Savannah River
NUCLEAR SOLUTIONS℠
FLUOR • NEWPORT NEWS NUCLEAR • HONEYWELL

United States Department of Energy

Savannah River Site

2020 Effectiveness Monitoring Report (EMR) for Monitored Natural Attenuation (MNA) at the L-Area Southern Groundwater (LASG) Operable Unit (OU) (U)

Data from 2018 through 2019

<u>SEMS Number: 77</u>

SRNS-RP-2020-00332

Revision 0

June 2020

DISCLAIMER

Printed in the United States of America
Prepared for
U. S. Department of Energy
and
Savannah River Site Nuclear Solutions, LLC
Aiken, South Carolina

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ACRONYMS AND ABBREVIATIONS

~	approximately
ac	acre
cm	centimeter
DQOs	data quality objectives
EMP	Effectiveness Monitoring Plan
EMR	Effectiveness Monitoring Report
FFA	Federal Facility Agreement
ft	foot, feet
IC	institutional control
In	inch, inches
GAU	Gordon aquifer unit
GCU	Gordon confining unit
ha	hectare, hectares
KSZ	key source zone
KSZCL	key source zone contaminant level
LASG	L-Area Southern Groundwater
LAZ	lower aquifer zone
LUC	land use control
m	meter, meters
µg/L	microgram per liter
mg/L	milligram per liter
MCL	maximum contaminant level
MNA	monitored natural attenuation
msl	mean sea level
NBN	no building number
OU	operable unit
PCE	tetrachloroethylene
pCi/mL	picocuries per milliliter
RA	remedial action
RCRA	Resource Conservation and Recovery Act
RFI/RI	RCRA Facility Investigation/Remedial Investigation
ROD	Record of Decision
SCDHEC	South Carolina Department of Health and Environmental Control
SRNS	Savannah River Nuclear Solutions, LLC
SRS	Savannah River Site
TC	tan clay
TCE	trichloroethylene
UAZ	upper aquifer zone
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
UTRAU	Upper Three Runs aquifer unit
VOC	volatile organic compound
WSRC	Washington Savannah River Company

This page is intentionally left blank.

1.0 INTRODUCTION

The L-Area Southern Groundwater (LASG) Operable Unit (OU) is listed as a Resource Conservation and Recovery Act (RCRA) 3004(u) Solid Waste Management Unit/Comprehensive Environmental Response, Compensation, and Liability Act unit in Appendix C of the Federal Facility Agreement (FFA) (1993) for the Savannah River Site (SRS). The selected remedy for the LASG OU is Monitored Natural Attenuation (MNA) with Institutional Controls (ICs). Sampling optimizations that were developed and approved in the 2012 Effectiveness Monitoring Report (EMR) (SRNS 2012) started in 4Q2012. All Land Use Control (LUC) boundary wells and plume wells, except those exceeding volatile organic compound (VOC) maximum contaminant levels (MCLs), are sampled biennially instead of annually. Also, EMRs are produced on a 4-year cycle with an interim 2-year supplemental data summary report in letter format. The *Biennial Effectiveness Monitoring Report (Sampling Summary) for the Monitored Natural Attenuation at the L-Area Southern Groundwater Operable Unit, 2016 through 2017* (SRNS 2018) was the last report submitted for regulatory review.

These sampling optimizations and reporting requirements are documented in the *Addendum to the Monitored Natural Attenuation Effectiveness Monitoring Plan for the L-Area Southern Groundwater Operable Unit (NBN)* (SRNS 2013) as approved by the U.S. Environmental Protection Agency (USEPA) and the South Carolina Department of Health and Environmental Control (SCDHEC). This EMR covers data collected during 2018 and 2019.

2.0 OPERABLE UNIT DESCRIPTION AND HISTORY

L Area is located in the south-central portion of the SRS in Barnwell County, South Carolina (Figure 2-1). The L-Area Reactor operated from 1954 to 1968 and 1984 to 1988. L Lake, constructed in 1985 as a cooling pond for L-Reactor, covers 418.4 hectares (ha) (1,034 acres [ac]) and contains 7-billion gallons of water. The LASG OU encompasses all of the groundwater from the L-Area groundwater divide south to L Lake. The original pre-work plan characterization at LASG OU covered about 505.8 ha (1,250 ac) and included several remediated/depleted source units, that supported past production activities. Past activities at the remediated/depleted source units have resulted in groundwater contamination beneath LASG

OU. Contaminants include plumes of tritium, tetrachloroethylene (PCE), and trichloroethylene (TCE).

2.1 Remedial Action Requirements and Objectives

As stated in the LASG OU Record of Decision (ROD) (WSRC 2007), the scope of the LASG OU remedial action (RA) is limited to local groundwater in three known contaminant plumes. The plumes include a tritium plume west of the reactor and two commingled VOC and tritium plumes south of the reactor. The selected remedy for the LASG OU is MNA/IC. The components of MNA/IC at the LASG OU include the following:

- ICs at LASG OU will consist of general site access controls, groundwater use restrictions, the SRS Site Use/Site Clearance program, and deed restrictions and notifications.
- Contaminant concentrations in local groundwater will be reduced below remedial goals (MCLs/applicable or relevant and appropriate requirements) by natural attenuation processes including dispersion, dilution, and radioactive decay.
- The long-term monitoring of groundwater conditions in the plumes and surface water conditions in L Lake will allow an evaluation of the performance of the selected remedy and changing conditions in LASG OU.

The remedial action objectives for LASG OU are as follows:

- Prevent human exposure to groundwater above MCLs.
- Treat and/or mitigate groundwater contaminated above MCLs to reduce the discharge of groundwater with contaminants above MCLs to L Lake.

2.2 Land Use Control Boundary and Monitoring Network

The area in which groundwater contamination exceeds applicable MCLs is depicted on Figure 2-2 as the LUC area. Comprising approximately 384.4 ha (950 ac), the LUC area includes all groundwater contaminated above MCLs within the OU and under adjacent portions of L Lake. Restrictions on the use of groundwater within this LUC boundary will be enforced as long as contaminant levels exceed MCLs.

As outlined in the Addendum to the Effectiveness Monitoring Plan (EMP) (SRNS 2013), the monitoring network at LASG OU includes 26 monitoring wells and 5 surface water stations that are analyzed for tritium and/or PCE and TCE (Figure 2-2) (Table 2-1).

This page is intentionally left blank.

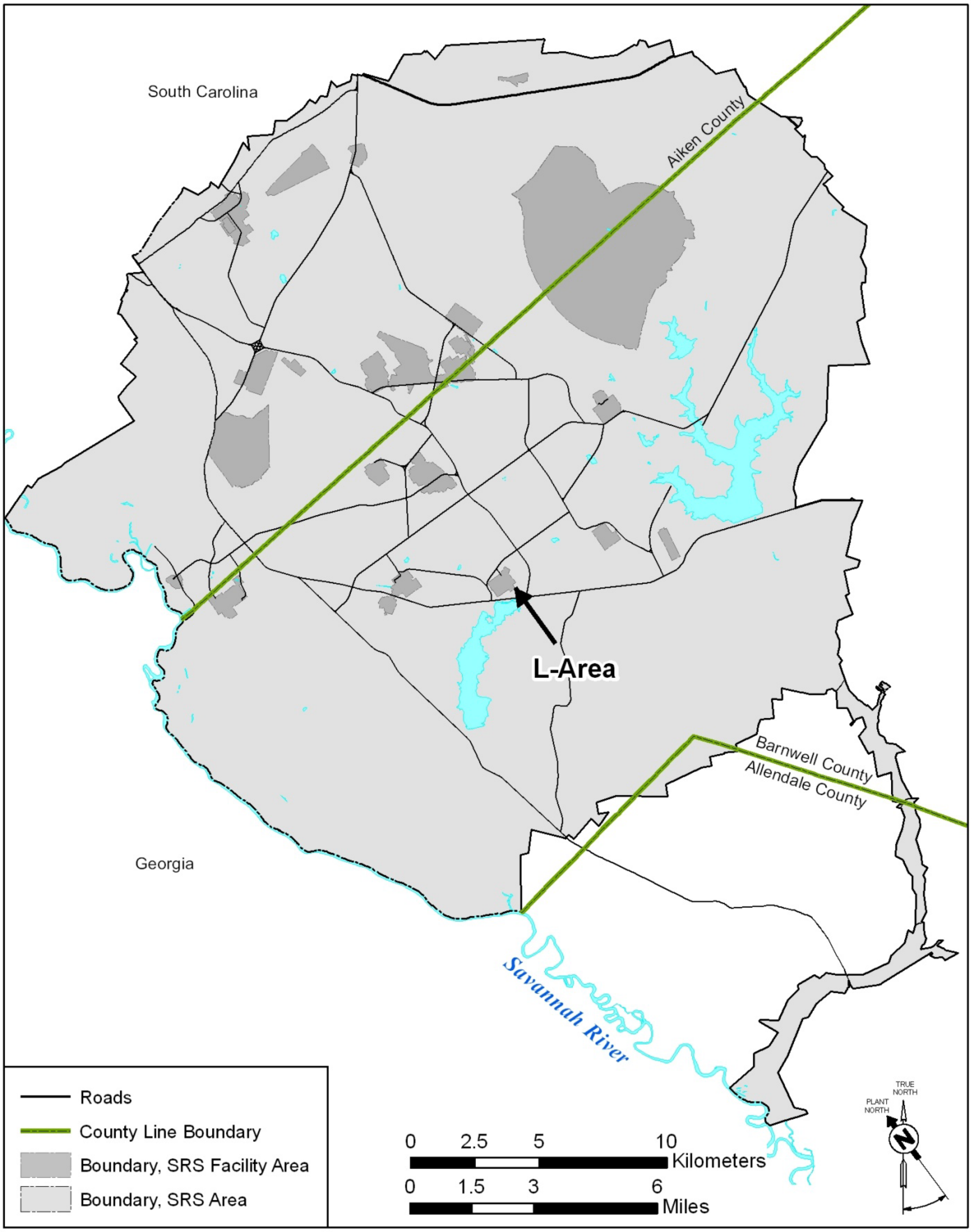


Figure 2-1. Location of L Area at the SRS

This page is intentionally left blank.

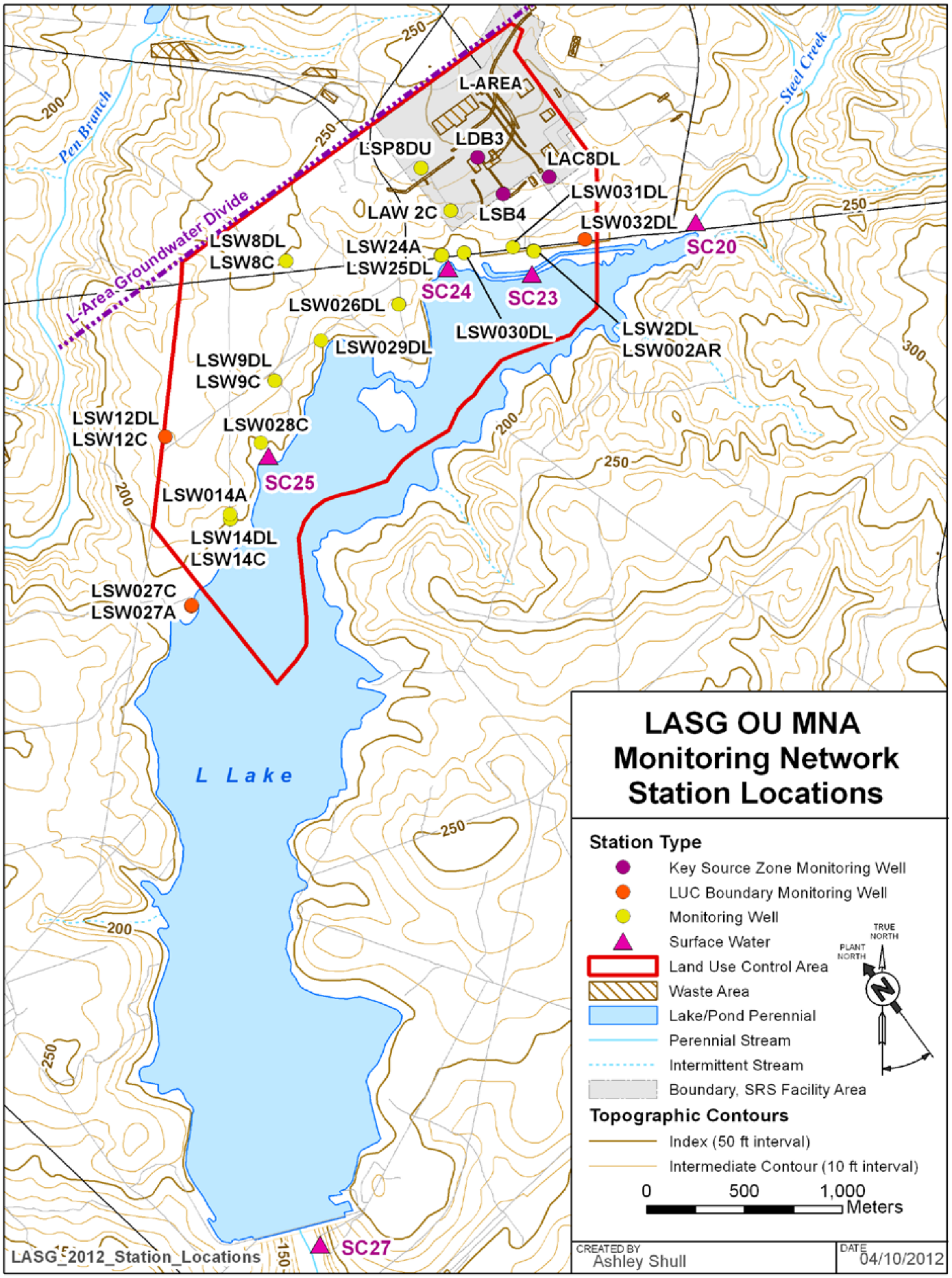


Figure 2-2. LASG OU MNA Monitoring Network Station Locations

This page is intentionally left blank.

Table 2-1. LASG OU MNA Monitoring Network

Count	Station	Aquifer	Plume	Station Use	Lab Analyses	Odd Years Sampling	Even Years Sampling	Ground Elevation	Screen Zone (ft msl)	
									Top	Bottom
1	LAC 8DL	UAZ	Southeast Plume	KSZ Monitoring Well	Tritium, VOCs	X	X	234	190.4	180.4
2	LAW 2C	UAZ	Southwest Plume	Monitoring Well	Tritium, VOCs	X	If VOCs are detected in Previous Odd Year	222.2	191.2	171.2
3	LDB 3	UAZ	Southwest Plume	KSZ Monitoring Well	Tritium, VOCs	X	X	251.2	219.3	199.3
4	LSB 4	UAZ	Southeast Plume	KSZ Monitoring Well	Tritium, VOCs	X	X	229.5	221.5	191.5
5	LSP 8DU	UAZ	Southwest Plume	Monitoring Well	Tritium, VOCs	X	If VOCs are detected in Previous Odd Year	247.14	210.04	195.04
6	LSW 2DL	UAZ	Southeast Plume	Monitoring Well	Tritium, VOCs	X	If VOCs are detected in Previous Odd Year	199.63	150.29	144.63
7	LSW 8C	LAZ	Western Plume	Monitoring Well	Tritium	X		249.5	108.71	103.04
8	LSW 8DL	UAZ	Western Plume	Monitoring Well	Tritium	X		249.5	164.5	158.83
9	LSW 9C	LAZ	Western Plume	Monitoring Well	Tritium	X		222.48	89.08	83.38
10	LSW 9DL	UAZ	Western Plume	Monitoring Well	Tritium	X		222.48	129.78	124.08
11	LSW 12C	LAZ	Western Plume	LUC Boundary Monitoring Well	Tritium	X		233.62	92.61	86.91
12	LSW 12DL	UAZ	Western Plume	LUC Boundary Monitoring Well	Tritium	X		233.62	148.62	142.92
13	LSW 14C	LAZ	Western Plume	Monitoring Well	Tritium	X		202.45	105.47	99.77
14	LSW 14DL	UAZ	Western Plume	Monitoring Well	Tritium	X		202.45	156.45	150.75
15	LSW 24A	GAU	Southwest Plume	Monitoring Well	Tritium, VOCs	X	If VOCs are detected in Previous Odd Year	200.04	-24.64	-29.65
16	LSW 25DL	UAZ	Southwest Plume	Monitoring Well	Tritium, VOCs	X	If VOCs are detected in Previous Odd Year	200.39	155.39	150.39
17	LSW002AR	GAU	Southeast Plume	Monitoring Well	Tritium, VOCs	X	If VOCs are detected in Previous Odd Year	198.97	8.97	3.97
18	LSW014A	GAU	Western Plume	Monitoring Well	Tritium	X		206.12	33.12	28.12
19	LSW026DL	UAZ	Southwest Plume	Monitoring Well	Tritium, VOCs	X	If VOCs are detected in Previous Odd Year	214.55	149.55	144.55
20	LSW027A	GAU	Western Plume	LUC Boundary Monitoring Well	Tritium	X		195.02	29.02	24.02
21	LSW027C	LAZ	Western Plume	LUC Boundary Monitoring Well	Tritium	X		194.78	118.28	113.28
22	LSW028C	LAZ	Western Plume	Monitoring Well	Tritium	X		200.96	90.96	85.96
23	LSW029DL	UAZ	Western Plume	Monitoring Well	Tritium, VOCs	X	If VOCs are detected in Previous Odd Year	202.34	136.84	131.84
24	LSW030DL	UAZ	Southwest Plume	Monitoring Well	Tritium, VOCs	X	If VOCs are detected in Previous Odd Year	202.55	153.55	148.55
25	LSW031DL	UAZ	Southeast Plume	LUC Boundary Monitoring Well	Tritium, VOCs	X	If VOCs are detected in Previous Odd Year	206.58	152.58	147.58
26	LSW032DL	UAZ	Southeast Plume	LUC Boundary Monitoring Well	Tritium, VOCs	X	If VOCs are detected in Previous Odd Year	206.66	166.66	161.66
27	SC20	UAZ	Surface Water	Surface Water	Tritium, VOCs	X	X			
28	SC23	UAZ	Surface Water	Surface Water	Tritium, VOCs	X	X			
29	SC24	UAZ	Surface Water	Surface Water	Tritium, VOCs	X	X			
30	SC25	UAZ	Surface Water	Surface Water	Tritium, VOCs	X	X			
31	SC27	UAZ	Surface Water	Surface Water	Tritium, VOCs	X	X			

This page is intentionally left blank.

3.0 SITE HYDROGEOLOGY

3.1 Physiographic Setting

The LASG OU LUC boundary is located southeast of the L-Area groundwater divide and includes a portion of L Lake. Topographic relief in this area ranges between approximately 57.9 meters (m) (190 feet [ft]) and 76.2 m (260 ft) above mean sea level (msl) and slopes to the south and southeast towards L Lake (Figure 2-2).

3.2 Hydrogeologic Setting

A detailed description of the hydrostratigraphic units relevant to the LASG OU can be found in the RCRA Facility Investigation/Remedial Investigation (RFI/RI) report (WSRC 2005) and in the L-Area Groundwater Hydrogeologic Conceptual Model Report (WSRC 2002).

The Floridan aquifer system is the aquifer system of concern within the LASG OU area. The system is divided into two aquifer units separated by a confining unit. From top to bottom, they are known as the Upper Three Runs aquifer unit (UTRAU), the Gordon confining unit (GCU), and the Gordon aquifer unit (GAU).

The UTRAU occurs between the water table surface and the GCU. The UTRAU is divided into two aquifer zones by an informal aquitard referred to as the “tan clay” (TC). From top to bottom they are known as the upper aquifer zone (UAZ) of the UTRAU, the TC, and the lower aquifer zone (LAZ) of the UTRAU. A schematic of these units can be seen in the cross section of the western tritium plume in Section 4.3 (Figure 4-5).

4.0 MONITORING AND REPORTING

The long-term monitoring of groundwater conditions in the plumes and surface water conditions in L Lake will ensure that the expected natural attenuation processes including dispersion, dilution, and radioactive decay are performing as modeled and contaminant concentrations are decreasing as predicted.

The monitoring data quality objectives (DQOs), listed below, form the basis for the LASG OU monitoring program.

DQO #1: Perform monitoring to ensure that the plumes' lateral movement is trending in a manner consistent with the conceptual flow path to L Lake as predicted by the model.

DQO #2: Perform monitoring to ensure that the plumes' vertical movement is trending in a manner consistent with the conceptual flow path as predicted by the model.

DQO #3: Perform monitoring to ensure that the plumes' contaminants (tritium and VOCs) are trending to lower concentration/activity as they approach L Lake in the groundwater.

DQO #4: Perform surface water monitoring to ensure that the plumes' contaminants (tritium and VOCs) are below regulatory thresholds and are not trending to higher concentration/activity as they leave L Lake at the dam to ensure protection of downstream receptors.

DQO #5: Perform groundwater monitoring to ensure that there are no releases of contaminants from unknown or existing sources and that existing remediated or depleted sources are under control.

Groundwater monitoring for both the L-Area Oil and Chemical Basin (LAOCB) and the L-Reactor Seepage Basin (LRSB) are included as part of the LASG OU monitoring program. In accordance with the Addendum to the EMP (SRNS 2013), performance monitoring of the LAOCB and the LRSB is completed on a five-year cycle. The first performance monitoring occurred in 2012, and the data results were submitted with the Biennial EMR Sampling Summary which was submitted on June 25, 2014 (SRNS 2014). To align with the schedule for submittal of the LAOCB Five-Year Remedy Review Reports, the second sampling for the LAOCB and LRSB occurred in 2016. Future sampling will occur during the years 2020, 2025, etc. The next performance monitoring sampling for the LAOCB and the LRSB is scheduled for 2020 and will be reported in the next LASG OU data sampling summary report to be submitted in 2022.

4.1 Groundwater Elevation Measurements and Groundwater Flow Direction

In the fourth quarter of 2019 (4Q2019), water table groundwater elevation measurements ranged from 65.68 m (215.5 ft) msl in the source area at station LDB 3 to 55.47 m (181.99 ft) msl on the western edge of the LUC boundary at station LSW 12DL. L-Lake is maintained at an elevation of approximately 58 m (190 ft) msl. The lake influences groundwater flow as it recharges groundwater in the UTRA at elevations below 58 m (190 ft) msl (in the southwestern portion of the area). This is demonstrated in Figure 4-1, as flow moves towards LSW 12DL rather than towards L Lake. Hydrographs for each well are available in Appendix A.

Within the LASG OU LUC boundary, groundwater flows from L-Area (~67 m [~220 ft] msl) towards the south and southwest toward L Lake and Pen Branch (minimum measurement of 57.95 m [178 ft] msl). Figure 4-1 shows the groundwater elevation within the UAZ. Groundwater flow in the GAU is to the southwest (Figure 4-2). Water level measurements from monitoring wells in 4Q2019 were approximately 0.18 m (0.6 ft) lower than 4Q2018 measurements and similar to 4Q2017 measurements.

Based on water elevation data in co-located well clusters, there is very little difference (average of 0.2 m [0.6 ft]) in the hydraulic head measurements within the UTRAU from the UAZ to the LAZ (across the TC). There is a consistent downward gradient of approximately 5.5 – 7.0 m (18 – 23 ft) difference in hydraulic heads between the UTRA and the GAU (across the GCU).

This page is intentionally left blank.

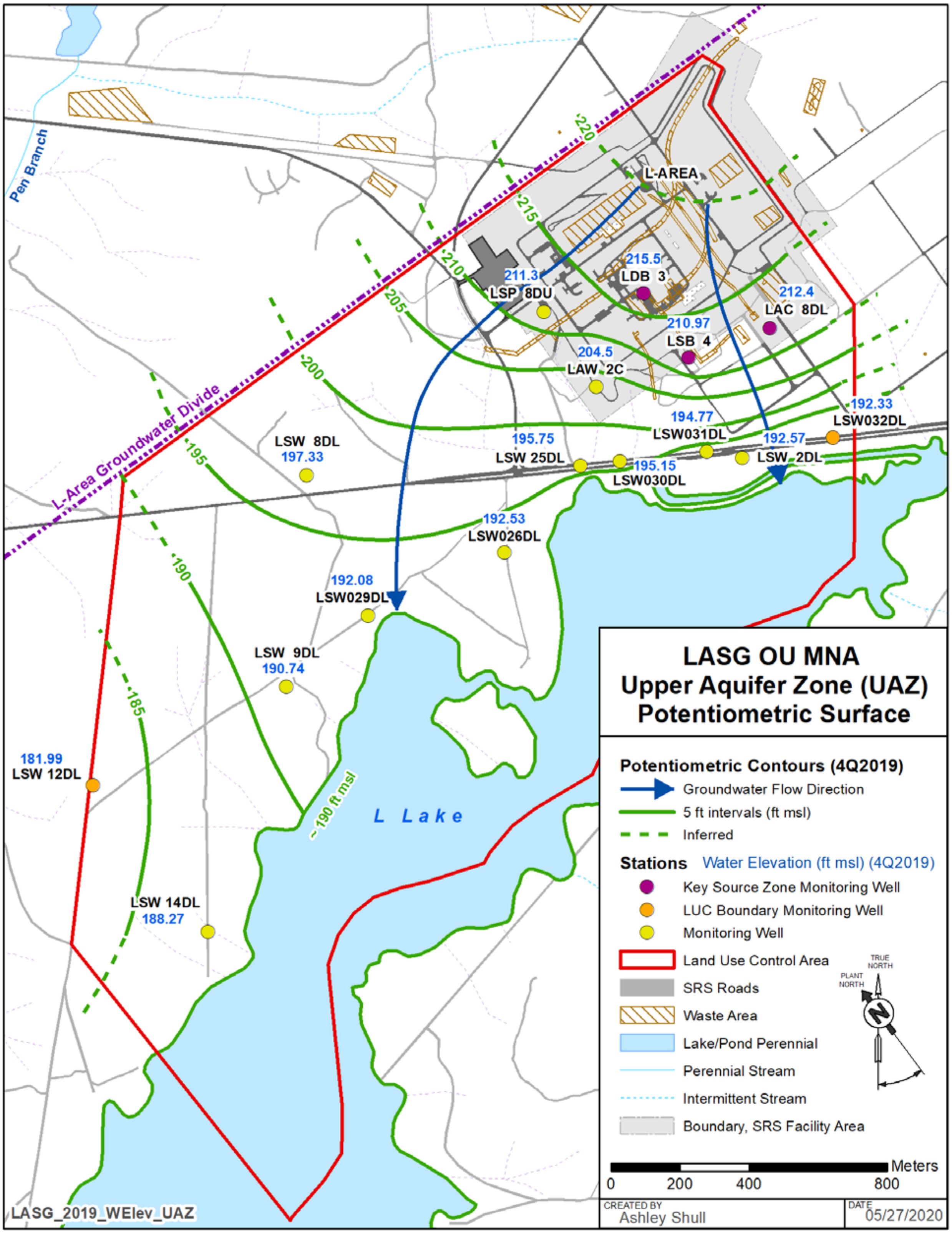


Figure 4-1. Potentiometric Surface of the Upper Aquifer Zone (4Q2019)

This page is intentionally left blank.

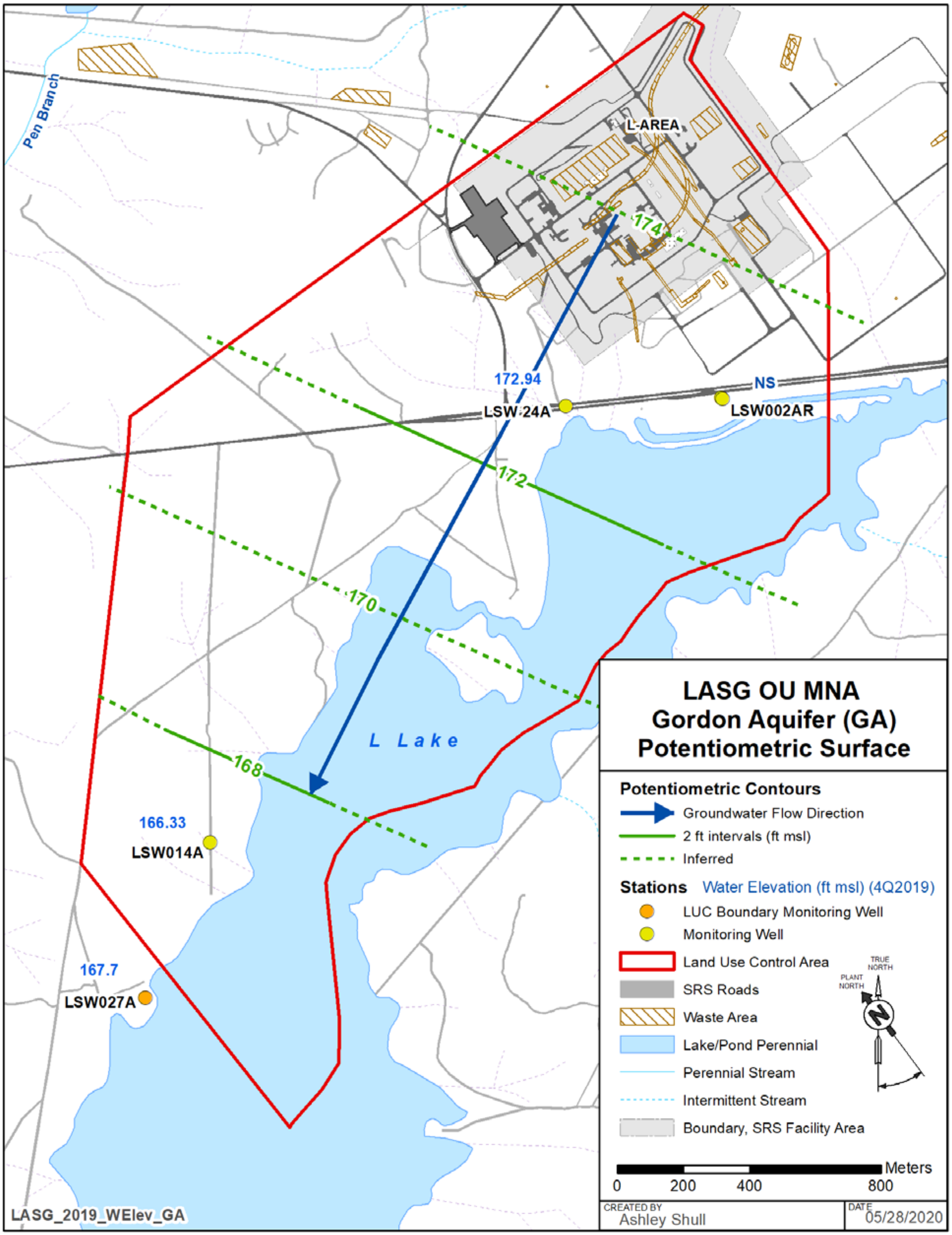


Figure 4-2. Potentiometric Surface of the Gordon Aquifer (4Q2019)

This page is intentionally left blank.

4.1.1 Recharge and Precipitation Measurements

Recharge entering the groundwater can be estimated from precipitation data. The amount of precipitation generally entering the groundwater as recharge is typically one-third of total precipitation (Aadland, et. al 1995). A comparison of monthly rainfall for 2016 through 2019 and the 20-year monthly average is shown in Figure 4-3.

Total precipitation in 2016 and 2018 at the L-Area monitoring station were above the 20-year average of 119.6 cm (47.08 in), with 2018 almost 38 cm (15 in) above average. Total precipitation during 2017 and 2019 were about average.

The increased or near average rainfall over the past seven years has kept water elevations relatively constant, as the potentiometric surfaces and groundwater flow paths have remained consistent with previous years.

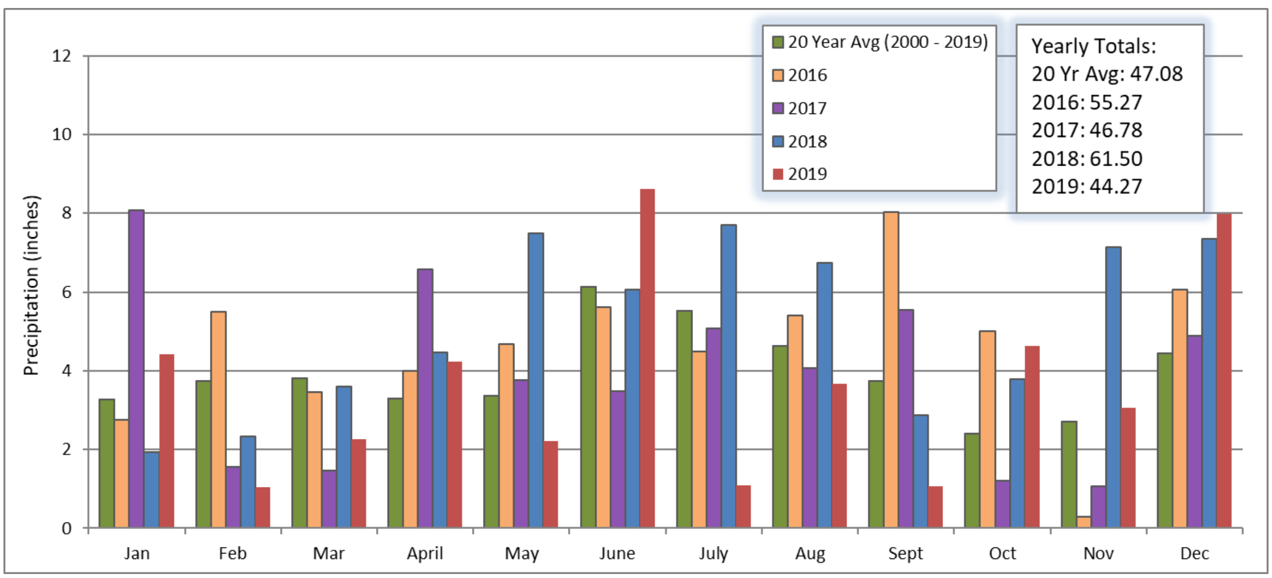


Figure 4-3. Monthly Rainfall Measurements During 2016, 2017, 2018, and 2019 Compared with 20-year Averages in the Vicinity of L Area

4.2 Groundwater and Surface Water Compliance

The objective of monitoring at the LASG OU is to assess compliance with the MCLs within and at the LUC boundary and compliance with the Key Source Zone Contaminant Levels (KSZCLs) at the Key Source Zone (KSZ) monitoring wells (Figure 2-2). LUC boundary well results are compared to MCLs to verify that the plumes are still within the LUC area. In addition, KSZCL values (see Table B-1) are used to identify where source zone wells exhibit increasing concentrations. KSZCL values are well-specific and are calculated as 150% of the observed maximum between the 2005 and 2007 results. If results at the KSZ monitoring wells exceed these values, then a confirmation sample will be collected and the frequency of sampling will be increased to quarterly for one year. If an increasing trend is observed, a meeting with the USEPA, SCDHEC, and USDOE will be convened to discuss the results and whether other remediation alternatives should be considered. Similarly, if a LUC boundary well exceeds an MCL for a contaminant, a confirmatory sample will be collected and a meeting with the USEPA, SCDHEC, and USDOE will be convened for discussion.

4.3 Groundwater and Surface Water Results

Appendix B (Table B-1) provides the sampling results for groundwater and surface water. In accordance with the Addendum to the EMP (SRNS 2013), all monitoring wells and surface water stations are sampled during odd numbered years. During even numbered years, only KSZ monitoring wells, wells known to have exceeded the MCL for VOCs in the previous year, and all surface water stations are sampled. One well, LSW002AR, was mistakenly not sampled during 4Q2019. As a result, this well will be included in the 4Q2020 sampling, and again during the required 4Q2021 sampling event. Also, due to overgrown vegetation causing boat inaccessibility in L Lake during 4Q2018, sampling of two surface water stations (SC 23 and SC 24) were moved to 1Q2019 during the winter months after the vegetation died back. One of the 67 samples collected during 2018 and 2019 had turbidity levels exceed 15 nephelometric turbidity units (well LSW 8DL during 4Q2019). However, elevated turbidity does not affect VOC and tritium results. Thus, all sample results with elevated turbidity are considered valid. Appendix C provides time-series plots of all the wells for tritium, PCE, and TCE.

4.3.1 Tritium

Tritium was detected in approximately three-fourths of all the samples collected in 2018 and 2019. Only five wells exceeded the 20 picocuries/milliliter (pCi/mL) MCL. None of the exceedances were observed in any of the LUC boundary wells. The KSZ monitoring wells were all below their KSZCLs and also below MCLs. All KSZ monitoring wells continue a decreasing concentration trend. Stations LSW 25DL and LSW031DL continue to display the highest tritium concentrations at the LASG OU but displayed decreasing concentrations (Appendix C, pages C-50 and C-56). These wells are located downgradient of the source areas and are located in the heart of the southwest and southeast tritium plumes, respectively, and capture the plume as it migrates southward towards L Lake. Upgradient wells have decreased in concentration, and all three tritium plumes have decreased in size. All the remaining monitoring wells have shown either an overall decreasing or steady trend in tritium concentrations as presented in Appendix C. Figure 4-4 shows the extent of the tritium plumes. Figure 4-5 shows a cross-sectional view of the western tritium plume.

One of the five surface water stations exceeded the tritium MCL in February 2019. Tritium was detected just above the MCL of 20 pCi/mL at station SC 24 with a concentration of 20.6 pCi/mL where the southwest tritium plume enters L Lake. The 4Q2019 result was below the MCL with a concentration of 3.27 pCi/mL. Station SC 20 where the sample is obtained from Steel Creek before entering L Lake at the northeast was below MCLs during 2018 and 2019. Contamination at station SC 20 originates upgradient in Steel Creek from P-Area. The surface water discharging from L Lake (SC 27) is not contaminated above the MCL and displays lower concentrations (2.99 pCi/mL) than the water entering L Lake at station SC 20 (3.88 pCi/mL). The trend at SC 27 continues to decrease as shown in Appendix C.

Modeling predicted that the maximum discharge of tritium into L-Lake would have occurred around 2015 to 2018 (WSRC 2004). As of this report period, the highest tritium concentration in surface water (20.6 pCi/mL) is at station SC 24 where the southwestern plume enters L Lake. This station has generally shown a decreasing trend over the past nine years (see page C-60 in Appendix C) and concentrations remain significantly below the expected maximum discharge concentration (~10,0500 pCi/mL for 2018/2019) as plotted in the Modeling Report

(WSRC 2004) (Figure 4-6). As groundwater and the contaminant plumes continue to migrate towards L Lake, concentrations at surface water stations (especially SC 23 and SC 24) may increase. However, the surface water data at SC 27 also indicates that the maximum discharge of tritium appears to have already occurred. Concentrations are approximately 25% of those observed about 14 years ago (11.9 pCi/mL). Given the half-life of tritium of 12.3 years, this data indicates that the tritium flux into L Lake from both sources (L-Area and P-Area [upgradient Steel Creek]) has likely peaked.

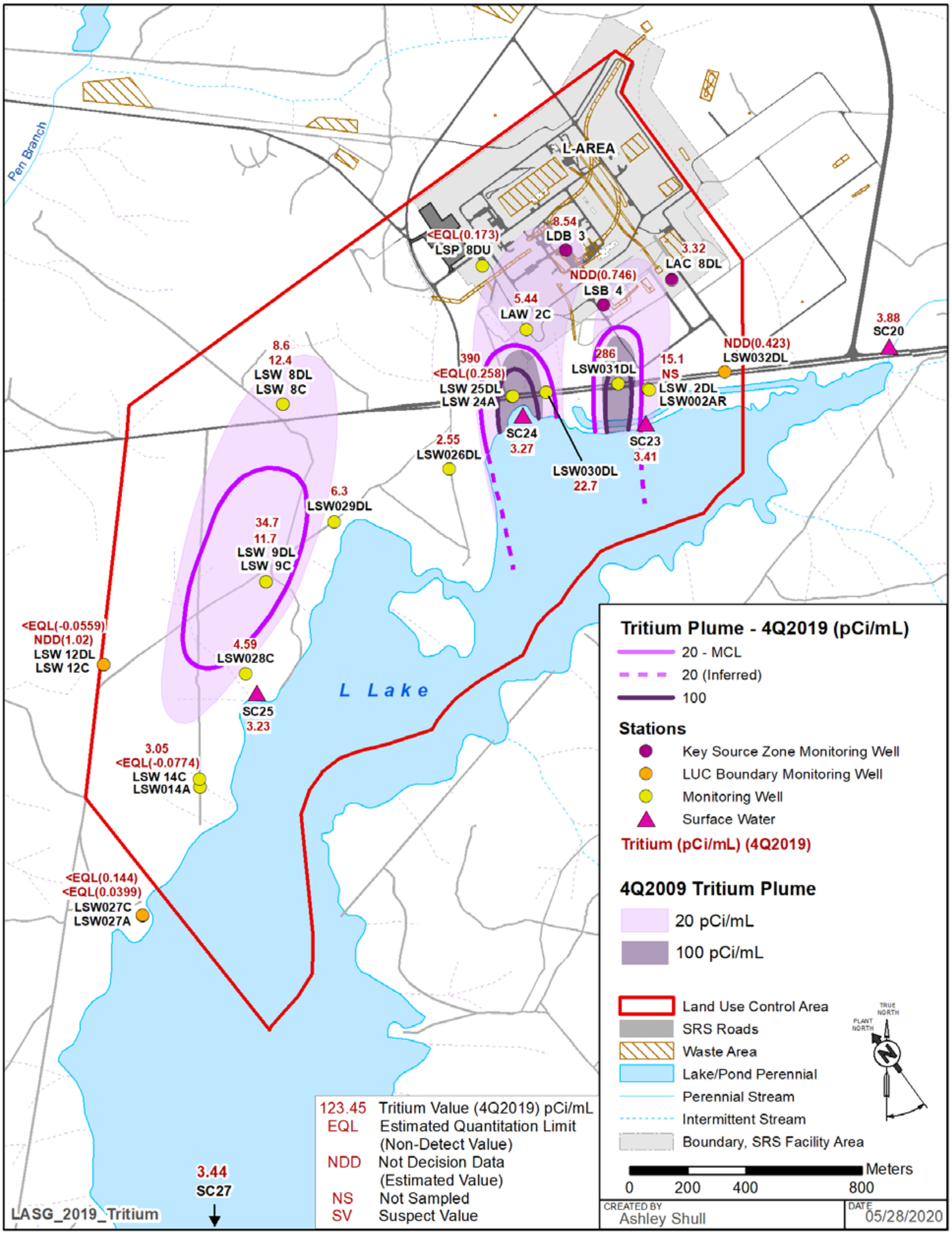


Figure 4-4. LASG OU Tritium Plume (4Q2019)

This page is intentionally left blank.

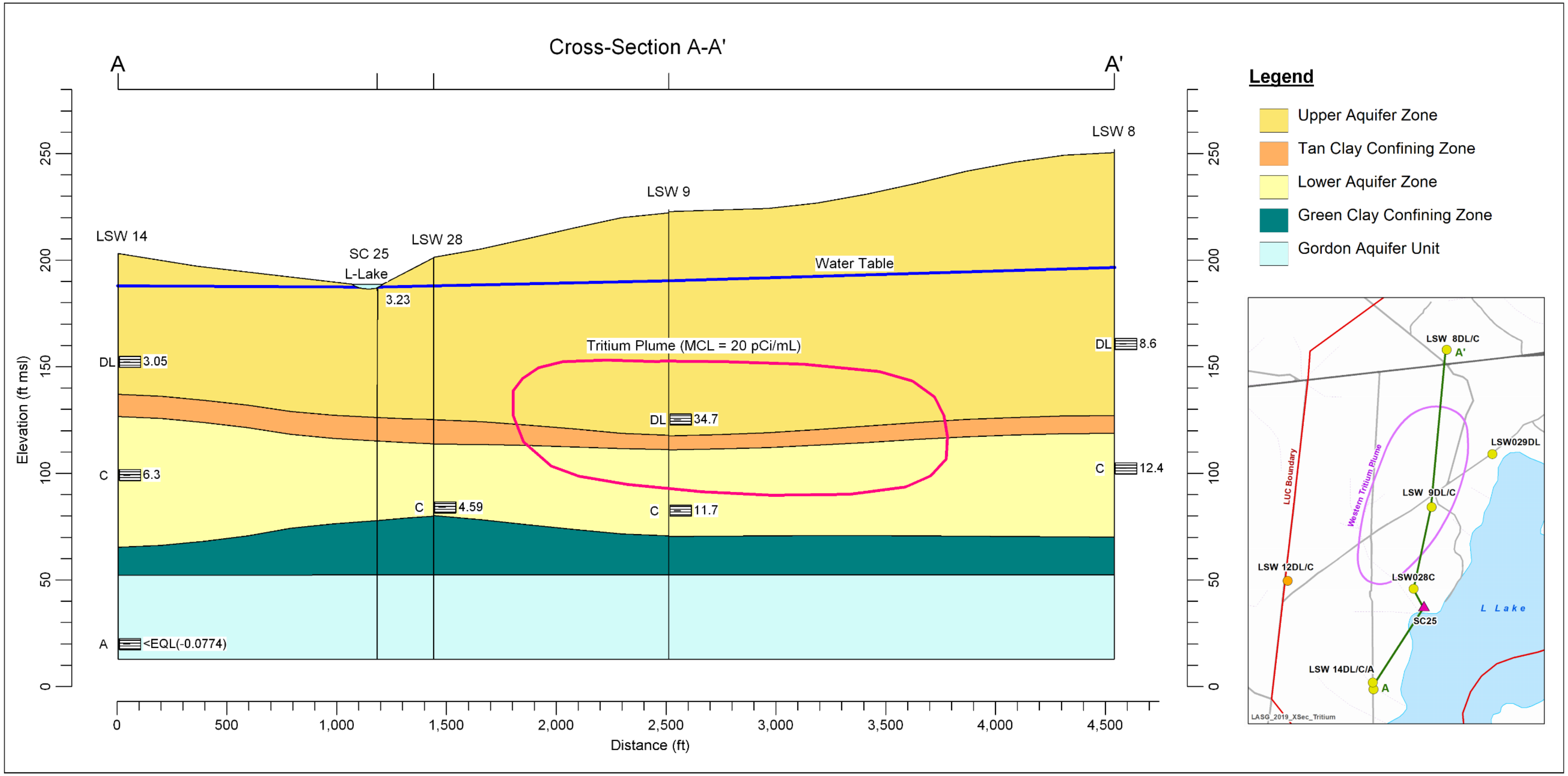


Figure 4-5. LASG OU Western Tritium Plume Cross Section

This page is intentionally left blank.

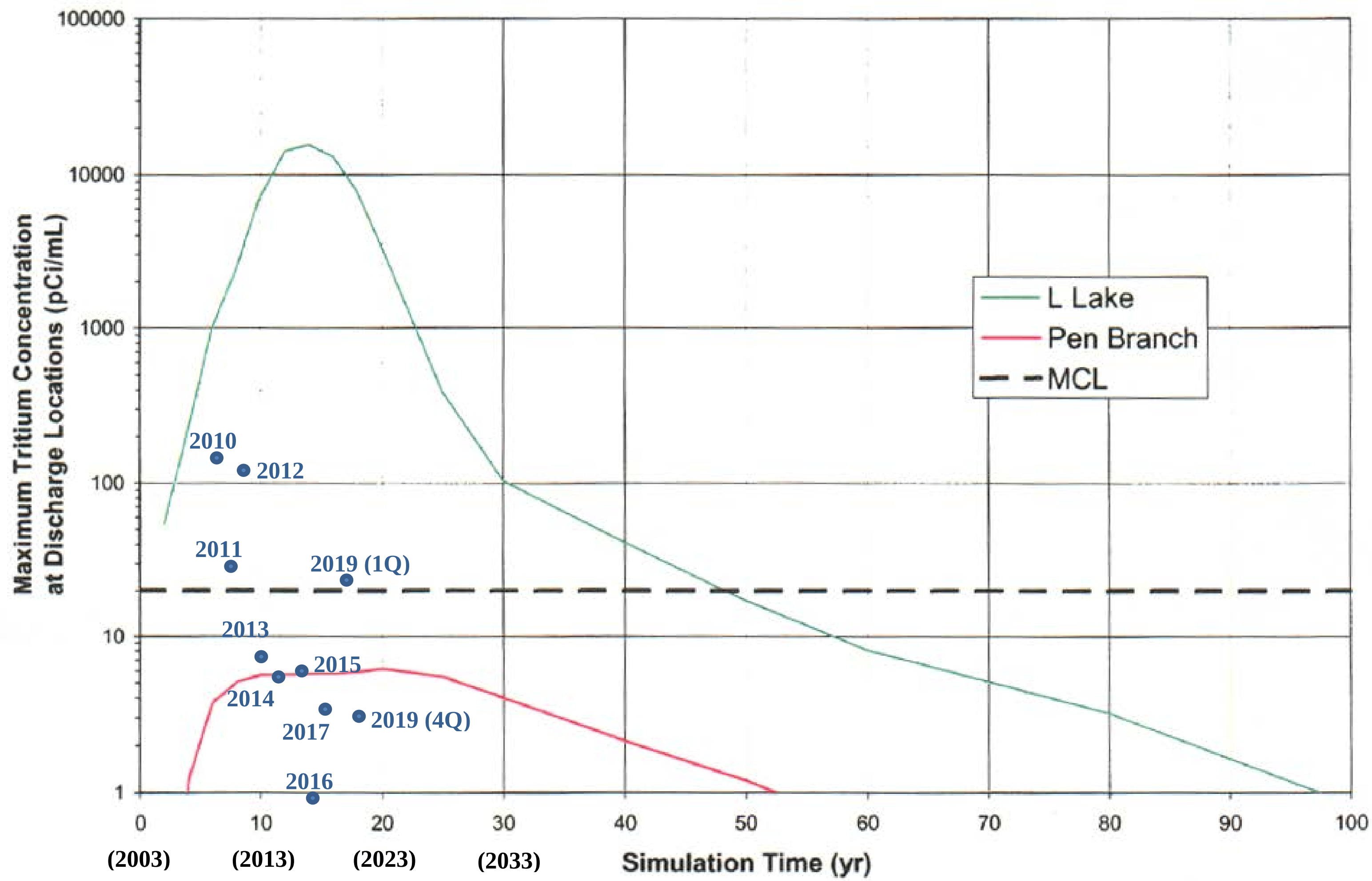


Figure 4-6. Modeled Maximum Concentration of Tritium at Discharge Locations with SC 24 Tritium Values

This page is intentionally left blank.

