA parameters were collected at wells AGW145 and AGW148 to provide additional characterization of the aquifer redox conditions in the intermediate zone off Boeing property. Results of NA parameter collection indicate mildly reducing conditions are present at both wells (nitrate and iron concentrations are low to non-detect, moderate sulfate concentrations are present, and methane concentrations are low to non-detect). In addition, total organic carbon concentrations are low to non-detect. NA data at all four wells shows that aquifer redox conditions have remained consistent over time, and data collected to date provides adequate information on ambient aquifer conditions. Boeing proposes to discontinue NA parameter monitoring at all four of these wells. Approved changes to the NA sampling frequency are presented in Table 2.

Discontinuation of Sampling at Wells Outside Plume Boundary

Boeing recommended that six wells be removed from the groundwater monitoring program. These wells include AGW250-6, AGW253, AGW260, AGW264, AGW267, and AGW268 and are located outside of the plume boundary. These six wells are all screened in the intermediate or deep groundwater zones and monitoring of the plume boundary at these locations is not necessary, as there is another comparably screened well upgradient of each location. Concentration contours for each constituent (TCE, cis-1,2-DCE, and VC) showing the locations of the wells in relationship to the groundwater plumes in the intermediate and deep zones are presented in Figures 2 through 7. Time series plots for these wells are included in Attachment A.

Ecology requested that all six wells remain in the groundwater monitoring program; however, they approved revisions to the sampling frequencies. The revised sampling frequencies for all six wells are presented in Table 2.

Conclusions

Boeing plans to implement the changes to groundwater monitoring, titled Phase VII Interim Groundwater Monitoring Program, during the annual monitoring event in June 2016. Any new wells will be incorporated into the Phase VII monitoring program for 4 quarters of sampling after installation. After 4 quarters of samples have been collected, the sampling frequency will be adjusted to a semi-annual sampling frequency.

Boeing intends for the Phase VII monitoring program to streamline groundwater data collection while maintaining adequate data quality to meet the RI and FS objectives. If the needs of the project change, Boeing will resume sampling necessary wells at Ecology's request.

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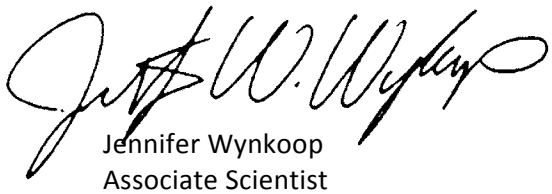

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Sarah Fees, LG
Project Geologist

SEF/JWW/jrc
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References

Ecology. 2016. Letter: Ecology comment and approval regarding the: Draft Technical Memorandum: Phase VII Interim Groundwater Monitoring Program, Boeing Auburn Facility, Auburn, Washington Landau Project No. 0025164.130.190; prepared for The Boeing Company by Landau Associates; February 10, 2016; Ecology FS #2018; CS #5049; EPA WAD041337130. From Robin Harrover, Hazardous Waste and Toxics Reduction Program, Washington State Department of Ecology, to James Bet, Environmental Affairs, The Boeing Company. June 1.

LAI. 2009. Final Letter: Interim Groundwater Monitoring Plan (Phase IV Groundwater Monitoring Program), Boeing Auburn, Auburn, Washington. From Eric F. Weber, Landau Associates, Inc., to Robin Harrover, Washington State Department of Ecology. November 20.

LAI. 2010. Final Letter: Response to Ecology's January 27, 2010 Letter on the Proposed Phase IV Monitoring Program - Boeing Auburn Fabrication Division Facility, Auburn, Washington WAD 041337130. From Eric F. Weber, Landau Associates, Inc., to Robin Harrover, Washington State Department of Ecology. March 3.

LAI. 2014a. Final Letter: Amendment to the Phase V Groundwater Monitoring Program, Boeing Auburn, Auburn, Washington. From Sarah Fees and Jennifer Wynkoop, Landau Associates, Inc., to Robin Harrover, Washington State Department of Ecology. May 1.

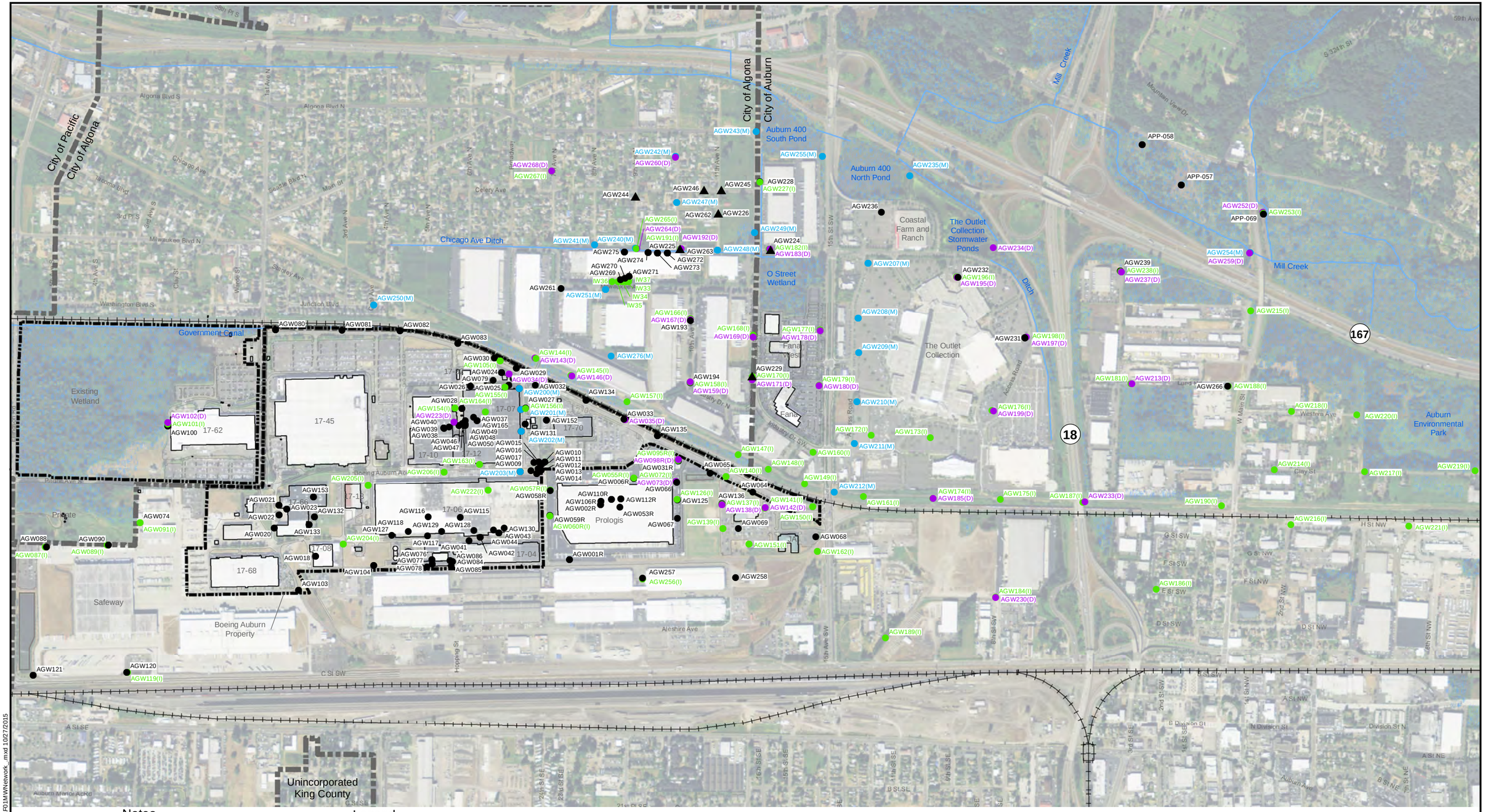
LAI. 2014b. Technical Memorandum: Phase VI Interim Groundwater Monitoring Program, Boeing Auburn, Auburn, Washington. Landau Associates, Inc. December 11.

Attachments

Figure 1: Current Monitoring Well Network
Figure 2: Intermediate Zone (40-60 ft) TCE Concentrations Most Recent – June 2015
Figure 3: Intermediate Zone (40-60 ft) cis-1,2-DCE Concentrations Most Recent – June 2015
Figure 4: Intermediate Zone (40-60 ft) Vinyl Chloride Concentrations Most Recent – June 2015
Figure 5: Deep Zone (80-100 ft) TCE Concentrations Most Recent – June 2015
Figure 6: Deep Zone (80-100 ft) cis-1,2-DCE Concentrations Most Recent – June 2015
Figure 7: Deep Zone (80-100 ft) Vinyl Chloride Concentrations Most Recent – June 2015

Table 1: Phase VI Groundwater Monitoring Plan
Table 2: Phase VII Groundwater Monitoring Plan
Table 3: Vinyl Chloride EPA Method 8260C SIM Data

Attachment A: Volatile Organic Compound Time Series Graphs



Notes

1. Well designations beginning with APP are installed and owned by WSDOT.
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- ▲ Offsite Water Table Well
- ● Shallow Monitoring Well (2 to 30 ft BGS)
- (I) ● Intermediate Monitoring Well (40 to 60 ft BGS)
- (D) ● Deep Monitoring Well (80 to 100 ft BGS)
- (M) ● Multi-Level Well
- Wetland Areas
- Water Bodies
- Waterways

N

0 1,000 2,000

Scale in Feet

Base map source: Geometrix 2003; Aerial Photo Source: ESRI World Imagery; Parcel Data Source: King County GIS 2012

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Boeing Auburn Auburn, Washington	**Current Monitoring Well Network**	Figure 1

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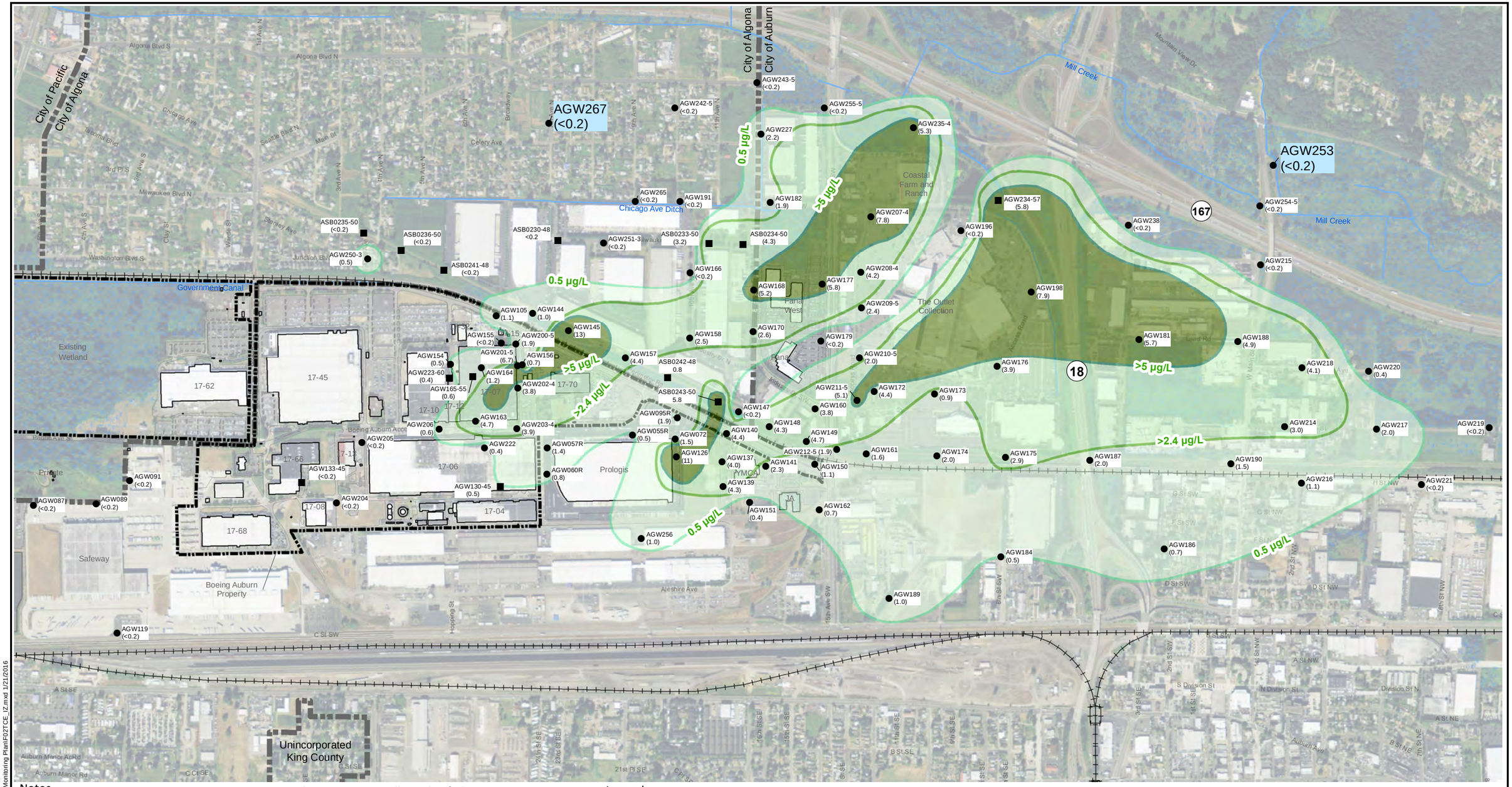

Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- TCE Contour (>5.0 µg/L)
- TCE Contour (>2.4 µg/L)
- TCE Contour (≥0.5 µg/L)
- Waterways
- Wetland Areas
- Boeing Property
- City Limits

AGW267 (<0.2) Wells proposed for removal from the groundwater monitoring program

N

0 1,000 2,000

Scale in Feet

Base map source: Geometrix 2003; Aerial Photo Source: Esri World Imagery; Parcel Data Source: King County GIS 2013

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Boeing Auburn Auburn, Washington	**Intermediate Zone (40-60 ft) TCE Concentrations Most Recent – June 2015**	Figure 2

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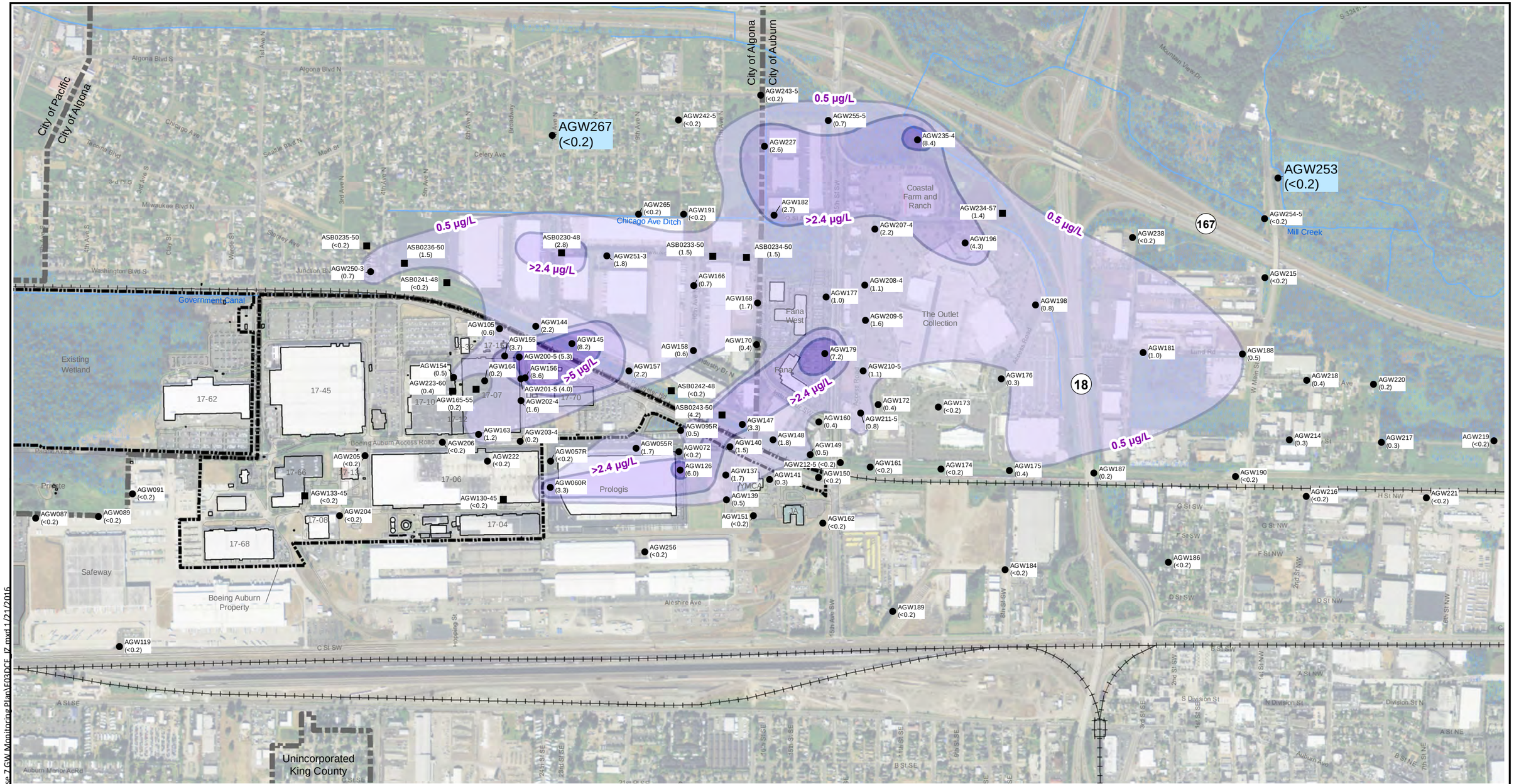

Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- cis-1,2-DCE Contour (>5.0 µg/L)
- cis-1,2-DCE Contour (>2.4 µg/L)
- cis-1,2-DCE Contour (≥0.5 µg/L)
- Waterways
- Wetland Areas
- Boeing Property
- City Limits

AGW267 (<0.2) Wells proposed for removal from the groundwater monitoring program

N

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Scale in Feet

Base map source: Geometrix 2003; Aerial Photo Source: Esri World Imagery; Parcel Data Source: King County GIS 2013

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Boeing Auburn Auburn, Washington	**Intermediate Zone (40-60 ft) cis-1,2-DCE Concentrations Most Recent – June 2015**	Figure 3

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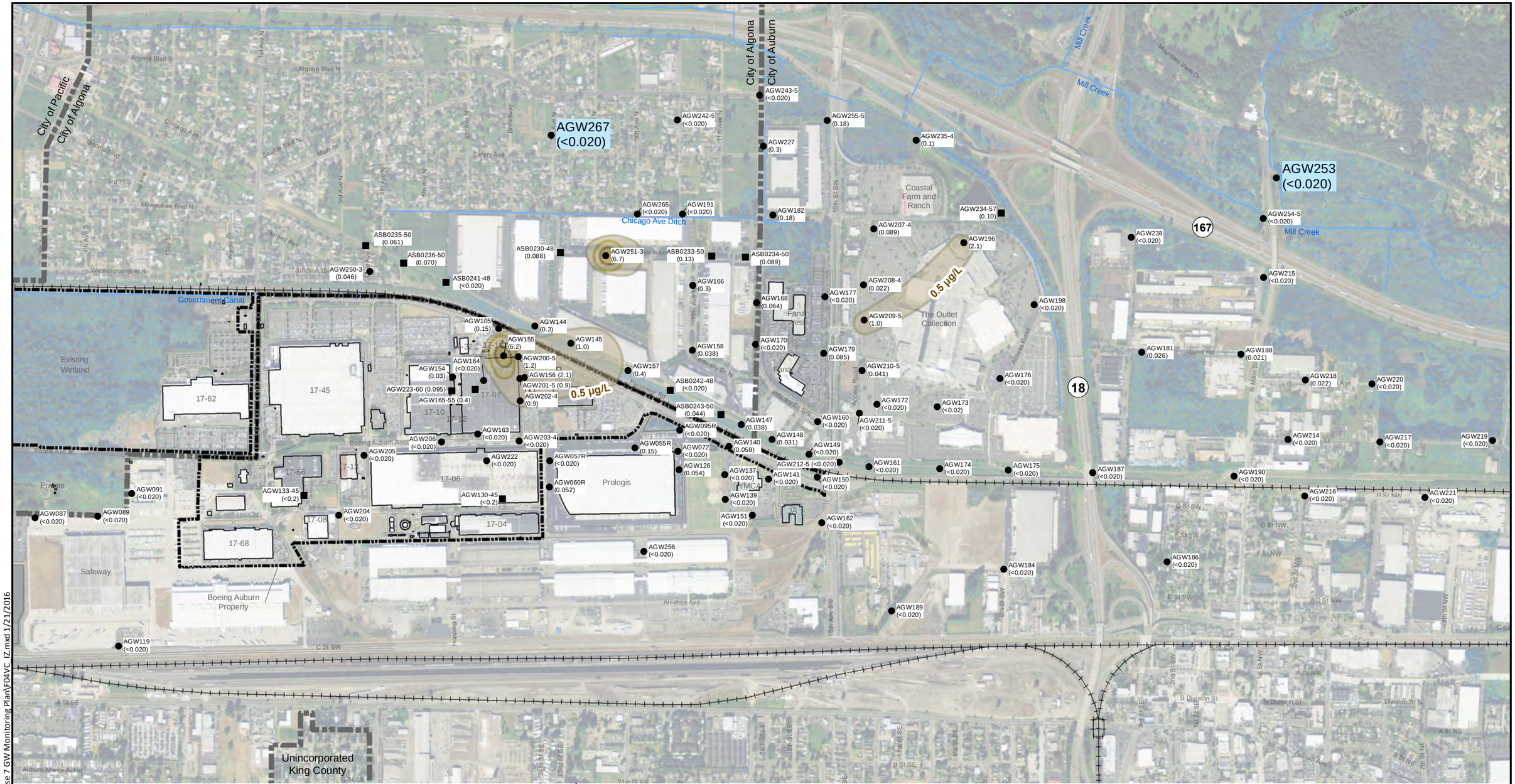

Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- Vinyl Chloride Contour (>5.0 µg/L)
- Vinyl Chloride Contour (>2.4 µg/L)
- Vinyl Chloride Contour (≥0.5 µg/L)
- Waterways
- Wetland Areas
- Boeing Property
- City Limits

AGW267 (<0.020) Wells proposed for removal from the groundwater monitoring program

N

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Scale in Feet

Base map source: Geometrix 2003; Aerial Photo Source: Esri World Imagery; Parcel Data Source: King County GIS 2013

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Boeing Auburn Auburn, Washington	**Intermediate Zone (40-60 ft) Vinyl Chloride Concentrations Most Recent – June 2015**	Figure 4

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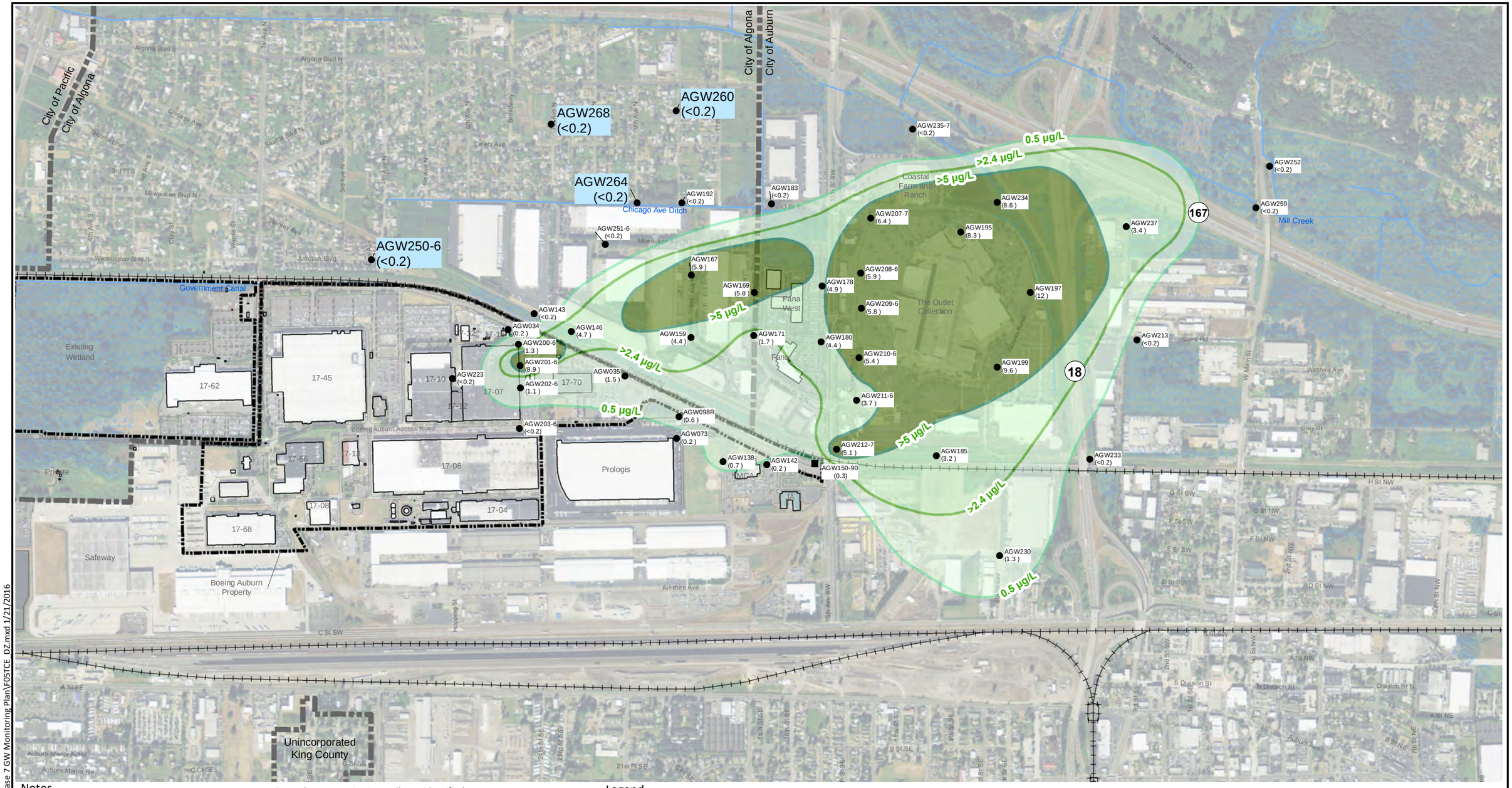

Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- TCE Contour (>5.0 µg/L)
- TCE Contour (>2.4 µg/L)
- TCE Contour (≥0.5 µg/L)
- Waterways
- Wetland Areas
- Boeing Property
- City Limits

AGW260 (<0.2) Wells proposed for removal from the groundwater monitoring program

0 1,000 2,000

Scale in Feet

Base map source: Geometrix 2003; Aerial Photo Source: Esri World Imagery; Parcel Data Source: King County GIS 2013

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Boeing Auburn Auburn, Washington	**Deep Zone (80-100 ft) TCE Concentrations Most Recent – June 2015**	Figure 5

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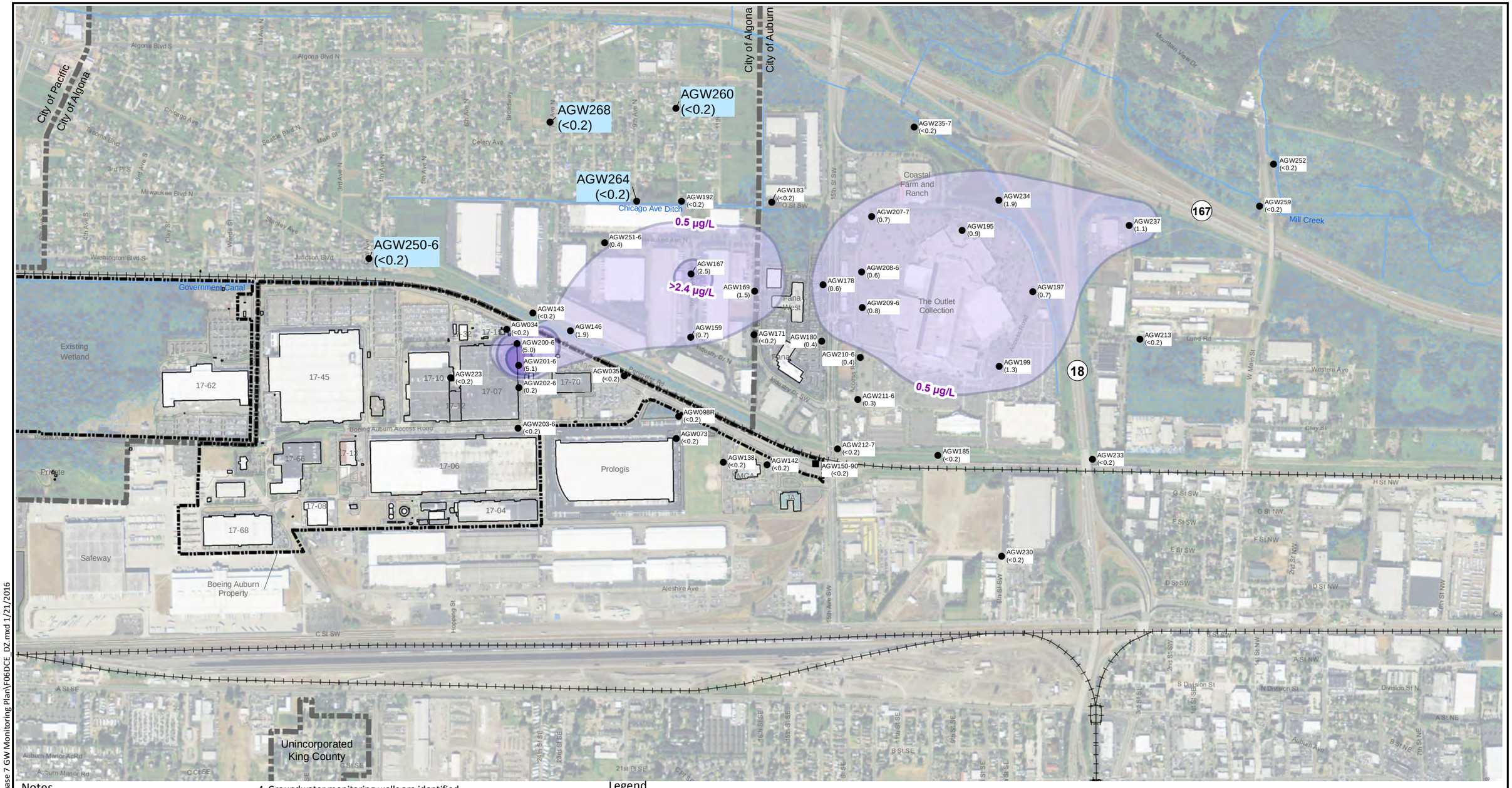

Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- cis-1,2-DCE Contour (>5.0 µg/L)
- cis-1,2-DCE Contour (>2.4 µg/L)
- cis-1,2-DCE Contour (≥0.5 µg/L)
- Waterways
- Wetland Areas
- Boeing Property
- City Limits

AGW260 (<0.2) Wells proposed for removal from the groundwater monitoring program

N

0 1,000 2,000

Scale in Feet

Base map source: Geometrix 2003; Aerial Photo Source: Esri World Imagery; Parcel Data Source: King County GIS 2013

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Boeing Auburn Auburn, Washington	**Deep Zone (80-100 ft) cis-1,2-DCE Concentrations Most Recent – June 2015**	Figure 6

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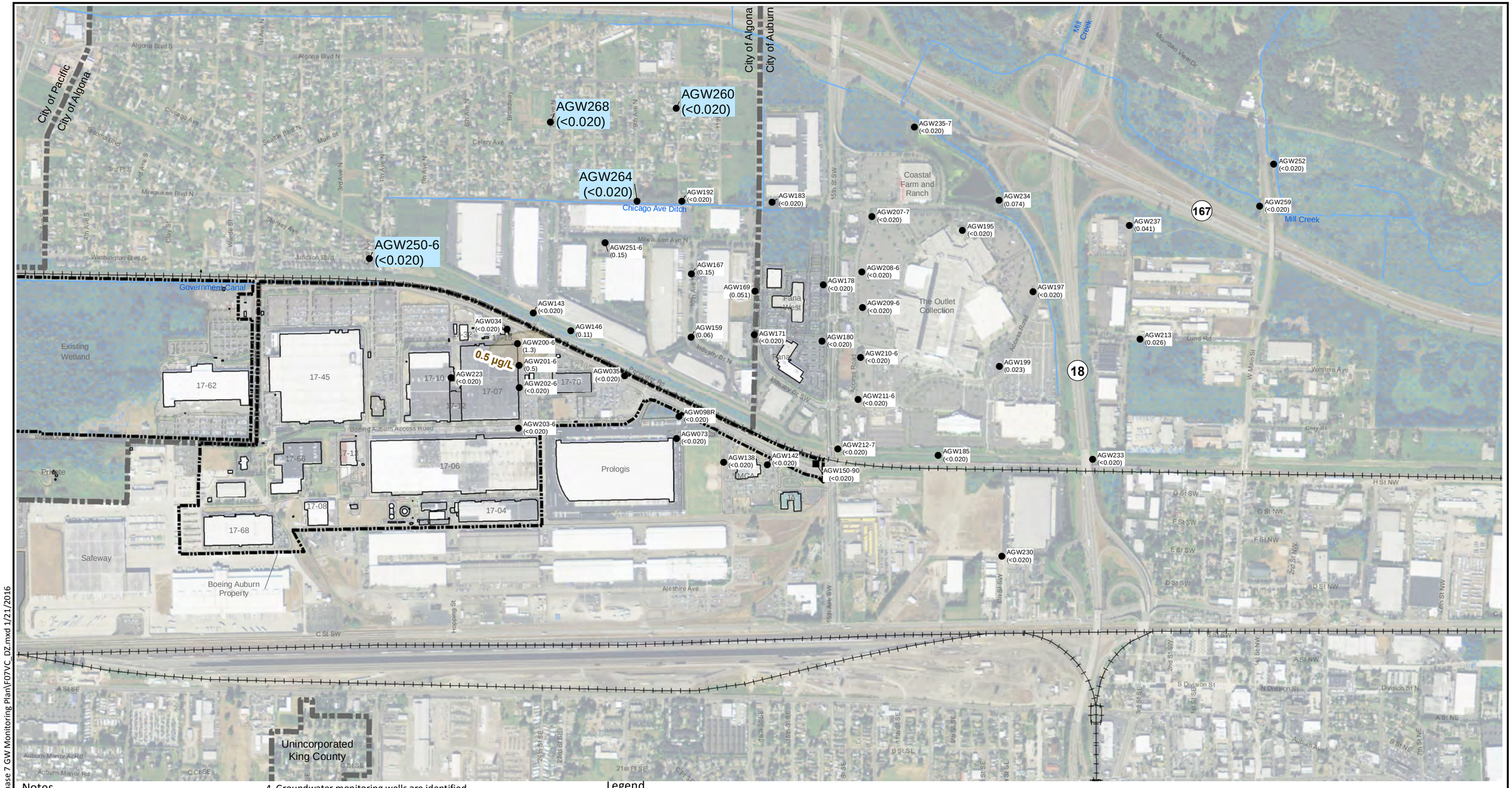

