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MEMORANDUM

To: Dana Bayuk, Oregon Department of Environmental Quality
Date: September 12, 2016

From: John Edwards, Anchor QEA, LLC
John Renda, Anchor QEA, LLC
Rob Ede, Hahn and Associates
Project: 000029-02.40

Cc: Bob Wyatt, Patty Dost, Ben Hung, and Jen Mott

Re: Proposed Revisions to the NW Natural Gasco Groundwater Monitoring Program

A groundwater sampling event is scheduled at the Gasco Site (Site) in September 2016. A table summarizing the current monitoring program was submitted to the Oregon Department of Environmental Quality (DEQ) by email (July 29, 2016; Jen Mott to Dana Bayuk; attached). Due to significant progress in Remedial Investigation (RI)/Feasibility Study (FS) activities at the Site, Anchor QEA evaluated the current monitoring program to determine whether revisions to the program are technically appropriate based on current project data needs. Based on that evaluation, it was determined that revisions to the program are warranted. This memorandum summarizes that evaluation and the proposed revisions to the current monitoring program.

STATUS OF RI/FS ACTIVITIES

An FS for the Site is under development. The RI and Risk Assessment (RA) for the Gasco property portion of the Site are complete, and an RI/RA Addendum for the Siltronic property portion of the Site is under development. The RIs and RAs for both portions of the Site will support the development of an FS for the entire Site (OU1). Optimization of the groundwater source control hydraulic control and containment (HC&C) system is complete, and the system is transitioning into a long-term O&M phase.

GROUNDWATER QUALITY DATA NEEDS

The objectives supported by the current monitoring program were evaluated relative to the current status of Site activities. For the purposes of FS development, it was determined that the nature and extent of groundwater contamination has been fully characterized throughout OU1 and the current data set is more than adequate to support FS alternatives development. Furthermore, the groundwater quality dataset for the FS has been locked down, and additional

groundwater monitoring data obtained during FS development will not be used for FS alternatives development.

In addition, wells at locations with groundwater that exceeds risk-based concentrations have been identified, and additional groundwater monitoring data obtained during FS development will not affect these findings. Also, remedial alternatives developed in the FS will not be affected by the direction of concentration trends at individual wells (i.e., stable, declining, or increasing), and additional groundwater monitoring trend data obtained during FS development will not support FS alternatives development.

With respect to HC&C data needs, groundwater concentration trends are not criteria for determining whether the source control project is meeting RAOs, and groundwater concentration trends are not being used to assess the operational parameters of the HC&C system, such as pumping rates and elevation set points. However, it may be useful to know which wells are showing a change in concentration trends that is coincident with the 2013 startup of the HC&C system.

In summary, it was determined that based on the status of the RI/FS activities, the current groundwater quality data needs are limited to tracking changes in concentration trends coincident with the 2013 startup of the HC&C system.

IDENTIFICATION OF WELLS WITH GROUNDWATER CONCENTRATION TREND CHANGES COINCIDENT WITH HC&C OPERATION

Anchor QEA identified wells with groundwater concentration changes coincident with HC&C operation by reviewing the concentration time trends for key groundwater chemicals of concern representative of the primary groundwater risk drivers for the Site, including benzo-a-pyrene, naphthalene, benzene, total cyanide, and free cyanide. The attached Figures 1-1 through 1-120 and 2-1 through 2-120 provide the time trend concentration graphs and statistical trend lines for each of these COCs at each well.

The statistical trend graphs for each well were reviewed to see if the trends have been consistent over the monitoring period. The trends were considered consistent regardless of whether they were stable, increasing, or decreasing. The trend graphs were also reviewed to identify wells with increases or decreases in groundwater COC concentration trends that appear coincident with the operation of the HC&C system beginning in 2013.

Review of the concentration trend graphs revealed that a majority of the wells have had consistent groundwater quality trends over the monitoring period (i.e., stable, increasing, or decreasing concentrations). However, at a subset of the wells, there have been changes (increases or decreases) in groundwater quality trends that may be a result of operation of the HC&C system.

PROPOSED REVISIONS TO THE CURRENT MONITORING PROGRAM

Based on this evaluation, Anchor QEA proposes that the groundwater monitoring program be modified prior to the sampling event scheduled for September to consist of the following two components:

1. Annual sampling of the HC&C extraction wells

- PW-1Ub
 - PW-1L
 - PW-2U
 - PW-2L
 - PW-3U
 - PW-3-118
 - PW-4U
 - PW-4L
 - PW-5U
 - PW-5L
 - PW-6U
 - PW-6L
 - PW-7-93
 - PW-8-68
 - PW-9-92
 - PW-10L
 - PW-11U
 - PW-12U
 - PW-13U
 - PW-14U
 - PW-15U
 - PW-16U
-

2. Annual sampling of the monitoring wells and piezometers at locations where the concentration trends beginning in 2013 may be a result of operation of the HC&C system. These monitoring wells and piezometers include the following:

- MW-4-101
 - MW- 5-100
 - MW-5-175
 - MW-5-32
 - MW-8-56
 - MW-16-65
 - MW-18-125
 - MW-20-120
 - MW-23-27
 - MW-23-123
 - MW-28U
 - MW-31U
 - MW-34U
 - MW-42F
 - OW-1F
 - OW-5F
 - OW-9-25
 - PZ-5-5
 - PZ-5-20
 - PZ-5-55
 - PZ-6-150
 - PZ-6-5
 - PZ-6-50
 - PZ-7-100
 - PZ-7-50
 - PZ-9-110
 - PZ-9-150
 - PZ-9-50
 - PZ-9 75
 - WS-16-161
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These well locations are identified in Figure 3 (attached). Anchor QEA proposes that this modified program extend through FS development and until a Record of Decision (ROD) is provided for OU1. Sampling of all other wells in the current program would be suspended until the monitoring program is redesigned following the upland ROD. Subsequent to the ROD, a post-FS monitoring program would be developed to assess the progress of the upland remedy in meeting Remedial Action Objectives.

Attachments

Table of Comprehensive Groundwater Monitoring Framework dated July 29, 2016

Figures 1-1 through 1-120: Time Series Concentration Plots (VOCs, SVOCs, and Metals)

Figures 2-1 through 2-120: Time Series Concentration Plots (Cyanide)

Figure 3: Proposed Monitoring Program Wells

ATTACHMENTS

Comprehensive Well Network Description - NW Natural and Siltronic Properties
Data Collection Program and Sampling Schedule
Revision Date: July 28, 2016

