Draft Technical Memorandum

TO: Marv Coleman, Washington State Department of Ecology

CC: Eric Huseby, City of Tacoma

FROM: Sierra Mott and Jennifer Wynkoop

DATE: March 9, 2017

RE: **Long-Term Groundwater Monitoring Status Report No. 3 for January 2017**
Former Sauro's Cleanerama Site
Tacoma, Washington
Project No. 0094048.090.093

Introduction

On behalf of the City of Tacoma (City), Landau Associates, Inc. (LAI) is providing results for long-term groundwater monitoring activities at the former Sauro's Cleanerama site (site). Figure 1 shows the site location. The City is conducting semi-annual sampling at nine monitoring wells as outlined in the Cleanup Action Plan (CAP; LAI 2014), which is part of the Agreed Order (No. DE 11080) between the City and Washington State Department of Ecology (Ecology). Under the CAP, the City is implementing a monitored natural attenuation (MNA) remedy that includes 2 years of semi-annual groundwater monitoring beginning in January 2016 followed by annual groundwater monitoring in subsequent years until groundwater at the site reaches cleanup goals (CAP estimate is 26 years of annual sampling). Groundwater monitoring includes collection of volatile organic compounds (VOCs) and MNA geochemical samples in accordance with the CAP.

Semi-Annual Groundwater Monitoring Program Summary

The existing site groundwater monitoring well network includes 17 wells. Of the 17 wells, 9 were selected for long-term monitoring under the CAP. Figure 2 shows the monitoring well network and the nine wells selected for continued monitoring. Table 1 presents a sampling matrix for the long-term monitoring wells.

LAI completed the first year of semi-annual sampling events in January and June 2016 (LAI 2016). The third sampling event was completed January 18, 2017; this status report presents results of the January 2017 sampling event. One additional semi-annual event will occur (July 2017) before the sampling is transitioned to annual frequency. LAI will make a recommendation on the timing of the annual sampling for either January or July, depending on concentration trends.

During the January 2017 sampling event, samples were collected in accordance with the Sampling and Analysis Plan (LAI 2013) and Table 1. VOC and MNA analyses are collected using a peristaltic pump at MW-2. The other eight wells are sampled using passive diffusion bags for VOCs and dedicated Waterra foot valves for MNA parameters. VOC samples at RNS-MW6 were collected at two discrete depths because of the relatively long screen (20 ft) and prior sampling has demonstrated stratification

within the well; all other wells are sampled at a single depth. All samples were submitted under proper chain of custody to TestAmerica Laboratories, Inc. (TestAmerica) located in Tacoma, Washington.

All groundwater samples were analyzed by the laboratory for VOC constituents of concern: tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-Dichloroethene (cDCE), and vinyl chloride (VC) and MNA parameters (nitrate, nitrite, total organic carbon [TOC], sulfate, sulfide, chloride, and dissolved gasses [acetylene, methane, ethane, and ethene]). Samples were analyzed by the following methods: VOCs by U.S. Environmental Protection Agency (EPA) Method 8260; nitrate/nitrite by EPA Method 300.0; TOC by EPA Method 5310B; sulfate/sulfide/chloride by EPA Method 4500; and dissolved gasses by EPA Method RSK-175. Field parameters were also collected, including conductivity and dissolved oxygen (DO) using a field meter (YSI model 556 or equivalent) and ferrous iron using a HACH® field test kit (Model IR-18C). A duplicate sample was collected at LAI-MW4 (Dup1) for quality control purposes. Data will be electronically submitted to Ecology's EIM system following submittal of this report. Table 2 presents the analytical methods, reporting limits, preservatives, and holding times. Table 3 presents VOC analytical data. Table 4 presents MNA analytical data. Time series plots of the VOC data are presented in Attachment 1.

Volatile Organic Compound Results

VOC analytical results from the January 2017 sampling event are consistent with historical results. At three wells, LAI-MW1; LAI-MW4; and LAI-MW5, all VOC concentrations have dropped below their respective laboratory reporting limits. At the six remaining wells, one or more VOCs exceed cleanup levels:

- LAI-MW2, MW13, and RNS-MW6 continue to have the highest concentrations of VOCs. Results indicate concentrations above cleanup levels for all four constituents with PCE and TCE concentrations having the largest exceedances of cleanup levels. Concentrations of PCE at these wells ranged from 390 micrograms per liter (µg/L) to 860 µg/L and concentrations of TCE ranged from 98 µg/L to 180 µg/L. The cleanup level for both TCE and PCE is 5 µg/L.
- LAI-MW3 results indicate concentrations of PCE and TCE continue to exceed cleanup levels; however, concentrations are somewhat lower (97 µg/L and 32 µg/L, respectively) than at the three wells discussed above.
- RNS-MW2 results indicate the concentration of PCE continues to exceed the cleanup level.
- MW2 results indicate the concentration of VC narrowly exceeded the cleanup level of 0.2 µg/L with a concentration of 0.44 µg/L.

VOC concentration time series plots (Attachment 1) were examined to identify data trends over time. Several wells have shown steady decreases in VOC concentrations, specifically LAI-MW1, LAI-MW4, and LAI-MW5 (currently non-detect for all VOCs). MW2 and MW-13 have also shown decreases in VOC concentrations over time. RNS-MW6 is sampled at two depths within the screen; recent data at this well appear to show decreasing trends from historical maximum concentrations in 2012 and

2013. Data trends at LAI-MW2 and LAI-MW3 are less clear, but VOC concentrations appear to have remained relatively stable over time with the exception of VC, which appears to be declining. Concentration trends at RNS-MW2 vary by constituent. VC is not detected at this well and TCE and cDCE concentrations appear to be declining; however, PCE concentrations continue to have an overall increasing trend. The laboratory data package for the most recent sampling event (January 2017) is provided in Attachment 2.

Monitored Natural Attenuation Results

Natural attenuation of chlorinated ethenes occurs through several mechanisms with the primary mechanism being biologically mediated reductive dechlorination. For reductive dechlorination to occur, the aquifer must be reducing. Measures of aquifer redox conditions include DO, oxygen-reduction potential, nitrate, ferrous iron, sulfate, and methane. MNA data appear to suggest favorable conditions for reductive-dechlorination at LAI-MW5 (near the source area) and LAI-MW4 (the most downgradient well). Indicators of reductive dechlorination are summarized below:

- Ferrous iron was detected at 4.5 milligrams per liter (mg/L) at LAI-MW4 and 2.0 mg/L at LAI-MW5.
- Sulfate was detected at low concentrations at LAI-MW4 (2.1 mg/L).
- Methane was detected at a concentration of 3.7 µg/L at LAI-MW4 and 12 µg/L at LAI-MW5.

At the remaining seven wells, data were not conclusive regarding the potential for reductive dechlorination; however, concentrations at most wells appear to be declining. The laboratory data package for the most recent sampling event (January 2017) is provided in Attachment 2. January 2017 MNA data is presented in Table 4.

Occurrence of Problems

None noted.

Planned Groundwater Monitoring Activities

Groundwater monitoring results will continue to be submitted to Ecology 60 days after completion of sampling activities. The next scheduled sampling event will occur in July 2017.

* * * * * * * * * *

Please contact us if you have any questions concerning groundwater monitoring activities or results presented in this status report.

LANDAU ASSOCIATES, INC.

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Project Scientist

Jennifer Wynkoop
Senior Associate Scientist

SMM/JWW/jrc
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References

LAI. 2013. Draft Sampling and Analysis Plan, Former Sauro's Property, Tacoma, Washington. Landau Associates, Inc. January 24.

LAI. 2014. Draft Cleanup Action Plan, Former Sauro's Cleanerama Site, Tacoma, Washington. Landau Associates, Inc. September 5.

LAI. 2016. Memorandum: Long-Term Groundwater Monitoring Status Report No. 1 for January 2016, Former Sauro's Cleanerama Site, Tacoma, Washington. From Sierra Mott, Landau Associates, Inc., to Marv Coleman, Washington State Department of Ecology. March 3.

Attachments:

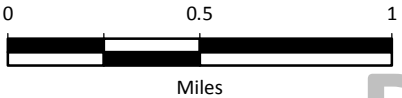
Figure 1: Vicinity Map
Figure 2: Sauro's Cleanerama Monitoring Well Network

Table 1: Sample Matrix
Table 2: Sampling Laboratory and Field Parameter Details
Table 3: Constituents of Concern Groundwater Analytical Results
Table 4: Monitored Natural Attenuation Parameters

Attachment 1: Constituents of Concern Concentration Time Series Plots
Attachment 2: January 2017 Laboratory Data Package









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Data Source: Esri 2012

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Sauro's Cleanerama Tacoma, Washington	**Vicinity Map**	Figure 1

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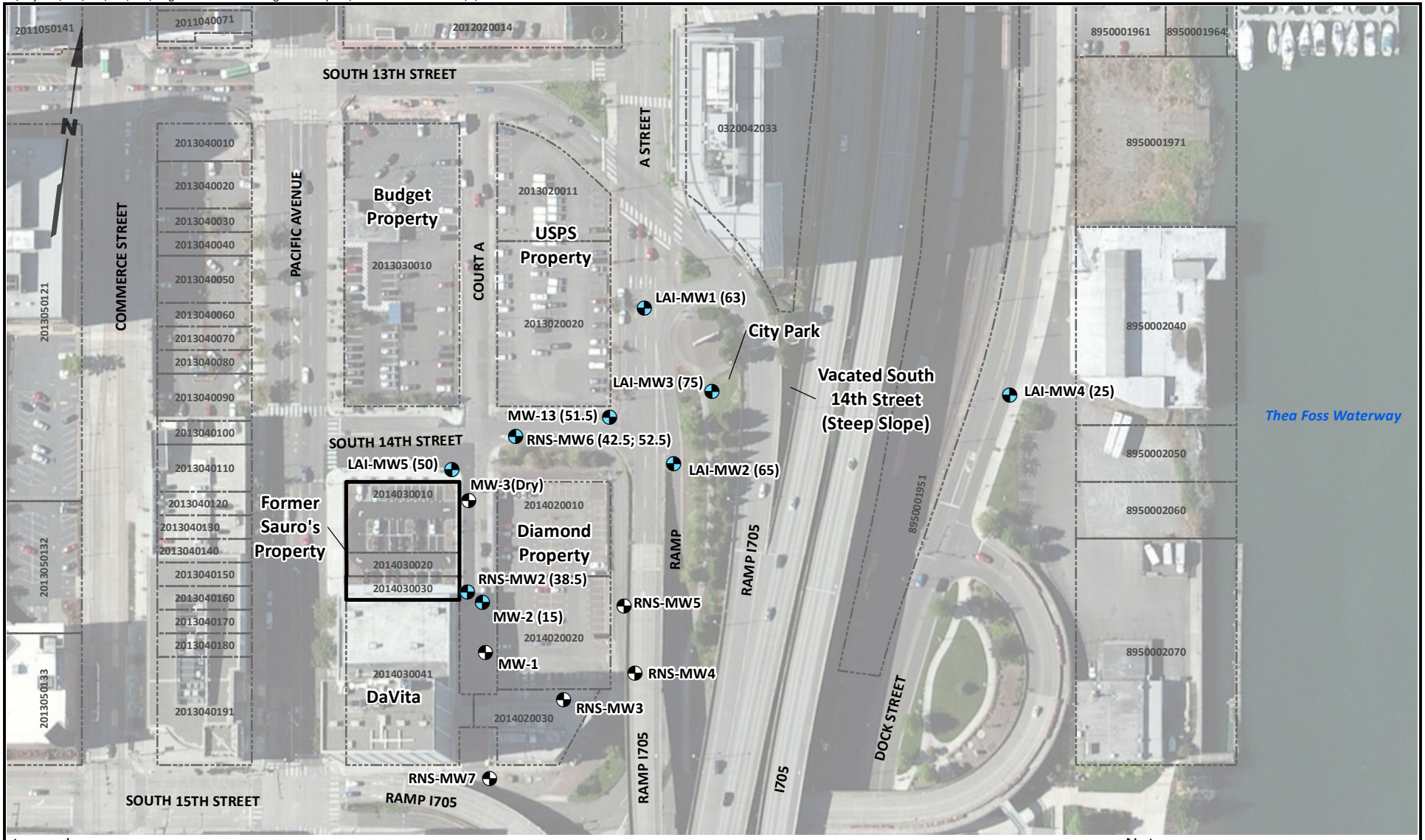

Legend

- Long-Term Groundwater Monitoring Well (and Well Depth)
- Other Existing Monitoring Well
- Subject Property
- Tax Parcels with Parcel ID

0 150 300

Scale in Feet

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Data Source: Esri World Imagery, 2013.

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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Sauro's Cleanerama
Tacoma, Washington

Sauro's Cleanerama
Monitoring Well Network

Figure
2

Table 1
Sample Matrix
Sauro's Cleanerama
Tacoma, Washington

Location	VOC Sampling Depth (ft)	VOC Concentration Data Sampling Method	MNA Parameters Sampling Depth (ft)	MNA Parameters Sampling Method
LAI-MW1	63	PDB	63	WAT
LAI-MW2	65	PDB	65	WAT
LAI-MW3	75	PDB	75	WAT
LAI-MW4	25	PDB	25	WAT
LAI-MW5	50	PDB	50	WAT
MW2-PP	15	PP	15	PP
MW13	51.5	PDB	51.5	WAT
RNS-MW2	38.5	PDB	38.5	WAT
RNS-MW6 [(a)]	42.5 and 52.5	PDB	47.5	WAT

Note:
(a) For RNS-MW6, where there are two VOC sampling depths, the MNA sampling depth is the mid-point between the two VOC sampling depths.