Notes

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6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
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Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- Vinyl Chloride Contour (>5.0 µg/L)
- Vinyl Chloride Contour (>2.4 µg/L)
- Vinyl Chloride Contour (≥0.5 µg/L)
- Waterways
- Wetland Areas
- Boeing Property
- City Limits
- AGW260 (<0.2) Wells proposed for removal from the groundwater monitoring program

N

0 1,000 2,000

Scale in Feet

Base map source: Geometrix 2003; Aerial Photo Source: Esri World Imagery; Parcel Data Source: King County GIS 2013

LANDAU ASSOCIATES

Boeing Auburn Auburn, Washington	**Deep Zone (80-100 ft) Vinyl Chloride Concentrations Most Recent – June 2015**	Figure 7

G:\Projects\025\164\130\109\Phase 7 GW Monitoring Plan\F07VC_DZ.mxd 1/21/2016

Table 1
Phase VI Groundwater Monitoring Plan
Boeing Auburn

Well	Aquifer Depth	Phase VI Frequency	VOCs 8260[(a)]	VOCs PCE 8260 SIM[(b)]	VOCs VC 8260 SIM[(b)]	NA Parameters[(c)]	Metals 6010[(d)]	TPH-Dx NWTPH-Dx[(e)]	TPH-G NWTPH-Gx
AGW001R	S	SA	X	X	A				
AGW002R	S	SA	X		X	X			
AGW006R	S	SA	X		X				
AGW009	S	A	X	X	X				
AGW010	S	SA	X	X	X			X	X
AGW024	S	SA	X						
AGW025	S	SA	X						
AGW026	S	SA	X		X				
AGW027	S	SA	X		X				
AGW029	S	A	X		X				
AGW030	S	A	X		X				
AGW031R	S	SA	X		X				
AGW032	S	SA	X	X	X				
AGW033	S	SA	X	X	X				
AGW034	D	A	X		X				
AGW035	D	A	X		X				
AGW037	S	SA	X	X	X				
AGW039	S	A	X		X		As		
AGW040	S	A	X	X	X				
AGW041	S	A	X		X				
AGW044	S	A	X	X	X			X	
AGW048	S	A					Cd, Ni		
AGW049	S	SA					Cd, Ni		
AGW050	S	SA					Cd, Ni		
AGW053R	S	SA	X	X	X				
AGW055R	I	SA	X		X				
AGW057R	I	SA	X		A				
AGW058R	S	A	X		X				
AGW059R	S	A	X		X				
AGW060R	I	SA	X	X	X				
AGW064	S	SA	X		A				
AGW065	S	A	X		A				
AGW066	S	SA	X	X	A	Iron only			
AGW067	S	SA	X	X	A				
AGW068	S	A	X		A				
AGW069	S	SA	X		A				
AGW072	I	SA	X	X	A				
AGW073	D	SA	X		A				
AGW074	S	SA	X		X				
AGW078	S	A	X	A	A				
AGW079	S	SA	X						
AGW081	S	A	X	X	X				
AGW085	S	SA	X	X	A				
AGW087	I	SA	X		X				
AGW088	S	SA	X		X				
AGW089	I	SA	X		X				

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Phase VI Groundwater Monitoring Plan
Boeing Auburn

Well	Aquifer Depth	Phase VI Frequency	VOCs 8260[a]	VOCs PCE 8260 SIM[b]	VOCs VC 8260 SIM[b]	NA Parameters[c]	Metals 6010[d]	TPH-Dx NWTPH-Dx[e]	TPH-G NWTPH-Gx
AGW090	S	SA	X		X				
AGW091	I	SA	X		X				
AGW095R	I	SA	X	X	X				
AGW098R	D	SA	X	X	A				
AGW104	S	A	X	A	A				
AGW105	I	SA	X		X				
AGW106R	S	SA	X		A	X			
AGW110R	S	SA	X		X	X			
AGW112R	S	SA	X	X	X				
AGW115	S	SA	X	X					
AGW116	S	SA	X		A				
AGW117	S	SA	X		A				
AGW118	S	SA	X		A				
AGW119	I	SA	X		X				
AGW120	S	SA	X		X				
AGW125	S	SA	X	X	X	X			
AGW126	I	SA	X	X	X	X			
AGW127	S	A	X		A				
AGW128	S	SA	X	X	X			X	
AGW129	S	SA	X		A				
AGW130	S	SA	X		A			X	
AGW131	S	SA	X			X[f]			
AGW133	S	A	X		X				
AGW134	S	SA	X		X				
AGW135	S	SA	X	X	X				
AGW136	S	SA	X		X				
AGW137	I	SA	X		X				
AGW138	D	SA	X		A				
AGW139	I	SA	X	X	A				
AGW140	I	SA	X		X				
AGW141	I	SA	X	X	A				
AGW142	D	SA	X	A	A				
AGW143	D	SA	X		A				
AGW144	I	SA	X		X				
AGW145	I	SA	X			X[f]			
AGW146	D	SA	X		X				
AGW147	I	SA	X		X				
AGW148	I	SA	X	X	X	X[f]			
AGW149	I	SA	X		A				
AGW150	I	SA	X		A				
AGW151	I	SA	X		A				
AGW152	S	SA	X			X[f]			
AGW153	S	A	X		X				
AGW154	I	SA	X		X				
AGW155	I	SA	X						
AGW156	I	SA	X	X					

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Boeing Auburn

Well	Aquifer Depth	Phase VI Frequency	VOCs 8260[a]	VOCs PCE 8260 SIM[b]	VOCs VC 8260 SIM[b]	NA Parameters[c]	Metals 6010[d]	TPH-Dx NWTPH-Dx[e]	TPH-G NWTPH-Gx
AGW157	I	SA	X	X	X				
AGW158	I	SA	X		X				
AGW159	D	SA	X	X	X				
AGW160	I	SA	X		A				
AGW161	I	SA	X		A				
AGW162	I	SA	X	X	A				
AGW163	I	SA	X	X	X				
AGW164	I	SA	X	X	X				
AGW165	S	SA	X	X	X				
AGW166	I	SA	X	X	X				
AGW167	D	SA	X		X				
AGW168	I	SA	X	X	X				
AGW169	D	SA	X		X				
AGW170	I	SA	X	X	X				
AGW171	D	SA	X	X	A				
AGW172	I	SA	X		A				
AGW173	I	SA	X		X				
AGW174	I	SA	X		A				
AGW175	I	SA	X		A				
AGW176	I	SA	X		X				
AGW177	I	SA	X	X	X				
AGW178	D	SA	X	X	X				
AGW179	I	SA	X		X				
AGW180	D	SA	X	X	A				
AGW181	I	SA	X		X				
AGW182	I	SA	X	X	X				
AGW183	D	Q	X		SA				
AGW184	I	SA	X		A				
AGW185	D	SA	X		A				
AGW186	I	SA	X		A				
AGW187	I	SA	X		A				
AGW188	I	SA	X		X				
AGW189	I	SA	X		A				
AGW190	I	SA	X		A				
AGW191	I	Q	X		SA				
AGW192	D	Q	X		SA				
AGW193	S	SA	X	X	X				
AGW194	S	SA	X	X	X				
AGW195	D	SA	X	X	X				
AGW196	I	SA	X						
AGW197	D	SA	X	X	A				
AGW198	I	SA	X		X				
AGW199	D	SA	X		X				
AGW200-2	S	SA	X						
AGW200-5	I	SA	X						
AGW200-6	D	SA	X						

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Boeing Auburn

Well	Aquifer Depth	Phase VI Frequency	VOCs 8260[a]	VOCs PCE 8260 SIM[b]	VOCs VC 8260 SIM[b]	NA Parameters[c]	Metals 6010[d]	TPH-Dx NWTPH-Dx[e]	TPH-G NWTPH-Gx
AGW201-2	S	SA	X						
AGW201-5	I	SA	X						
AGW201-6	D	SA	X	X	X				
AGW202-2	S	SA	X	X	X				
AGW202-4	I	SA	X						
AGW202-6	D	SA	X	X	A				
AGW203-2	S	SA	X	X	A				
AGW203-4	I	SA	X	X	A				
AGW203-6	D	SA	X	X	A				
AGW204	I	A	X		A				
AGW205	I	A	X		A				
AGW206	I	SA	X		A				
AGW207-2	S	SA	X		X				
AGW207-4	I	SA	X		X				
AGW207-7	D	SA	X		X				
AGW208-2	S	SA	X						
AGW208-4	I	SA	X		X				
AGW208-6	D	SA	X		A				
AGW209-2	S	SA	X						
AGW209-5	I	SA	X		X				
AGW209-6	D	SA	X		X				
AGW210-2	S	A	X		A				
AGW210-5	I	SA	X		X				
AGW210-6	D	SA	X		A				
AGW211-2	S	A	X		A				
AGW211-5	I	SA	X		X				
AGW211-6	D	SA	X		A				
AGW212-2	S	A	X	X	A				
AGW212-5	I	SA	X	X	A				
AGW212-7	D	SA	X	X	A				
AGW213	D	SA	X	X	X				
AGW214	I	SA	X		X				
AGW215	I	Q	X	X	SA				
AGW216	I	SA	X	X	A				
AGW217	I	SA	X	X	X				
AGW218	I	SA	X		X				
AGW219	I	SA	X		X				
AGW220	I	SA	X	X	X				
AGW221	I	SA	X	X	X				
AGW222	I	SA	X		A				
AGW223	D	A	X	X	A				
AGW224	S (WT)	A	X		A				
AGW225	S (WT)	Q	X		X	X			
AGW226	S (WT)	Q	X		X	X			
AGW227	I	Q	X		X				
AGW228	S	Q	X		X				

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Phase VI Groundwater Monitoring Plan
Boeing Auburn

Well	Aquifer Depth	Phase VI Frequency	VOCs 8260[a]	VOCs PCE 8260 SIM[b]	VOCs VC 8260 SIM[b]	NA Parameters[c]	Metals 6010[d]	TPH-Dx NWTPH-Dx[e]	TPH-G NWTPH-Gx
AGW229	S (WT)	SA	X		X				
AGW230	D	SA	X		A				
AGW231	S	SA	X						
AGW232	S	SA	X						
AGW233	D	SA	X		A				
AGW234	D	SA	X		X				
AGW235-2	S	Q	X		SA				
AGW235-4	I	Q	X		SA				
AGW235-7	D	SA	X		A				
AGW236	S	SA	X		X				
AGW237	D	Q	X	X	X				
AGW238	I	Q	X	X	X				
AGW239	S	Q	X	X	X				
AGW240-1	S (WT)	Q	X	X	X	X			
AGW240-5	S	Q	X	X	X	X			
AGW241-1	S (WT)	Q	X	X	X				
AGW241-5	S	Q	X	X	X				
AGW242-1	S (WT)	Q	X	X	X				
AGW242-2	S	Q	X	X	X				
AGW242-5	I	Q	X	X	X				
AGW243-1	S (WT)	Q	X	X	X				
AGW243-3	S	Q	X	X	X				
AGW243-5	I	Q	X	X	X				
AGW244	S (WT)	Q	X	X	X				
AGW245	S (WT)	Q	X	X	X				
AGW246	S (WT)	Q	X	X	X				
AGW247-1	S (WT)	Q	X	X	X	X			
AGW247-5	S	Q	X	X	X	X			
AGW248-1	S (WT)	Q	X	X	X				
AGW248-5	S	Q	X	X	X				
AGW249-1	S (WT)	Q	X	X	X				
AGW249-5	S	Q	X	X	X				
AGW250-1	S (WT)	Q	X	X	X				
AGW250-2	S	Q	X	X	X				
AGW250-3	I	Q	X	X	X				
AGW250-6	D	Q	X	X	X				
AGW251-1	S (WT)	Q	X	X	X	X			
AGW251-2	S	Q	X	X	X	X			
AGW251-3	I	Q	X	X	X	X			
AGW251-6	D	Q	X	X	X				
AGW252	D	Q	X	X	X				
AGW253	I	Q	X	X	X				
AGW254-1	S (WT)	Q	X	X	X				
AGW254-2	S	Q	X	X	X				
AGW254-5	I	Q	X	X	X				
AGW255-1	S (WT)	Q	X	X	X				

Table 1
Phase VI Groundwater Monitoring Plan
Boeing Auburn

Well	Aquifer Depth	Phase VI Frequency	VOCs 8260[a]	VOCs PCE 8260 SIM[b]	VOCs VC 8260 SIM[b]	NA Parameters[c]	Metals 6010[d]	TPH-Dx NWTPH-Dx[e]	TPH-G NWTPH-Gx
AGW255-3	S	Q	X	X	X				
AGW255-5	I	Q	X	X	X				
AGW256	I	Q	X	X	X				
AGW257	S	Q	X	X	X				
AGW258	S	Q	X	X	X				
AGW259	D	Q	X	X	X				
AGW260	D	Q	X	X	X				
AGW261	S	Q	X	X	X				
AGW262	S(WT)	Q	X	X	X				
AGW263	S(WT)	Q	X	X	X				
AGW264	D	Q	X	X	X				
AGW265	I	Q	X	X	X				
AGW266	S	Q	X	X	X				
AGW267	I	Q	X	X	X				
AGW268	D	Q	X	X	X				
AGW269	S	Q	X	X	X	X			
AGW270	S	Q	X	X	X	X			
AGW271	S	Q	X	X	X	X			
AGW272	S	Q	X	X	X	X			
AGW273	S	Q	X	X	X	X			
AGW274	S	Q	X	X	X	X			
AGW275	S	Q	X	X	X	X			
AGW276-1	S(WT)	Q	X	X	X				
AGW276-2	S	Q	X	X	X				
AGW276-3	S	Q	X	X	X				
AGW276-4	I	Q	X	X	X				
AGW276-5	I	Q	X	X	X				
AGW276-6	D	Q	X	X	X				
AGW276-7	D	Q	X	X	X				
IW34	I	Q	X	X	X	X			
IW36	I	Q	X	X	X	X			
IW37	I	Q	X	X	X	X			
APP-057	S	SA	X	X	X				

Aquifer Depth
S(WT) = Water Table
S = Shallow
I = Intermediate
D = Deep

Frequency
Q = Quarterly (March, June, September, December)
SA = Semi-annually (June and December)
A = Annually (June)

Notes
a. Volatile organic compounds by U.S. Environmental Protection Agency (EPA) Method 8260; collect three 40-millimeter (mL) VOAs (HCl).
b. Vinyl chloride and tetrachloroethene by SIM; collect two 40-mL VOAs (HCl); X indicates SIM should be collected for all sample events, A indicates annual sampling only in June.
c. Natural Attenuation (NA) Parameters include Ethene/Ethane/Methane by Method 8015, Sulfate By IC Method E300, TOC by Method 415.1, and DO/ORP/Iron II field measuremer
d. Dissolved metals, field filtered, preserved HNO3.
e. With silica gel and acid wash cleanup.
f. Excludes Ethene/Ethane/Methane

Table 2
Phase VII Groundwater Monitoring Plan
Boeing Auburn

Well	Groundwater Depth	Description	Location	Phase VII Frequency	VOCs 8260 [a]	VOCs PCE 8260 SIM [b]	VOCs VC 8260 SIM [b]	NA Parameters [c]	Metals 6010 [d]	TPH-Dx NWTPH-Dx [e]	TPH-G NWTPH-Gx
AGW001R	S	Property Boundary	SE of Prologis Bldg	SA	X		A				
AGW002R	S	Area 1	In Prologis Bldg	SA	X		X	A			
AGW006R	S	Area 1	W of Prologis Bldg	SA	X		X				
AGW009	S	AOC A-01	NW of Bldg 17-06	A	X		X				
AGW010	S	AOC A-01	NW of Bldg 17-06	SA	X		X			X	X
AGW024	S	SWMU S-06/Bldg 17-15	WWPTP	SA	X						
AGW025	S	SWMU S-06/Bldg 17-15	E of WWPTP	SA	X						
AGW026	S	SWMU-13	W of Bldg 17-07	SA	X		X				
AGW027	S	SWMU S-13	N of Bldg 17-07	SA	X		X				
AGW029	S	Property Boundary	W of WWPTP	A	X		X				
AGW030	S	Property Boundary	W of WWPTP	A	X		X				
AGW031R	S	Property Boundary	NW of Prologis Bldg	SA	X		X				
AGW032	S	Property Boundary	N of WWPTP	SA	X		X				
AGW033	S	Property Boundary	N of Bldg 17-70	SA	X		X				
AGW034	D	Property Boundary	WWPTP	A	X		X				
AGW035	D	Property Boundary	N of Bldg 17-70	A	X		X				
AGW037	S	SWMU S-13	S Part of Bldg 17-07	SA	X		X				
AGW039	S	AOC A-10	N Part of Bldg 17-10	A	X		X		As		
AGW040	S	AOC A-10	N Part of Bldg 17-10	A	X		X				
AGW041	S	Bldg. 17-06 - SWMU S-16	E of Bldg 17-06	A	X		X				
AGW044	S	Bldg. 17-06 - SWMU S-16	Bldg 17-06; Col E10	A	X		X			X	
AGW048	S	Acid Scrubber-AOC A-09	Between Bldgs 17-07 and 17-10	A					Cd, Ni		
AGW049	S	Acid Scrubber-AOC A-09	Between Bldgs 17-07 and 17-10	SA					Cd, Ni		
AGW050	S	Acid Scrubber-AOC A-09	Between Bldgs 17-07 and 17-10	SA					Cd, Ni		
AGW053R	S	Area 1	In Prologis Bldg	SA	X		X				
AGW055R	I	Area 1	W of Prologis Bldg	SA	X		X				
AGW057R	I	Area 1 South End	S of Prologis Bldg	SA	X		A				
AGW058R	S	Area 1 South End	S of Prologis Bldg	A	X		X				
AGW059R	S	Area 1 South End	S of Prologis Bldg	A	X		X				
AGW060R	I	Area 1 South End	S of Prologis Bldg	SA	X		X				
AGW064	S	Area 1	W of YMCA Bldg	SA	X		A				
AGW065	S	Area 1	SW of YMCA Bldg	A	X		A				
AGW066	S	Area 1	N of Prologis Bldg	SA	X		A				
AGW067	S	Area 1	N of Prologis Bldg	SA	X		A				
AGW068	S	Area 1	N End of YMCA/JA	A	X		A				
AGW069	S	Area 1	E of YMCA Bldg	SA	X		A				
AGW072	I	Area 1	NW of Prologis Bldg	SA	X		A				
AGW073	D	Area 1	NW of Prologis Bldg	SA	X		A				
AGW074	S	Sentry	N of City of Pacific Wells	SA	X		X				
AGW078	S	Property Boundary	Building 17-34 S	A	X		A				
AGW079	S	SWMU S-06	S of Bldg 17-15	SA	X						
AGW081	S	Property Boundary	Perimeter Rd W of Bldg 17-45	A	X		X				
AGW085	S	Property Boundary	E of Bldg 17-34	SA	X		A				
AGW087	I	Sentry	E of City of Pacific Wells	SA	X		X				
AGW088	S	Sentry	E of City of Pacific Wells	SA	X		X				
AGW089	I	Sentry	NE of City of Pacific Wells	SA	X		X				
AGW090	S	Sentry	NE of City of Pacific Wells	SA	X		X				
AGW091	I	Sentry	N of City of Pacific Wells	SA	X		X				
AGW095R	I	Area 1	NW of Prologis Bldg	SA	X		X				
AGW098R	D	Area 1	NW of Prologis Bldg	SA	X		A				
AGW104	S	Property Boundary	Former Bldg 17-16	A	X		A				
AGW105	I	Property Boundary	Perimeter Rd W of WWPTP	SA	X		X				
AGW106R	S	Area 1	In Prologis Bldg	SA	X		A	A			
AGW110R	S	Area 1	In Prologis Bldg	SA	X		X	A			
AGW112R	S	Area 1	In Prologis Bldg	SA	X		X				
AGW115	S	Bldg. 17-06 - SWMU S-16	In Bldg 17-06	SA	X						
AGW116	S	Bldg. 17-06 - SWMU S-16	In Bldg 17-06	SA	X		A				
AGW117	S	Bldg. 17-06 - SWMU S-16	In Bldg 17-06	SA	X		A				
AGW118	S	Bldg. 17-06 - SWMU S-16	In Bldg 17-06	SA	X		A				
AGW119	I	Safeway	E Side of Safeway Prop.	SA	X		X				
AGW120	S	Safeway	E Side of Safeway Prop.	SA	X		X				
AGW125	S	Area 1	N of Prologis Bldg	SA	X		X				
AGW126	I	Area 1	N of Prologis Bldg	SA	X		X				
AGW127	S	Bldg. 17-06 - SWMU S-16	In Bldg 17-06	A	X		A				
AGW128	S	Bldg. 17-06 - SWMU S-16	In Bldg 17-06	SA	X		X			X	
AGW129	S	Bldg. 17-06 - SWMU S-16	In Bldg 17-06	SA	X		A				
AGW130	S	Bldg. 17-06 - SWMU S-16	In Bldg 17-06	SA	X		A			X	
AGW131	S	SWMU S-18/Bldg 17-35	N of Bldg 17-07	SA	X						
AGW133	S	AOC A-06	E of Bldg 17-66	A	X		X				
AGW134	S	Property Boundary	Perimeter Rd W of Bldg 17-70	SA	X		X				
AGW135	S	Property Boundary	Perimeter Rd N of Bldg 17-70	SA	X		X				
AGW136	S	Area 1	S of YMCA Bldg	SA	X		X				
AGW137	I	Area 1	S of YMCA Bldg	SA	X		X				
AGW138	D	Area 1	S of YMCA Bldg	SA	X		A				
AGW139	I	Area 1	SE of YMCA Bldg	SA	X		A				
AGW140	I	Area 1	SW of YMCA Bldg	SA	X		X				
AGW141	I	Area 1	N of YMCA Bldg	SA	X		A				
AGW142	D	Area 1	N of YMCA Bldg	SA	X		A				
AGW143	D	Offsite	Interurban Trail, NW of WWPTP	SA	X		A				
AGW144	I	Offsite	Interurban Trail, NW of WWPTP	SA	X		X				
AGW145	I	Offsite	Interurban Trail, NW of WWPTP	SA	X						
AGW146	D	Offsite	Interurban Trail, NW of WWPTP	SA	X		X				
AGW147	I	Offsite	Interurban Trail, W of YMCA/JA	SA	X		X				
AGW148	I	Offsite	Interurban Trail, W of YMCA/JA	SA	X		X				

Table 2
Phase VII Groundwater Monitoring Plan
Boeing Auburn

Well	Groundwater Depth	Description	Location	Phase VII Frequency	VOCs 8260 [a]	VOCs PCE 8260 SIM [b]	VOCs VC 8260 SIM [b]	NA Parameters [c]	Metals 6010 [d]	TPH-Dx NWTPH-Dx [e]	TPH-G NWTPH-Gx
AGW149	I	Offsite	Interurban Trail, W of YMCA/JA	SA	X		A				
AGW150	I	Offsite	W of YMCA/JA	SA	X		A				
AGW151	I	Area 1	E of YMCA Bldg	SA	X		A				
AGW152	S	SWMU S-18/Bldg 17-35	N of Bldg 17-07	SA	X						
AGW153	S	AOC A-06	In Bldg 17-66	A	X		X				
AGW154	I	South of Former Vapor Degreaser in 17-07	S of Bldg 17-07	SA	X		X				
AGW155	I	West of Bldg 17-07	W of Bldg 17-07	SA	X						
AGW156	I	North of Bldg 17-07	N of Bldg 17-07	SA	X						
AGW157	I	Property Boundary	NW of Bldg 17-21	SA	X		X				
AGW158	I	Offsite	10th St SW	SA	X		X				
AGW159	D	Offsite	10th St SW	SA	X		X				
AGW160	I	Offsite	W of YMCA/JA - Industry Dr.	SA	X		A				
AGW161	I	Offsite	Interurban Trail, N of 15th St SW	SA	X		A				
AGW162	I	Offsite	NE corner of YMCA/JA	SA	X		A				
AGW163	I	East of Bldg 17-07	E of 17-07, near large door	SA	X		X				
AGW164	I	Inside Bldg 17-07	Bldg 17-07, near column A7	SA	X		X				
AGW165	S	Inside Bldg 17-07	Bldg 17-07, near column B9	SA	X		X				
AGW166	I	Offsite	10th St SW	SA	X		X				
AGW167	D	Offsite	10th St SW	SA	X		X				
AGW168	I	Offsite	Boundary Blvd	SA	X		X				
AGW169	D	Offsite	Boundary Blvd	SA	X		X				
AGW170	I	Offsite	Boundary Blvd	SA	X		X				
AGW171	D	Offsite	Boundary Blvd	SA	X		A				
AGW172	I	Offsite	SE corner of Outlet Collection Lot	SA	X		A				
AGW173	I	Offsite	E side of Outlet Collection Lot	SA	X		X				
AGW174	I	Offsite	Interurban Trail, N of 15th St SW	SA	X		A				
AGW175	I	Offsite	Interurban Trail, N of 15th St SW	SA	X		A				
AGW176	I	Offsite	NE corner of Outlet Collection Lot	SA	X		X				
AGW177	I	Offsite	Western Fana Property	SA	X		X				
AGW178	D	Offsite	Western Fana Property	SA	X		X				
AGW179	I	Offsite	Eastern Fana Property	SA	X		X				
AGW180	D	Offsite	Eastern Fana Property	SA	X		A				
AGW181	I	Offsite	S end of Lund Rd	SA	X		X				
AGW182	I	Offsite	O St at Boundary Blvd	SA	X		X				
AGW183	D	Offsite	O St at Boundary Blvd	SA	X		X				
AGW184	I	Offsite	8th St at cul-de-sac	SA	X		A				
AGW185	D	Offsite	Interurban Trail E of Outlet Collection	SA	X		A				
AGW186	I	Offsite	E St and 3rd	SA	X		A				
AGW187	I	Offsite	Interurban Trail N side of SR 18	SA	X		A				
AGW188	I	Offsite	Lund Rd at Main ST	SA	X		X				
AGW189	I	Offsite	City of Auburn Maintenance Fac.	SA	X		A				
AGW190	I	Offsite	Interurban Trail at Main ST	SA	X		A				
AGW191	I	Offsite	Chicago Ave and 10th Ave Algona	Q	X		X				
AGW192	D	Offsite	Chicago Ave and 10th Ave Algona	Q	X		X				
AGW193	S	Offsite	10th St SW, Algona	SA	X		X				
AGW194	S	Offsite	10th St SW, Algona	SA	X		X				
AGW195	D	Offsite	Outlet Collection - delivery area, W side	SA	X		X				
AGW196	I	Offsite	Outlet Collection - delivery area, W side	SA	X						
AGW197	D	Offsite	Outlet Collection - west of Sam's Club	SA	X		A				
AGW198	I	Offsite	Outlet Collection - west of Sam's Club	SA	X		X				
AGW199	D	Offsite	Outlet Collection - north of Marshals	SA	X		X				
AGW200-2	S	Onsite CMT	Outside Bldg 17-07 NW Corner	SA	X						
AGW200-5	I	Onsite CMT	Outside Bldg 17-07 NW Corner	SA	X						
AGW200-6	D	Onsite CMT	Outside Bldg 17-07 NW Corner	SA	X						
AGW201-2	S	Onsite CMT	Outside Bldg 17-07 North Central	SA	X						
AGW201-5	I	Onsite CMT	Outside Bldg 17-07 North Central	SA	X						
AGW201-6	D	Onsite CMT	Outside Bldg 17-07 North Central	SA	X		X				
AGW202-2	S	Onsite CMT	Outside Bldg 17-07 East Central	SA	X		X				
AGW202-4	I	Onsite CMT	Outside Bldg 17-07 East Central	SA	X						
AGW202-6	D	Onsite CMT	Outside Bldg 17-07 East Central	SA	X		A				
AGW203-2	S	Onsite CMT	Staging area btwn 17-07 and 17-06	SA	X		A				
AGW203-4	I	Onsite CMT	Staging area btwn 17-07 and 17-06	SA	X		A				
AGW203-6	D	Onsite CMT	Staging area btwn 17-07 and 17-06	SA	X		A				
AGW204	I	Onsite	In grass NW of Bldg 17-08	A	X		A				
AGW205	I	Onsite	In pavement NW of Bldg 17-13	A	X		A				
AGW206	I	Onsite	In parking area E of Bldg 17-10	SA	X		A				
AGW207-2	S	Offsite CMT	Outlet Collection parking lot SW Corner	SA	X		X				
AGW207-4	I	Offsite CMT	Outlet Collection parking lot SW Corner	SA	X		X				
AGW207-7	D	Offsite CMT	Outlet Collection parking lot SW Corner	SA	X		X				
AGW208-2	S	Offsite CMT	Outlet Collection parking lot across from Taco Del Mar	SA	X						
AGW208-4	I	Offsite CMT	Outlet Collection parking lot across from Taco Del Mar	SA	X		X				
AGW208-6	D	Offsite CMT	Outlet Collection parking lot across from Taco Del Mar	SA	X		A				
AGW209-2	S	Offsite CMT	Outlet Collection parking lot across from Starbucks	SA	X						
AGW209-5	I	Offsite CMT	Outlet Collection parking lot across from Starbucks	SA	X		X				
AGW209-6	D	Offsite CMT	Outlet Collection parking lot across from Starbucks	SA	X		X				
AGW210-2	S	Offsite CMT	Outlet Collection parking lot across from IHOP	A	X		X				
AGW210-5	I	Offsite CMT	Outlet Collection parking lot across from IHOP	SA	X		X				
AGW210-6	D	Offsite CMT	Outlet Collection parking lot across from IHOP	SA	X		A				

Table 2
Phase VII Groundwater Monitoring Plan
Boeing Auburn

Well	Groundwater Depth	Description	Location	Phase VII Frequency	VOCs 8260 [a]	VOCs PCE 8260 SIM [b]	VOCs VC 8260 SIM [b]	NA Parameters [c]	Metals 6010 [d]	TPH-Dx NWTPH-Dx [e]	TPH-G NWTPH-Gx
AGW211-2	S	Offsite CMT	Outlet Collection parking lot across from Red Robin	A	X		X				
AGW211-5	I	Offsite CMT	Outlet Collection parking lot across from Red Robin	SA	X		X				
AGW211-6	D	Offsite CMT	Outlet Collection parking lot across from Red Robin	SA	X		A				
AGW212-2	S	Offsite CMT	Interurban Trail at 15th St SW	A	X		X				
AGW212-5	I	Offsite CMT	Interurban Trail at 15th St SW	SA	X		A				
AGW212-7	D	Offsite CMT	Interurban Trail at 15th St SW	SA	X		A				
AGW213	D	Offsite	S end of Lund Rd	SA	X		X				
AGW214	I	Offsite	S end of Clay St, W side of street in parking lane next to driveway	SA	X		X				
AGW215	I	Offsite	West Main St access Rd, N side of road	SA	X		X				
AGW216	I	Offsite	H St, intersection w/ 2nd St W side	SA	X		A				
AGW217	I	Offsite	Clay St., halfway up W side	SA	X		X				
AGW218	I	Offsite	Western Ave, W side, in grass next to sidewalk N of driveway	SA	X		X				
AGW219	I	Offsite	Clay St., West side of cul-de-sac at N end	SA	X		X				
AGW220	I	Offsite	Western Ave., N end	SA	X		X				
AGW221	I	Offsite	H St. instersection with 6th, W side in gravel	SA	X		X				
AGW222	I	Onsite	Inside the 17-06 building.	SA	X		A				
AGW223	D	Onsite	Scrubber Alley	A	X		X				
AGW224	S (WT)	Offsite	O St at Boundary Blvd	A	X		A				
AGW225	S (WT)	Offsite	Chicago Ave and 10th Ave Algona	Q	X		X	X			
AGW226	S (WT)	Offsite	11th Ave, Algona	Q	X		X	X			
AGW227	I	Offsite	West end of Boundary Blvd	SA	X		X				
AGW228	S	Offsite	West end of Boundary Blvd	SA	X		X				
AGW229	S (WT)	Offsite	Boundary Blvd	SA	X		X				
AGW230	D	Offsite	8th St at cul-de-sac	SA	X		A				
AGW231	S	Offsite	Outlet Collection - north of Marshals	SA	X						
AGW232	S	Offsite	Outlet Collection - delivery area, W side	SA	X						
AGW233	D	Offsite	Interurban Trail N side of SR 18	SA	X		A				
AGW234	D	Offsite	Access road to Outlet Collection stormwater ponds	SA	X		X				
AGW235-2	S	Offsite CMT	Access road to Outlet Collection stormwater ponds	SA	X		X				
AGW235-4	I	Offsite CMT	Access road to Outlet Collection stormwater ponds	SA	X		X				
AGW235-7	D	Offsite CMT	Access road to Outlet Collection stormwater ponds	SA	X		A				
AGW236	S	Offsite	Coastal Farm and Ranch Parking Lot	SA	X		X				
AGW237	D	Offsite	Auburn School District, NW corner of property	SA	X		X				
AGW238	I	Offsite	Auburn School District, NW corner of property	SA	X		X				
AGW239	S	Offsite	Auburn School District, NW corner of property	SA	X		X				
AGW240-1	S (WT)	Offsite CMT	Chicago Ave and 9th Ave, Algona	Q	X		X	X			
AGW240-5	S	Offsite CMT	Chicago Ave and 9th Ave, Algona	Q	X		X	X			
AGW241-1	S (WT)	Offsite CMT	Chicago Ave and 8th Ave, Algona	SA	X		X				
AGW241-5	S	Offsite CMT	Chicago Ave and 8th Ave, Algona	SA	X		X				
AGW242-1	S (WT)	Offsite CMT	10th Ave N and Algona Blvd, Algona	SA	X		X				
AGW242-2	S	Offsite CMT	10th Ave N and Algona Blvd, Algona	SA	X		A				
AGW242-5	I	Offsite CMT	10th Ave N and Algona Blvd, Algona	SA	X		A				
AGW243-1	S (WT)	Offsite CMT	Boundary Blvd and Algona Blvd, Algona	SA	X		X				
AGW243-3	S	Offsite CMT	Boundary Blvd and Algona Blvd, Algona	SA	X		A				
AGW243-5	I	Offsite CMT	Boundary Blvd and Algona Blvd, Algona	SA	X		A				
AGW244	S (WT)	Offsite	Celery Ave and 9th Ave, Algona	SA	X		X				
AGW245	S (WT)	Offsite	11th Ave (between Algona Blvd and Celery Ave), Algona	SA	X		X				
AGW246	S (WT)	Offsite	Celery Ave (between 11th Ave and 10th Ave), Algona	SA	X		X				
AGW247-1	S (WT)	Offsite CMT	10th Ave east of Algona Blvd, Algona	Q	X		X	X			
AGW247-5	S	Offsite CMT	10th Ave east of Algona Blvd, Algona	Q	X		X	X			
AGW248-1	S (WT)	Offsite CMT	Chicago Ave and 11th Ave, Algona	SA	X		X				
AGW248-5	S	Offsite CMT	Chicago Ave and 11th Ave, Algona	SA	X		X				
AGW249-1	S (WT)	Offsite CMT	Boundary Blvd, Algona	SA	X		X				
AGW249-5	S	Offsite CMT	Boundary Blvd, Algona	SA	X		X				
AGW250-1	S (WT)	Offsite CMT	Junction Blvd, Algona	SA	X		X				
AGW250-2	S	Offsite CMT	Junction Blvd, Algona	SA	X		X				
AGW250-3	I	Offsite CMT	Junction Blvd, Algona	SA	X		X				
AGW250-6	D	Offsite CMT	Junction Blvd, Algona	SA	X		X				
AGW251-1	S (WT)	Offsite CMT	Milwaukee Blvd, Algona	Q	X		X	X			
AGW251-2	S	Offsite CMT	Milwaukee Blvd, Algona	Q	X		X	X			
AGW251-3	I	Offsite CMT	Milwaukee Blvd, Algona	Q	X		X	X			
AGW251-6	D	Offsite CMT	Milwaukee Blvd, Algona	SA	X		X				
AGW252	D	Offsite	N Access Rd, West Main St	SA	X		X				
AGW253	I	Offsite	N Access Rd, West Main St	A	X		X				
AGW254-1	S (WT)	Offsite CMT	S Access Rd, West Main St	SA	X		X				
AGW254-2	S	Offsite CMT	S Access Rd, West Main St	SA	X		X				
AGW254-5	I	Offsite CMT	S Access Rd, West Main St	SA	X		X				
AGW255-1	S (WT)	Offsite CMT	15th St SW, North of O St	SA	X		X				
AGW255-3	S	Offsite CMT	15th St SW, North of O St	SA	X		X				
AGW255-5	I	Offsite CMT	15th St SW, North of O St	SA	X		X				
AGW256	I	Offsite	GSA, South of NW Building	SA	X		A				
AGW257	S	Offsite	GSA, South of NW Building	SA	X		A				
AGW258	S	Offsite	GSA, North of NW Building	SA	X		A				
AGW259	D	Offsite	S Access Rd, West Main St	SA	X		X				
AGW260	D	Offsite	10th Ave N and Algona Blvd, Algona	SA	X		X				