4.3.2 Tetrachloroethylene (PCE)

PCE was detected in about a third of the samples collected (11 out of 31 samples). Of the detections, only 4 samples from 2 wells (LSW 25DL and LSW030DL) were above the 5 microgram per liter (µg/L) MCL. The LUC boundary well (LSW032DL) that was sampled for PCE was non-detect. All KSZ monitoring wells were below the MCL of 5 µg/L. Concentrations at KSZ well LAC 8DL continue to decline (Appendix C, page C-3) and did not exceed the KSZCL (90 µg/L). The other two KSZ monitoring wells (LSB 4 and LDB 3) were non-detect for PCE during both years. The overall maximum PCE concentration at LASG OU was 50.7 µg/L during 2018 at station LSW 25DL, which is located downgradient of the source area. Station LAW 2C, located upgradient of LSW 25DL, continued to be non-detect during 2018 and 2019. Station LSW026DL on the western edge of the PCE plume continued a downward trend below MCLs. Station LSW029DL, which is the westernmost well that is monitoring the PCE plume, did not detect PCE during 2018 or 2019. In the future, if PCE concentrations at well LSW026DL become higher than concentrations at LSW 25DL and LSW030DL, an additional surface water sample location in L-Lake will be collected at the powerline road crossing located south of station LSW026DL. As of this report period, concentrations at LSW 25DL continue to be greater and concentrations at LSW026DL have been decreasing; therefore, no additional surface water samples will be collected. Figure 4-7 shows the extent of the PCE plumes. Results in 2018 and 2019 have remained constant or decreased from previous year's results (Appendix C).

Modeling predicted that the maximum discharge of PCE into L-Lake would have occurred around 2014 to 2016 (WSRC 2004). To date, all surface water samples have been non-detect, with the exception of only one sample with detection below 1 µg/L (SC 24 in 2010). PCE was not detected in surface water during 2018 or 2019. Concentrations remain far below the expected maximum discharge concentration for PCE (~150 µg/L for 2018/2019) as plotted in the Modeling Report (WSRC 2004) (Figure 4-8). Based on the slowly declining PCE trends in wells LSW 25DL and LSW 30DL, a significant increase in surface water PCE concentration is not expected.

This page is intentionally left blank.

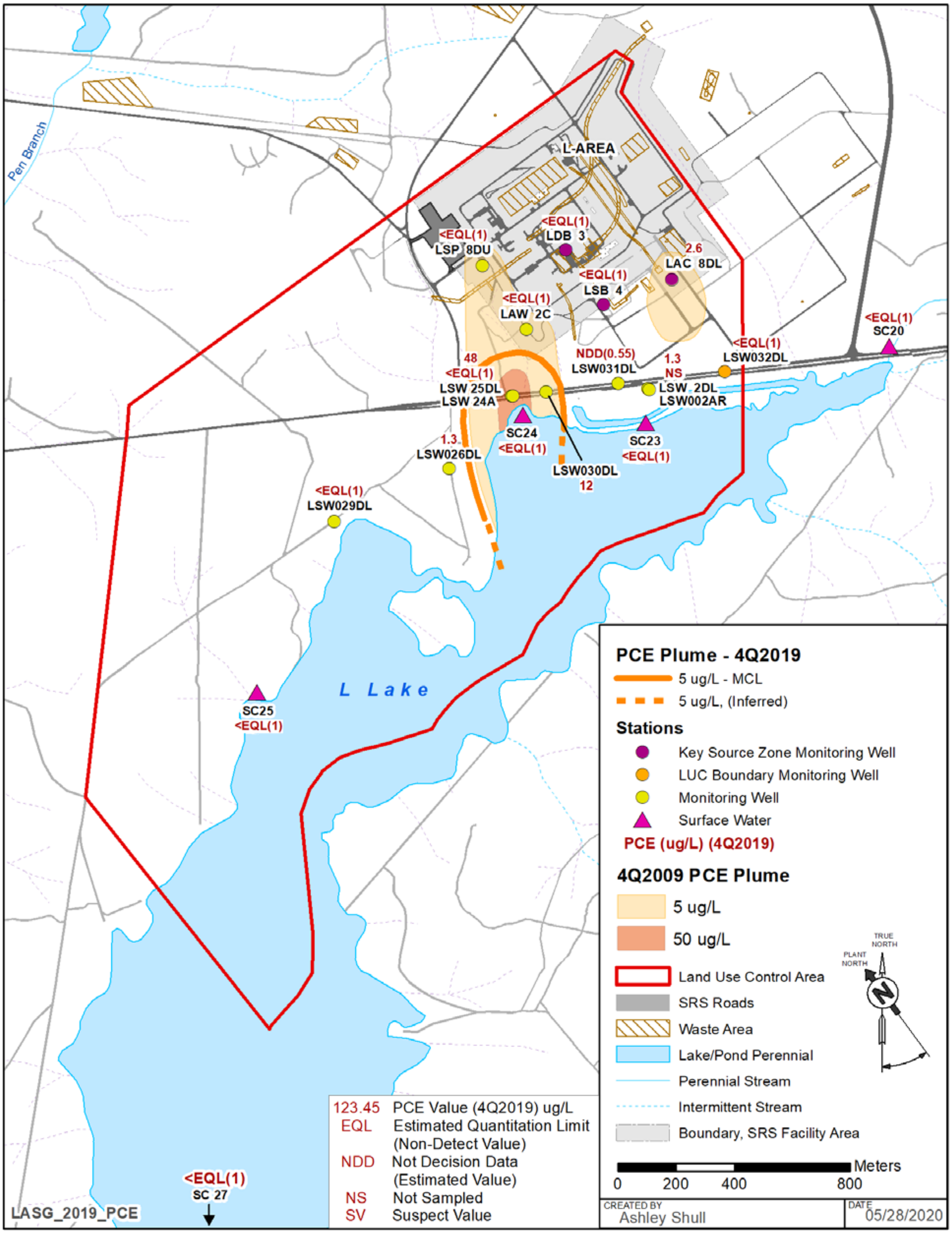


Figure 4-7. LASG OU PCE Plume (4Q2019)

This page is intentionally left blank.

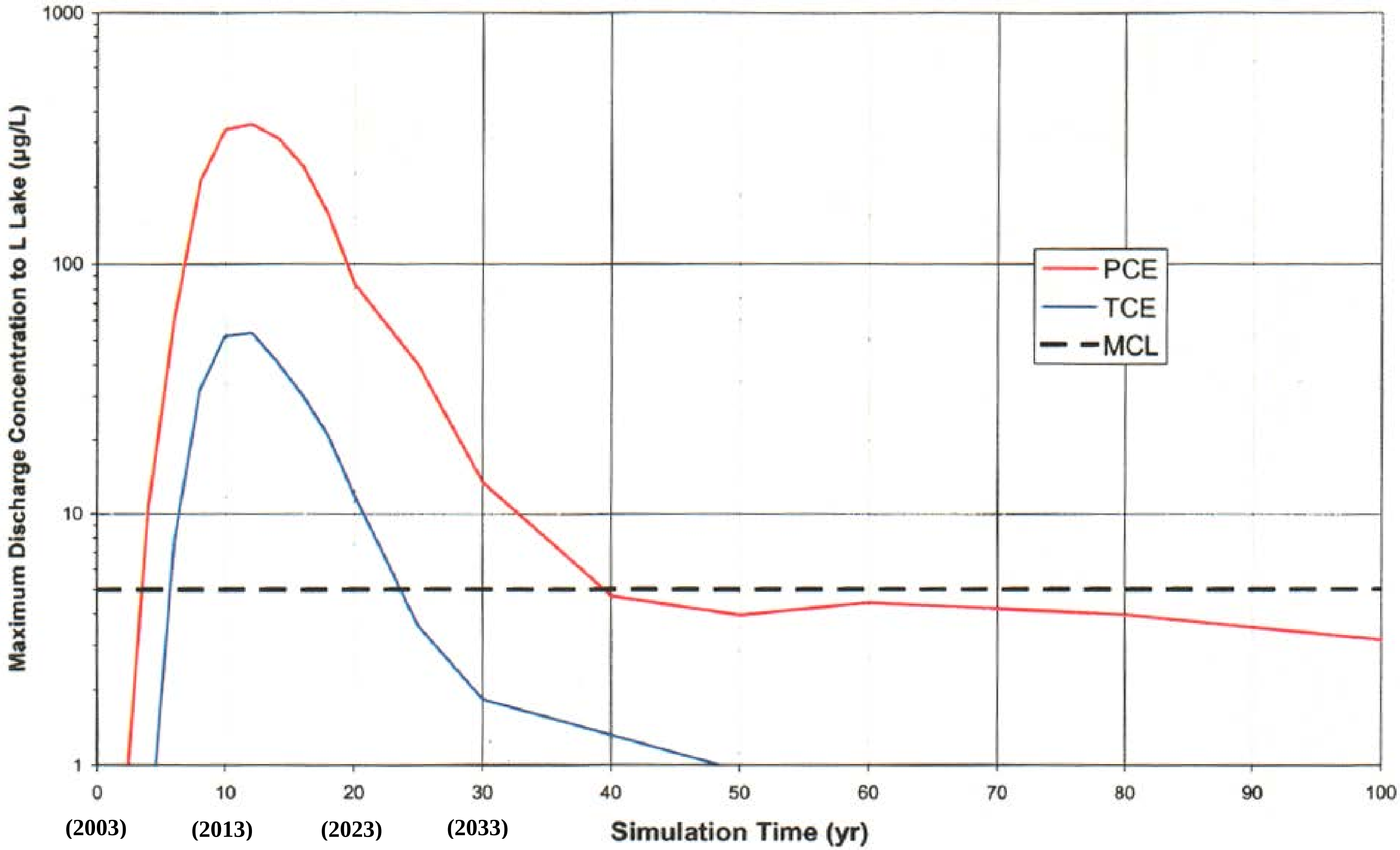


Figure 4-8. Modeled Maximum Concentration of VOCs at L-Lake Discharge Locations

This page is intentionally left blank.

4.3.3 Trichloroethylene (TCE)

TCE was detected in only five of 31 samples, but all were below the 5 µg/L MCL. These detections are from stations LAC 8DL, LSW030DL, and LSW 25DL. LAC 8DL is a KSZ monitoring well and continued a downward trend below the TCE 5 µg/L MCL. LAC 8DL had a maximum concentration of 4.37 µg/L during 2018, and also did not exceed the KSZCL (31.5 µg/L). TCE was not detected at the LUC boundary well, LSW032DL. Results in 2018 and 2019 have remained constant or decreased from previous results (Appendix C).

Modeling predicted that the maximum discharge of TCE into L Lake would have occurred around 2014 to 2016 (WSRC 2004). TCE was not detected in surface water during 2018 or 2019. To date, all surface water samples have been non-detect or below the MCL for TCE and concentrations remain below the expected maximum discharge concentration for TCE (~30 µg/L for 2018/2019) as plotted in the Modeling Report (WSRC 2004) (Figure 4-8). Based on monitoring well TCE concentrations below the MCL, it is expected surface water TCE concentration will remain non-detect.

This page is intentionally left blank.

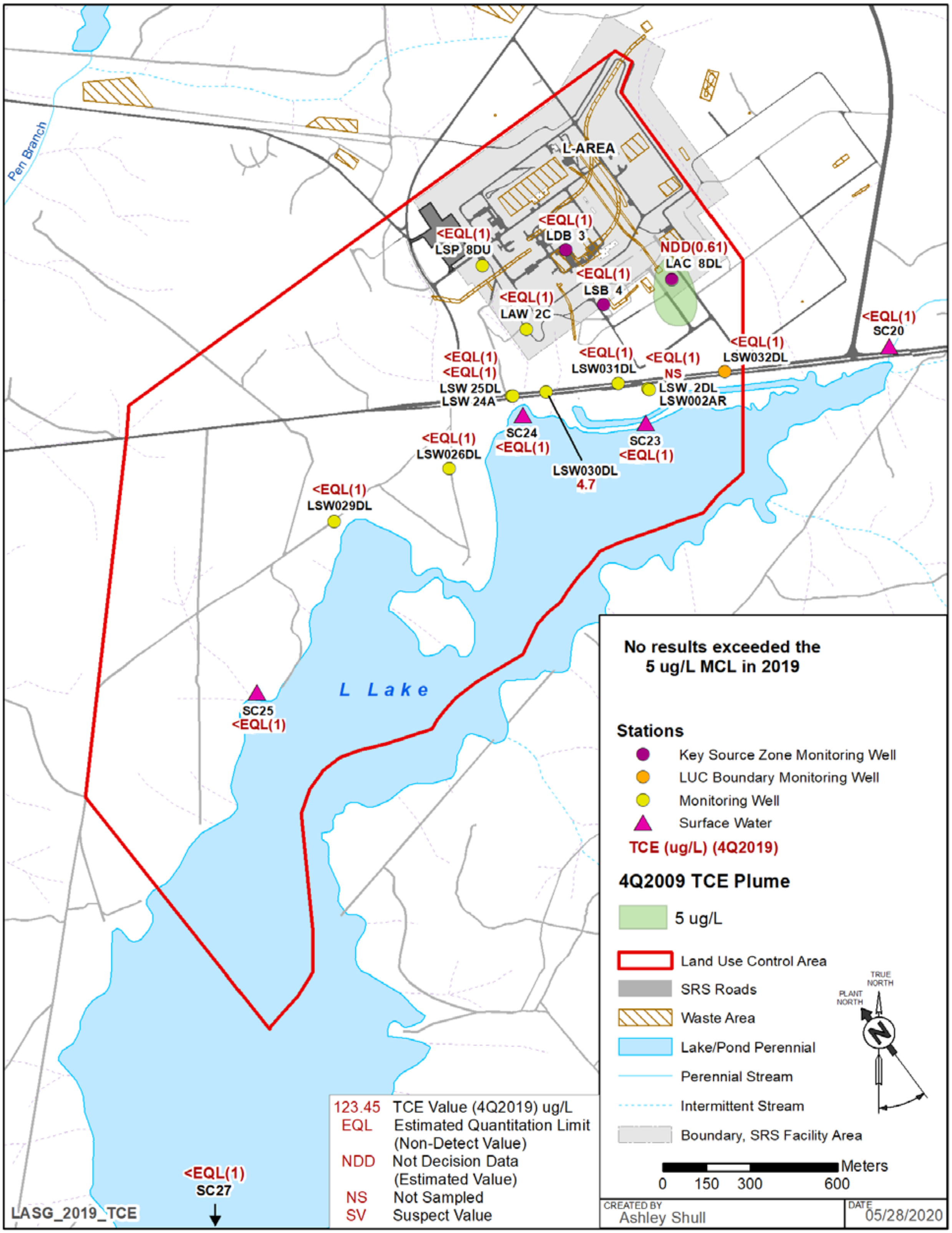


Figure 4-9. LASG OU TCE Plume (4Q2019)

This page is intentionally left blank.

5.0 CONCLUSIONS

Sampling results of all wells in the monitoring network show the distribution of contamination is consistent with previous observations. The increased or near average rainfall over the last seven years has kept water elevations relatively constant, as the potentiometric surfaces and groundwater flow paths have remained consistent with previous years. Overall, contaminant levels of tritium, PCE, and TCE are decreasing without increasing flux to L Lake as predicted by earlier modeling (WSRC 2004). All three contaminant plumes (tritium, PCE, and TCE) have decreased in size compared to previous years. TCE was not detected above MCLs in 2018 or 2019. Tritium was the only contaminant detected at any of the LUC boundary wells, but at low levels below the MCL. All of the contaminant levels for the KSZ monitoring wells were below their respective KSZCL.

With the overall decreasing trends in groundwater and surface water contaminant concentrations, the decreasing size of the plumes, and a decreasing trend in contaminant levels discharging from L Lake, the MNA/ICs remedy is effective in reducing the groundwater contaminants to levels below MCLs and preventing human exposure to groundwater above MCLs.

6.0 REFERENCES

Aadland, Rolf K., J. A. Gellici, and P. A. Thayer, 1995. *Hydrogeologic Framework of West-Central South Carolina,* Water Resources Division Report 5, South Carolina Department of Natural Resources, Columbia, SC 29201

FFA, 1993. *Federal Facility Agreement for the Savannah River Site*, Administrative Docket No. 89-05-FF (Effective Date: August 16, 1993)

SRNS, 2012. *Biennial Effectiveness Monitoring Report (EMR) for Monitored Natural Attenuation (MNA) at the L-Area Southern Groundwater (LASG) Operable Unit (OU) (U), 2010 through 2011*, SRNS-RP-2012-00169, Rev. 0, June, Savannah River Nuclear Solutions, Savannah River Site, Aiken, SC

SRNS, 2013. *Addendum to the Monitored Natural Attenuation Effectiveness Monitoring Plan for the L-Area Southern Groundwater Operable Unit (NBN) (U),* SRNS-RP-2012-00857, Rev. 1, May, Savannah River Nuclear Solutions, Savannah River Site, Aiken, SC

SRNS, 2014. *Biennial Effectiveness Monitoring Report (Sampling Summary) for the Monitored Natural Attenuation at the L-Area Southern Groundwater Operable Unit, 2012 through 2013*, ACP-14-169, June 25, 2014, Savannah River Nuclear Solutions, Savannah River Site, Aiken, SC

SRNS, 2018. *Biennial Effectiveness Monitoring Report (Sampling Summary) for the Monitored Natural Attenuation at the L-Area Southern Groundwater Operable Unit, 2016 through 2017*, IACD-18-156, June 20, 2018, Savannah River Nuclear Solutions, Savannah River Site, Aiken, SC

WSRC, 2002. *L-Area Southern Groundwater Hydrogeologic Conceptual Model (U)*, WSRC-RP-2002-4179, Rev. 1, December, Washington Savannah River Company, Savannah River Site, Aiken, SC

WSRC, 2004. *Groundwater Flow and Transport Model of the L-Area Southern Groundwater Operable Unit (U)*, WSRC-RP-2004-4082, Rev. 0, June, Washington Savannah River Company, Savannah River Site, Aiken SC

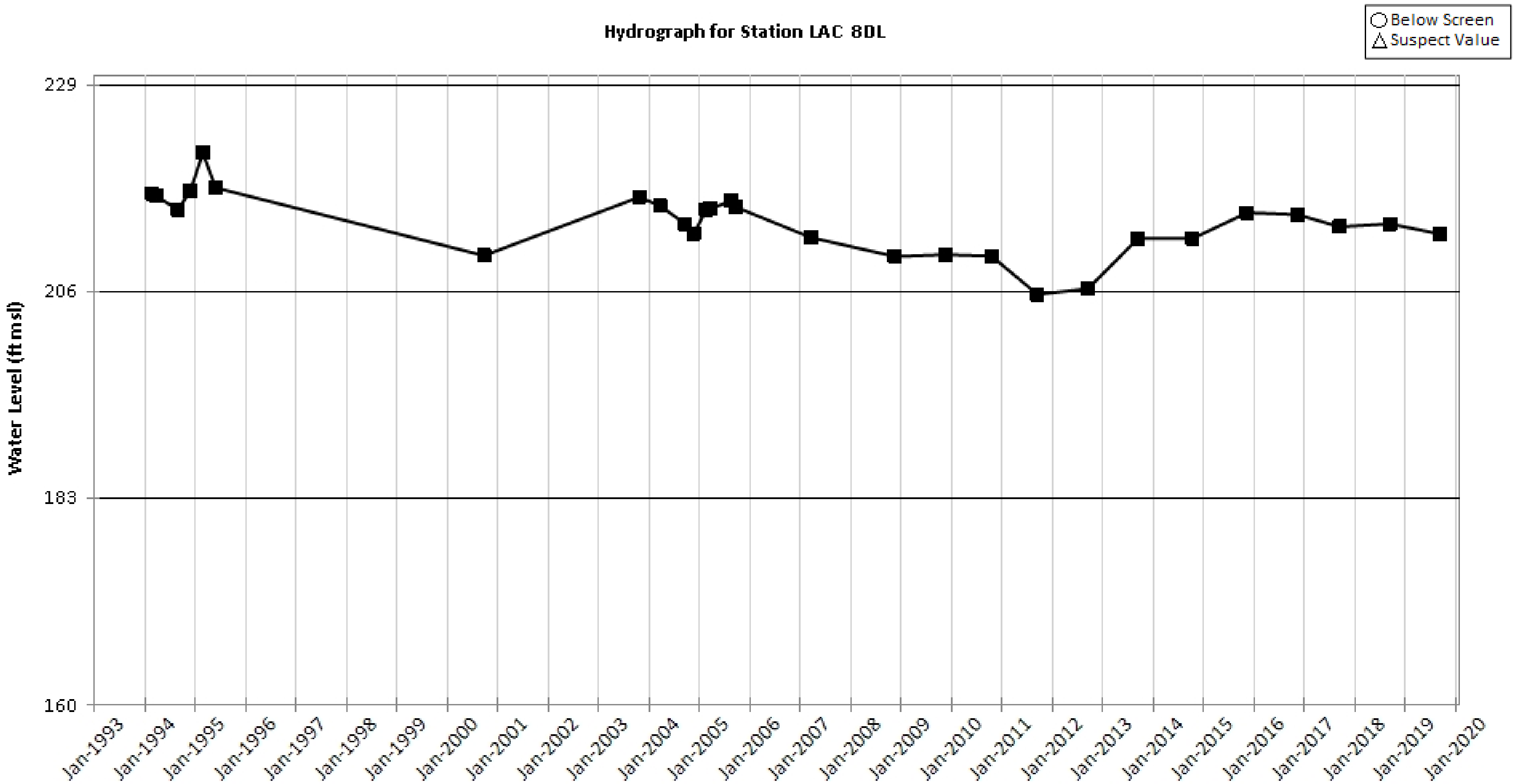
WSRC, 2005. *Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation for the L-Area Southern Groundwater Operable Unit (U)*, WSRC-RP-2003-4171, Rev. 1.1, July, Washington Savannah River Company, Savannah River Site, Aiken, SC

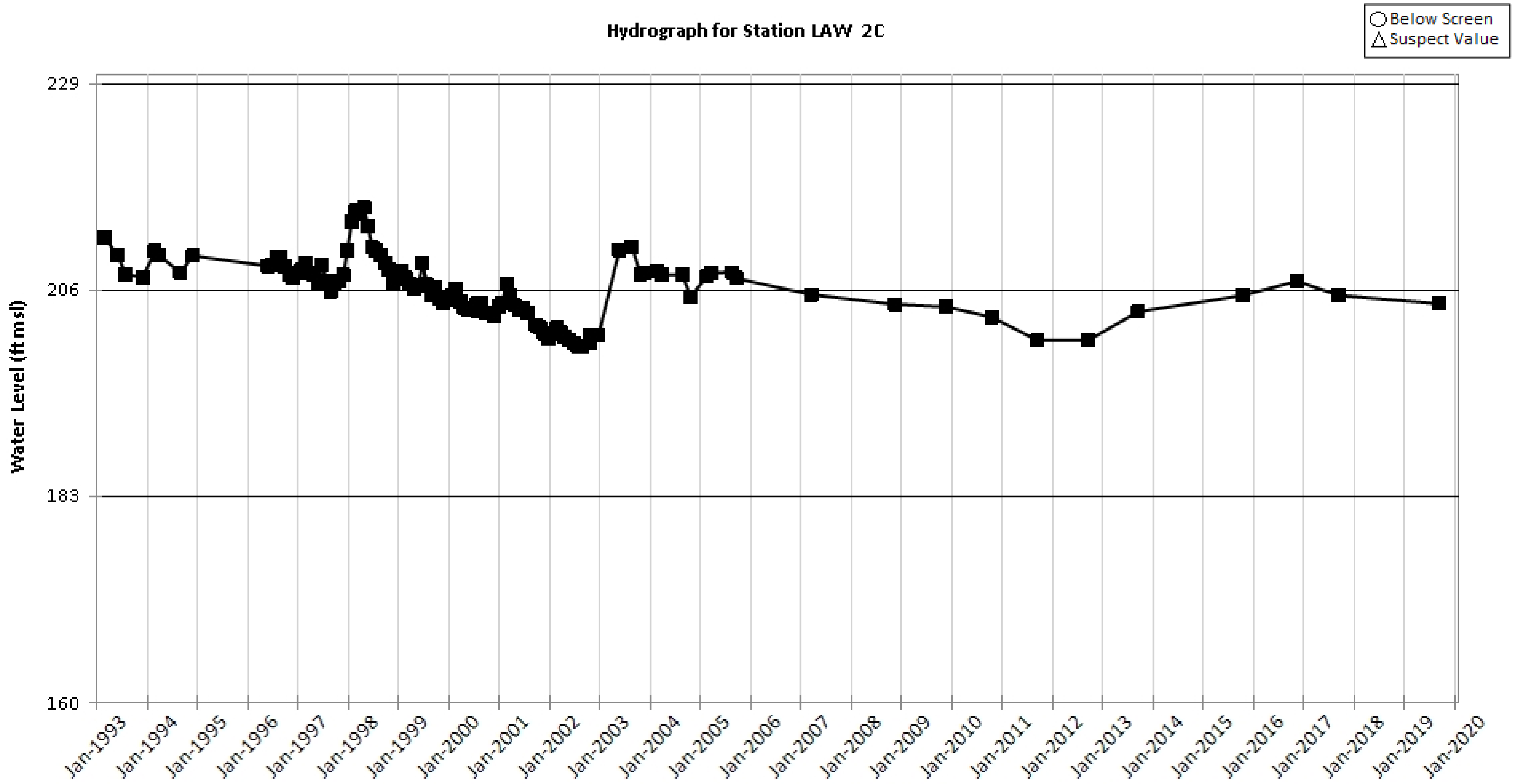
WSRC, 2007. *Record of Decision Remedial Alternative Selection for the L-Area Southern Groundwater Operable Unit (NBN) (U)*, WSRC-RP-2006-4052, Rev. 1.1, March, Washington Savannah River Company, Savannah River Site, Aiken, SC

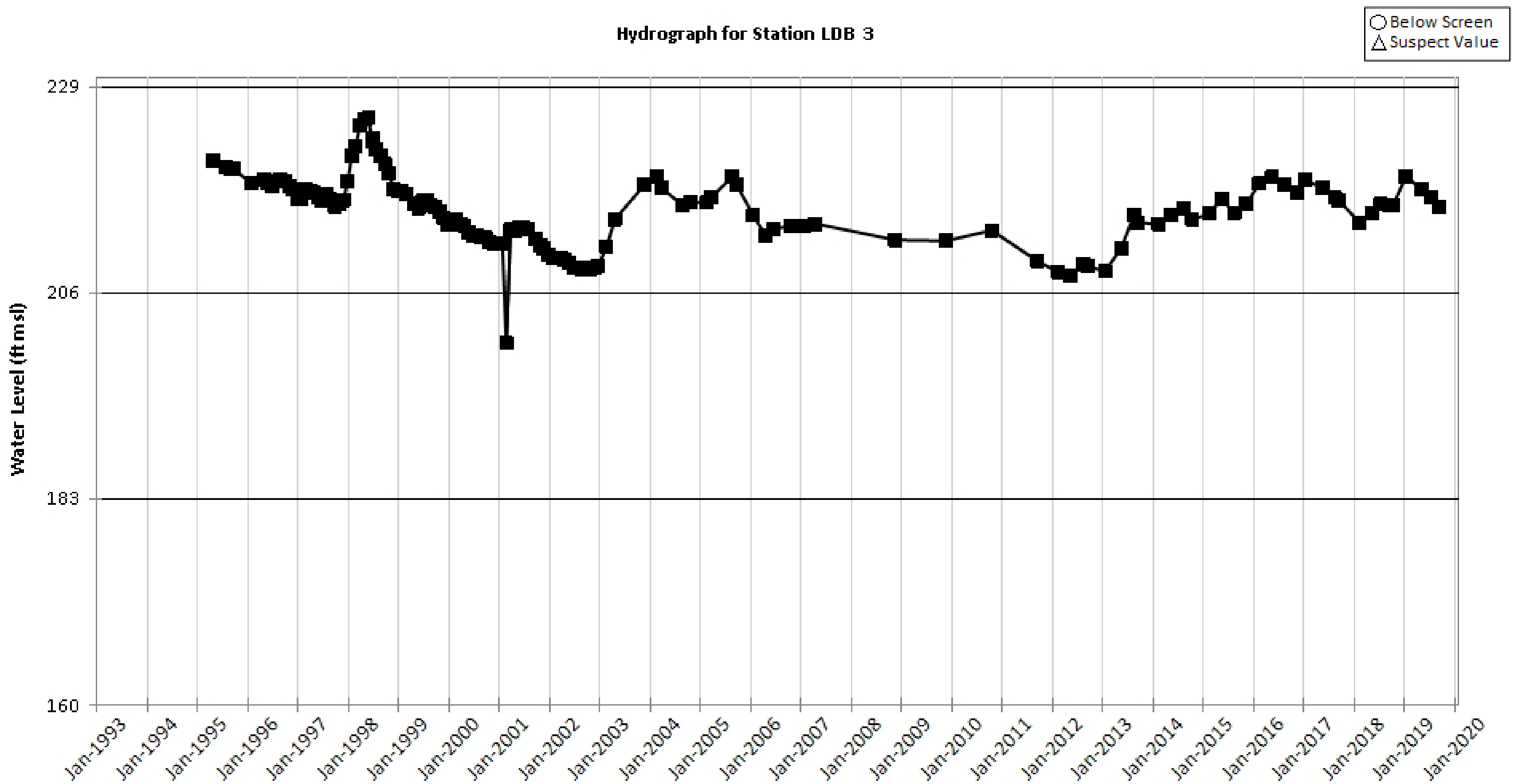
Appendix A

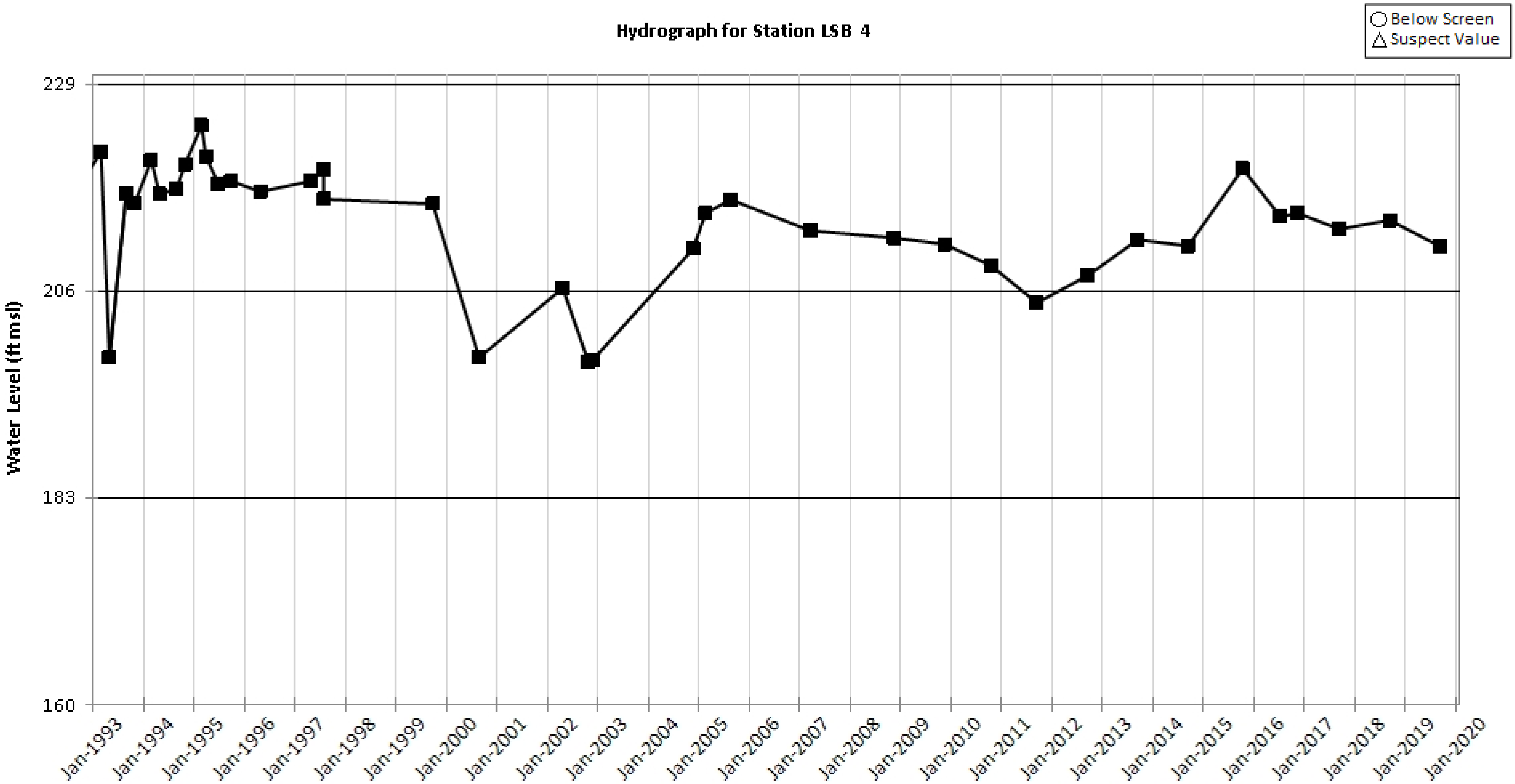
Hydrographs

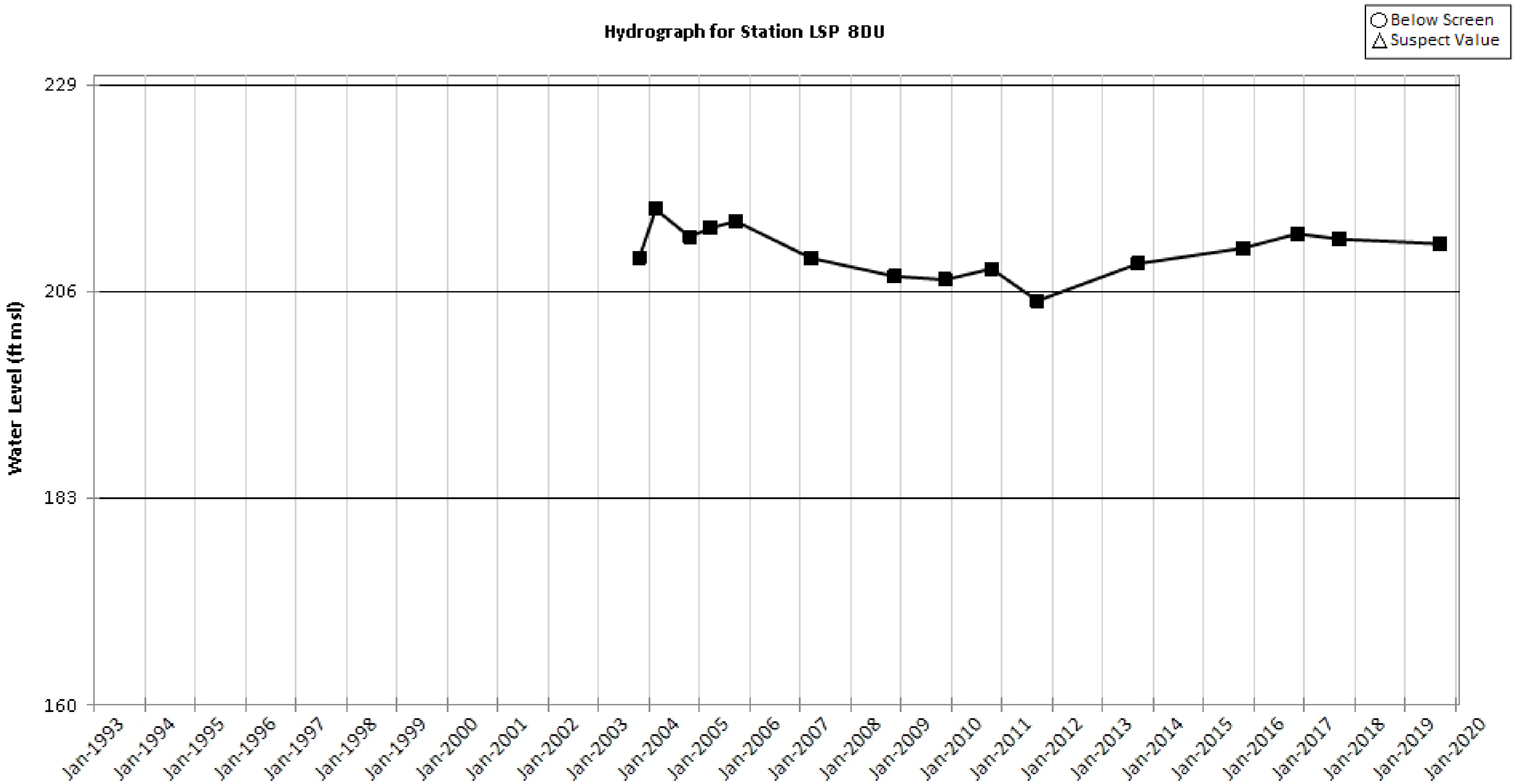
This page is intentionally left blank.

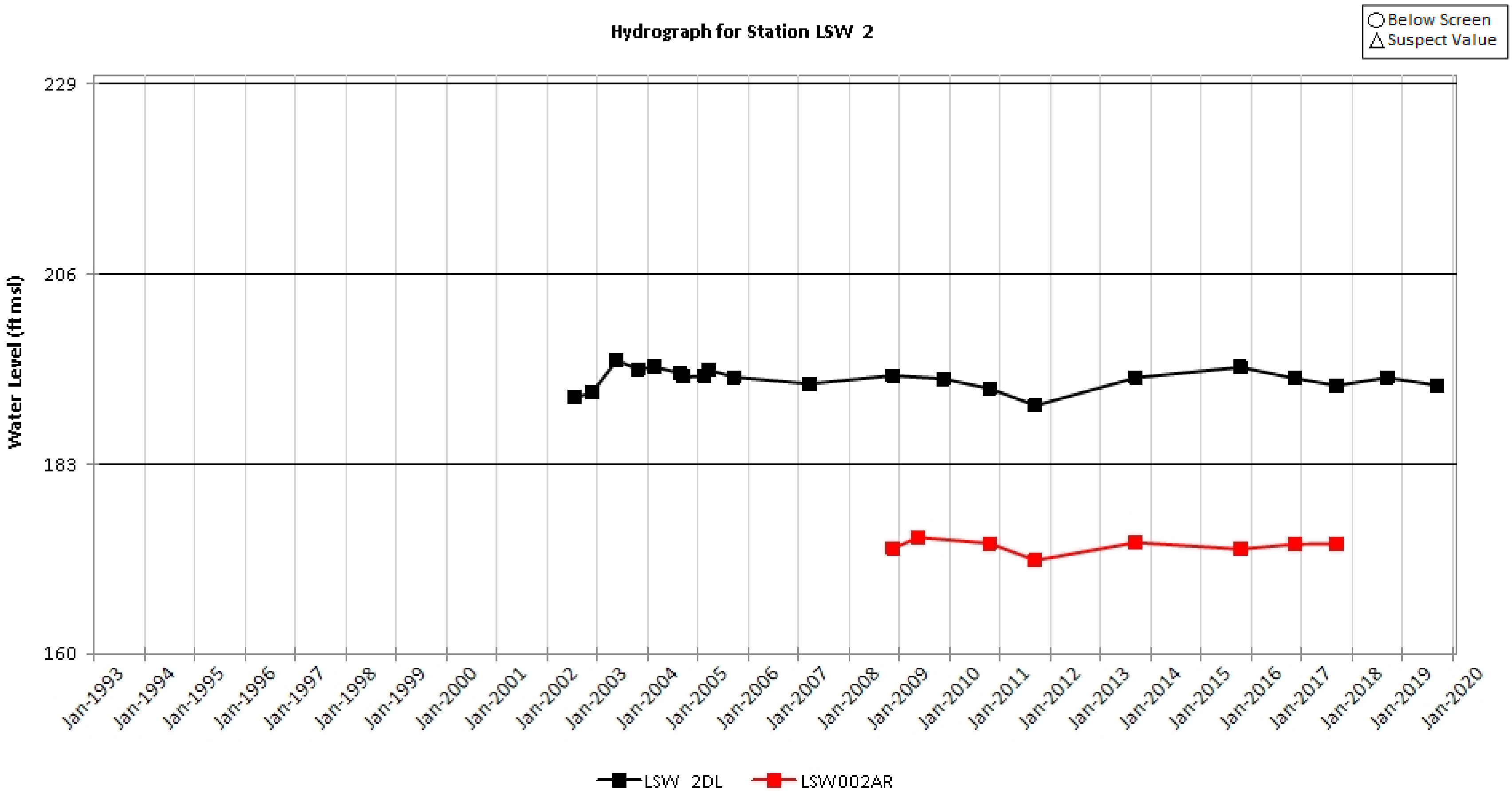

Hydrograph for Station LAC 8DL
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020

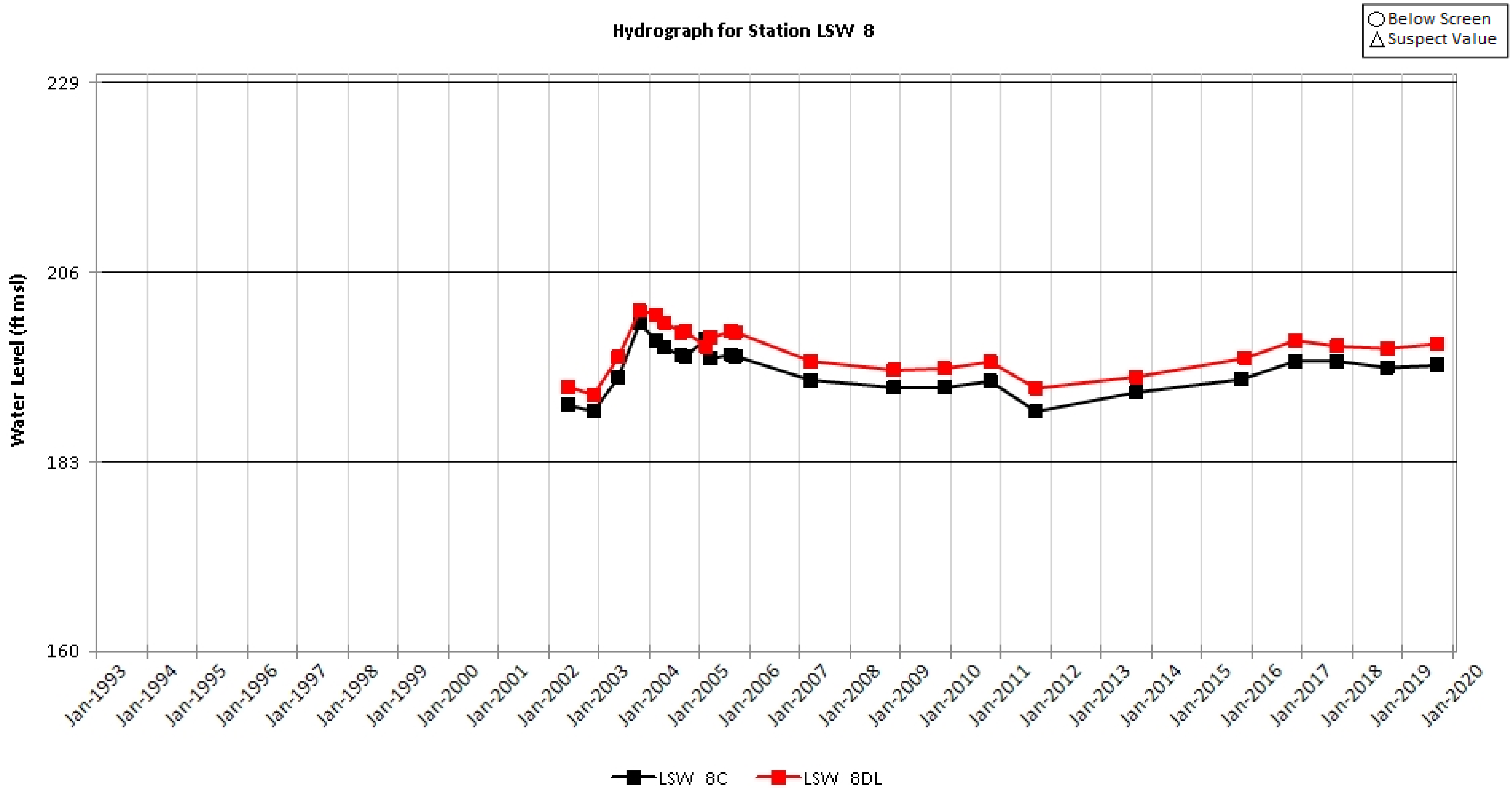

Hydrograph for Station LAW 2C
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020

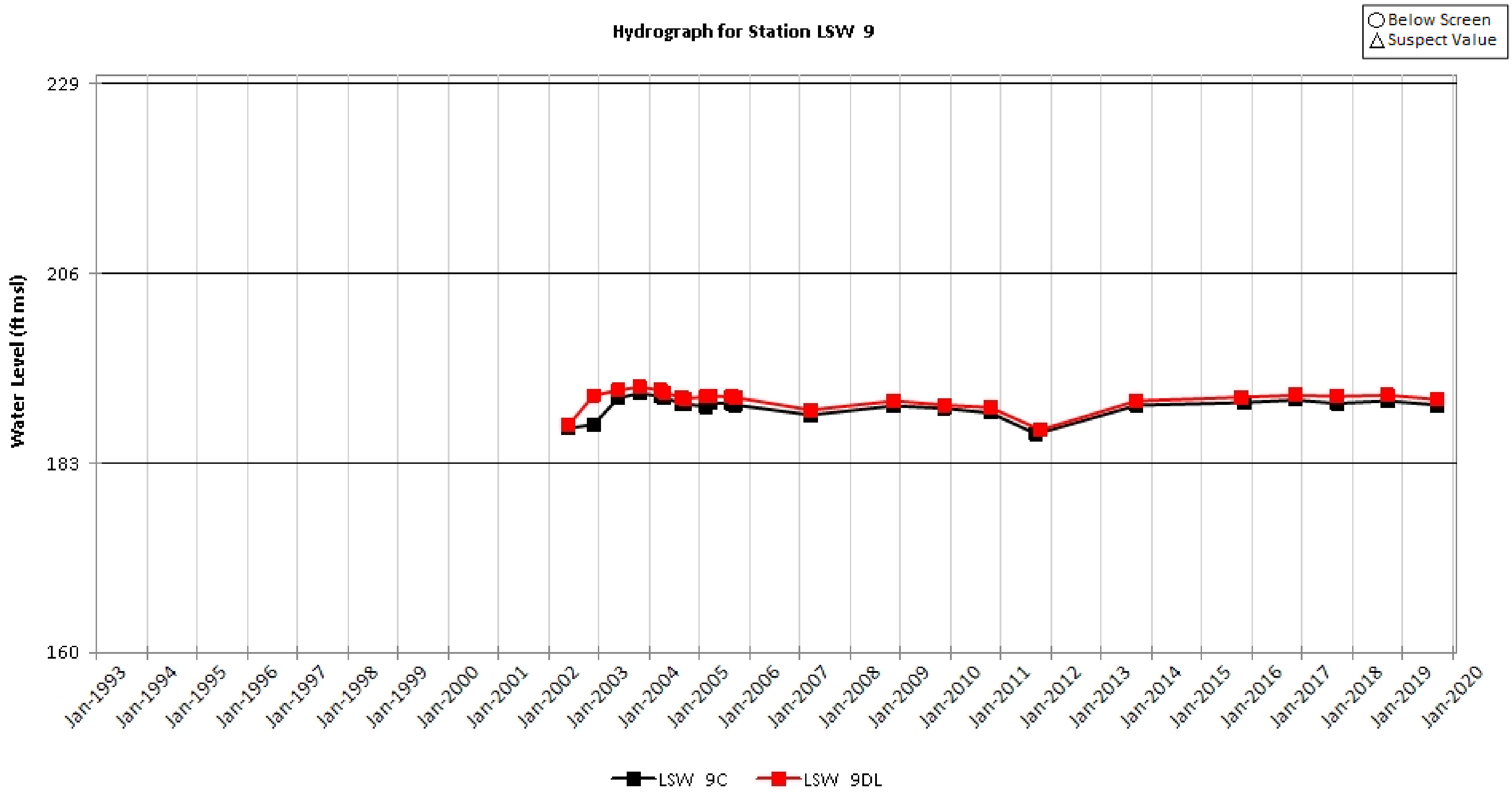

Hydrograph for Station LDB 3
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020