Abbreviations/Acronyms:
ft = feet
MNA = monitored natural attenuation
PDB = passive diffusion bag
PP = peristaltic pump with dedicated tubing
VOC = volatile organic compound
WAT = (dedicated) Waterra foot valve (with dedicated 5/8-inch HDPE tubing)

Table 2
Sampling Laboratory and Field Parameter Details
Sauro's Cleanerama
Tacoma, Washington

Groundwater Analytical Parameters	EPA Analytical Method	Practical Quantitation Limit	Preservation	Maximum Holding Time (Days)
Volatile Organic Compounds				
Tetrachloroethene	8260C	0.2 µg/L	Add HCl to pH<2; Store cool at 6°C	14
Trichloroethene	8260C	0.2 µg/L	Add HCl to pH<2; Store cool at 6°C	14
cis-1,2-Dichloroethene	8260C	0.2 µg/L	Add HCl to pH<2; Store cool at 6°C	14
Vinyl Chloride	8260C	0.2 µg/L	Add HCl to pH<2; Store cool at 6°C	14
Monitored Natural Attenuation				
Chloride	SM 4500-CL-E	1.0 mg/L	Store cool at 6°C	28
Nitrate (NO_3) (Total) as N	353.2	0.2 mg/L [(a)]	Store cool at 6°C	48 hours
Nitrite (NO_2) (Total) as N	353.2	0.4 mg/L [(a)]	Store cool at 6°C	48 hours
Total Organic Carbon	SM 5310B	1.00 mg/L	Add 2mL 9N H2SO4 pH<2; Store at 6°C	28
Sulfate (SO_4) (Total)	SM 4500-SO_4 E	5.0 mg/L	Store cool at 6°C	28
Sulfide (SO_2) (Total)	SM 4500-S2 D	0.150 mg/L	Store cool at 6°C	7
AMEE	RSK 175	0.0050 mg/L	Store cool at 6°C	14

Groundwater Field Parameters	Data Collection Method	Instrument	Units
Monitored Natural Attenuation			
Conductivity	Field	YSI [(b)]	µS/cm
Dissolved Oxygen	Field	YSI	mg/L
Oxidation Reduction Potential	Field	YSI	units +/- mV
pH	Field	YSI	unitless
Temperature	Field	YSI	(°C)
Ferrous Iron (Fe^{2+})	Field	Hach® Kit	mg/L
Turbidity	Field	Turbidity Meter	NTU
Water Level	Field	Water Level Indicator	0.01 ft

Notes:

(a) Reporting limits for nitrate and nitrite were raised prior to the July 2016 sampling event due to laboratory capabilities.
(b) YSI shall be recalibrated daily.

Abbreviations/Acronyms:

AMEE = acetylene, methane, ethane, and ethene
°C = degrees Celsius
EPA = U.S. Environmental Protection Agency
ft = foot
µg/L = micrograms per liter
mg/L = milligrams per liter
mL = millimeters
mV = millivolts
µS/cm = microSiemens per centimeter
NTU = nephelometric turbidity units

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Table 3
Constituents of Concern Groundwater Analytial Results - January 2017
Sauro's Cleanerama
Tacoma, Washington

Analyte	Groundwater MTCA Method A CUL or Federal/State MCL (µg/L)	Sample Location, Laboratory ID, Sample Date, and Sample Type										
		LAI-MW1 580-65491-2 1/18/2017 N	LAI-MW2 580-65491-3 1/18/2017 N	LAI-MW3 580-65491-4 1/18/2017 N	LAI-MW4 580-65491-5 1/18/2017 N	LAI-MW4 580-65491-12 1/18/2017 FD	LAI-MW5 580-65491-6 1/18/2017 N	MW2 580-65491-7 1/18/2017 N	MW13 580-65491-8 1/18/2017 N	RNS-MW2 580-65491-9 1/18/2017 N	RNS-MW6-42.5 580-65491-10 1/18/2017 N	RNS-MW6-52.5 580-65491-11 1/18/2017 N
Volatile Organic Compounds (µg/L; SW-846 8260C)												
cis-1,2-Dichloroethene	70 [(a)]	0.20 U	**120**	**39**	0.20 U	0.20 U	0.20 U	**0.75**	**73**	0.20 U	**140**	**110**
Tetrachloroethene	5	0.20 U	**390**	**97**	0.20 U	0.20 U	0.20 U	**0.54**	**430**	**25**	**860**	**570**
Trichloroethene	5	0.20 U	**120**	**32**	0.20 U	0.20 U	0.20 U	**0.30**	**98**	**0.51**	**180**	**130**
Vinyl Chloride	0.2	0.20 U	**0.80 J**	0.20 U	0.20 U	0.20 U	0.20 U	**0.44**	**0.73 J**	0.20 U	**0.33 J**	**0.53**

Notes:

(a) Cis-1,2-DCE does not have a MTCA Method A CUL for groundwater; therefore, the Federal/State primary MCL value of 70 µg/L is used as the CUL.

Bold text indicates detected analyte.

Green highlighting = compound detected above cleanup criteria.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = The compound was not detected at the reported concentration.

Abbreviations:

µg/L = micrograms per liter
CUL = cleanup level
FD = field duplicate
ID = identification
MCL = maximum contaminant levels
MTCA = Model Toxics Control Act
N = primary sample

Table 4
Monitored Natural Attenuation Parameters
Sauro's Cleanerama
Tacoma, Washington

Sample Location:	LAI-MW1	LAI-MW2	LAI-MW3	LAI-MW4	LAI-MW4	LAI-MW5	MW2	MW13	RNS-MW2	RNS-MW6-52.5
Laboratory ID:	580-65491-2	580-65491-3	580-65491-4	580-65491-5	580-65491-12	580-65491-6	580-65491-7	580-65491-8	580-65491-9	580-65491-11
Sample Date:	1/18/2017	1/18/2017	1/18/2017	1/18/2017	1/18/2017	1/18/2017	1/18/2017	1/18/2017	1/18/2017	1/18/2017
Sample Type:	N	N	N	N	FD	N	N	N	N	N
Natural Attenuation Parameters (mg/L; EPA 300.0/SM 4500-S2-D/SM 5310B)										
Chloride	**72**	**12**	**17**	**24**	**24**	**14**	**25**	**14**	**42**	**25**
Nitrogen, Nitrate	**1.3**	0.20 U	**0.54**	0.20 U	0.20 U	0.20 U	**1.9**	**0.65**	**2.9**	**0.61**
Nitrogen, Nitrite	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Sulfate	**19**	**19**	**20**	**2.1**	**2.6**	1.2 U	**24**	**30**	**27**	**27**
Sulfide, Total	0.050 U	0.25 U	0.050 U	0.050 U	0.050 U	0.10 U	0.050 U	0.25 U	0.25 U	0.25 U
Total Organic Carbon	**2.6**	**5.6**	**1.8**	**3.6**	**3.5**	**9.6**	**2.7**	**1.7**	**1.2**	**1.9**
Dissolved Gasses (mg/L; RSK-175)										
Methane	0.0050 U	**0.024**	0.0050 U	**3.7 J-FD**	**4.6 J-FD**	**12**	**1.0**	**0.010**	0.0050 U	**0.036**
Ethane	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	**0.0087**
Ethene	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Acetylene	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Field Parameters										
Dissolved Oxygen (mg/L)	**2.17**	**6.97**	**1.31**	**2.35**	**2.13**	**1.81**	**1.67**	**2.21**	**6.37**	**2.77**
Oxidation Reduction Potential (mV)	**31.2**	**15.5**	**31.6**	**-18.3**	**-19.5**	**-26.0**	**38.9**	**37.7**	**35.8**	**41.9**
Iron (mg/L)	0.0	**1.5**	0.0	**4.5**	**4.5**	**2.0**	**0.5**	0.0	0.0	0.0

Notes:

Bold = detected compound

J-FD = The analyte was positively identified and was subsequently qualified as estimated due to field duplicate imprecision; the associated numerical value is the approximate concentration of the analyte in the sample.

U = The compound was not detected at the reported concentration.

Abbreviations:

mg/L = milligrams per liter

mV = millivolt

FD = field duplicate

ID = identification

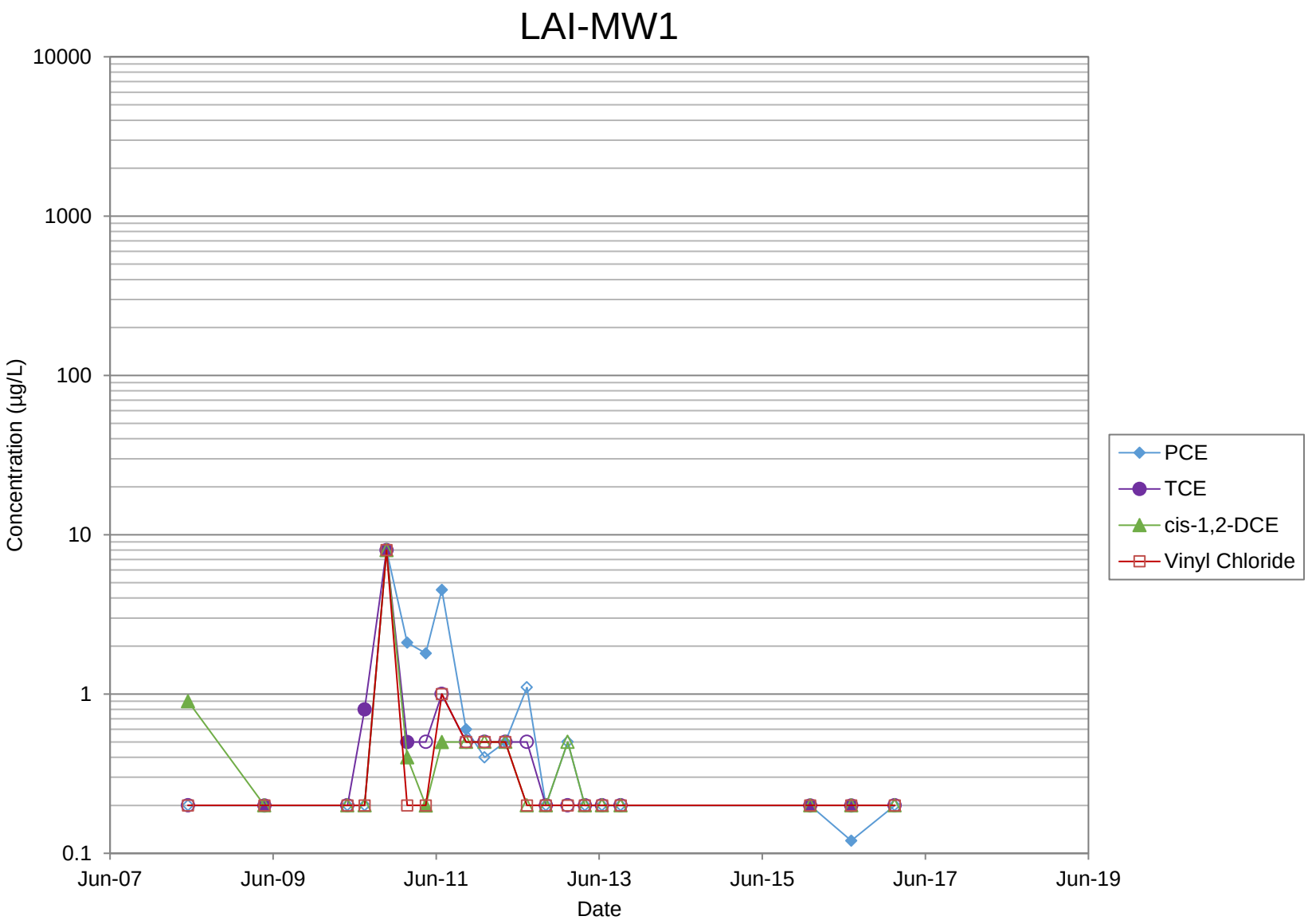
N = primary sample

ATTACHMENT 1

Constituents of Concern Concentration Time Series Plots

Notes

1. Open markers on graphs indicate non-detect values. Values shown represent the analytical reporting limit.
2. Open markers shown in the legend indicate the compound has never been detected at this location.
3. The analytical laboratory erroneously reported down to the method detection limit in January and July 2016.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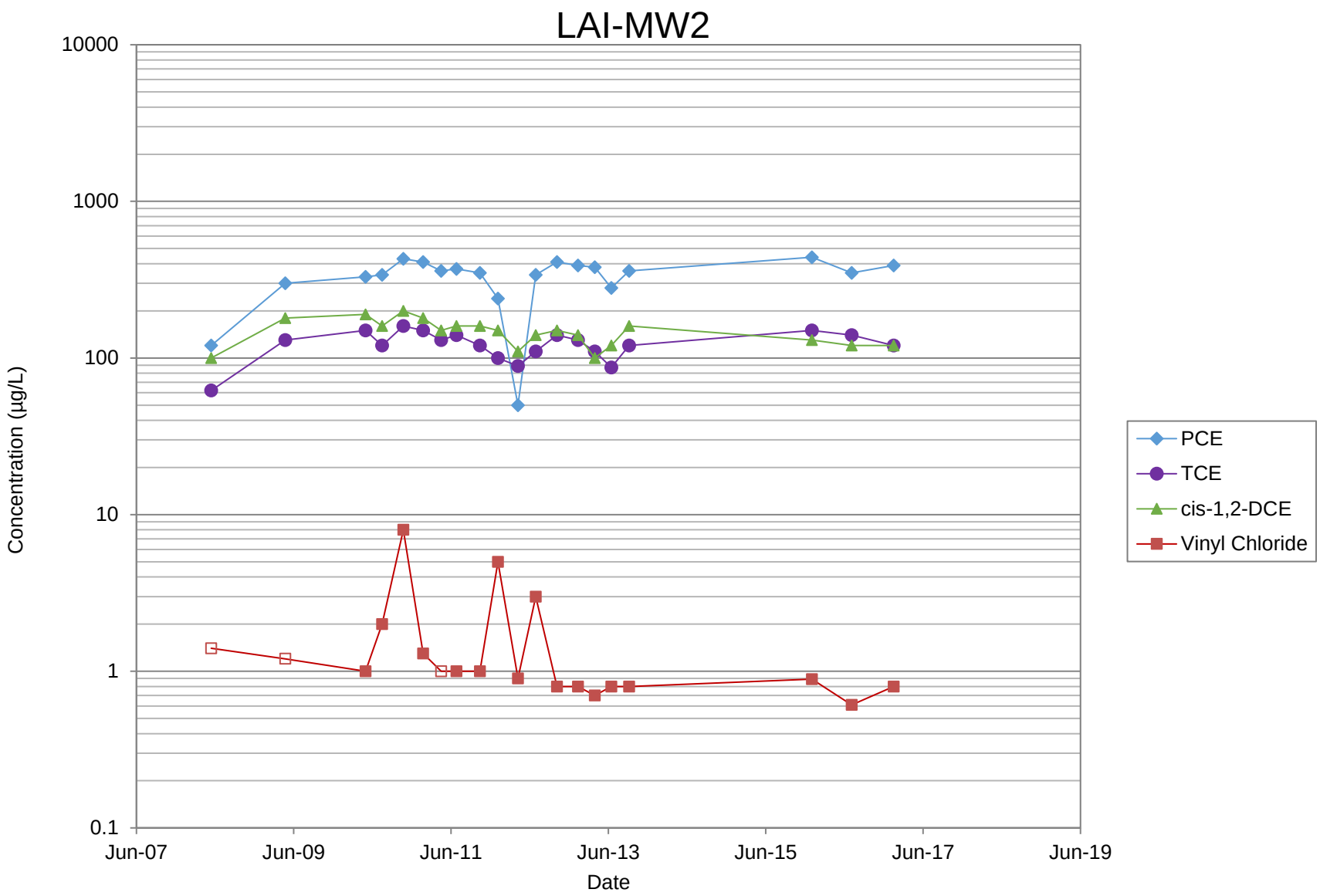
Jun-09
Jun-11
Jun-13
Jun-15
Jun-17
Jun-19
Date
PCE
TCE
cis-1,2-DCE
Vinyl Chloride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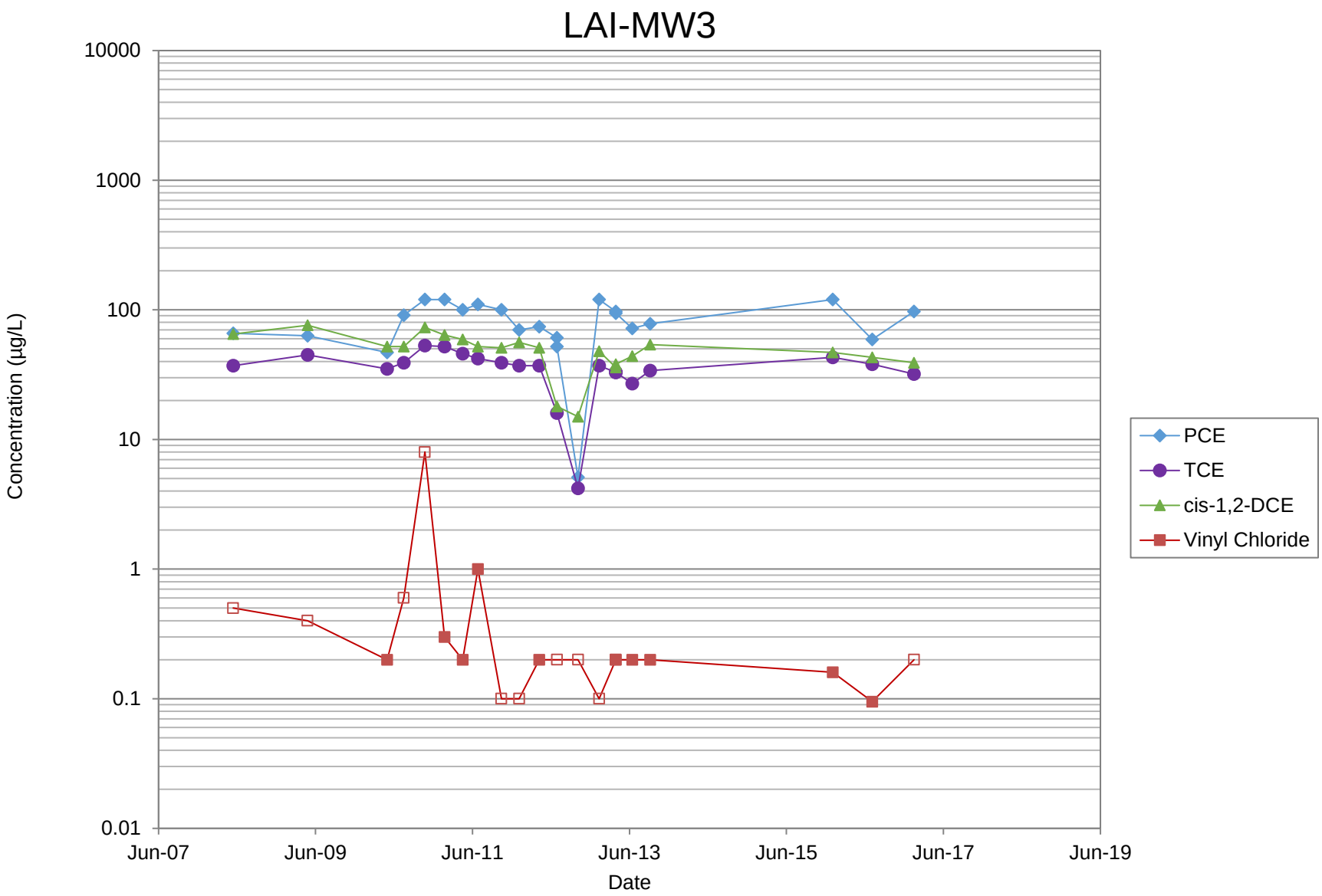
cis-1,2-DCE
Vinyl Chloride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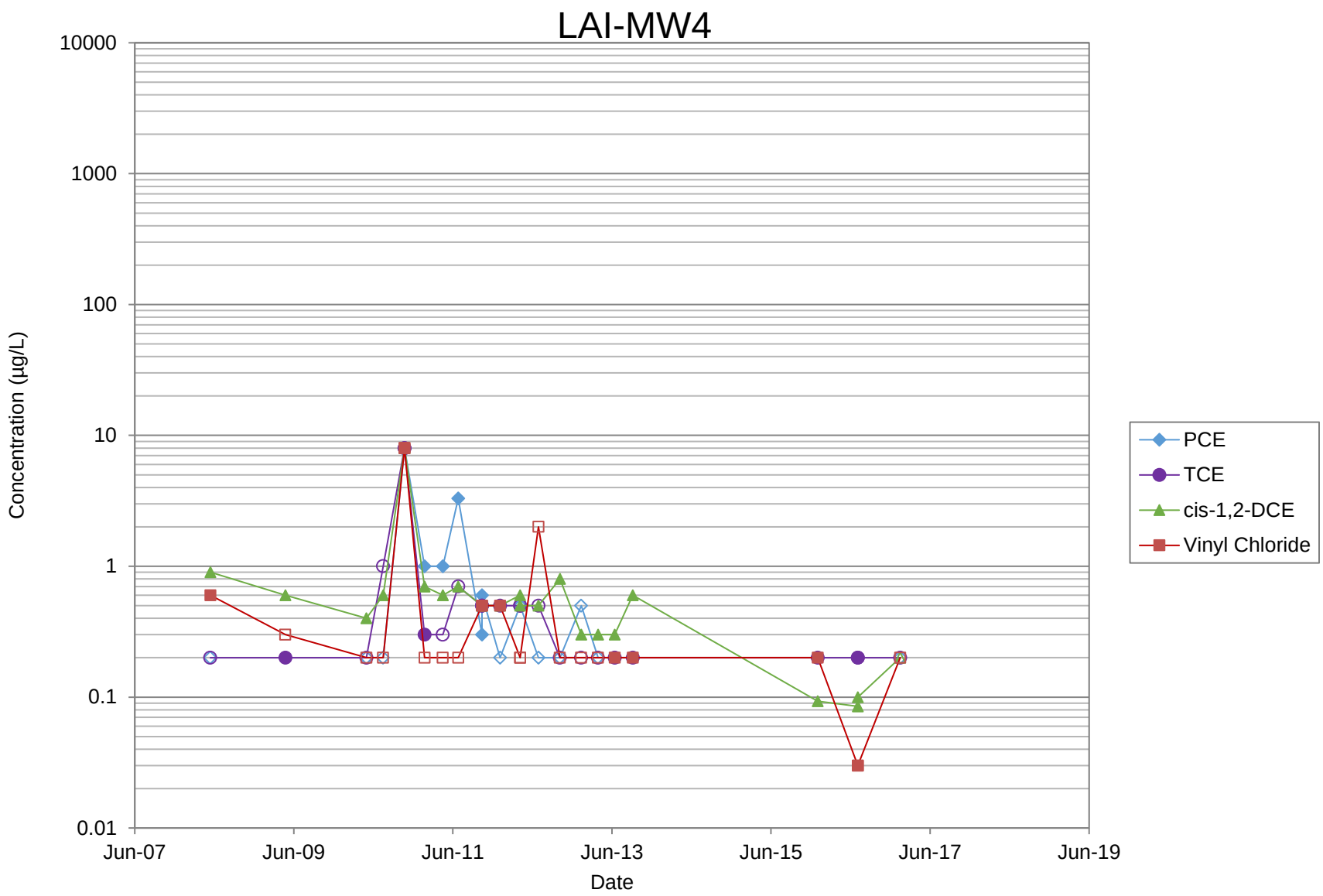
Vinyl Chloride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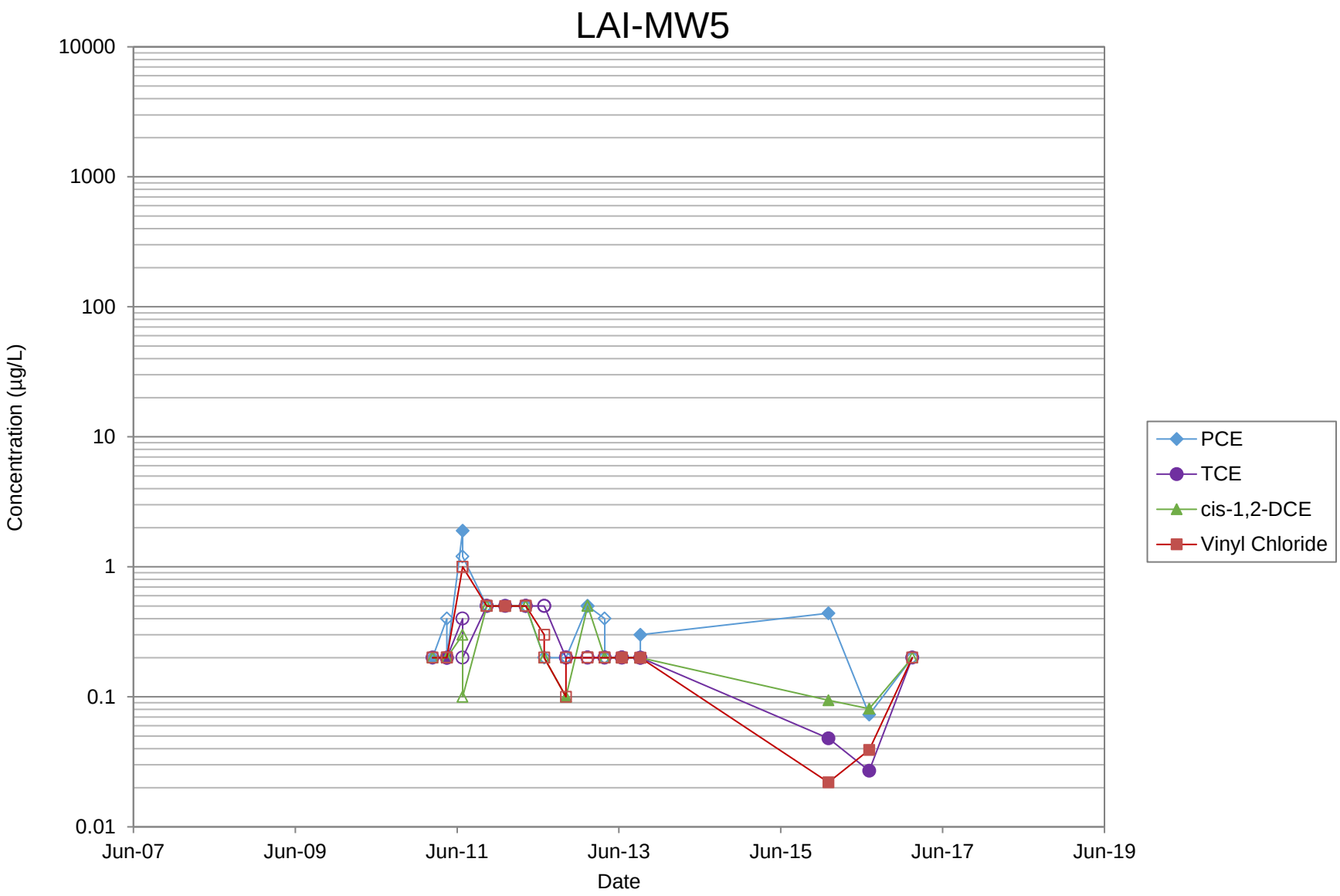
cis-1,2-DCE