Table 2
Phase VII Groundwater Monitoring Plan
Boeing Auburn

Well	Groundwater Depth	Description	Location	Phase VII Frequency	VOCs 8260 [a]	VOCs PCE 8260 SIM [b]	VOCs VC 8260 SIM [b]	NA Parameters [c]	Metals 6010 [d]	TPH-Dx NWTPH-Dx [e]	TPH-G NWTPH-Gx
AGW261	S	Offsite	South end of Milwaukee Blvd, Algona	SA	X		X				
AGW262	S(WT)	Offsite	11th Ave, Algona	Q	X		SA				
AGW263	S(WT)	Offsite	Chicago Ave and 10th Ave Algona	Q	X		SA				
AGW264	D	Offsite	Chicago Ave and 9th Ave, Algona	SA	X		X				
AGW265	I	Offsite	Chicago Ave and 9th Ave, Algona	SA	X		X				
AGW266	S	Offsite	Lund Rd at Main ST	SA	X		X				
AGW267	I	Offsite	7th Ave and Celery Ave, Algona	SA	X		X				
AGW268	D	Offsite	7th Ave and Celery Ave, Algona	SA	X		X				
AGW269	S	Offsite	Primus, East of Warehouse	Q	X		X	X			
AGW270	S	Offsite	Primus, East of Warehouse	Q	X		X	X			
AGW271	S	Offsite	Primus, East of Warehouse	Q	X		X	X			
AGW272	S	Offsite	Primus, West of Warehouse	Q	X		X	X			
AGW273	S	Offsite	Primus, West of Warehouse	Q	X		X	X			
AGW274	S	Offsite	Primus, West of Warehouse	Q	X		X	X			
AGW275	S	Offsite	Primus, West of Warehouse	Q	X		X	X			
AGW276-2	S	Offsite	DCT Industrial	Q	X		X				
AGW276-5	I	Offsite	DCT Industrial	Q	X		X				
AGW276-7	D	Offsite	DCT Industrial	Q	X		X				
IW34	I	Offsite	Primus, East of Warehouse	Q	X		X	X			
IW36	I	Offsite	Primus, East of Warehouse	Q	X		X	X			
IW37	I	Offsite	Primus, East of Warehouse	Q	X		X	X			
APP-057	S	WSDOT well - Offsite	East of West Valley Hwy, South of W Main St	SA	X		X				

Aquifer Depth
S(WT) = Water Table
S = Shallow
I = Intermediate
D = Deep

Frequency
Q = Quarterly (March, June, September, December)
SA = Semiannually (June and December)
A = Annually (June)

Notes
Changes from the Phase VI monitoring program are highlighted in yellow.
Locations that had proposed changes that were not approved by Ecology are highlighted in blue.

a. Volatile Organic Compounds by U.S. Environmental Protection Agency (EPA) Method 8260C; collect three 40-milliliter (mL) VOAs (HCl)
b. Vinyl chloride and tetrachloroethene by EPA Method 8260C selected ion monitoring (SIM); collect two 40-mL VOAs (HCl); X indicates SIM should be collected for all sample events, A indicates annual sampling only in June, SA indicates semiannual sampling.
c. Natural Attenuation (NA) Parameters include Acetylene/Methane/Ethene/Ethane by Method RSKSOP-175 Modified, Sulfate by EPA Method 300, Sulfide by Method S 4500-S2, D-2000, TOC by Method SM 5310 C-2000, and DO/ORP/Iron II field measurements, X indicates NA parameters should be collected for all sample events, A indicates annual sampling only in June and no analysis for acetylene or sulfide.
d. Dissolved metals, field filtered, preserved HNO3.
e. With silica gel and acid wash cleanup.

Table 3
Vinyl Chloride EPA Method 8260C SIM Data
Boeing Auburn

Well	Sample Date	Concentration (µg/L)	
AGW238			
	12/3/2015	0.020	U
	8/28/2015	0.020	U
	6/5/2015	0.020	U
	3/2/2015	0.020	U
AGW241-1			
	11/30/2015	0.020	U
	8/26/2015	0.020	U
	6/8/2015	0.020	U
	3/2/2015	0.020	U
AGW242-2			
	11/30/2015	0.020	U
	8/25/2015	0.020	U
	6/9/2015	0.020	U
	3/4/2015	0.020	U
AGW242-5			
	11/30/2015	0.020	U
	8/25/2015	0.020	U
	6/9/2015	0.020	U
	3/4/2015	0.020	U
AGW243-3			
	11/30/2015	0.020	U
	8/26/2015	0.020	U
	6/8/2015	0.020	U
	3/2/2015	0.020	U
AGW243-5			
	11/30/2015	0.020	U
	8/26/2015	0.020	U
	6/8/2015	0.020	U
	3/2/2015	0.020	U
AGW244			
	12/3/2015	0.020	U
	8/25/2015	0.020	U
	6/10/2015	0.020	U
	3/3/2015	0.020	U

Well	Sample Date	Concentration (µg/L)	
AGW246			
	12/3/2015	0.020	U
	8/26/2015	0.020	U
	6/10/2015	0.020	U
	3/5/2015	0.020	U
AGW250-1			
	11/30/2015	0.020	U
	8/25/2015	0.020	U
	6/8/2015	0.020	U
	3/3/2015	0.020	U
AGW254-1			
	12/4/2015	0.020	U
	8/27/2015	0.020	U
	6/5/2015	0.020	U
	3/4/2015	0.020	U
AGW254-5			
	12/4/2015	0.020	U
	8/27/2015	0.020	U
	6/5/2015	0.020	U
	3/4/2015	0.020	U
AGW256			
	12/1/2015	0.020	U
	8/26/2015	0.020	U
	6/2/2015	0.020	U
	3/2/2015	0.020	U
AGW257			
	12/1/2015	0.020	U
	8/26/2015	0.020	U
	6/2/2015	0.020	U
	3/2/2015	0.020	U
AGW258			
	12/1/2015	0.020	U
	8/26/2015	0.020	U
	6/2/2015	0.020	U
	3/2/2015	0.020	U

Abbreviations/Acronyms

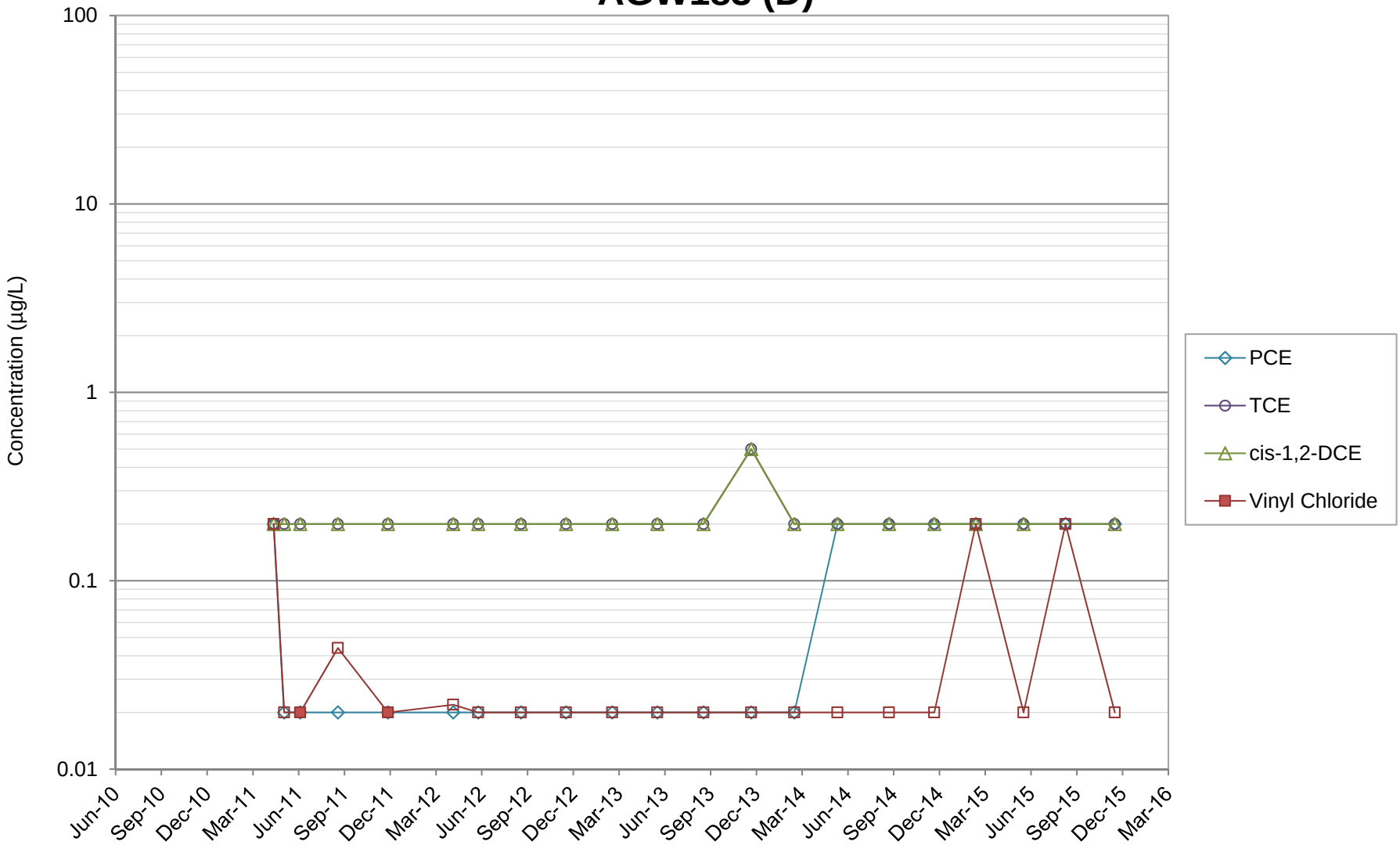
EPA = U.S. Environmental Protection Agency
µg/L = micrograms per liter
SIM = Selected Ion Monitoring
U = Compound was undetected at the reported concentration.
VC = Vinyl Chloride

Notes

EPA Analytical Method SW8260C SIM.
Wells with VC concentrations have been below the SIM detection limit of 0.02 µg/L for at least the last four sampling events.
Only data from the last four sampling events is provided, for some wells additional historical data is available.

ATTACHMENT A

Volatile Organic Compound Time Series Graphs



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

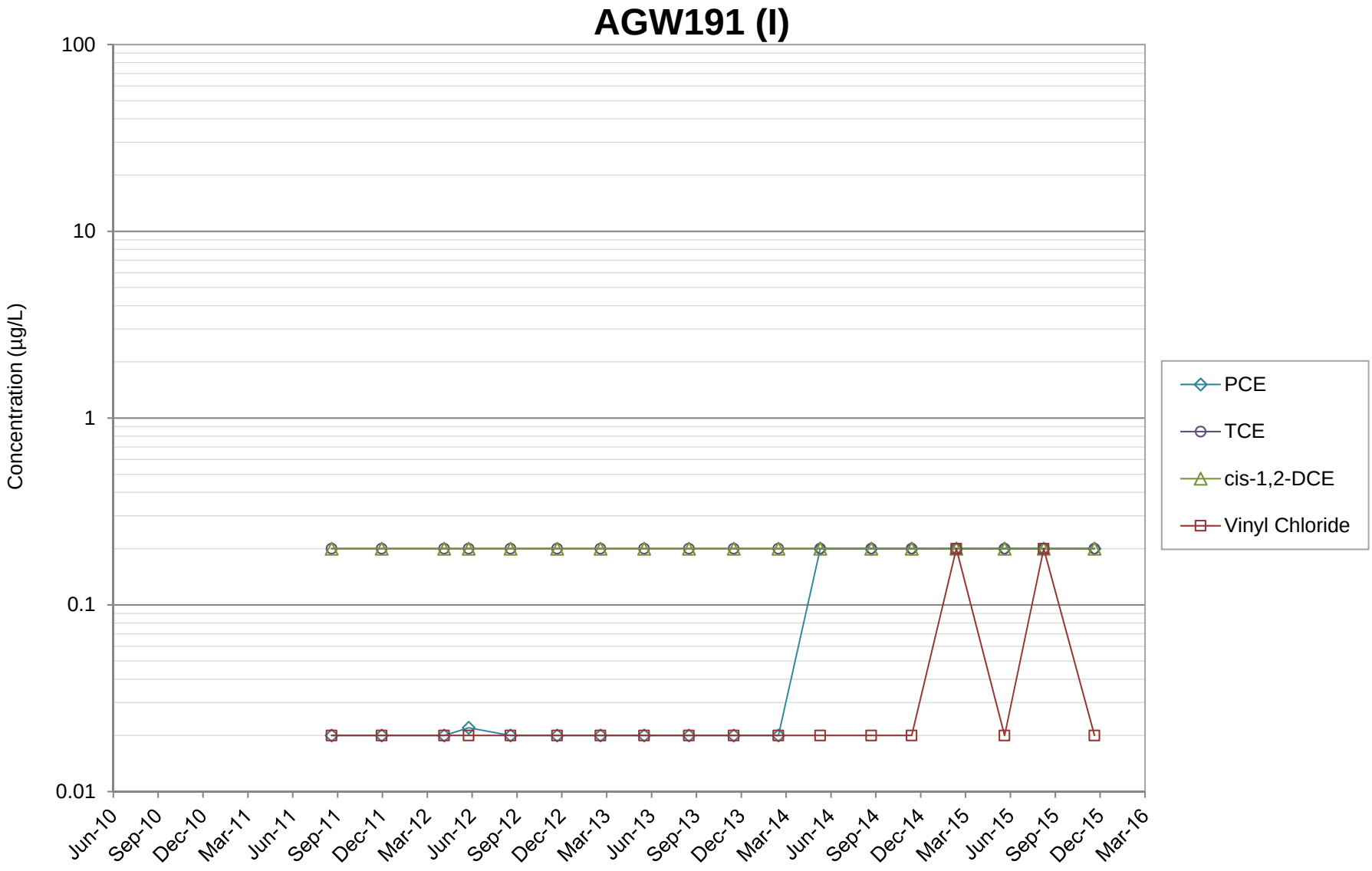
2) Open markers shown in the legend indicate the compound has never been detected at this location.

LANDAU ASSOCIATES

Boeing Auburn
Auburn, Washington

AGW183 VOC Concentrations

Figure
1-1

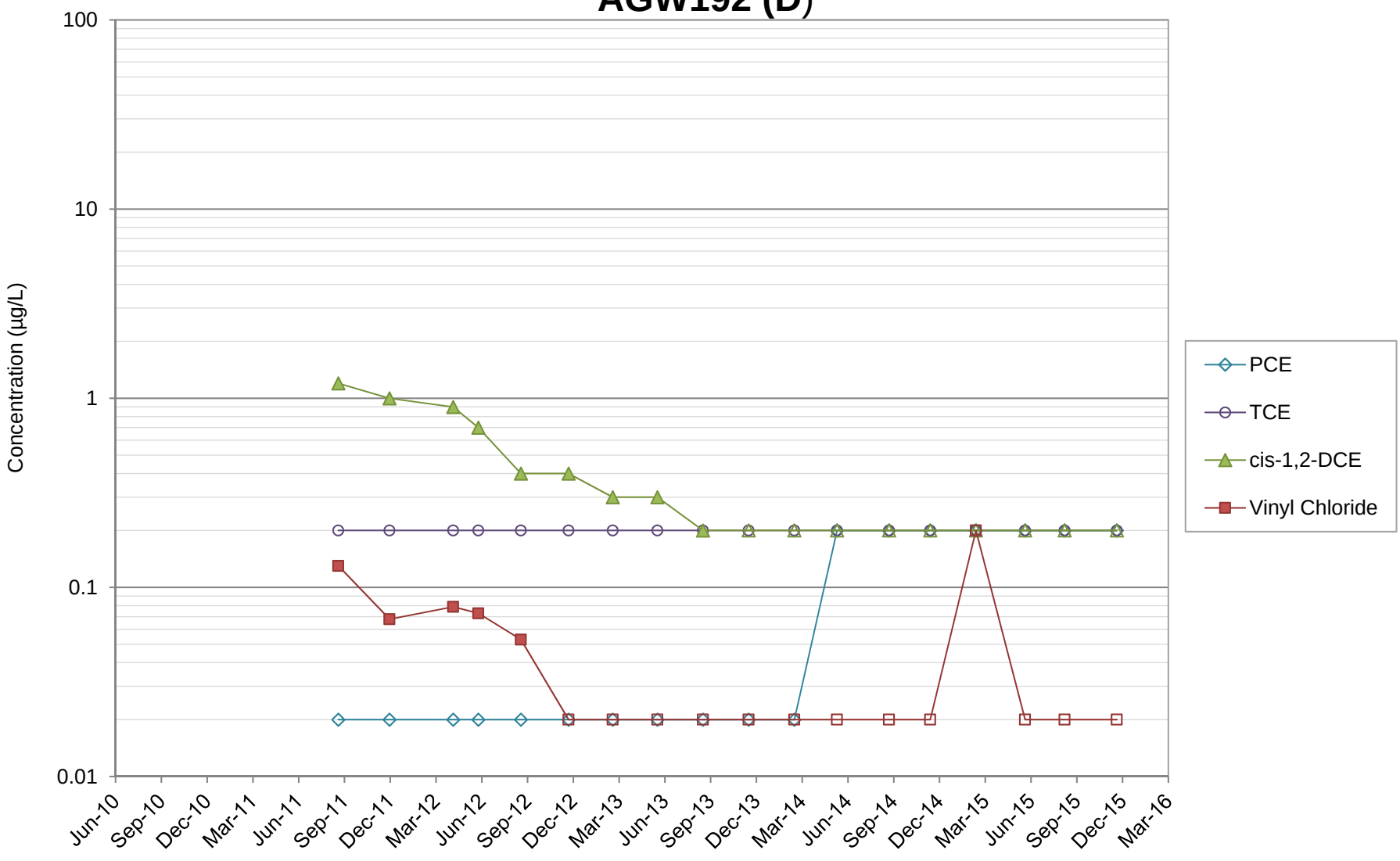


Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

2) Open markers shown in the legend indicate the compound has never been detected at this location.

LANDAU ASSOCIATES	Boeing Auburn Auburn, Washington	**AGW191 VOC Concentrations**

Figure
1-2



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

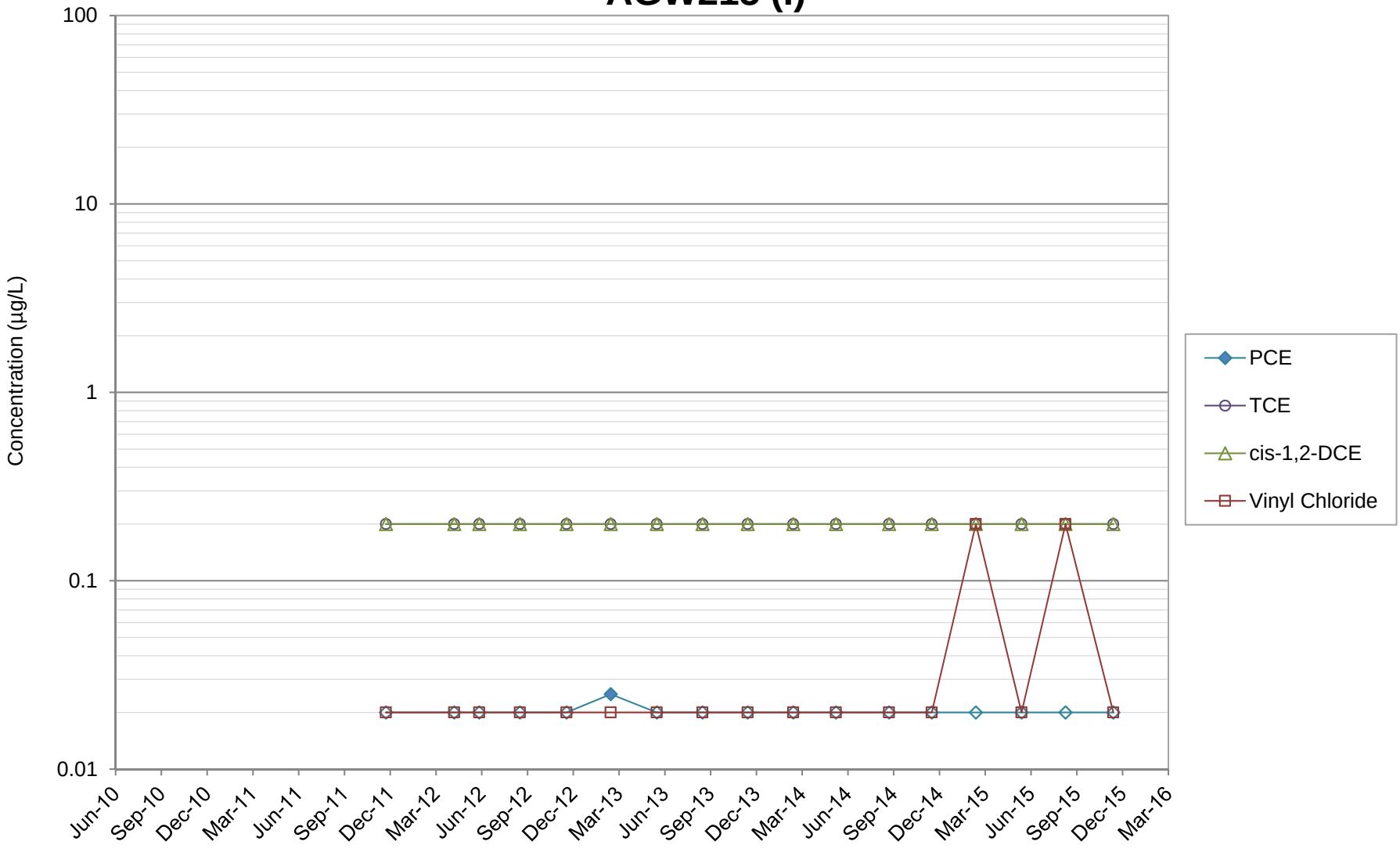
2) Open markers shown in the legend indicate the compound has never been detected at this location.

LANDAU ASSOCIATES

Boeing Auburn
Auburn, Washington

AGW192 VOC Concentrations

Figure
1-3



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

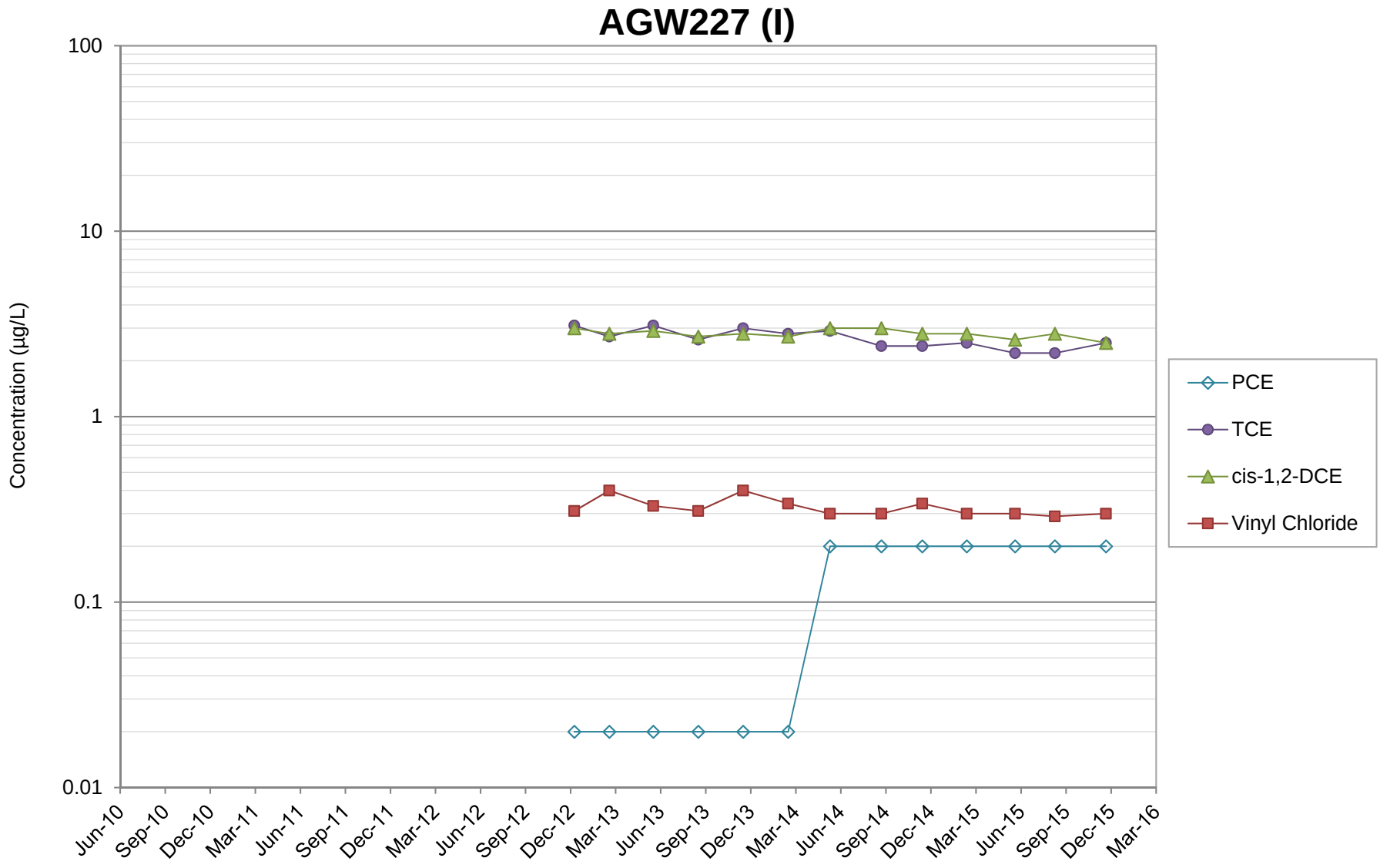
2) Open markers shown in the legend indicate the compound has never been detected at this location.

LANDAU ASSOCIATES

Boeing Auburn
Auburn, Washington

AGW215 VOC Concentrations

Figure
1-4

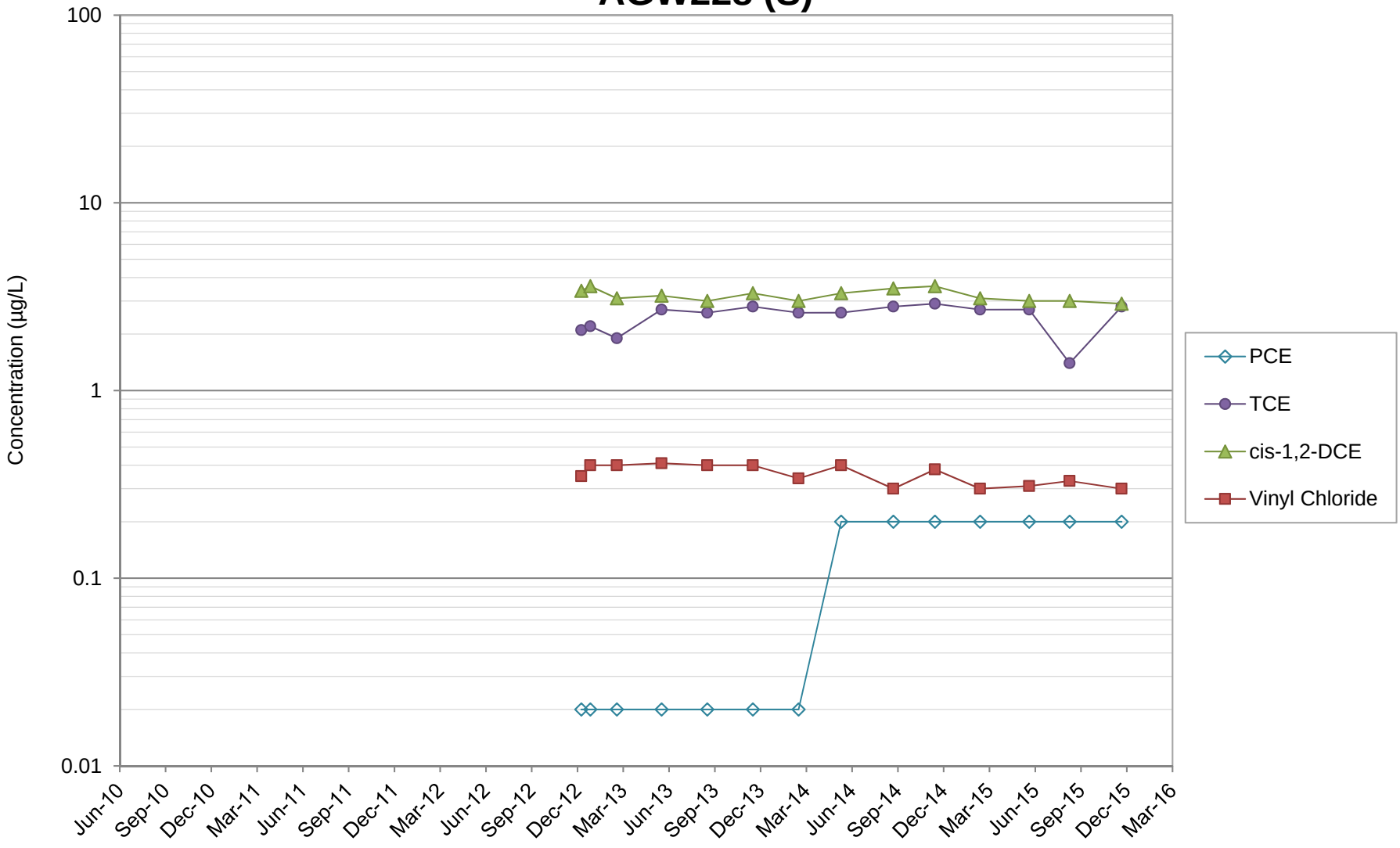


Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

2) Open markers shown in the legend indicate the compound has never been detected at this location.

LANDAU ASSOCIATES

Boeing Auburn Auburn, Washington	**AGW227 VOC Concentrations**	Figure 1-5



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

2) Open markers shown in the legend indicate the compound has never been detected at this location.

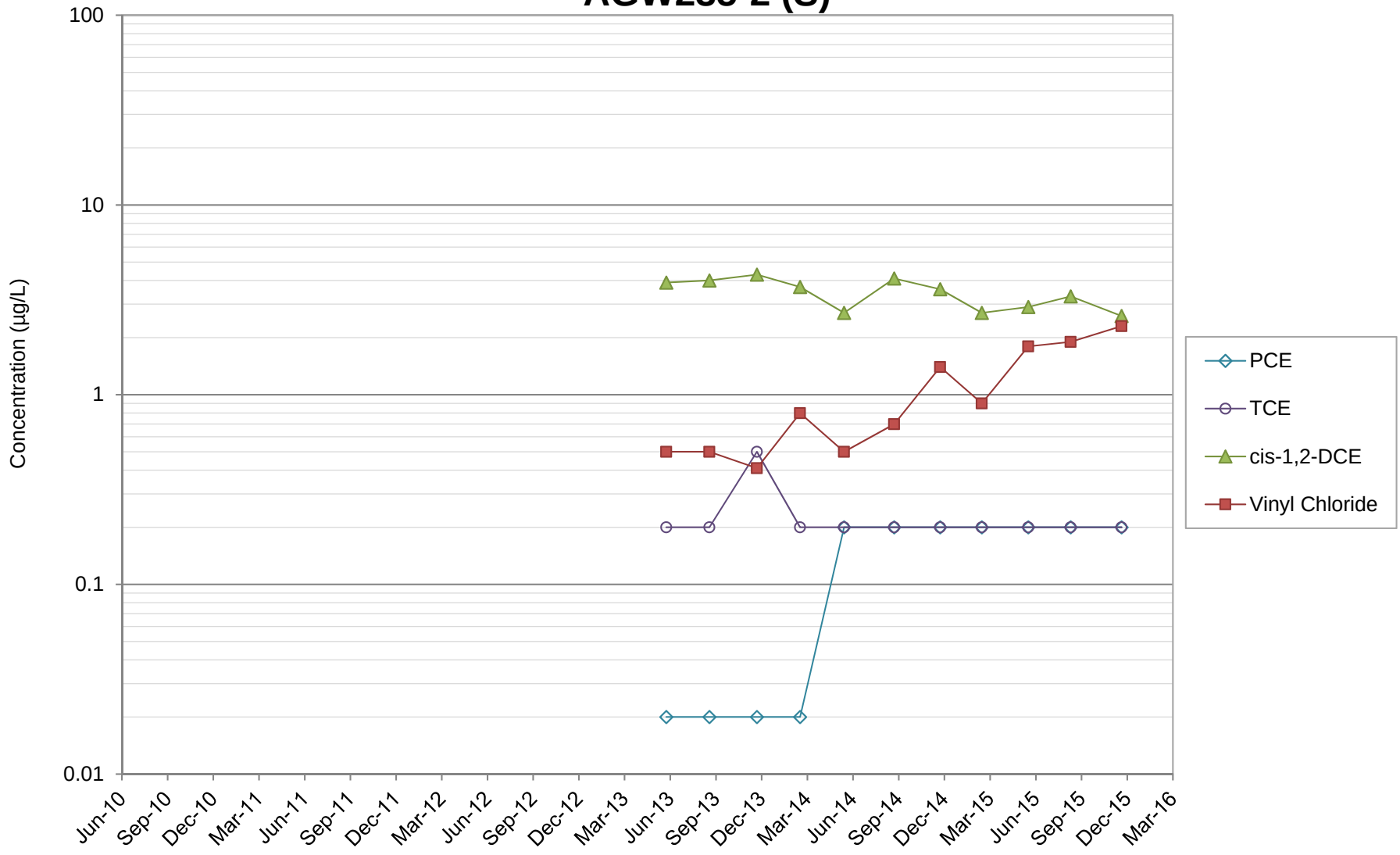
LANDAU ASSOCIATES

Boeing Auburn
Auburn, Washington

AGW228 VOC Concentrations

Figure
1-6

AGW235-2 (S)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

2) Open markers shown in the legend indicate the compound has never been detected at this location.