Well Information										NW Natural MGP Data Collection Program					NW Natural Sampling Schedule				Siltronic cVOC Data Collection Objectives					Siltronic Sampling Schedule		
Well ID	Installed By	Site Location	Operable Unit (OU) ²	NW Natural Monitoring Entity	Water-Bearing Zone ³	•Nearshore (200 feet) •Upland •River	Eastings ⁴	Northings ⁴	Screened Interval (feet bgs)	Quarterly GW Measurement: •Manual (M) •Transducer (T)	DNAPL Measurement:	HC&C Control Well	Source Control Monitoring	RI/HERA and Data Trends	New Well Monitoring (Quarterly as Indicated)	TPH-Dx and -Gx	Integrated Monitoring ¹	Integrated Monitoring ¹ with TPH-Dx, -Gx	Integrated Monitoring ¹ with TPH-Dx, -Gx, EPH, and VPH	Quarterly GW Measurement: Manual (M) or Transducer (T)	DNAPL Monitoring	EIB Performance Monitoring	HC&C Performance Monitoring	RI N&E Monitoring	Schedule	
Monitoring Wells																										
MW-1-22	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7623089.8	705897.6	11	21	M	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-
MW-1-65	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623083.3	705869.1	45	55	M/T	-	-	X	X	-	-	-	1Q and 3Q	-	-	-	-	-	-	
MW-1-82	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623095.0	705868.1	72	82	M/T	-	-	X	X	-	-	-	1Q and 3Q	-	-	-	-	-	-	
MW-2-32	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7623338.8	705787.9	21.5	31.5	M	-	-	X	X	-	-	-	-	-	-	-	-	-	-	
MW-2-61	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623333.0	705792.2	50	60	M	-	-	X	X	-	-	-	1Q and 3Q	-	-	-	-	-	-	
MW-2-104	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623343.6	705784.9	94	104	M	-	-	X	X	-	-	-	1Q and 3Q	-	-	-	-	-	-	
MW-3-26	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7623842.6	705486.8	15	25	M	Semi-monthly	-	X	X	-	-	-	-	-	-	-	-	-	-	
MW-3-56	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623848.3	705485.4	45	55	M/T	Semi-monthly	-	X	X	-	-	-	-	-	-	-	-	-	-	
MW-4-35	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7624102.6	705378.2	24	34	M	Semi-monthly	-	X	X	-	-	-	-	-	-	-	-	-	-	
MW-4-57	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624107.4	705375.2	46	56	M/T	Semi-monthly	-	X	X	-	-	-	-	-	-	-	-	-	-	
MW-4-101	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624095.4	705380.3	89.5	99.5	M	Semi-monthly	-	X	X	-	-	-	-	-	-	-	-	-	-	
MW-5-32	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624346.9	705217.2	21	31	M/T	Semi-monthly	-	X	X	-	-	-	-	-	-	-	-	-	-	
MW-5-100	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624340.3	705213.1	88	98	M	Semi-monthly	-	X	X	-	-	-	-	-	-	-	-	-	-	
MW-5-175	NW Natural	Gasco	OU1	Anchor QEA	Deep Lower Alluvium	Nearshore	7624347.8	705207.6	163	173	M/T	Semi-monthly	-	X	X	-	-	-	1Q and 3Q	-	-	-	-	-	-	
MW-6-61	NW Natural	Gasco	OU1	Decommissioned	Upper Alluvium	Upland	7623303.9	705400.3	50	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-7-60	NW Natural	Gasco	OU1	HAI	Upper Alluvium	Upland	7623510.3	705392.9	50.0	60.0	M	-	-	-	X	-	-	-	3Q	-	-	-	-	-	-	
MW-8-29	NW Natural	Gasco	OU1	HAI	Fill	Upland	7623959.0	705168.7	18.0	28.0	M	-	-	-	X	-	-	-	3Q	-	-	-	-	-	-	
MW-8-56	NW Natural	Gasco	OU1	HAI	Upper Alluvium	Upland	7623956.1	705170.8	45.0	55.0	M	-	-	-	X	-	-	-	1Q and 3Q	-	-	-	-	-	-	
MW-9-29	NW Natural	Gasco	OU1	HAI	Fill/Alluvium	Upland	7623072.8	705017.3	18.0	28.0	M	-	-	-	X	-	-	-	3Q	-	-	-	-	-	-	
MW-10-25	NW Natural	Gasco	OU1	HAI	Fill	Upland	7623484.2	704943.6	14.0	24.0	M	Quarterly	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-10-61	NW Natural	Gasco	OU1	HAI	Upper Alluvium	Upland	7623481.4	704946.0	50.0	60.0	M	-	-	-	X	-	-	-	3Q	-	-	-	-	-	-	
MW-11-32	NW Natural	Gasco	OU1	HAI	Fill	Upland	7623854.1	704790.0	21.0	31.0	M	Quarterly	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-12-36	NW Natural	Gasco	OU1	HAI	Fill/Alluvium	Upland	7623621.3	704130.4	25.0	35.0	M	-	-	-	X	-	-	-	3Q	-	-	-	-	-	-	
MW-13-61	NW Natural	Gasco	OU1	Decommissioned	Upper Alluvium	Upland	7623444.4	705437.3	50	60	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	
MW-13-61R	NW Natural	Gasco	OU1	Decommissioned	Upper Alluvium	Upland	7623436.1	705424.1	51	61	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	
MW-14-110	NW Natural	Gasco	OU1	HAI	Lower Alluvium	Upland	7623751.3	704881.7	98.0	108.0	M	-	-	-	X	-	-	-	3Q	-	-	-	-	-	-	
MW-15-50	NW Natural	Gasco	OU1	HAI	Upper Alluvium	Upland	7623699.5	704648.7	40.0	50.0	M	-	-	-	X	-	-	-	3Q	-	-	-	-	-	-	
MW-15-66	NW Natural	Gasco	OU1	HAI	Upper Alluvium	Upland	7623705.5	704639.7	60.5	65.5	M	-	-	-	X	-	-	-	3Q	-	-	-	-	-	-	
MW-16-45	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623944.8	705482.9	30	45	M/T	Monthly	-	-	X	-	-	-	-	-	-	-	-	-	-	
MW-16-65	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623950.4	705478.8	55	65	M/T	Semi-monthly	-	X	X	-	-	-	-	1Q and 3Q	-	-	-	-	-	
MW-16-125	NW Natural	Gasco	OU1	Decommissioned	Lower Alluvium	Nearshore	7623955.5	705475.1	115	125	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	
MW-17-79	NW Natural	Gasco	OU1	Decommissioned	Upper Alluvium	Nearshore	7624159.5	705321.7	38.5	78.5	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	
MW-18-30	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7623922.4	705446.9	19	29	M/T	Weekly	-	-	X	-	-	-	-	-	-	-	-	-	-	
MW-18-125	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623935.8	705436.8	115	125	M/T	Semi-monthly	-	X	X	-	-	-	-	-	-	-	-	-	-	
MW-18-180	NW Natural	Gasco	OU1	Anchor QEA	Deep Lower Alluvium	Nearshore	7623930.4	705444.2	170	180	M/T	Semi-monthly	-	X	X	-	-	-	1Q and 3Q	-	-	-	-	-	-	
MW-19-22	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7624251.0	705292.0	12	22	M/T	Semi-monthly	-	X	X	-	-	-	-	1Q and 3Q	-	-	-	-	-	
MW-19-125	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624246.0	705295.0	115	125	M/T	Semi-monthly	-	X	X	-	-	-	-	1Q and 3Q	-	-	-	-	-	
MW-19-180	NW Natural	Gasco	OU1	Anchor QEA	Deep Lower Alluvium	Nearshore	7624240.0	705298.0	170	180	M/T	Semi-monthly	-	X	X	-	-	-	1Q and 3Q	-	-	-	-	-	-	
MW-20-120	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624360.0	705233.0	110	120	M	Semi-monthly	-	X	X	-	-	-	-	1Q and 3Q	-	-	-	-	-	
MW-21-12	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7623633.5	705643.0	7	12	M	-	-	-	X	X	-	-	-	-	-	-	-	-	-	
MW-21-75	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623645.9	705635.6	65	75	M/T	-	-	X	X	-	-	-	-	1Q and 3Q	-	-	-	-	-	
MW-21-115	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623653.4	705631.1	105.0	115.0	M/T	-	-	X	X	-	-	-	-	1Q and 3Q	-	-	-	-	-	
MW-21-165	NW Natural	Gasco	OU1	Anchor QEA	Deep Lower Alluvium	Nearshore	7623661.9	705626.6	156.0	166.0	M/T	-	-	X	X	-	-	-	-	1Q and 3Q	-	-	-	-	-	
MW-21U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623643.7	705645.9	25	35	T	-	-	X	X	-	-	-	-	1Q and 3Q	-	-	-	-	-	
MW-22-80	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623312.7	705869.2	69.9	79.9	M/T	-	-	X	-	X	-	-	-	-	-	-	-	-	-	
MW-22U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623306.2	705875.4	45.0	55.0	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
MW-23-27	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7623498.5	705734.9	17.7	27.7	M	-	-	-	X	X	-	-	-	-	-	-	-	-	-	
MW-23-75	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623494.4	705738.2	64.7	74.7	M/T	-	-	X	X	-	-	-	-	-	-	-	-	-	-	
MW-23-123	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623490.4	705740.6	113.3	123.3	M	-	-	X	X	-	-	-	-	1Q and 3Q	-	-	-	-	-	
MW-23U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623490.3	705734.9	40.0	50.0	T	-	-	X	X	-	-	-	-	1Q and 3Q	-	-	-	-	-	
MW-24-70	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623865.8	705515.5	60.1	70.1	M/T	Semi-monthly	-	X	X	-	-	-	-	-	-	-	-	-	-	
MW-24-130	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623868.1	705513.3	120.1	130.1	M/T	Semi-monthly	X	-	-	-	-	-	-	-	-	-	-	-	-	
MW-25L	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623074.4	705972.6	54.0	64.0	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-26U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623954.2	705459.8	38.5	48.5	T	Weekly	X	-	-	-	-	-	-	-	-	-	-	-	-	
MW-27L	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624002.7	705428.4	106.0	116.0	T	Semi-monthly	X	-	-	-	-	-	-	-	-	-	-	-	-	
MW-27U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623998.7	705431.2	66.1	76.1	T	Monthly	-	X												