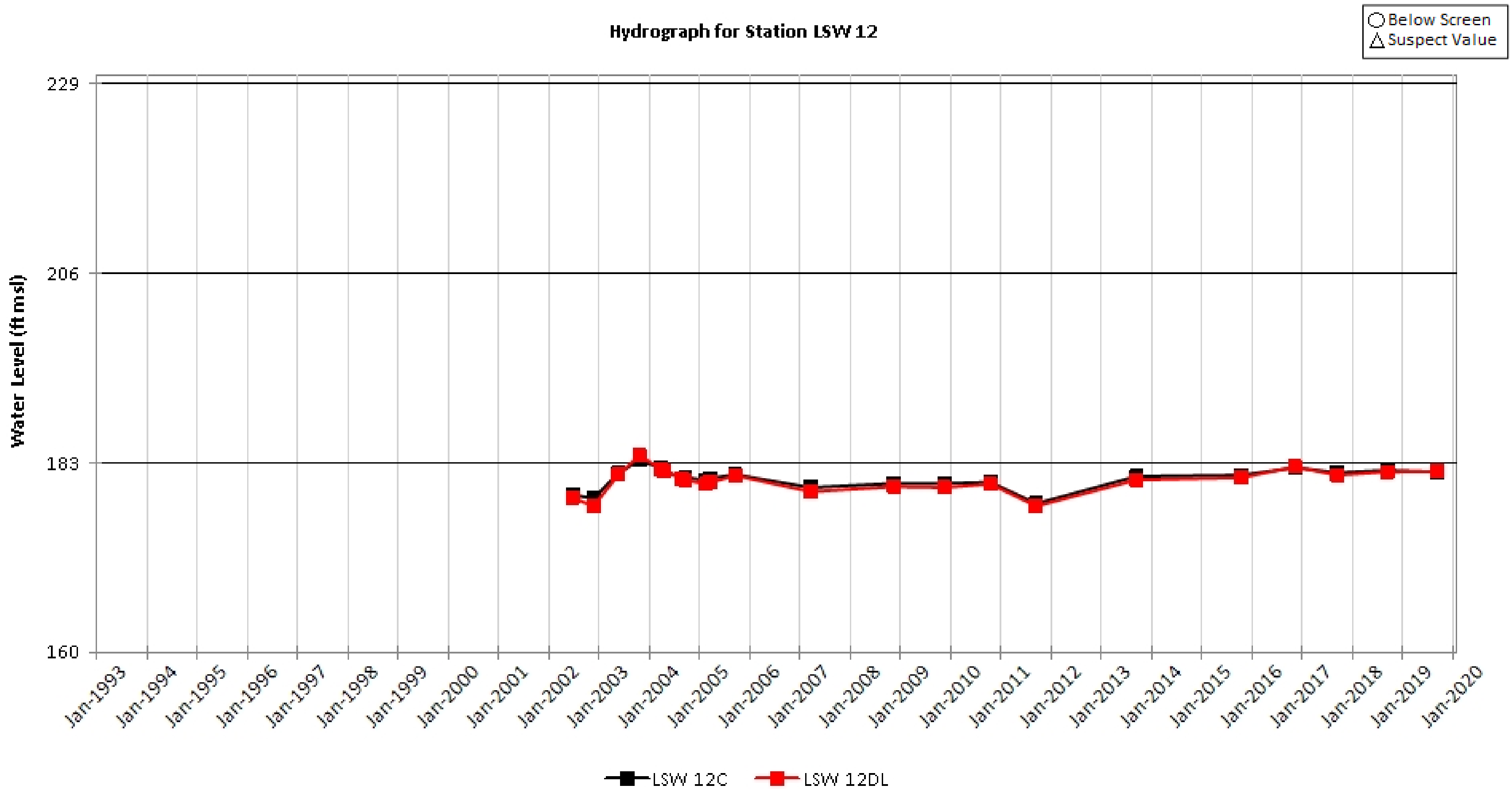

Hydrograph for Station LSB 4
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020

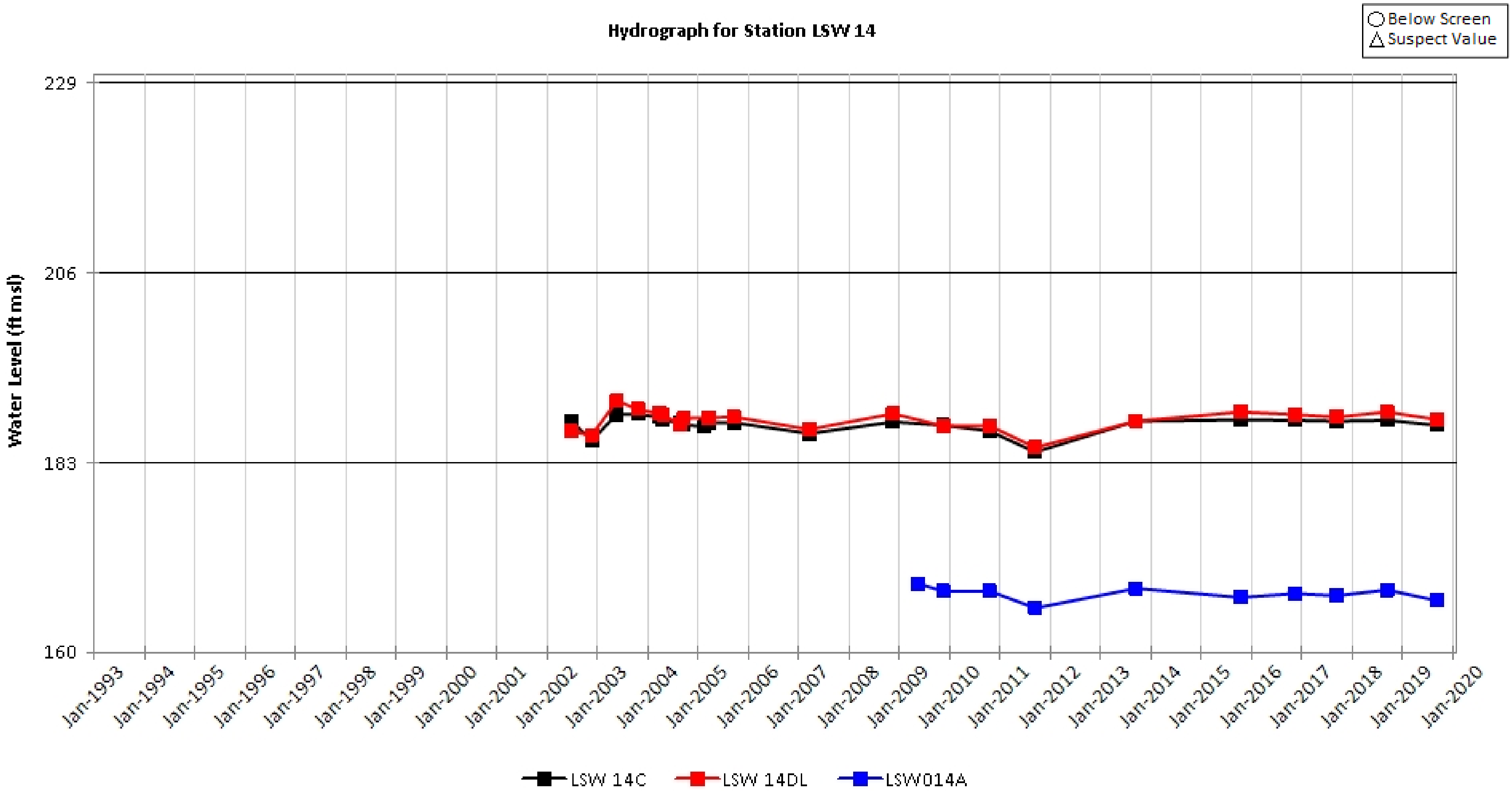

Hydrograph for Station LSP 8DU
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020

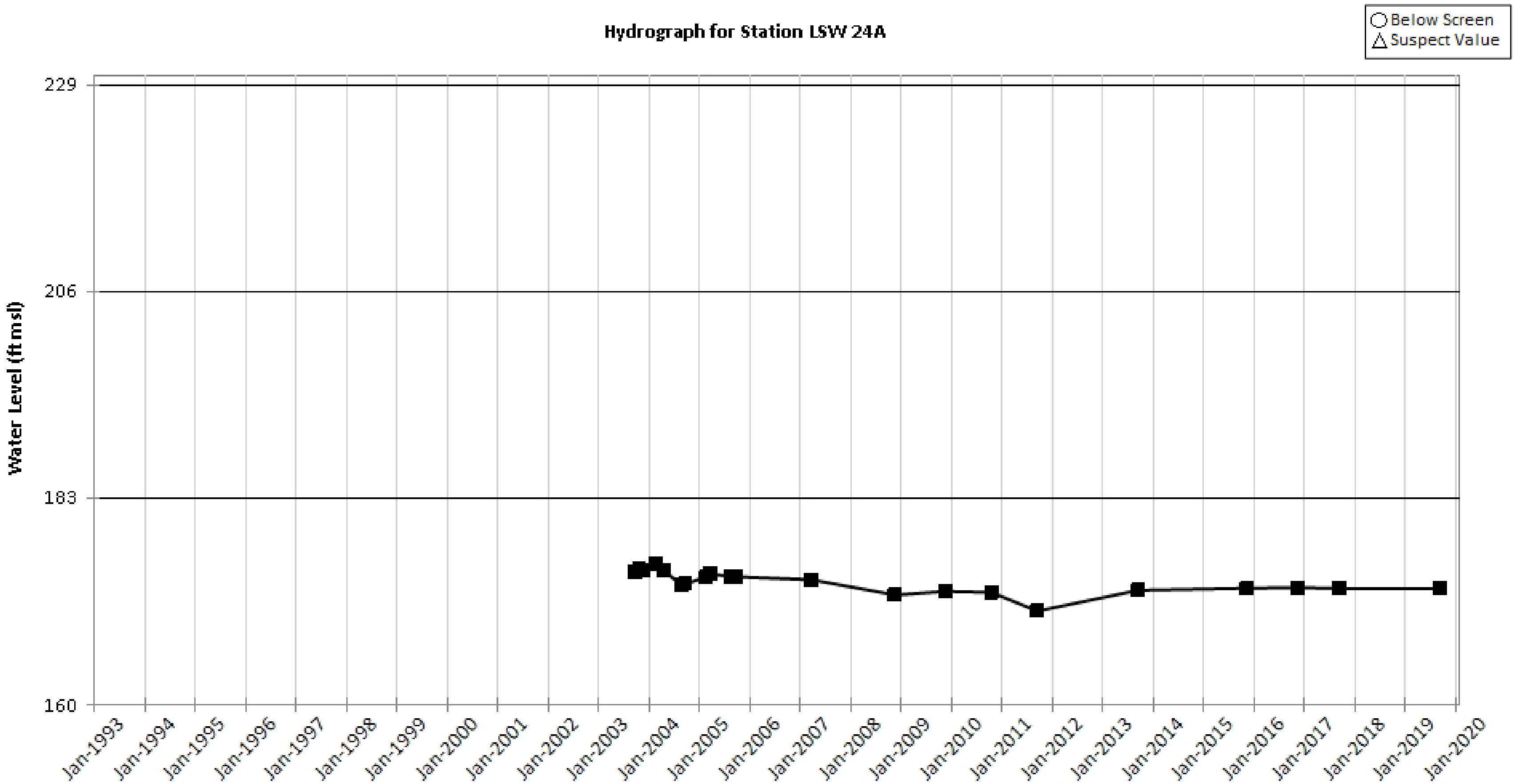

Hydrograph for Station LSW 2
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 2DL
LSW002AR


Hydrograph for Station LSW 8
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 8C
LSW 8DL

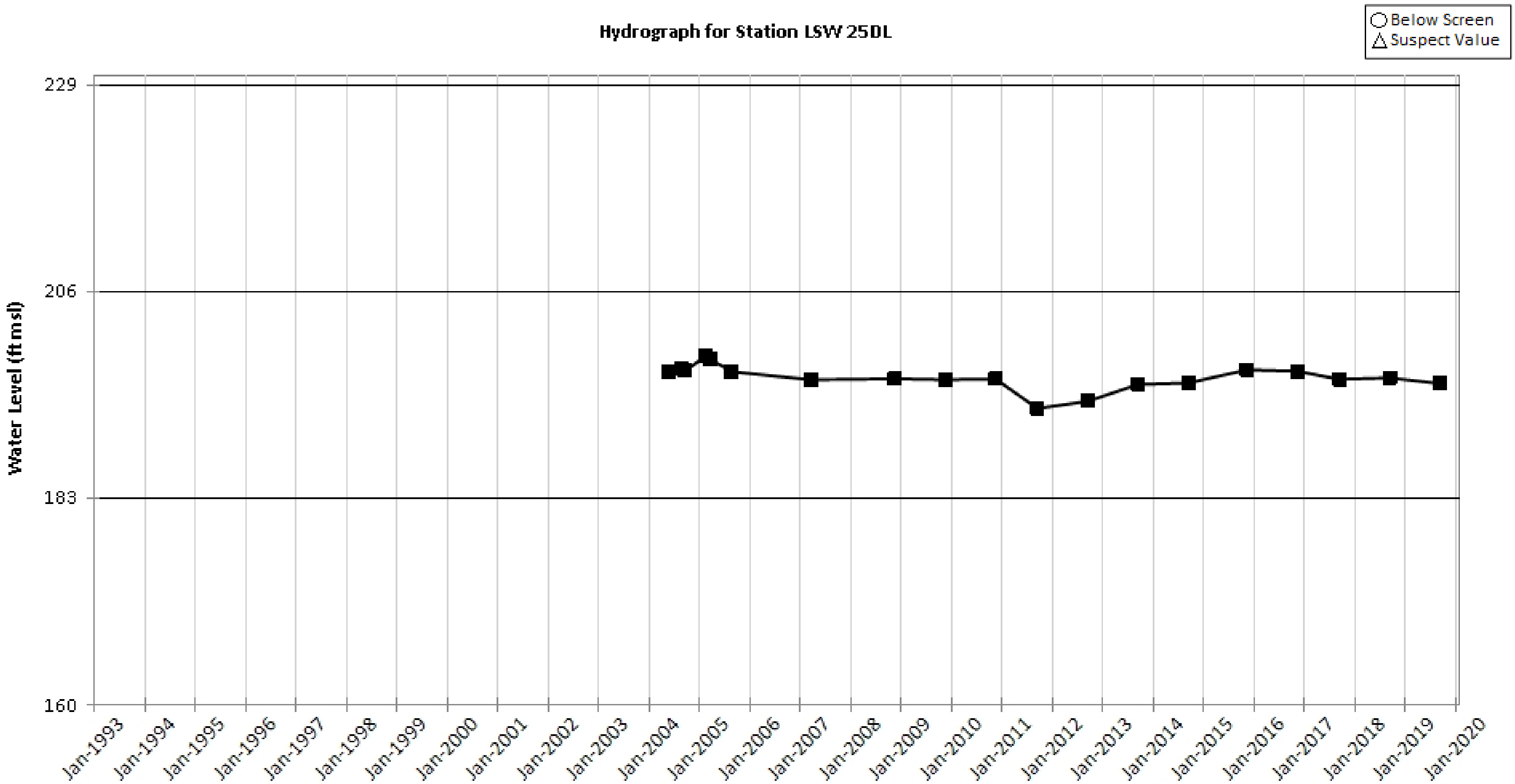

Hydrograph for Station LSW 9
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 9C
LSW 9DL

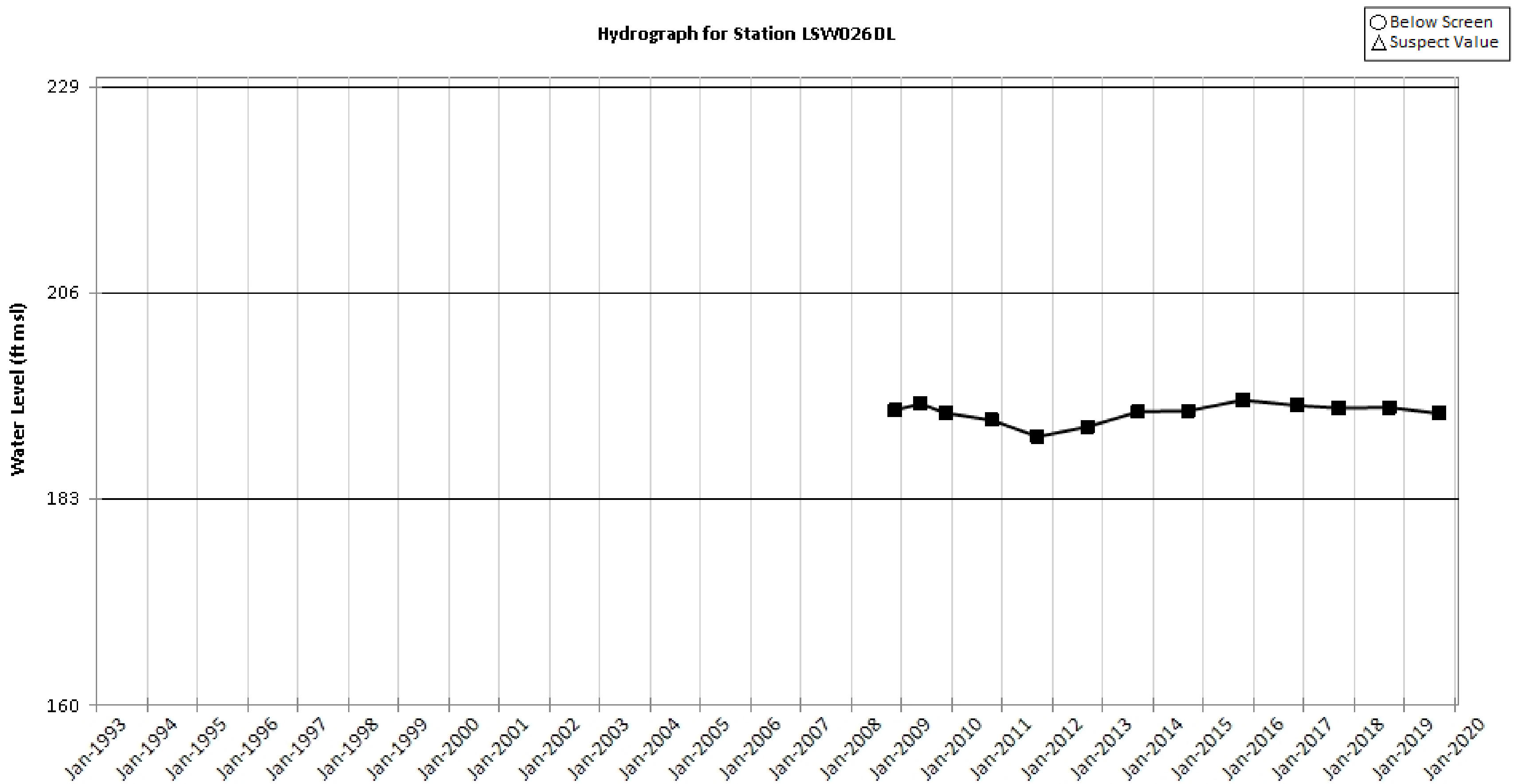

Hydrograph for Station LSW 12
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 12C
LSW 12DL

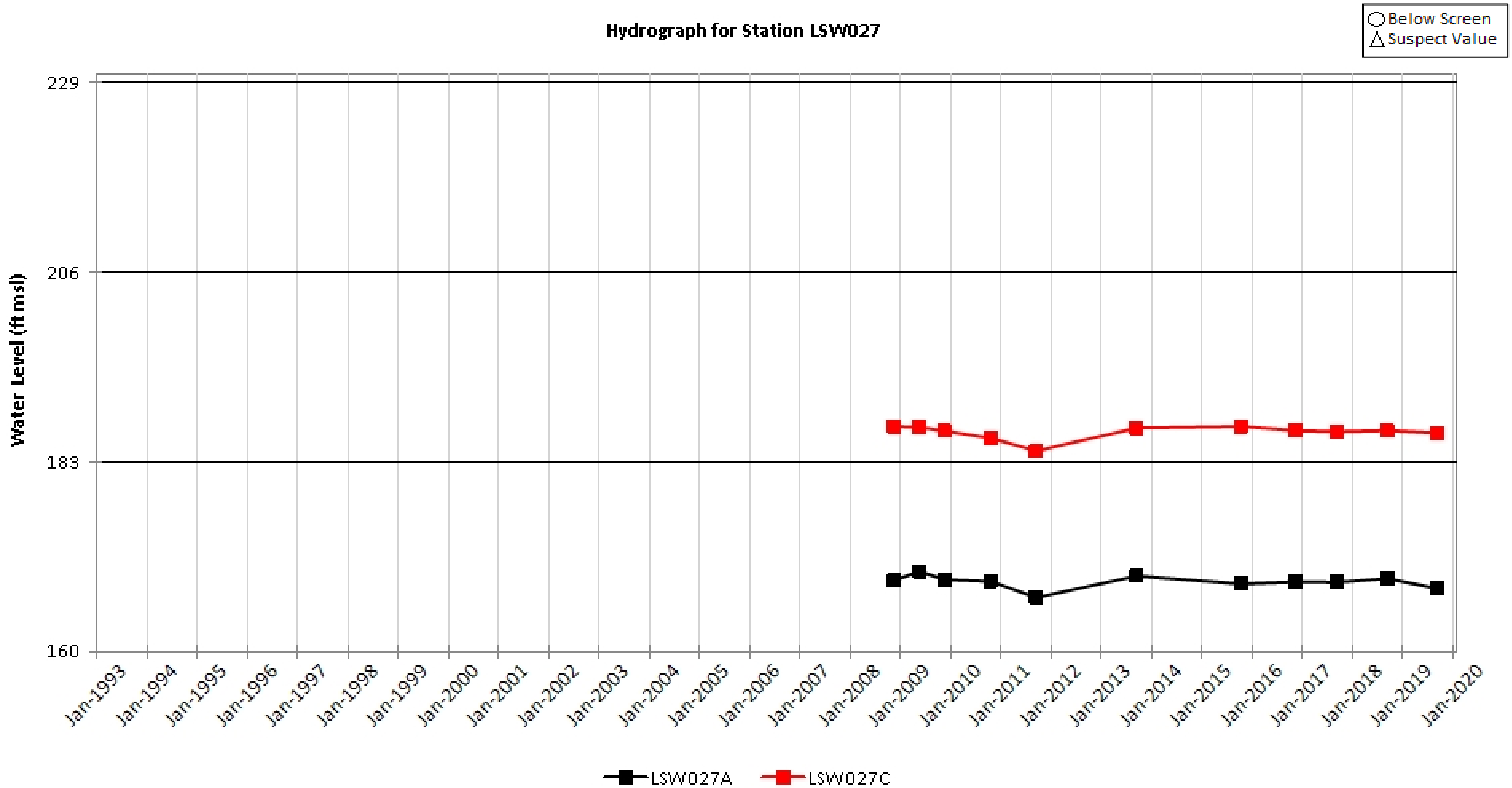

Hydrograph for Station LSW 14
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 14C
LSW 14DL
LSW014A

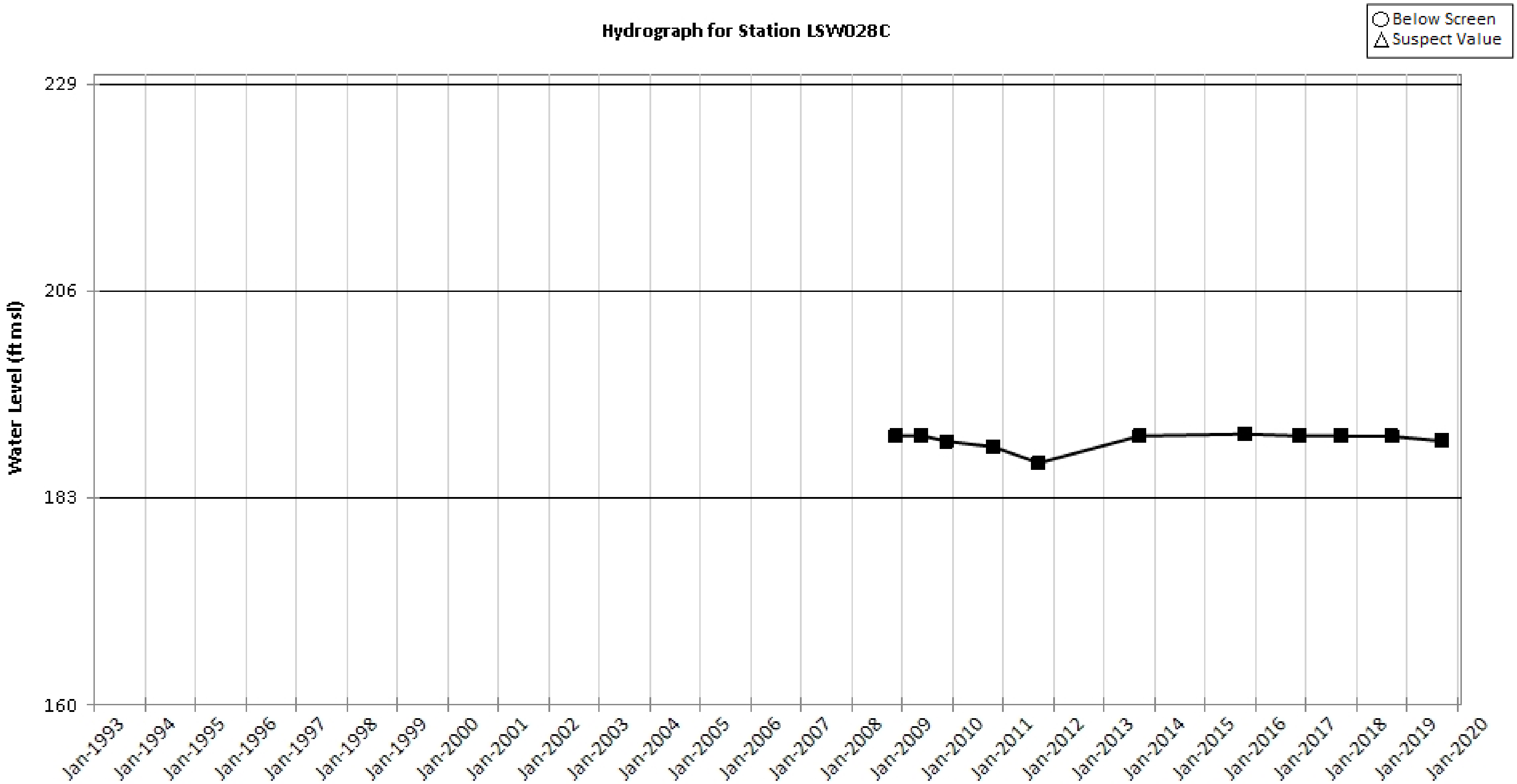


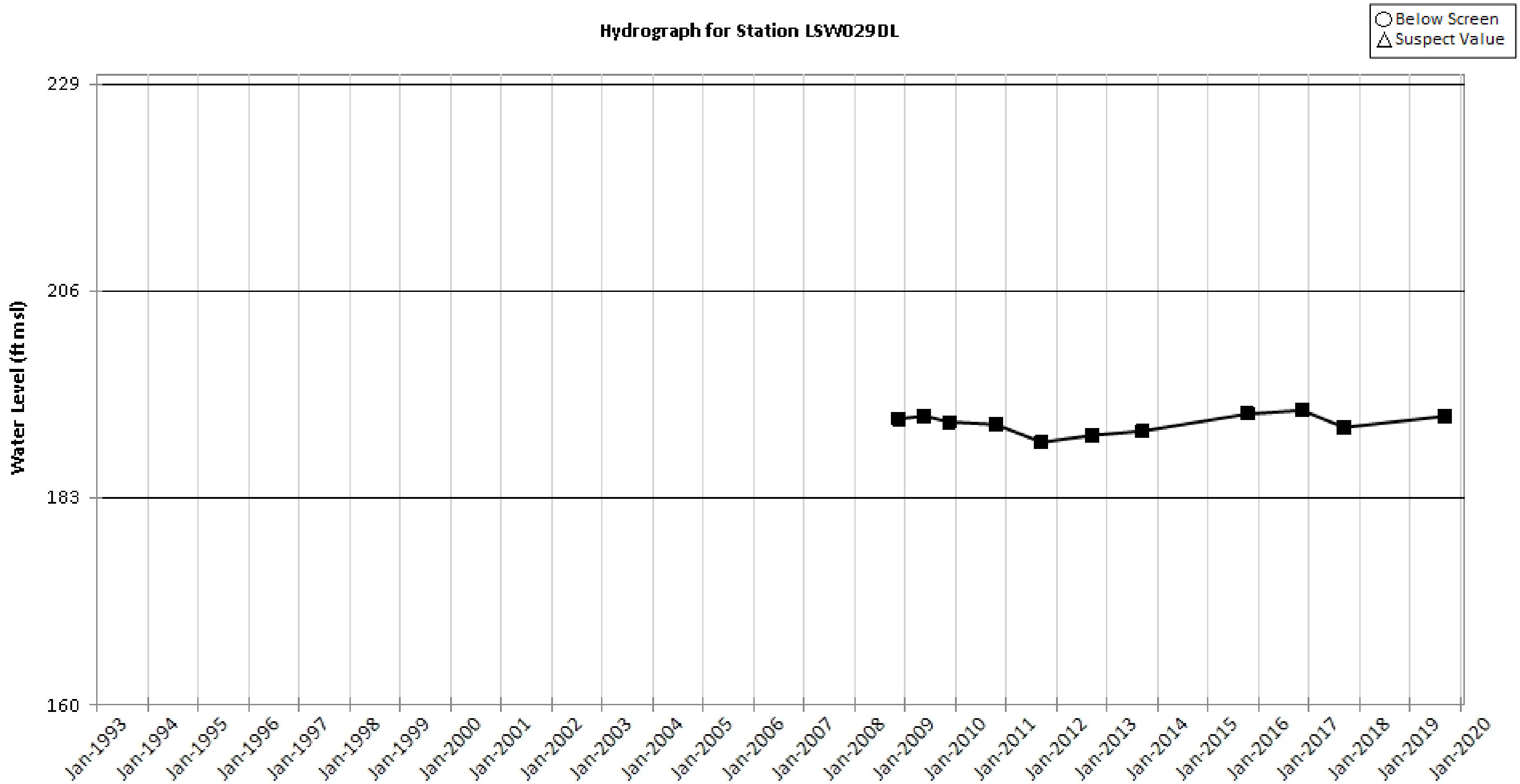
Hydrograph for Station LSW 24A
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020

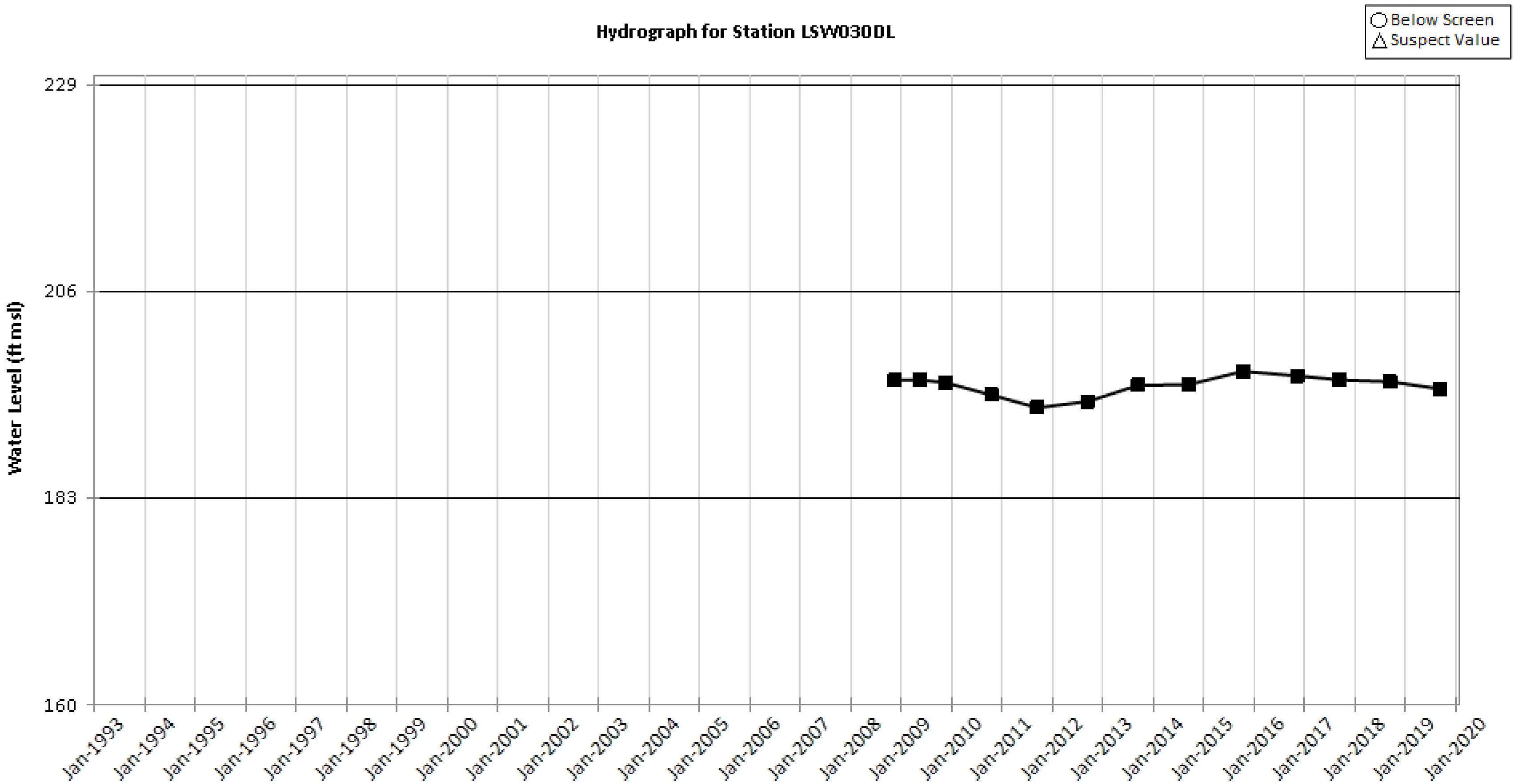

Hydrograph for Station LSW 25DL
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020

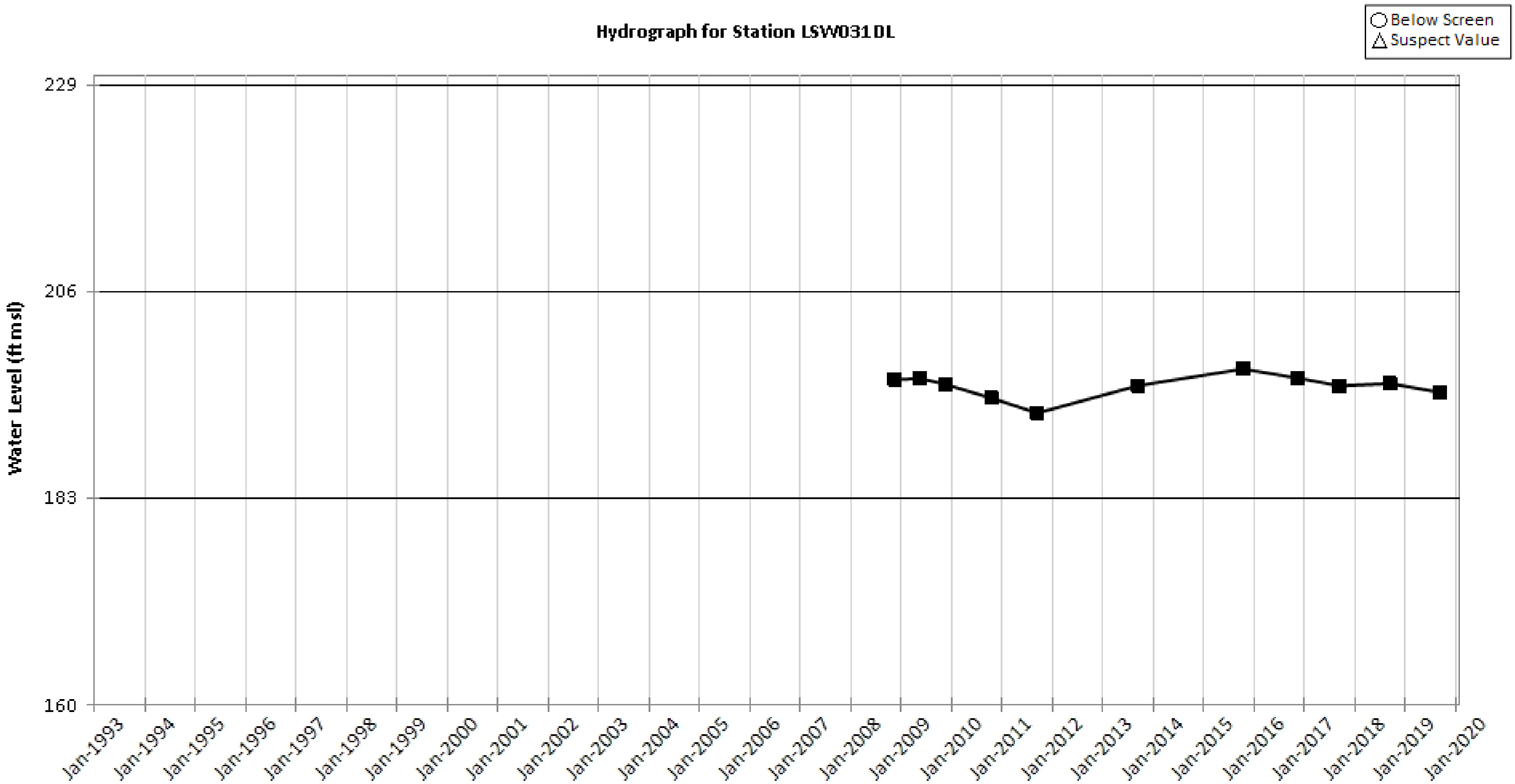

Hydrograph for Station LSW026DL
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020

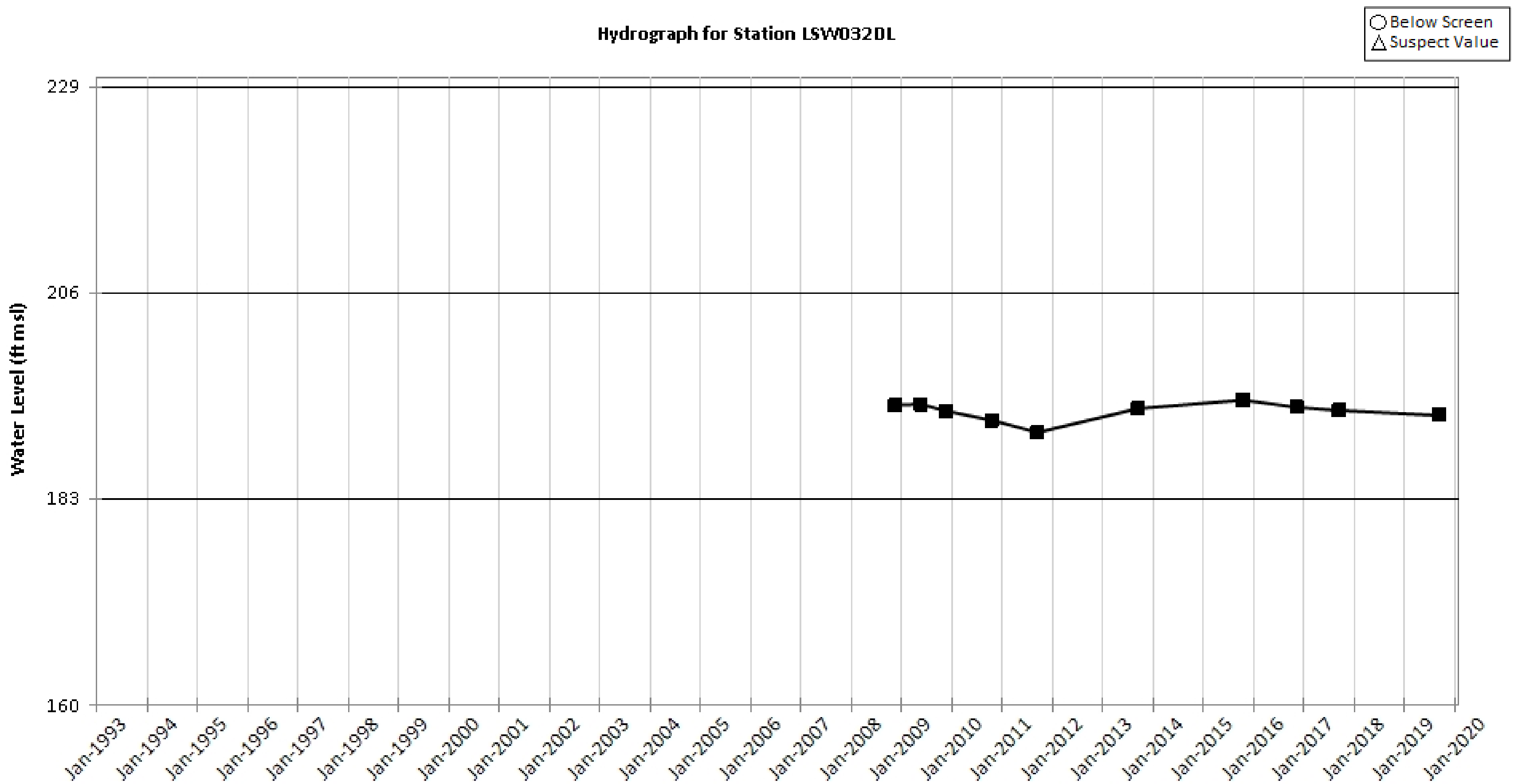

Hydrograph for Station LSW027
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW027A
LSW027C


Hydrograph for Station LSW028C
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020


Hydrograph for Station LSW029DL
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020


Hydrograph for Station LSW030DL
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020


Hydrograph for Station LSW031DL
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020


Hydrograph for Station LSW032DL
Below Screen
Suspect Value
Water Level (ft msl)
229
206
183
160
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020

This page is intentionally left blank.

Appendix B

Groundwater and Surface Water Monitoring Results

This page is intentionally left blank.

Key to Reading the Table

The following abbreviations may appear in the data table:

Laboratories Available for Use During 2018 - 2019

EAI	Enthalpy Analytical, Inc
EBL	Environmental Bioassay Lab
GEL	General Engineering Lab
PACE	Pace Analytical Energy Services, LLC
SHE	Shealy Environmental Services, Inc
TAL	TestAmerica Laboratories, Inc

Nomenclature

EQL	sample-specific estimated quantitation limit
GAU	Gordon Aquifer Unit
KSZ	Key Source Zone
KSZCL	Key Source Zone Concentration Limit
LAZ	Lower Aquifer Zone
MAZ	Middle Aquifer Zone
MCL	Maximum Contaminant Level
TC	Tan Clay
UAZ	Upper Aquifer Zone
UTRAU	Upper Three Runs Aquifer Unit

Units

deg. C	degrees Celsius
gal	gallons
ft	feet
mg/L	milligrams per liter
msl	mean sea level
NTU	nepholometric turbidity unit
pCi/mL	picocuries per milliliter
pH	pH unit
ug/L	micrograms per liter

Field Conditions

A	Pump is surging excessively; aerated
B	blank sample was collected
C	well is continuously pumping
D	well is dry-no sample or field data collected
E	equipment blank was collected
I	well went dry during sampling; field data collected but insufficient water to collect all samples
L	well went dry before sampling began; only depth to water can be determined
N	well was not stabilized before sampling began
P	inaccessibility or mechanical failure prevented sample collection and field analysis of the water
S	no water in standpipe; for water level events only
T	samples were collected, but some samples were not sent to the laboratory due to high turbidity
W	unable to sample well because of stabilization or sampling equipment failure; water-level measurements were obtained
X	well went dry during purging; samples collected after well recovered measurements obtained
0	OK
1	Pump Dry
2	Sampled after recovery
3	Gallons purged through sample port
4	DI water taken from 772-7B
5	High turbidity
6	Flow meter leaking
7	Pump failure
8	Flow meter not operating
9	# gallons added
10	Well is inaccessible, well can not be Sampled
11	Well abandoned
12	No water to surface
13	Field measurements only
14	Not all samples were collected
15	Equipment failure
16	No water in standpipe
17	Bailed well
18	Water level tape not long enough
19	Well not sampled, maintenance required
20	Well sampled, maintenance required
21	Measurement Exceeded Criteria

Table B-1. L-Area Southern Groundwater OU MNA Monitoring Results, 2018 - 2019

See insert on the next page

This page is intentionally left blank.