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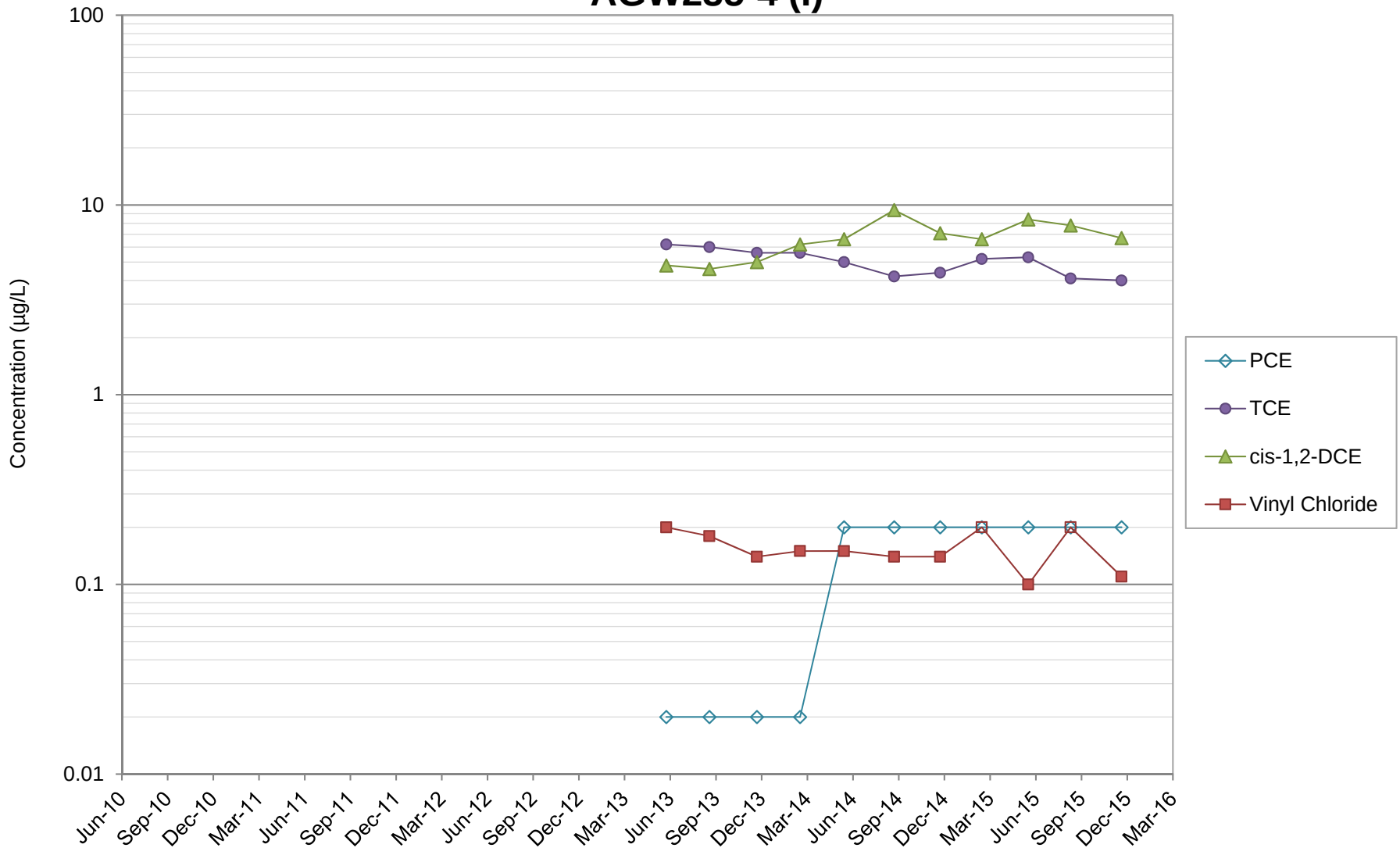
Auburn, Washington

AGW235-2 VOC Concentrations

Figure
1-7



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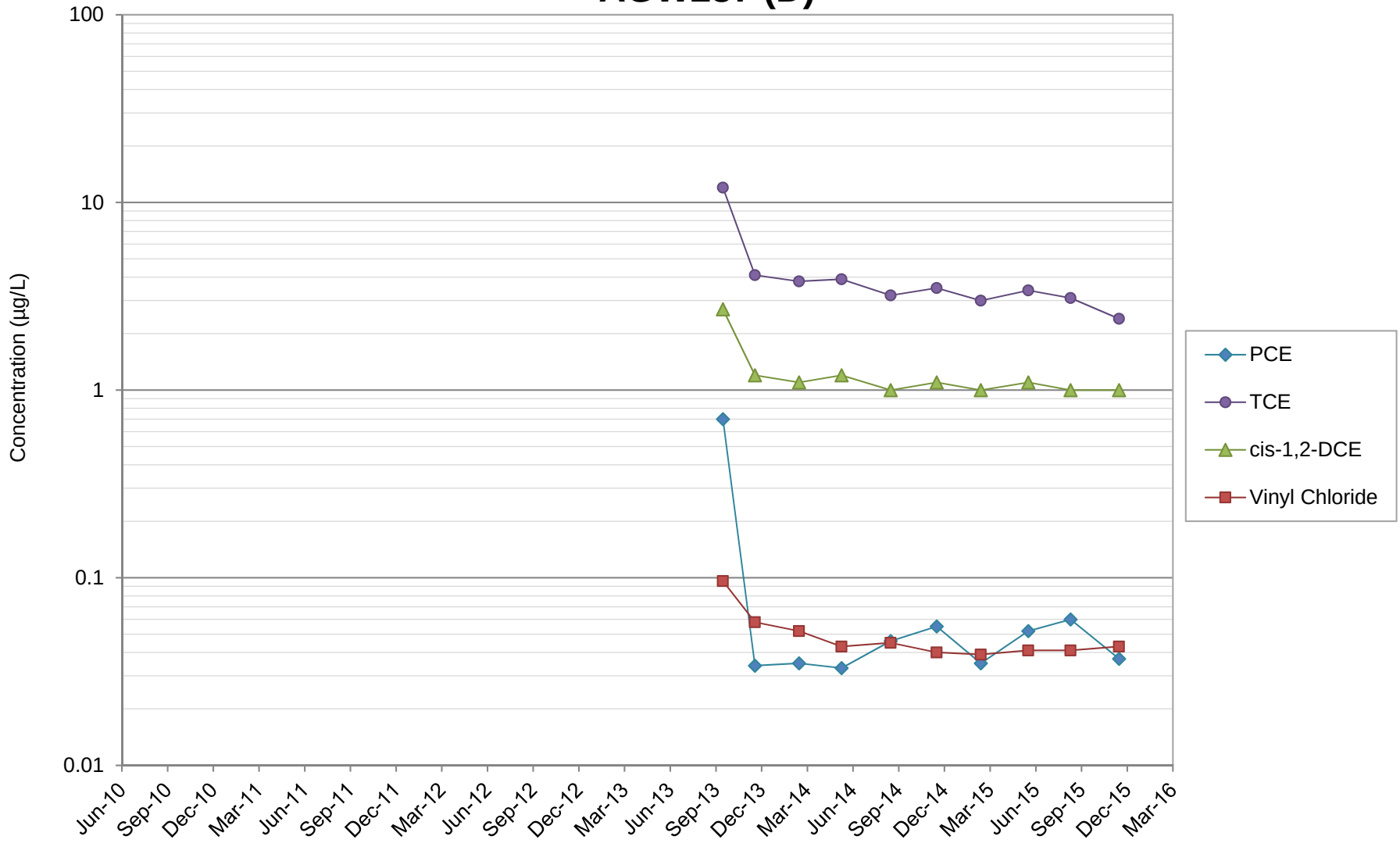
AGW235-4 VOC Concentrations

Figure
1-8

AGW237 (D)



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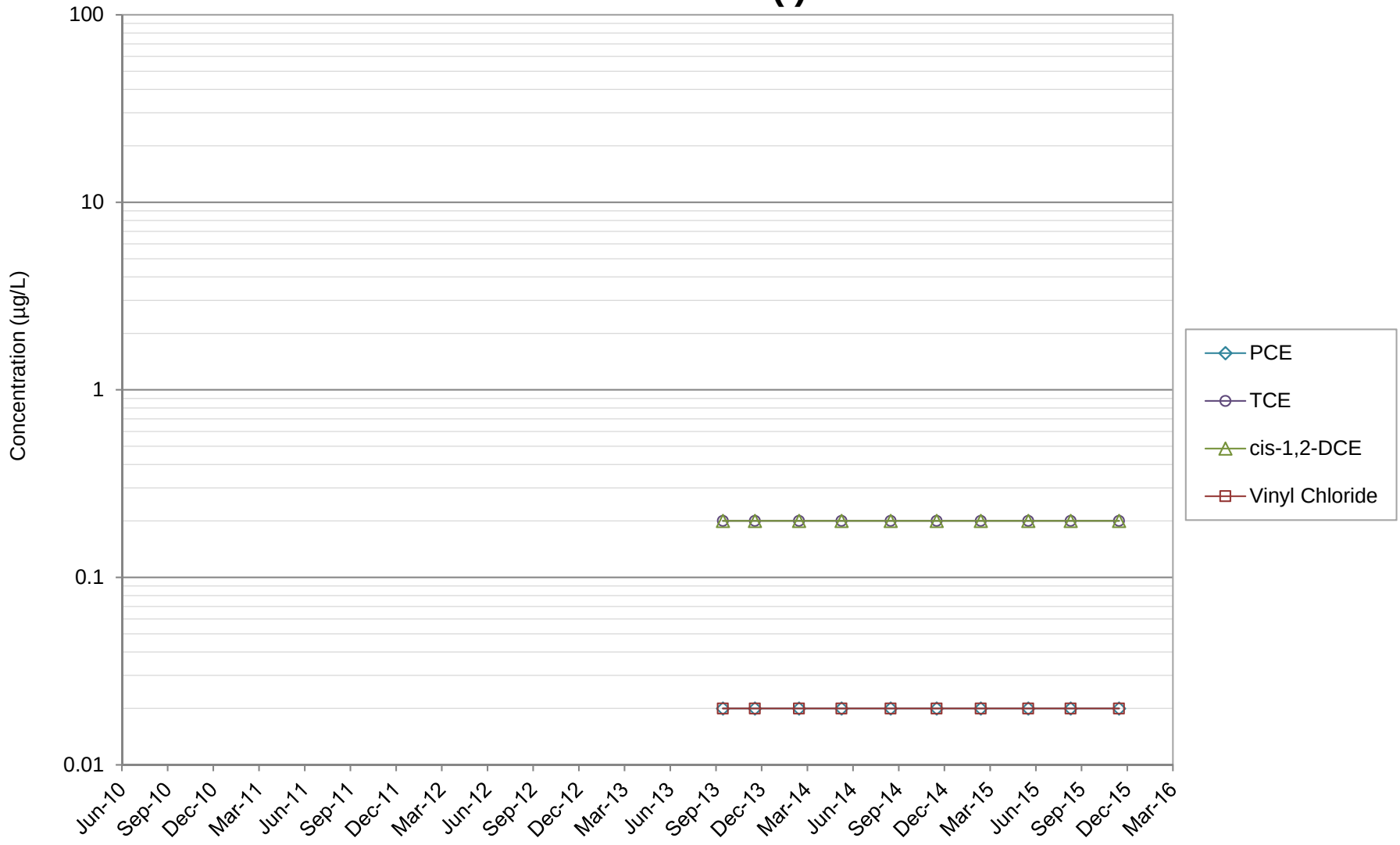
AGW237 VOC Concentrations

Figure
1-9

AGW238 (I)



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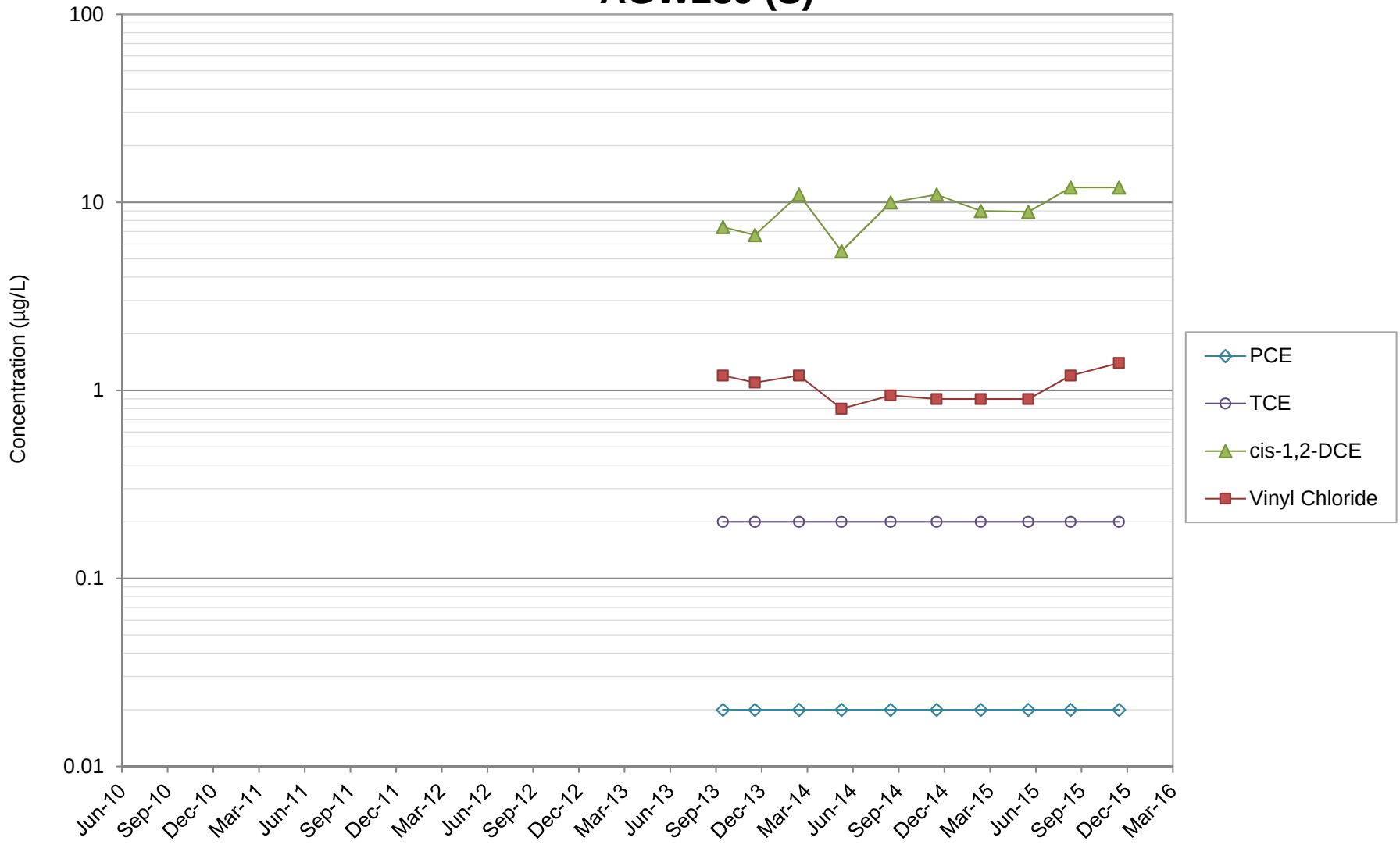
AGW238 VOC Concentrations

Figure
1-10

AGW239 (S)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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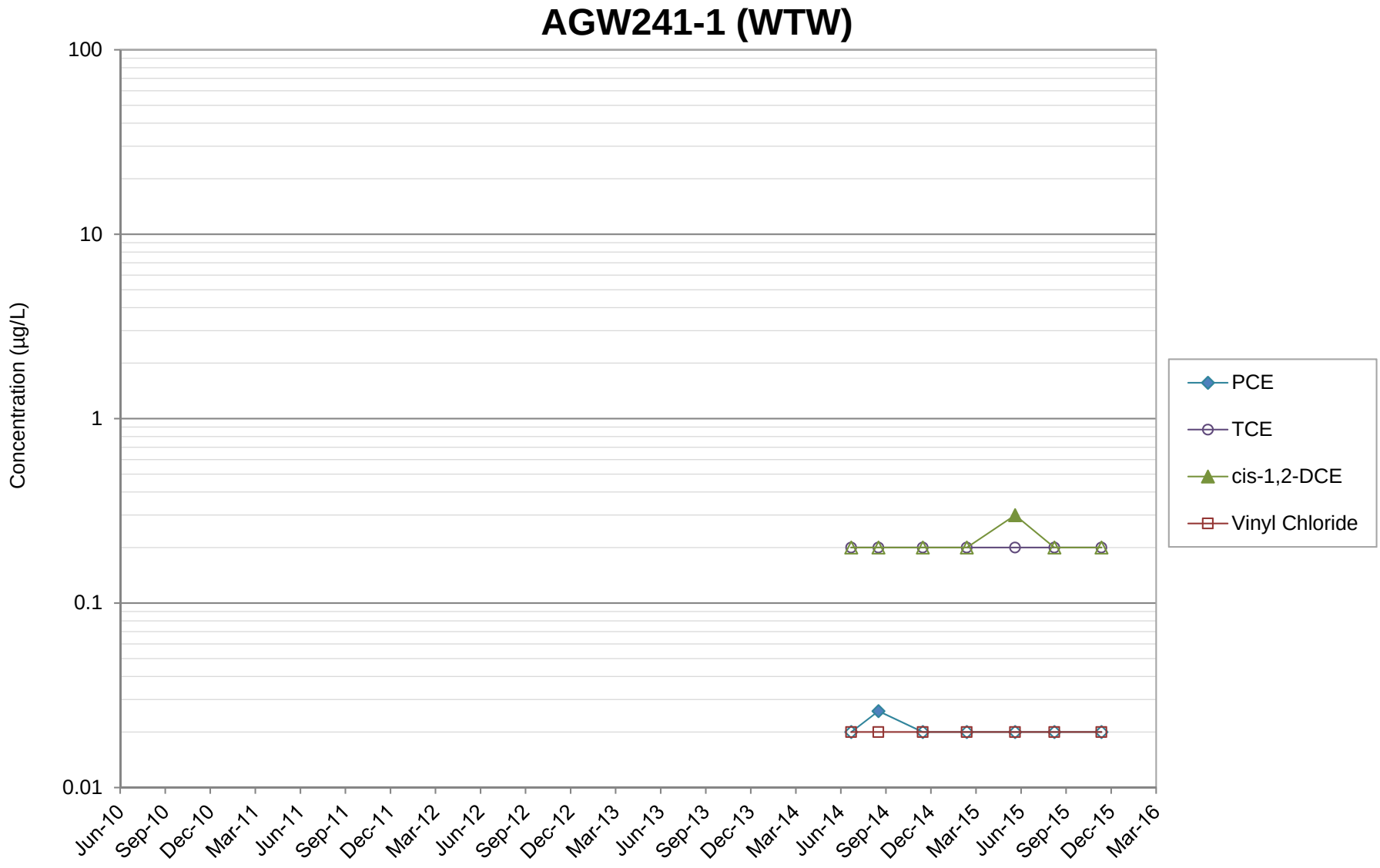
AGW239 VOC Concentrations

Figure
1-11



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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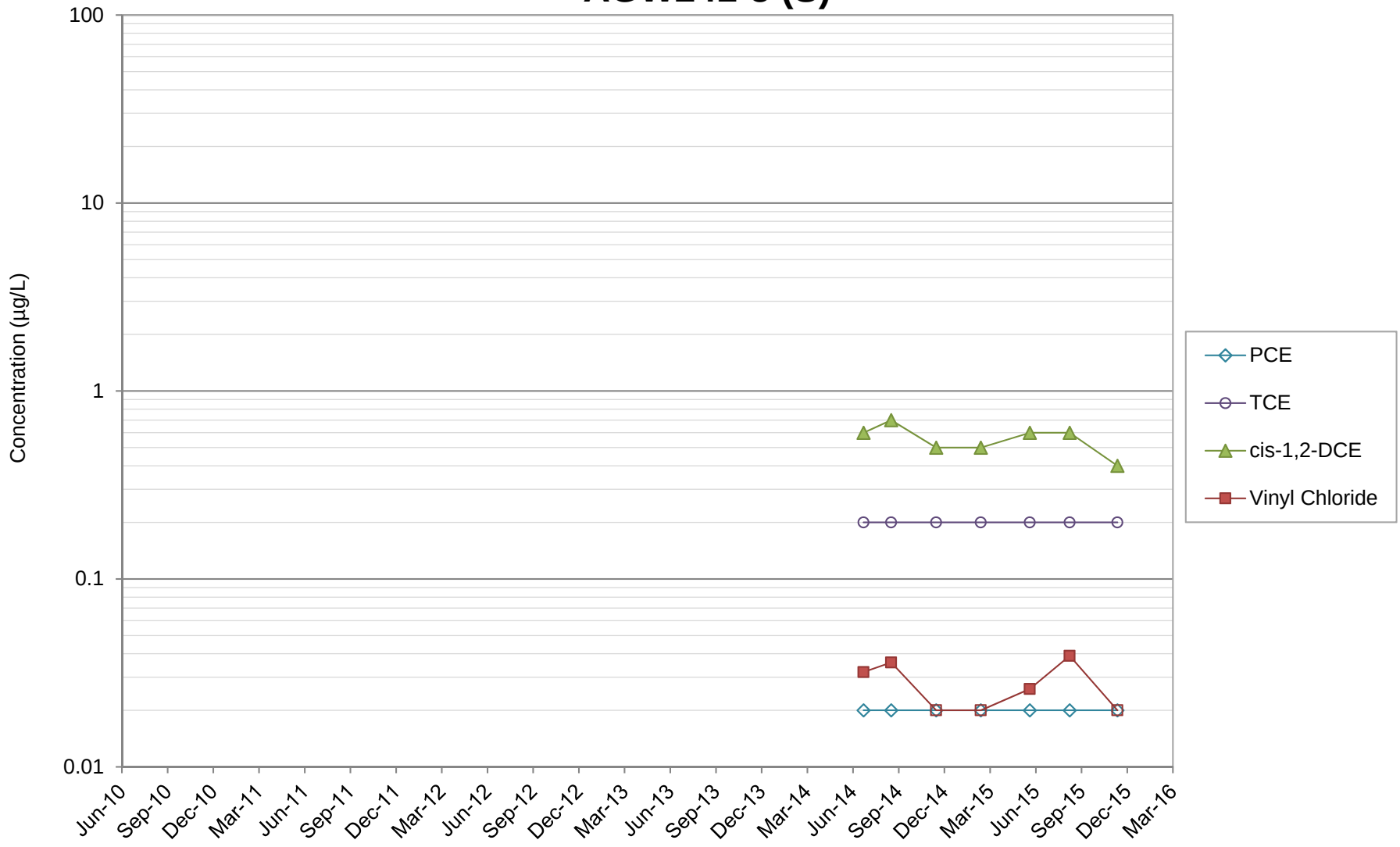
AGW241-1VOC Concentrations

Figure
1-12

AGW241-5 (S)



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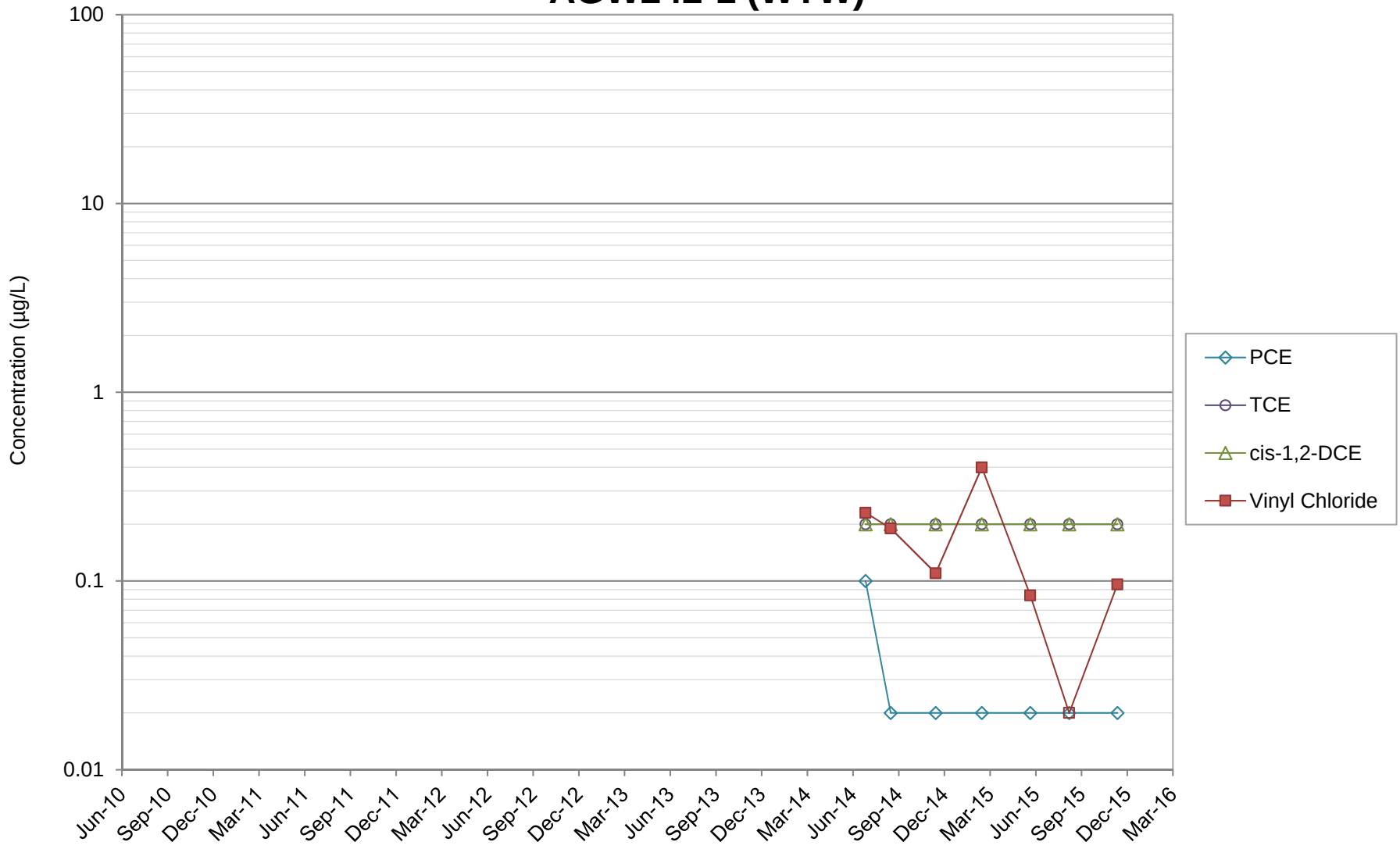
AGW241-5 VOC Concentrations

Figure
1-13

AGW242-1 (WTW)



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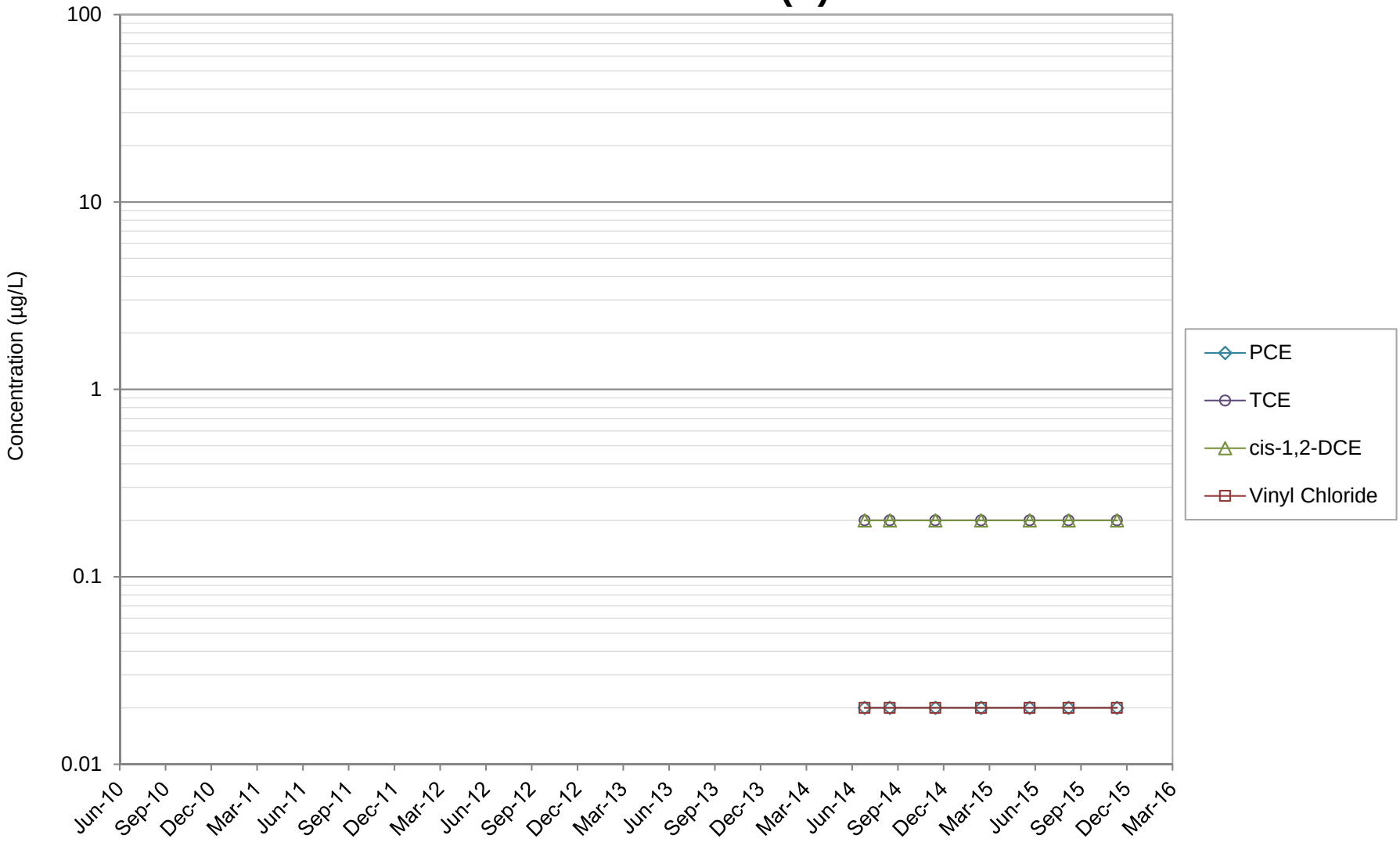
LANDAU ASSOCIATES	Boeing Auburn Auburn, Washington	**AGW242-1 VOC Concentrations**

Figure
1-14

AGW242-2 (S)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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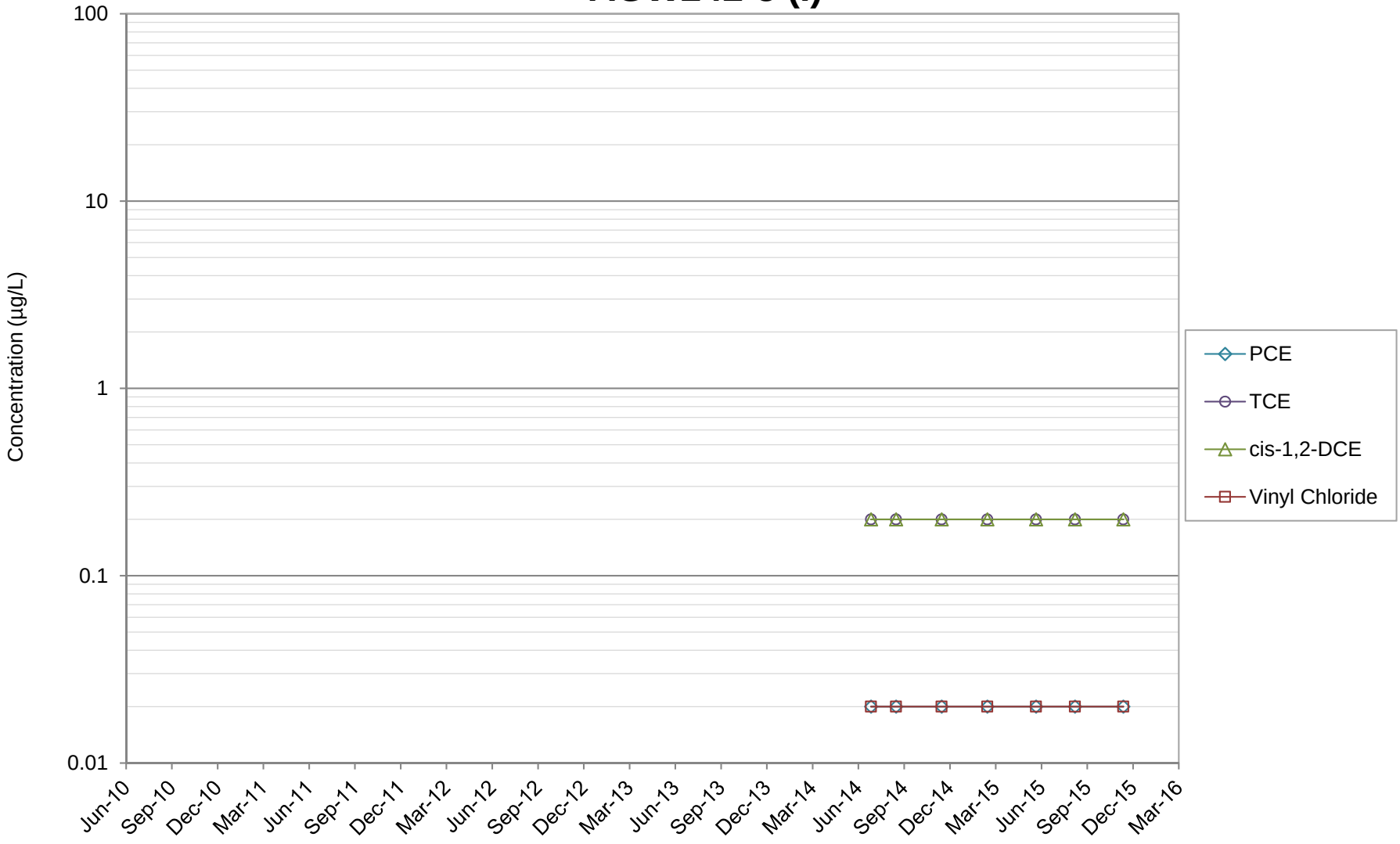
AGW242-2 VOC Concentrations