Comprehensive Well Network Description - NW Natural and Siltronic Properties
Data Collection Program and Sampling Schedule
 Revision Date: July 28, 2016

Well Information										NW Natural MGP Data Collection Program					NW Natural Sampling Schedule				Siltronic cVOC Data Collection Objectives					Siltronic Sampling Schedule	
Well ID	Installed By	Site Location	Operable Unit (OU) ²	NW Natural Monitoring Entity	Water-Bearing Zone ³	•Nearshore (200 feet) •Upland •River	Easting ⁴	Northing ⁴	Screened Interval (feet bgs)	Quarterly GW Measurement: •Manual (M) •Transducer (T)	DNAPL Measurement:	HC&C Control Well	Source Control Monitoring	RI/HERA and Data Trends	New Well Monitoring (Quarterly as Indicated)	TPH-Dx and -Gx	Integrated Monitoring ¹	Integrated Monitoring ¹ with TPH-Dx, -Gx	Integrated Monitoring ¹ with TPH-Dx, -Gx, EPH, and VPH	Quarterly GW Measurement: Manual (M) or Transducer (T)	DNAPL Monitoring	EIB Performance Monitoring	HC&C Performance Monitoring	RI N&E Monitoring	Schedule
MW-PW-2L	NW Natural	Siltronic	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624540.9	705179.9	119.8	139.8	-	Weekly	-	-	-	-	-	-	-	-	-	-	-	-	-
NWN-1-20	NW Natural	Siltronic	OU1	HAI	Fill	Upland	7623946.7	704240.4	10.0	20.0	M	-	-	X	-	-	3Q	-	-	-	-	-	-	-	-
NWN-2-20	NW Natural	Siltronic	OU1	HAI	Fill	Upland	7623940.1	703958.0	10.0	20.0	M	-	-	X	-	-	-	-	-	-	-	-	-	-	-
NWN-3-17	NW Natural	Siltronic	OU1	HAI	Fill	Upland	7624165.6	703613.0	7.0	17.0	M	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
NWN-4-15	NW Natural	Siltronic	OU2	HAI	Fill	Upland	7624417.0	703176.5	5.0	15.0	M	-	-	X	-	-	-	-	-	-	-	-	-	-	-
NWN-5-20	NW Natural	Siltronic	OU2	HAI	Fill	Upland	7624797.3	702900.2	10.0	20.0	M	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
NWN-6-31	NW Natural	Siltronic	OU2	HAI	Fill	Upland	7625094.4	702865.2	21.0	31.0	M	-	-	X	-	-	-	-	-	-	-	-	-	-	-
NWN-7-30	NW Natural	Siltronic	OU1	HAI	Fill	Upland	7624543.0	703893.5	20.0	30.0	M	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
NWN-8-30	NW Natural	Siltronic	OU2	HAI	Fill	Upland	7625491.7	703329.4	15.0	30.0	M	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
NWN-9-31	NW Natural	Siltronic	OU1	HAI	Fill	Nearshore	7625000.8	704896.3	16.0	31.0	M	-	-	X	-	-	-	-	-	-	-	-	-	-	-
NWN-10-26	NW Natural	Siltronic	OU2	HAI	Fill	Nearshore	7625813.7	704369.3	11.0	26.0	M	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
NWN-11-24	NW Natural	Siltronic	OU1	HAI	Fill	Upland	7625080.5	704323.5	14.0	24.0	M	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
NWN-12-20	NW Natural	Siltronic	OU2	HAI	Fill	Upland	7625552.3	704097.9	10.0	20.0	M	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
NWN-13-23	NW Natural	Siltronic	OU1	HAI	Fill	Upland	7624041.9	704353.4	13.0	23.0	M	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
NWN-13-73	NW Natural	Siltronic	OU1	HAI	Upper Alluvium	Upland	7624031.8	704361.5	63.0	73.0	M	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
NWN-13-106	NW Natural	Siltronic	OU1	HAI	Lower Alluvium	Upland	7624023.9	704368.0	96.0	106.0	M	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
PW-01-80	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624095.8	705353.7	39.5	79.5	M	Monthly	-	-	-	-	-	-	-	-	-	-	-	-	-
PW-3-85	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624367.0	705229.0	75.0	85.0	T	Monthly	-	-	-	-	-	-	-	-	-	-	-	-	-
WS-8-33	NW Natural	Siltronic	OU1	HAI	Fill	Nearshore	7624854.1	704987.9	22.5	32.5	T	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
WS-8-59	NW Natural	Siltronic	OU1	HAI	Upper Alluvium	Nearshore	7624858.3	704990.2	48.5	58.5	T	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
WS-9-34	NW Natural	Siltronic	OU1	HAI	Fill	Nearshore	7625261.8	704714.1	23.5	33.5	M	-	-	X	-	-	-	-	-	-	-	-	-	-	-
WS-10-27	Siltronic	Siltronic	OU1	HAI	Fill	Upland	7624393.1	704306.6	11.0	26.0	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WS-11-125	Siltronic	Siltronic	OU1	Decommissioned	Lower Alluvium	Nearshore	7624628.3	705147.4	109.0	124.0	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
WS-11-161	Siltronic	Siltronic	OU1	Decommissioned	Deep Lower Alluvium	Nearshore	7624628.3	705147.4	145.0	160.0	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
WS-12-125	Siltronic	Siltronic	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624836.2	704998.7	109.0	124.0	M	-	-	X	-	-	-	-	-	-	-	-	-	-	-
WS-12-161	Siltronic	Siltronic	OU1	HAI	Deep Lower Alluvium	Nearshore	7624836.2	704998.7	145.0	160.0	MT	-	-	-	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
WS-13-69	Siltronic	Siltronic	OU1	HAI	Upper Alluvium	Upland	7624575.1	704633.4	52.6	67.6	M	-	-	X	-	-	3Q	-	-	-	-	-	-	-	1Q, 2Q, 3Q, and 4Q ⁵
WS-13-105	Siltronic	Siltronic	OU1	HAI	Lower Alluvium	Upland	7624575.1	704633.4	89.0	104.0	M	-	-	X	-	-	3Q	-	-	-	-	-	-	-	1Q, 2Q, 3Q, and 4Q ⁵
WS-14-125	Siltronic	Siltronic	OU1	Decommissioned	Lower Alluvium	Nearshore	7624485.7	705182.5	109.0	124.0	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
WS-14-161	Siltronic	Siltronic	OU1	Decommissioned	Deep Lower Alluvium	Nearshore	7624485.7	705182.5	145.0	160.0	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
WS-15-85	Siltronic	Siltronic	OU1	HAI	Upper Alluvium	Upland	7624438.9	704728.2	70.0	85.0	M	-	-	-	-	-	-	-	-	-	-	-	-	-	Bimonthly ^{5,9}
WS-15-140	Siltronic	Siltronic	OU1	HAI	Lower Alluvium	Upland	7624438.9	704728.2	125.0	140.0	M	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-16-125	Siltronic	Siltronic	OU1	HAI	Deep Lower Alluvium	Upland	7624326.8	704965.0	109.0	124.0	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WS-16-161	Siltronic	Siltronic	OU1	HAI	Lower Alluvium	Upland	7624326.8	704965.0	145.0	160.0	M	-	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-
WS-17-52	Siltronic	Siltronic	OU1	HAI	Upper Alluvium	Upland	7624607.5	704484.3	41.0	51.0	M	-	-	X	-	-	3Q	-	-	-	-	-	-	-	-
WS-17-94	Siltronic	Siltronic	OU1	HAI	Lower Alluvium	Upland	7624607.5	704484.3	78.0	93.0	M	-	-	X	-	-	3Q	-	-	-	-	-	-	-	-
WS-18-71	Siltronic	Siltronic	OU1	HAI	Upper Alluvium	Upland	7624577.5	704689.9	60.0	70.0	M	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-18-101	Siltronic	Siltronic	OU1	-	Lower Alluvium	Upland	7624581.4	704692.3	91.0	101.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1Q, 2Q, 3Q, and 4Q ⁵
WS-19-71	Siltronic	Siltronic	OU1	HAI	Upper Alluvium	Upland	7624579.5	704675.8	60.0	70.0	M	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-19-101	Siltronic	Siltronic	OU1	-	Lower Alluvium	Upland	7624575.9	704678.6	92.0	102.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-21-112	Siltronic	Siltronic	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624617.9	705091.1	94.5	109.5	T	-	-	X	-	-	-	-	-	-	-	-	-	-	1Q, 2Q, 3Q, and 4Q ⁵
WS-21-131	Siltronic	Siltronic	OU1	-	Lower Alluvium	Nearshore	7624622.6	705086.1	115.0	130.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Bimonthly ⁹
WS-23-116	Siltronic	Siltronic	OU1	-	Lower Alluvium	Upland	7624452.6	705097.3	100.0	115.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Bimonthly ⁹
WS-24-111	Siltronic	Siltronic	OU1	HAI	Lower Alluvium	Upland	7624532.1	705032.9	100.0	110.0	M	-	-	-	-	-	-	-	-	-	-	-	-	-	Bimonthly ⁹
WS-24-155	Siltronic	Siltronic	OU1	-	Lower Alluvium	Upland	7624538.3	705037.4	99.0	109.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WS-25-96	Siltronic	Siltronic	OU1	-	Upper Alluvium	Nearshore	7624670.2	705040.6	85.0	95.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Bimonthly ⁹
WS-25-111	Siltronic	Siltronic	OU1	HAI	Lower Alluvium	Nearshore	7624667.3	705042.8	100.0	110.0	M	-	-	-	-	-	-	-	-	-	-	-	-	-	Bimonthly ⁹
WS-26-86	Siltronic	Siltronic	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624747.8	704984.7	75.0	85.0	T	-	-	X	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-26-116	Siltronic	Siltronic	OU1	-	Lower Alluvium	Nearshore	7624750.4	704982.4	105.0	115.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1Q, 2Q, 3Q, and 4Q ⁷
WS-27-86	Siltronic	Siltronic	OU1	-	Upper Alluvium	Upland	7624754.5	704902.1	70.0	85.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁷
WS-30-96	Siltronic	Siltronic	OU1	-	Upper Alluvium	Upland	7624472.5	704758.7	85.0	95.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1Q, 2Q, 3Q, and 4Q ⁵
WS-31-106	Siltronic	Siltronic	OU1	-	Lower Alluvium	Upland	7624519.8	704716.0	95.0	105.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-32-76	Siltronic	Siltronic	OU1	-	Upper Alluvium	Upland	7624524.7	704718.5	65.0	75.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1Q, 2Q, 3Q, and 4Q ⁵
WS-32-106	Siltronic	Siltronic	OU1	-	Lower Alluvium	Upland	7624528.9	704721.4	90.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-33-81	Siltronic	Siltronic	OU1	-	Upper Alluvium	Upland	7624536.7	704736.7	70.0	80.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Bimonthly ^{5,9}
WS-33-106	Siltronic	Siltronic	OU1	-	Lower Alluvium	Upland	7624535.5	704733.1	95.0	105.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-34-71	Siltronic	Siltronic	OU1	-	Upper Alluvium	Upland	7624559.1	704675.8	60.0	70.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-34-106	Siltronic	Siltronic	OU1	-	Lower Alluvium	Upland	7624563.5	704679.8	95.0	105.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-35-76	Siltronic	Siltronic	OU1	-	Upper Alluvium	Upland	7624562.0	704701.3	65.0	75.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-35-106	Siltronic	Siltronic	OU1	-	Lower Alluvium	Upland	7624561.0	704702.9	95.0	105.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1Q, 2Q, 3Q, and 4Q ⁵
WS-36-81	Siltronic	Siltronic	OU1	-	Upper Alluvium	Upland	7624561.7	704714.7	70.0	80.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-36-106	Siltronic	Siltronic	OU1	-	Lower Alluvium	Upland	7624564.7	704715.3	95.0	105.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2Q and 4Q ⁵
WS-37-51	Siltronic	Siltronic	OU1	-	Upper Alluvium	Upland	7624606.5	704653.5																	