				Field Data											Tritium		VOCs			
Table B-1. L-Area Southern Groundwater OU MNA Monitoring Results, 2018 - 2019				SAMPLE COLLECTION DATE	PH	TURBIDITY	DEPTH TO WATER	WATER TEMPERATURE	SAMPLING EVENT WATER ELEVATION	VOLUME PURGED	PHENOLPHTHALEIN ALKALINITY (AS CACO3)	TOTAL ALKALINITY (AS CACO3)	**Constituent**	FIELD CONDITIONS	TRITIUM	*Well Specific KSZCL for Tritium*	TETRACHLOROETHYLENE (PCE)	*Well Specific KSZCL for Tetrachloroethylene (PCE)*	TRICHLOROETHYLENE (TCE)	*Well Specific KSZCL for Trichloroethylene (TCE)*
				day-month-year	pH	NTU	ft	degC	ft	gal	mg/L	mg/L	**Unit**		pCi/L	pCi/L	ug/L	ug/L	ug/L	ug/L
Station	**Well Use**	**Secondary Well Use**	**Aquifer Zone**			15							**MCL**		20		5		5	
LAC 8DL	Southeast Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	17-Oct-2018	5.2	0.6	22.88	20.7	213.52	3	0	4			3.79	102.75	4.37	90	1.16	31.5
LAC 8DL	Southeast Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	08-Oct-2019	5	0.3	24	20.1	212.4	3	0	0			3.32	102.75	2.6	90	[0.61]	31.5
LSB 4	Southeast Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	17-Oct-2018	4.7	0.4	17.73	21.7	213.87	2	0	0			[0.621]	137.7	<EQL (1)	NA	<EQL (1)	NA
LSB 4	Southeast Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	08-Oct-2019	4.7	0.9	20.63	21.7	210.97	1	0	0			[0.652]	137.7	<EQL (1)	NA	<EQL (1)	NA
LSB 4	Southeast Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU											Lab Duplicate	[0.746]	137.7		NA		NA
LSW 2DL	Southeast Plume Monitoring Well		UAZ_UTRAU	17-Oct-2018	5.9	4.5	7.76	21.6	193.48	2	0	12			16.4		[0.99]		<EQL (1)	
LSW 2DL	Southeast Plume Monitoring Well		UAZ_UTRAU	08-Oct-2019	5.8	2.6	8.67	21.5	192.57	1	0	5			15.1		1.3		<EQL (1)	
LSW002AR	Southeast Plume Monitoring Well		GAU	NS	NS	NS	NS	NS	NS	NS	NS	NS		MS	NS		NS		NS	
LSW031DL	Southeast Plume Monitoring Well		UAZ_UTRAU	17-Oct-2018	5.6	1.1	13.41	20.8	195.76	0	0	6			284		<EQL (1)		<EQL (1)	
LSW031DL	Southeast Plume Monitoring Well		UAZ_UTRAU	08-Oct-2019	5.2	0.6	14.4	22.2	194.77	0	0	1			286		[0.55]		<EQL (1)	
LSW032DL	Southeast Plume Monitoring Well	LUC Boundary Monitoring Well	UAZ_UTRAU	08-Oct-2019	5.8	0.4	16.6	22.8	192.33	0	0	3			[0.423]		<EQL (1)		<EQL (1)	
LAW 2C	Southwest Plume Monitoring Well		UAZ_UTRAU	08-Oct-2019	4.8	0.4	19.5	20.3	204.5	45	0	0			5.44		<EQL (1)		<EQL (1)	
LDB 3	Southwest Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	15-Mar-2018	5.8	0.8	39.55	26.9	213.85	20	6	0			23.8	282	NS	NA	NS	NA
LDB 3	Southwest Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	04-Jun-2018	5.7	1.4	38.6	27.8	214.8	21	0	45			9.2	282	NS	NA	NS	NA
LDB 3	Southwest Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	08-Aug-2018	5.9	1	37.5	27.2	215.9	22	0	24			[0.806]	282	NS	NA	NS	NA
LDB 3	Southwest Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	18-Oct-2018	6	0.7	37.7	28.6	215.7	21	0	21			[0.601]	282	<EQL (1)	NA	<EQL (1)	NA
LDB 3	Southwest Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	01-Nov-2018	5.9	1.2	37.6	27.3	215.8	21	0	28			1.34	282	NS	NA	NS	NA
LDB 3	Southwest Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	08-Feb-2019	6	1.2	34.4	26.9	219	26	0	27			<EQL (0.927)	282	NS	NA	NS	NA
LDB 3	Southwest Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	11-Jun-2019	6	1	35.9	27.8	217.5	20	0	42			<EQL (0.861)	282	NS	NA	NS	NA
LDB 3	Southwest Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	29-Aug-2019	6	1.9	36.7	26.8	216.7	21	0	28			<EQL (0.988)	282	NS	NA	NS	NA
LDB 3	Southwest Plume Monitoring Well	Key Source Zone Monitoring Well	UAZ_UTRAU	09-Oct-2019	6	3.2	37.9	26.7	215.5	24	0	69			8.54	282	<EQL (1)	NA	<EQL (1)	NA
LSP 8DU	Southwest Plume Monitoring Well		UAZ_UTRAU	08-Oct-2019	5	13.9	38.42	23.7	211.3	0	0	2			<EQL (2.7)		<EQL (1)		<EQL (1)	
LSW 24A	Southwest Plume Monitoring Well		GAU	08-Oct-2019	5.7	1.8	29.6	22.5	172.94	2	0	14			<EQL (0.95)		<EQL (1)		<EQL (1)	
LSW 25DL	Southwest Plume Monitoring Well		UAZ_UTRAU	22-Oct-2018	4.8	0.2	6.7	19.3	196.38	16	0	0			472		50.7		[0.44]	
LSW 25DL	Southwest Plume Monitoring Well		UAZ_UTRAU	08-Oct-2019	4.8	0.2	7.33	20	195.75	15	0	0			390		48		<EQL (1)	
LSW026DL	Southwest Plume Monitoring Well		UAZ_UTRAU	17-Oct-2018	5.6	1.6	23.92	20.5	193.21	0	0	7			2.78		2.03		<EQL (1)	
LSW026DL	Southwest Plume Monitoring Well		UAZ_UTRAU	08-Oct-2019	6.7	2	24.6	20.7	192.53	0	0	7			2.55		1.3		<EQL (1)	
LSW030DL	Southwest Plume Monitoring Well		UAZ_UTRAU	17-Oct-2018	5.3	4.2	9.2	20.7	195.95	0	0	5			28.2		6.19		2.15	
LSW030DL	Southwest Plume Monitoring Well		UAZ_UTRAU	08-Oct-2019	5.7	0.4	10	23.2	195.15	0	0	2			22.7		12		4.7	
LSW 8C	Western Plume Monitoring Well		LAZ_UTRAU	18-Oct-2018	5.7	3.8	57.3	18.6	194.45	1	0	9			13.8		NS		NS	
LSW 8C	Western Plume Monitoring Well		LAZ_UTRAU	08-Oct-2019	5.6	6.6	57.04	19.9	194.71	1	0	11			12.4		NS		NS	
LSW 8DL	Western Plume Monitoring Well		UAZ_UTRAU	18-Oct-2018	5.5	6.9	55	19	196.75	2	0	6			11.2		NS		NS	
LSW 8DL	Western Plume Monitoring Well		UAZ_UTRAU	08-Oct-2019	5.6	**18.8**	54.42	20.3	197.33	1	0	9			8.6		NS		NS	
LSW 9C	Western Plume Monitoring Well		LAZ_UTRAU	18-Oct-2018	6.2	2.6	34	19.4	190.56	2	0	35			10.9		NS		NS	
LSW 9C	Western Plume Monitoring Well		LAZ_UTRAU	08-Oct-2019	6.7	1.1	34.5	20.8	190.06	2	0	51			11.7		NS		NS	
LSW 9DL	Western Plume Monitoring Well		UAZ_UTRAU	18-Oct-2018	6.1	14.8	33.3	18.9	191.26	2	0	14			38.2		NS		NS	
LSW 9DL	Western Plume Monitoring Well		UAZ_UTRAU	08-Oct-2019	6.1	12.7	33.82	21	190.74	2	0	20			34.7		NS		NS	
LSW 12C	Western Plume Monitoring Well	LUC Boundary Monitoring Well	LAZ_UTRAU	18-Oct-2018	7.7	1.7	53.61	18.5	182.13	1	0	44			1.1		NS		NS	
LSW 12C	Western Plume Monitoring Well	LUC Boundary Monitoring Well	LAZ_UTRAU	08-Oct-2019	8	5.9	53.8	20.2	181.94	1	0	80			[1.02]		NS		NS	
LSW 12DL	Western Plume Monitoring Well	LUC Boundary Monitoring Well	UAZ_UTRAU	18-Oct-2018	7.7	2.6	53.8	18.6	181.94	1	0	21			<EQL (0.832)		NS		NS	
LSW 12DL	Western Plume Monitoring Well	LUC Boundary Monitoring Well	UAZ_UTRAU	08-Oct-2019	7.4	4.4	53.75	21.2	181.99	1	0	13			<EQL (0.908)		NS		NS	
LSW 14C	Western Plume Monitoring Well		LAZ_UTRAU	16-Oct-2018	7	2.4	16.5	20.8	188.17	1	0	84			7.48		NS		NS	
LSW 14C	Western Plume Monitoring Well		LAZ_UTRAU											Lab Duplicate	7.56					
LSW 14C	Western Plume Monitoring Well		LAZ_UTRAU	08-Oct-2019	7.6	0.8	17.1	21.2	187.57	1	0	80			6.3		NS		NS	
LSW 14DL	Western Plume Monitoring Well		UAZ_UTRAU	16-Oct-2018	5.4	0.7	15.5	20.8	189.17	1	0	4			3.96		NS		NS	
LSW 14DL	Western Plume Monitoring Well		UAZ_UTRAU	08-Oct-2019	5.3	0.6	16.4	21.8	188.27	1	0	4			3.05		NS		NS	
LSW014A	Western Plume Monitoring Well		GAU	16-Oct-2018	6.3	11.1	41.3	20.5	167.63	0	0	25			<EQL (0.856)		NS		NS	
LSW014A	Western Plume Monitoring Well		GAU	08-Oct-2019	6.6	3.6	42.6	20.1	166.33	0	0	29			<EQL (0.926)		NS		NS	
LSW027A	Western Plume Monitoring Well	LUC Boundary Monitoring Well	GAU	18-Oct-2018	6.3	8.5	28.7	19.2	168.9	0	0	65			<EQL (0.894)		NS		NS	
LSW027A	Western Plume Monitoring Well	LUC Boundary Monitoring Well	GAU	08-Oct-2019	6.3	7.9	29.9	20.7	167.7	0	0	65			<EQL (0.871)		NS		NS	
LSW027A	Western Plume Monitoring Well	LUC Boundary Monitoring Well	GAU											Lab Duplicate	<EQL (0.873)					
LSW027C	Western Plume Monitoring Well	LUC Boundary Monitoring Well	LAZ_UTRAU	18-Oct-2018	7	1.3	11	19.1	186.86	0	0	64			<EQL (0.833)		NS		NS	
LSW027C	Western Plume Monitoring Well	LUC Boundary Monitoring Well	LAZ_UTRAU	08-Oct-2019	7	1.5	11.3	21.1	186.56	0	0	62			<EQL (0.876)		NS		NS	
LSW028C	Western Plume Monitoring Well		LAZ_UTRAU	18-Oct-2018	7.8	1.7	14.04	19.6	189.84	0	0	69			4.99		NS		NS	
LSW028C	Western Plume Monitoring Well		LAZ_UTRAU	08-Oct-2019	7.8	1.7	14.56	19.9	189.32	0	0	56			4.59		NS		NS	
LSW029DL	Western Plume Monitoring Well		UAZ_UTRAU	08-Oct-2019	8.1	5.3	12.95	22	192.08	0	0	18			6.3		<EQL (1)		<EQL (1)	
SC20	Surface Water			17-Oct-2018	6.9	1.3	NS	26	NS	0	0	20			3.06		<EQL (1)		<EQL (1)	
SC20	Surface Water			09-Oct-2019	6.4	1.1	NS	23.4	NS	0	0	14			3.88		<EQL (1)		<EQL (1)	
SC23	Surface Water			27-Feb-2019	6.7	1.8	NS	14.6	NS	0	0	16			5.99		<EQL (1)		<EQL (1)	
SC23	Surface Water													Lab Duplicate	6.06					
SC23	Surface Water			22-Oct-2019	6.4	1.1	NS	22.8	NS	0	0	13			3.41		<EQL (1)		<EQL (1)	
SC24	Surface Water			27-Feb-2019	6.1	2.7	NS	14.1	NS	0	0	13			20.6		<EQL (1)		<EQL (1)	
SC24	Surface Water			22-Oct-2019	6.8	1.4	NS	23.1	NS	0	0	15			3.27		<EQL (1)		<EQL (1)	
SC25	Surface Water			17-Oct-2018	7	1.8	NS	24.3	NS	0	0	20			2.03		<EQL (1)		<EQL (1)	
SC25	Surface Water			22-Oct-2019	7.1	1.2	NS	23.1	NS	0	0	16			3.23		<EQL (1)		<EQL (1)	
SC27	Surface Water			17-Oct-2018	6.7	1	NS	24.4	NS	0	0	22			2.99		<EQL (1)		<EQL (1)	
SC27	Surface Water			09-Oct-2019	6.8	1.1	NS	24.4	NS	0	0	18			2.94		<EQL (1)		<EQL (1)	

Explanation
RCOC = Refined Constituent of Concern
MCL = maximum concentration limit based on Environmental Protection Agency Primary Drinking Water Standards.
LUC = Land Use Conservation

(grey)	[KSZCL = 'Key Source Zone Concentration Limit' which is equivalent to 150% of maximum value observed for KSZ monitoring wells between 2005 and 2007 monitoring period.
[##]	EPA Functional Guideline Code of 'J' was applied to the result, indicating an estimated quanity.
<EQL(##)	Constituent was below detection. The sample-specific Estimated Quantitation Limit is in parentheses.
(red)	Result exceeds the KSZCL for KSZ wells, or exceeds the MCL for surface water locations
(orange)	Result is between the MCL and the KSZCL for KSZ wells, and exceeds the MCL for all other wells.
REJ	Result Rejected.
	Result is less than the applicable limit and without EPA Functional Guidline qualifiers.
NS	Requested to be sampled but was not. See comments as to why not.
Blue Text	Not a required sample analysis.
BOLD	Turbidity level exceeds the sample quality limit of 15 NTU

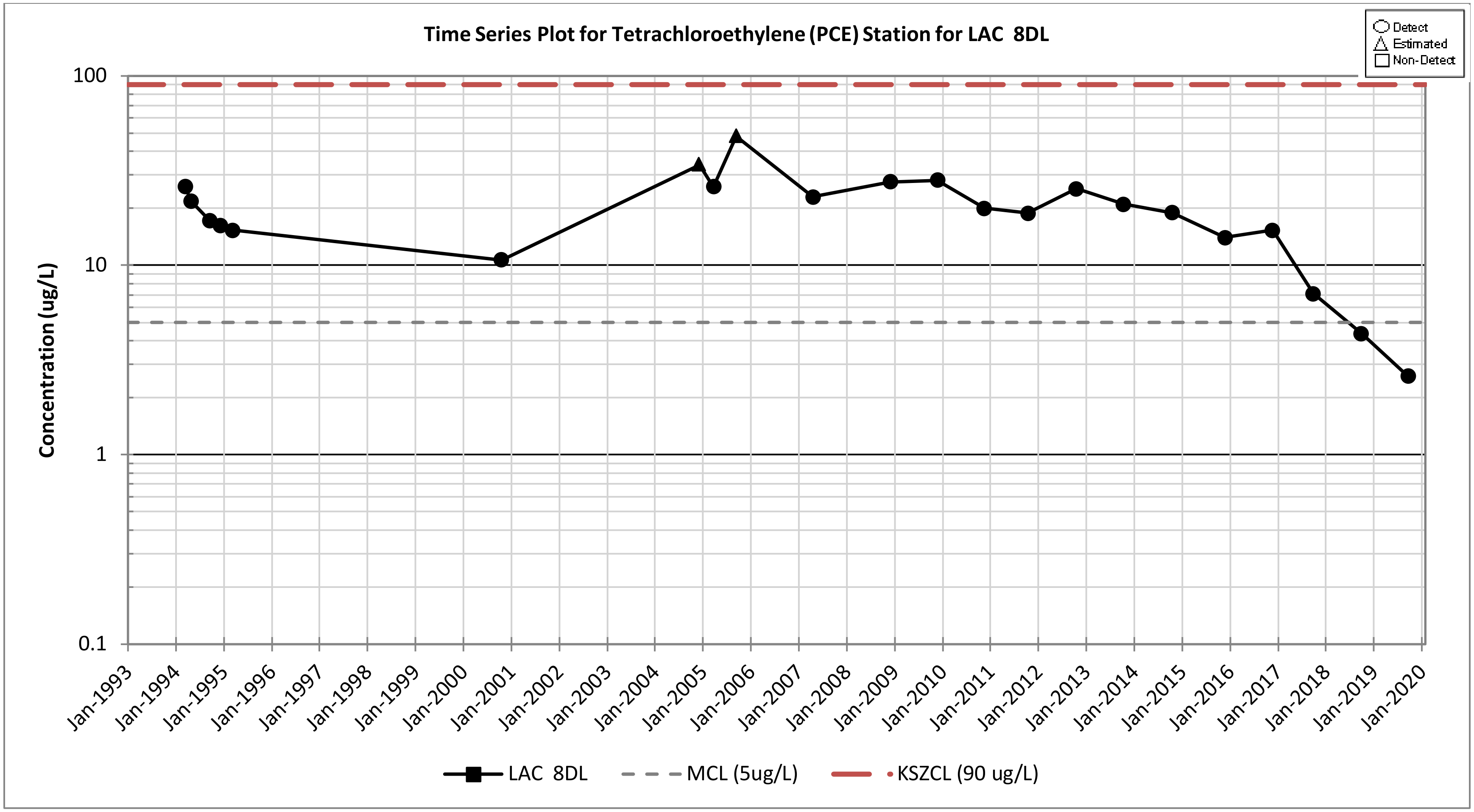
Field Conditions Codes

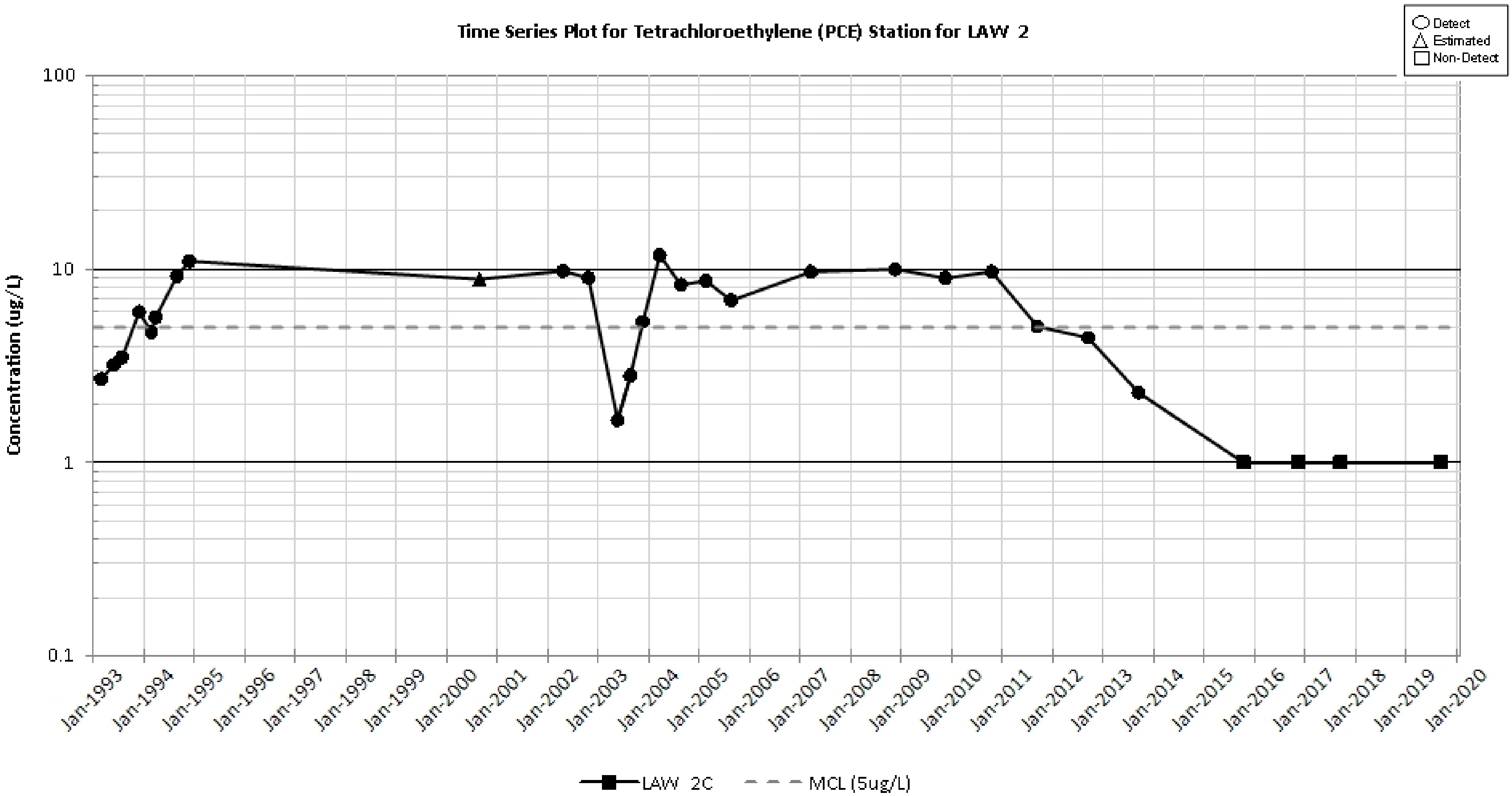
MS	Station was mistakenly not sampled.

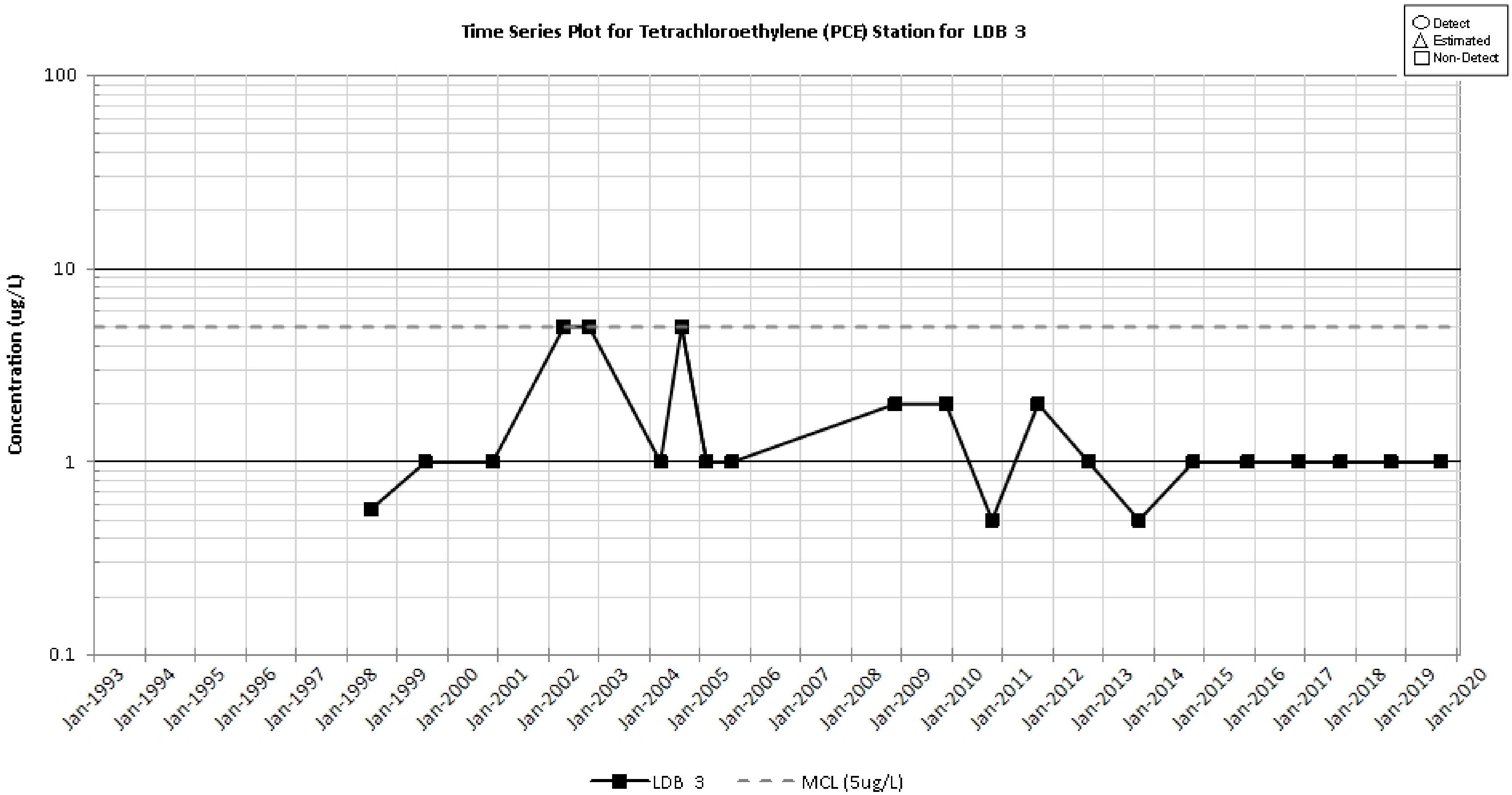
Appendix C

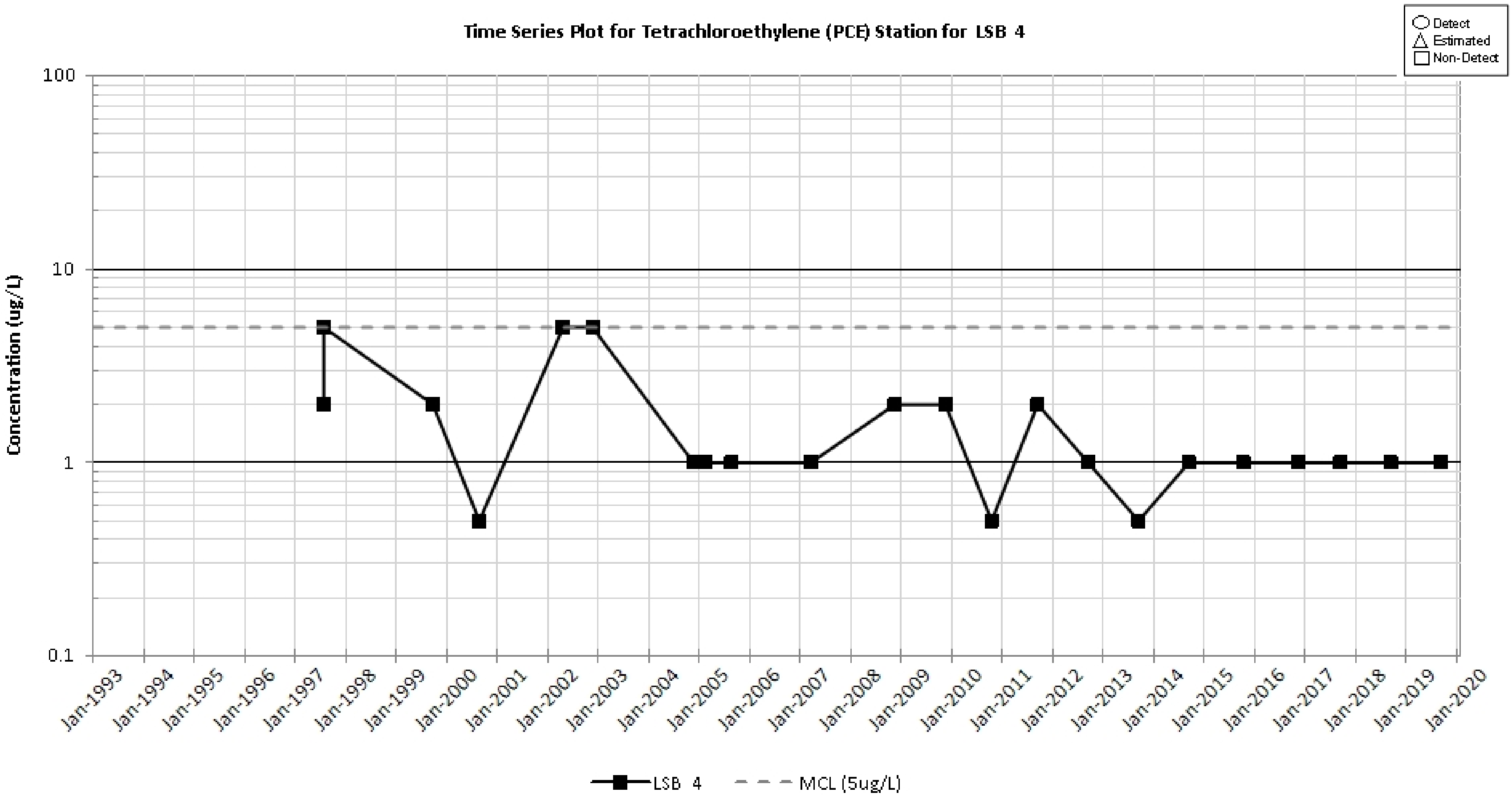
Time-Series Plots

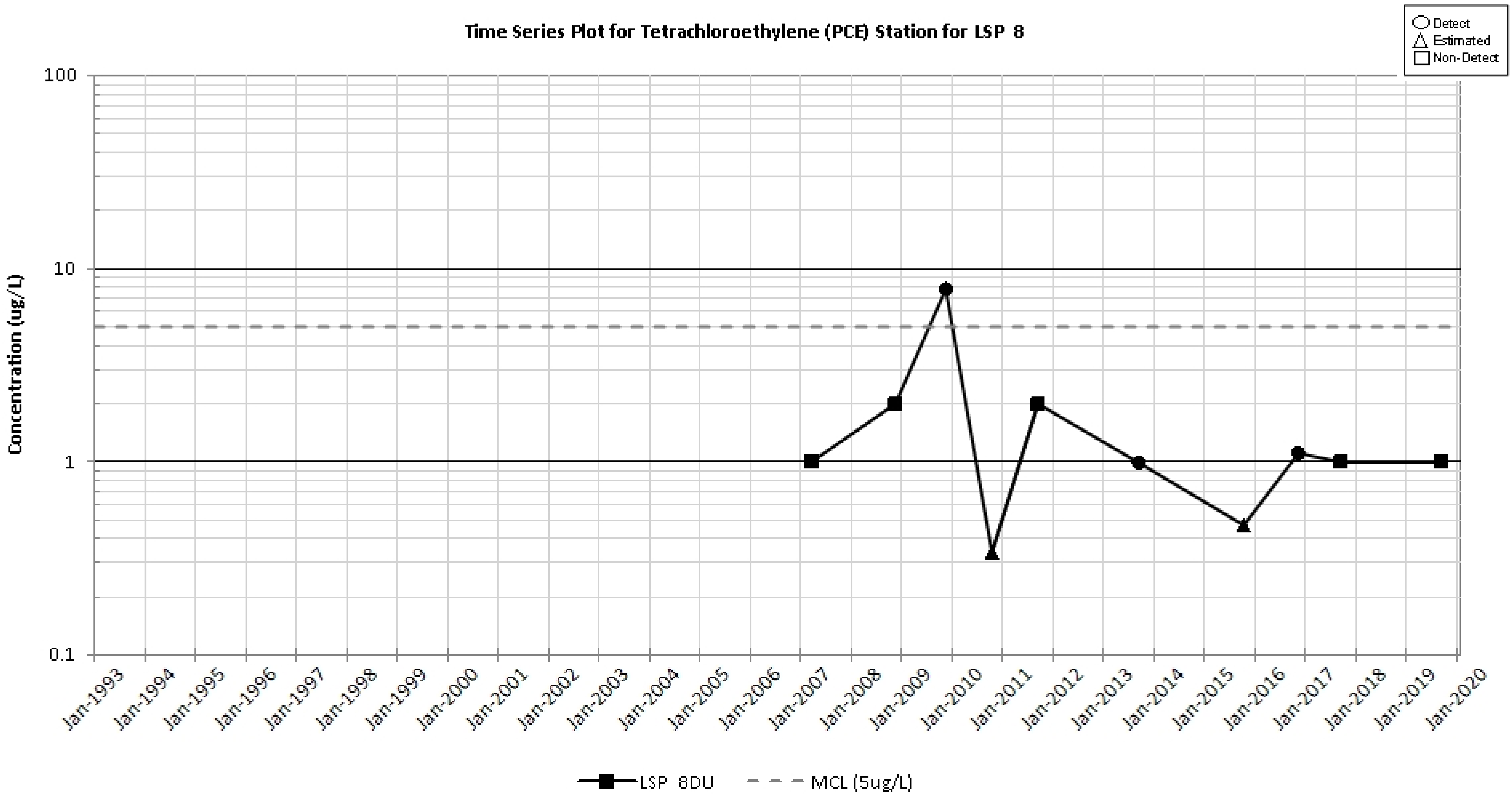
This page is intentionally left blank.

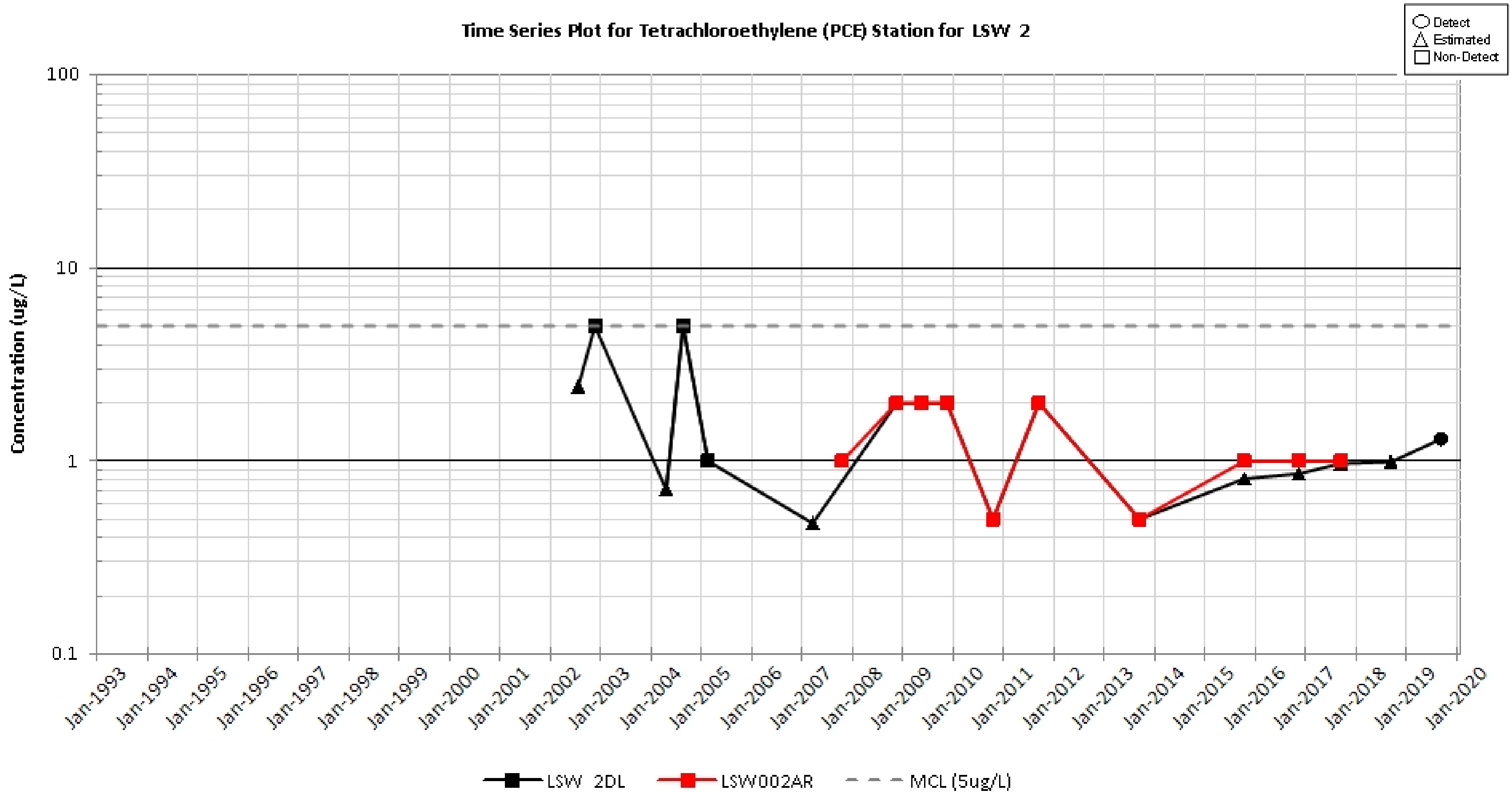

Time Series Plot for Tetrachloroethylene (PCE) Station for LAC 8DL
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LAC 8DL
MCL (5ug/L)
KSZCL (90 ug/L)

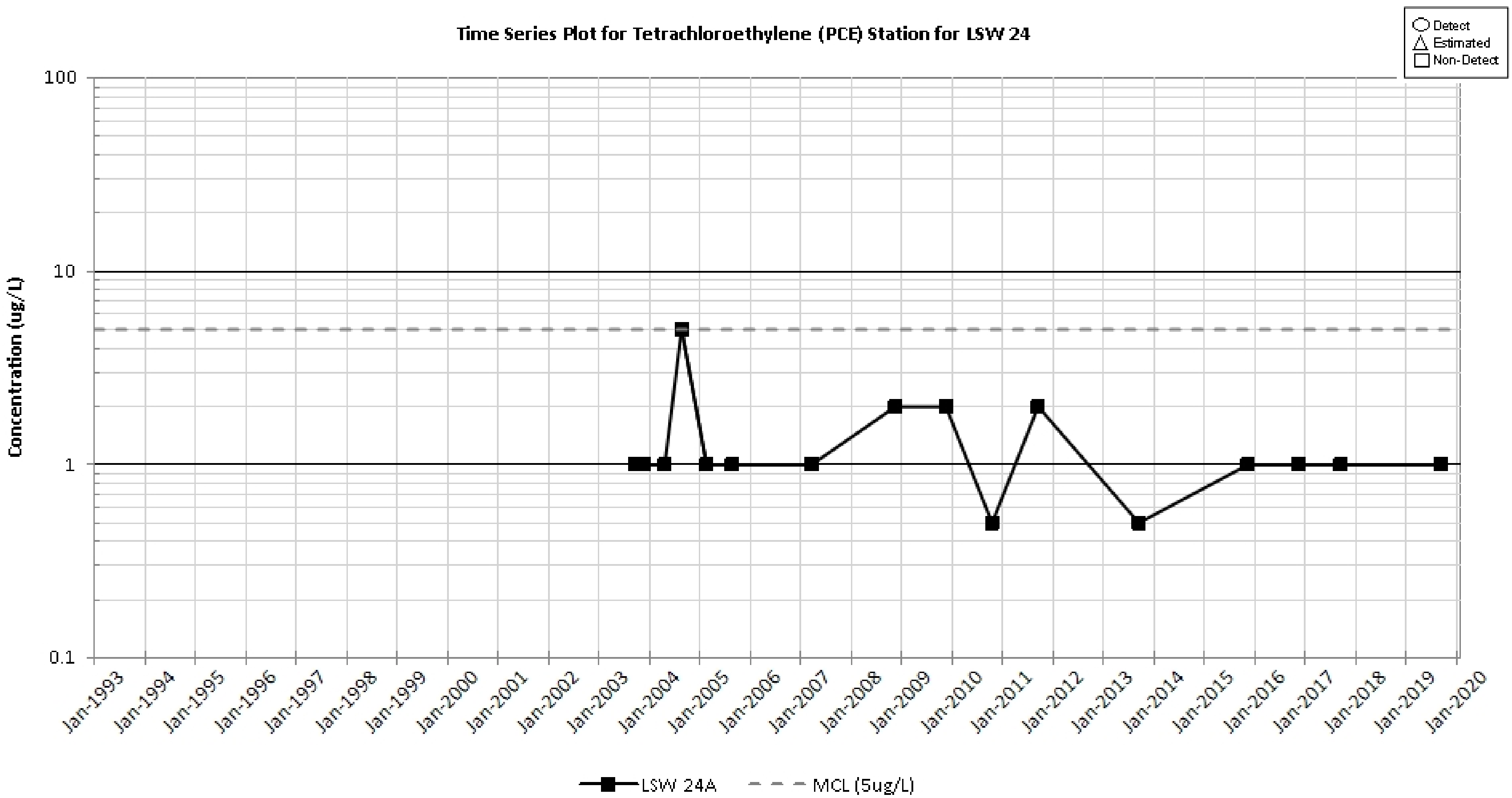

Time Series Plot for Tetrachloroethylene (PCE) Station for LAW 2
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LAW 2C
MCL (5ug/L)

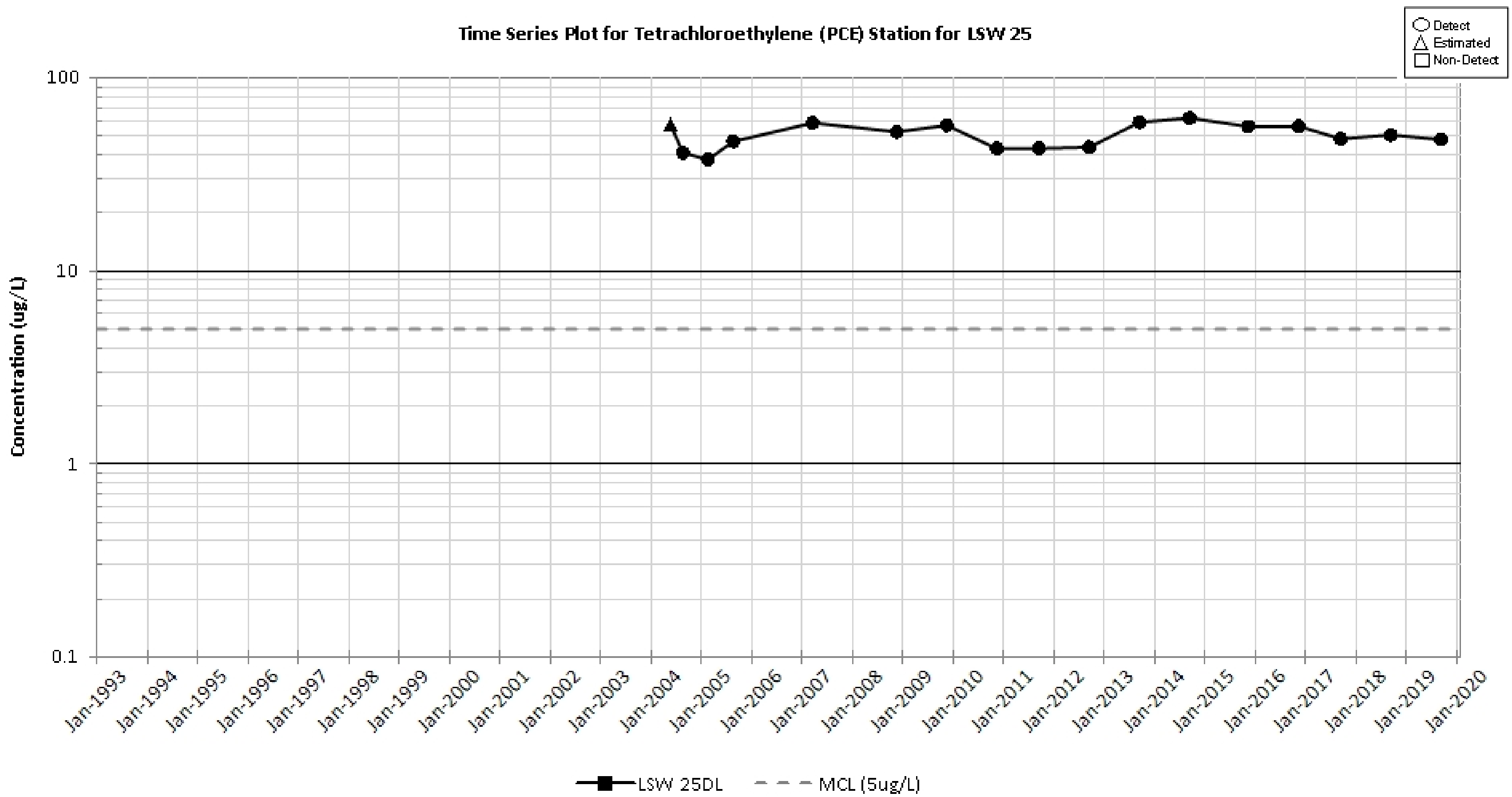

Time Series Plot for Tetrachloroethylene (PCE) Station for LDB 3
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LDB 3
MCL (5ug/L)

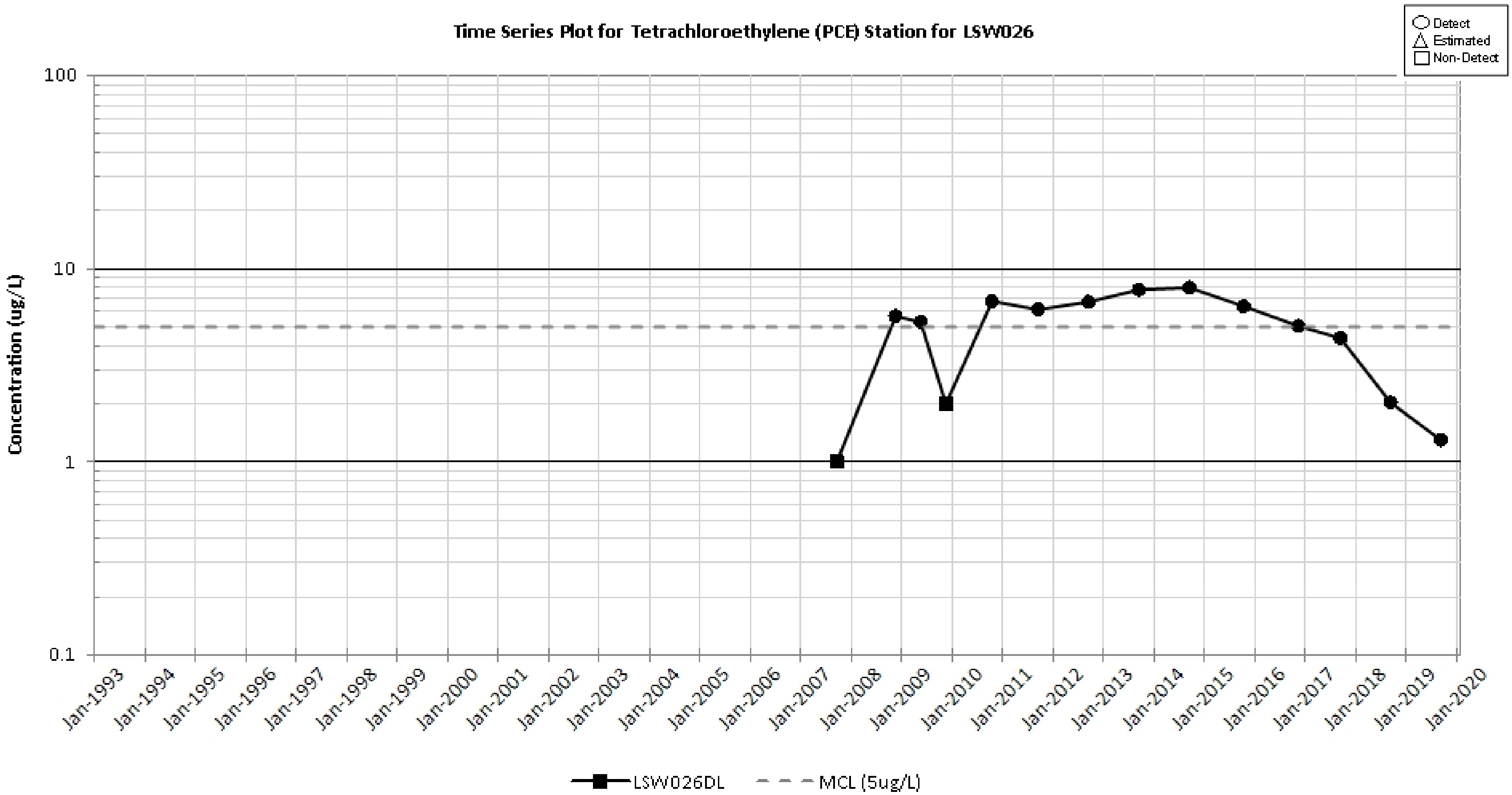

Time Series Plot for Tetrachloroethylene (PCE) Station for LSB 4
Detect
Estimated
Non-Detect
100
10
1
0.1
Concentration (ug/L)
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSB 4
MCL (5ug/L)

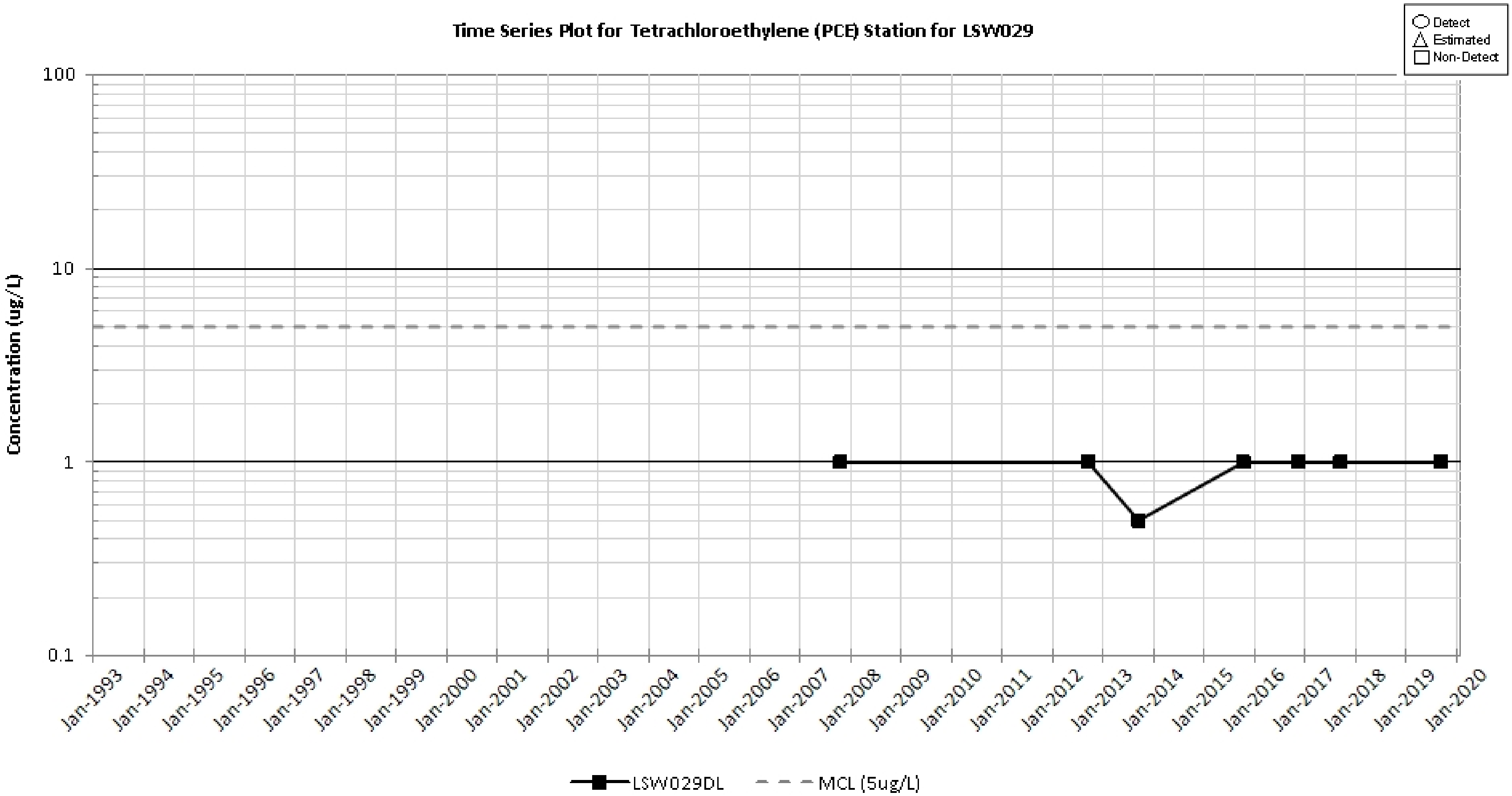

Time Series Plot for Tetrachloroethylene (PCE) Station for LSP 8
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSP 8DU
MCL (5ug/L)