Figure
1-15

AGW242-5 (I)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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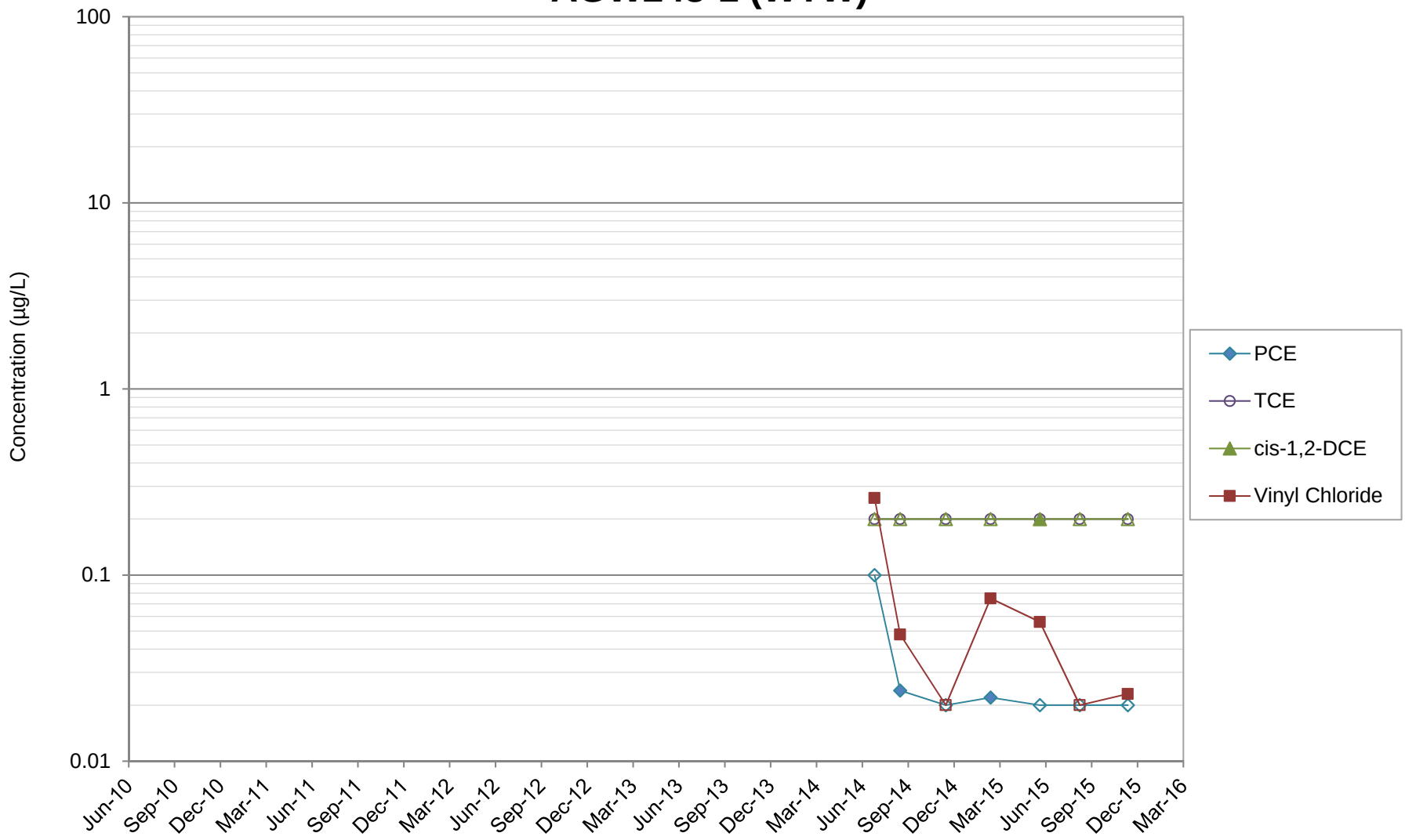
AGW242-5 VOC Concentrations

Figure
1-16

AGW243-1 (WTW)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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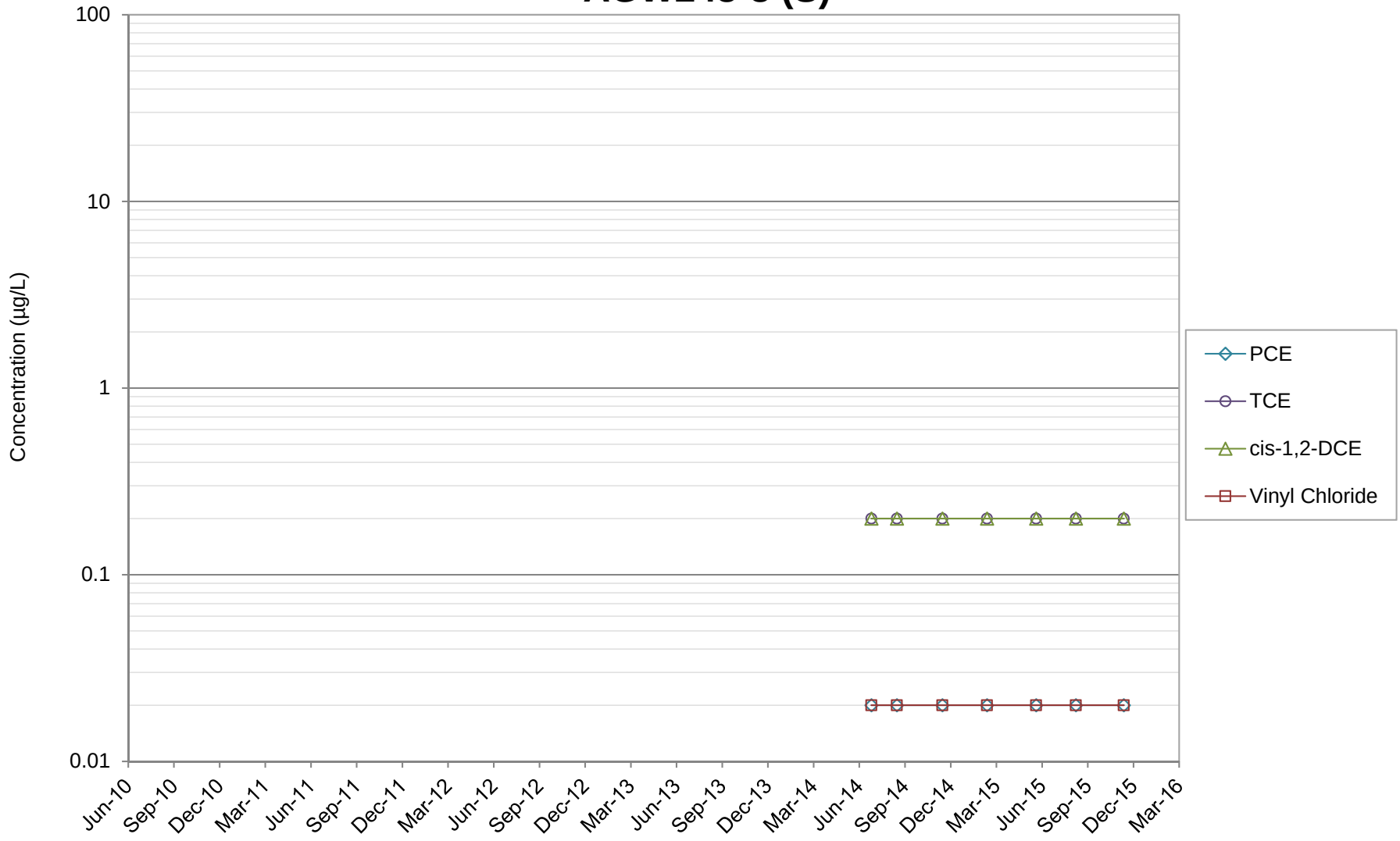
LANDAU ASSOCIATES	Boeing Auburn Auburn, Washington	**AGW243-1 VOC Concentrations**

Figure
1-17

AGW243-3 (S)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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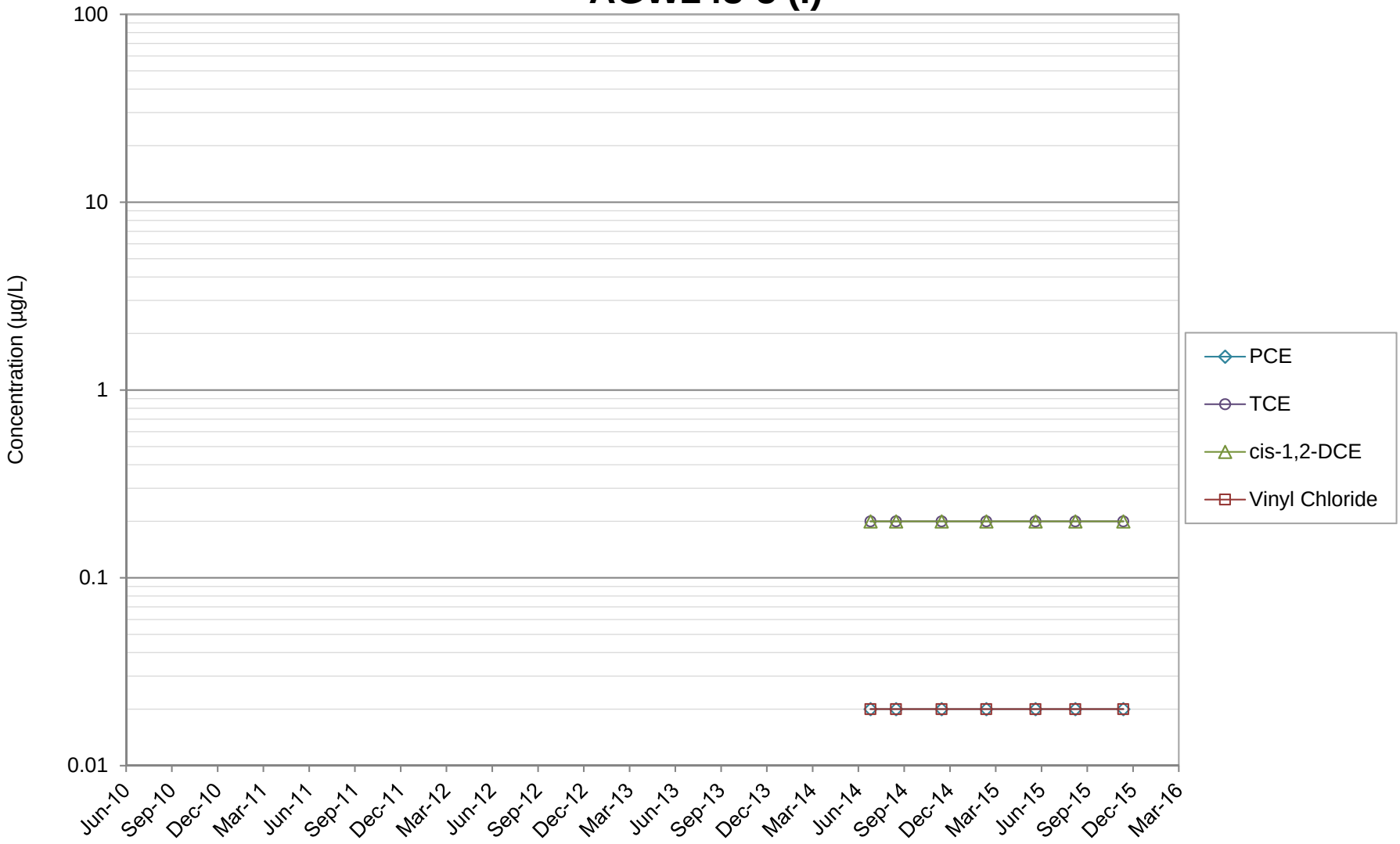
Boeing Auburn
Auburn, Washington

AGW243-3 VOC Concentrations

Figure
1-18

AGW243-5 (I)



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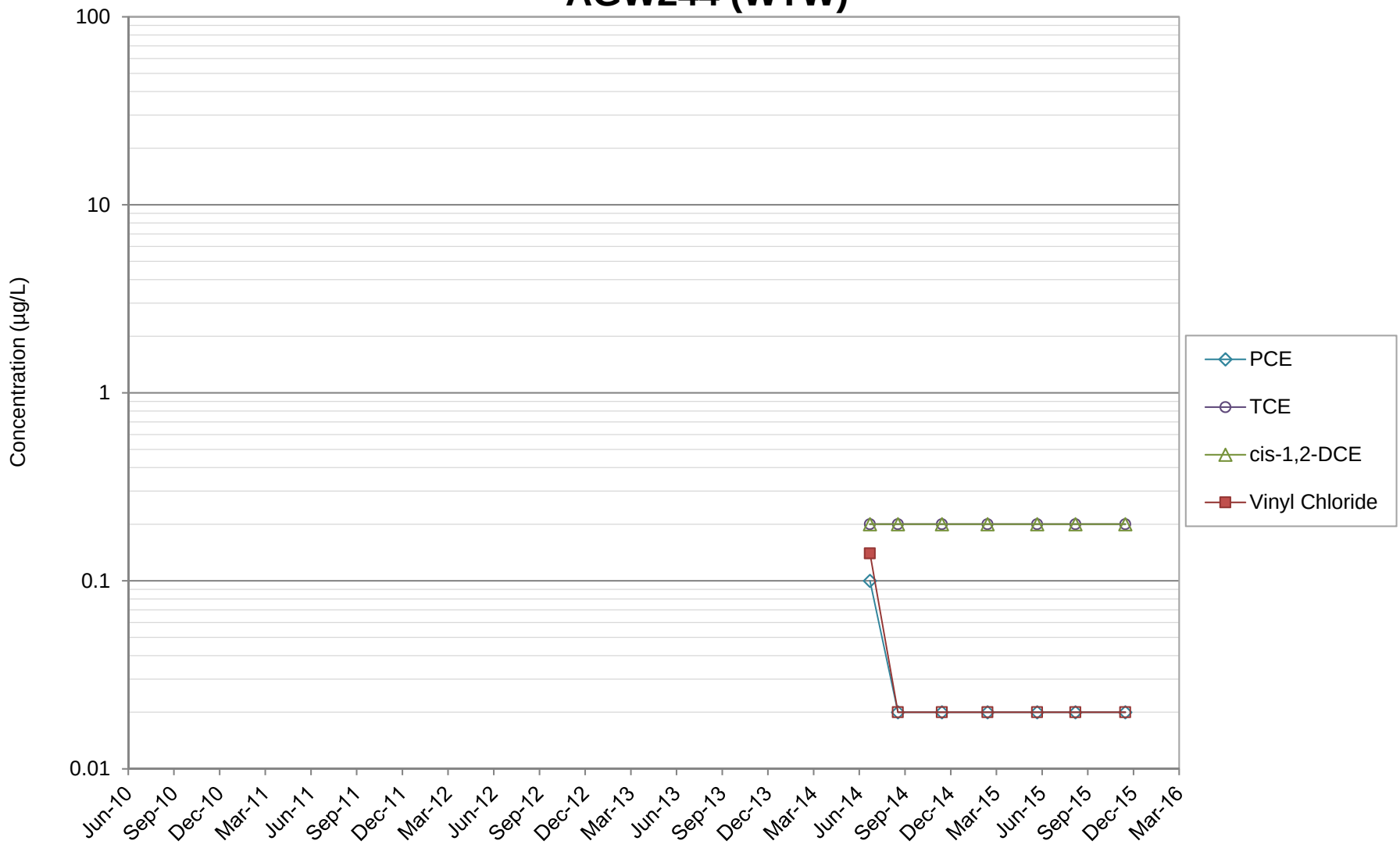
AGW243-5 VOC Concentrations

Figure
1-19

AGW244 (WTW)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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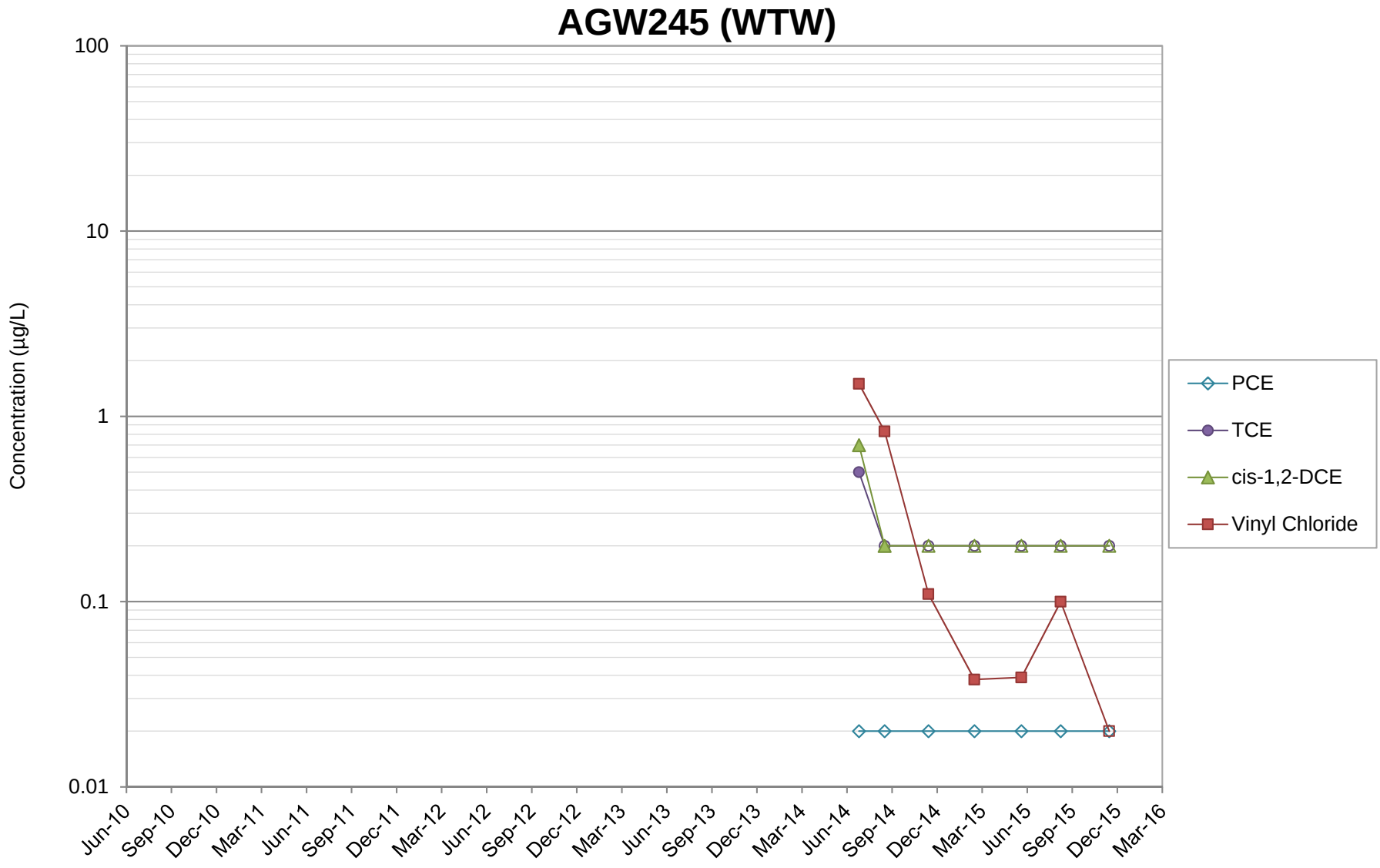
AGW244 VOC Concentrations

Figure
1-20



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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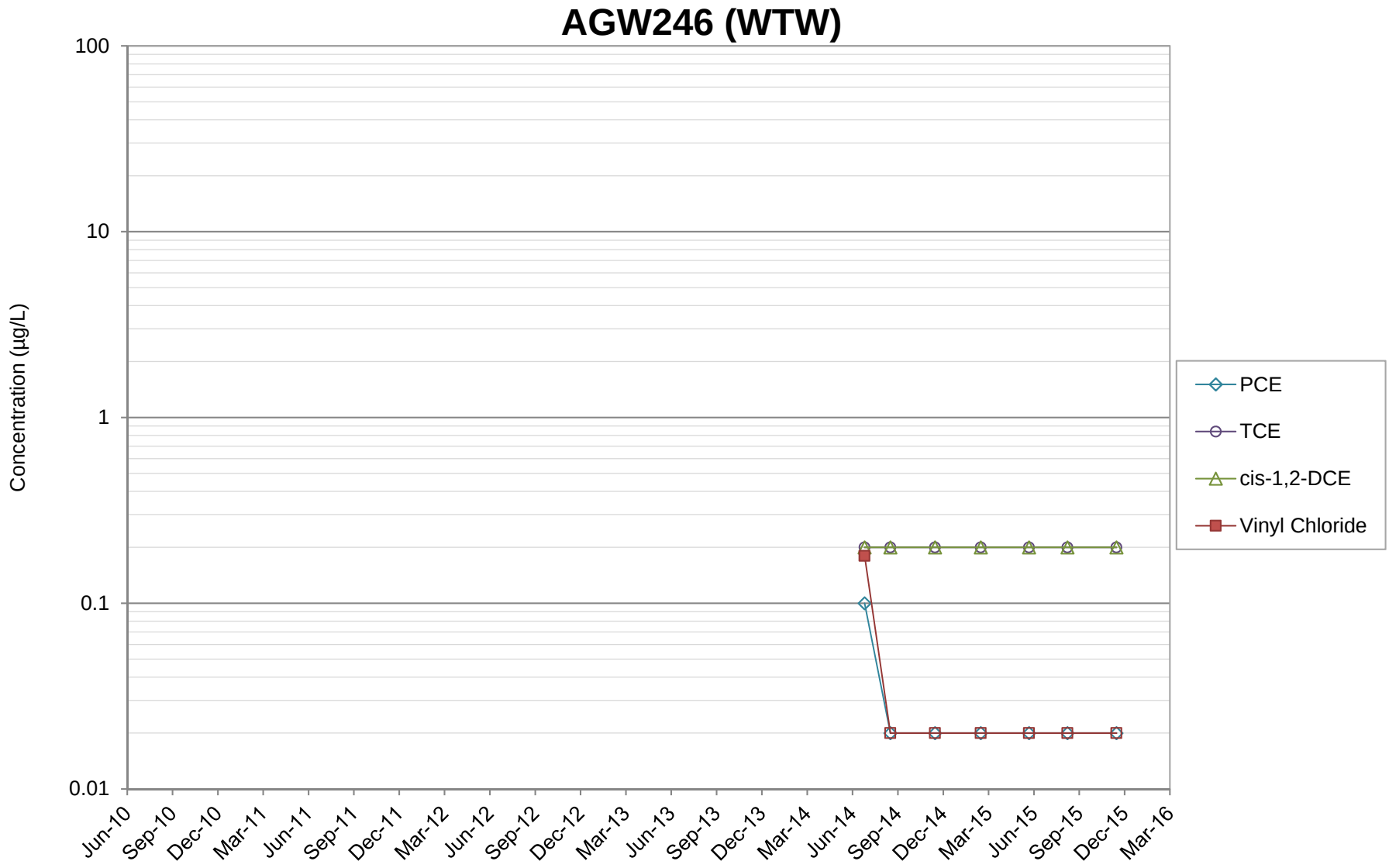
Auburn, Washington

AGW245 VOC Concentrations

Figure
1-21



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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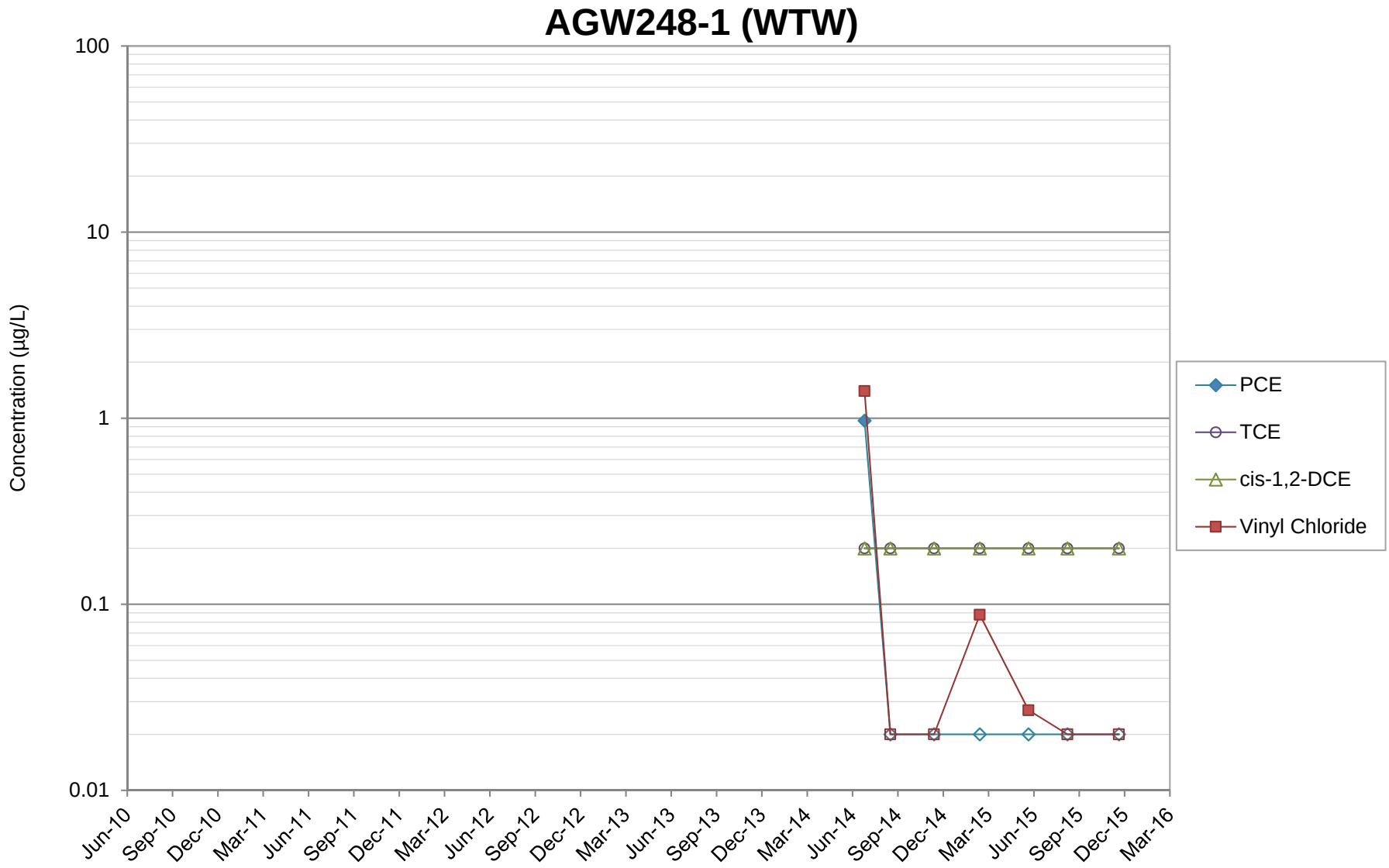
AGW246 VOC Concentrations

Figure
1-22



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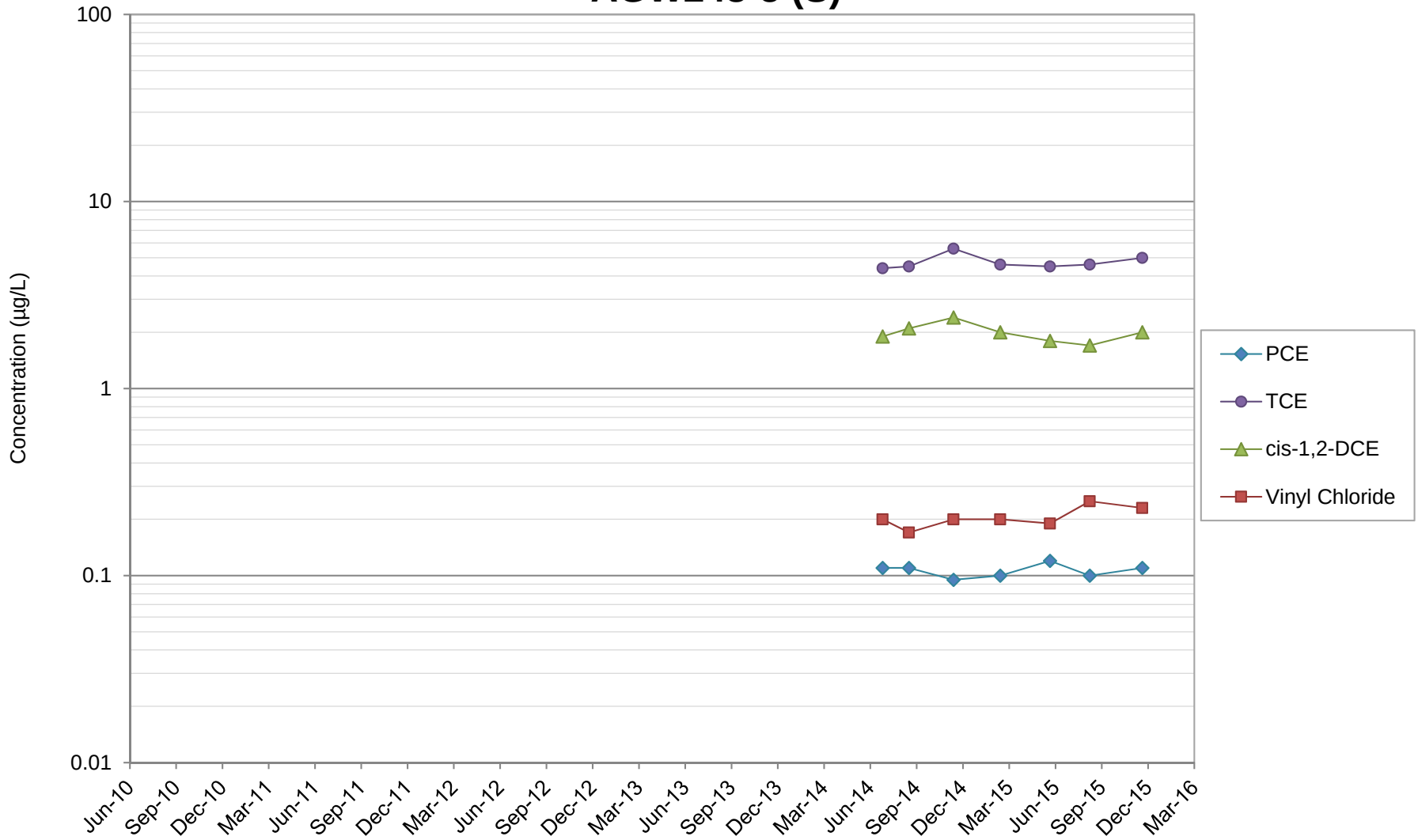
AGW248-1 VOC Concentrations

Figure
1-23

AGW248-5 (S)



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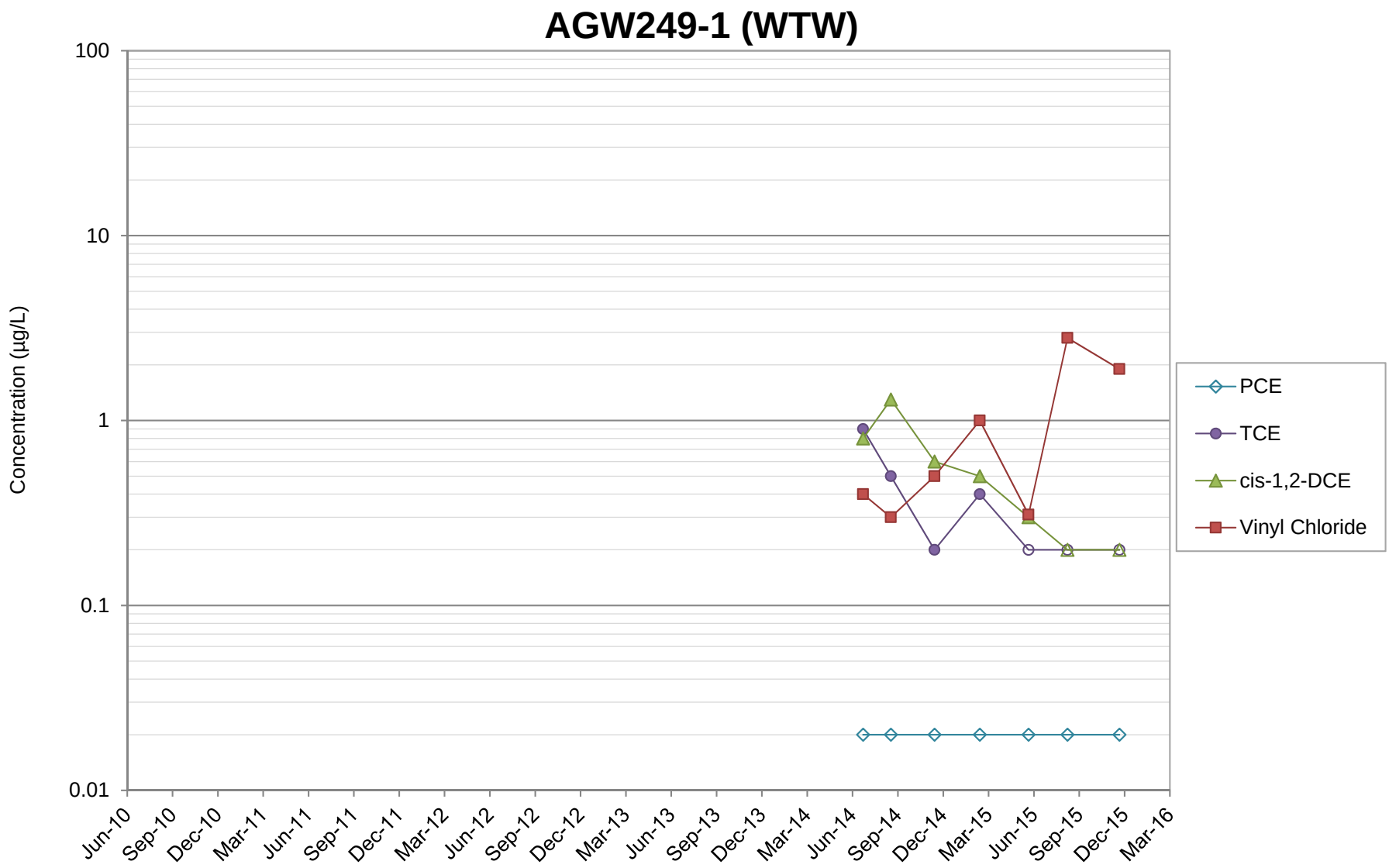
AGW248-5 VOC Concentrations