Vinyl Chloride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Concentration (µg/L)
Jun-07
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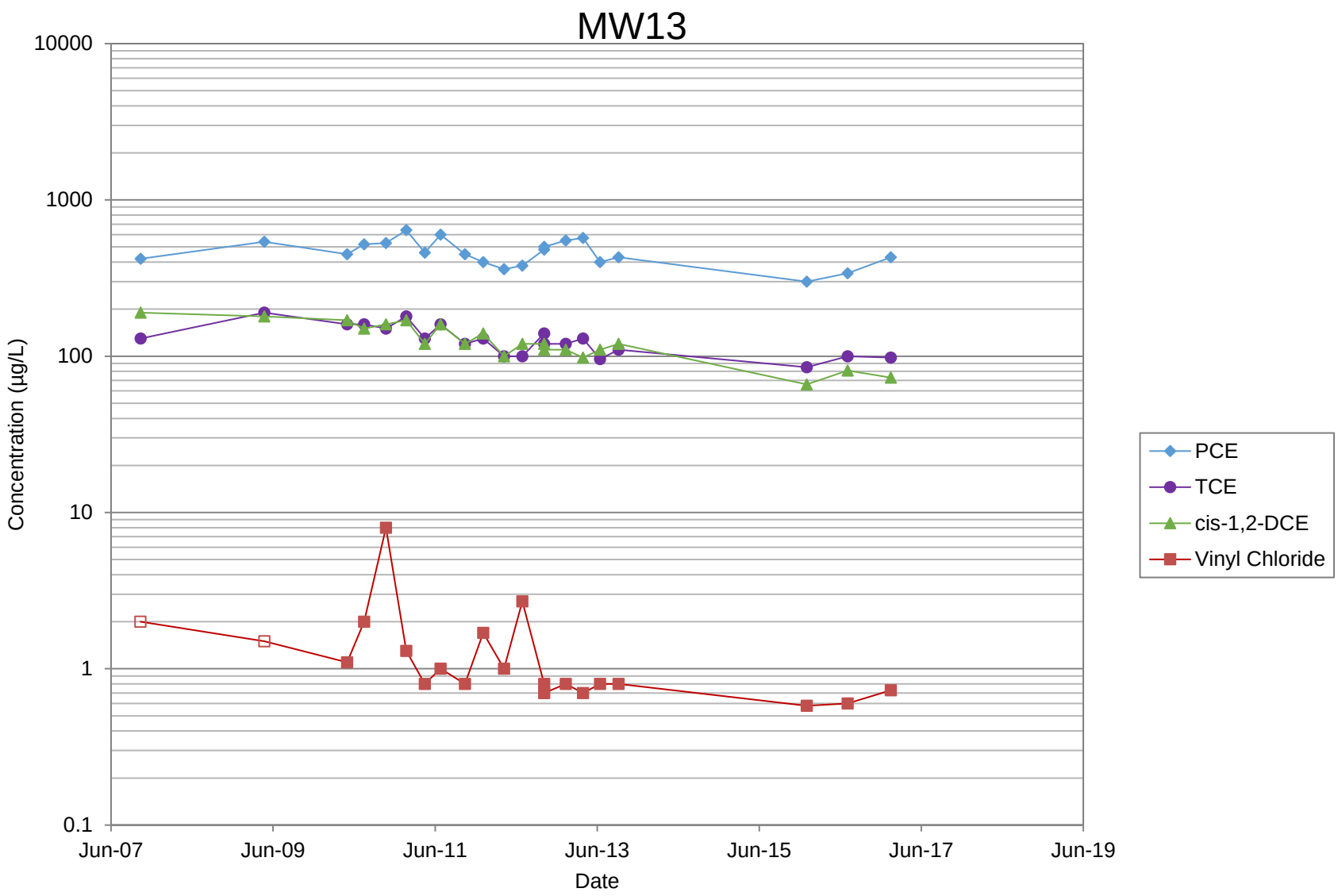
cis-1,2-DCE
Vinyl Chloride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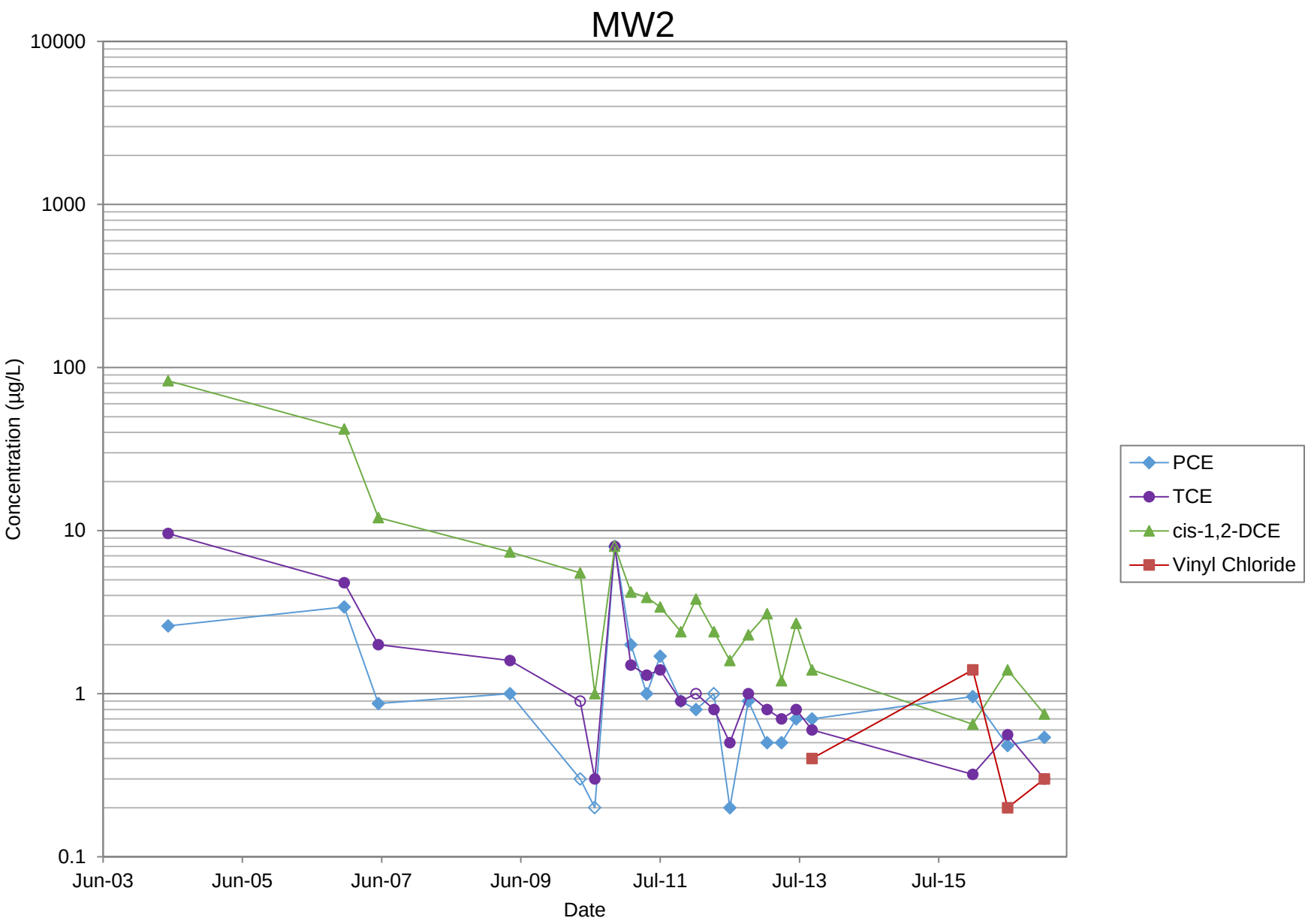
cis-1,2-DCE
Vinyl Chloride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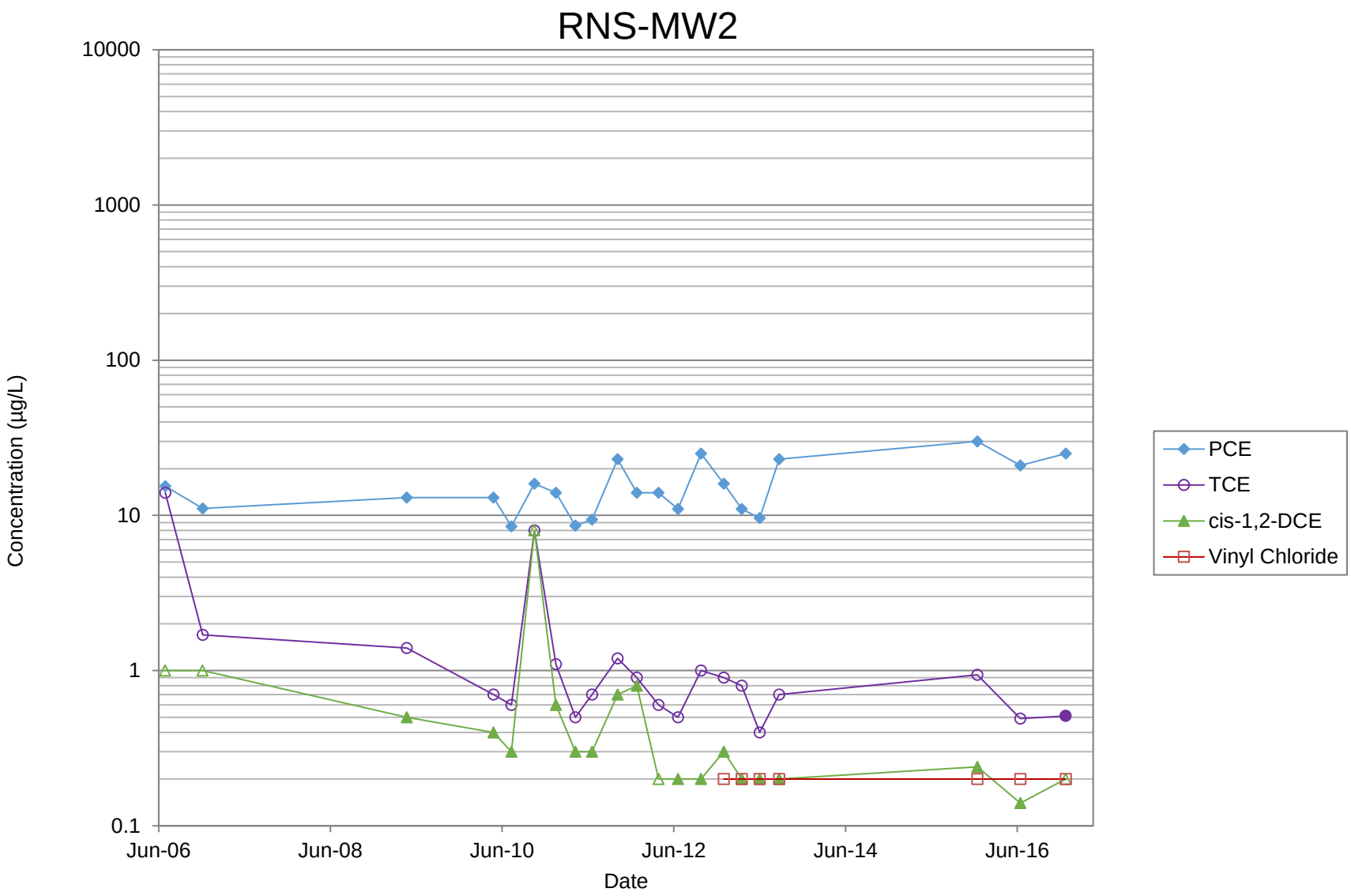
Jul-13
Jul-15
Date
PCE
TCE
cis-1,2-DCE
Vinyl Chloride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Concentration (µg/L)
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Jun-12
Jun-14
Jun-16
Date
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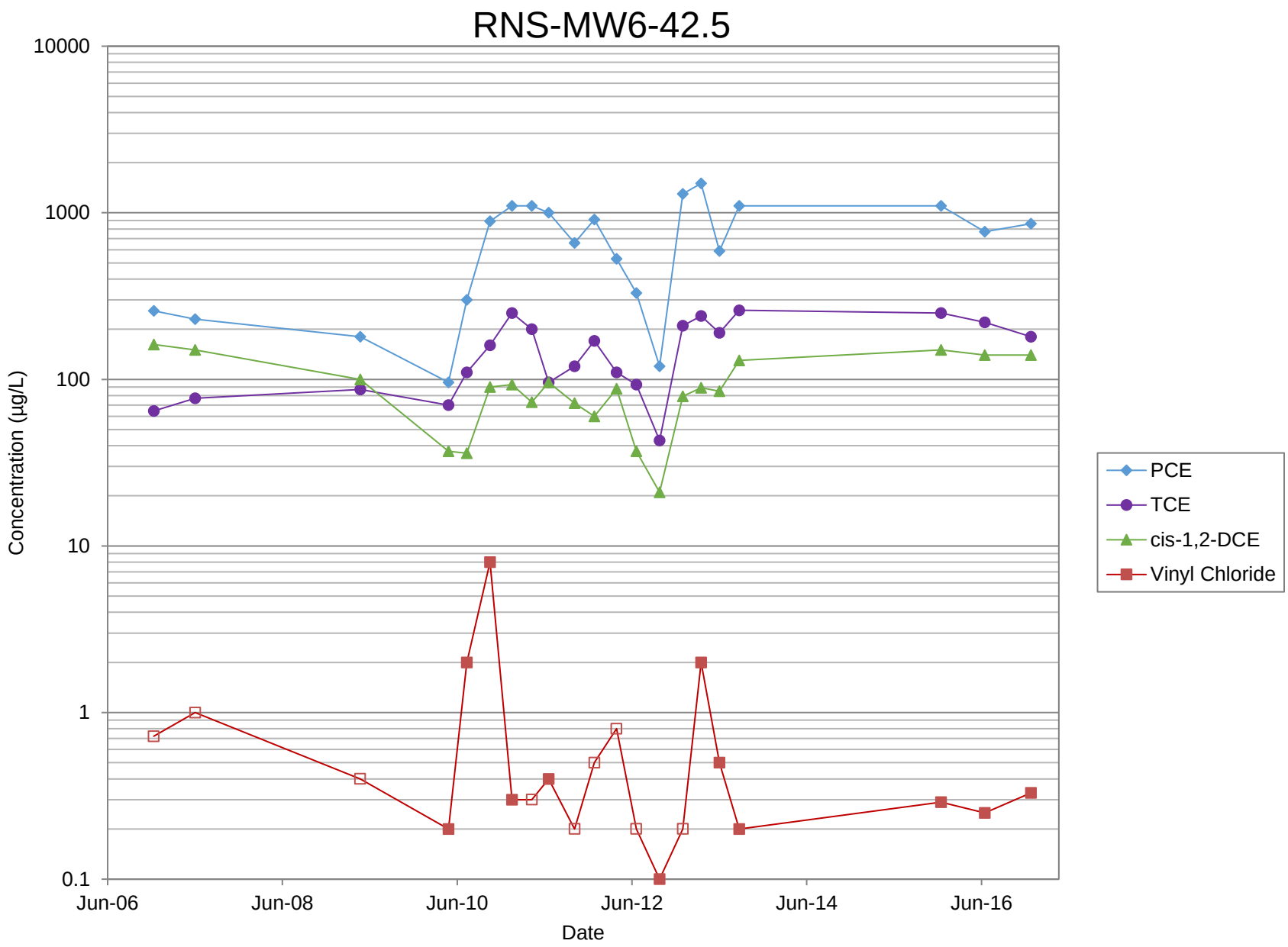
TCE
cis-1,2-DCE
Vinyl Chloride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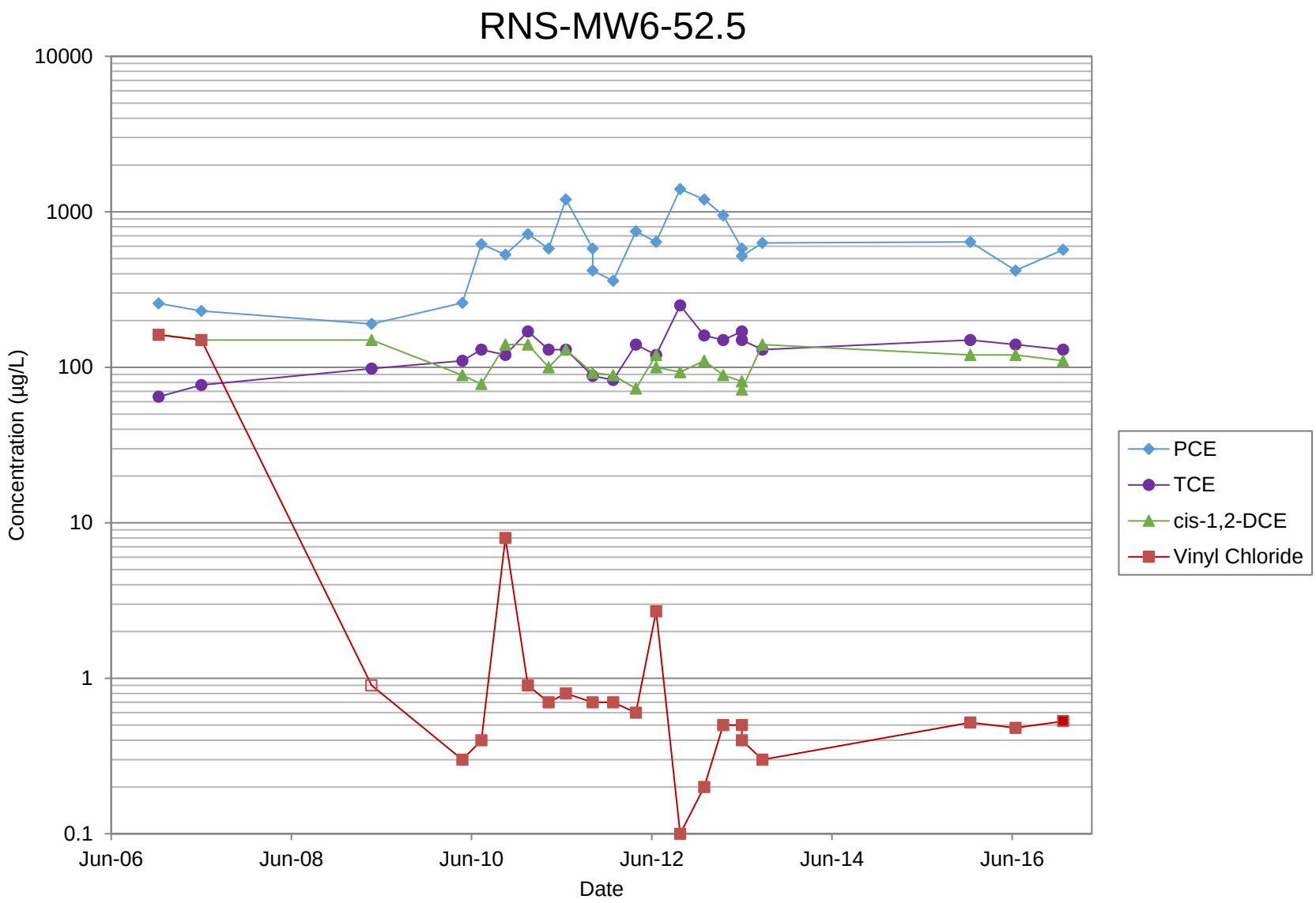
TCE
cis-1,2-DCE
Vinyl Chloride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10000
1000
100
10
1
0.1
Concentration (µg/L)
Jun-06
Jun-08
Jun-10
Jun-12
Jun-14
Jun-16
Date
PCE
TCE
cis-1,2-DCE
Vinyl Chloride