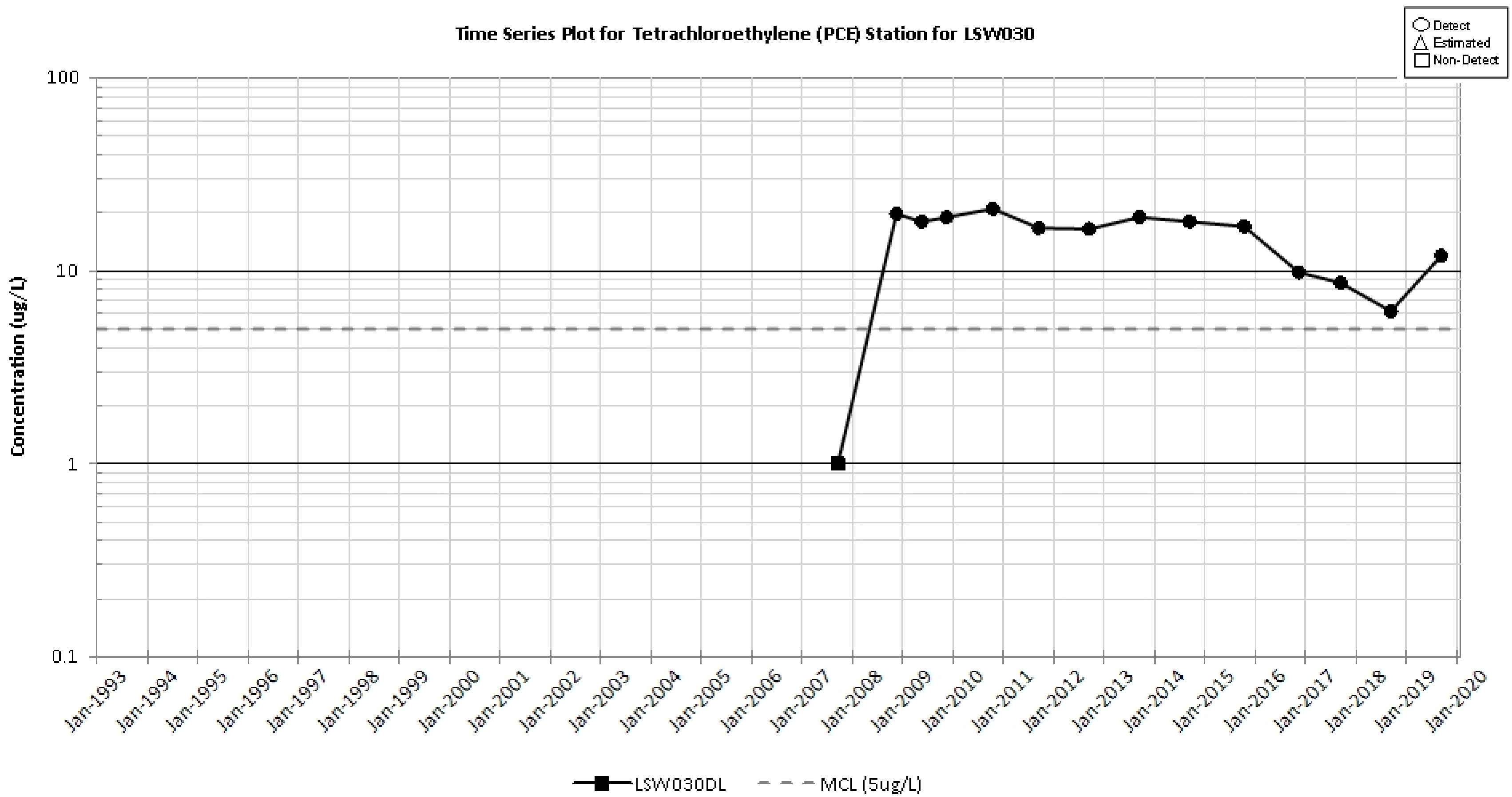

Time Series Plot for Tetrachloroethylene (PCE) Station for LSW 2
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 2DL
LSW002AR
MCL (5ug/L)

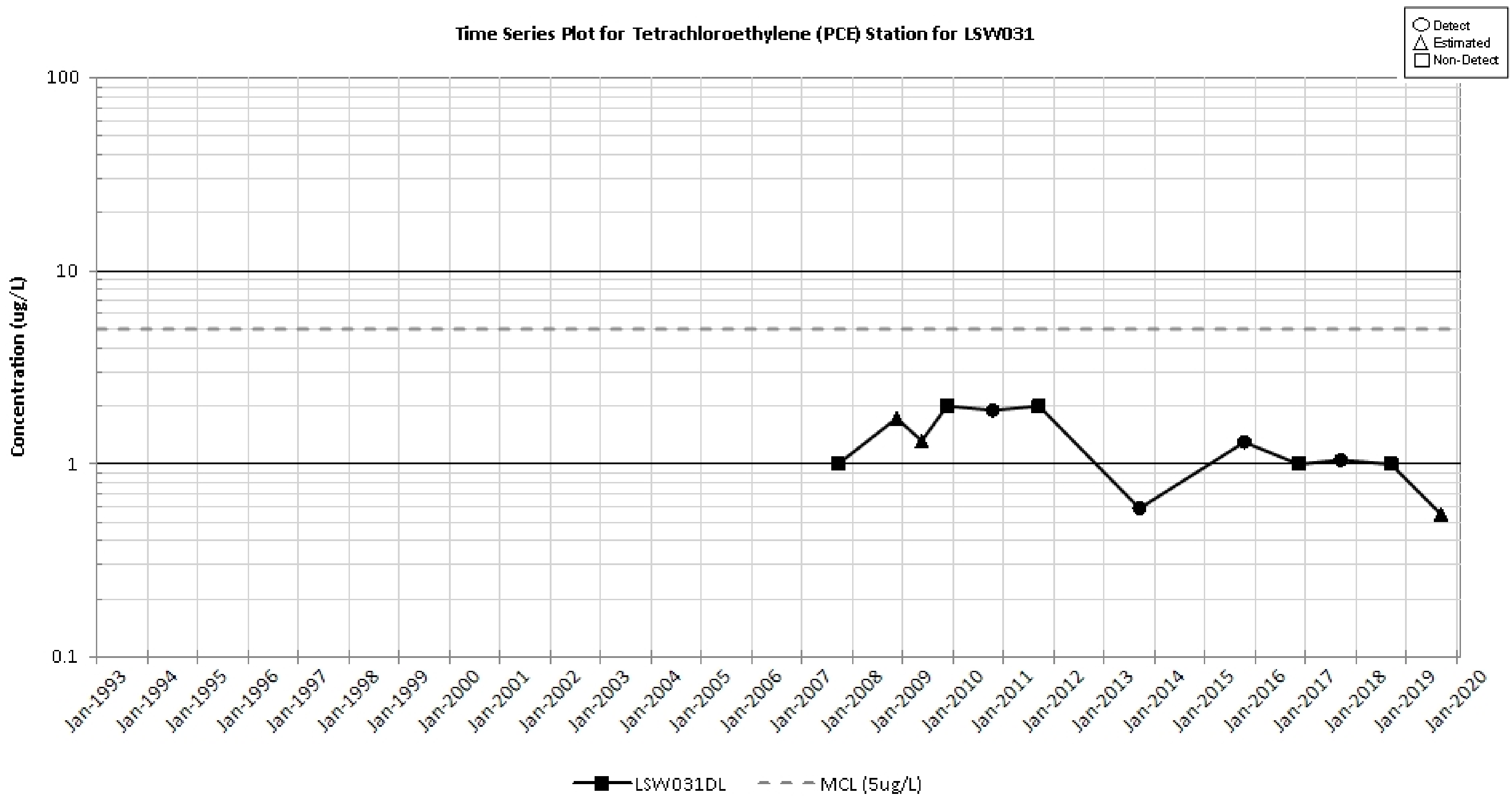

Time Series Plot for Tetrachloroethylene (PCE) Station for LSW 24
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 24A
MCL (5ug/L)

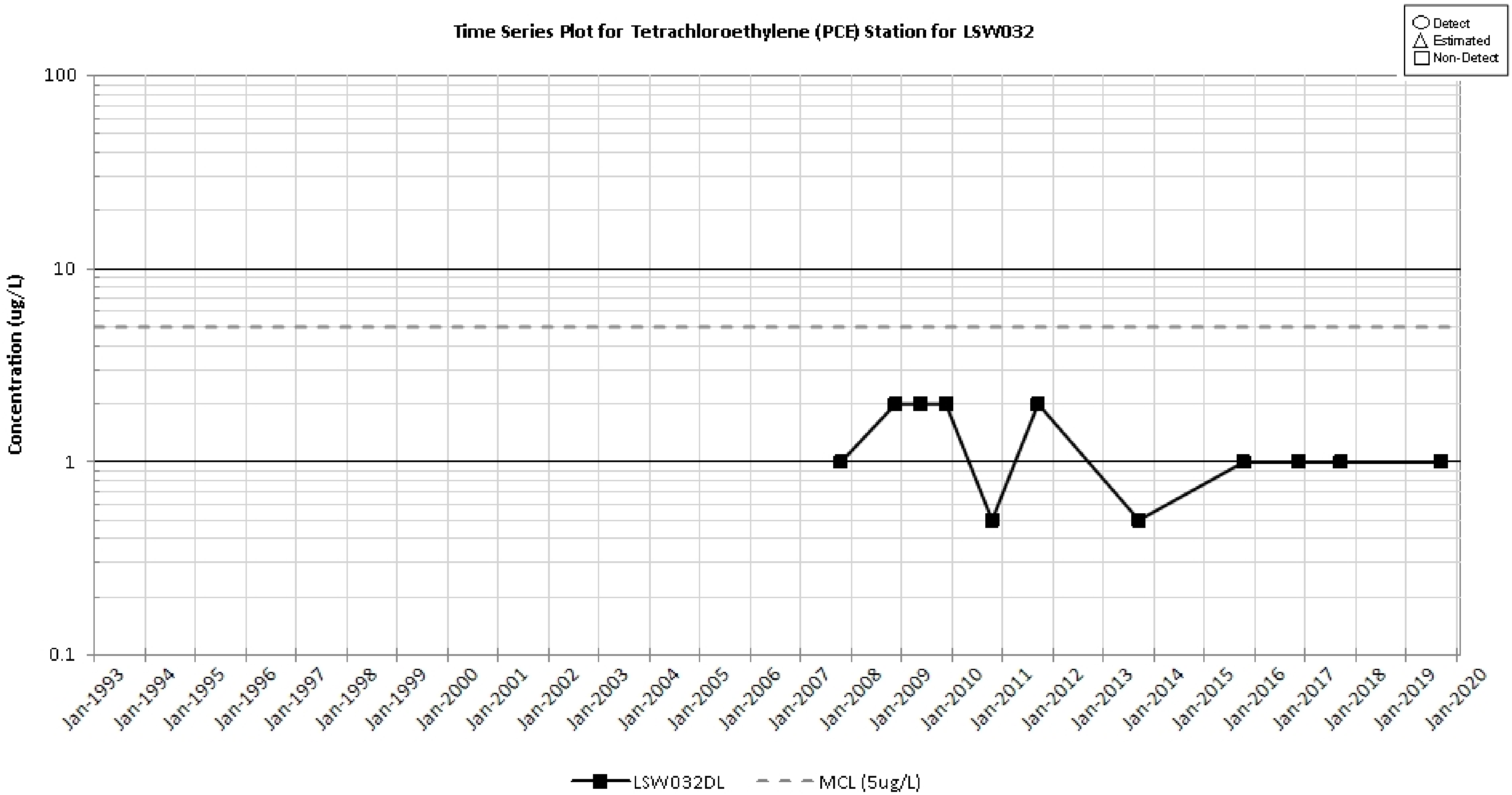

Time Series Plot for Tetrachloroethylene (PCE) Station for LSW 25
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 25DL
MCL (5ug/L)

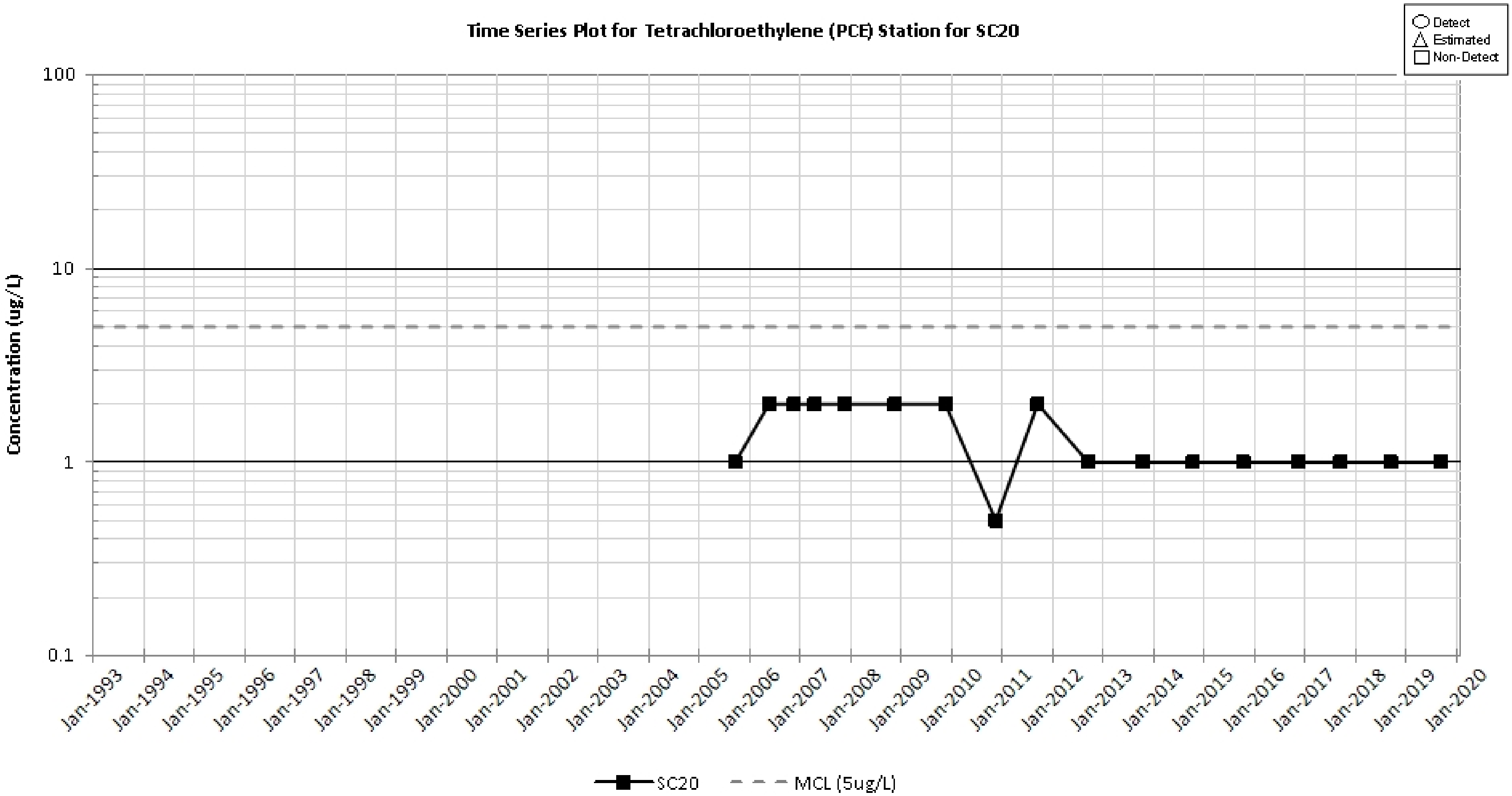

Time Series Plot for Tetrachloroethylene (PCE) Station for LSW026
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW026DL
MCL (5ug/L)

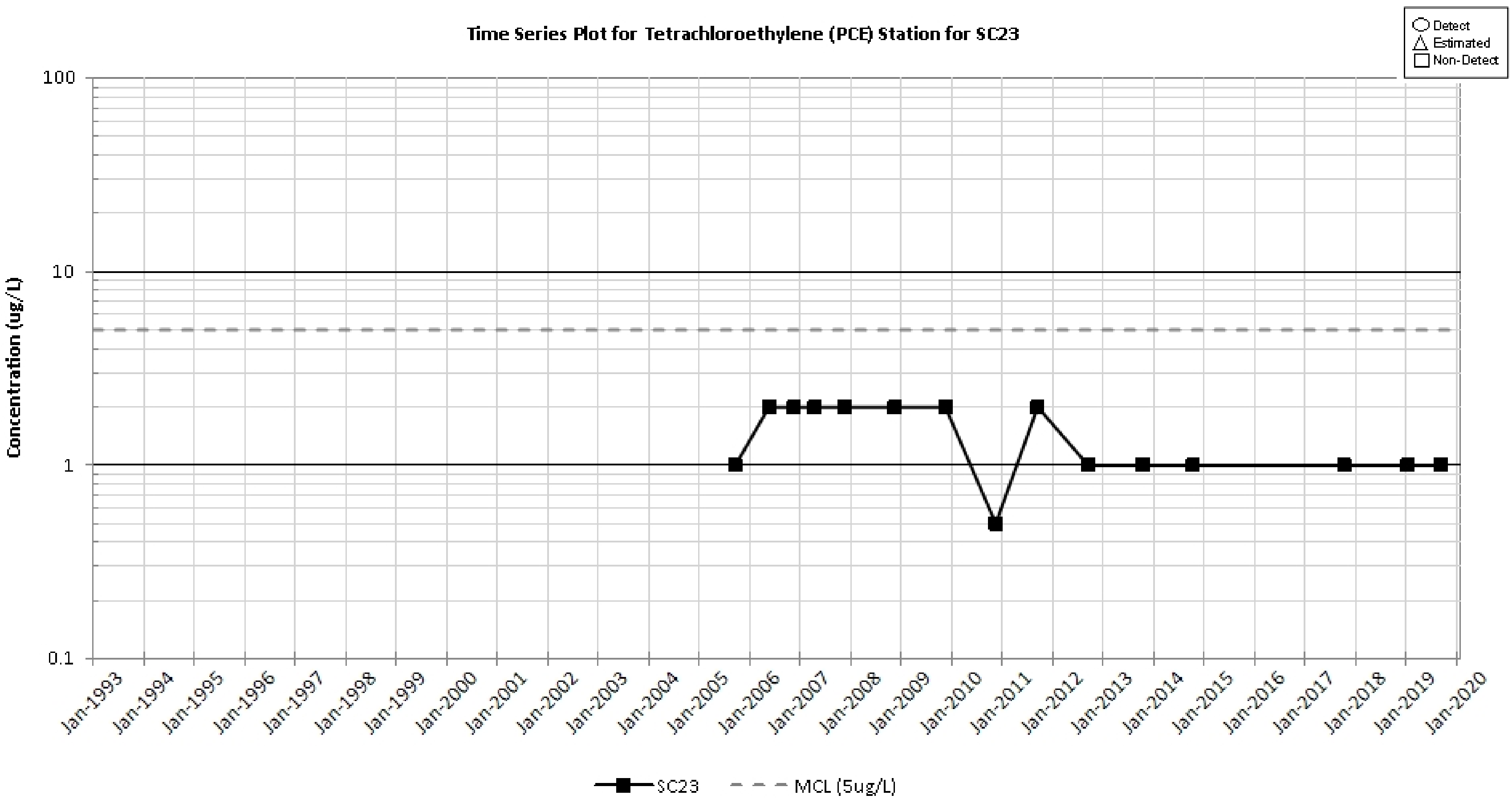

Time Series Plot for Tetrachloroethylene (PCE) Station for LSW029
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW029DL
MCL (5ug/L)

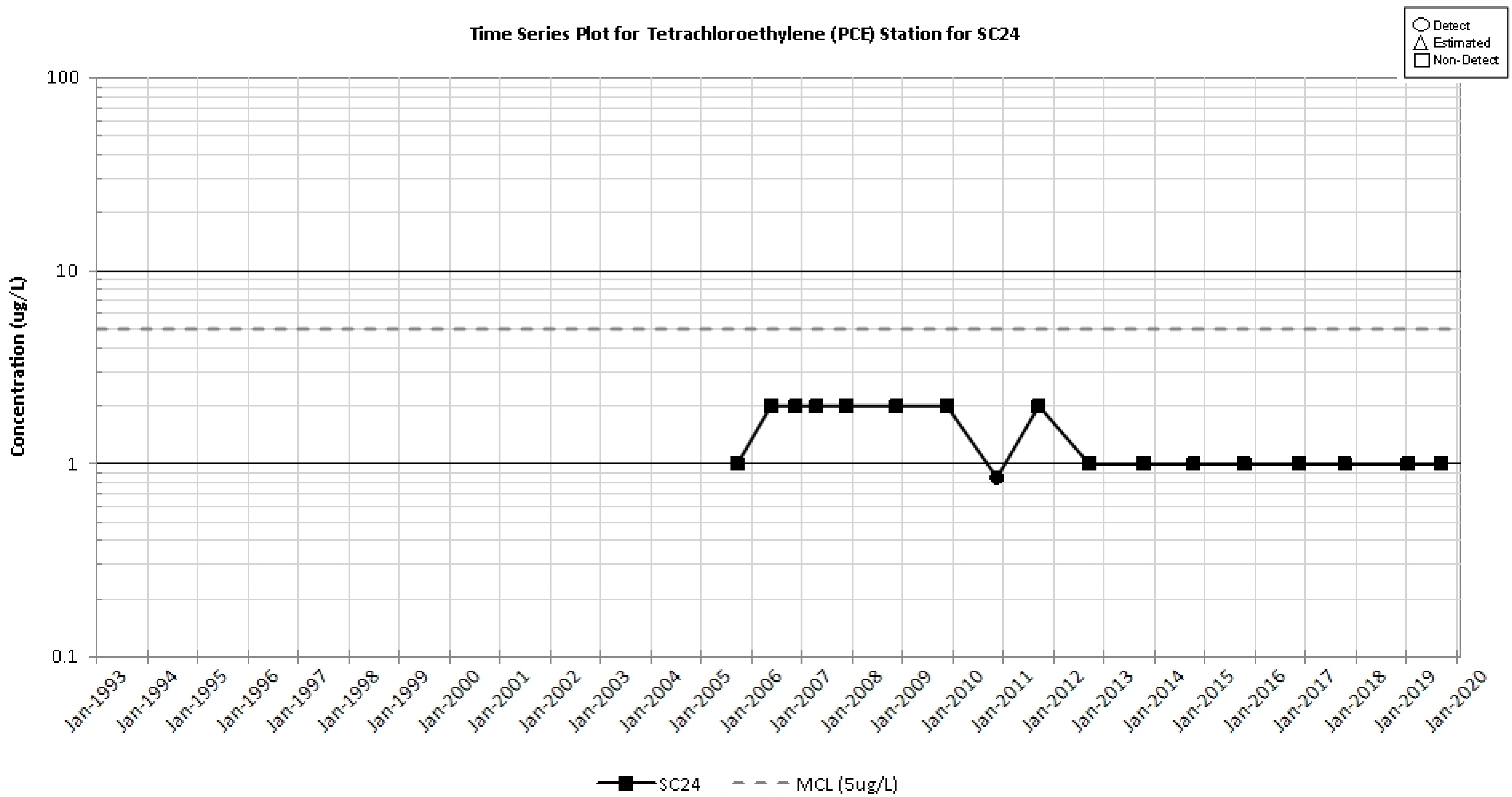

Time Series Plot for Tetrachloroethylene (PCE) Station for LSW030
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW030DL
MCL (5ug/L)

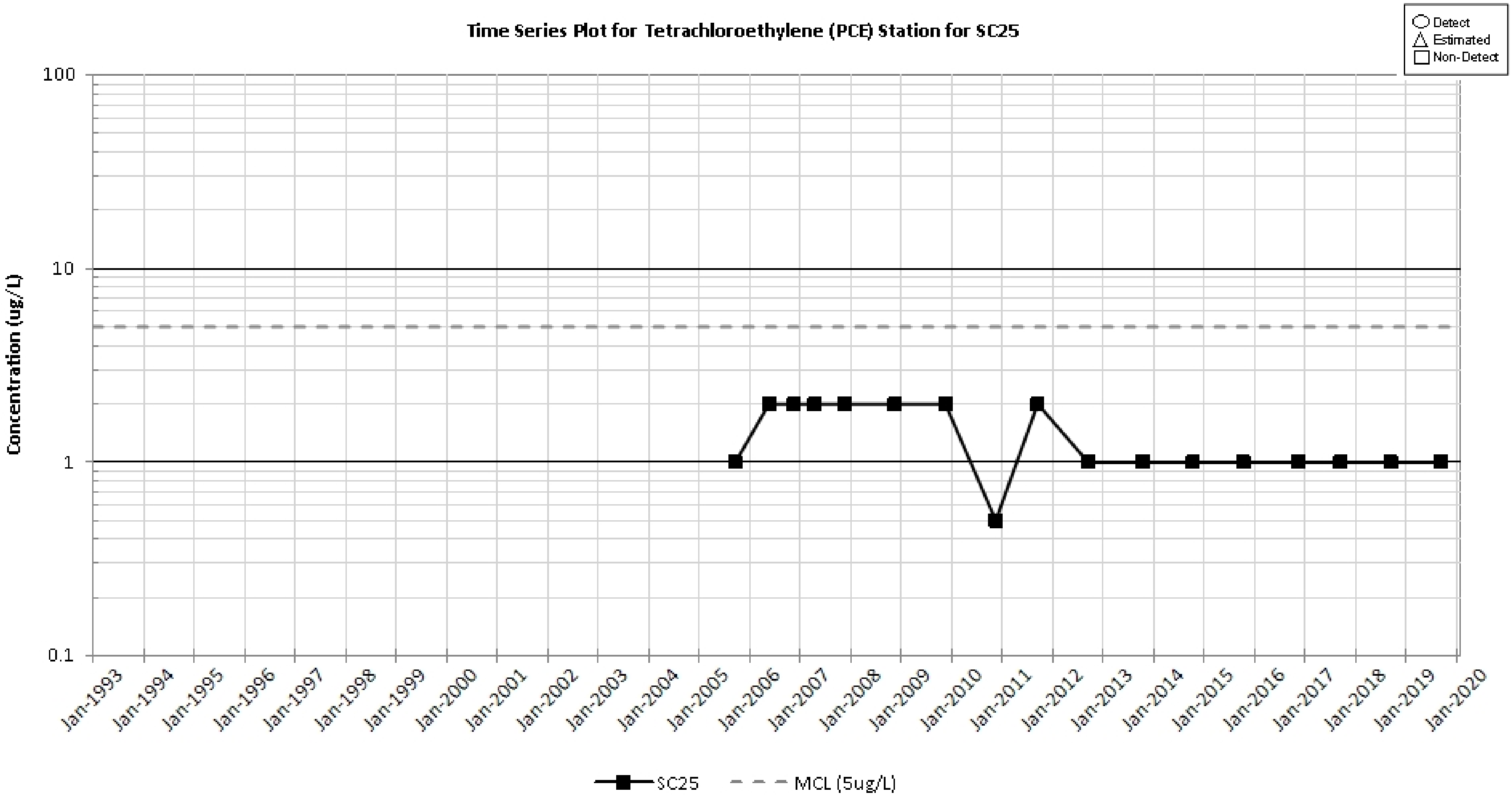

Time Series Plot for Tetrachloroethylene (PCE) Station for LSW031
Detect
Estimated
Non-Detect
100
10
1
0.1
Concentration (ug/L)
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW031DL
MCL (5ug/L)

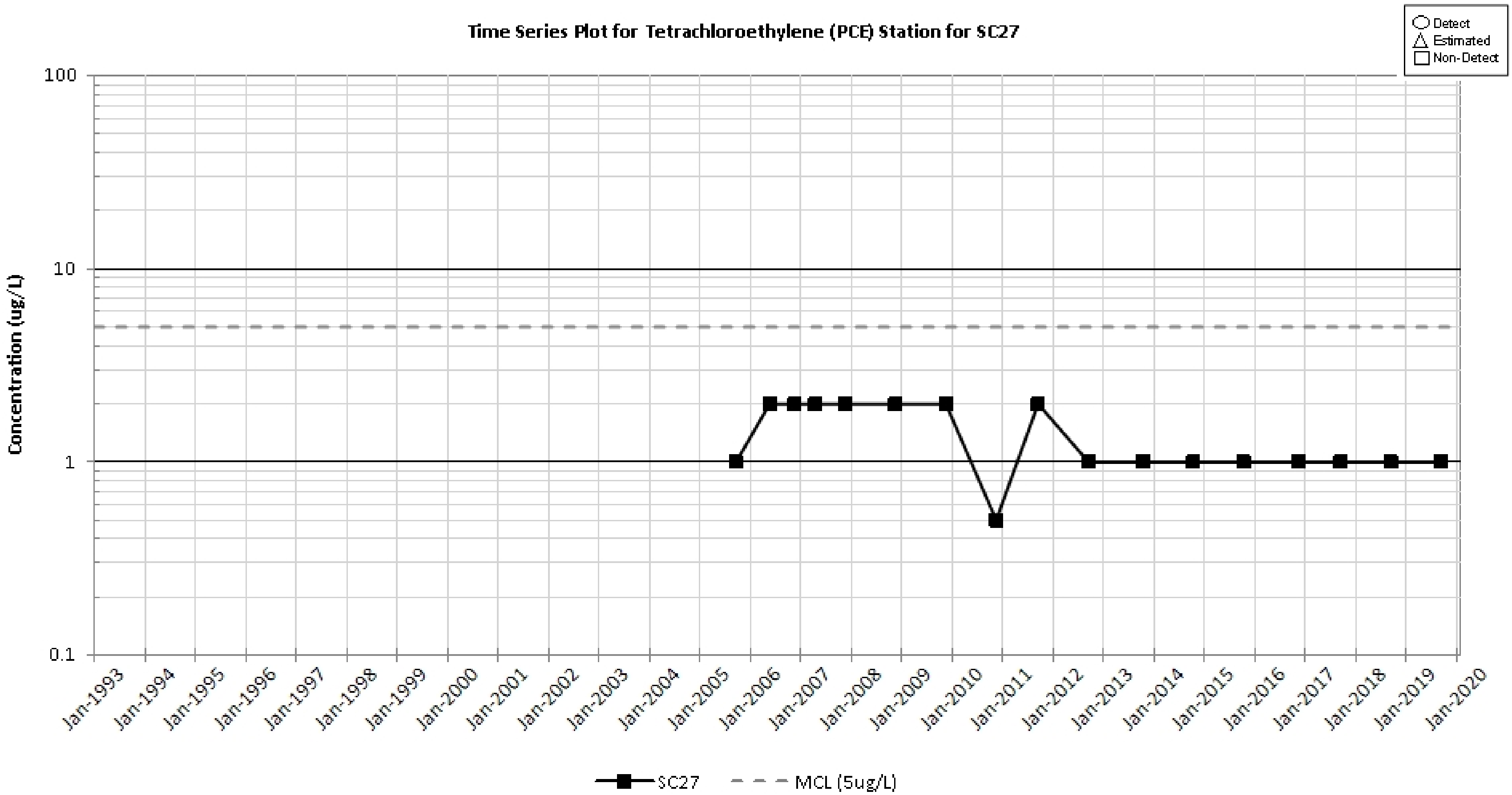

Time Series Plot for Tetrachloroethylene (PCE) Station for LSW032
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW032DL
MCL (5ug/L)


Time Series Plot for Tetrachloroethylene (PCE) Station for SC20
Detect
Estimated
Non-Detect
100
10
1
0.1
Concentration (ug/L)
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC20
MCL (5ug/L)

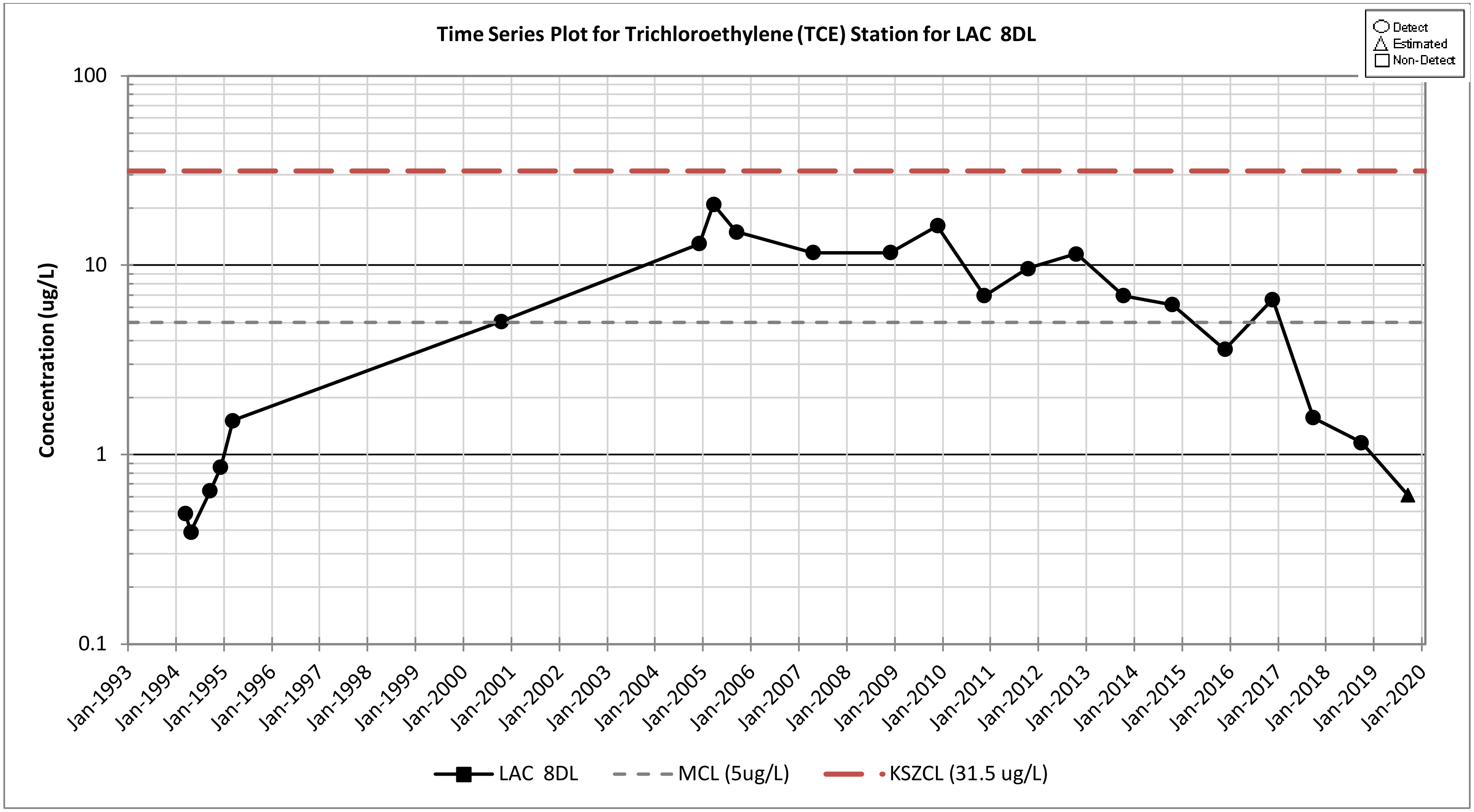

Time Series Plot for Tetrachloroethylene (PCE) Station for SC23
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC23
MCL (5ug/L)

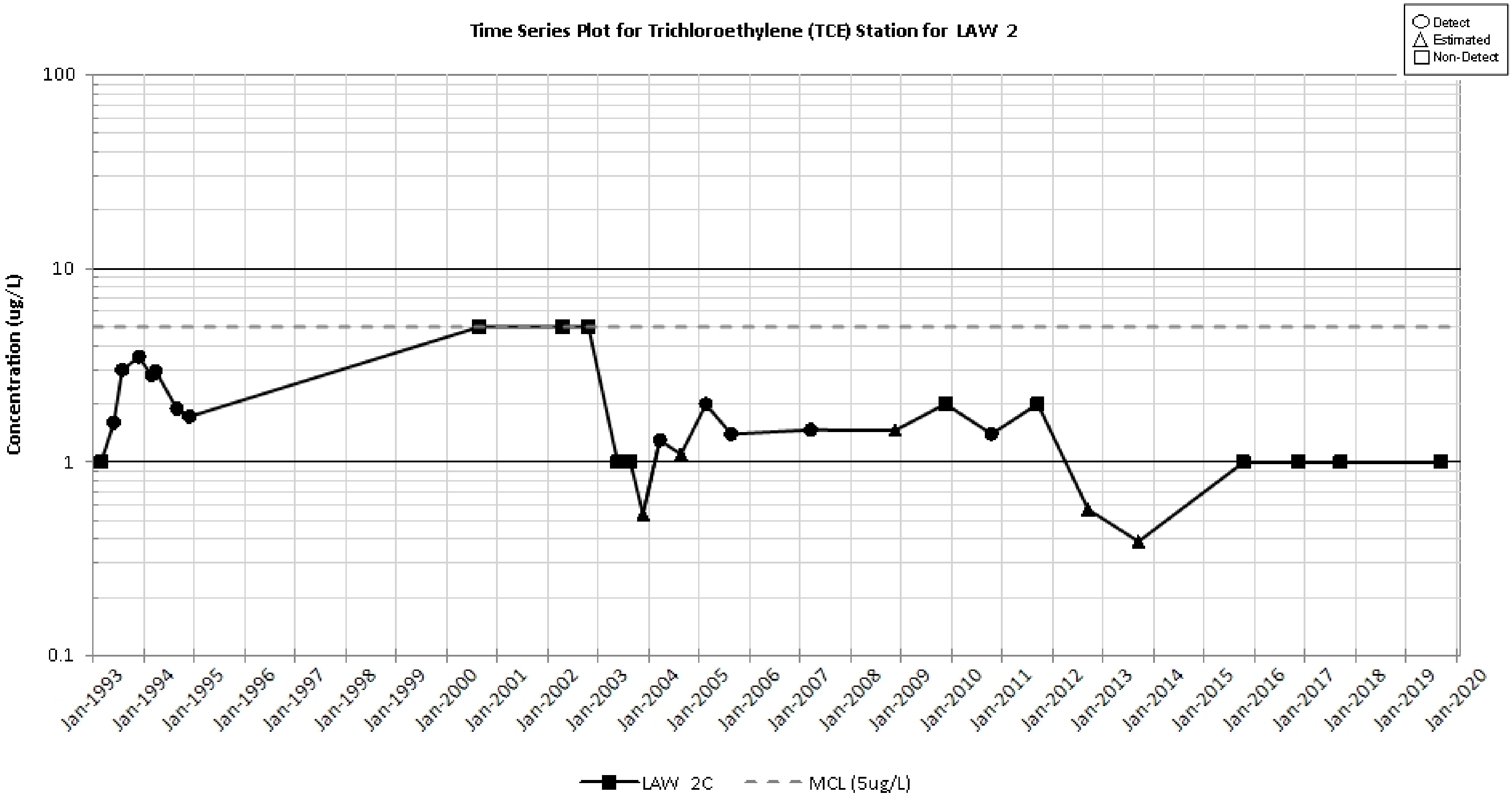

Time Series Plot for Tetrachloroethylene (PCE) Station for SC24
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC24
MCL (5ug/L)

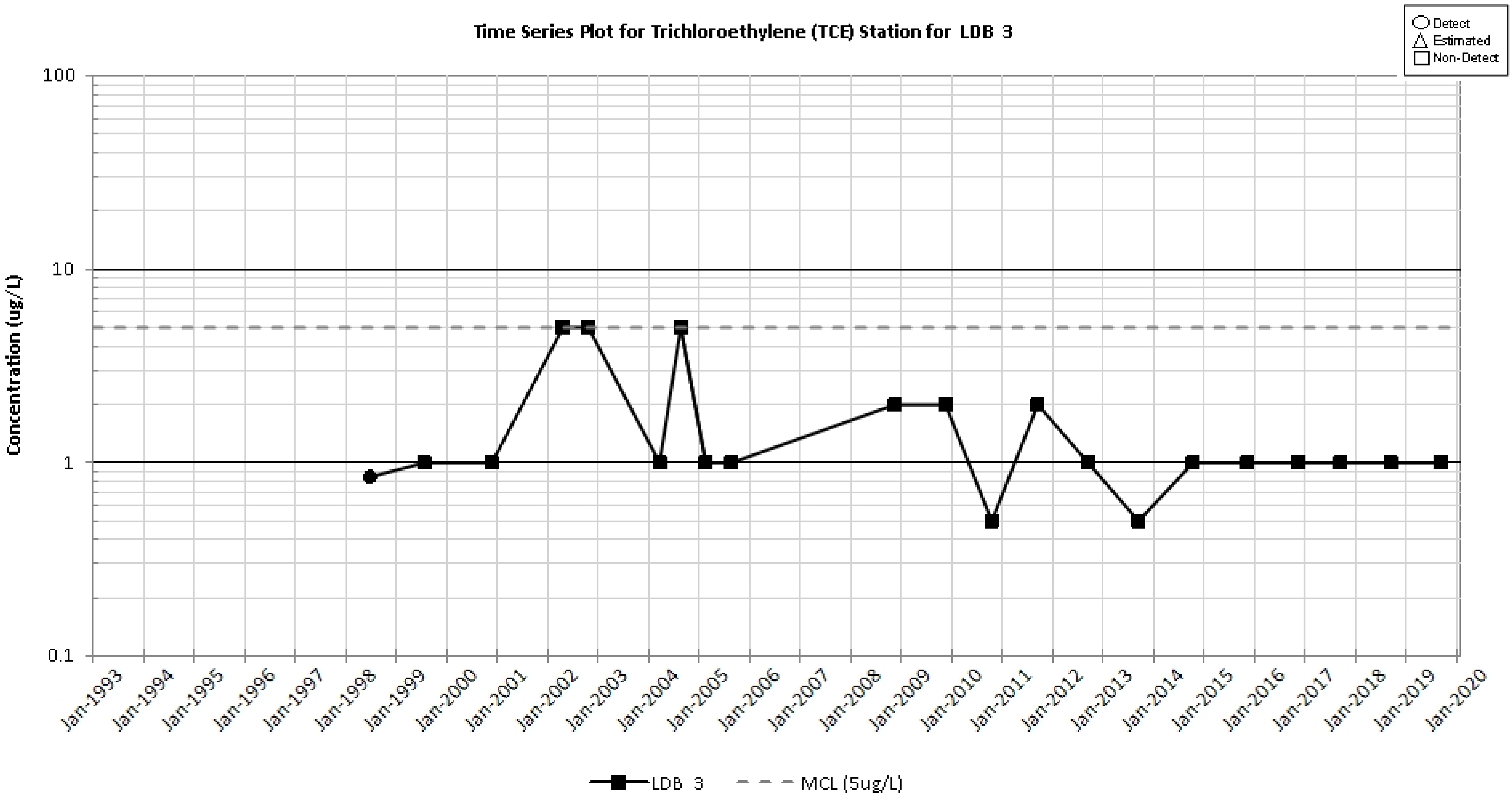

Time Series Plot for Tetrachloroethylene (PCE) Station for SC25
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC25
MCL (5ug/L)

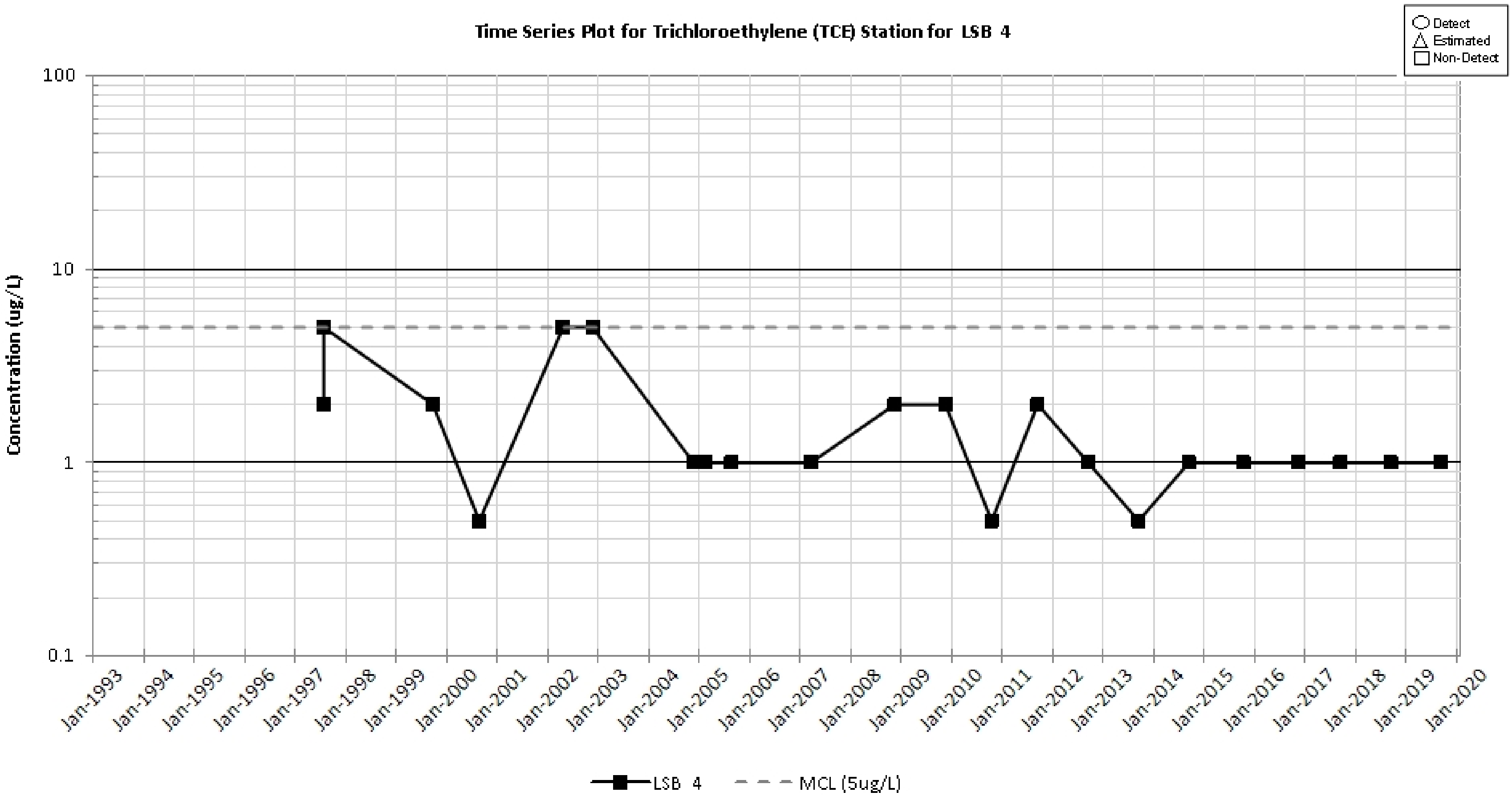


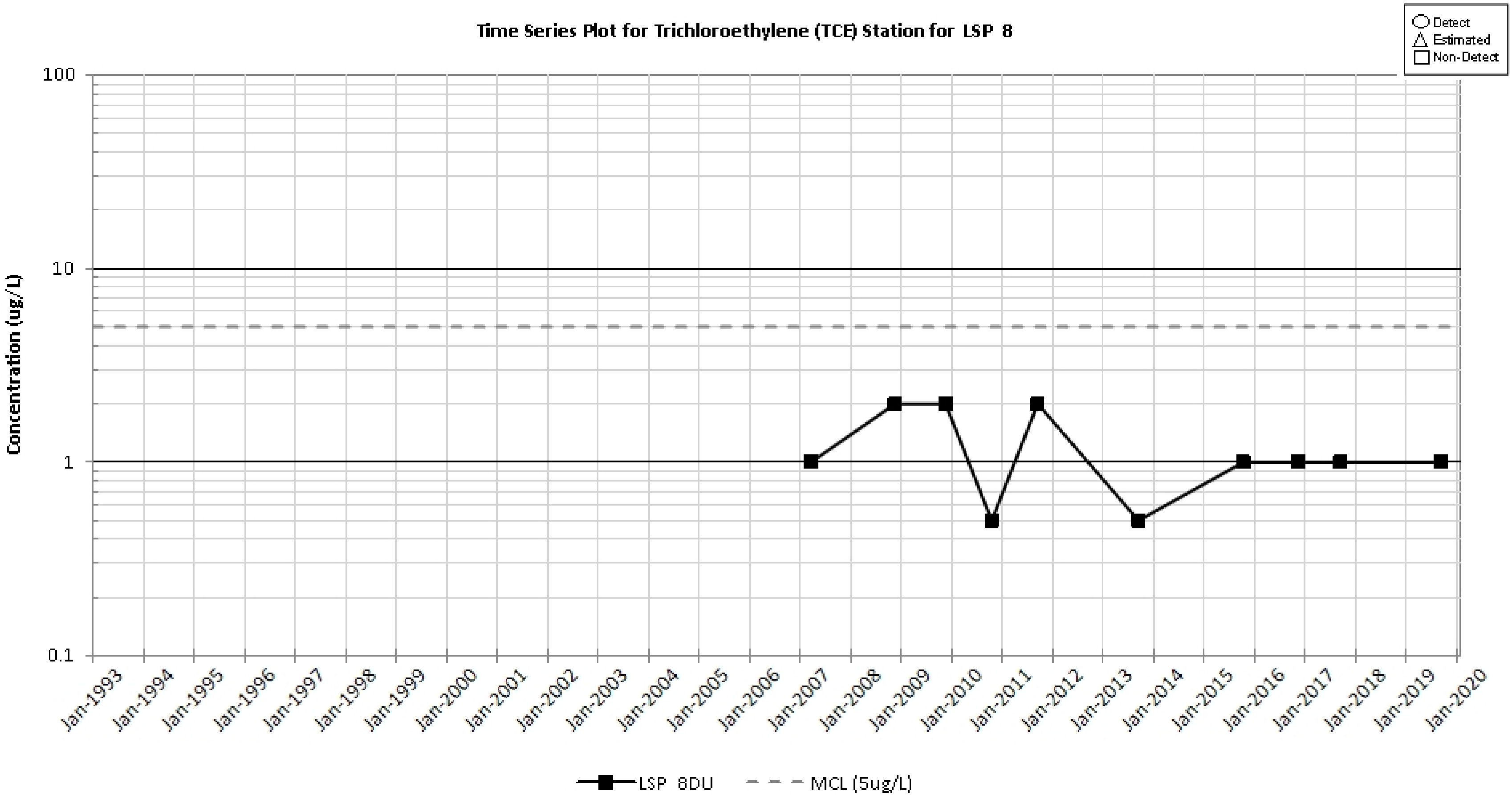
Time Series Plot for Tetrachloroethylene (PCE) Station for SC27
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC27
MCL (5ug/L)