Figure
1-24



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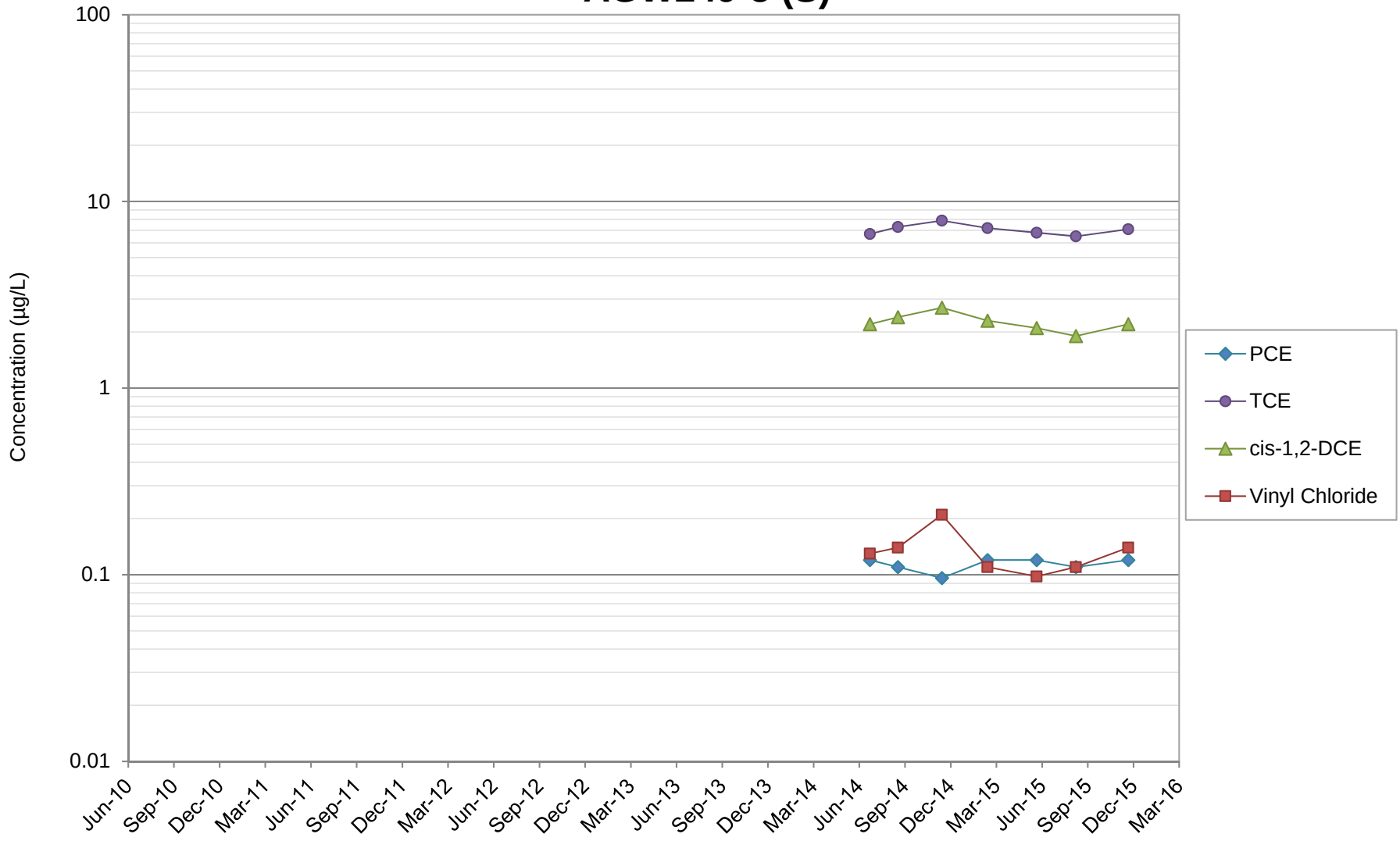
Boeing Auburn Auburn, Washington	**AGW249-1 VOC Concentrations**	Figure 1-25



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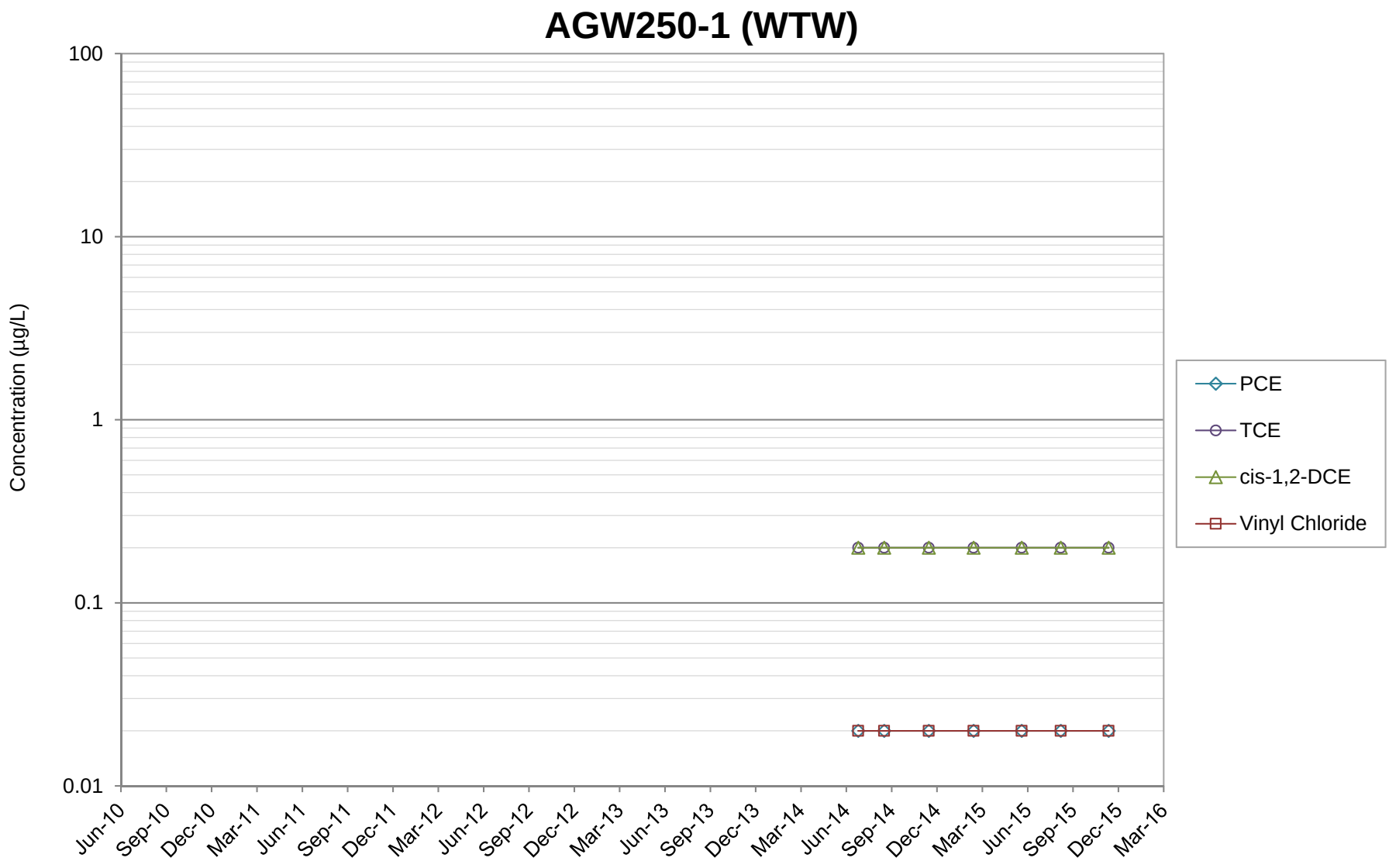
Boeing Auburn Auburn, Washington	**AGW249-5 VOC Concentrations**	Figure 1-26



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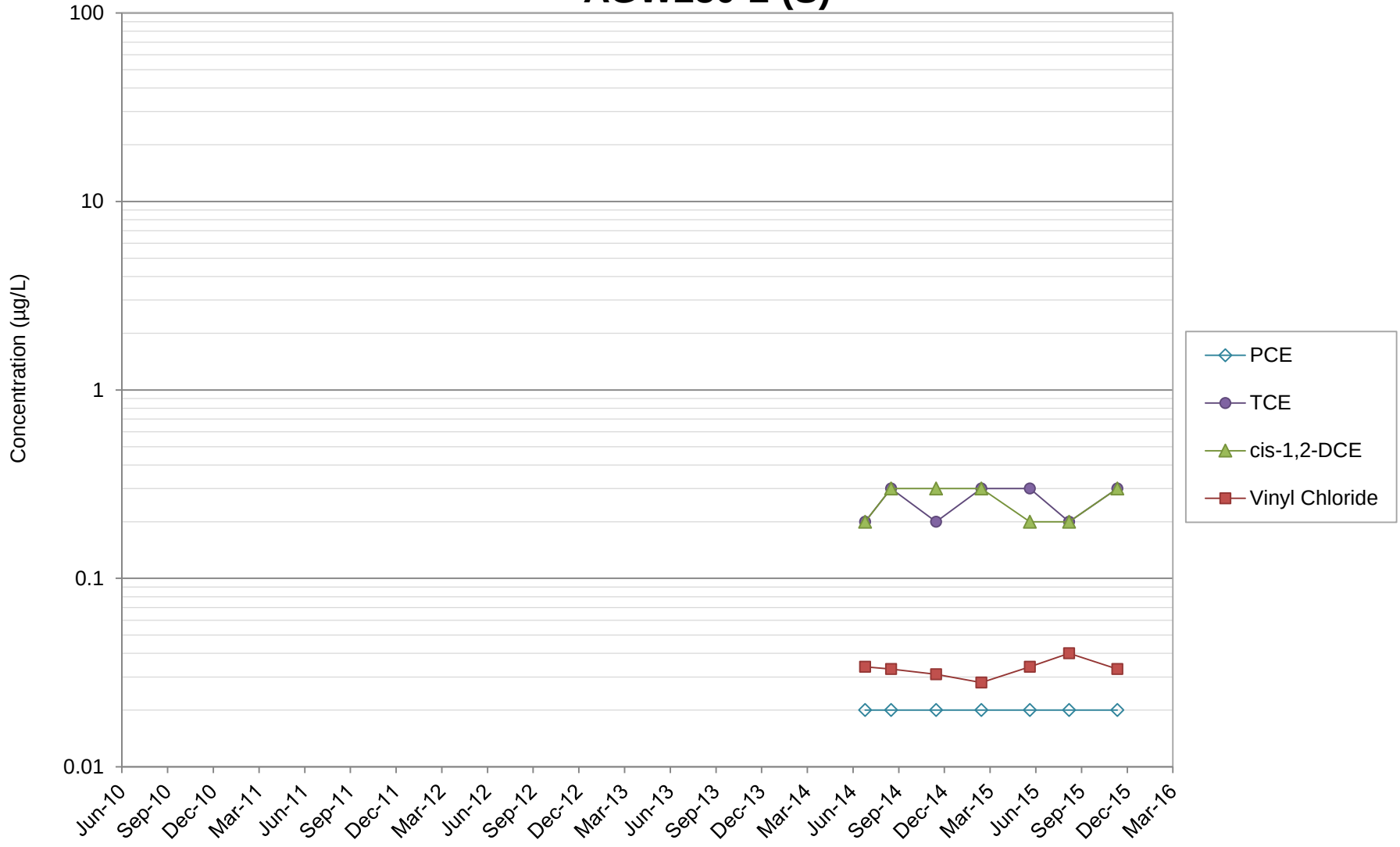
Auburn, Washington

AGW250-1 VOC Concentrations

Figure
1-27



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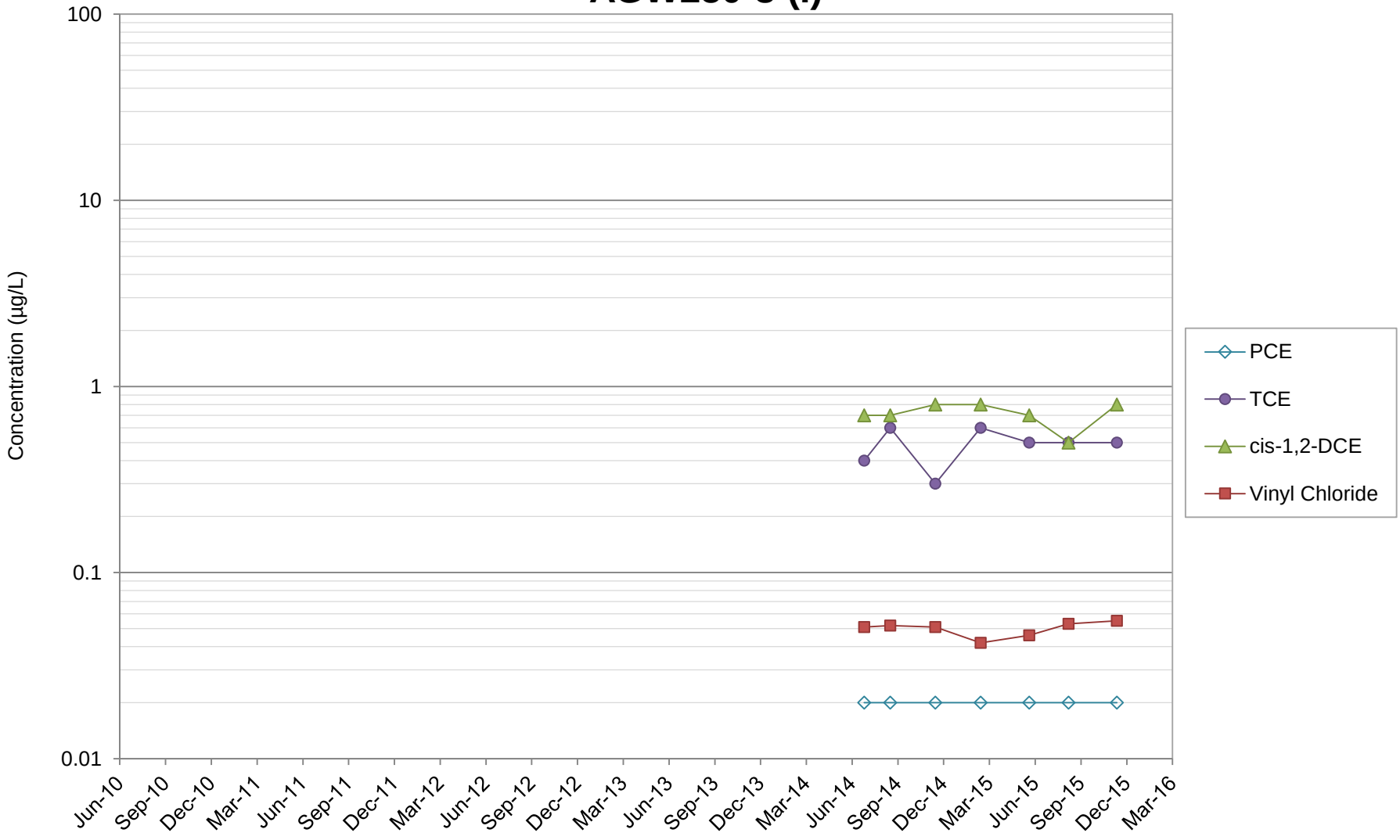
Auburn, Washington

AGW250-2 VOC Concentrations

Figure
1-28



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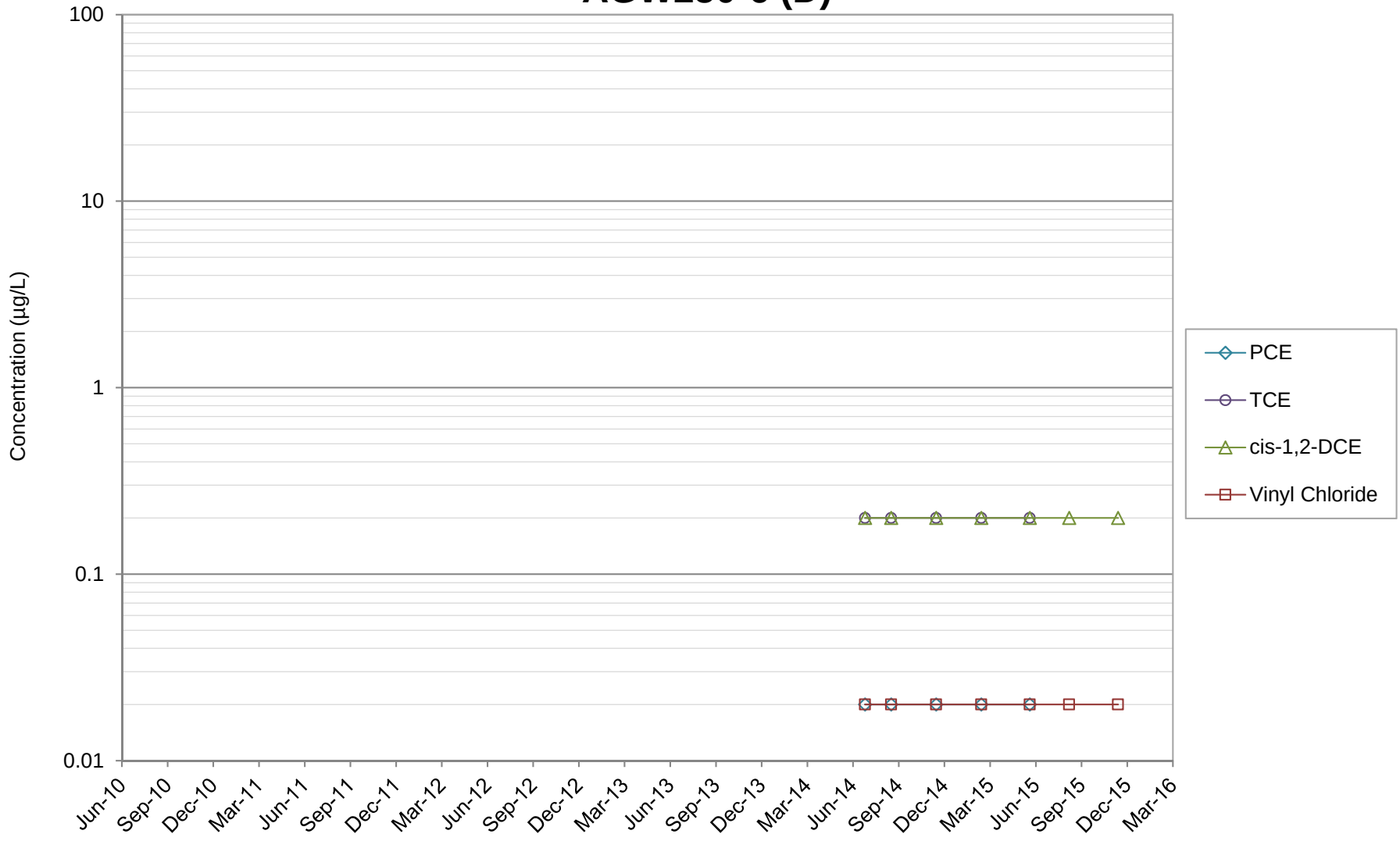
AGW250-3 VOC Concentrations

Figure
1-29



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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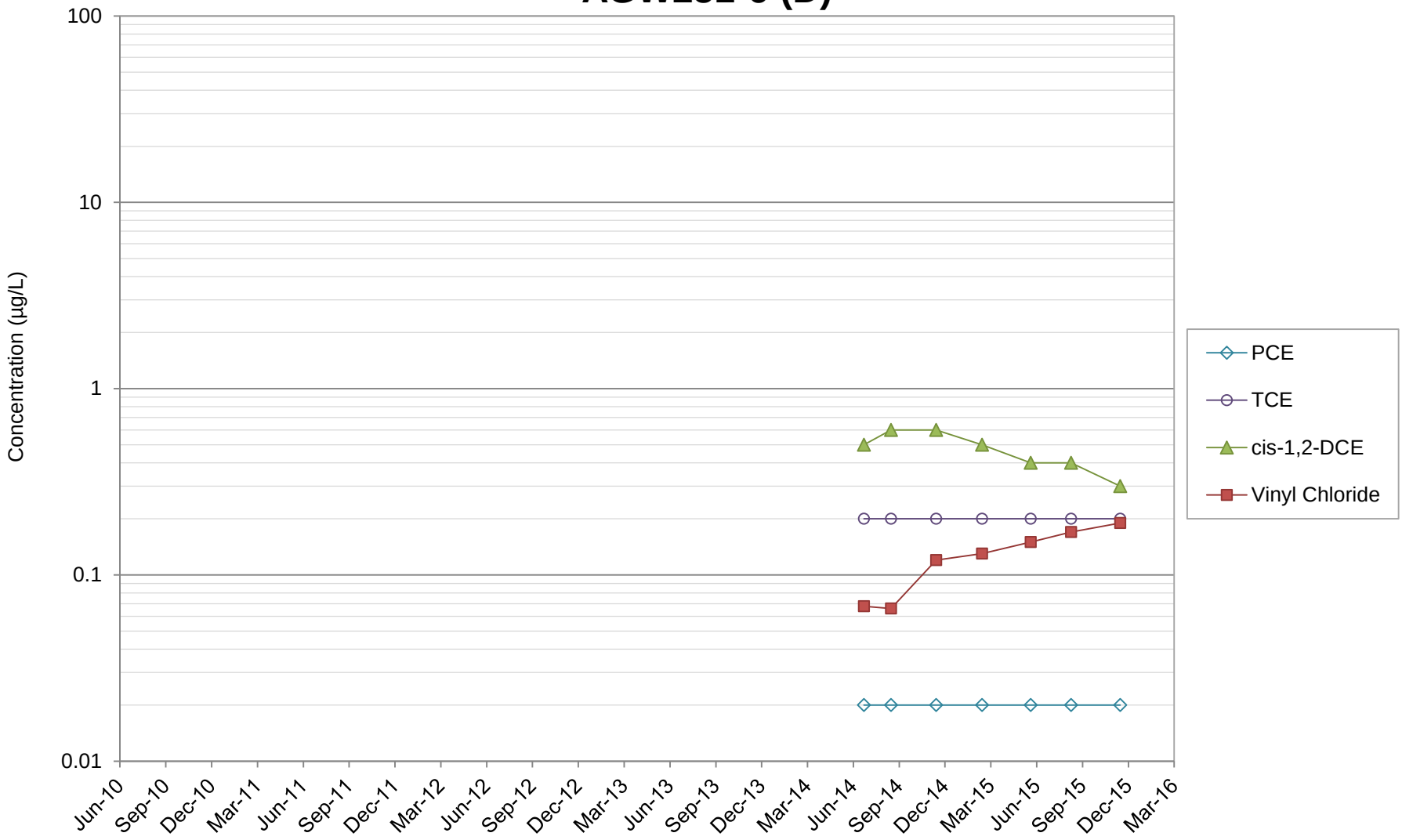
AGW250-6 VOC Concentrations

Figure
1-30

AGW251-6 (D)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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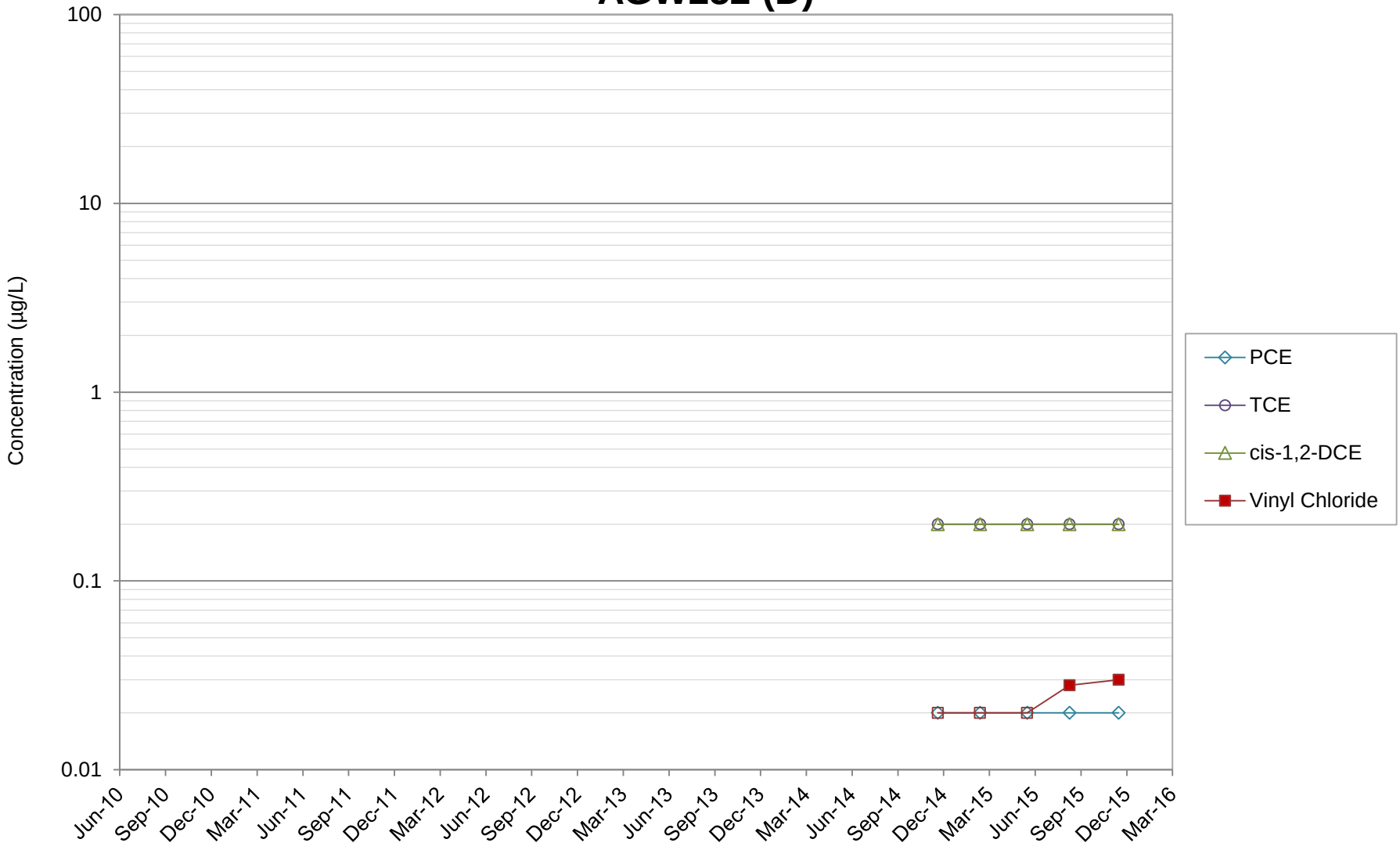
AGW251-6 VOC Concentrations

Figure
1-31

AGW252 (D)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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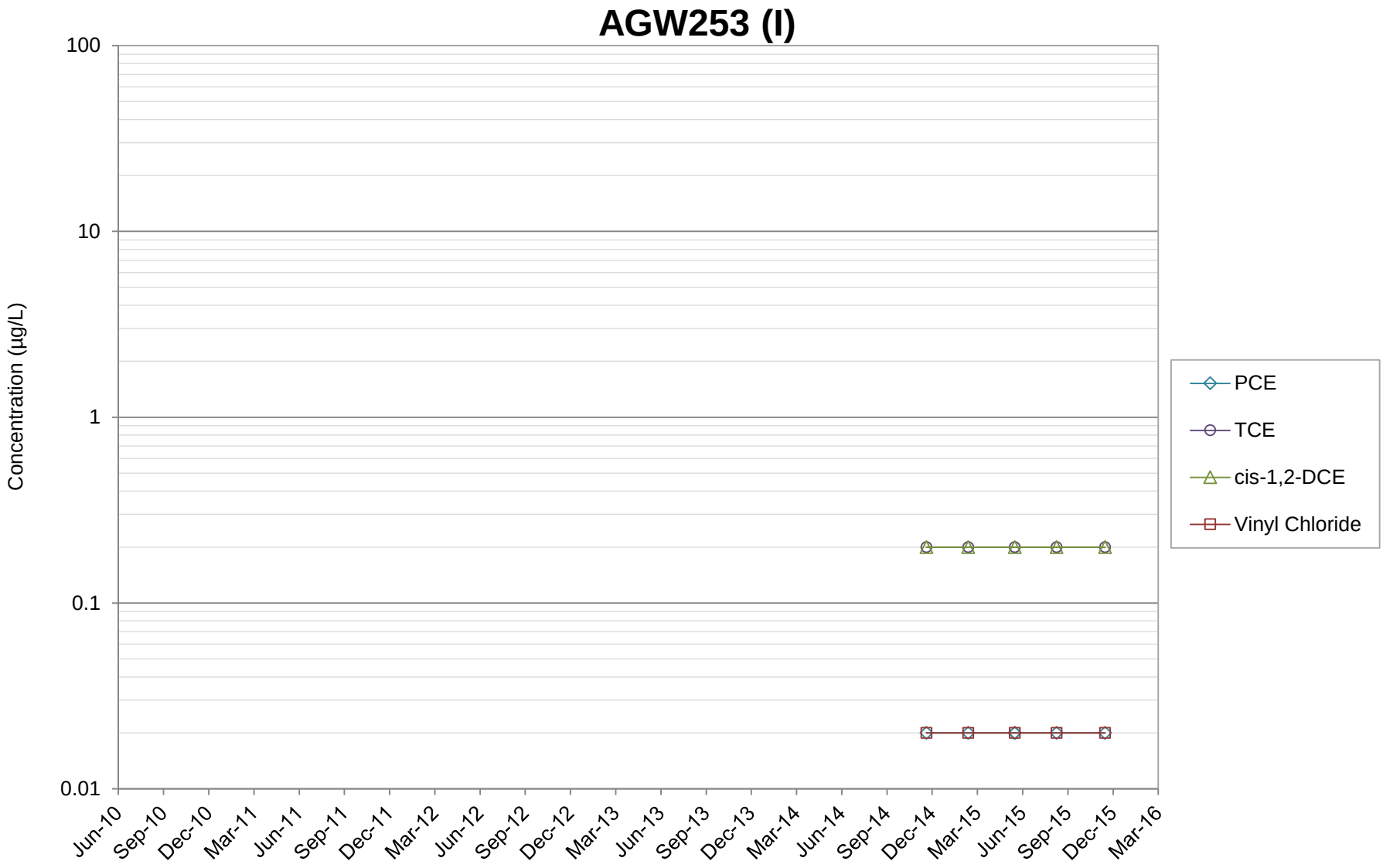
AGW252 VOC Concentrations

Figure
1-32



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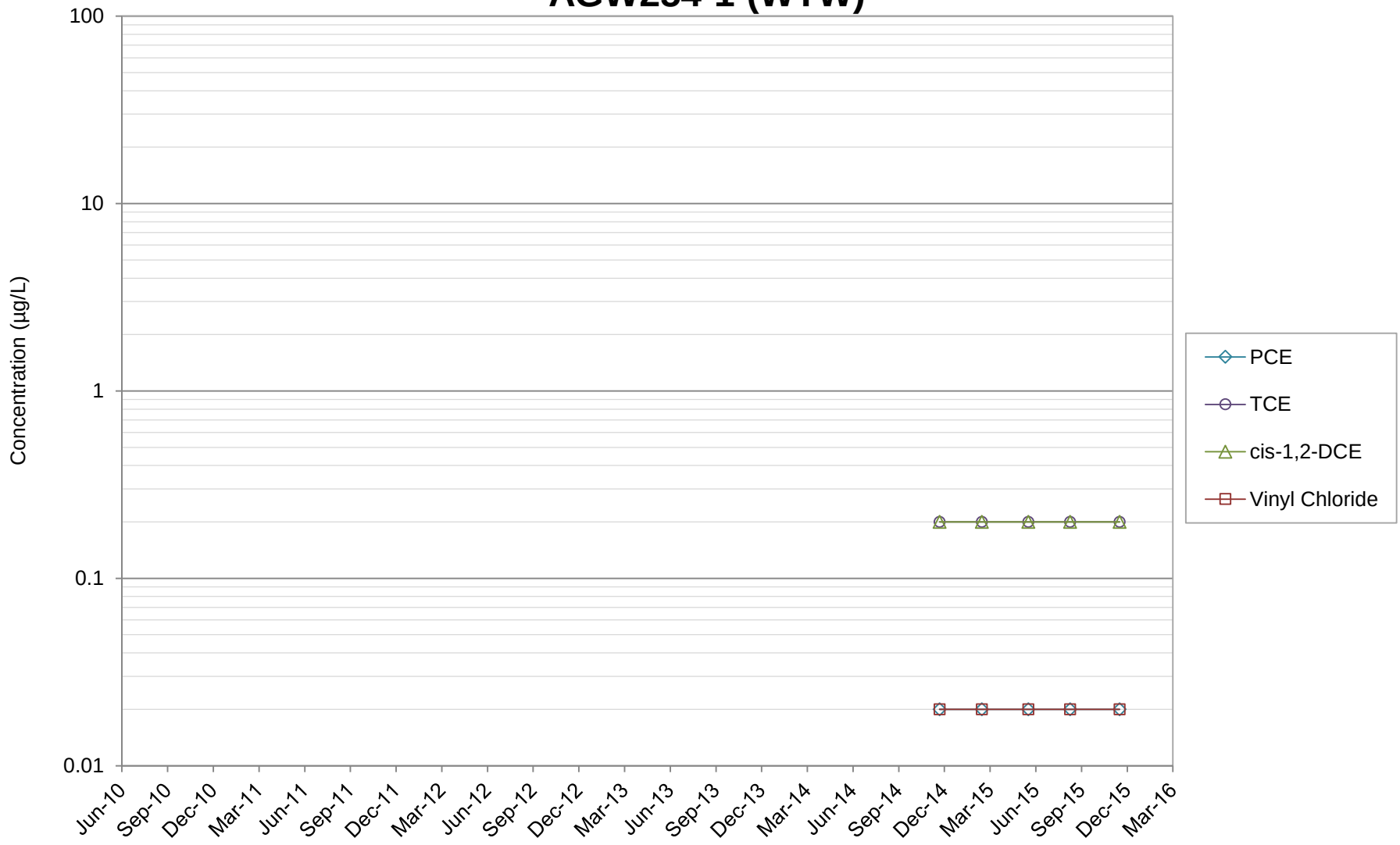
AGW253 VOC Concentrations