ATTACHMENT 2

January 2017 Laboratory Data Package

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-65491-1
Client Project/Site: Sauro's
Revision: 3

For:
Landau & Associates, Inc.
950 Pacific Avenue, Suite 515
Tacoma, Washington 98402

Attn: Jennifer Wynkoop

Authorized for release by:
2/28/2017 4:32:02 PM

Sheri Cruz, Project Manager I
(253)922-2310
sheri.cruz@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 580-65491-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative
580-65491-1

Revised 2/15/17 to report to RL only per client request on 2/13/17.
Revised 2/17/17 Client asked for 8260 to report sample 3 and 10 from 1X dilution for VC results
Revised 2/28/17 for sample 11 to report VC for 1X dilution

Comments
No additional comments.

Receipt
The samples were received on 1/18/2017 4:35 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4º C and 2.5º C.

Receipt Exceptions
They used to do 2C and now want to do 1C
Client would like the 8260 1X dilution reported for sample 3 and 10. We ran it already. just need to add it as primary with E flags and dilution as secondary per client request

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 580-236704 recovered above the upper control limit for multiple surrogates. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) 8260C: Surrogate recovery for the following samples was outside the upper control limit: Trip Blanks (580-65491-1), LAI-MW1-20170118 (580-65491-2), LAI-MW3-20170118 (580-65491-4), LAI-MW4-20170118 (580-65491-5), LAI-MW5-20170118 (580-65491-6), MW13-20170118 (580-65491-8), RNS-MW2-20170118 (580-65491-9) and DUP1-20170118 (580-65491-12). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C: The QC and samples recovered high for multiple surrogates. Since the samples were non-detect the data has been reported. (LCS 580-236704/5), (LCSD 580-236704/6) and (MB 580-236704/4)

Method(s) 8260C: The following samples was diluted to bring the concentration of target analytes within the calibration range: LAI-MW2-20170118 (580-65491-3), LAI-MW3-20170118 (580-65491-4), MW13-20170118 (580-65491-8), RNS-MW6-42.5-20170118 (580-65491-10) and RNS-MW6-52.5-20170118 (580-65491-11). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: Reanalysis of the following samples occurred due to failing QC in the initial batch. LAI-MW3-20170118 (580-65491-4), LAI-MW4-20170118 (580-65491-5), RNS-MW2-20170118 (580-65491-9) and DUP1-20170118 (580-65491-12)

Please report the 580-65491 sample 3 and 10 from 1X dilution already analyzed but not reported. Needs VC as action limit of 0.2. It is ND at the 50X dilution.

Method(s) 8260C: Toluene-d8 surrogate recovery for the following samples was outside acceptance limits biased high: LAI-MW2-20170118 (580-65491-3), RNS-MW6-42.5-20170118 (580-65491-10), (CCVIS 580-236704/2), (CCVL 580-236704/3), (LCS 580-236704/5), (LCSD 580-236704/6) and (MB 580-236704/4). The vinyl chloride results at 1X (no dilution) have been reported per client request.

Method(s) 8260C: Client has requested 1X sample to be reported as primary. Toluene-d8 (surrogate) recovered high biased at 141% (limit is 125%). Secondary results are reported at 50X dilution in analytical batch 236986. RNS-MW6-52.5-20170118 (580-65491-11)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method(s) RSK-175: The methane result could not be confirmed for LAI-MW1-20170118 (580-65491-2) due to matrix interference. The result from the front column is reported (J flagged as estimated). RSK-175 analytical batch 280-359884

Job ID: 580-65491-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

Method(s) RSK-175: Ethane eluted outside the retention time window on the front column for the following samples: LAI-MW4-20170118 (580-65491-5), MW2-20170118 (580-65491-7) and DUP1-20170118 (580-65491-12). This retention time shift is the result of matrix interference. Ethane is qualitatively confirmed on the rear column. However, since the rear column does not provide ethane quantitation due to co-elution with acetylene, data has been reported from the front column. RSK-175 batch 280-359884

Method(s) RSK-175: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with RSK-175 analytical batch 280-359884. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Landau & Associates, Inc.
Project/Site: Sauro's

TestAmerica Job ID: 580-65491-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
E	Result exceeded calibration range.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Landau & Associates, Inc.
Project/Site: Sauro's

TestAmerica Job ID: 580-65491-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-65491-1	Trip Blanks	Water	01/18/17 00:01	01/18/17 16:35
580-65491-2	LAI-MW1-20170118	Water	01/18/17 11:00	01/18/17 16:35
580-65491-3	LAI-MW2-20170118	Water	01/18/17 10:15	01/18/17 16:35
580-65491-4	LAI-MW3-20170118	Water	01/18/17 11:45	01/18/17 16:35
580-65491-5	LAI-MW4-20170118	Water	01/18/17 08:50	01/18/17 16:35
580-65491-6	LAI-MW5-20170118	Water	01/18/17 15:45	01/18/17 16:35
580-65491-7	MW2-20170118	Water	01/18/17 14:00	01/18/17 16:35
580-65491-8	MW13-20170118	Water	01/18/17 13:15	01/18/17 16:35
580-65491-9	RNS-MW2-20170118	Water	01/18/17 14:35	01/18/17 16:35
580-65491-10	RNS-MW6-42.5-20170118	Water	01/18/17 12:25	01/18/17 16:35
580-65491-11	RNS-MW6-52.5-20170118	Water	01/18/17 12:35	01/18/17 16:35
580-65491-12	DUP1-20170118	Water	01/18/17 08:55	01/18/17 16:35

LANDAU ASSOCIATES

- [ ] Seattle/Edmonds (425) 778-0907
- [x] Tacoma (253) 926-2493
- [ ] Spokane (509) 327-9737
- [ ] Portland (503) 542-1080
- [ ] _____

Chain-of-Custody Record

Loc: 580
65491

Date 1/18/17
Page 1 of 1

Project Name Sauro's
Project No. 094048.090.094
Project Location/Event Tacoma, WA / Jan 2017
Sampler's Name Sierra Mott & Katie Gauglitz
Project Contact Sierra Mott
Send Results To Dani Jorgensen, Sierra Mott

Testing Parameters

Turnaround Time
- [x] Standard
- [ ] Accelerated
- [ ] _____

Sample I.D.	Date	Time	Matrix	No. of Containers	VOCs (Method 8260C)	Sulfate (300.0)	Nitrate (300.0)	TOC (5310B)	Sulfide (4500-SP2)	AMEE (RSK 175)	Chloride
TripBlanks	—	—	H2O	3	X						
LA1-MW1-20170118	1/18/17	1100		9	X	X	X	X	X	X	X
LA1-MW2-20170118		1015		9	X	X	X	X	X	X	X
LA1-MW3-20170118		1145		9	X	X	X	X	X	X	X
LA1-MW4-20170118		850		9	X	X	X	X	X	X	X
LA1-MW5-20170118		1545		9	X	X	X	X	X	X	X
MW2-20170118		1400		9	X	X	X	X	X	X	X
MW13-20170118		1315		9	X	X	X	X	X	X	X
RNS-MW2-20170118		1435		9	X	X	X	X	X	X	X
RNS-MW6-42.5-20170118		1225		3	X						
RNS-MW6-52.5-20170118		1235		9	X	X	X	X	X	X	X
Dup1-20170118		855		9	X	X	X	X	X	X	X

Observations/Comments

- X Allow water samples to settle, collect aliquot from clear portion
- ___ NWTPH-Dx - run acid wash silica gel cleanup
- ___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
- ___ non-preserved
- ___ preserved w/methanol
- ___ preserved w/sodium bisulfate
- ___ Freeze upon receipt
- ___ Dissolved metal water samples field filtered

Other _____

580-65491 Chain of Custody

TB A2 Cooler ___ Cor 2.5 w/o Unc 3.4
Cooler Dsc Lg Blue @Lab ___
Wet/Packs Packing bub

TB A2 Cooler ___ Cor 2.4 w/o Unc 3.3
Cooler Dsc Lg Blue @Lab ___
Wet/Packs Packing bub
Clidro

Special Shipment/Handling or Storage Requirements: Coolers on ice

Method of Shipment: drop off

Relinquished by	Received by	Relinquished by	Received by
Signature Katie M. Gauglitz	Signature Tom Blankinship	Signature	Signature
Printed Name Katie Gauglitz	Printed Name Blankinship	Printed Name	Printed Name
Company LAI	Company TA-Sea	Company	Company
Date 1/18/2017 Time 16:35	Date 1/18/17 Time 1635	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

2/28/2017

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-43696.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Washington	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 580-65491-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 1/30/2017			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Sauro's	Project #: 58009425			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175/ (MOD) Local Method	SM4500_S2_D/ Sulfide	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
LAI-MW1-20170118 (580-65491-2)	1/18/17	11:00 Pacific		Water			X	X	4	
LAI-MW2-20170118 (580-65491-3)	1/18/17	10:15 Pacific		Water			X	X	4	
LAI-MW3-20170118 (580-65491-4)	1/18/17	11:45 Pacific		Water			X	X	4	
LAI-MW4-20170118 (580-65491-5)	1/18/17	08:50 Pacific		Water			X	X	4	
LAI-MW5-20170118 (580-65491-6)	1/18/17	15:45 Pacific		Water			X	X	4	
MW2-20170118 (580-65491-7)	1/18/17	14:00 Pacific		Water			X	X	4	
MW13-20170118 (580-65491-8)	1/18/17	13:15 Pacific		Water			X	X	4	
RNS-MW2-20170118 (580-65491-9)	1/18/17	14:35 Pacific		Water			X	X	4	
RNS-MW6-52.5-20170118 (580-65491-11)	1/18/17	12:35 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Tom Blankenship	1/19/17	TA-Sea	Reed Rotz	1-20-17 0915	TAP
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

0.8 IR#5-0.2 RP 1-20-17

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-43696.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Washington	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 580-65491-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 1/30/2017			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Sauro's	Project #: 58009425			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175/ (MOD) Local Method	SM4500_S2_D/ Sulfide	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
DUP1-20170118 (580-65491-12)	1/18/17	08:55 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Tom [signature]	Date/Time: 1/19/17	Company	Received by: [signature]	Date/Time: 1-20-17 0915	Company TAD
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 580-65491-1

Login Number: 65491
List Number: 1
Creator: Gall, Brandon A

List Source: TestAmerica Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 580-65491-1

Login Number: 65491
List Number: 2
Creator: Pottruff, Reed W

List Source: TestAmerica Denver
List Creation: 01/20/17 06:24 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: Trip Blanks
Date Collected: 01/18/17 00:01
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.20		ug/L		01/19/17 14:38	1
cis-1,2-Dichloroethene	ND		0.20		ug/L		01/19/17 14:38	1
Trichloroethene	ND		0.20		ug/L		01/19/17 14:38	1
Tetrachloroethene	ND		0.20		ug/L		01/19/17 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*108*		*74 - 118*		*01/19/17 14:38*	*1*
Toluene-d8 (Surr)	*132*	*X*	*75 - 125*		*01/19/17 14:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*127*		*46 - 150*		*01/19/17 14:38*	*1*
4-Bromofluorobenzene (Surr)	*121*	*X*	*81 - 120*		*01/19/17 14:38*	*1*
Dibromofluoromethane (Surr)	*124*		*42 - 132*		*01/19/17 14:38*	*1*

Client Sample ID: LAI-MW1-20170118
Date Collected: 01/18/17 11:00
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.20		ug/L		01/19/17 18:54	1
cis-1,2-Dichloroethene	ND		0.20		ug/L		01/19/17 18:54	1
Trichloroethene	ND		0.20		ug/L		01/19/17 18:54	1
Tetrachloroethene	ND		0.20		ug/L		01/19/17 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*95*		*74 - 118*		*01/19/17 18:54*	*1*
Toluene-d8 (Surr)	*115*		*75 - 125*		*01/19/17 18:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*130*		*46 - 150*		*01/19/17 18:54*	*1*
4-Bromofluorobenzene (Surr)	*121*	*X*	*81 - 120*		*01/19/17 18:54*	*1*
Dibromofluoromethane (Surr)	*125*		*42 - 132*		*01/19/17 18:54*	*1*