Comprehensive Well Network Description - NW Natural and Siltronic Properties
Data Collection Program and Sampling Schedule
Revision Date: July 28, 2016

Well Information										NW Natural MGP Data Collection Program					NW Natural Sampling Schedule					Siltronic cVOC Data Collection Objectives				Siltronic Sampling Schedule		
Well ID	Installed By	Site Location	Operable Unit (OU) ²	NW Natural Monitoring Entity	Water-Bearing Zone ³	•Nearshore (200 feet) •Upland •River	Eastings ⁴	Northings ⁴	Screened Interval (feet bgs)	Quarterly GW Measurement: •Manual (M) •Transducer (T)	DNAPL Measurement:	HC&C Control Well	Source Control Monitoring	RI/HERA and Data Trends	New Well Monitoring (Quarterly as Indicated)	TPH-Dx and -Gx	Integrated Monitoring ¹	Integrated Monitoring ¹ with TPH-Dx, -Gx	Integrated Monitoring ¹ with TPH-Dx, -Gx, EPH, and VPH	Quarterly GW Measurement: Manual (M) or Transducer (T)	DNAPL Monitoring	EIB Performance Monitoring	HC&C Performance Monitoring	RI N&E Monitoring	Schedule	
DNAPL Removal or Observation Wells																										
DW-6U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623939.8	705466.0	36.3	48.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
DW-11U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624424.4	705169.8	21.7	33.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
DW-14U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623987.9	705421.1	31.8	46.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-6-32	NW Natural	Gasco	OU1	HAI	Fill	Nearshore	7623289.8	705412.1	21	31	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
MW-13-30	NW Natural	Gasco	OU1	HAI	Fill	Upland	7623447.2	705432.9	19.0	29.0	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
OW-1F	NW Natural	Siltronic	OU1	Anchor QEA	Fill	Nearshore	7624722.3	705044.2	30.0	35.0	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
OW-2F	NW Natural	Siltronic	OU1	Anchor QEA	Fill	Nearshore	7624542.7	705172.5	25.6	30.6	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
OW-5F	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7624070.3	705366.7	28.5	33.5	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
OW-7-17	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7623753.3	705593.8	12.5	17.5	M/T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
OW-8-15	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7623600.4	705685.4	10.1	15.1	M/T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
OW-8-28	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7623623.5	705691.3	23.1	28.1	M	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
OW-9-25	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7623388.5	705812.5	20.0	25.0	M/T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
OW-10F	NW Natural	Gasco	OU1	Anchor QEA	Fill	Nearshore	7623183.5	705929.8	20.7	25.7	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
Groundwater Extraction Wells																										
PW-1L	NW Natural	Siltronic	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624730.3	705046.4	114.8	134.8	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-1U	NW Natural	Siltronic	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624718.0	705053.1	55.1	70.1	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-2L	NW Natural	Siltronic	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624558.2	705165.7	120.1	140.1	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-2U	NW Natural	Siltronic	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624548.9	705171.6	57.8	72.8	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-3-118	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624353.0	705238.0	108.0	118.0	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-3U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624358.3	705216.9	42.8	57.8	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-4L	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624216.3	705309.2	105.4	125.4	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-4U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624207.1	705313.8	47.2	62.2	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-5L	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7624049.2	705380.6	105.7	125.7	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-5U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624057.4	705374.2	49.9	64.9	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-6L	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623921.5	705497.0	103.7	123.7	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-6U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623927.6	705487.4	49.4	64.4	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-7-93	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623758.1	705591.0	73.5	93.5	M/T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-8-39	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623616.2	705698.8	24.2	39.2	M/T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-8-68	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623605.5	705682.9	48.0	68.0	M/T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-9-92	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623393.5	705809.4	72.6	92.6	M/T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-10L	NW Natural	Gasco	OU1	Anchor QEA	Lower Alluvium	Nearshore	7623189.4	705921.9	59.8	79.8	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-11U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624435.7	705191.3	49.8	64.8	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-12U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624297.6	705265.9	47.8	62.8	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-13U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7624144.5	705333.4	57.6	72.6	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-14U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623986.8	705437.0	57.8	67.8	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-15U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623680.7	705639.0	35.1	55.1	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PW-16U	NW Natural	Gasco	OU1	Anchor QEA	Upper Alluvium	Nearshore	7623554.8	705713.3	30.4	50.4	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
Piezometers																										
PZ-PW2	NW Natural	Siltronic	OU1	Decommissioned	Upper Alluvium	Nearshore	7624554.5	705180.6	63.8	88.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PZ-PW3	NW Natural	Gasco	OU1	Decommissioned	Upper Alluvium	Nearshore	7624353.4	705203.8	50.3	55.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PZ1-5	NW Natural	Gasco-River	OU1	Anchor QEA	Fill	NA	7623598.3	705767.9	4.5	5.4	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ1-20	NW Natural	Gasco-River	OU1	Anchor QEA	Upper Alluvium	NA	7623596.6	705766.9	19.3	20.2	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ1-50	NW Natural	Gasco-River	OU1	Anchor QEA	Lower Alluvium	NA	7623592.6	705764.4	45.1	50.1	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ2-5	NW Natural	Gasco-River	OU1	Anchor QEA	Fill	NA	7623677.3	705819.3	5.5	6.4	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ2-20	NW Natural	Gasco-River	OU1	Anchor QEA	Upper Alluvium	NA	7623676.5	705817.6	20.6	21.5	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ2-43	NW Natural	Gasco-River	OU1	Anchor QEA	Lower Alluvium	NA	7623665.1	705810.2	38.3	43.3	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ2-77	NW Natural	Gasco-River	OU1	Anchor QEA	Lower Alluvium	NA	7623670.3	705813.4	71.9	76.9	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ4-12	NW Natural	Gasco-River	OU1	Anchor QEA	Upper Alluvium	NA	7623820.4	705775.4	6.7	11.7	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ4-41	NW Natural	Gasco-River	OU1	Anchor QEA	Lower Alluvium	NA	7623816.5	705777.8	36.1	41.1	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ5-5	NW Natural	Gasco-River	OU1	Anchor QEA	Fill	NA	7623645.7	705738.0	3.8	4.8	M/T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ5-20	NW Natural	Gasco-River	OU1	Anchor QEA	Upper Alluvium	NA	7623647.3	705735.8	15.0	20.0	M/T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ5-55	NW Natural	Gasco-River	OU1	Anchor QEA	Lower Alluvium	NA	7623648.8	705733.4	50.0	55.0	M/T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ5-85	NW Natural	Gasco-River	OU1	Anchor QEA	Lower Alluvium	NA	7623650.5	705731.0	79.9	84.9	M/T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ6-5	NW Natural	Gasco-River	OU1	Anchor QEA	Fill	NA	7623986.5	705532.4	3.9	4.9	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ6-50	NW Natural	Gasco-River	OU1	Anchor QEA	Upper Alluvium	NA	7623989.1	705530.0	45.2	50.2	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ6-115	NW Natural	Gasco-River	OU1	Anchor QEA	Lower Alluvium	NA	7623989.2	705536.4	110.1	115.1	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ6-150	NW Natural	Gasco-River	OU1	Anchor QEA	Deep Lower Alluvium	NA	7623994.6	705532.7	145.4	150.4	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ7-5	NW Natural	Gasco-River	OU1	Anchor QEA	Fill	NA	7624284.1	705379.0	4.1	5.2	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ7-50	NW Natural	Gasco-River	OU1	Anchor QEA	Upper Alluvium	NA	7624288.8	705377.5	43.2	48.2	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ7-100	NW Natural	Gasco-River	OU1	Anchor QEA	Lower Alluvium	NA	7624285.4	705383.2	94.3	99.3	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PZ7-150	NW Natural	Gasco-River	OU1	Anchor QEA	Deep Lower Alluvium	NA	7624290.9	705381.7	145.3	150.3	T	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-