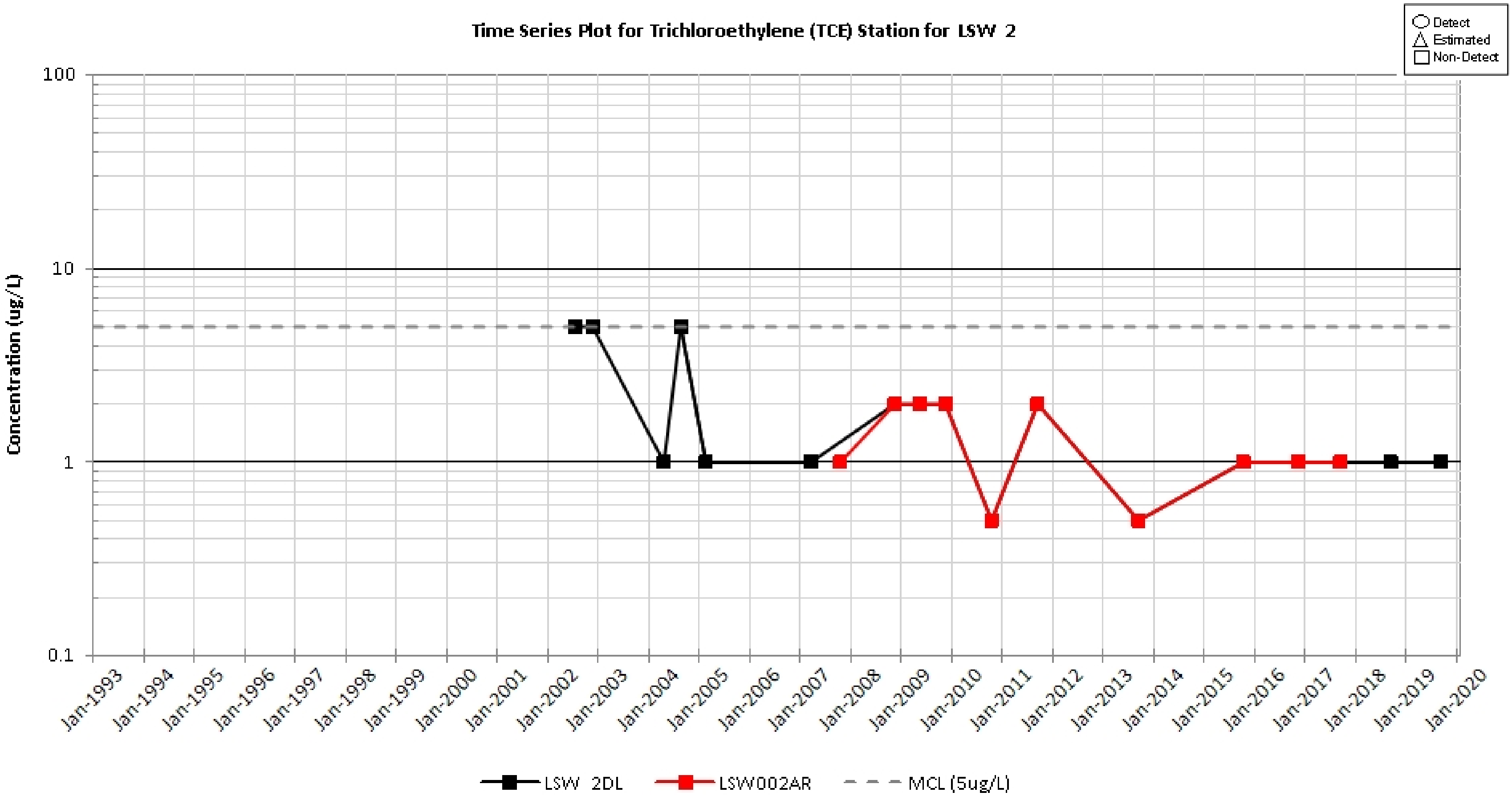

Time Series Plot for Trichloroethylene (TCE) Station for LAC 8DL
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LAC 8DL
MCL (5ug/L)
KSZCL (31.5 ug/L)

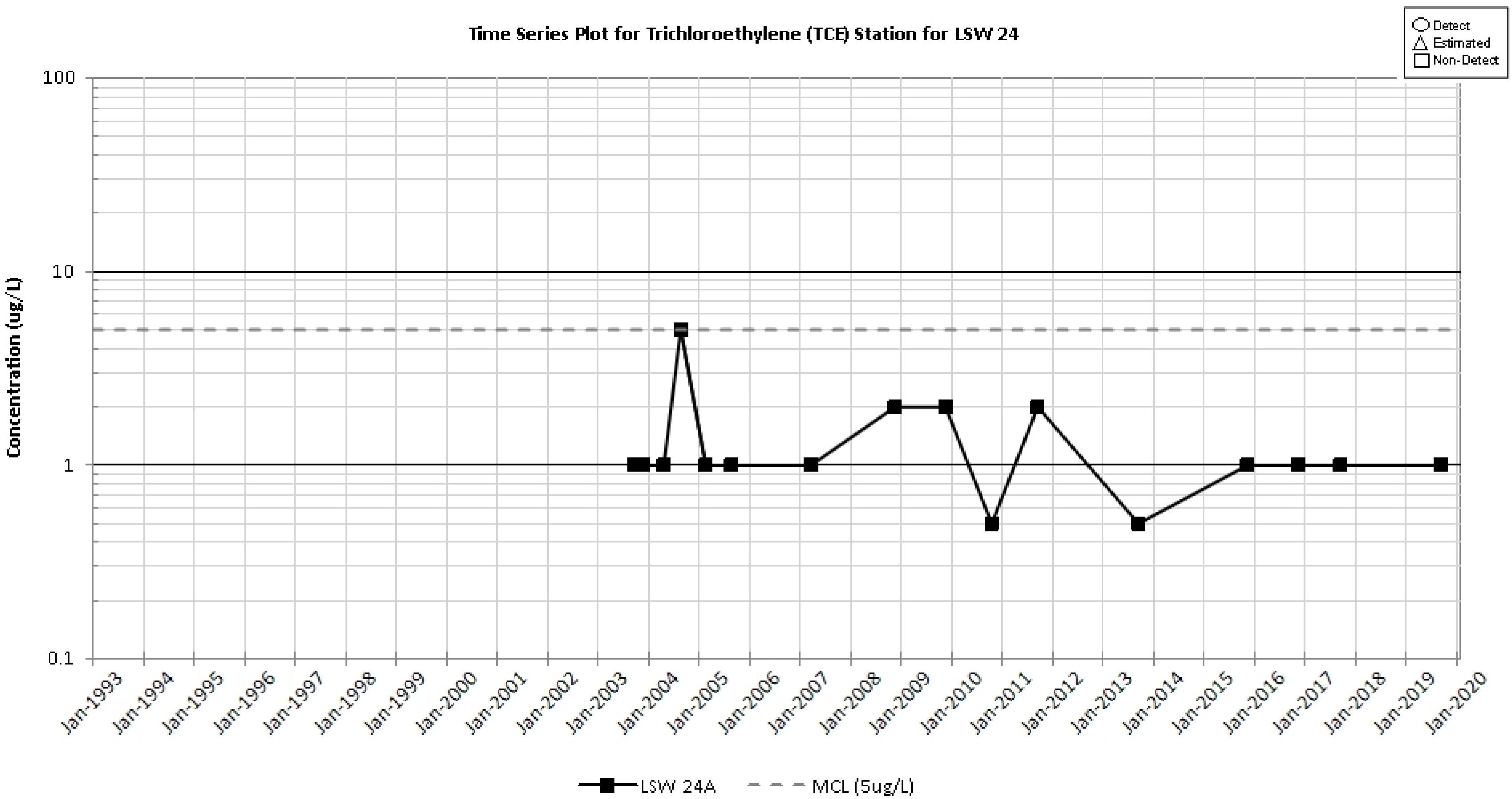

Time Series Plot for Trichloroethylene (TCE) Station for LAW 2
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LAW 2C
MCL (5ug/L)

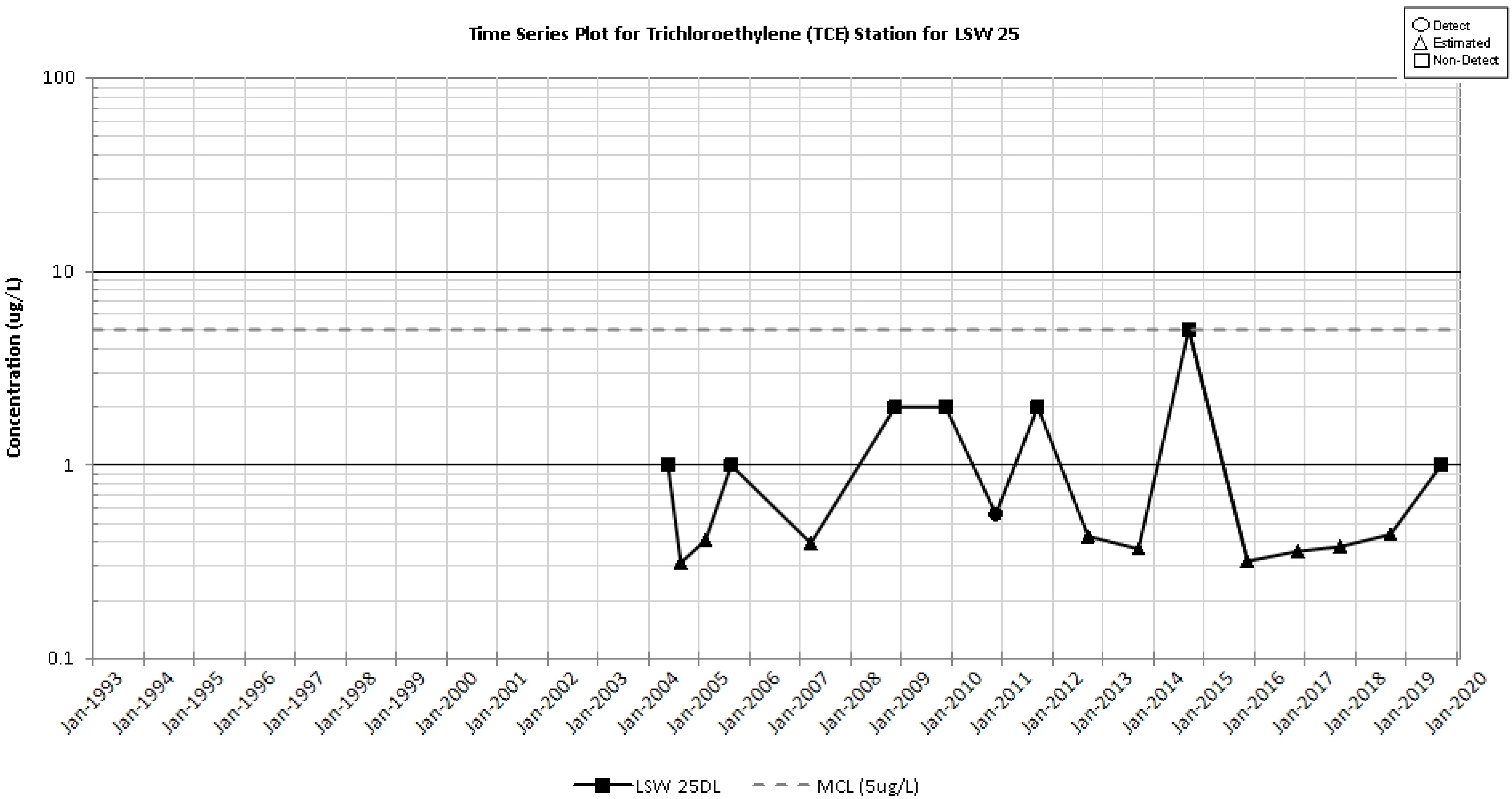

Time Series Plot for Trichloroethylene (TCE) Station for LDB 3
Detect
Estimated
Non-Detect
100
10
1
0.1
Concentration (ug/L)
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LDB 3
MCL (5ug/L)

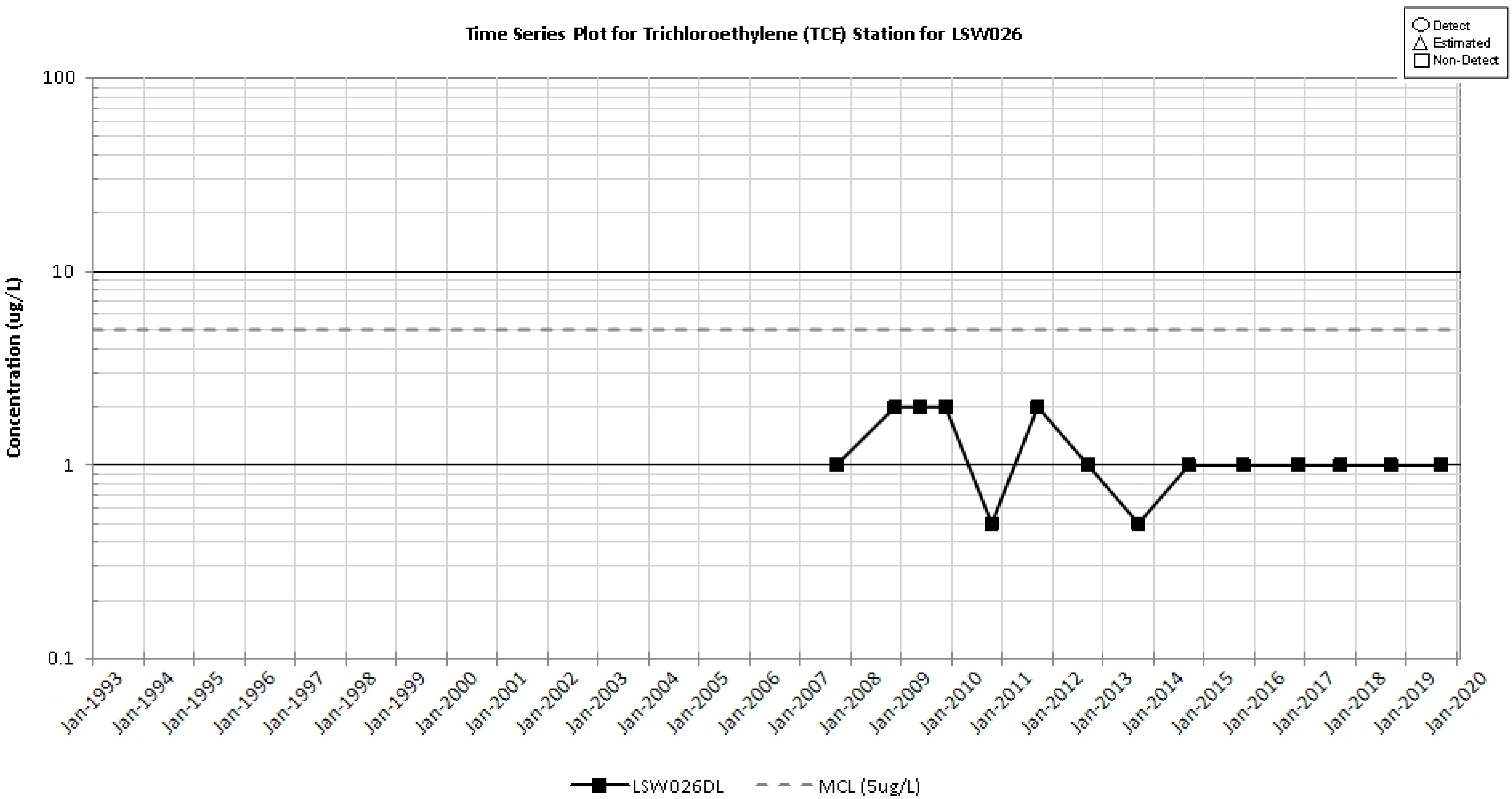

Time Series Plot for Trichloroethylene (TCE) Station for LSB 4
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSB 4
MCL (5ug/L)

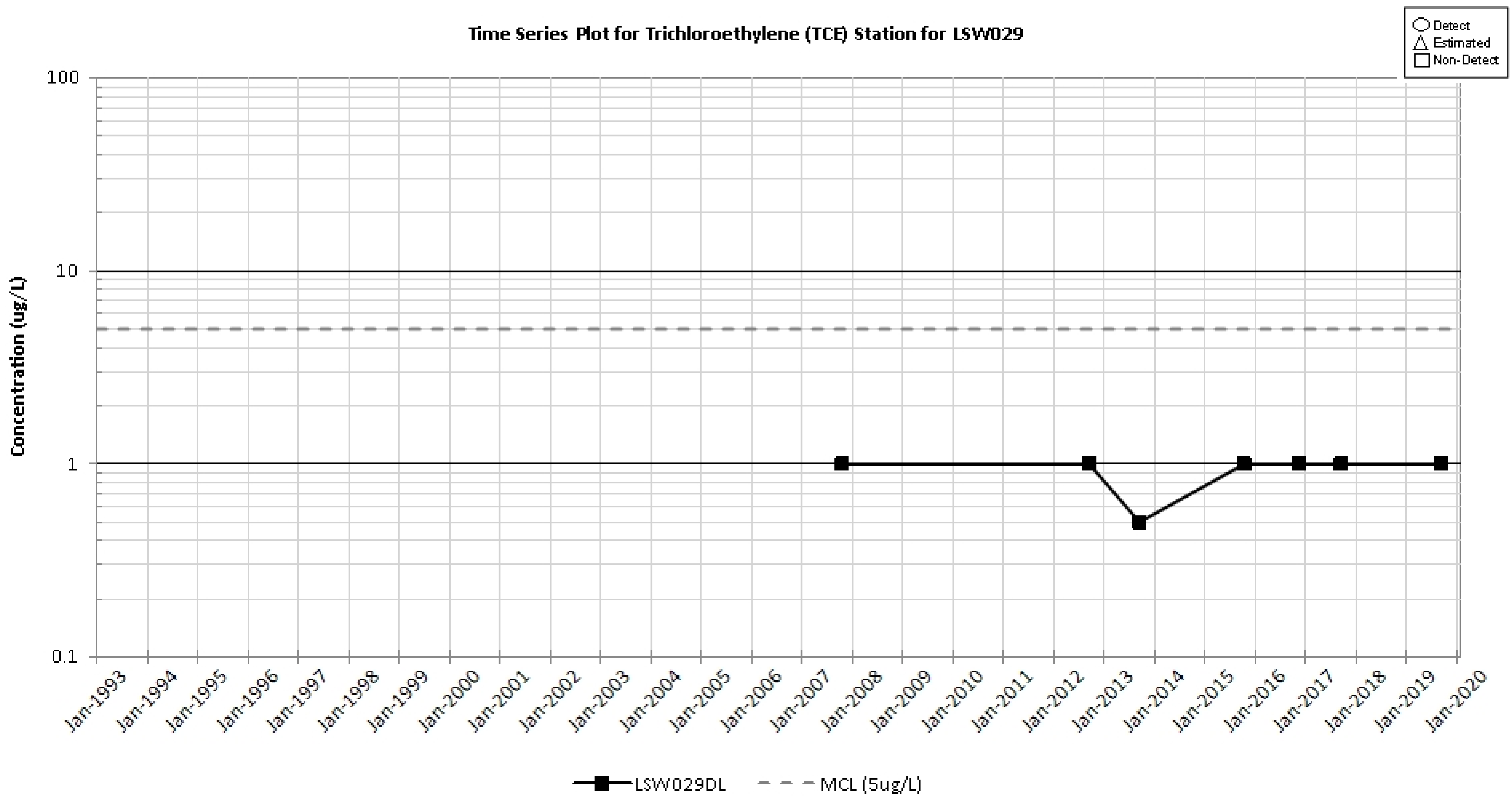

Time Series Plot for Trichloroethylene (TCE) Station for LSP 8
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSP 8DU
MCL (5ug/L)

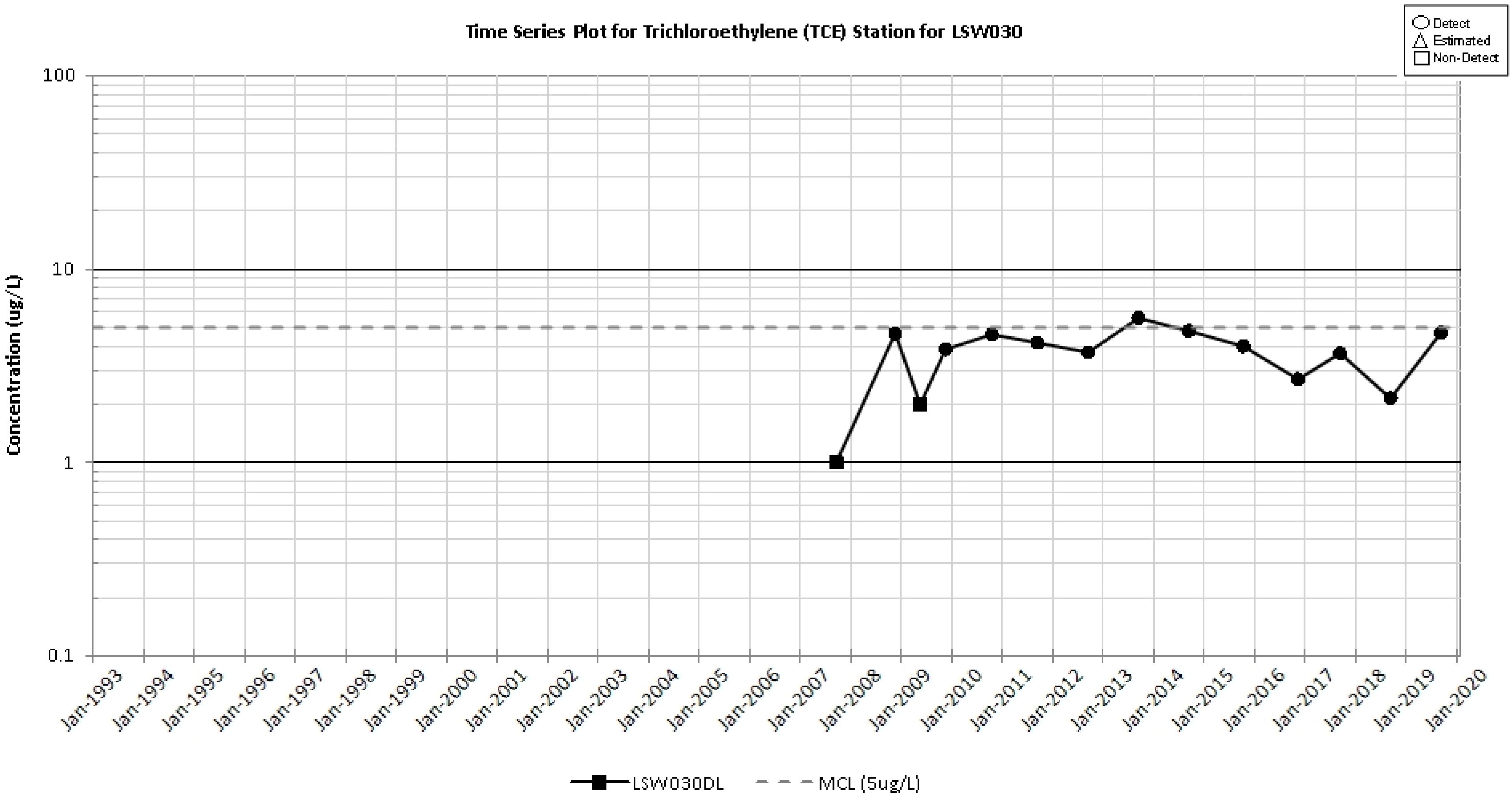

Time Series Plot for Trichloroethylene (TCE) Station for LSW 2
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 2DL
LSW002AR
MCL (5ug/L)

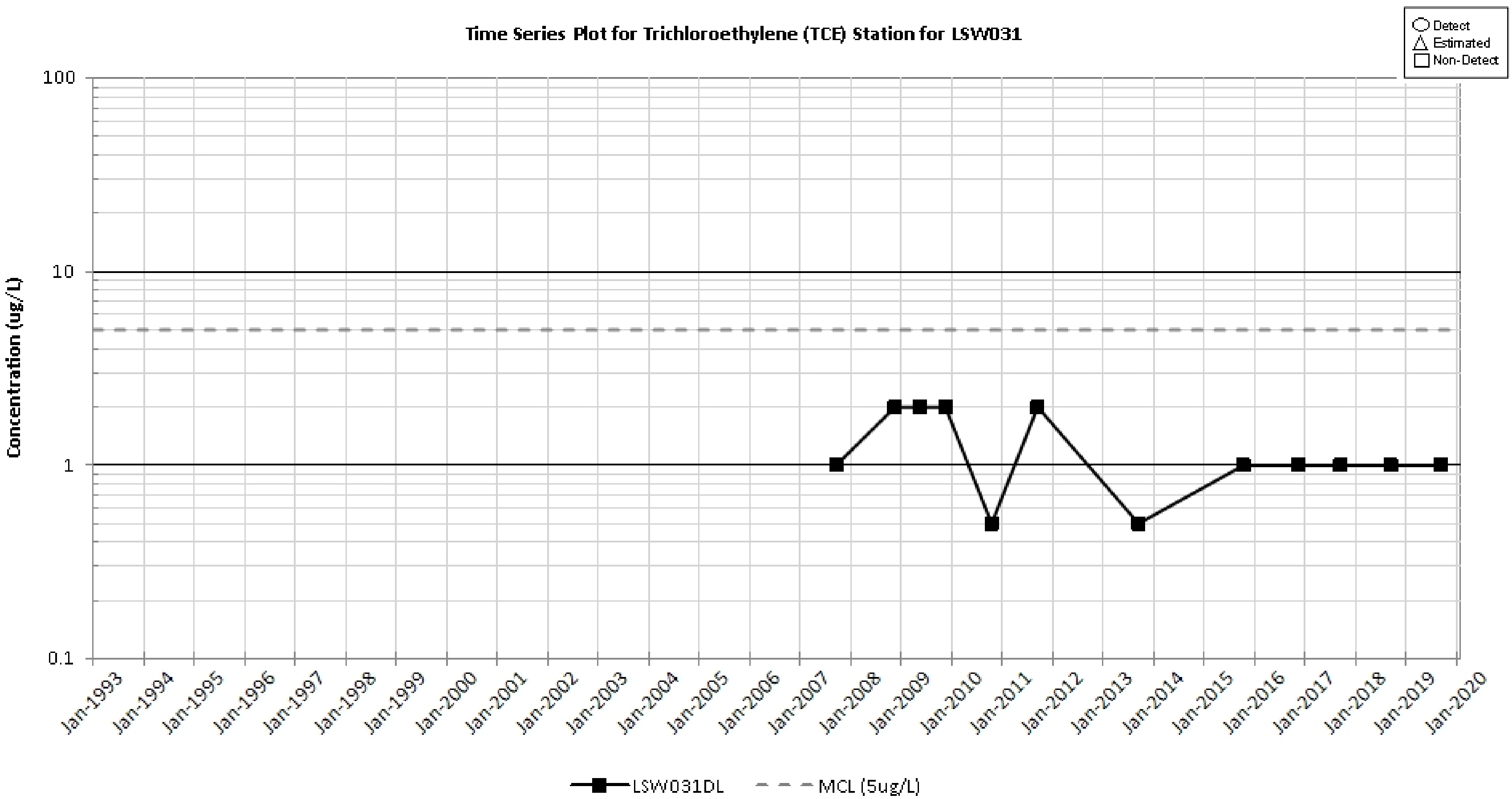

Time Series Plot for Trichloroethylene (TCE) Station for LSW 24
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 24A
MCL (5ug/L)

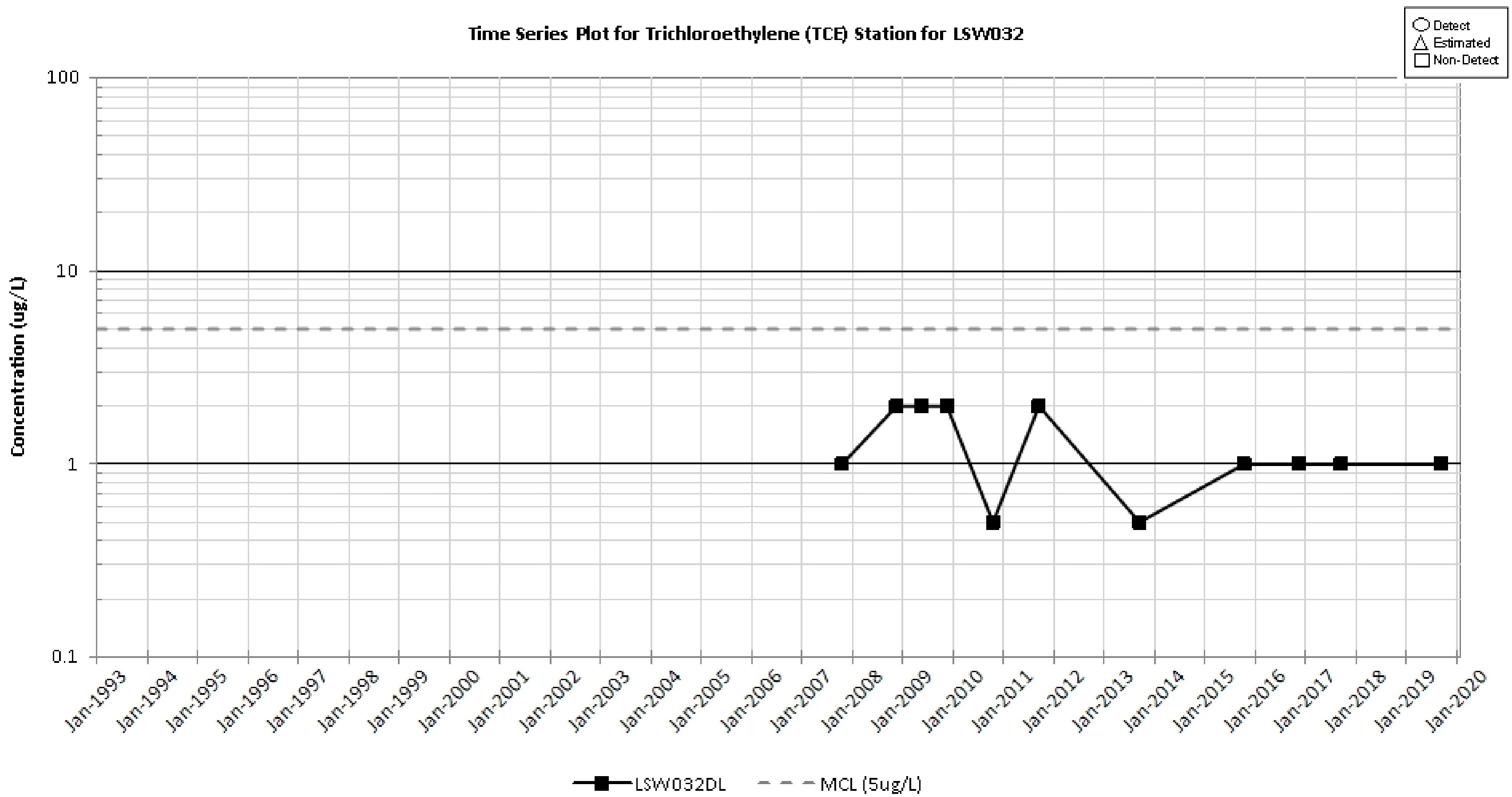

Time Series Plot for Trichloroethylene (TCE) Station for LSW 25
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 25DL
MCL (5ug/L)

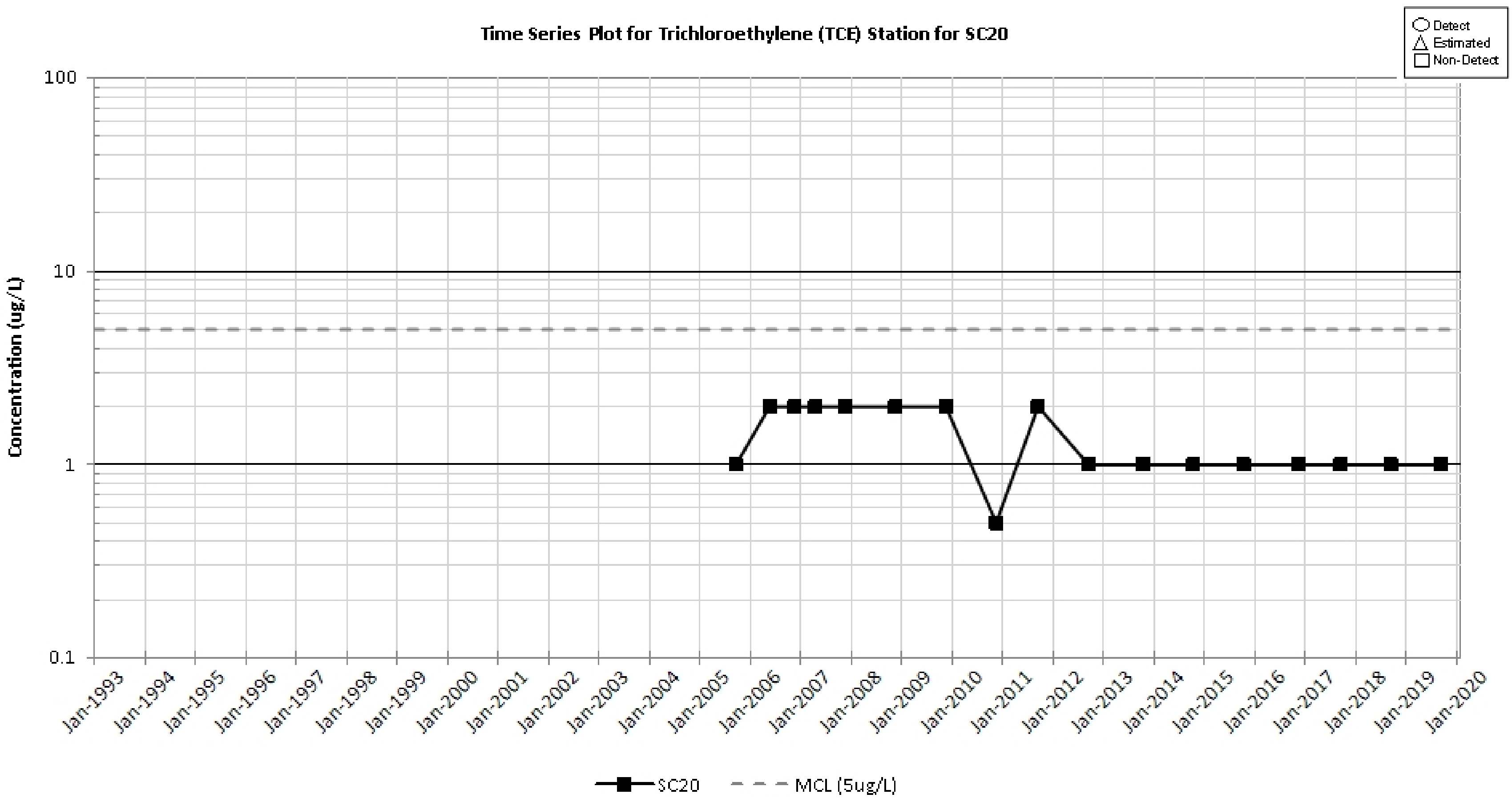

Time Series Plot for Trichloroethylene (TCE) Station for LSW026
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW026DL
MCL (5ug/L)

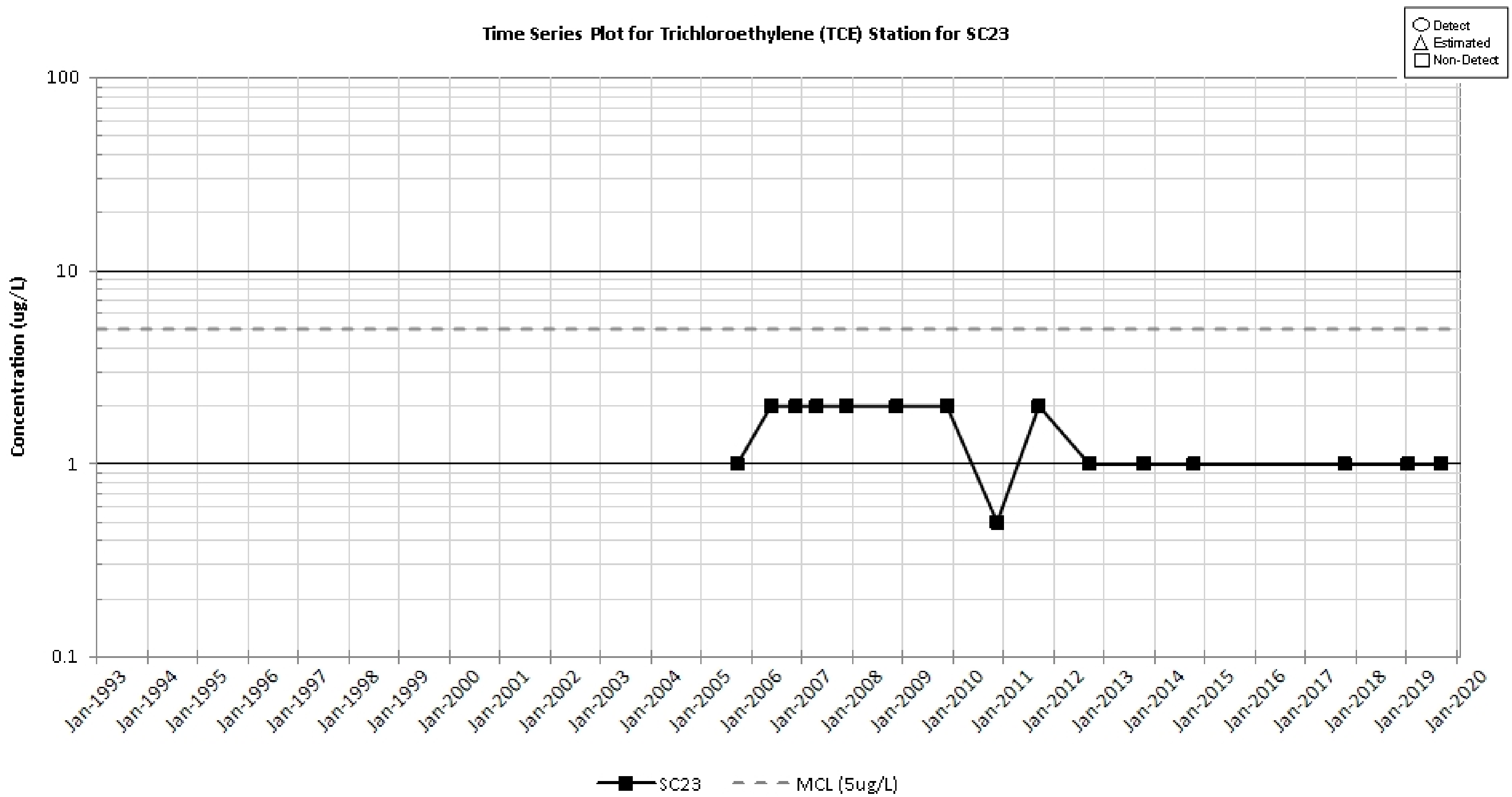

Time Series Plot for Trichloroethylene (TCE) Station for LSW029
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW029DL
MCL (5ug/L)

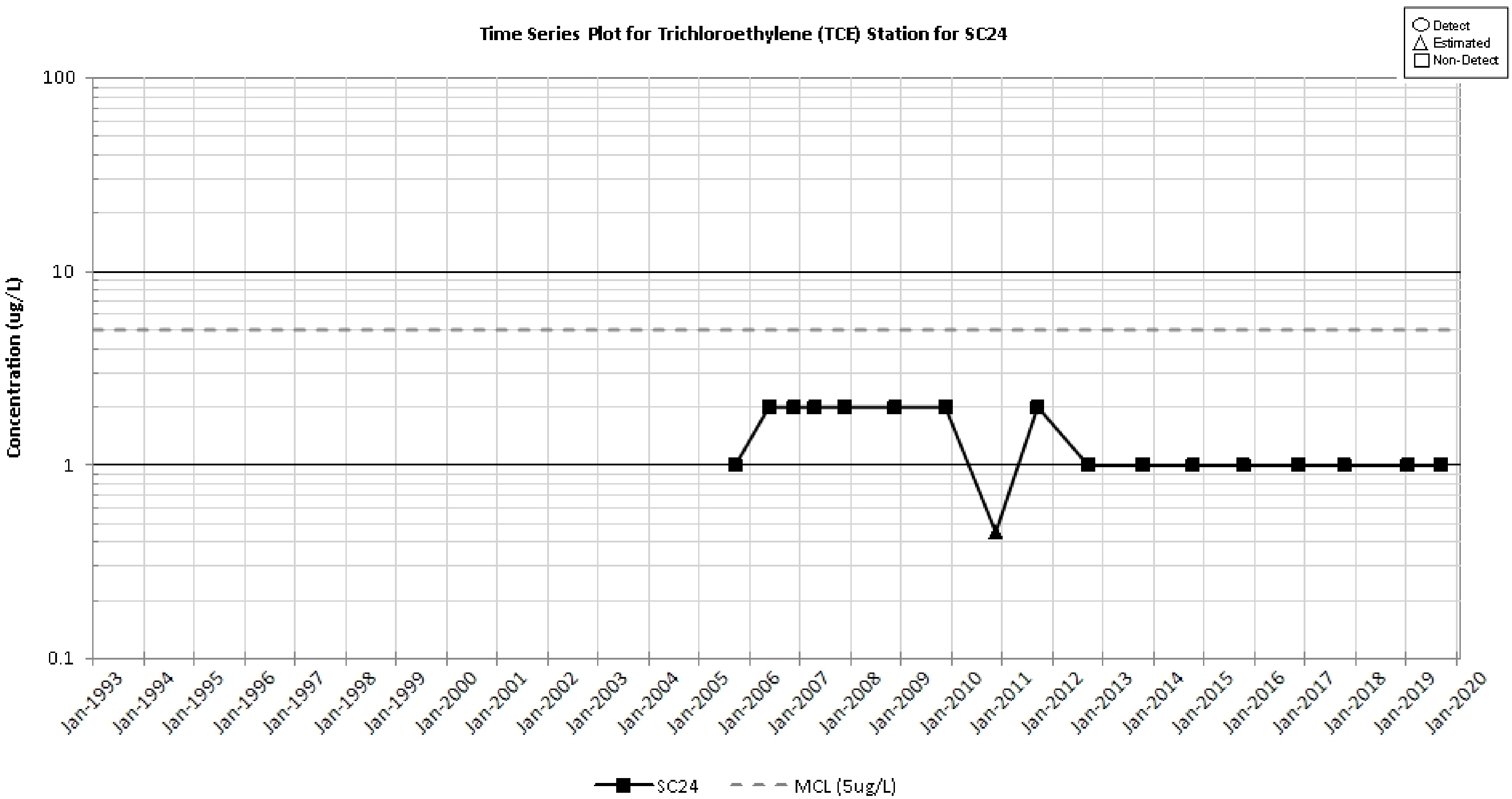

Time Series Plot for Trichloroethylene (TCE) Station for LSW030
Detect
Estimated
Non-Detect
100
10
1
0.1
Concentration (ug/L)
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW030DL
MCL (5ug/L)

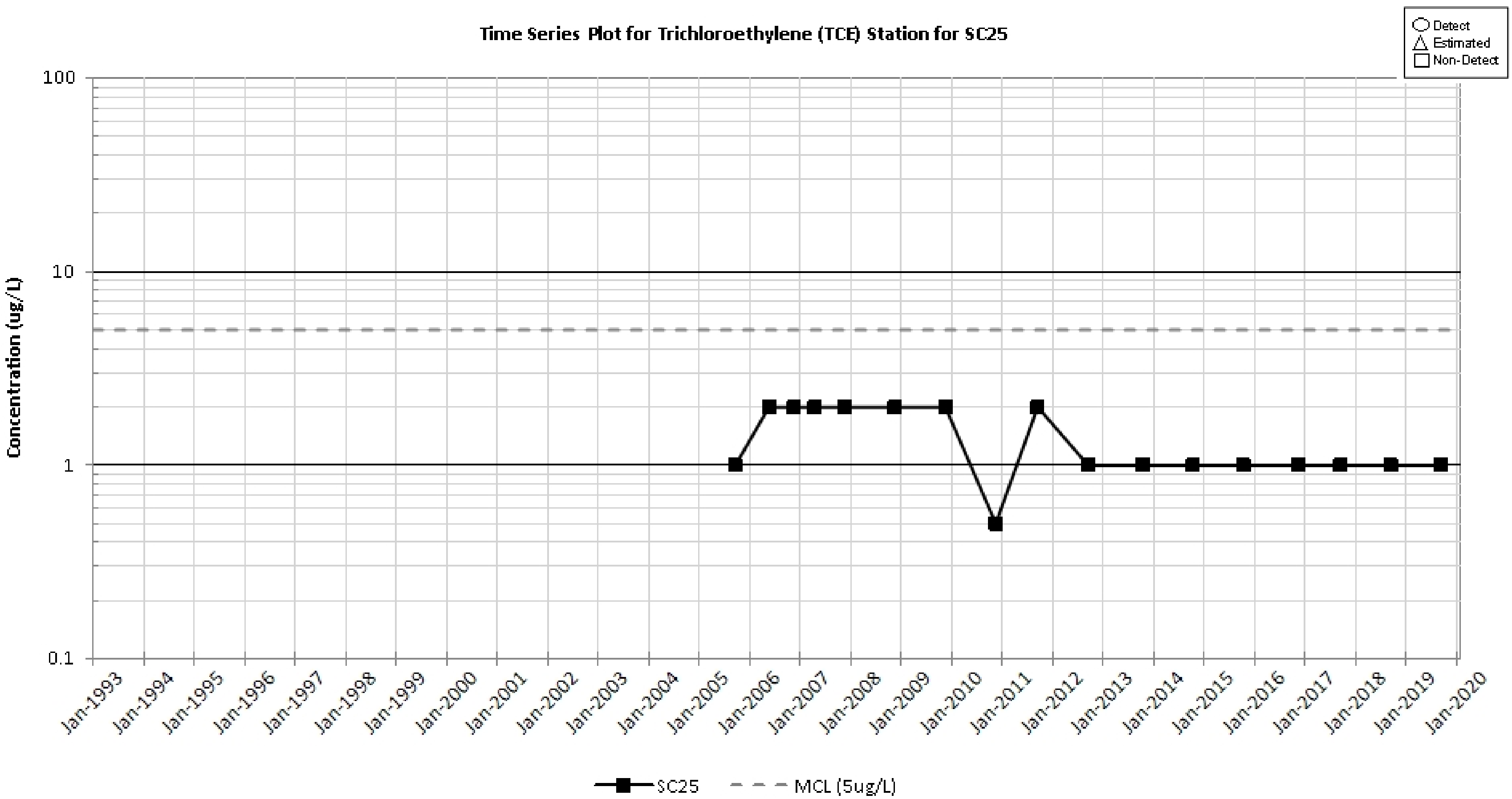

Time Series Plot for Trichloroethylene (TCE) Station for LSW031
Detect
Estimated
Non-Detect
100
10
1
0.1
Concentration (ug/L)
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW031DL
MCL (5ug/L)