Client Sample ID: LAI-MW2-20170118
Date Collected: 01/18/17 10:15
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	**0.80**		0.20		ug/L		01/19/17 19:20	1
Vinyl chloride	ND		10		ug/L		01/24/17 18:26	50
cis-1,2-Dichloroethene	**120**		10		ug/L		01/24/17 18:26	50
Trichloroethene	**120**		10		ug/L		01/24/17 18:26	50
Tetrachloroethene	**390**		10		ug/L		01/24/17 18:26	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*109*		*74 - 118*		*01/19/17 19:20*	*1*
Trifluorotoluene (Surr)	*100*		*74 - 118*		*01/24/17 18:26*	*50*
Toluene-d8 (Surr)	*134*	*X*	*75 - 125*		*01/19/17 19:20*	*1*
Toluene-d8 (Surr)	*101*		*75 - 125*		*01/24/17 18:26*	*50*
1,2-Dichloroethane-d4 (Surr)	*125*		*46 - 150*		*01/19/17 19:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*46 - 150*		*01/24/17 18:26*	*50*
4-Bromofluorobenzene (Surr)	*120*		*81 - 120*		*01/19/17 19:20*	*1*
4-Bromofluorobenzene (Surr)	*109*		*81 - 120*		*01/24/17 18:26*	*50*
Dibromofluoromethane (Surr)	*127*		*42 - 132*		*01/19/17 19:20*	*1*
Dibromofluoromethane (Surr)	*102*		*42 - 132*		*01/24/17 18:26*	*50*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: LAI-MW3-20170118
Date Collected: 01/18/17 11:45
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.20		ug/L		01/19/17 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*116*		*74 - 118*		*01/19/17 19:45*	*1*
Toluene-d8 (Surr)	*131*	*X*	*75 - 125*		*01/19/17 19:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*46 - 150*		*01/19/17 19:45*	*1*
4-Bromofluorobenzene (Surr)	*121*	*X*	*81 - 120*		*01/19/17 19:45*	*1*
Dibromofluoromethane (Surr)	*125*		*42 - 132*		*01/19/17 19:45*	*1*

Client Sample ID: LAI-MW4-20170118
Date Collected: 01/18/17 08:50
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.20		ug/L		01/19/17 20:11	1
cis-1,2-Dichloroethene	ND		0.20		ug/L		01/19/17 20:11	1
Trichloroethene	ND		0.20		ug/L		01/19/17 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*109*		*74 - 118*		*01/19/17 20:11*	*1*
Toluene-d8 (Surr)	*131*	*X*	*75 - 125*		*01/19/17 20:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*128*		*46 - 150*		*01/19/17 20:11*	*1*
4-Bromofluorobenzene (Surr)	*109*		*81 - 120*		*01/19/17 20:11*	*1*
Dibromofluoromethane (Surr)	*119*		*42 - 132*		*01/19/17 20:11*	*1*

Client Sample ID: LAI-MW5-20170118
Date Collected: 01/18/17 15:45
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.20		ug/L		01/19/17 20:37	1
cis-1,2-Dichloroethene	ND		0.20		ug/L		01/19/17 20:37	1
Trichloroethene	ND		0.20		ug/L		01/19/17 20:37	1
Tetrachloroethene	ND		0.20		ug/L		01/19/17 20:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*112*		*74 - 118*		*01/19/17 20:37*	*1*
Toluene-d8 (Surr)	*145*	*X*	*75 - 125*		*01/19/17 20:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*127*		*46 - 150*		*01/19/17 20:37*	*1*
4-Bromofluorobenzene (Surr)	*132*	*X*	*81 - 120*		*01/19/17 20:37*	*1*
Dibromofluoromethane (Surr)	*125*		*42 - 132*		*01/19/17 20:37*	*1*

Client Sample ID: MW2-20170118
Date Collected: 01/18/17 14:00
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	**0.44**		0.20		ug/L		01/24/17 20:33	1
cis-1,2-Dichloroethene	**0.75**		0.20		ug/L		01/24/17 20:33	1
Trichloroethene	**0.30**		0.20		ug/L		01/24/17 20:33	1
Tetrachloroethene	**0.54**		0.20		ug/L		01/24/17 20:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*93*		*74 - 118*		*01/24/17 20:33*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW2-20170118
Date Collected: 01/18/17 14:00
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-7
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*75 - 125*		*01/24/17 20:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*46 - 150*		*01/24/17 20:33*	*1*
4-Bromofluorobenzene (Surr)	*115*		*81 - 120*		*01/24/17 20:33*	*1*
Dibromofluoromethane (Surr)	*102*		*42 - 132*		*01/24/17 20:33*	*1*

Client Sample ID: MW13-20170118
Date Collected: 01/18/17 13:15
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	**0.73**		0.20		ug/L		01/19/17 21:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*116*		*74 - 118*		*01/19/17 21:03*	*1*
Toluene-d8 (Surr)	*130*	*X*	*75 - 125*		*01/19/17 21:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*128*		*46 - 150*		*01/19/17 21:03*	*1*
4-Bromofluorobenzene (Surr)	*120*		*81 - 120*		*01/19/17 21:03*	*1*
Dibromofluoromethane (Surr)	*126*		*42 - 132*		*01/19/17 21:03*	*1*

Client Sample ID: RNS-MW2-20170118
Date Collected: 01/18/17 14:35
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.20		ug/L		01/19/17 21:29	1
cis-1,2-Dichloroethene	ND		0.20		ug/L		01/19/17 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*109*		*74 - 118*		*01/19/17 21:29*	*1*
Toluene-d8 (Surr)	*136*	*X*	*75 - 125*		*01/19/17 21:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*126*		*46 - 150*		*01/19/17 21:29*	*1*
4-Bromofluorobenzene (Surr)	*126*	*X*	*81 - 120*		*01/19/17 21:29*	*1*
Dibromofluoromethane (Surr)	*126*		*42 - 132*		*01/19/17 21:29*	*1*

Client Sample ID: RNS-MW6-42.5-20170118
Date Collected: 01/18/17 12:25
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	**0.33**		0.20		ug/L		01/19/17 21:54	1
Vinyl chloride	ND		10		ug/L		01/24/17 19:17	50
cis-1,2-Dichloroethene	**140**		10		ug/L		01/24/17 19:17	50
Trichloroethene	**180**		10		ug/L		01/24/17 19:17	50
Tetrachloroethene	**860**		10		ug/L		01/24/17 19:17	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*113*		*74 - 118*		*01/19/17 21:54*	*1*
Trifluorotoluene (Surr)	*97*		*74 - 118*		*01/24/17 19:17*	*50*
Toluene-d8 (Surr)	*129*	*X*	*75 - 125*		*01/19/17 21:54*	*1*
Toluene-d8 (Surr)	*99*		*75 - 125*		*01/24/17 19:17*	*50*
1,2-Dichloroethane-d4 (Surr)	*126*		*46 - 150*		*01/19/17 21:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*46 - 150*		*01/24/17 19:17*	*50*
4-Bromofluorobenzene (Surr)	*120*		*81 - 120*		*01/19/17 21:54*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RNS-MW6-42.5-20170118
Date Collected: 01/18/17 12:25
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-10
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*81 - 120*		*01/24/17 19:17*	*50*
Dibromofluoromethane (Surr)	*125*		*42 - 132*		*01/19/17 21:54*	*1*
Dibromofluoromethane (Surr)	*102*		*42 - 132*		*01/24/17 19:17*	*50*

Client Sample ID: RNS-MW6-52.5-20170118
Date Collected: 01/18/17 12:35
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	**0.53**		0.20		ug/L		01/19/17 22:19	1
cis-1,2-Dichloroethene	**110**	**E**	0.20		ug/L		01/19/17 22:19	1
Trichloroethene	**120**	**E**	0.20		ug/L		01/19/17 22:19	1
Tetrachloroethene	**380**	**E**	0.20		ug/L		01/19/17 22:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*113*		*74 - 118*		*01/19/17 22:19*	*1*
Toluene-d8 (Surr)	*141*	*X*	*75 - 125*		*01/19/17 22:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*124*		*46 - 150*		*01/19/17 22:19*	*1*
4-Bromofluorobenzene (Surr)	*119*		*81 - 120*		*01/19/17 22:19*	*1*
Dibromofluoromethane (Surr)	*123*		*42 - 132*		*01/19/17 22:19*	*1*

Client Sample ID: DUP1-20170118
Date Collected: 01/18/17 08:55
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.20		ug/L		01/19/17 22:45	1
cis-1,2-Dichloroethene	ND		0.20		ug/L		01/19/17 22:45	1
Trichloroethene	ND		0.20		ug/L		01/19/17 22:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*101*		*74 - 118*		*01/19/17 22:45*	*1*
Toluene-d8 (Surr)	*125*		*75 - 125*		*01/19/17 22:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*127*		*46 - 150*		*01/19/17 22:45*	*1*
4-Bromofluorobenzene (Surr)	*121*	*X*	*81 - 120*		*01/19/17 22:45*	*1*
Dibromofluoromethane (Surr)	*128*		*42 - 132*		*01/19/17 22:45*	*1*

Client: Landau & Associates, Inc.
Project/Site: Sauro's

TestAmerica Job ID: 580-65491-1

Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

Client Sample ID: RNS-MW6-52.5-20170118
Date Collected: 01/18/17 12:35
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-11
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		10			ug/L		01/24/17 19:42	50
cis-1,2-Dichloroethene	**110**		10			ug/L		01/24/17 19:42	50
Trichloroethene	**130**		10			ug/L		01/24/17 19:42	50
Tetrachloroethene	**570**		10			ug/L		01/24/17 19:42	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*98*		*74 - 118*		*01/24/17 19:42*	*50*
Toluene-d8 (Surr)	*100*		*75 - 125*		*01/24/17 19:42*	*50*
1,2-Dichloroethane-d4 (Surr)	*91*		*46 - 150*		*01/24/17 19:42*	*50*
4-Bromofluorobenzene (Surr)	*112*		*81 - 120*		*01/24/17 19:42*	*50*
Dibromofluoromethane (Surr)	*100*		*42 - 132*		*01/24/17 19:42*	*50*

Method: 8260C - Volatile Organic Compounds (GC/MS) - RA

Client Sample ID: LAI-MW4-20170118
Date Collected: 01/18/17 08:50
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Tetrachloroethene	ND		0.20		ug/L		01/24/17 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*99*		*74 - 118*		*01/24/17 17:10*	*1*
Toluene-d8 (Surr)	*101*		*75 - 125*		*01/24/17 17:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*46 - 150*		*01/24/17 17:10*	*1*
4-Bromofluorobenzene (Surr)	*101*		*81 - 120*		*01/24/17 17:10*	*1*
Dibromofluoromethane (Surr)	*104*		*42 - 132*		*01/24/17 17:10*	*1*

Client Sample ID: MW13-20170118
Date Collected: 01/18/17 13:15
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**73**		10		ug/L		01/24/17 18:51	50
Trichloroethene	**98**		10		ug/L		01/24/17 18:51	50
Tetrachloroethene	**430**		10		ug/L		01/24/17 18:51	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*98*		*74 - 118*		*01/24/17 18:51*	*50*
Toluene-d8 (Surr)	*99*		*75 - 125*		*01/24/17 18:51*	*50*
1,2-Dichloroethane-d4 (Surr)	*91*		*46 - 150*		*01/24/17 18:51*	*50*
4-Bromofluorobenzene (Surr)	*111*		*81 - 120*		*01/24/17 18:51*	*50*
Dibromofluoromethane (Surr)	*100*		*42 - 132*		*01/24/17 18:51*	*50*

Client Sample ID: RNS-MW2-20170118
Date Collected: 01/18/17 14:35
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Trichloroethene	**0.51**		0.20		ug/L		01/24/17 17:36	1
Tetrachloroethene	**25**		0.20		ug/L		01/24/17 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*97*		*74 - 118*		*01/24/17 17:36*	*1*
Toluene-d8 (Surr)	*100*		*75 - 125*		*01/24/17 17:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*46 - 150*		*01/24/17 17:36*	*1*
4-Bromofluorobenzene (Surr)	*103*		*81 - 120*		*01/24/17 17:36*	*1*
Dibromofluoromethane (Surr)	*103*		*42 - 132*		*01/24/17 17:36*	*1*

Client Sample ID: DUP1-20170118
Date Collected: 01/18/17 08:55
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Tetrachloroethene	ND		0.20		ug/L		01/24/17 18:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*128*	*X*	*74 - 118*		*01/24/17 18:01*	*1*
Toluene-d8 (Surr)	*102*		*75 - 125*		*01/24/17 18:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*46 - 150*		*01/24/17 18:01*	*1*
4-Bromofluorobenzene (Surr)	*102*		*81 - 120*		*01/24/17 18:01*	*1*
Dibromofluoromethane (Surr)	*110*		*42 - 132*		*01/24/17 18:01*	*1*

Client: Landau & Associates, Inc.
Project/Site: Sauro's

TestAmerica Job ID: 580-65491-1

Method: 8260C - Volatile Organic Compounds (GC/MS) - RADL

Client Sample ID: LAI-MW3-20170118
Date Collected: 01/18/17 11:45
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-4
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
cis-1,2-Dichloroethene	39		2.0			ug/L		01/24/17 20:07	10
Trichloroethene	32		2.0			ug/L		01/24/17 20:07	10
Tetrachloroethene	97		2.0			ug/L		01/24/17 20:07	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*99*		*74 - 118*		*01/24/17 20:07*	*10*
Toluene-d8 (Surr)	*99*		*75 - 125*		*01/24/17 20:07*	*10*
1,2-Dichloroethane-d4 (Surr)	*91*		*46 - 150*		*01/24/17 20:07*	*10*
4-Bromofluorobenzene (Surr)	*111*		*81 - 120*		*01/24/17 20:07*	*10*
Dibromofluoromethane (Surr)	*102*		*42 - 132*		*01/24/17 20:07*	*10*

Method: RSK-175 - Dissolved Gases (GC)

Client Sample ID: LAI-MW1-20170118
Date Collected: 01/18/17 11:00
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-2
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Methane	ND		0.0050			mg/L		01/24/17 20:41	1
Ethylene	ND		0.0050			mg/L		01/24/17 20:41	1
Ethane	ND		0.0050			mg/L		01/24/17 20:41	1
Acetylene	ND		0.0050			mg/L		01/24/17 20:41	1

Client Sample ID: LAI-MW2-20170118
Date Collected: 01/18/17 10:15
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-3
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Methane	**0.024**		0.0050			mg/L		01/24/17 21:10	1
Ethylene	ND		0.0050			mg/L		01/24/17 21:10	1
Ethane	ND		0.0050			mg/L		01/24/17 21:10	1
Acetylene	ND		0.0050			mg/L		01/24/17 21:10	1

Client Sample ID: LAI-MW3-20170118
Date Collected: 01/18/17 11:45
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-4
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Methane	ND		0.0050			mg/L		01/24/17 21:01	1
Ethylene	ND		0.0050			mg/L		01/24/17 21:01	1
Ethane	ND		0.0050			mg/L		01/24/17 21:01	1
Acetylene	ND		0.0050			mg/L		01/24/17 21:01	1

Client Sample ID: LAI-MW4-20170118
Date Collected: 01/18/17 08:50
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-5
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Methane	**3.7**		0.0050			mg/L		01/24/17 21:14	1
Ethylene	ND		0.0050			mg/L		01/24/17 21:14	1
Ethane	ND		0.0050			mg/L		01/24/17 21:14	1
Acetylene	ND		0.0050			mg/L		01/24/17 21:14	1