**Comprehensive Well Network Description - NW Natural and Siltronic Properties
Data Collection Program and Sampling Schedule
Revision Date: July 28, 2016**

Well Information										NW Natural MGP Data Collection Program					NW Natural Sampling Schedule				Siltronic cVOC Data Collection Objectives					Siltronic Sampling Schedule	
Well ID	Installed By	Site Location	Operable Unit (OU) ²	NW Natural Monitoring Entity	Water-Bearing Zone ³	◆Nearshore (200 feet) ◆Upland ◆River	Easting ⁴	Northing ⁴	Screened Interval (feet bgs)	Quarterly GW Measurement: ◆Manual (M) ◆Transducer (T)	DNAPL Measurement:	HC&C Control Well	Source Control Monitoring	RI/HERA and Data Trends	New Well Monitoring (Quarterly as Indicated)	TPH-Dx and -Gx	Integrated Monitoring ¹	Integrated Monitoring ¹ with TPH-Dx, -Gx	Integrated Monitoring ¹ with TPH-Dx, -Gx, EPH, and VPH	Quarterly GW Measurement: Manual (M) or Transducer (T)	DNAPL Monitoring	EIB Performance Monitoring	HC&C Performance Monitoring	RI N&E Monitoring	Schedule
PZ8-5	NW Natural	Gasco-River	OU1	Anchor QEA	Fill	NA	7623244.6	706008.2	4.5 5.4	T	Semi-monthly	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-	-
PZ8-50	NW Natural	Gasco-River	OU1	Anchor QEA	Upper Alluvium	NA	7623249.0	706004.8	44.7 49.7	T	Semi-monthly	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-	-
PZ9-5	NW Natural	Siltronic-River	OU1	Anchor QEA	Fill	NA	7624596.3	705254.1	4.5 5.5	T	Semi-monthly	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-	-
PZ9-50	NW Natural	Siltronic-River	OU1	Anchor QEA	Lower Alluvium	NA	7624599.7	705256.9	45.4 50.4	T	Semi-monthly	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-	-
PZ9-75	NW Natural	Siltronic-River	OU1	Anchor QEA	Lower Alluvium	NA	7624606.4	705252.4	67.5 72.5	T	Semi-monthly	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-	-
PZ9-110	NW Natural	Siltronic-River	OU1	Anchor QEA	Lower Alluvium	NA	7624602.6	705255.0	105.6 110.6	T	Semi-monthly	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-	-
PZ9-150	NW Natural	Siltronic-River	OU1	Anchor QEA	Deep Lower Alluvium	NA	7624603.7	705248.3	146.1 151.1	T	Semi-monthly	-	X	-	-	1Q and 3Q	-	-	-	-	-	-	-	-	-

Notes:
 Bimonthly = every two months
 ASTM = American Society for Testing and Materials
 cVOC = chlorinated volatile organic compound
 DOC = dissolved organic carbon
 DNAPL = dense non-aqueous phase liquid
 DO = dissolved oxygen
 EIB = enhanced in-situ bioremediation
 EPA = U.S. Environmental Protection Agency
 EPH = extractable petroleum hydrocarbons
 HARN = High Accuracy Reference Network
 HC&C = hydraulic control and containment
 NA = not applicable
 NAD = North American Datum
 ORP = oxidation-reduction potential
 PAHs = polycyclic aromatic hydrocarbons
 RI N&E = remedial investigation nature and extent
 SIM = selective ion monitoring
 SVOCs = semivolatile organic compounds
 TOC = total organic carbon
 TPH = total petroleum hydrocarbons
 VOCs = volatile organic compounds
 VPH = volatile petroleum hydrocarbons