Figure
1-33

AGW254-1 (WTW)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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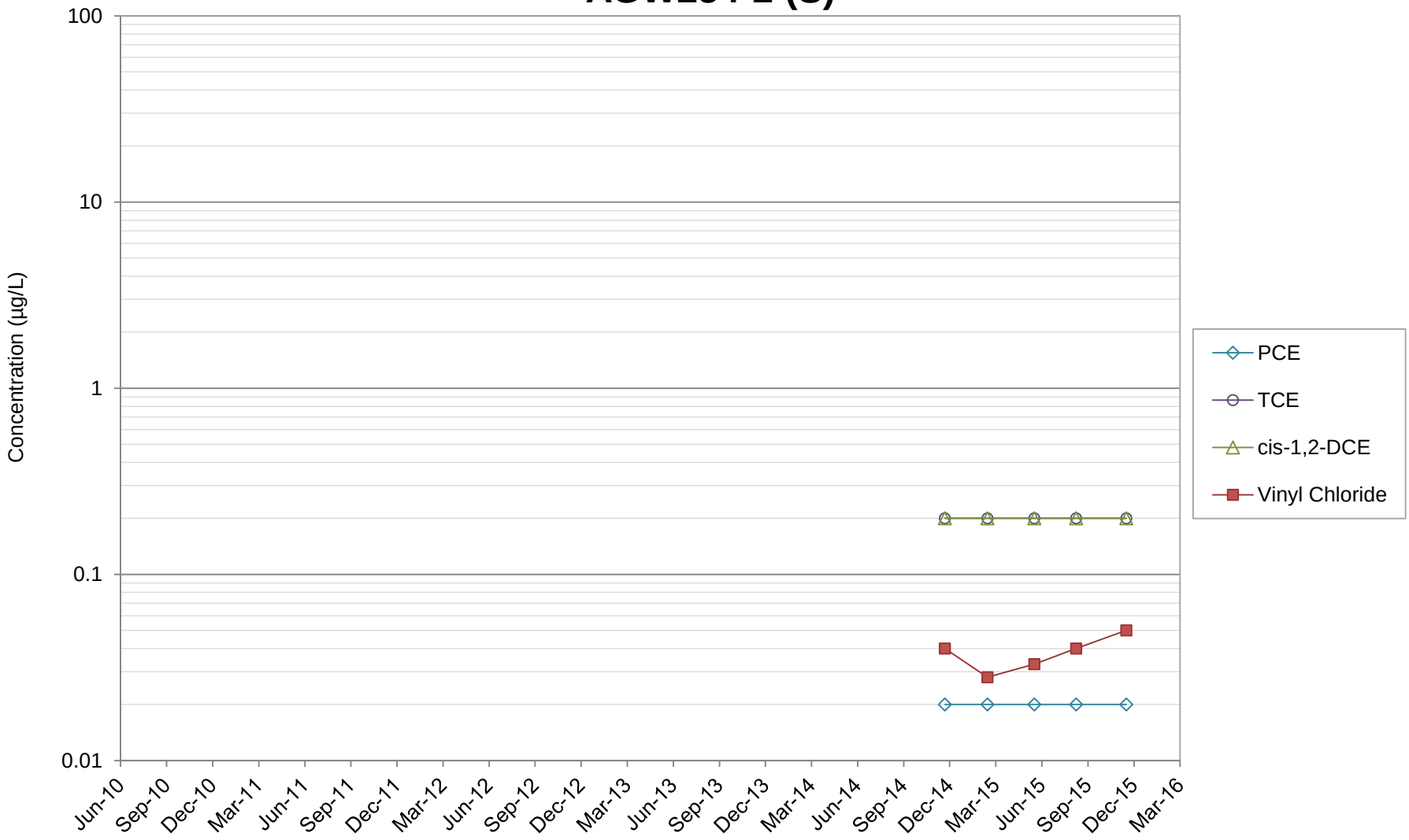
AGW254-1 VOC Concentrations

Figure
1-34



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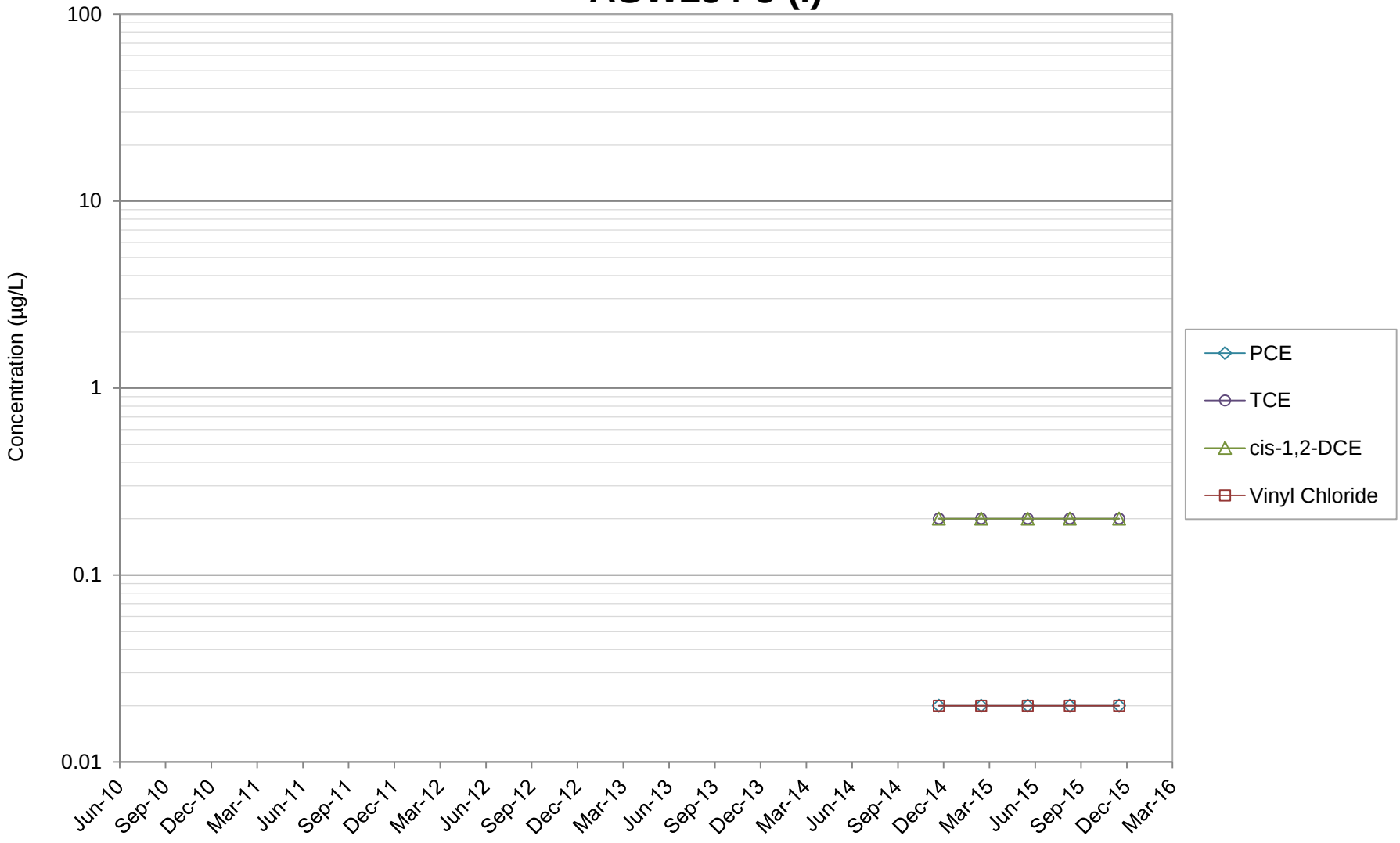
AGW254-2 VOC Concentrations

Figure
1-35

AGW254-5 (I)



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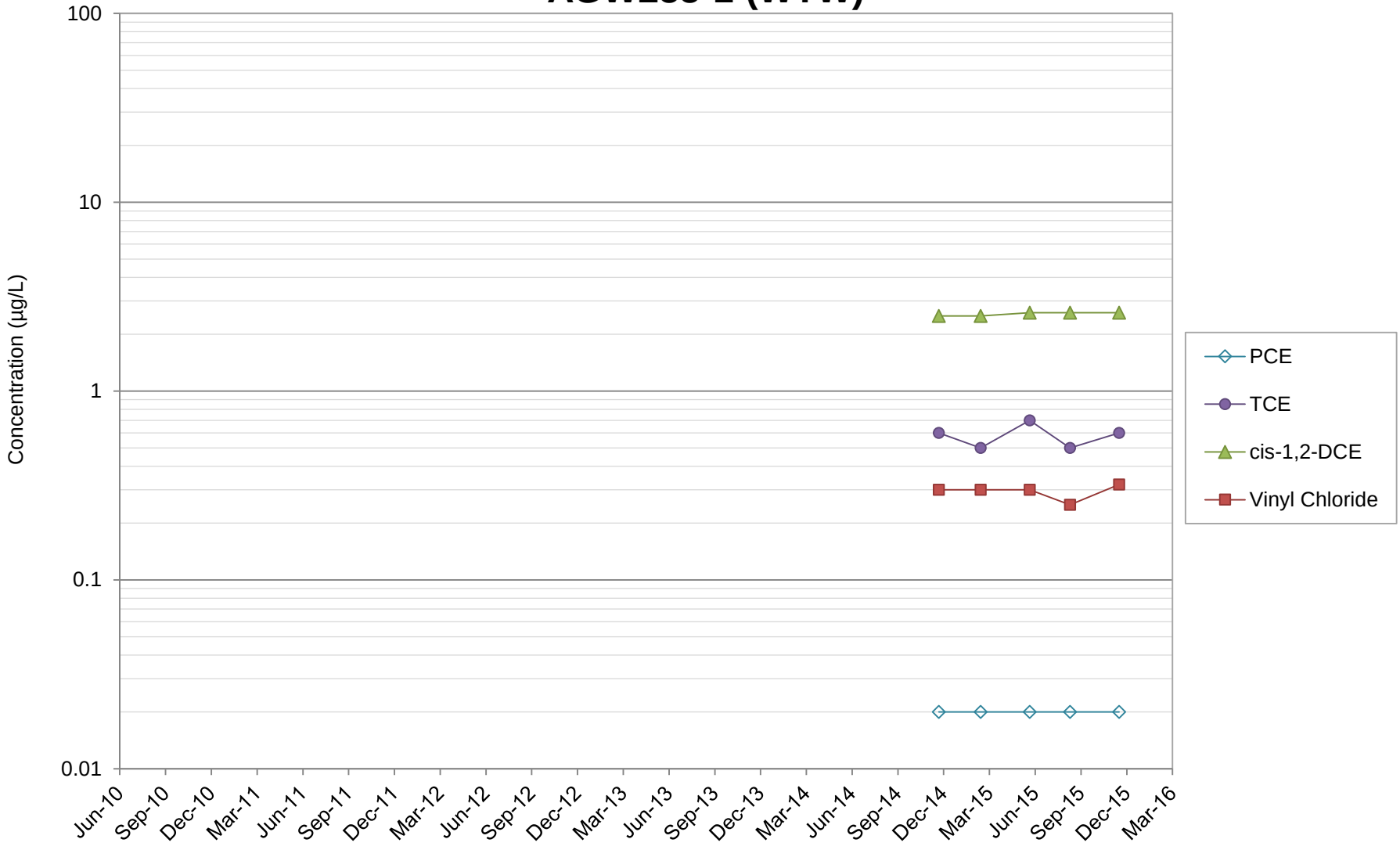
AGW254-5 VOC Concentrations

Figure
1-36

AGW255-1 (WTW)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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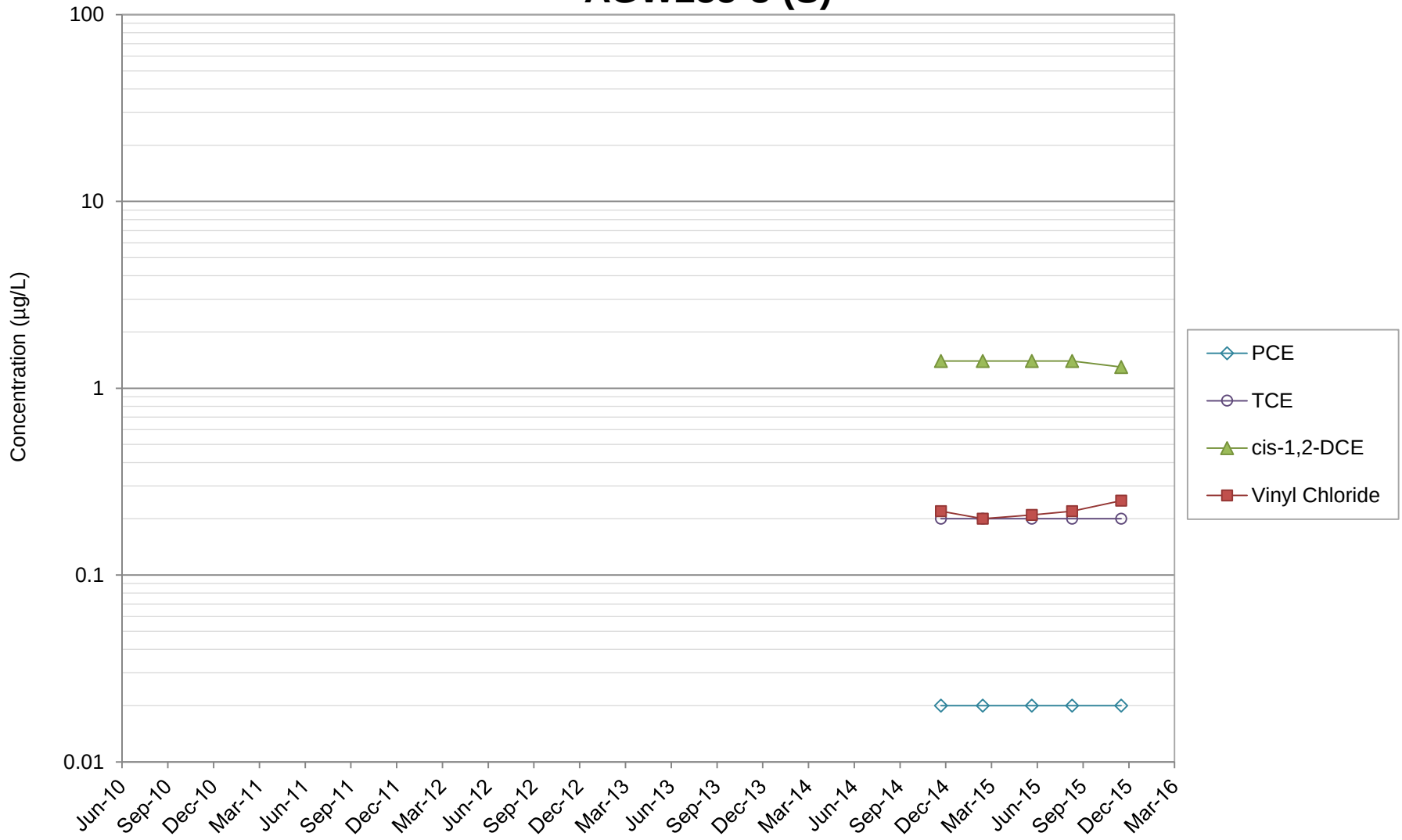
AGW255-1 VOC Concentrations

Figure
1-37

AGW255-3 (S)



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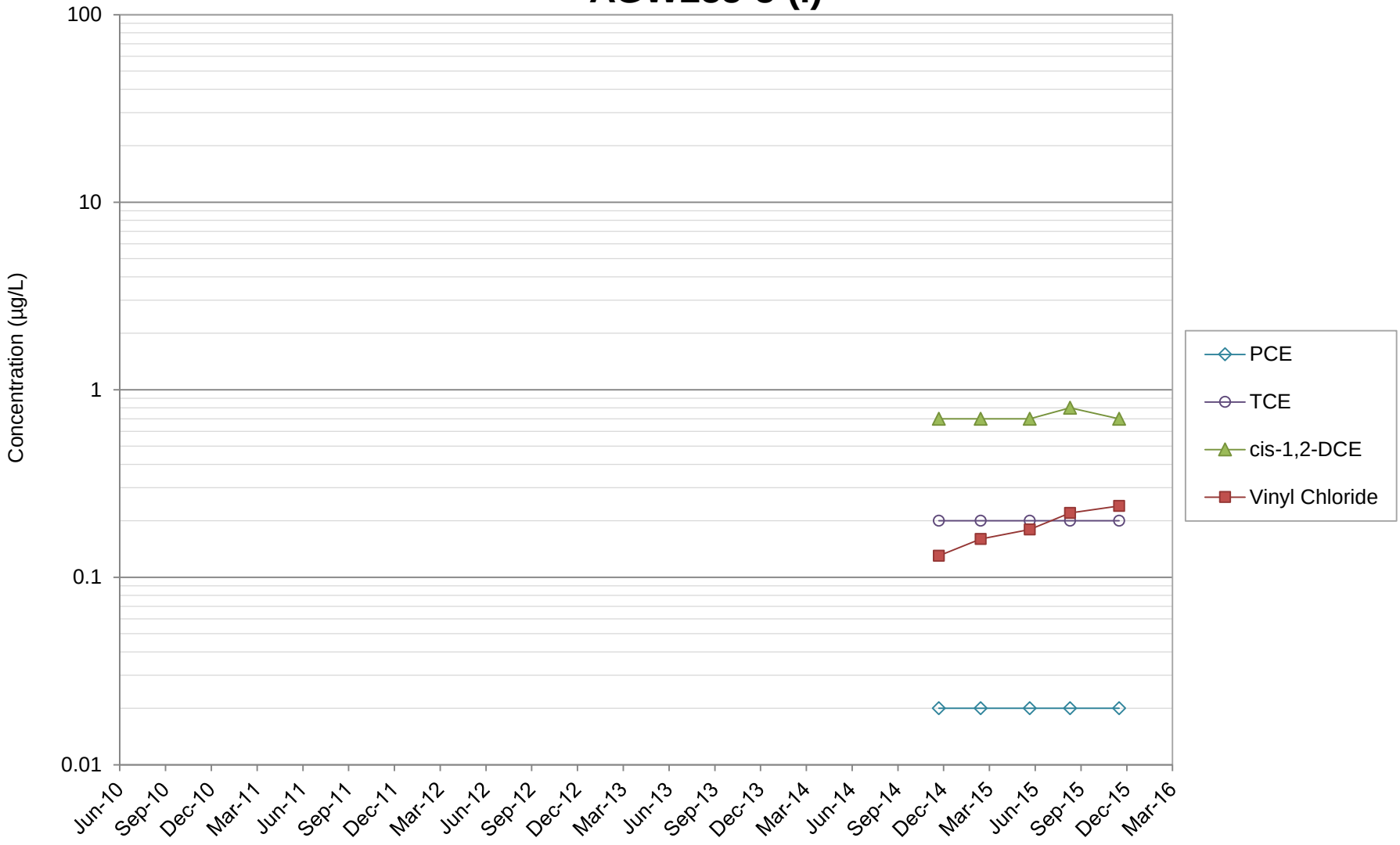
AGW255-3 VOC Concentrations

Figure
1-38

AGW255-5 (I)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

2) Open markers shown in the legend indicate the compound has never been detected at this location.

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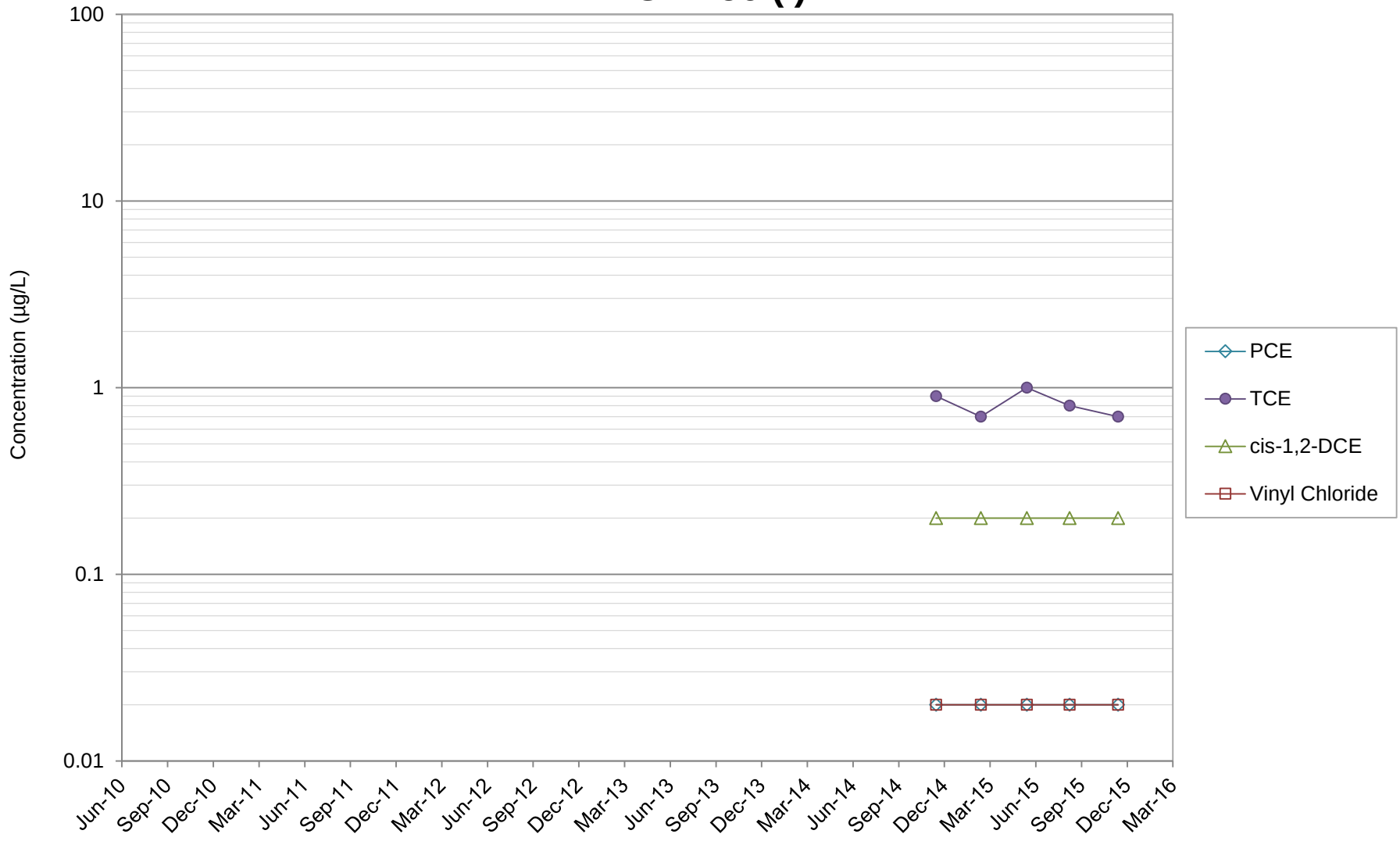
AGW255-5 VOC Concentrations

Figure
1-39

AGW256 (I)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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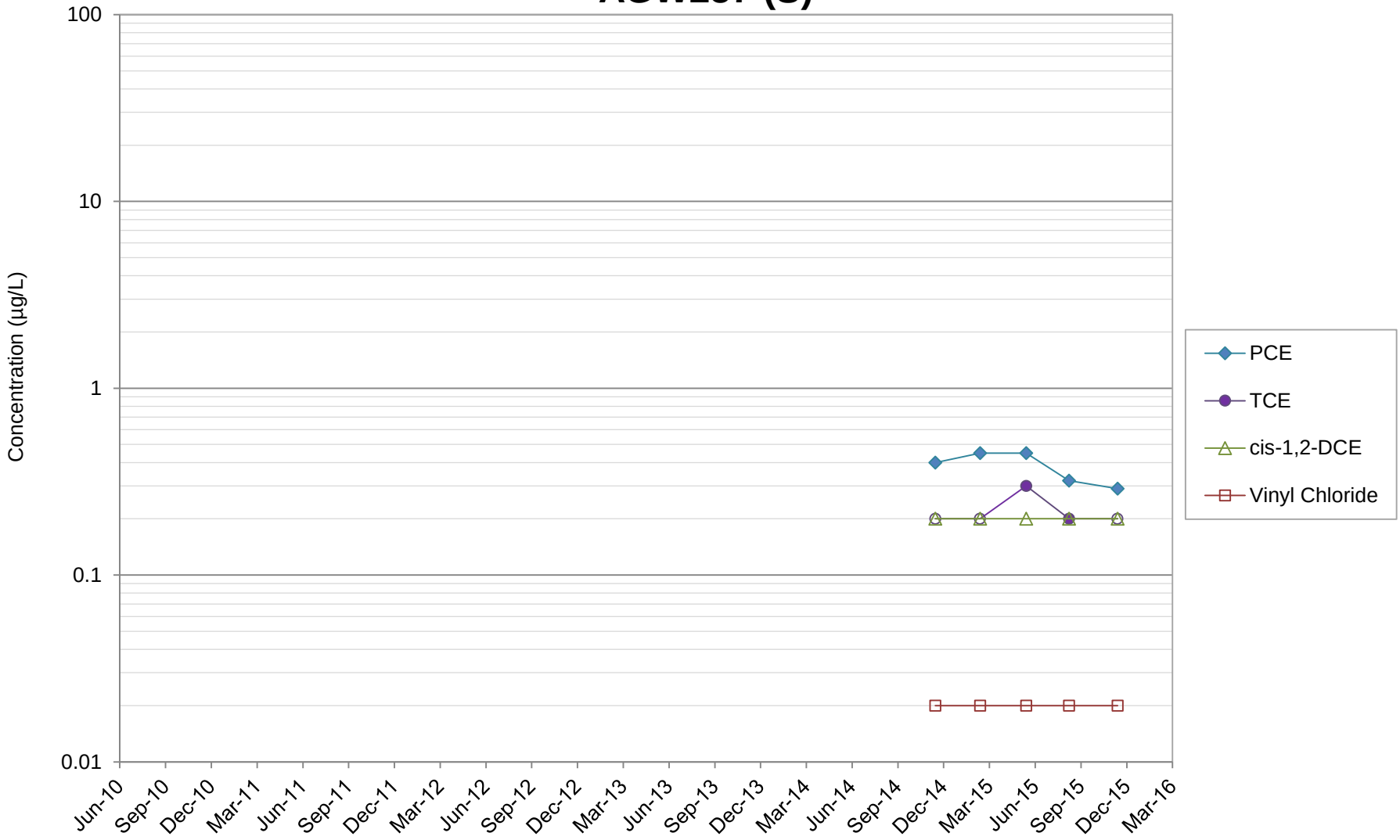
AGW256 VOC Concentrations

Figure
1-40



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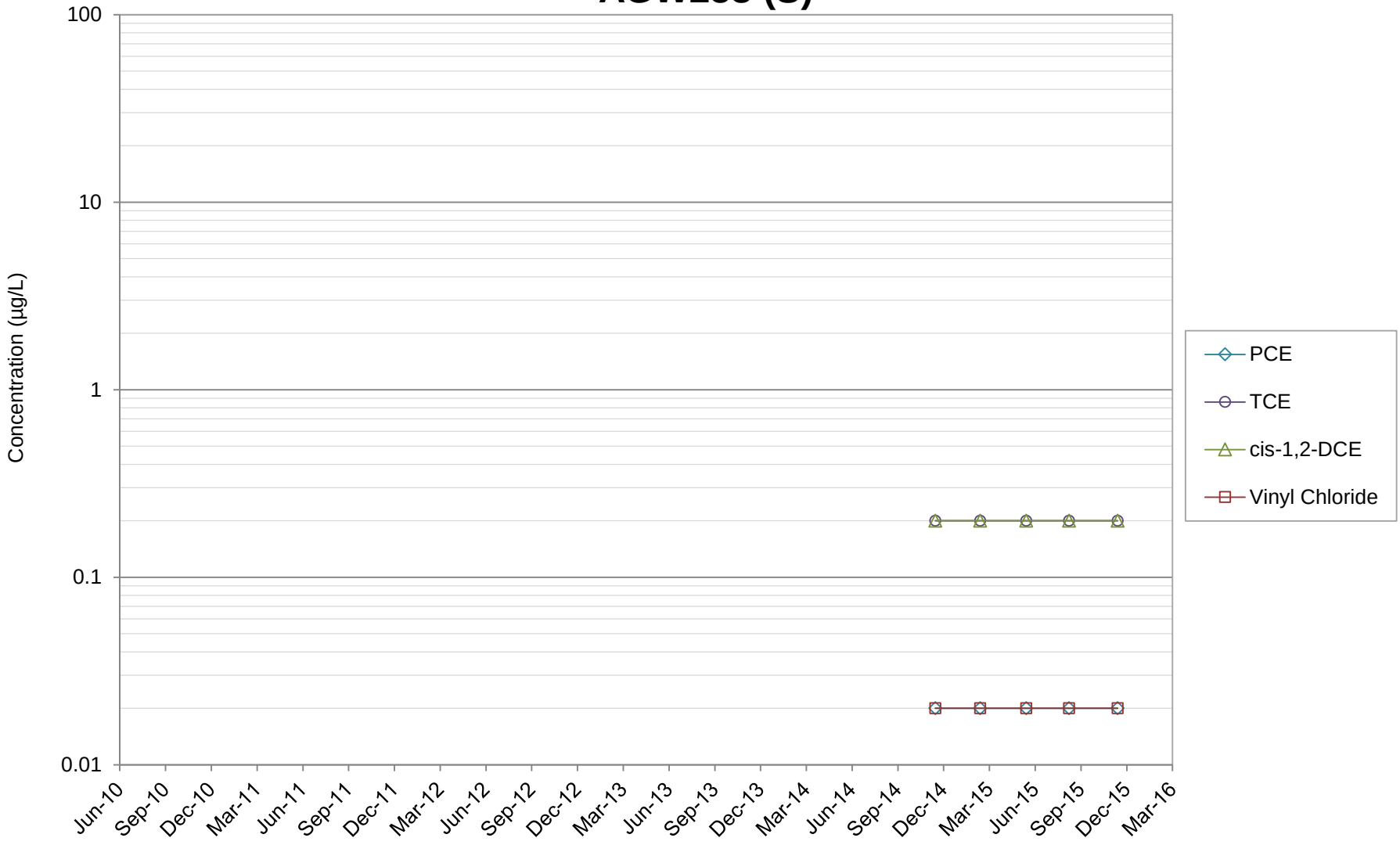
AGW257 VOC Concentrations

Figure
1-41

AGW258 (S)



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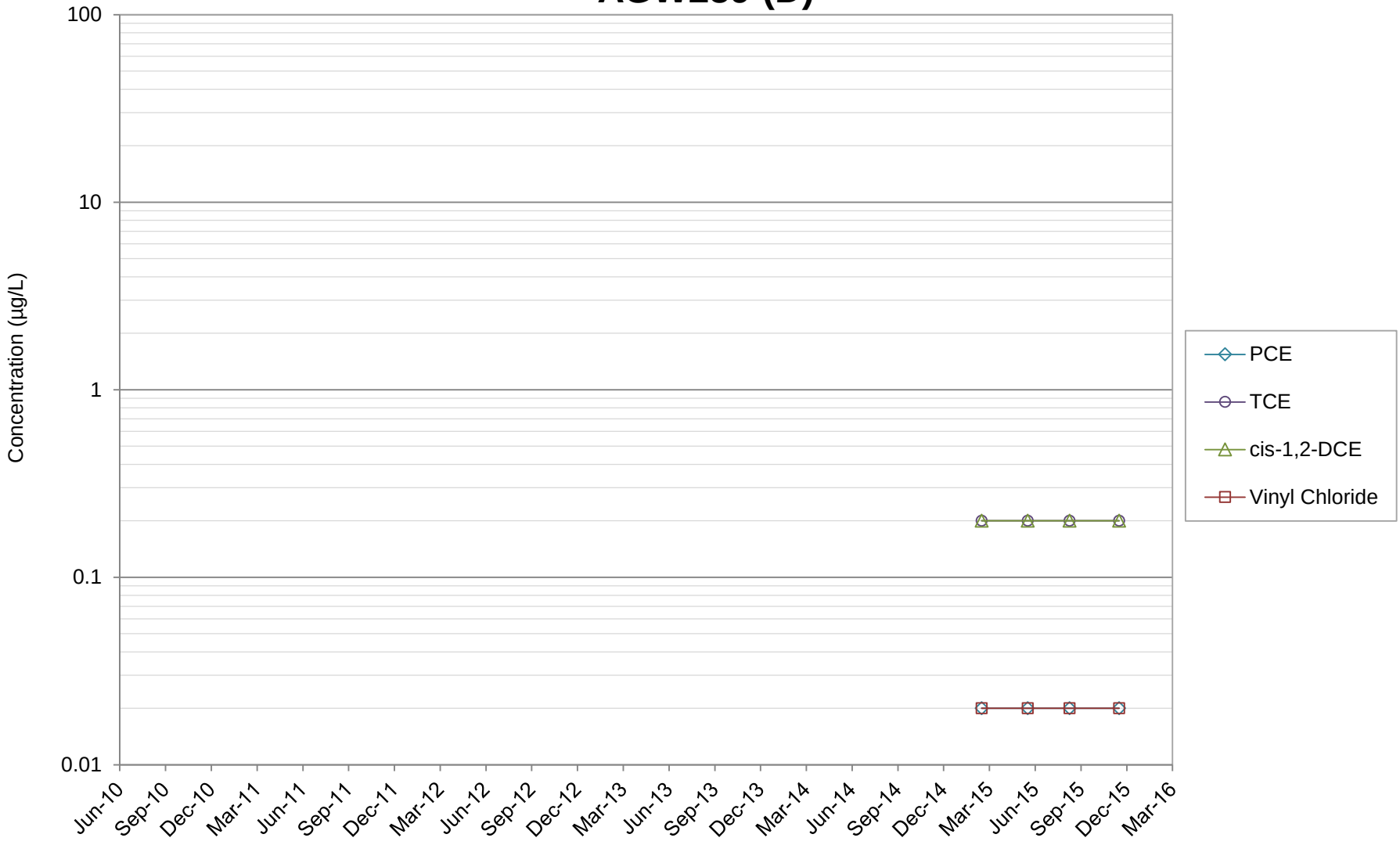
AGW258 VOC Concentrations

Figure
1-42

AGW259 (D)



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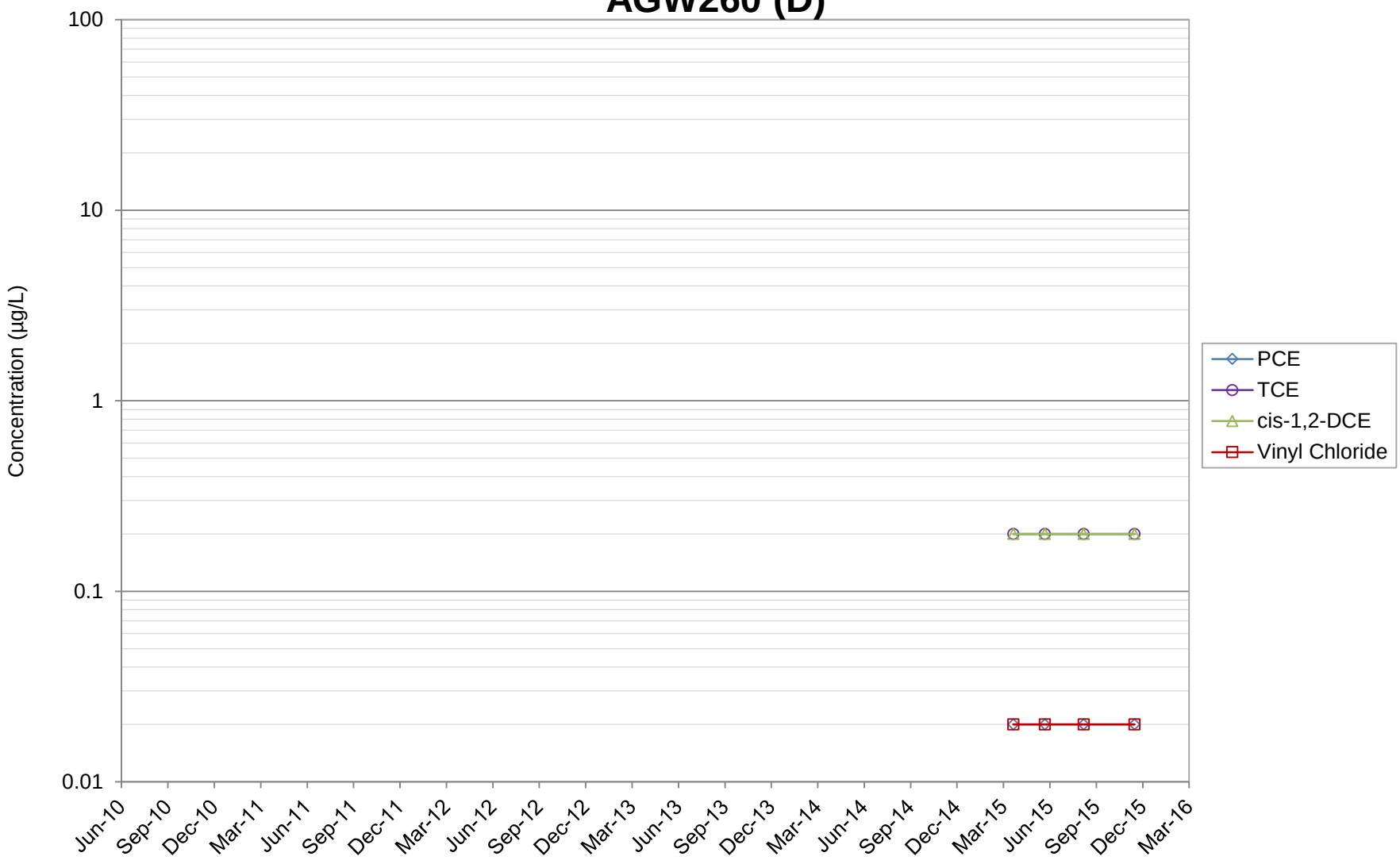
AGW259 VOC Concentrations

Figure
1-43



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

2) Open markers shown in the legend indicate the compound has never been detected at this location.