Client Sample ID: LAI-MW5-20170118
Date Collected: 01/18/17 15:45
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-6
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Methane	**12**		0.0050			mg/L		01/24/17 21:18	1
Ethylene	ND		0.0050			mg/L		01/24/17 21:18	1
Ethane	ND		0.0050			mg/L		01/24/17 21:18	1
Acetylene	ND		0.0050			mg/L		01/24/17 21:18	1

Client Sample ID: MW2-20170118
Date Collected: 01/18/17 14:00
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-7
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Methane	**1.0**		0.0050			mg/L		01/24/17 21:23	1
Ethylene	ND		0.0050			mg/L		01/24/17 21:23	1
Ethane	ND		0.0050			mg/L		01/24/17 21:23	1
Acetylene	ND		0.0050			mg/L		01/24/17 21:23	1

Method: RSK-175 - Dissolved Gases (GC)

Client Sample ID: MW13-20170118
Date Collected: 01/18/17 13:15
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Methane	**0.010**		0.0050		mg/L		01/24/17 21:27	1
Ethylene	ND		0.0050		mg/L		01/24/17 21:27	1
Ethane	ND		0.0050		mg/L		01/24/17 21:27	1
Acetylene	ND		0.0050		mg/L		01/24/17 21:27	1

Client Sample ID: RNS-MW2-20170118
Date Collected: 01/18/17 14:35
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Methane	ND		0.0050		mg/L		01/24/17 21:42	1
Ethylene	ND		0.0050		mg/L		01/24/17 21:42	1
Ethane	ND		0.0050		mg/L		01/24/17 21:42	1
Acetylene	ND		0.0050		mg/L		01/24/17 21:42	1

Client Sample ID: RNS-MW6-52.5-20170118
Date Collected: 01/18/17 12:35
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Methane	**0.036**		0.0050		mg/L		01/24/17 21:47	1
Ethylene	ND		0.0050		mg/L		01/24/17 21:47	1
Ethane	**0.0087**		0.0050		mg/L		01/24/17 21:47	1
Acetylene	ND		0.0050		mg/L		01/24/17 21:47	1

Client Sample ID: DUP1-20170118
Date Collected: 01/18/17 08:55
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Methane	**4.6**		0.0050		mg/L		01/24/17 21:51	1
Ethylene	ND		0.0050		mg/L		01/24/17 21:51	1
Ethane	ND		0.0050		mg/L		01/24/17 21:51	1
Acetylene	ND		0.0050		mg/L		01/24/17 21:51	1

General Chemistry

Client Sample ID: LAI-MW1-20170118
Date Collected: 01/18/17 11:00
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-2
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Nitrite as N	ND		0.40			mg/L		01/19/17 12:02	1
Sulfate	**19**		1.2			mg/L		01/19/17 12:02	1
Chloride	**72**	**F1**	0.90			mg/L		01/19/17 12:02	1
Nitrate as N	**1.3**		0.20			mg/L		01/19/17 12:02	1
Sulfide	ND		0.050			mg/L		01/25/17 19:39	1
Total Organic Carbon	**2.6**		1.0			mg/L		01/25/17 17:41	1

Client Sample ID: LAI-MW2-20170118
Date Collected: 01/18/17 10:15
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-3
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Nitrite as N	ND		0.40			mg/L		01/19/17 12:48	1
Sulfate	**19**		1.2			mg/L		01/19/17 12:48	1
Chloride	**12**		0.90			mg/L		01/19/17 12:48	1
Nitrate as N	ND		0.20			mg/L		01/19/17 12:48	1
Sulfide	ND		0.25			mg/L		01/25/17 19:39	5
Total Organic Carbon	**5.6**		1.0			mg/L		01/25/17 17:41	1

Client Sample ID: LAI-MW3-20170118
Date Collected: 01/18/17 11:45
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-4
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Nitrite as N	ND		0.40			mg/L		01/19/17 13:04	1
Sulfate	**20**		1.2			mg/L		01/19/17 13:04	1
Chloride	**17**		0.90			mg/L		01/19/17 13:04	1
Nitrate as N	**0.54**		0.20			mg/L		01/19/17 13:04	1
Sulfide	ND		0.050			mg/L		01/25/17 19:39	1
Total Organic Carbon	**1.8**		1.0			mg/L		01/25/17 17:41	1

Client Sample ID: LAI-MW4-20170118
Date Collected: 01/18/17 08:50
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-5
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Nitrite as N	ND		0.40			mg/L		01/19/17 13:19	1
Sulfate	**2.1**		1.2			mg/L		01/19/17 13:19	1
Chloride	**24**		0.90			mg/L		01/19/17 13:19	1
Nitrate as N	ND		0.20			mg/L		01/19/17 13:19	1
Sulfide	ND		0.050			mg/L		01/25/17 19:39	1
Total Organic Carbon	**3.6**		1.0			mg/L		01/25/17 17:41	1

Client Sample ID: LAI-MW5-20170118
Date Collected: 01/18/17 15:45
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-6
Matrix: Water

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Nitrite as N	ND		0.40			mg/L		01/19/17 13:34	1
Sulfate	ND		1.2			mg/L		01/19/17 13:34	1
Chloride	**14**		0.90			mg/L		01/19/17 13:34	1
Nitrate as N	ND		0.20			mg/L		01/19/17 13:34	1
Sulfide	ND		0.10			mg/L		01/25/17 19:39	2
Total Organic Carbon	**9.6**		1.0			mg/L		01/25/17 17:41	1

General Chemistry

Client Sample ID: MW2-20170118
Date Collected: 01/18/17 14:00
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Nitrite as N	ND		0.40		mg/L		01/19/17 13:50	1
Sulfate	**24**		1.2		mg/L		01/19/17 13:50	1
Chloride	**25**		0.90		mg/L		01/19/17 13:50	1
Nitrate as N	**1.9**		0.20		mg/L		01/19/17 13:50	1
Sulfide	ND		0.050		mg/L		01/25/17 19:39	1
Total Organic Carbon	**2.7**		1.0		mg/L		01/25/17 17:41	1

Client Sample ID: MW13-20170118
Date Collected: 01/18/17 13:15
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Nitrite as N	ND		0.40		mg/L		01/19/17 14:05	1
Sulfate	**30**		1.2		mg/L		01/19/17 14:05	1
Chloride	**14**		0.90		mg/L		01/19/17 14:05	1
Nitrate as N	**0.65**		0.20		mg/L		01/19/17 14:05	1
Sulfide	ND		0.25		mg/L		01/25/17 19:39	5
Total Organic Carbon	**1.7**		1.0		mg/L		01/25/17 17:41	1

Client Sample ID: RNS-MW2-20170118
Date Collected: 01/18/17 14:35
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Nitrite as N	ND		0.40		mg/L		01/19/17 14:21	1
Sulfate	**27**		1.2		mg/L		01/19/17 14:21	1
Chloride	**42**		0.90		mg/L		01/19/17 14:21	1
Nitrate as N	**2.9**		0.20		mg/L		01/19/17 14:21	1
Sulfide	ND		0.25		mg/L		01/25/17 19:39	5
Total Organic Carbon	**1.2**		1.0		mg/L		01/25/17 17:41	1

Client Sample ID: RNS-MW6-52.5-20170118
Date Collected: 01/18/17 12:35
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Nitrite as N	ND		0.40		mg/L		01/19/17 15:07	1
Sulfate	**27**		1.2		mg/L		01/19/17 15:07	1
Chloride	**25**		0.90		mg/L		01/19/17 15:07	1
Nitrate as N	**0.61**		0.20		mg/L		01/19/17 15:07	1
Sulfide	ND		0.25		mg/L		01/25/17 19:39	5
Total Organic Carbon	**1.9**		1.0		mg/L		01/25/17 17:41	1

Client Sample ID: DUP1-20170118
Date Collected: 01/18/17 08:55
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Nitrite as N	ND		0.40		mg/L		01/19/17 15:22	1
Sulfate	**2.6**		1.2		mg/L		01/19/17 15:22	1
Chloride	**24**		0.90		mg/L		01/19/17 15:22	1
Nitrate as N	ND		0.20		mg/L		01/19/17 15:22	1
Sulfide	ND		0.050		mg/L		01/25/17 19:39	1
Total Organic Carbon	**3.5**		1.0		mg/L		01/25/17 17:41	1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-236704/4
Matrix: Water
Analysis Batch: 236704

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.20			ug/L		01/19/17 13:21	1
cis-1,2-Dichloroethene	ND		0.20			ug/L		01/19/17 13:21	1
Trichloroethene	ND		0.20			ug/L		01/19/17 13:21	1
Tetrachloroethene	ND		0.20			ug/L		01/19/17 13:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*109*		*74 - 118*		*01/19/17 13:21*	*1*
Toluene-d8 (Surr)	*132*	*X*	*75 - 125*		*01/19/17 13:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*139*		*46 - 150*		*01/19/17 13:21*	*1*
4-Bromofluorobenzene (Surr)	*120*		*81 - 120*		*01/19/17 13:21*	*1*
Dibromofluoromethane (Surr)	*139*	*X*	*42 - 132*		*01/19/17 13:21*	*1*

Lab Sample ID: LCS 580-236704/5
Matrix: Water
Analysis Batch: 236704

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vinyl chloride			5.00	4.25		ug/L		85	59 - 140		
cis-1,2-Dichloroethene			5.00	4.61		ug/L		92	73 - 130		
Trichloroethene			5.00	4.59		ug/L		92	72 - 123		
Tetrachloroethene			5.00	4.92		ug/L		98	67 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*107*		*74 - 118*
Toluene-d8 (Surr)	*131*	*X*	*75 - 125*
1,2-Dichloroethane-d4 (Surr)	*127*		*46 - 150*
4-Bromofluorobenzene (Surr)	*120*		*81 - 120*
Dibromofluoromethane (Surr)	*126*		*42 - 132*

Lab Sample ID: LCSD 580-236704/6
Matrix: Water
Analysis Batch: 236704

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride			5.00	4.95		ug/L		99	59 - 140	15	30
cis-1,2-Dichloroethene			5.00	4.96		ug/L		99	73 - 130	7	20
Trichloroethene			5.00	4.86		ug/L		97	72 - 123	6	20
Tetrachloroethene			5.00	5.18		ug/L		104	67 - 123	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Trifluorotoluene (Surr)	*110*		*74 - 118*
Toluene-d8 (Surr)	*132*	*X*	*75 - 125*
1,2-Dichloroethane-d4 (Surr)	*125*		*46 - 150*
4-Bromofluorobenzene (Surr)	*120*		*81 - 120*
Dibromofluoromethane (Surr)	*128*		*42 - 132*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-236986/4
Matrix: Water
Analysis Batch: 236986

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.20		ug/L		01/24/17 12:51	1
cis-1,2-Dichloroethene	ND		0.20		ug/L		01/24/17 12:51	1
Trichloroethene	ND		0.20		ug/L		01/24/17 12:51	1
Tetrachloroethene	ND		0.20		ug/L		01/24/17 12:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*99*		*74 - 118*		*01/24/17 12:51*	*1*
Toluene-d8 (Surr)	*101*		*75 - 125*		*01/24/17 12:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*46 - 150*		*01/24/17 12:51*	*1*
4-Bromofluorobenzene (Surr)	*103*		*81 - 120*		*01/24/17 12:51*	*1*
Dibromofluoromethane (Surr)	*105*		*42 - 132*		*01/24/17 12:51*	*1*

Lab Sample ID: LCS 580-236986/5
Matrix: Water
Analysis Batch: 236986

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	5.00	4.46		ug/L		89	59 - 140
cis-1,2-Dichloroethene	5.00	5.08		ug/L		102	73 - 130
Trichloroethene	5.00	4.75		ug/L		95	72 - 123
Tetrachloroethene	5.00	4.84		ug/L		97	67 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*98*		*74 - 118*
Toluene-d8 (Surr)	*102*		*75 - 125*
1,2-Dichloroethane-d4 (Surr)	*102*		*46 - 150*
4-Bromofluorobenzene (Surr)	*84*		*81 - 120*
Dibromofluoromethane (Surr)	*104*		*42 - 132*

Lab Sample ID: LCSD 580-236986/6
Matrix: Water
Analysis Batch: 236986

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	5.00	4.69		ug/L		94	59 - 140	5	30
cis-1,2-Dichloroethene	5.00	5.24		ug/L		105	73 - 130	3	20
Trichloroethene	5.00	5.06		ug/L		101	72 - 123	6	20
Tetrachloroethene	5.00	5.08		ug/L		102	67 - 123	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Trifluorotoluene (Surr)	*97*		*74 - 118*
Toluene-d8 (Surr)	*100*		*75 - 125*
1,2-Dichloroethane-d4 (Surr)	*103*		*46 - 150*
4-Bromofluorobenzene (Surr)	*101*		*81 - 120*
Dibromofluoromethane (Surr)	*104*		*42 - 132*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 280-359884/5
Matrix: Water
Analysis Batch: 359884

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Methane	ND		0.0050			mg/L		01/24/17 18:54	1
Ethylene	ND		0.0050			mg/L		01/24/17 18:54	1
Ethane	ND		0.0050			mg/L		01/24/17 18:54	1
Acetylene	ND		0.0050			mg/L		01/24/17 18:54	1

Lab Sample ID: LCS 280-359884/6
Matrix: Water
Analysis Batch: 359884

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Methane			0.146	0.169		mg/L		115	75 - 125		
Ethylene			0.255	0.291		mg/L		114	75 - 125		
Ethane			0.274	0.319		mg/L		117	75 - 125		
Acetylene			0.237	0.258		mg/L		109	75 - 125		

Lab Sample ID: LCSD 280-359884/7
Matrix: Water
Analysis Batch: 359884

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane			0.146	0.164		mg/L		113	75 - 125	3	20
Ethylene			0.255	0.289		mg/L		113	75 - 125	1	20
Ethane			0.274	0.317		mg/L		116	75 - 125	1	20
Acetylene			0.237	0.260		mg/L		110	75 - 125	1	20

Lab Sample ID: 580-65491-4 DU
Matrix: Water
Analysis Batch: 359884

Client Sample ID: LAI-MW3-20170118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Methane	ND			ND		mg/L				10	20
Ethylene	ND			ND		mg/L				NC	20
Ethane	ND			ND		mg/L				NC	20
Acetylene	ND			ND		mg/L				NC	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-236747/3
Matrix: Water
Analysis Batch: 236747

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Nitrite as N	ND		0.40			mg/L		01/19/17 10:42	1
Nitrate as N	ND		0.20			mg/L		01/19/17 10:42	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 580-236747/4
Matrix: Water
Analysis Batch: 236747

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite as N			5.00	5.05		mg/L		101	90 - 110		
Nitrate as N			5.00	4.91		mg/L		98	90 - 110		