NW Natural Notes:
 1 = Analyses at all locations include PAHs OR SVOCs (EPA 8270-SIM), VOCs (EPA 8260B), Total Cyanide (EPA 335.4), Free Cyanide (ASTM D-4282-02), Available Cyanide (OIA-1677), and Total Metals (EPA 6000 Series) **. In addition, field measurements will be collected including DO, pH, Conductivity, Turbidity, Temperature, and ORP.
 ** = aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, and zinc.
Siltronic Notes:
 2 = Siltronic does not differentiate the various operable units. These designations are assigned to select monitoring wells by NW Natural.
 3 = Siltronic does not differentiate the alluvium water-bearing zone into upper, lower, and deep lower alluvium. These designations are assigned to select monitoring wells by NW Natural.
 4 = Horizontal Datum / Coordinate System is NAD83/91 (HARN) State Plane Oregon North International Feet.
 5 = Analyses include low level VOCs (EPA 8260B), fixed gases (ASTM D1945), Total and Dissolved Iron and Manganese (EPA 6010), Chloride and Sulfate (SW9056), and TOC and DOC (5310B). In addition, field measurements will be collected including DO, pH, Conductivity, Turbidity, Temperature, and ORP.
 6 = Analyses include low level VOCs (EPA 8260B), fixed gases (ASTM D1945), Dissolved Iron and Manganese (EPA 6020), Chloride and Sulfate (SW9056), TOC and DOC (5310B), PAHs (EPA 8270D-SIM), Total Cyanide (EPA 335.4), Available Cyanide (OIA-1677), Free Cyanide (ASTM D-4282), Total Arsenic (EPA 6020), Total Metals (Al, Sb, Cd, Cr, Cu, Fe, Pb, Mn, Ni, Se, Ag, Ti, V, Zn; EPA 6000 Series), Total Mercury (EPA 7470), Nitrate-Nitrogen, Sulfide (SM 4500-S2-F), and Alkalinity (total, bicarbonate, hydroxide, and carbonate; SM 2320B). In addition, field measurements will be collected including DO, pH, Conductivity, Turbidity, Temperature, and ORP.
 7 = Analyses include low level VOCs (EPA 8260B), fixed gases (ASTM D1945), Total and Dissolved Iron and Manganese (EPA 6010), and Chloride and Sulfate (SW9056). In addition, field measurements will be collected including DO, pH, Conductivity, Turbidity, Temperature, and ORP.
 8 = Analyses include low level VOCs (EPA 8260B), fixed gases (ASTM D1945), Chloride and Sulfate (SW9056), TOC and DOC (5310B), PAHs (EPA 8270D-SIM), Total Cyanide (EPA 335.4), Available Cyanide (OIA-1677), Free Cyanide (ASTM D-4282), Total Arsenic (EPA 6020), Total Metals (Al, Sb, Ba, Be, Cd, Ca, Cr, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Ti, V, Zn; EPA 6010), Dissolved Iron (EPA 6010), and Total Mercury (EPA 7470). In addition, field measurements will be collected including DO, pH, Conductivity, Turbidity, Temperature, and ORP.
 9 = Bimonthly sampling is scheduled for February, April, June, August, October, and December.

VOCs and SVOCs: MW-01-22

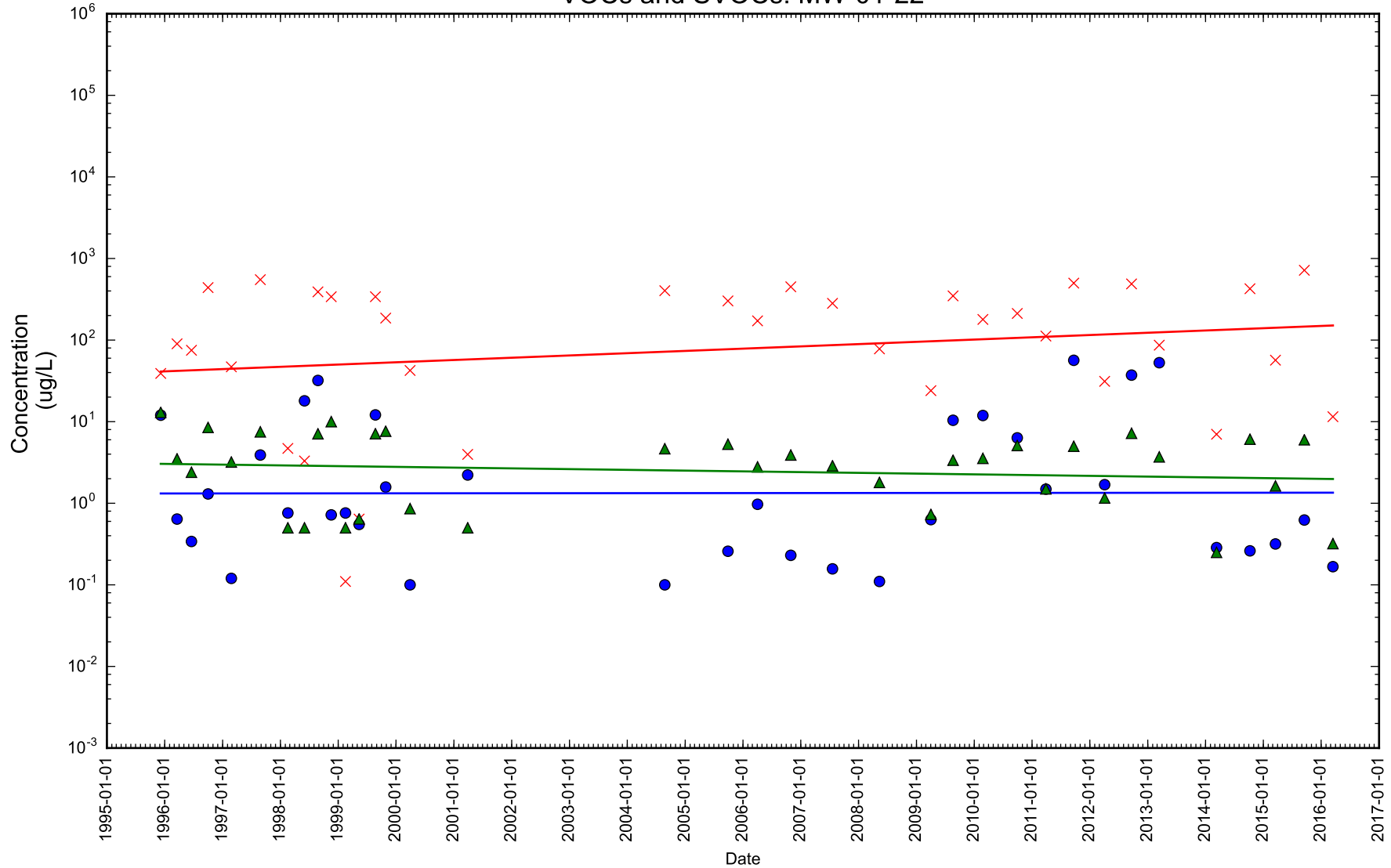


Figure 1-1

Time Series Concentration Plot



● Benzo(a)pyrene × Naphthalene ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-01-55