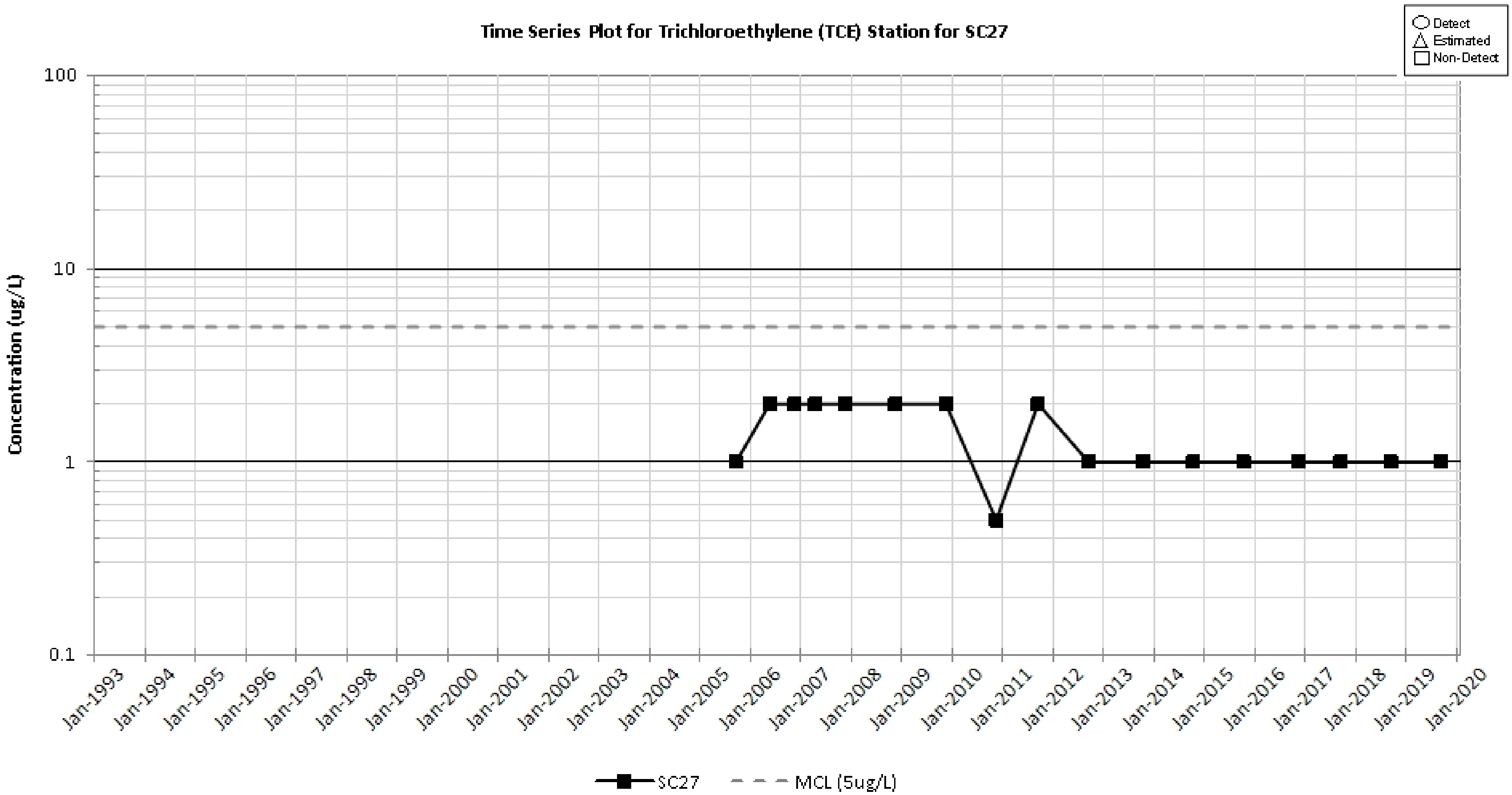

Time Series Plot for Trichloroethylene (TCE) Station for LSW032
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW032DL
MCL (5ug/L)

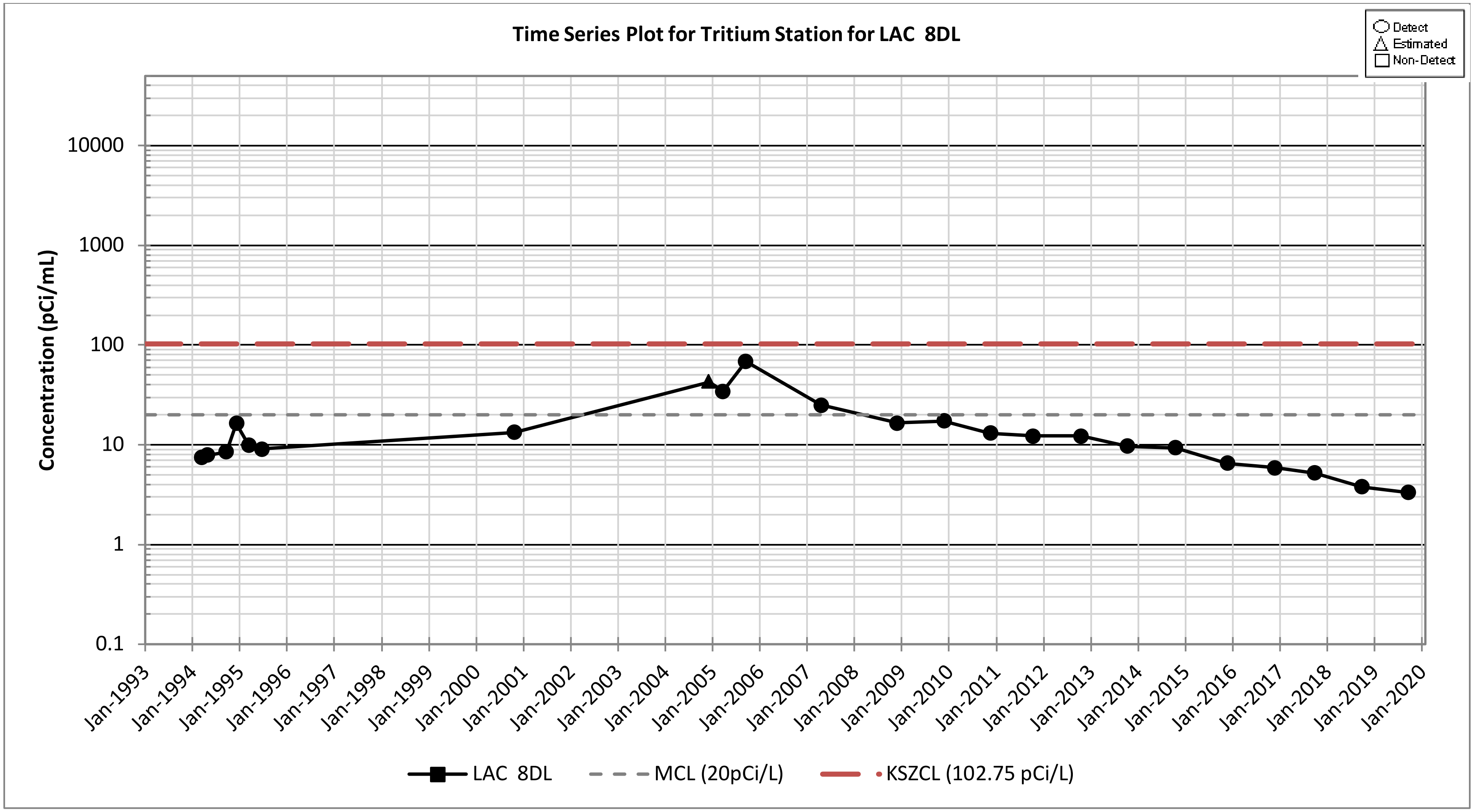

Time Series Plot for Trichloroethylene (TCE) Station for SC20
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC20
MCL (5ug/L)

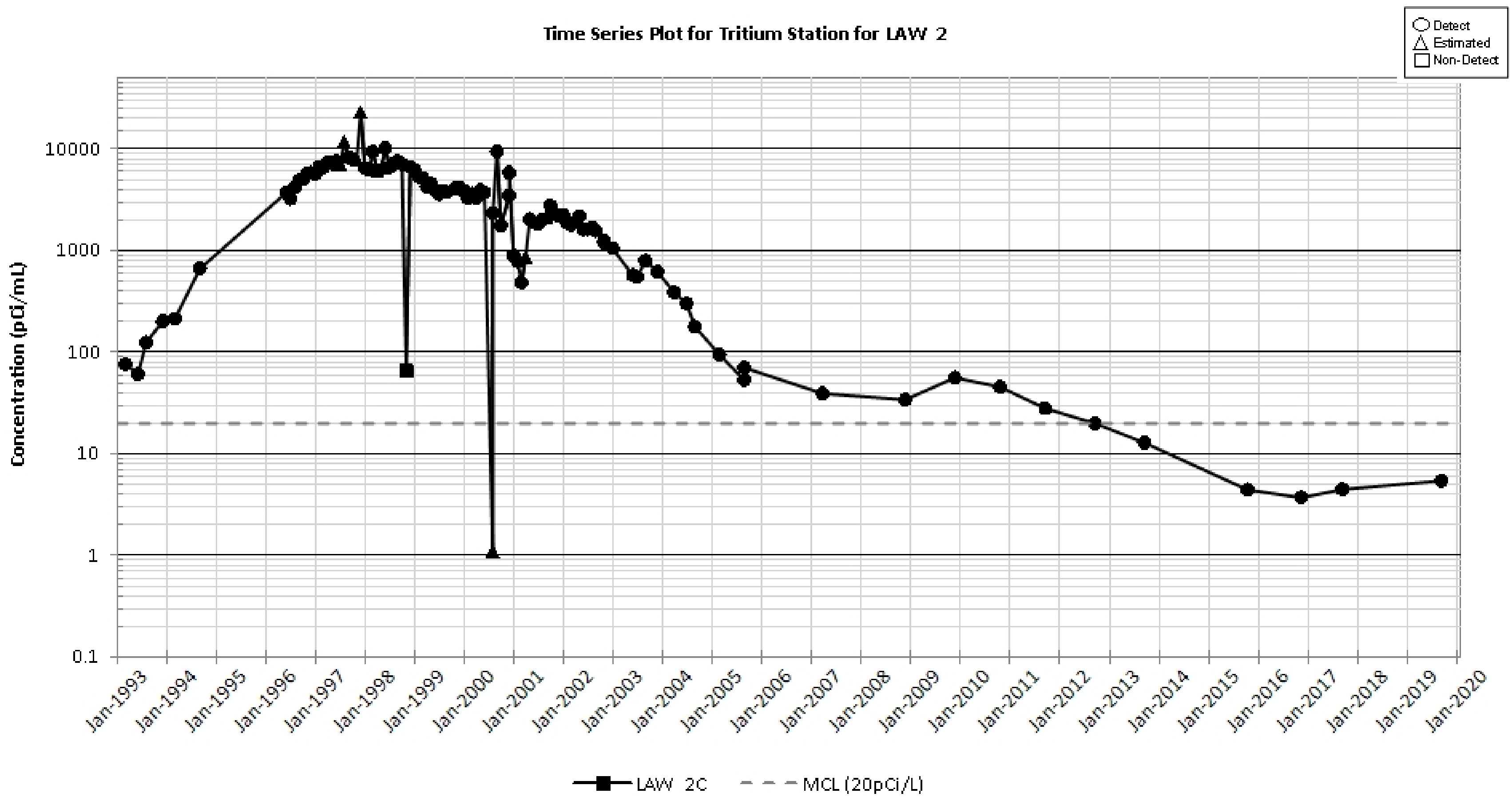

Time Series Plot for Trichloroethylene (TCE) Station for SC23
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC23
MCL (5ug/L)

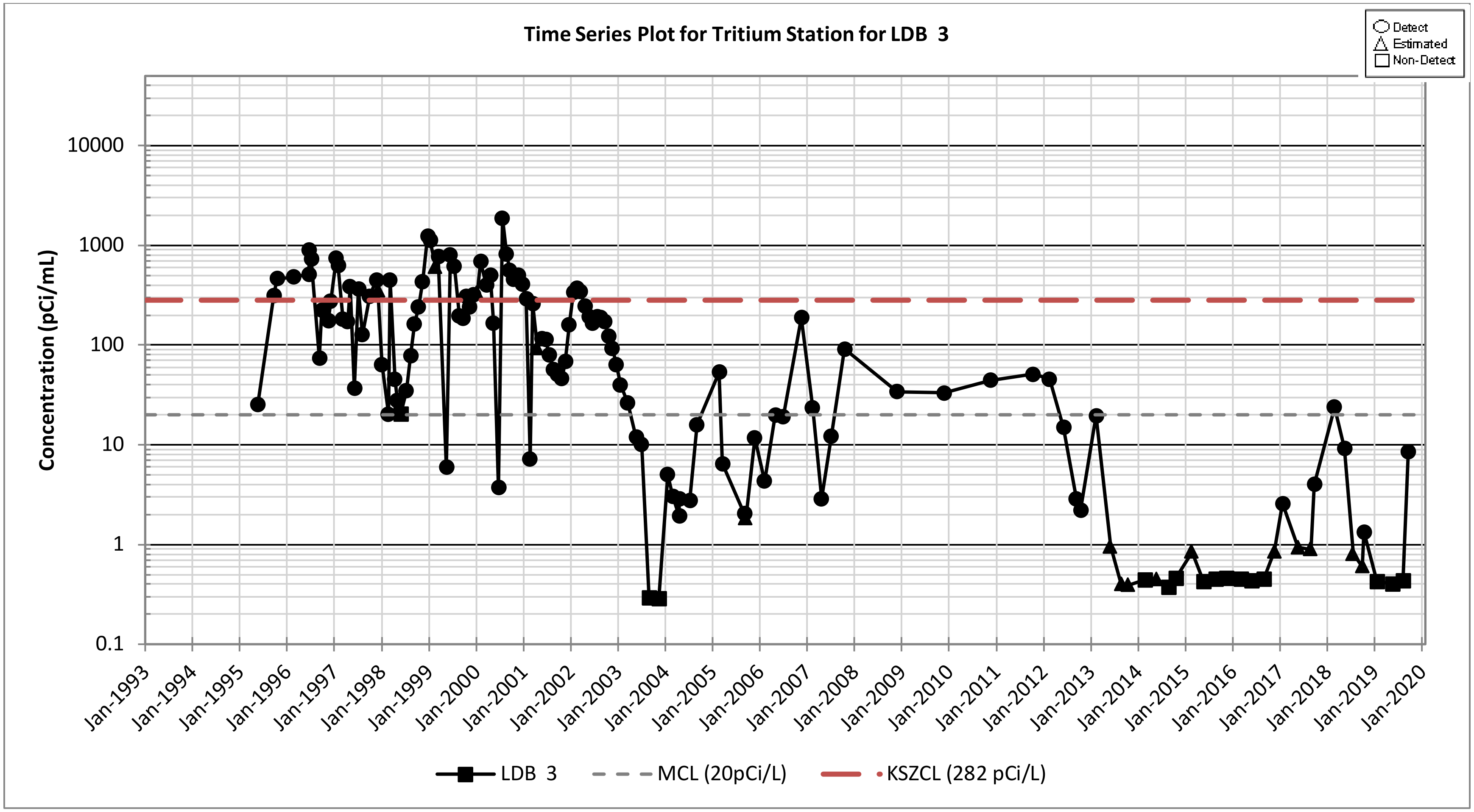

Time Series Plot for Trichloroethylene (TCE) Station for SC24
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC24
MCL (5ug/L)

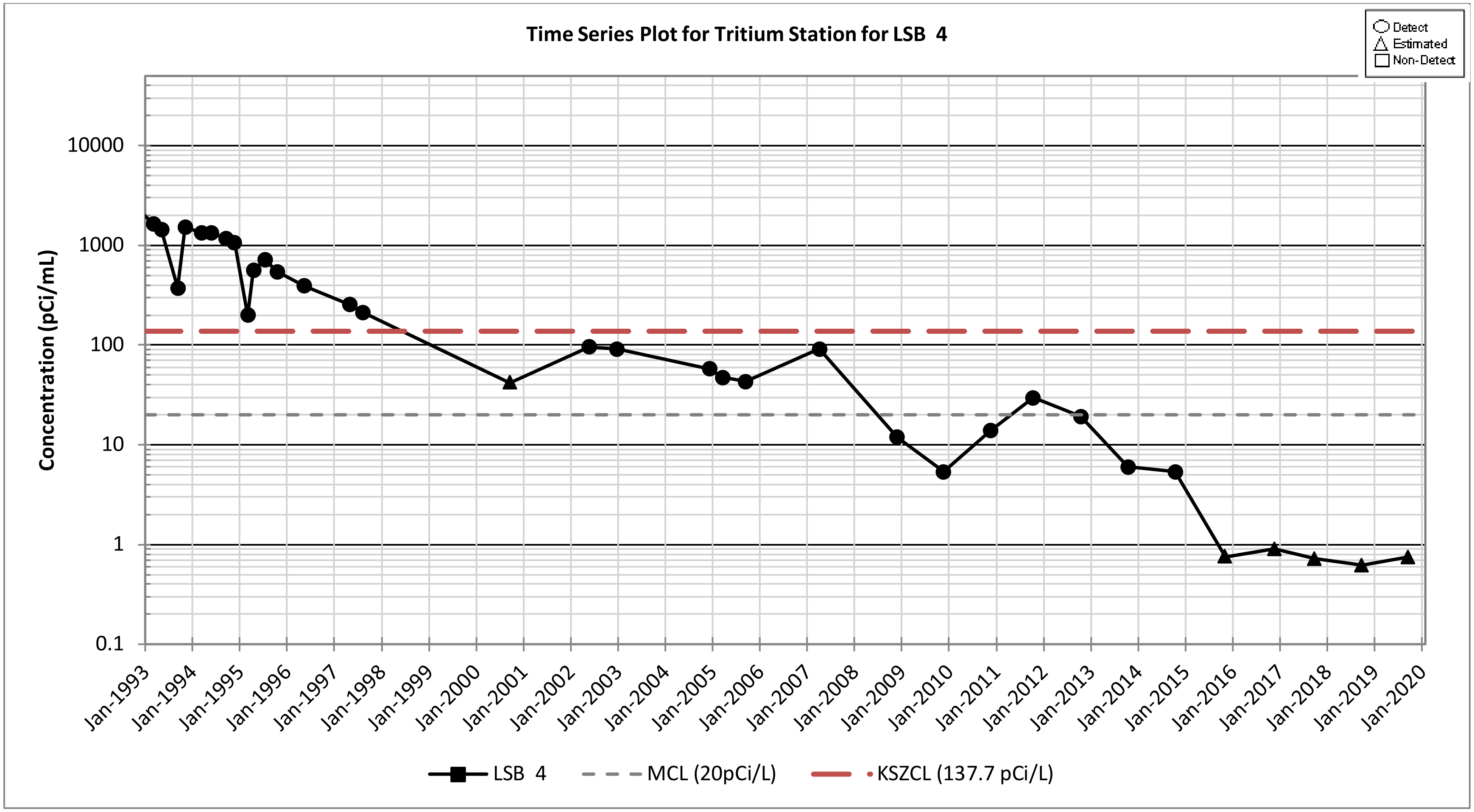

Time Series Plot for Trichloroethylene (TCE) Station for SC25
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC25
MCL (5ug/L)

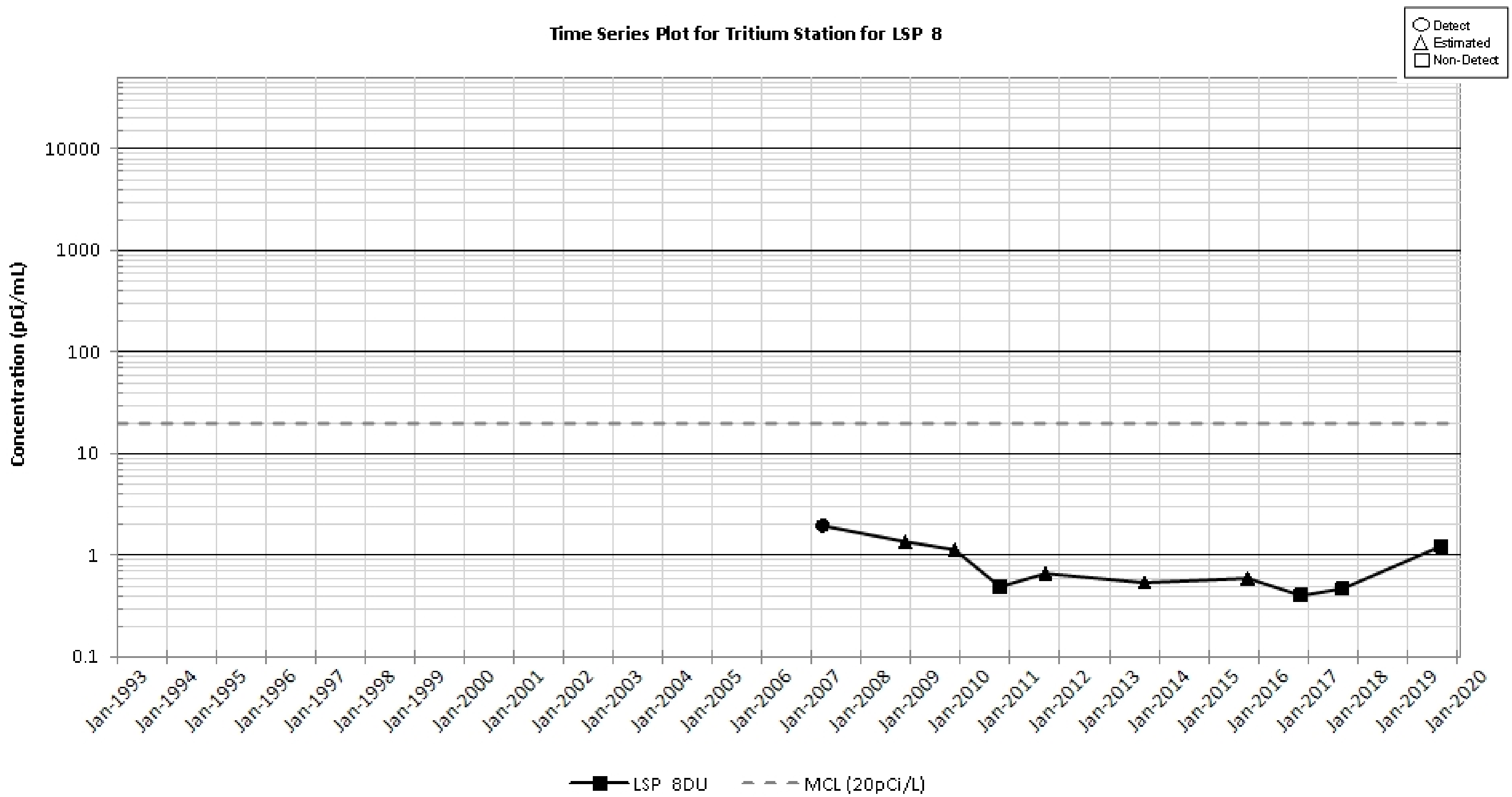

Time Series Plot for Trichloroethylene (TCE) Station for SC27
Detect
Estimated
Non-Detect
Concentration (ug/L)
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC27
MCL (5ug/L)

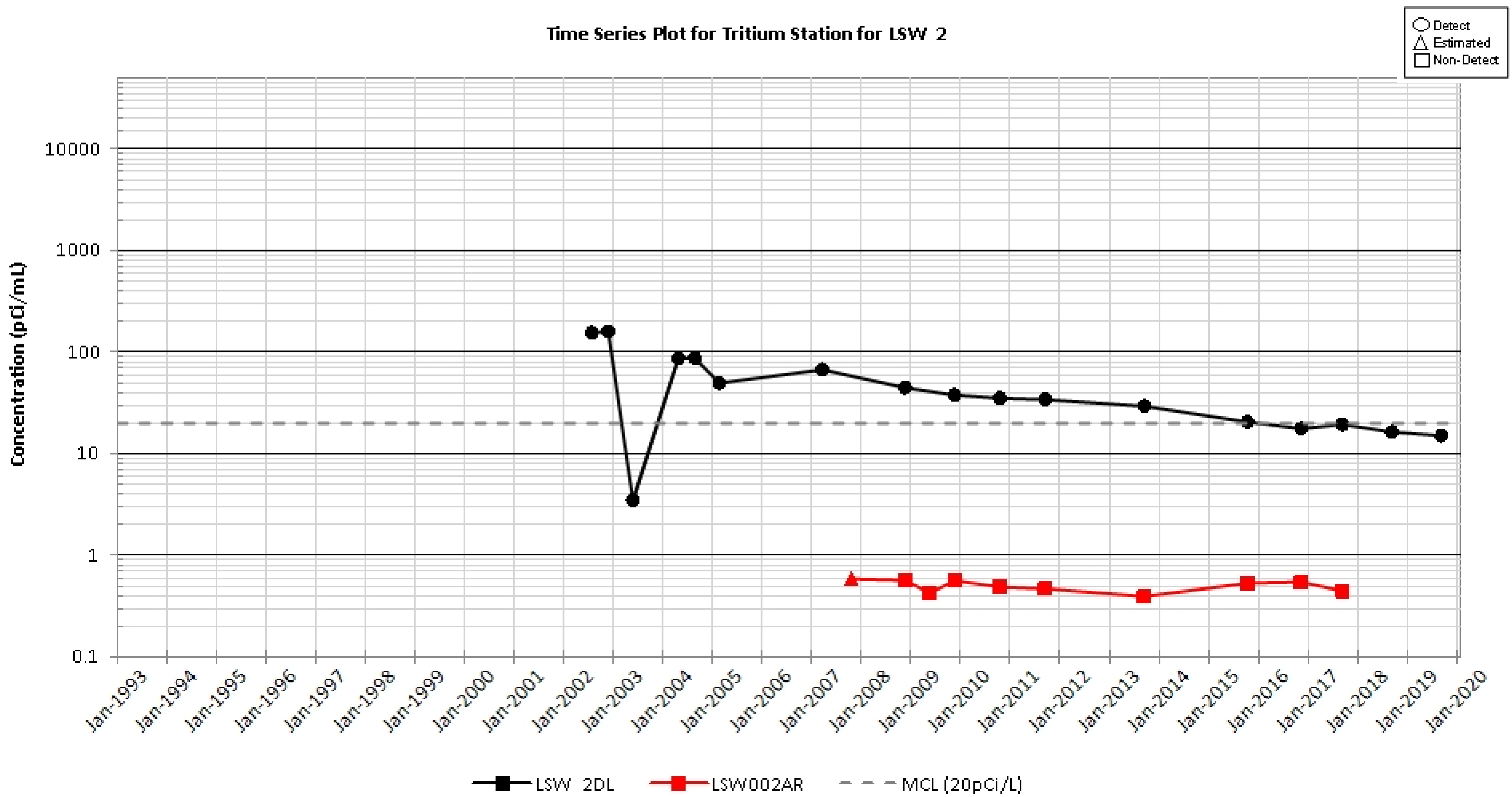

Time Series Plot for Tritium Station for LAC 8DL
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LAC 8DL
MCL (20pCi/L)
KSZCL (102.75 pCi/L)

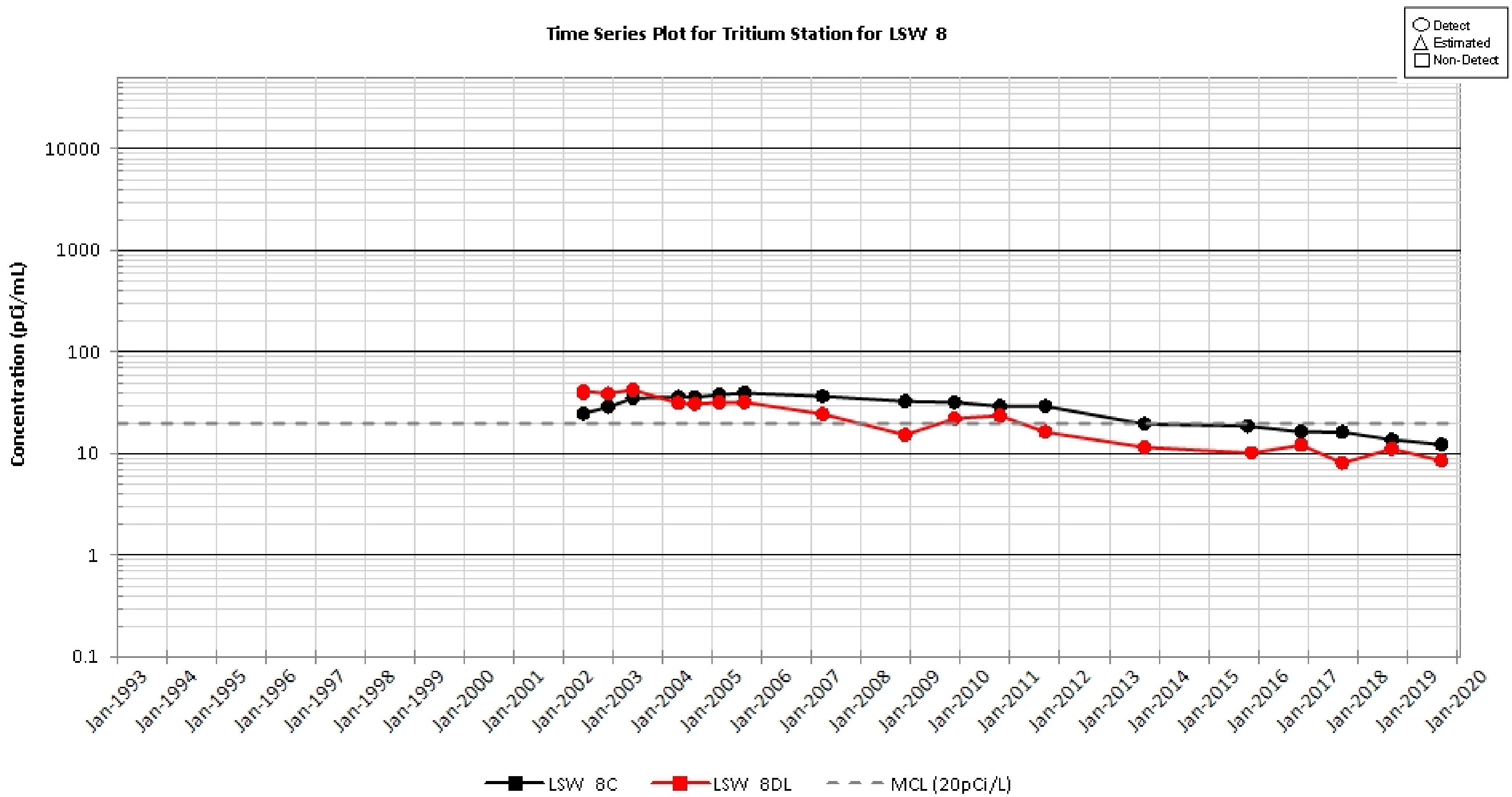

Time Series Plot for Tritium Station for LAW 2
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LAW 2C
MCL (20pCi/L)

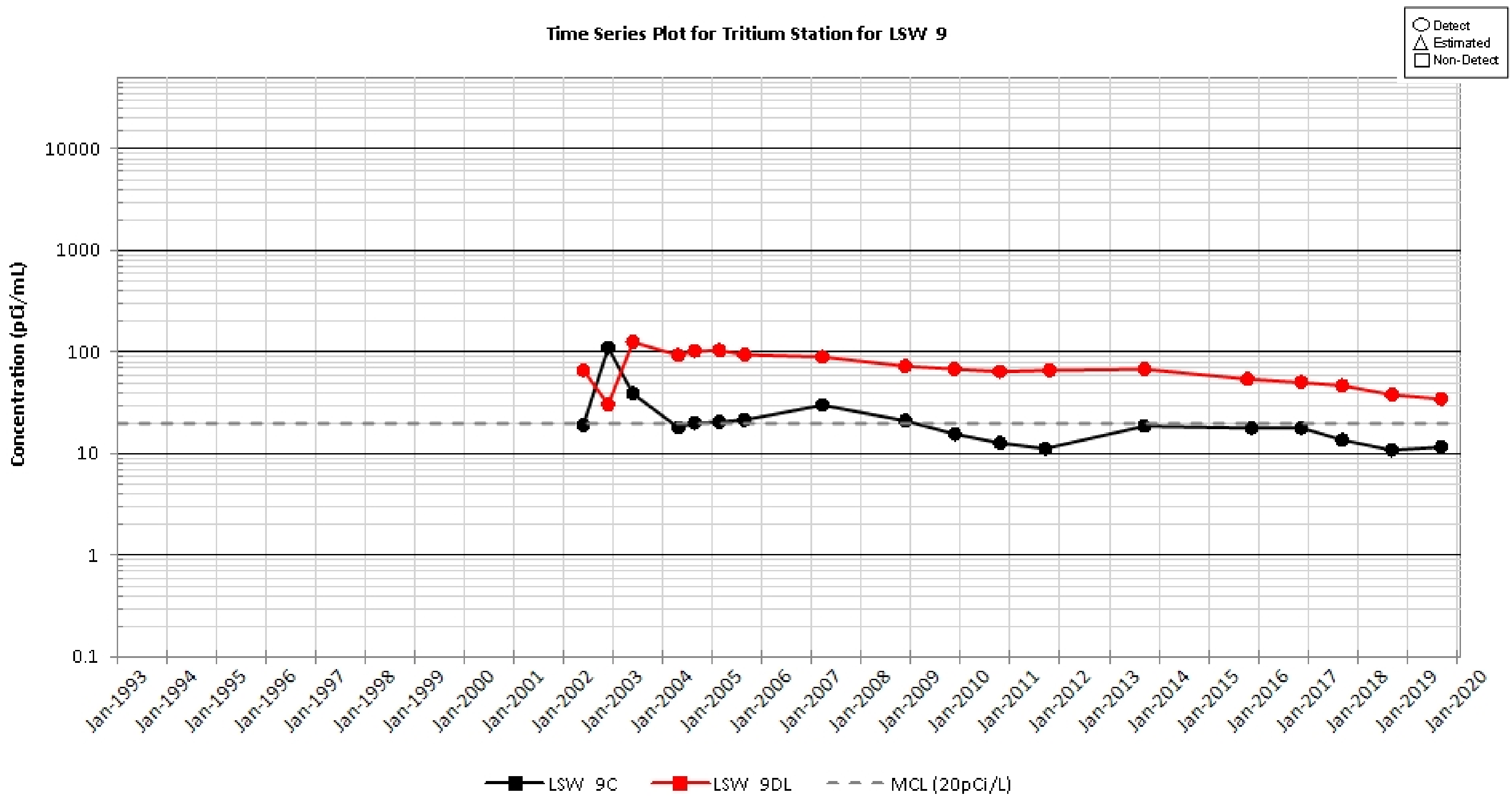

Time Series Plot for Tritium Station for LDB 3
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LDB 3
MCL (20pCi/L)
KSZCL (282 pCi/L)

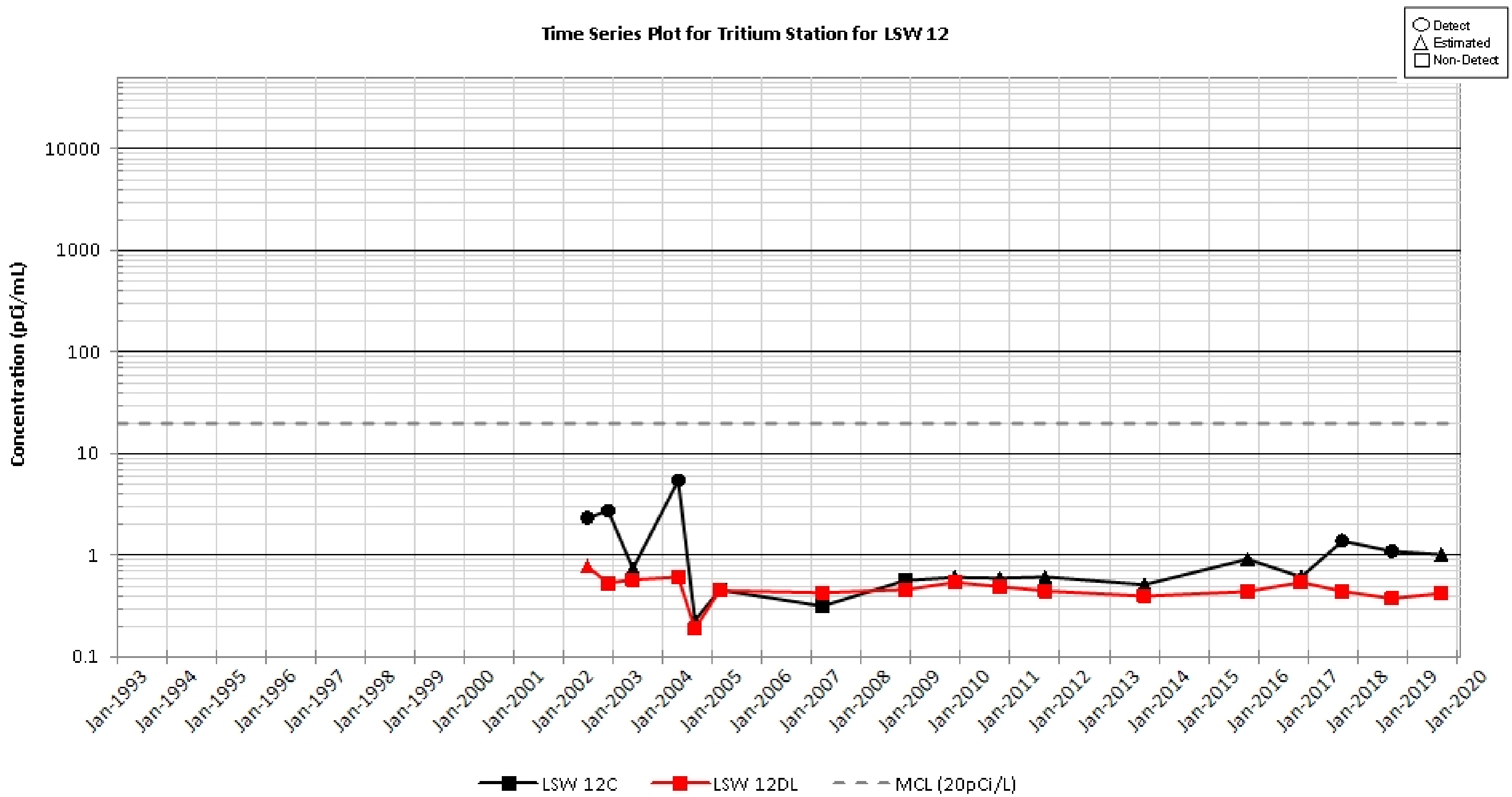

Time Series Plot for Tritium Station for LSB 4
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSB 4
MCL (20pCi/L)
KSZCL (137.7 pCi/L)

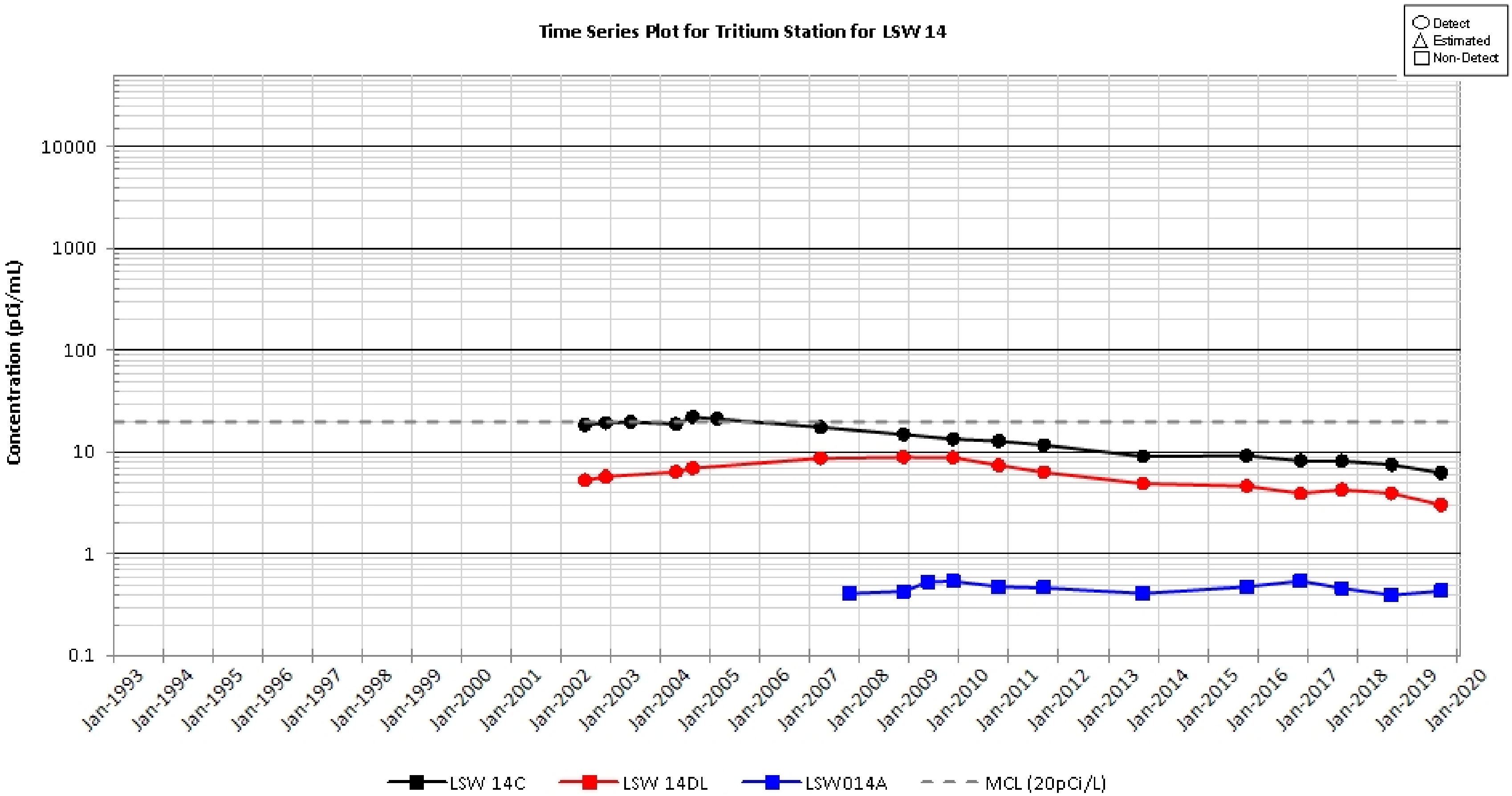

Time Series Plot for Tritium Station for LSP 8
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSP 8DU
MCL (20pCi/L)

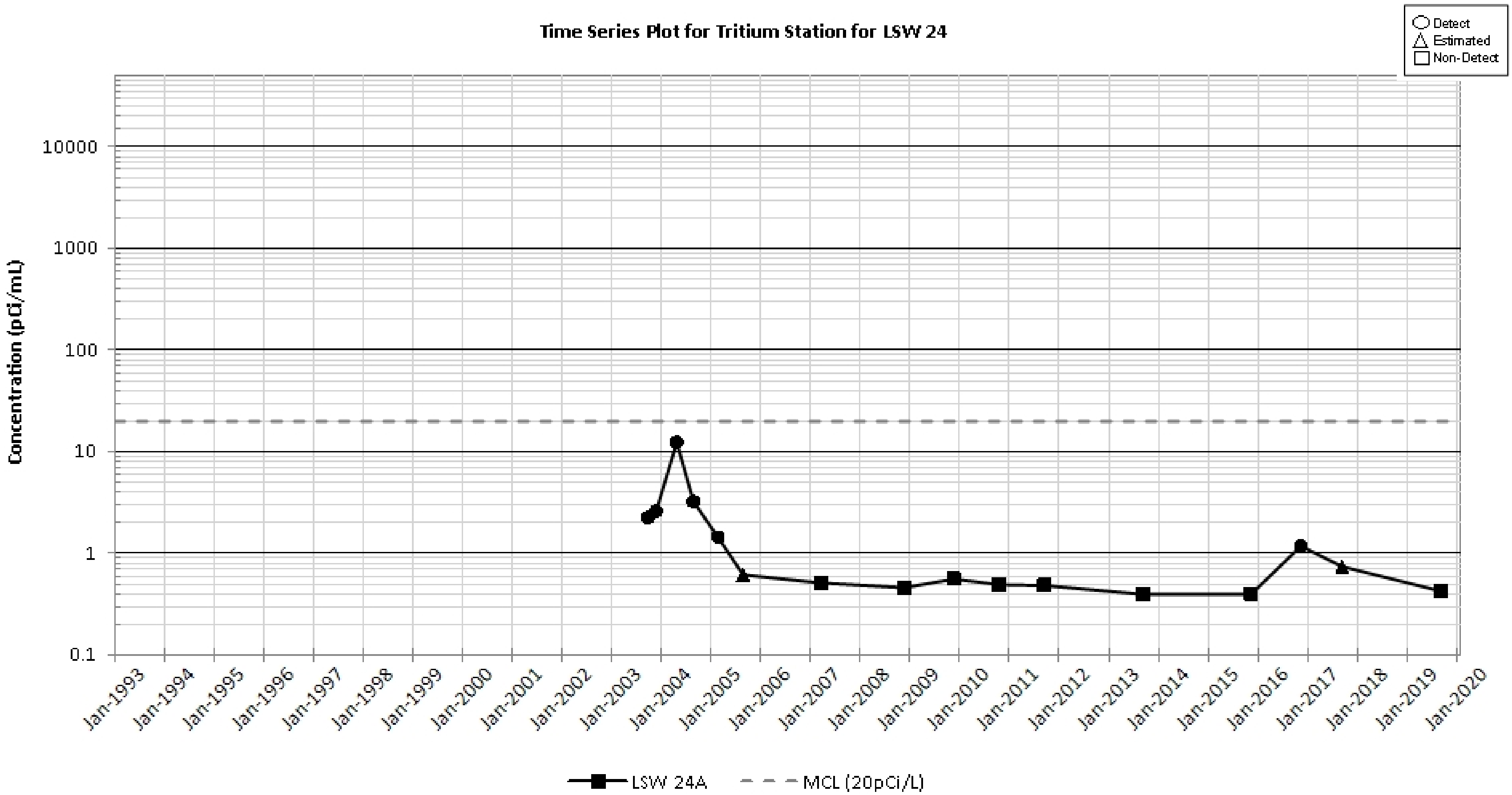

Time Series Plot for Tritium Station for LSW 2
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 2DL
LSW002AR
MCL (20pCi/L)

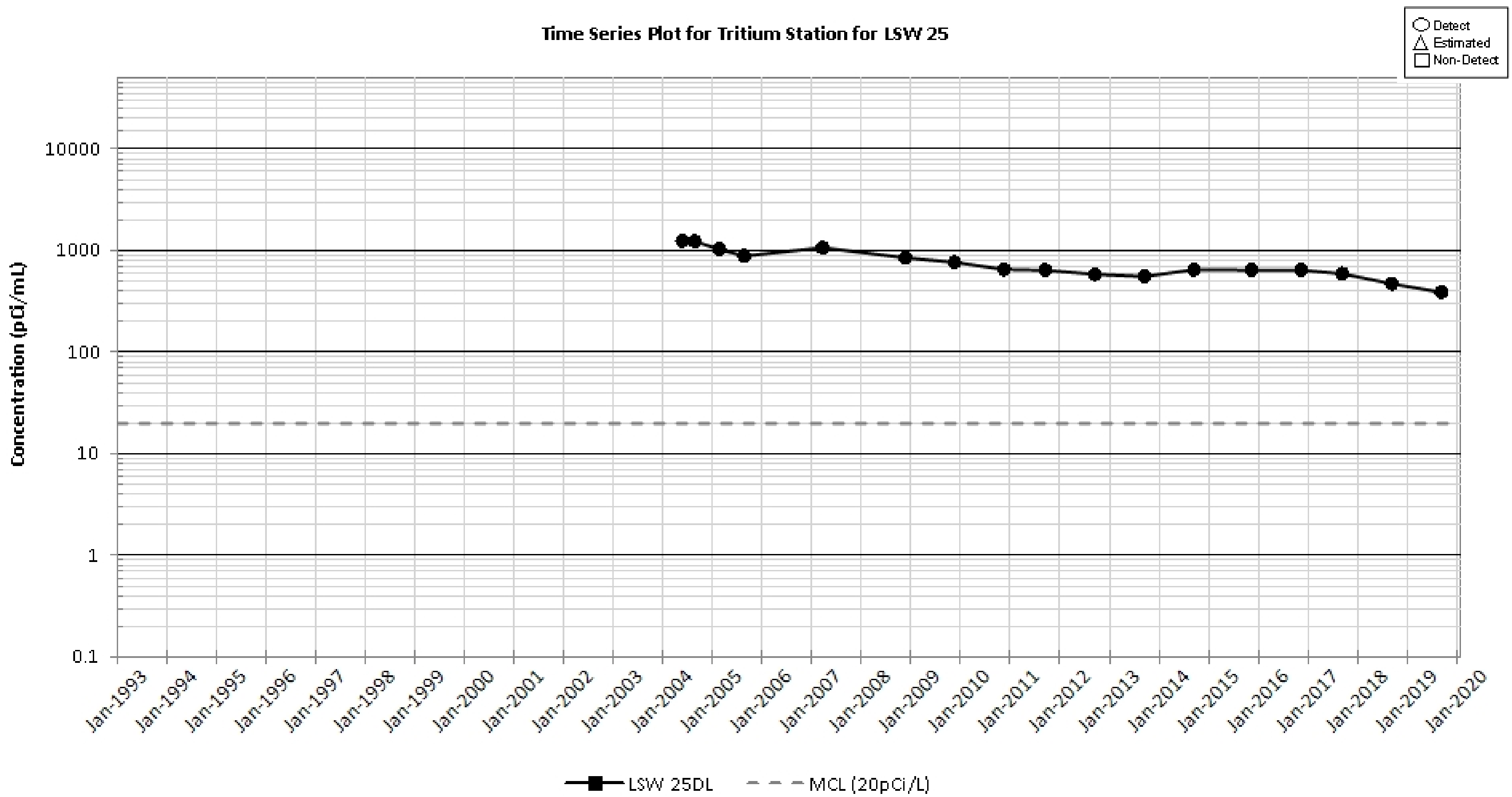

Time Series Plot for Tritium Station for LSW 8
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 8C
LSW 8DL
MCL (20pCi/L)