Lab Sample ID: LCSD 580-236747/5
Matrix: Water
Analysis Batch: 236747

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N			5.00	5.19		mg/L		104	90 - 110	3	15
Nitrate as N			5.00	4.91		mg/L		98	90 - 110	0	15

Lab Sample ID: 580-65491-2 MS
Matrix: Water
Analysis Batch: 236747

Client Sample ID: LAI-MW1-20170118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite as N	ND		5.00	4.86		mg/L		97	90 - 110		
Nitrate as N	1.3		5.00	6.39		mg/L		102	90 - 110		

Lab Sample ID: 580-65491-2 MSD
Matrix: Water
Analysis Batch: 236747

Client Sample ID: LAI-MW1-20170118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	ND		5.00	5.13		mg/L		103	90 - 110	5	15
Nitrate as N	1.3		5.00	6.54		mg/L		105	90 - 110	2	15

Lab Sample ID: MB 580-236749/3
Matrix: Water
Analysis Batch: 236749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Sulfate	ND		1.2			mg/L		01/19/17 10:42	1
Chloride	ND		0.90			mg/L		01/19/17 10:42	1

Lab Sample ID: LCS 580-236749/4
Matrix: Water
Analysis Batch: 236749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			50.0	49.5		mg/L		99	90 - 110		
Chloride			50.0	50.6		mg/L		101	90 - 110		

Lab Sample ID: LCSD 580-236749/5
Matrix: Water
Analysis Batch: 236749

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate			50.0	49.6		mg/L		99	90 - 110	0	15

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 580-236749/5
Matrix: Water
Analysis Batch: 236749

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			50.0	50.6		mg/L		101	90 - 110	0	15

Lab Sample ID: 580-65491-2 MS
Matrix: Water
Analysis Batch: 236749

Client Sample ID: LAI-MW1-20170118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	19		50.0	72.4		mg/L		106	90 - 110
Chloride	72	F1	50.0	126		mg/L		109	90 - 110

Lab Sample ID: 580-65491-2 MSD
Matrix: Water
Analysis Batch: 236749

Client Sample ID: LAI-MW1-20170118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	19		50.0	74.1		mg/L		110	90 - 110	2	15
Chloride	72	F1	50.0	128	F1	mg/L		113	90 - 110	1	15

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 280-360038/3
Matrix: Water
Analysis Batch: 360038

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Sulfide	ND		0.050			mg/L		01/25/17 19:39	1

Lab Sample ID: LCS 280-360038/4
Matrix: Water
Analysis Batch: 360038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide			0.527	0.532		mg/L		101	80 - 119

Lab Sample ID: LCSD 280-360038/5
Matrix: Water
Analysis Batch: 360038

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide			0.527	0.540		mg/L		102	80 - 119	2	10

Lab Sample ID: 580-65491-2 MS
Matrix: Water
Analysis Batch: 360038

Client Sample ID: LAI-MW1-20170118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND		0.527	0.511		mg/L		95	80 - 119

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: 580-65491-2 MSD
Matrix: Water
Analysis Batch: 360038

Client Sample ID: LAI-MW1-20170118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	ND		0.527	0.509		mg/L		95	80 - 119	0	10

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-236865/3
Matrix: Water
Analysis Batch: 236865

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0			mg/L		01/25/17 17:41	1

Lab Sample ID: LCS 580-236865/4
Matrix: Water
Analysis Batch: 236865

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			10.0	10.1		mg/L		101	85 - 115		

Lab Sample ID: 580-65491-2 MS
Matrix: Water
Analysis Batch: 236865

Client Sample ID: LAI-MW1-20170118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon	2.6		10.0	11.8		mg/L		92	85 - 115		

Lab Sample ID: 580-65491-2 MSD
Matrix: Water
Analysis Batch: 236865

Client Sample ID: LAI-MW1-20170118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	2.6		10.0	12.7		mg/L		102	85 - 115	8	20

Lab Sample ID: 580-65491-2 DU
Matrix: Water
Analysis Batch: 236865

Client Sample ID: LAI-MW1-20170118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon	2.6			2.47		mg/L				4	20

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Sauro's

TestAmerica Job ID: 580-65491-1

Client Sample ID: Trip Blanks
Lab Sample ID: 580-65491-1
Date Collected: 01/18/17 00:01
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236704	01/19/17 14:38	TL1	TAL SEA

Client Sample ID: LAI-MW1-20170118
Lab Sample ID: 580-65491-2
Date Collected: 01/18/17 11:00
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236704	01/19/17 18:54	TL1	TAL SEA
Total/NA	Analysis	RSK-175		1	359884	01/24/17 20:41	MPS	TAL DEN
Total/NA	Analysis	300.0		1	236747	01/19/17 12:02	RSB	TAL SEA
Total/NA	Analysis	300.0		1	236749	01/19/17 12:02	RSB	TAL SEA
Total/NA	Analysis	SM 4500 S2 D		1	360038	01/25/17 19:39	KAM	TAL DEN
Total/NA	Analysis	SM 5310B		1	236865	01/25/17 17:41	Z1T	TAL SEA

Client Sample ID: LAI-MW2-20170118
Lab Sample ID: 580-65491-3
Date Collected: 01/18/17 10:15
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236704	01/19/17 19:20	TL1	TAL SEA
Total/NA	Analysis	8260C		50	236986	01/24/17 18:26	HDK	TAL SEA
Total/NA	Analysis	RSK-175		1	359884	01/24/17 21:10	MPS	TAL DEN
Total/NA	Analysis	300.0		1	236747	01/19/17 12:48	RSB	TAL SEA
Total/NA	Analysis	300.0		1	236749	01/19/17 12:48	RSB	TAL SEA
Total/NA	Analysis	SM 4500 S2 D		5	360038	01/25/17 19:39	KAM	TAL DEN
Total/NA	Analysis	SM 5310B		1	236865	01/25/17 17:41	Z1T	TAL SEA

Client Sample ID: LAI-MW3-20170118
Lab Sample ID: 580-65491-4
Date Collected: 01/18/17 11:45
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236704	01/19/17 19:45	TL1	TAL SEA
Total/NA	Analysis	8260C	RADL	10	236986	01/24/17 20:07	HDK	TAL SEA
Total/NA	Analysis	RSK-175		1	359884	01/24/17 21:01	MPS	TAL DEN
Total/NA	Analysis	300.0		1	236747	01/19/17 13:04	RSB	TAL SEA
Total/NA	Analysis	300.0		1	236749	01/19/17 13:04	RSB	TAL SEA
Total/NA	Analysis	SM 4500 S2 D		1	360038	01/25/17 19:39	KAM	TAL DEN
Total/NA	Analysis	SM 5310B		1	236865	01/25/17 17:41	Z1T	TAL SEA

Client Sample ID: LAI-MW4-20170118
Lab Sample ID: 580-65491-5
Date Collected: 01/18/17 08:50
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236704	01/19/17 20:11	TL1	TAL SEA
Total/NA	Analysis	8260C	RA	1	236986	01/24/17 17:10	HDK	TAL SEA
Total/NA	Analysis	RSK-175		1	359884	01/24/17 21:14	MPS	TAL DEN
Total/NA	Analysis	300.0		1	236747	01/19/17 13:19	RSB	TAL SEA
Total/NA	Analysis	300.0		1	236749	01/19/17 13:19	RSB	TAL SEA
Total/NA	Analysis	SM 4500 S2 D		1	360038	01/25/17 19:39	KAM	TAL DEN
Total/NA	Analysis	SM 5310B		1	236865	01/25/17 17:41	Z1T	TAL SEA

Client Sample ID: LAI-MW5-20170118
Lab Sample ID: 580-65491-6
Date Collected: 01/18/17 15:45
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236704	01/19/17 20:37	TL1	TAL SEA
Total/NA	Analysis	RSK-175		1	359884	01/24/17 21:18	MPS	TAL DEN
Total/NA	Analysis	300.0		1	236747	01/19/17 13:34	RSB	TAL SEA
Total/NA	Analysis	300.0		1	236749	01/19/17 13:34	RSB	TAL SEA
Total/NA	Analysis	SM 4500 S2 D		2	360038	01/25/17 19:39	KAM	TAL DEN
Total/NA	Analysis	SM 5310B		1	236865	01/25/17 17:41	Z1T	TAL SEA

Client Sample ID: MW2-20170118
Lab Sample ID: 580-65491-7
Date Collected: 01/18/17 14:00
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236986	01/24/17 20:33	HDK	TAL SEA
Total/NA	Analysis	RSK-175		1	359884	01/24/17 21:23	MPS	TAL DEN
Total/NA	Analysis	300.0		1	236747	01/19/17 13:50	RSB	TAL SEA
Total/NA	Analysis	300.0		1	236749	01/19/17 13:50	RSB	TAL SEA
Total/NA	Analysis	SM 4500 S2 D		1	360038	01/25/17 19:39	KAM	TAL DEN
Total/NA	Analysis	SM 5310B		1	236865	01/25/17 17:41	Z1T	TAL SEA

Client Sample ID: MW13-20170118
Lab Sample ID: 580-65491-8
Date Collected: 01/18/17 13:15
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236704	01/19/17 21:03	TL1	TAL SEA
Total/NA	Analysis	8260C	RA	50	236986	01/24/17 18:51	HDK	TAL SEA
Total/NA	Analysis	RSK-175		1	359884	01/24/17 21:27	MPS	TAL DEN
Total/NA	Analysis	300.0		1	236747	01/19/17 14:05	RSB	TAL SEA

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	236749	01/19/17 14:05	RSB	TAL SEA
Total/NA	Analysis	SM 4500 S2 D		5	360038	01/25/17 19:39	KAM	TAL DEN
Total/NA	Analysis	SM 5310B		1	236865	01/25/17 17:41	Z1T	TAL SEA

Client Sample ID: RNS-MW2-20170118
Lab Sample ID: 580-65491-9
Date Collected: 01/18/17 14:35
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236704	01/19/17 21:29	TL1	TAL SEA
Total/NA	Analysis	8260C	RA	1	236986	01/24/17 17:36	HDK	TAL SEA
Total/NA	Analysis	RSK-175		1	359884	01/24/17 21:42	MPS	TAL DEN
Total/NA	Analysis	300.0		1	236747	01/19/17 14:21	RSB	TAL SEA
Total/NA	Analysis	300.0		1	236749	01/19/17 14:21	RSB	TAL SEA
Total/NA	Analysis	SM 4500 S2 D		5	360038	01/25/17 19:39	KAM	TAL DEN
Total/NA	Analysis	SM 5310B		1	236865	01/25/17 17:41	Z1T	TAL SEA

Client Sample ID: RNS-MW6-42.5-20170118
Lab Sample ID: 580-65491-10
Date Collected: 01/18/17 12:25
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236704	01/19/17 21:54	TL1	TAL SEA
Total/NA	Analysis	8260C		50	236986	01/24/17 19:17	HDK	TAL SEA

Client Sample ID: RNS-MW6-52.5-20170118
Lab Sample ID: 580-65491-11
Date Collected: 01/18/17 12:35
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236704	01/19/17 22:19	TL1	TAL SEA
Total/NA	Analysis	8260C	DL	50	236986	01/24/17 19:42	HDK	TAL SEA
Total/NA	Analysis	RSK-175		1	359884	01/24/17 21:47	MPS	TAL DEN
Total/NA	Analysis	300.0		1	236747	01/19/17 15:07	RSB	TAL SEA
Total/NA	Analysis	300.0		1	236749	01/19/17 15:07	RSB	TAL SEA
Total/NA	Analysis	SM 4500 S2 D		5	360038	01/25/17 19:39	KAM	TAL DEN
Total/NA	Analysis	SM 5310B		1	236865	01/25/17 17:41	Z1T	TAL SEA

Client Sample ID: DUP1-20170118
Lab Sample ID: 580-65491-12
Date Collected: 01/18/17 08:55
Matrix: Water
Date Received: 01/18/17 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236704	01/19/17 22:45	TL1	TAL SEA
Total/NA	Analysis	8260C	RA	1	236986	01/24/17 18:01	HDK	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Sauro's

TestAmerica Job ID: 580-65491-1

Client Sample ID: DUP1-20170118

Date Collected: 01/18/17 08:55
Date Received: 01/18/17 16:35

Lab Sample ID: 580-65491-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	359884	01/24/17 21:51	MPS	TAL DEN
Total/NA	Analysis	300.0		1	236747	01/19/17 15:22	RSB	TAL SEA
Total/NA	Analysis	300.0		1	236749	01/19/17 15:22	RSB	TAL SEA
Total/NA	Analysis	SM 4500 S2 D		1	360038	01/25/17 19:39	KAM	TAL DEN
Total/NA	Analysis	SM 5310B		1	236865	01/25/17 17:41	Z1T	TAL SEA

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Landau & Associates, Inc.
Project/Site: Sauro's

TestAmerica Job ID: 580-65491-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-18

Analysis Method	Prep Method	Matrix	Analyte

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-17
A2LA	ISO/IEC 17025		2907.01	10-31-17
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-17
Arizona	State Program	9	AZ0713	12-20-17
Arkansas DEQ	State Program	6	88-0687	06-01-17
California	State Program	9	2513	08-31-16 *
Connecticut	State Program	1	PH-0686	09-30-18
Florida	NELAP	4	E87667	06-30-17
Georgia	State Program	4	N/A	01-08-18
Illinois	NELAP	5	200017	04-30-17
Iowa	State Program	7	370	11-30-16 *
Kansas	NELAP	7	E-10166	04-30-17
Louisiana	NELAP	6	02096	06-30-17
Maine	State Program	1	CO0002	03-03-17
Minnesota	NELAP	5	8-999-405	12-31-17 *
Nevada	State Program	9	CO0026	07-31-17
New Hampshire	NELAP	1	205310	04-28-17
New Jersey	NELAP	2	CO004	06-30-17
New York	NELAP	2	11964	04-01-17
North Carolina (WW/SW)	State Program	4	358	12-31-17
North Dakota	State Program	8	R-034	01-09-17 *
Oklahoma	State Program	6	8614	08-31-17
Oregon	NELAP	10	4025	01-08-18
Pennsylvania	NELAP	3	68-00664	07-31-17
South Carolina	State Program	4	72002001	01-09-17 *
Texas	NELAP	6	T104704183-16-12	09-30-17
USDA	Federal		P330-16-00397	12-15-19
Utah	NELAP	8	CO00026	07-31-17
Virginia	NELAP	3	460232	06-14-17
Washington	State Program	10	C583	08-02-17
West Virginia DEP	State Program	3	354	11-30-17
Wisconsin	State Program	5	999615430	08-31-17
Wyoming (UST)	A2LA	8	2907.01	10-31-17

* Certification renewal pending - certification considered valid.