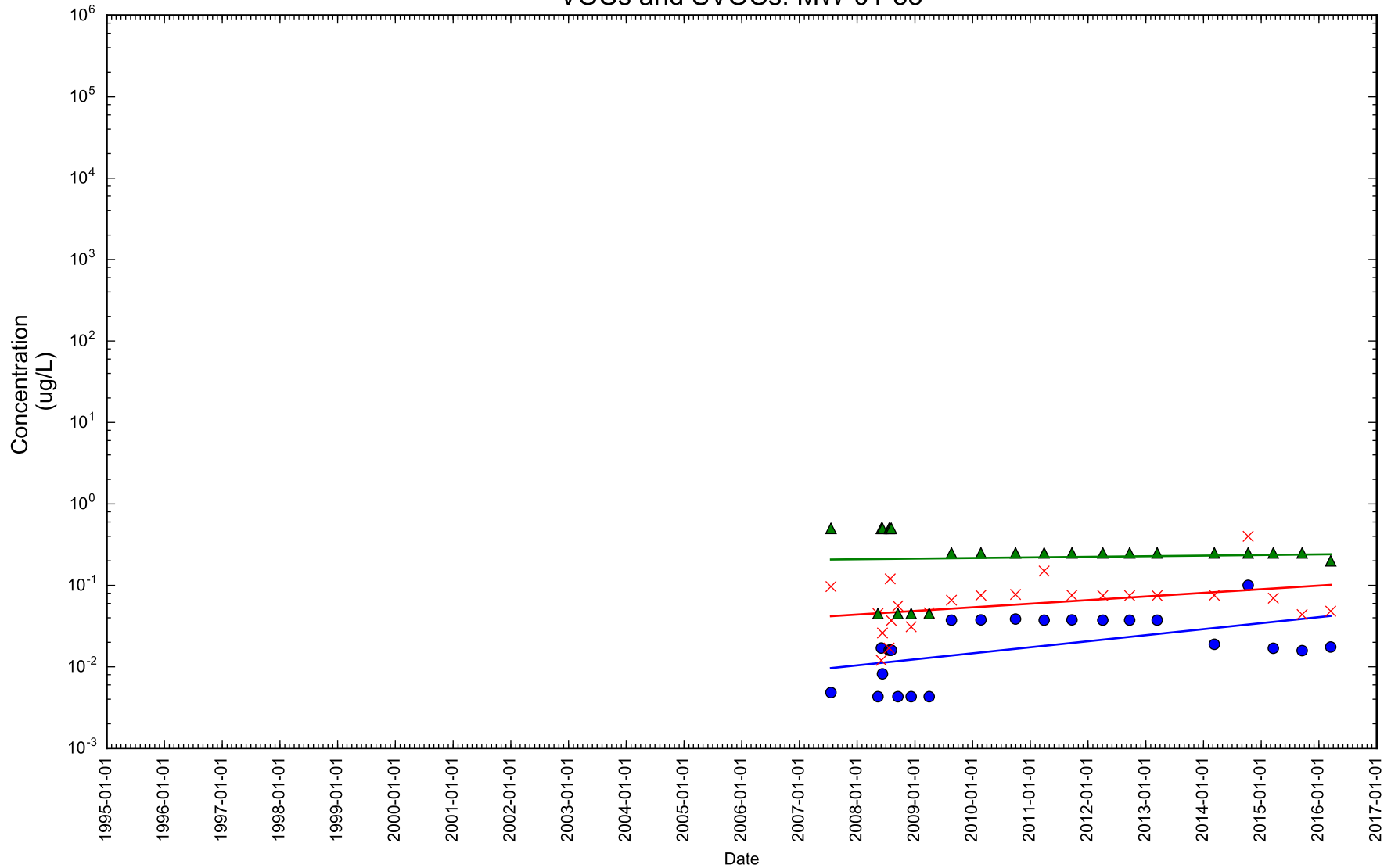


Figure 1-2

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-01-82

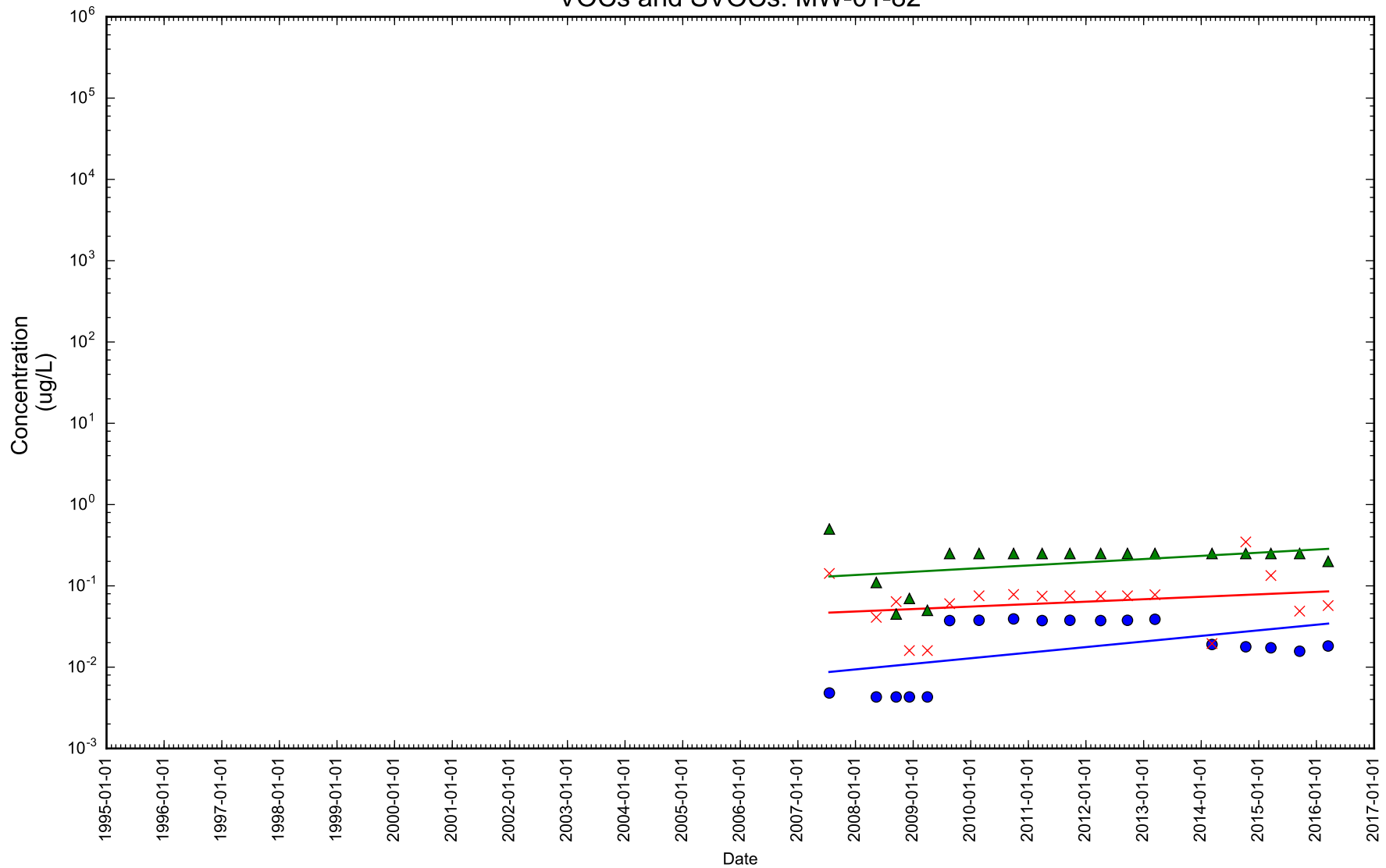


Figure 1-3

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-02-104

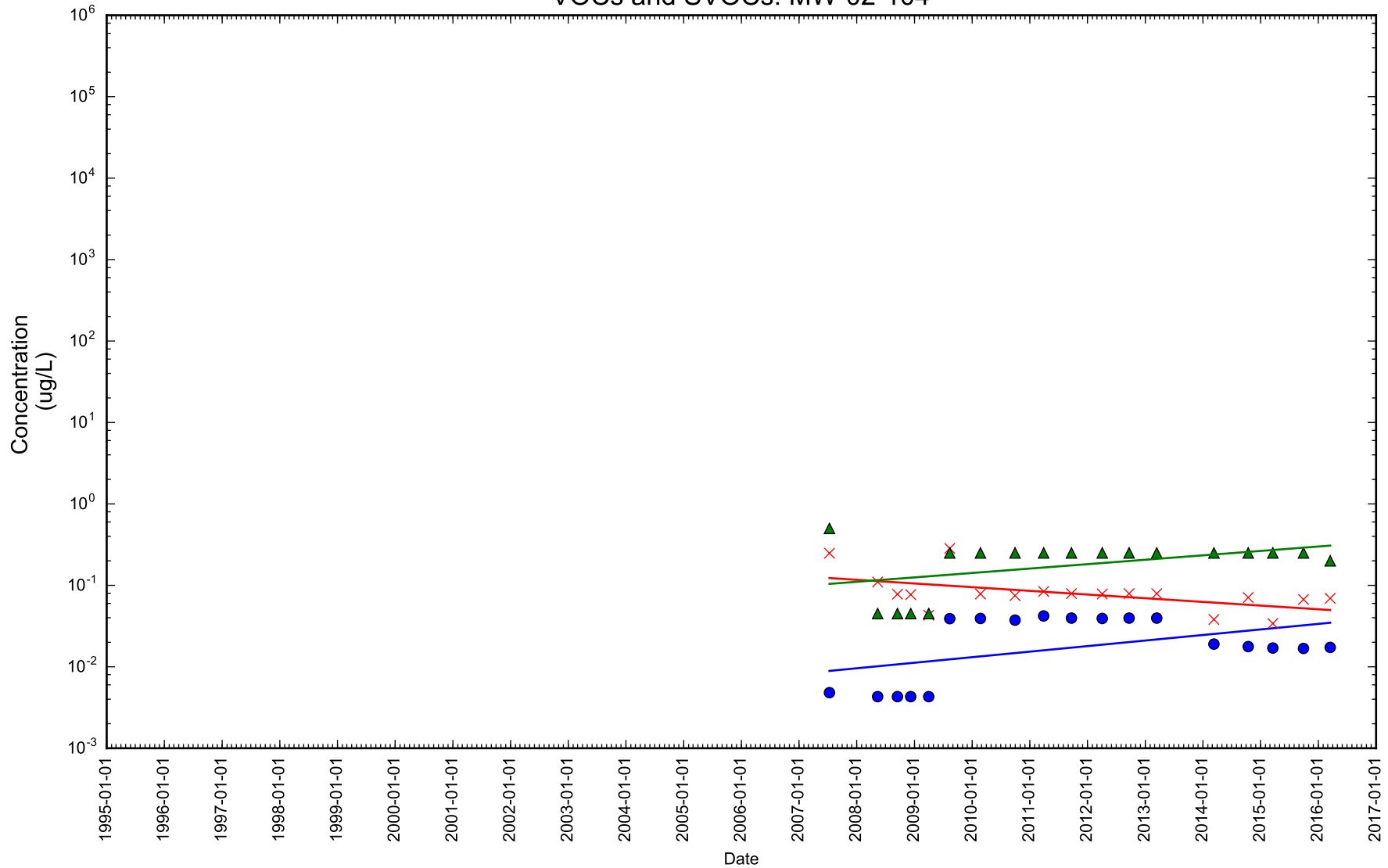


Figure 1-4

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-02-32