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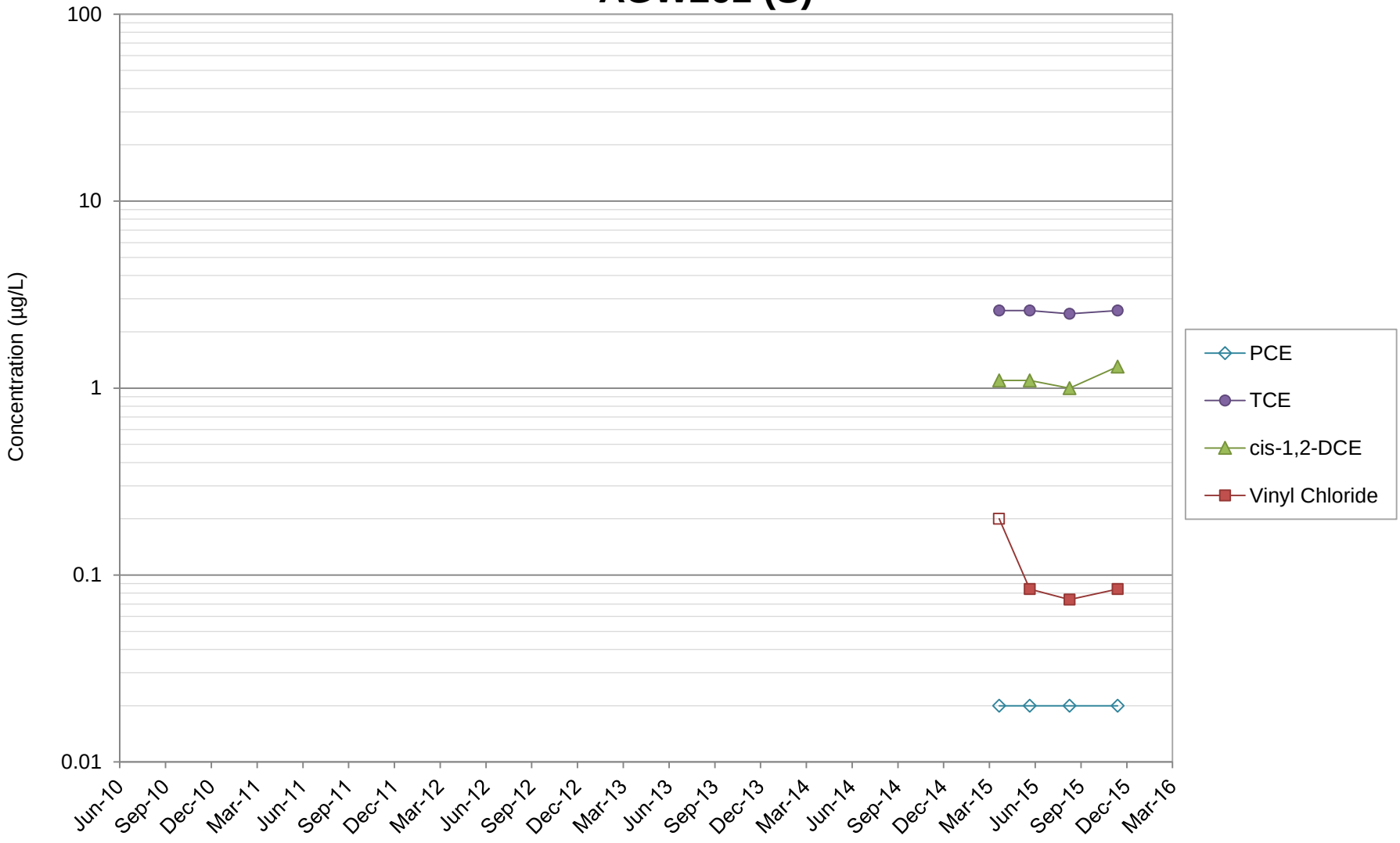
AGW260 VOC Concentrations

Figure
1-44

AGW261 (S)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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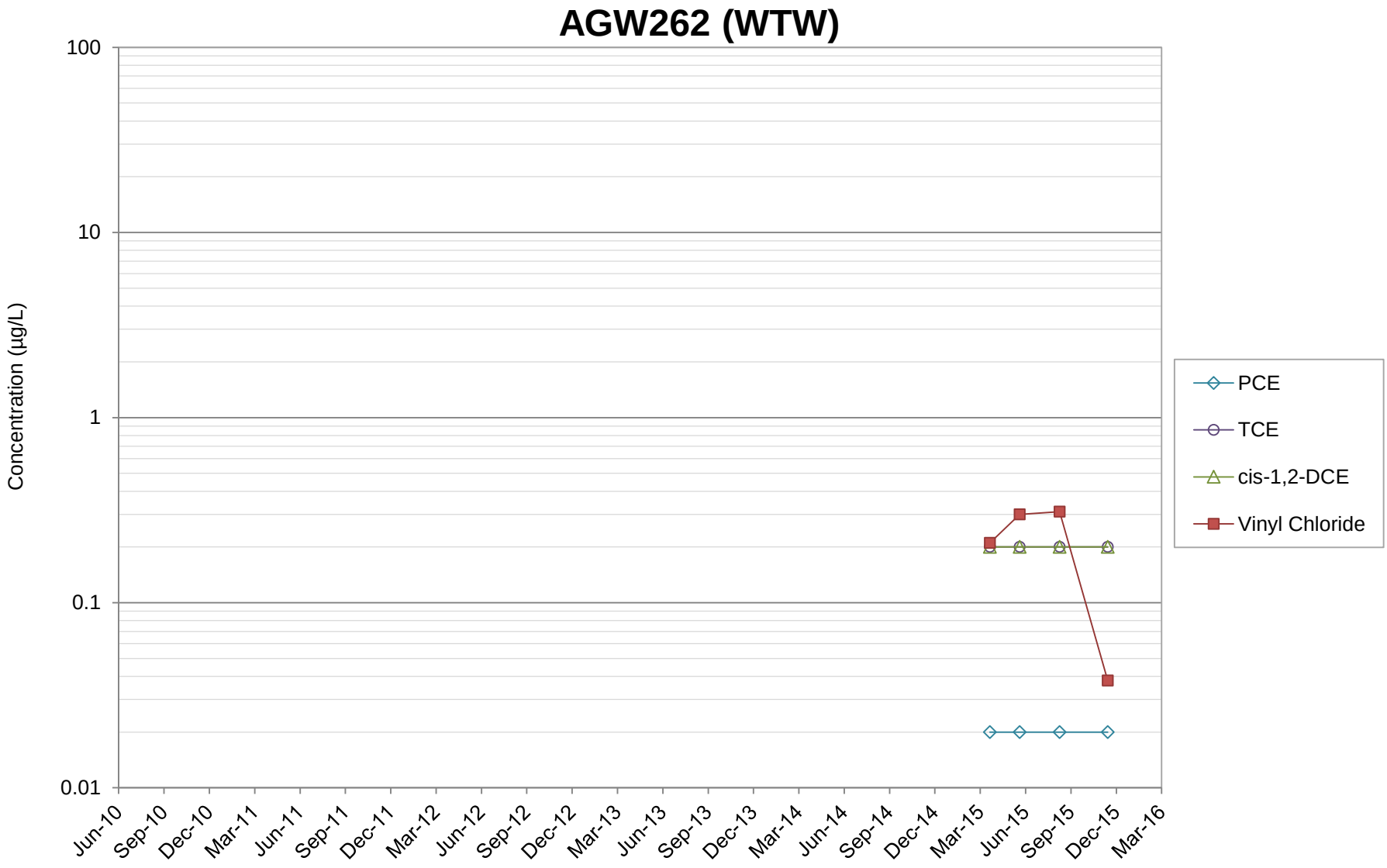
AGW261 VOC Concentrations

Figure
1-45



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

2) Open markers shown in the legend indicate the compound has never been detected at this location.

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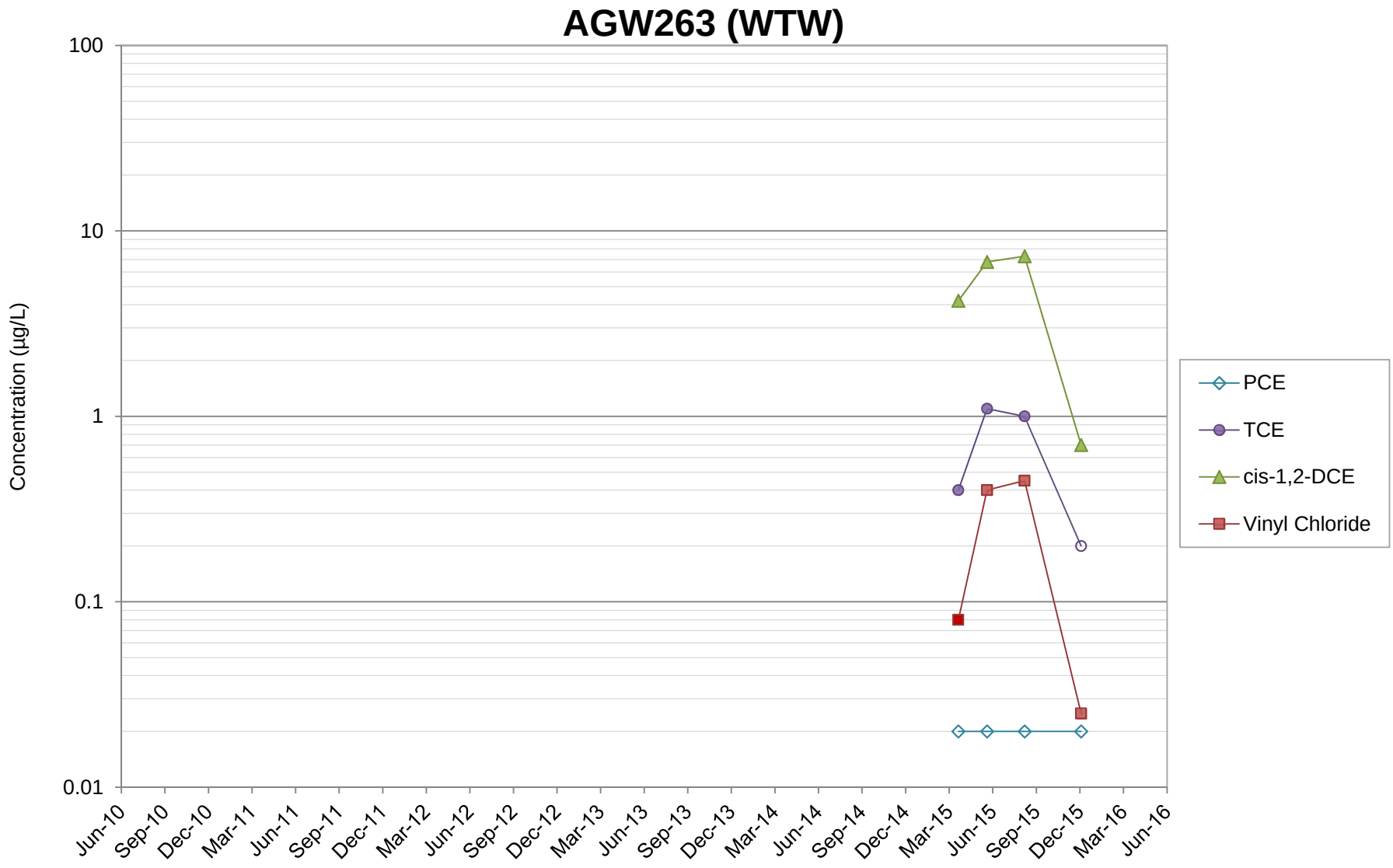

Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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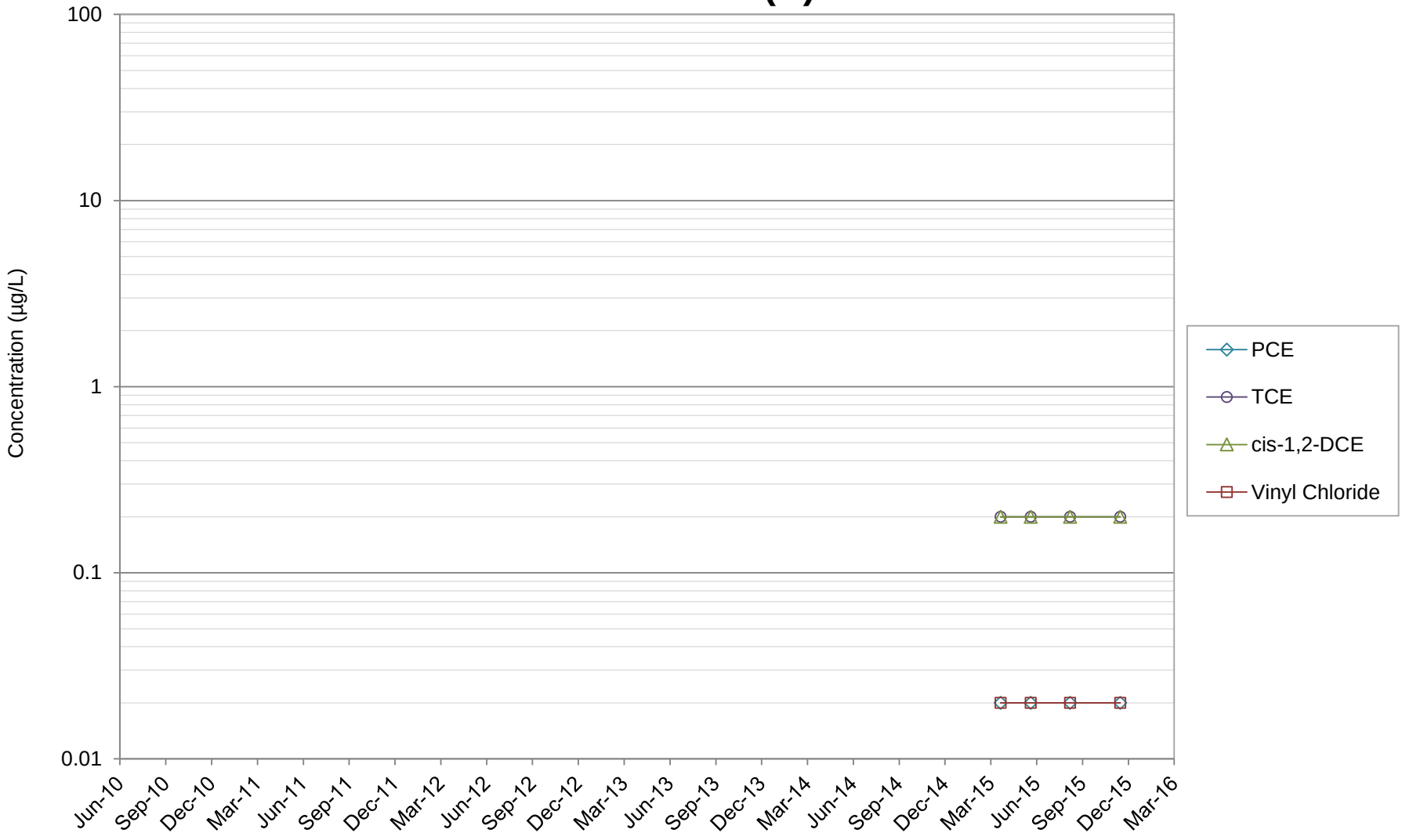
AGW263 VOC Concentrations

Figure
1-47

AGW264 (D)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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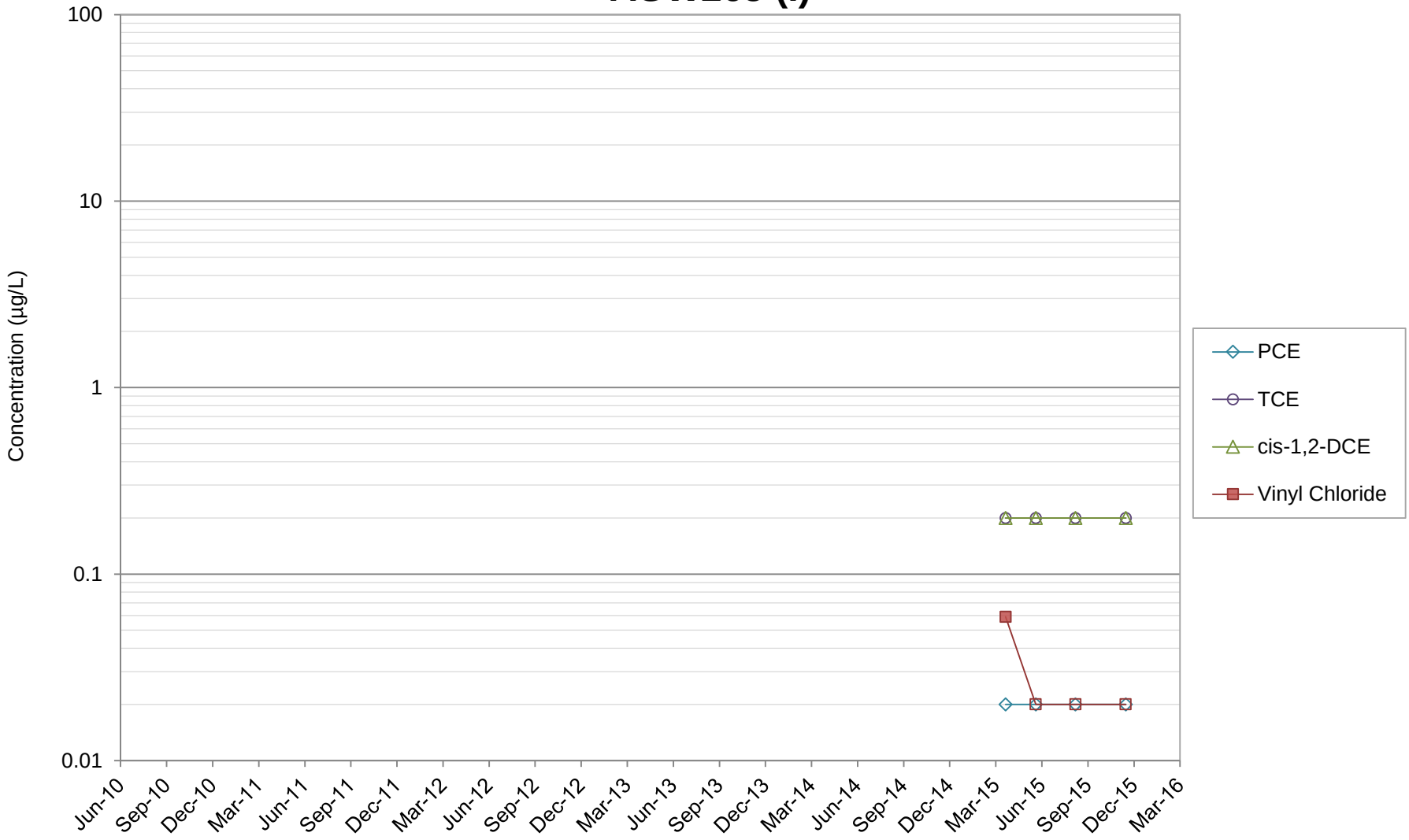
AGW264 VOC Concentrations

Figure
1-48



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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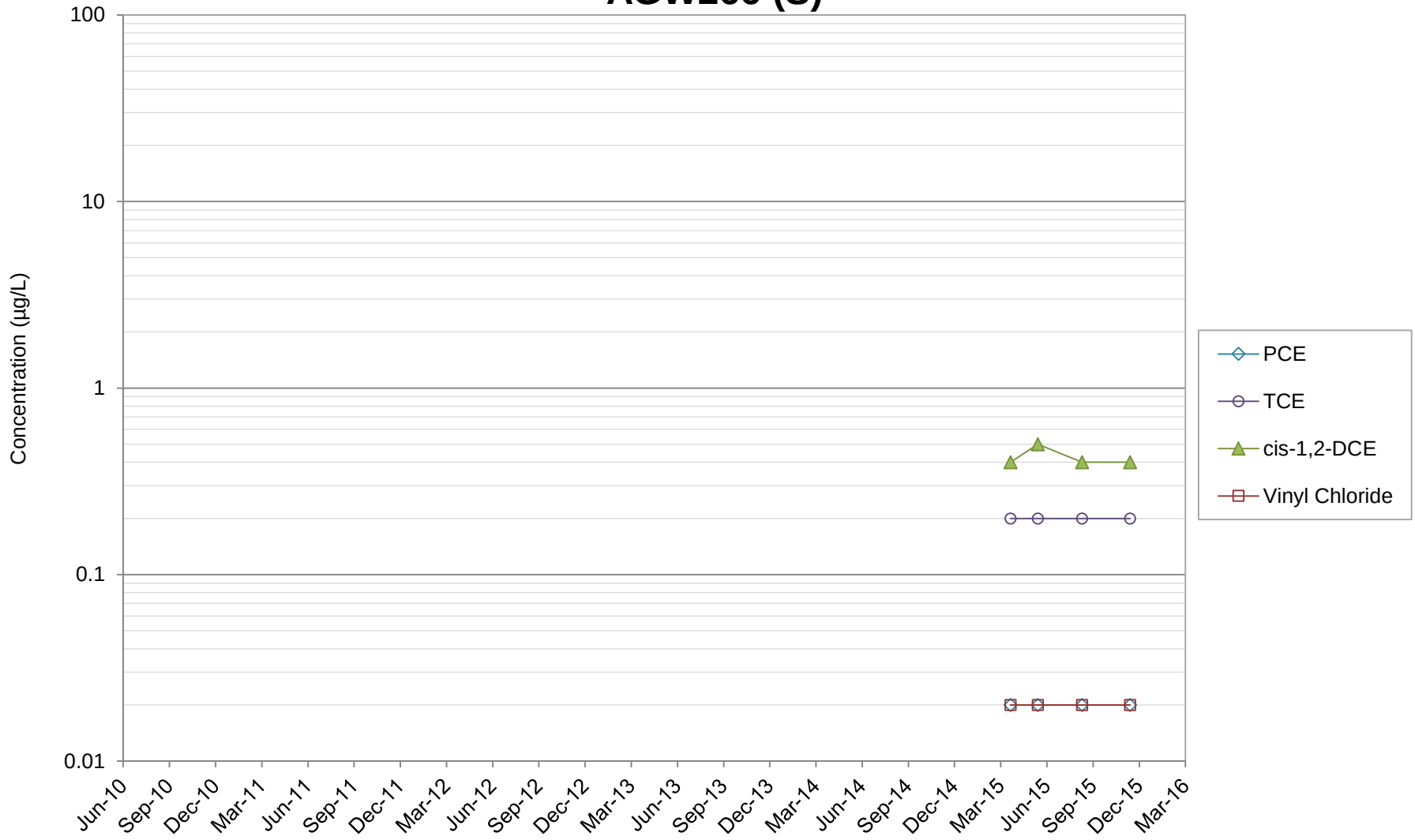
AGW265 VOC Concentrations

Figure
1-49

AGW266 (S)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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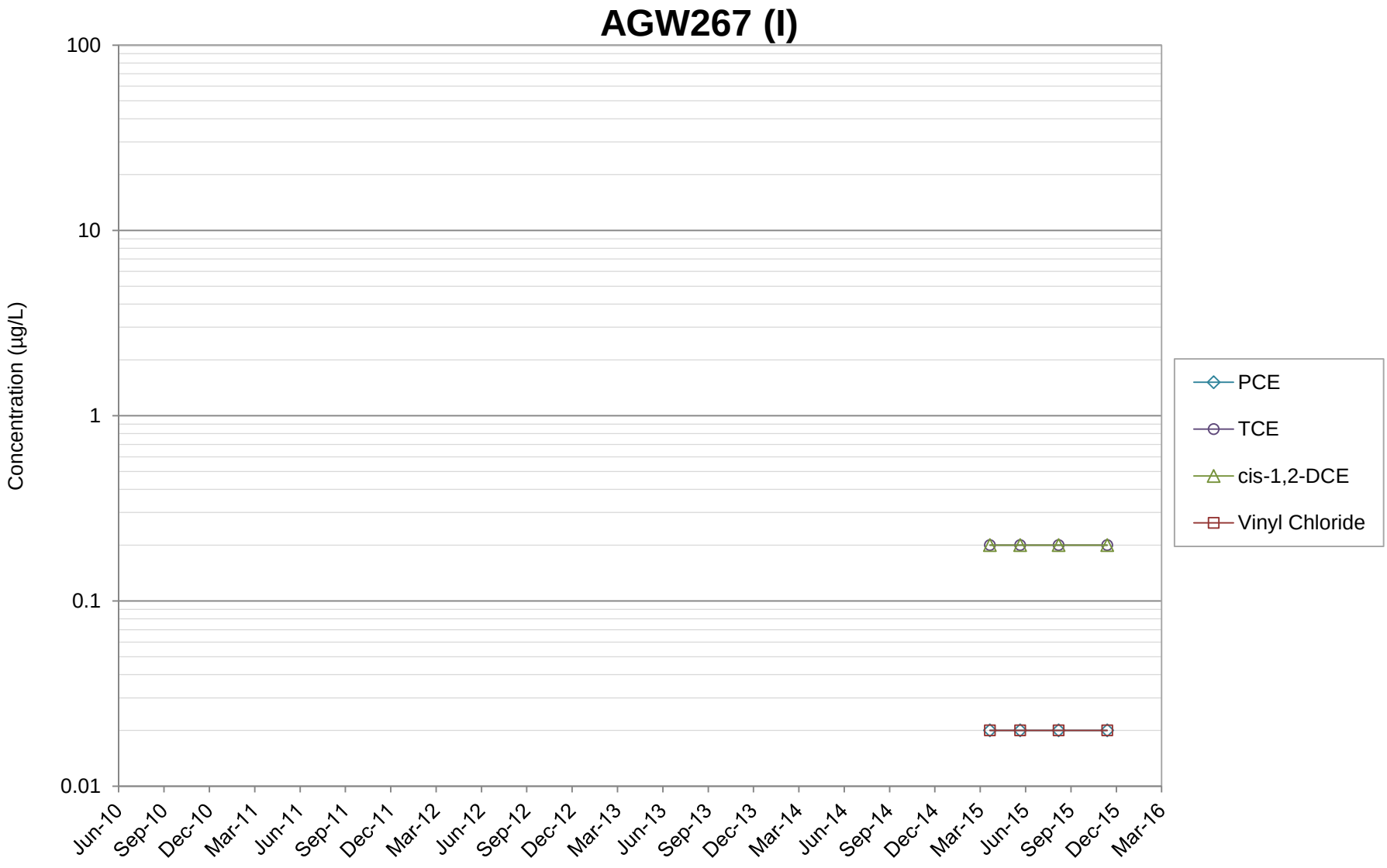
AGW266 VOC Concentrations

Figure
1-50



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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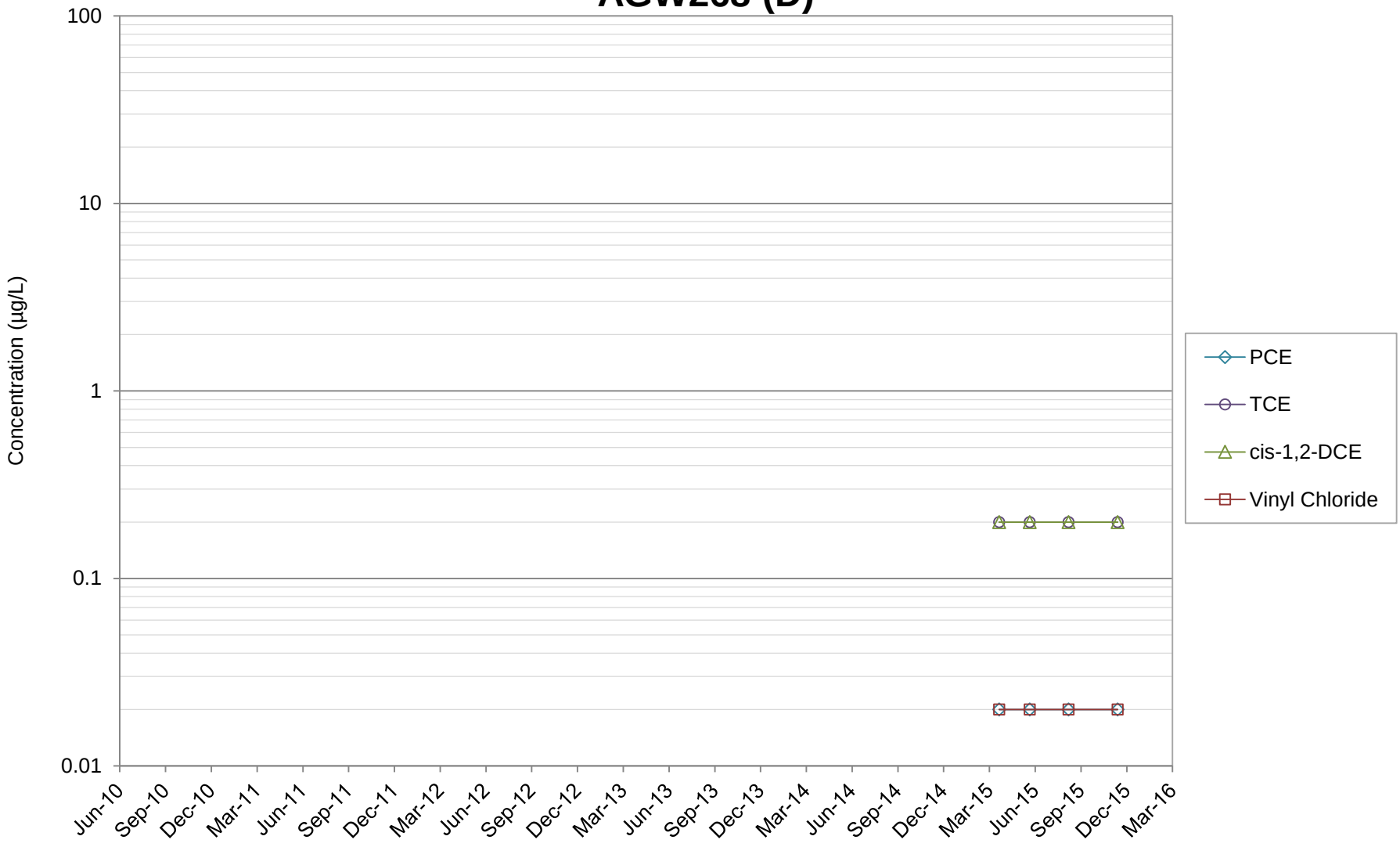
AGW267 VOC Concentrations

Figure
1-51

AGW268 (D)



Notes: 1) Open markers on graphs denote non-detect values, values shown represent analytical reporting limit.

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AGW268 VOC Concentrations

Figure
1-52