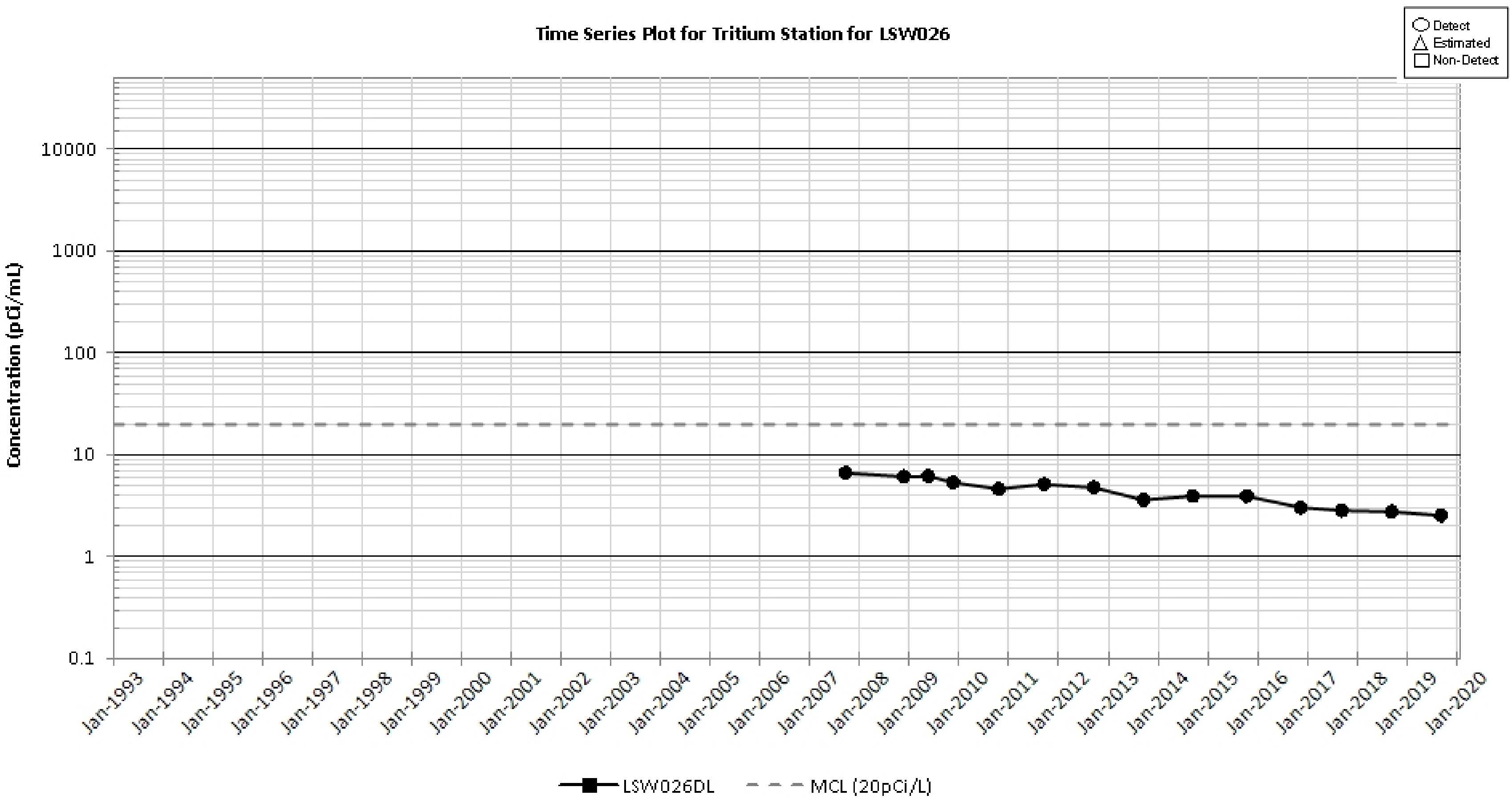

Time Series Plot for Tritium Station for LSW 9
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 9C
LSW 9DL
MCL (20pCi/L)

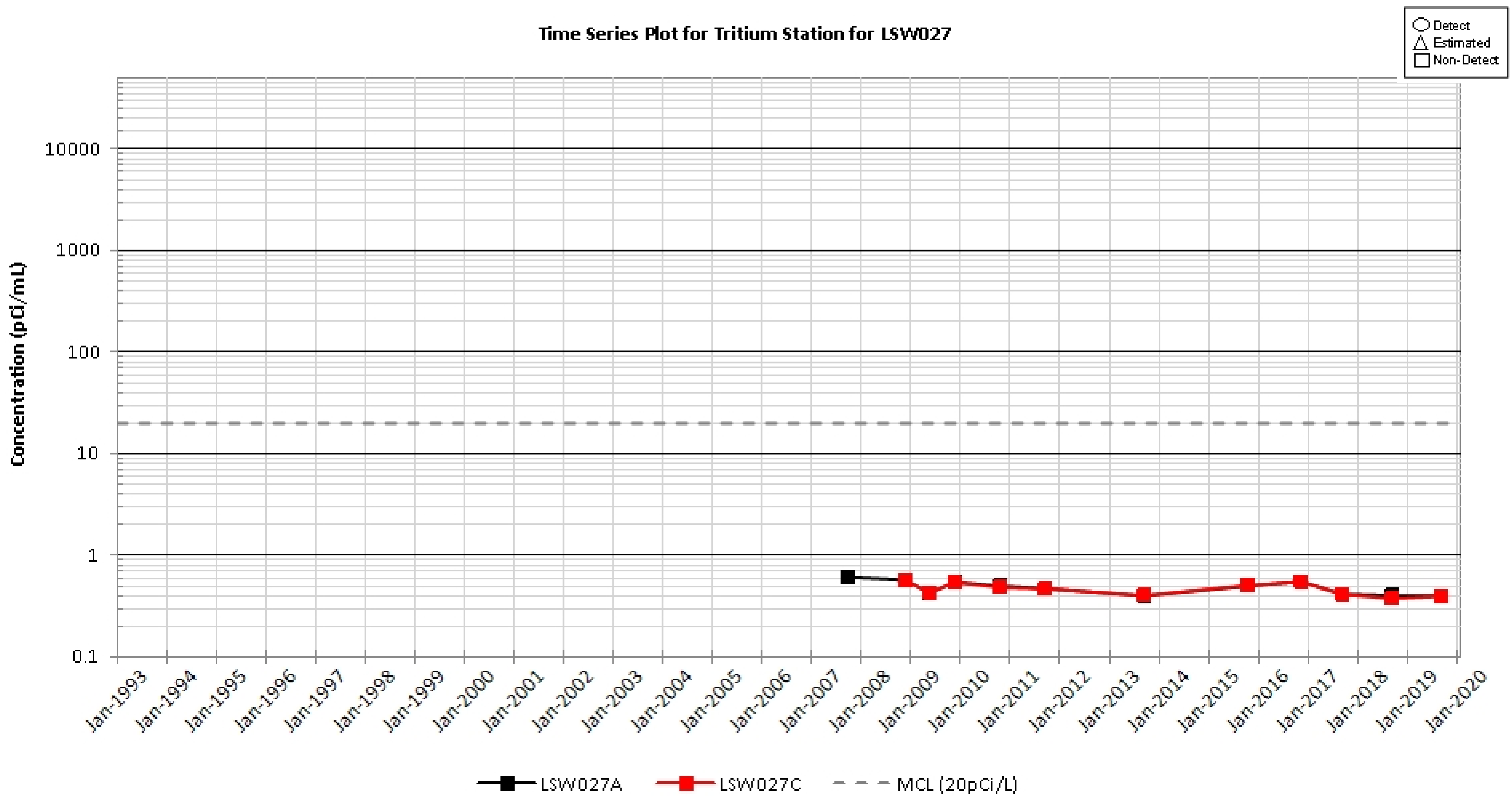

Time Series Plot for Tritium Station for LSW 12
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 12C
LSW 12DL
MCL (20pCi/L)

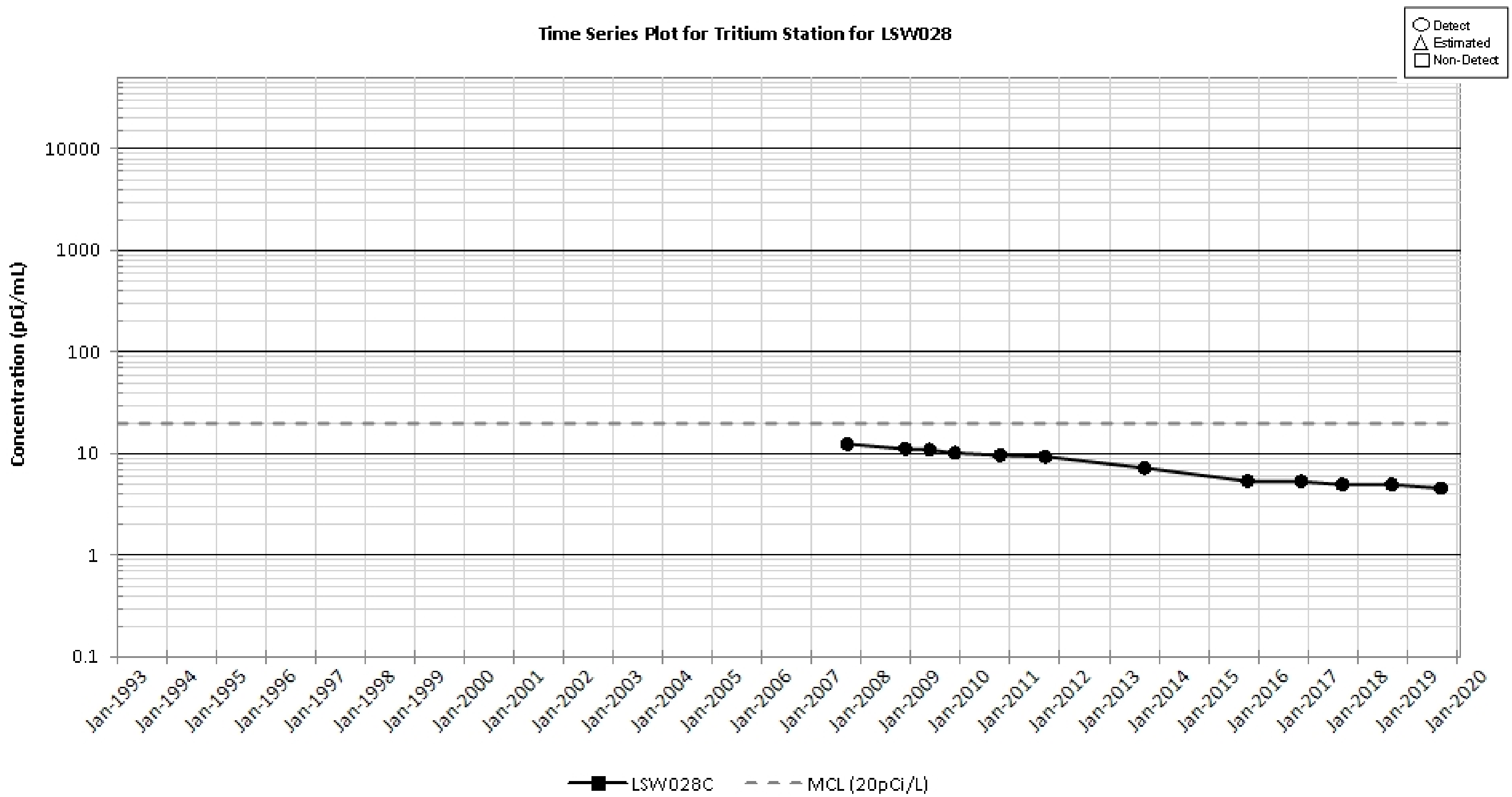

Time Series Plot for Tritium Station for LSW 14
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 14C
LSW 14DL
LSW014A
MCL (20pCi/L)

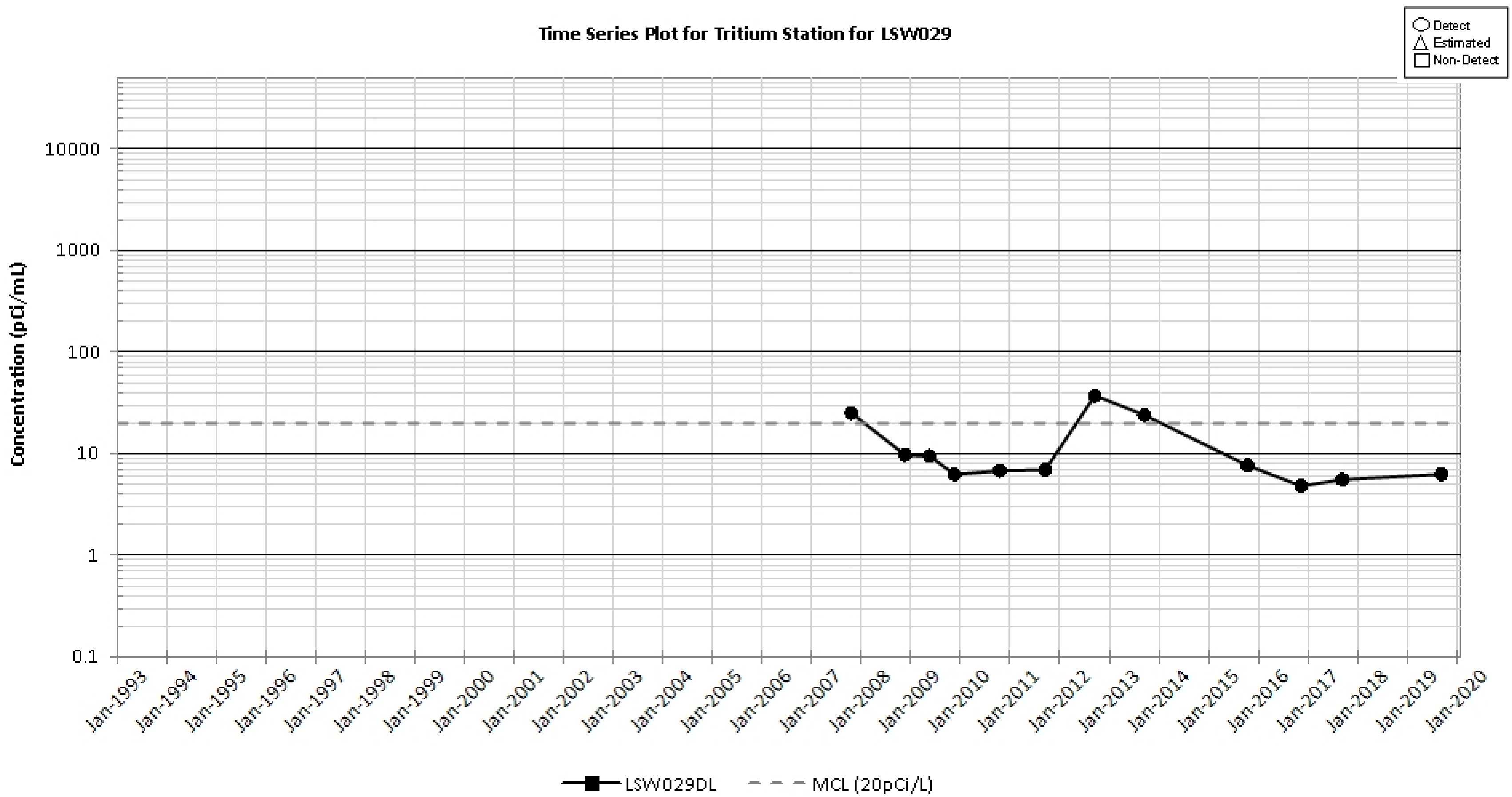

Time Series Plot for Tritium Station for LSW 24
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 24A
MCL (20pCi/L)

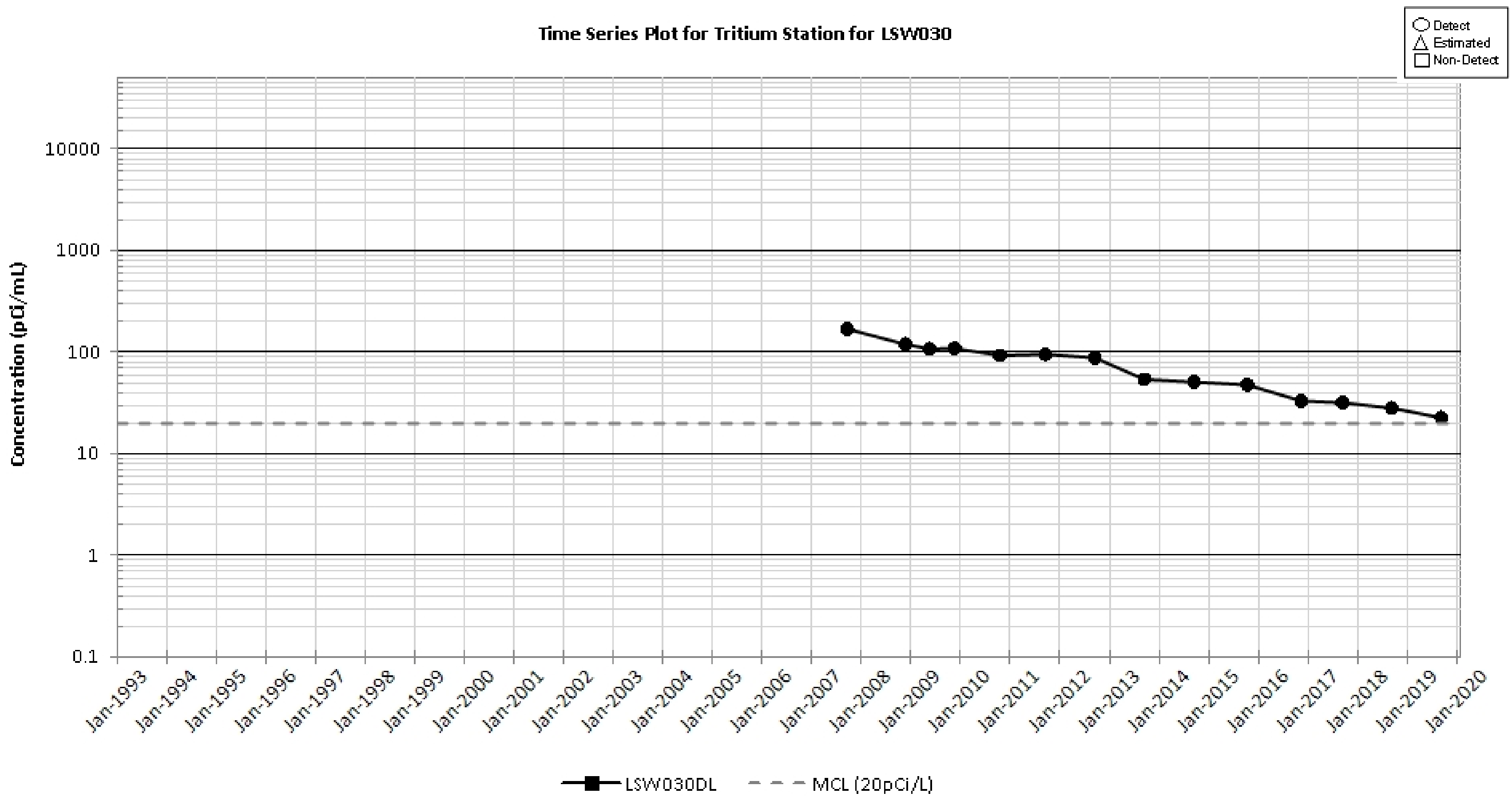

Time Series Plot for Tritium Station for LSW 25
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW 25DL
MCL (20pCi/L)

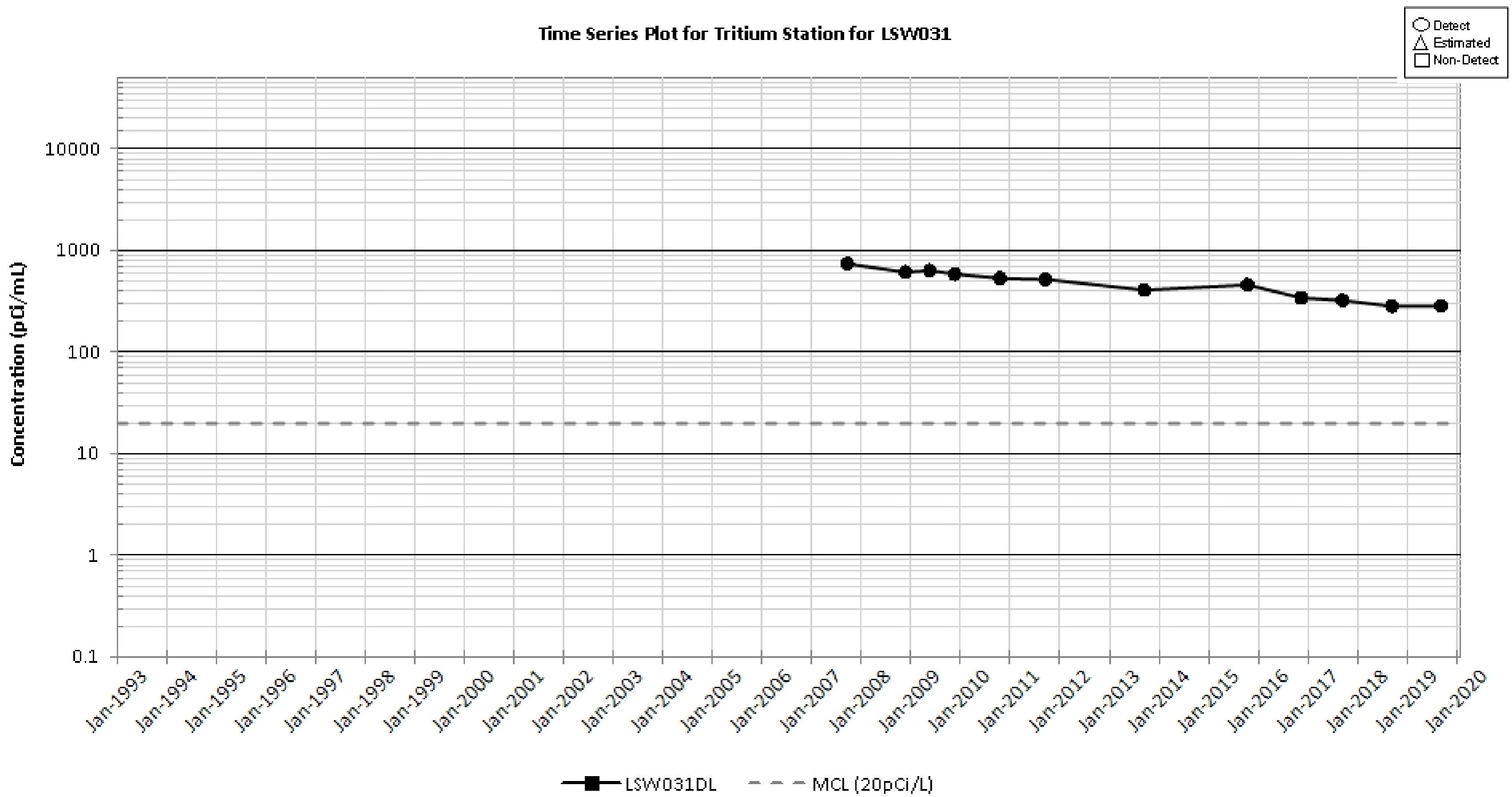

Time Series Plot for Tritium Station for LSW026
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW026DL
MCL (20pCi/L)

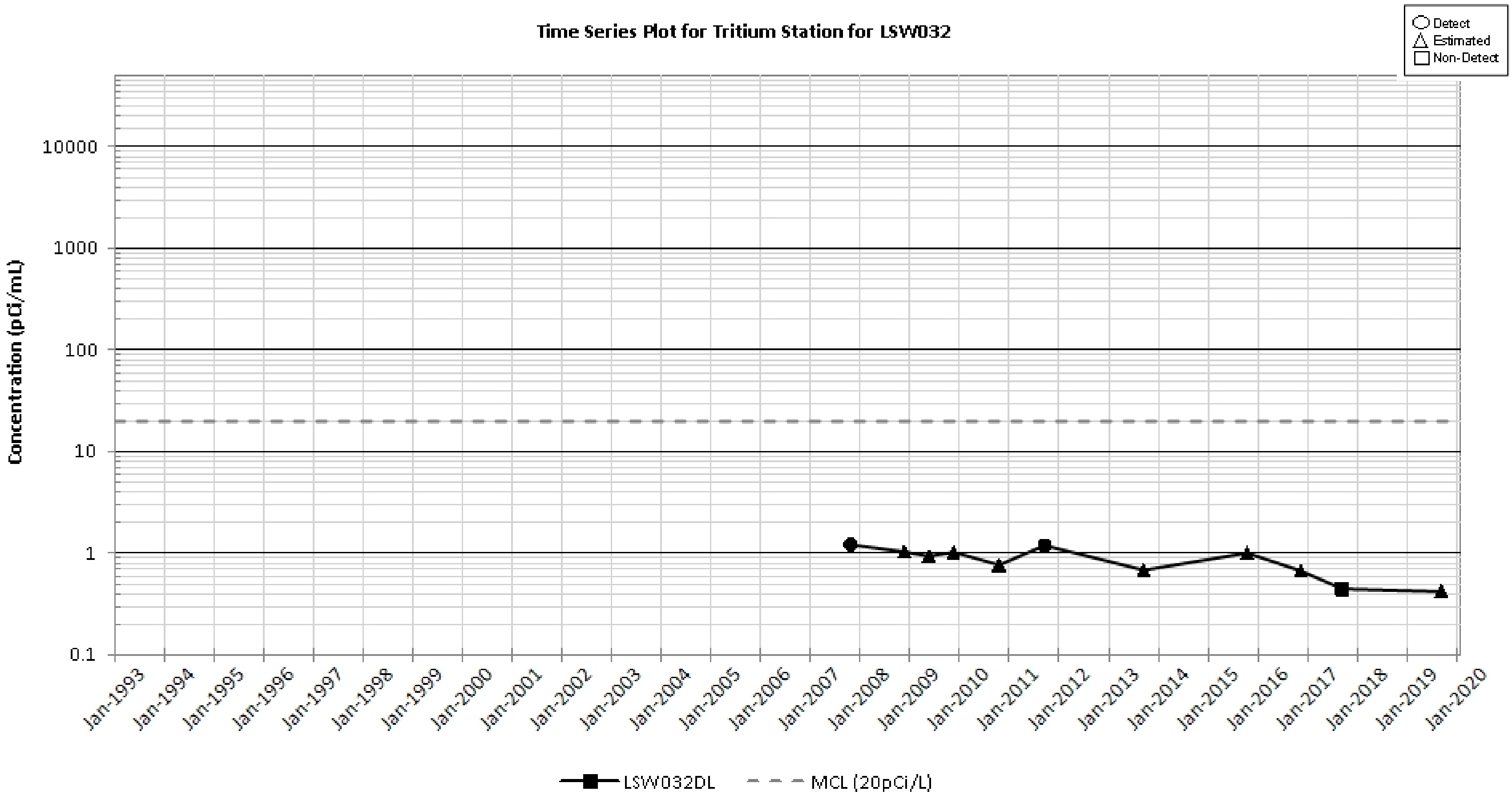

Time Series Plot for Tritium Station for LSW027
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW027A
LSW027C
MCL (20pCi/L)

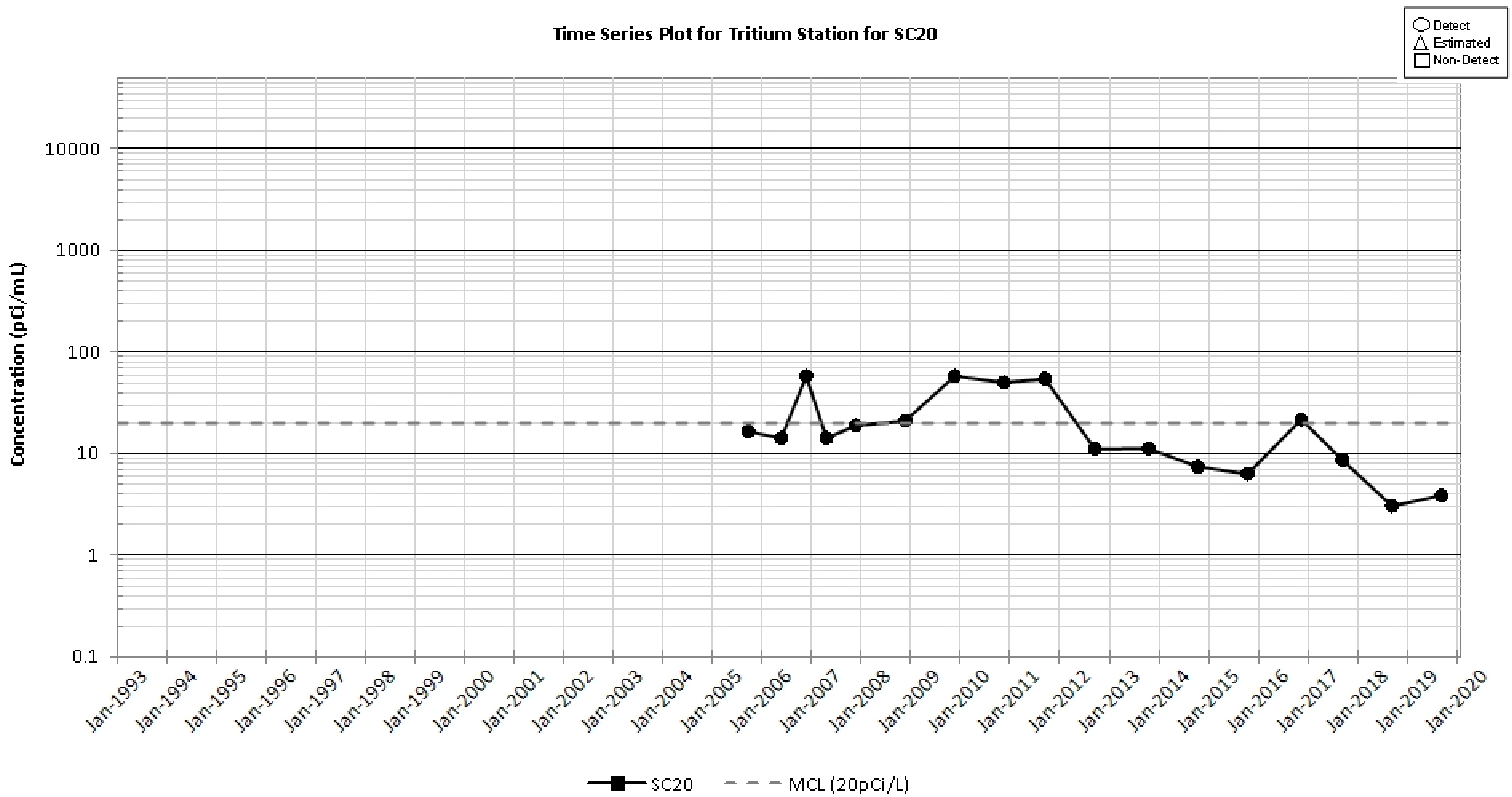

Time Series Plot for Tritium Station for LSW028
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW028C
MCL (20pCi/L)

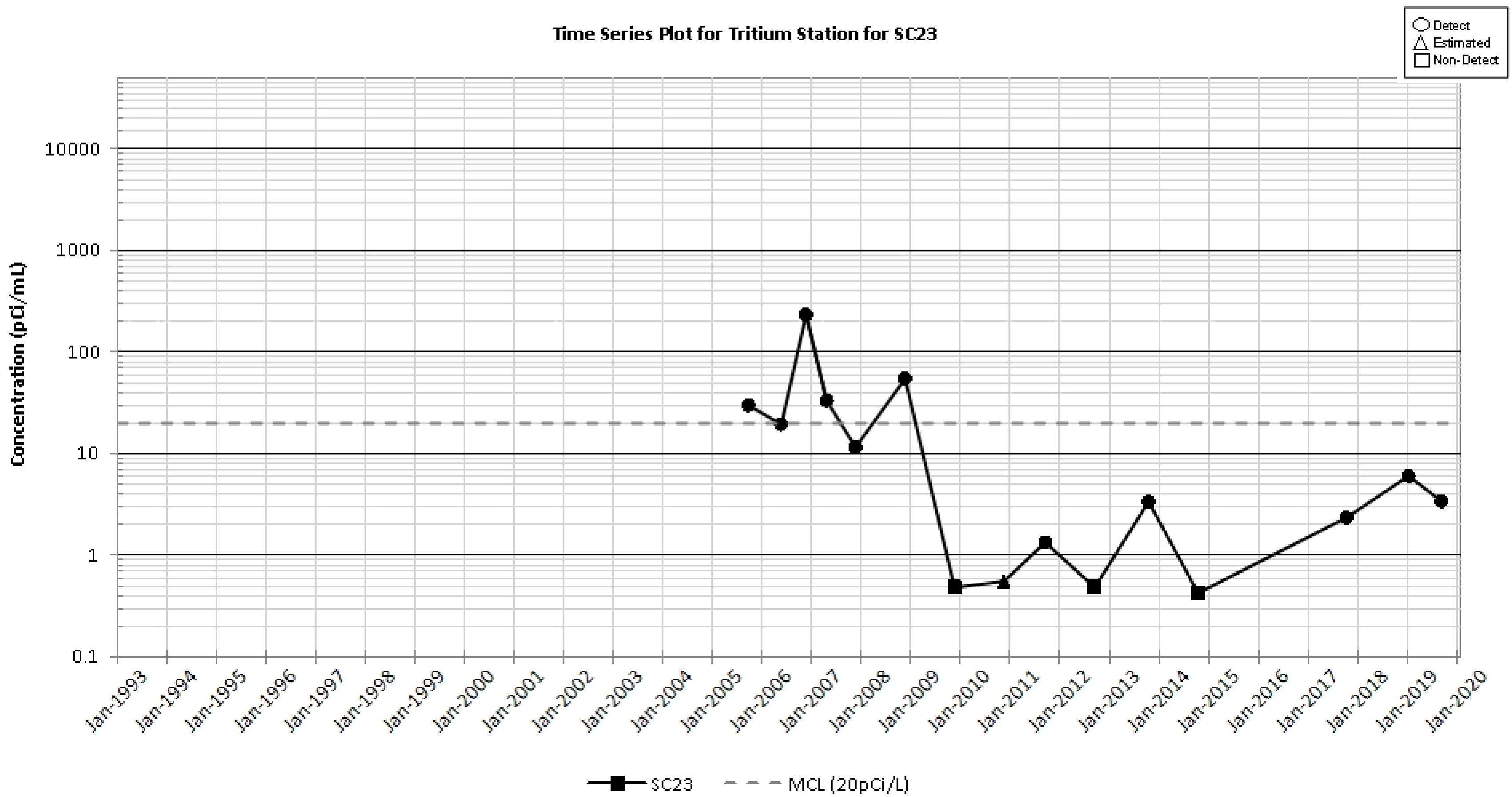

Time Series Plot for Tritium Station for LSW029
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW029DL
MCL (20pCi/L)

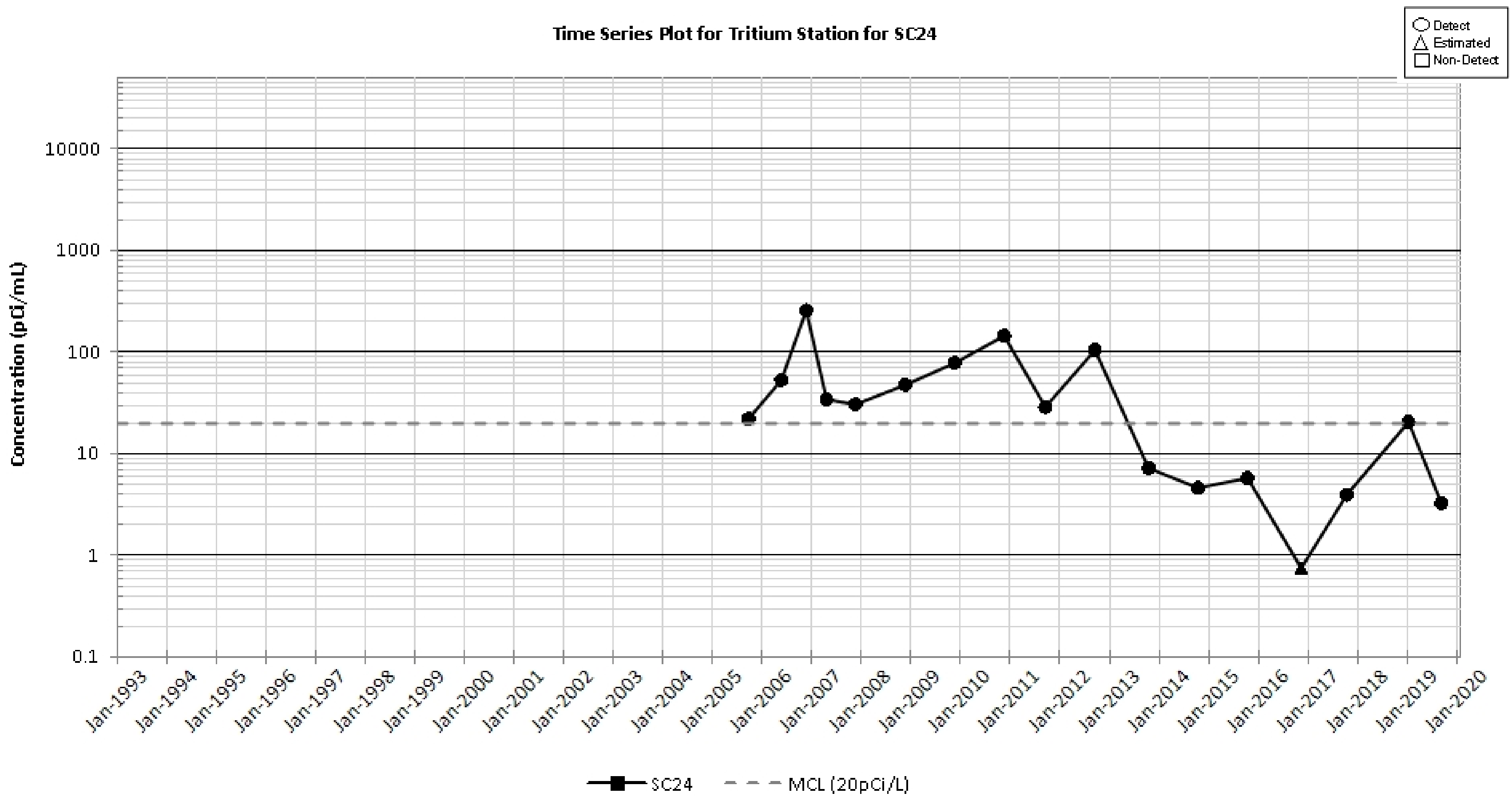

Time Series Plot for Tritium Station for LSW030
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW030DL
MCL (20pCi/L)

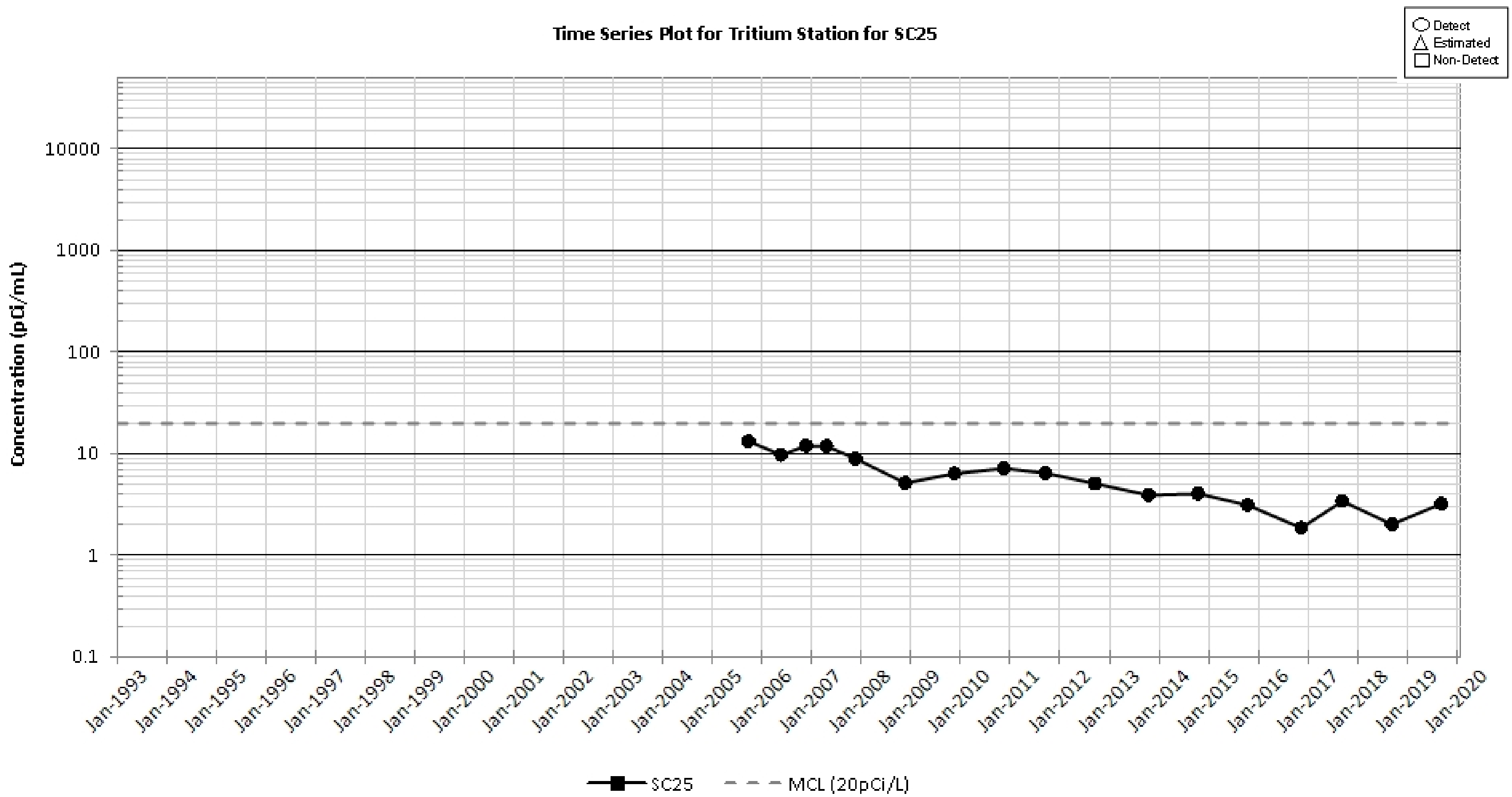

Time Series Plot for Tritium Station for LSW031
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW031DL
MCL (20pCi/L)

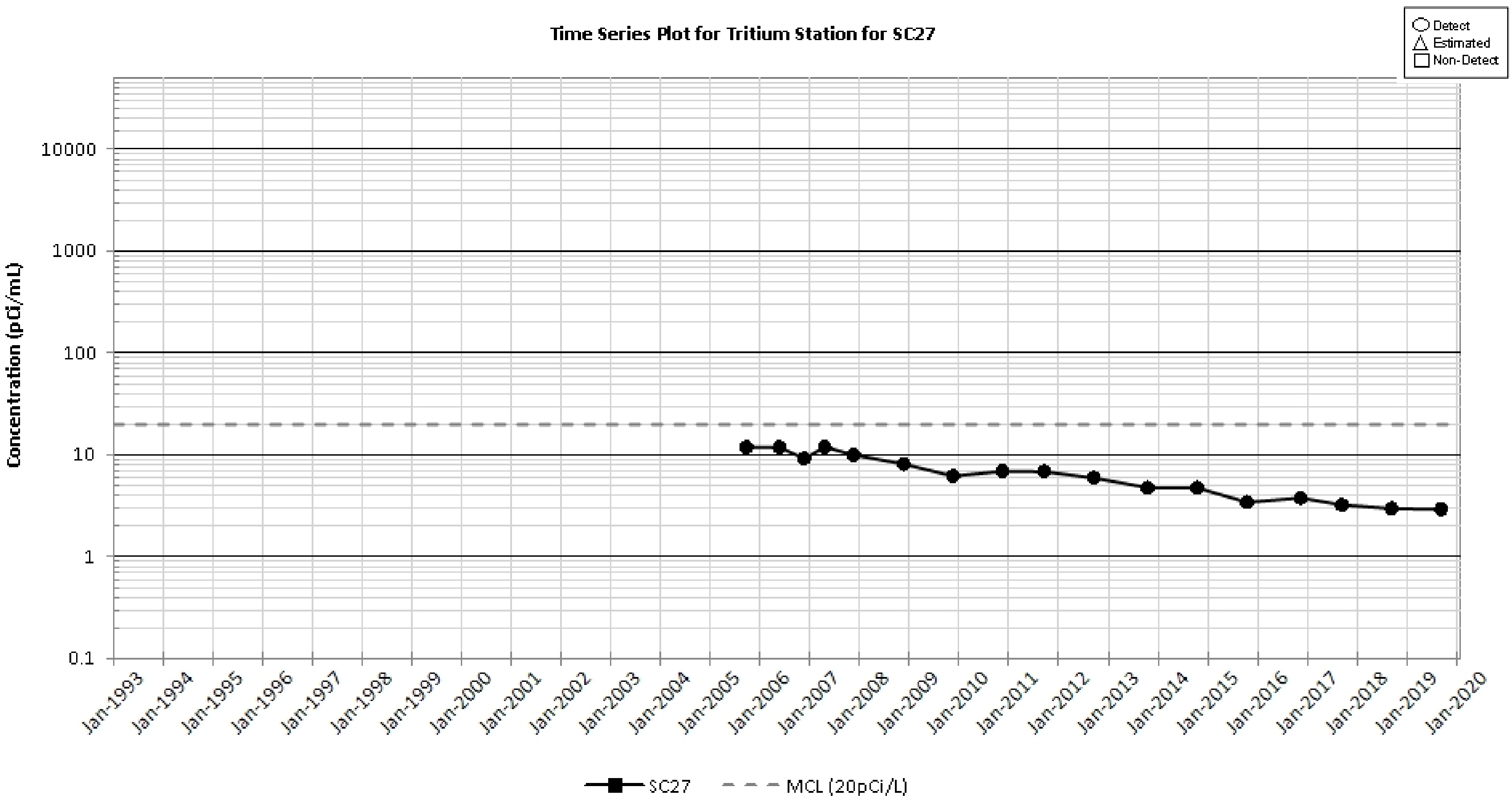

Time Series Plot for Tritium Station for LSW032
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
LSW032DL
MCL (20pCi/L)


Time Series Plot for Tritium Station for SC20
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC20
MCL (20pCi/L)


Time Series Plot for Tritium Station for SC23
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC23
MCL (20pCi/L)


Time Series Plot for Tritium Station for SC24
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC24
MCL (20pCi/L)


Time Series Plot for Tritium Station for SC25
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC25
MCL (20pCi/L)


Time Series Plot for Tritium Station for SC27
Detect
Estimated
Non-Detect
Concentration (pCi/mL)
10000
1000
100
10
1
0.1
Jan-1993
Jan-1994
Jan-1995
Jan-1996
Jan-1997
Jan-1998
Jan-1999
Jan-2000
Jan-2001
Jan-2002
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
SC27
MCL (20pCi/L)