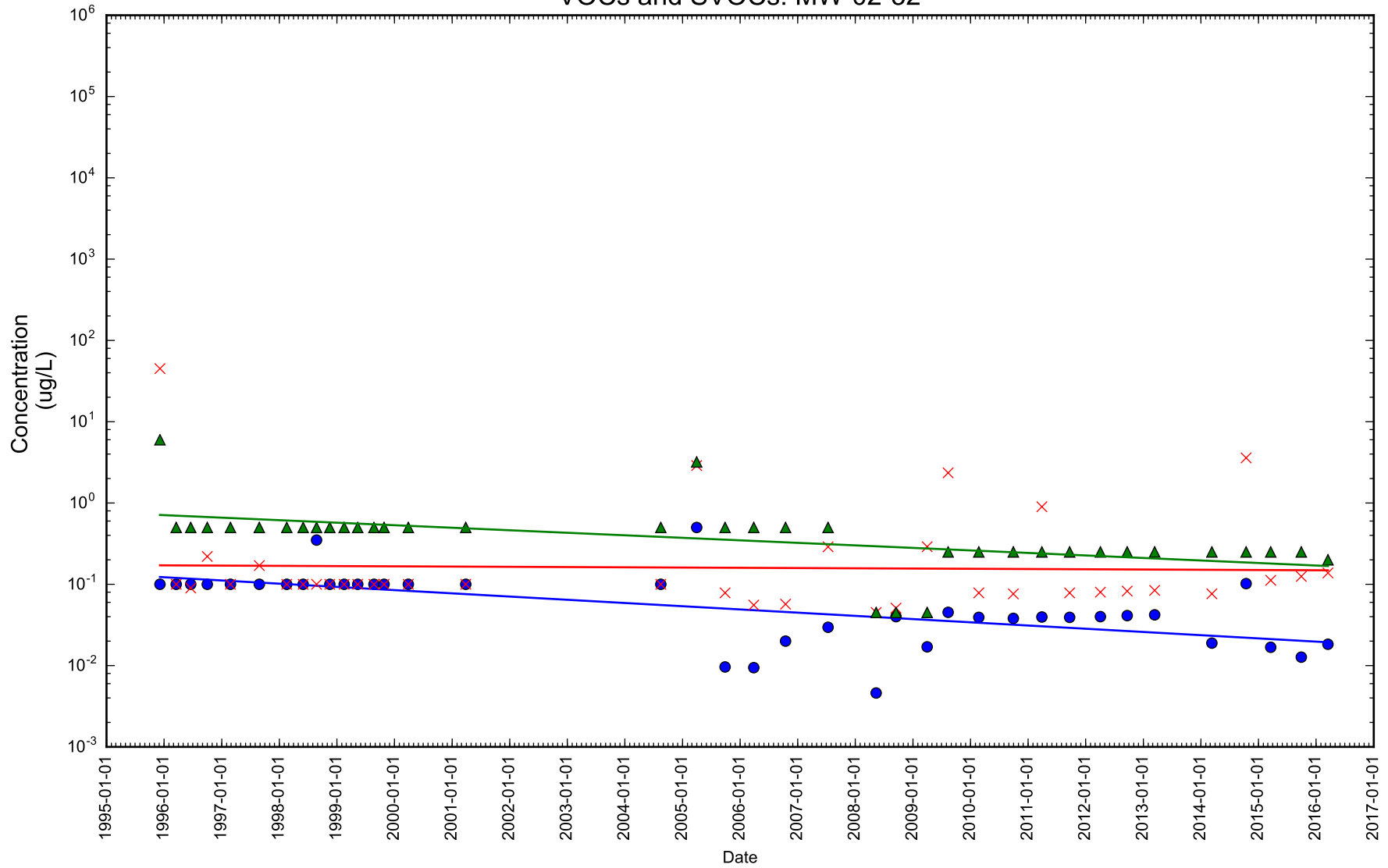


Figure 1-5

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-02-61

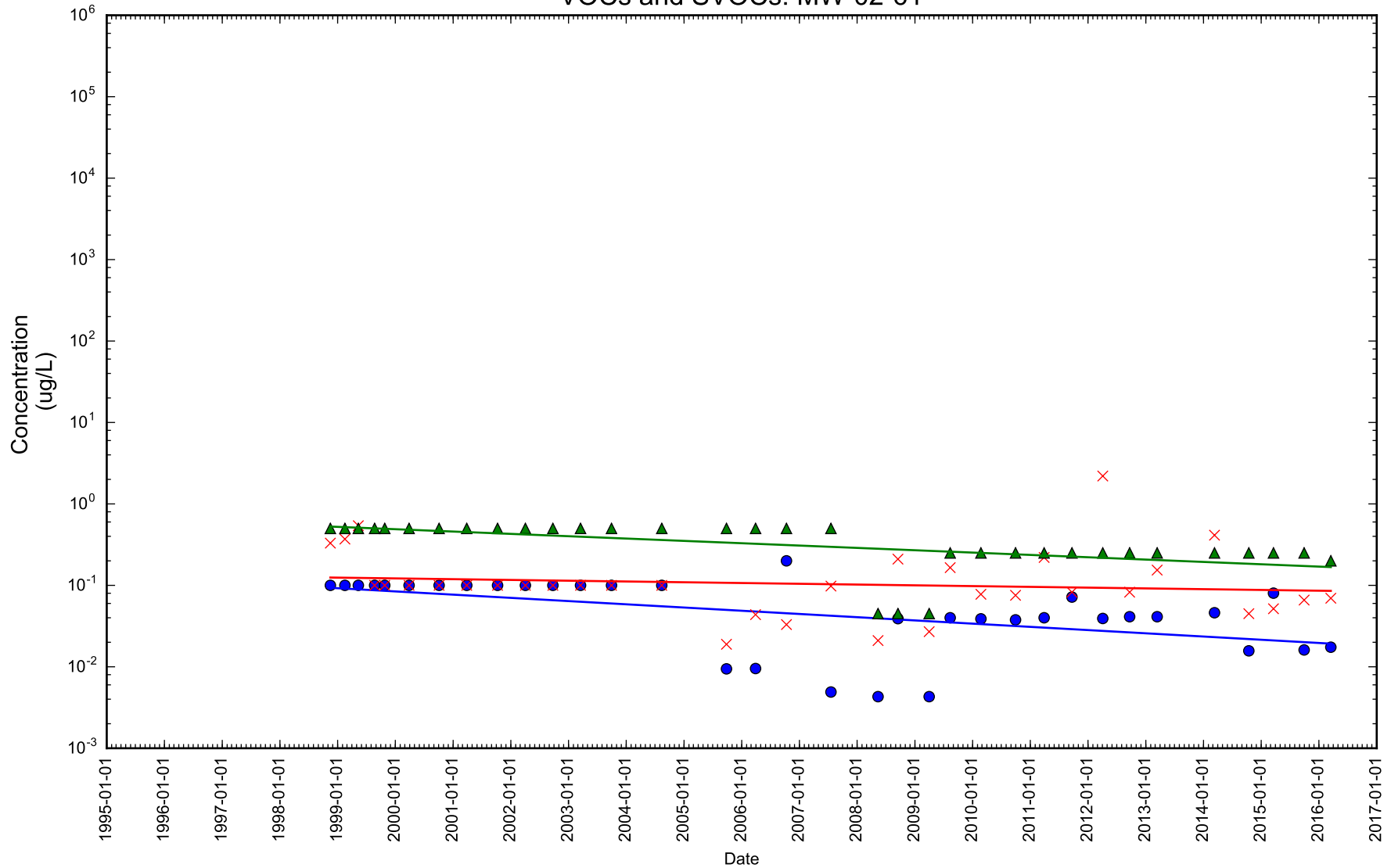


Figure 1-6

Time Series Concentration Plot



● Benzo(a)pyrene × Naphthalene ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-03-26

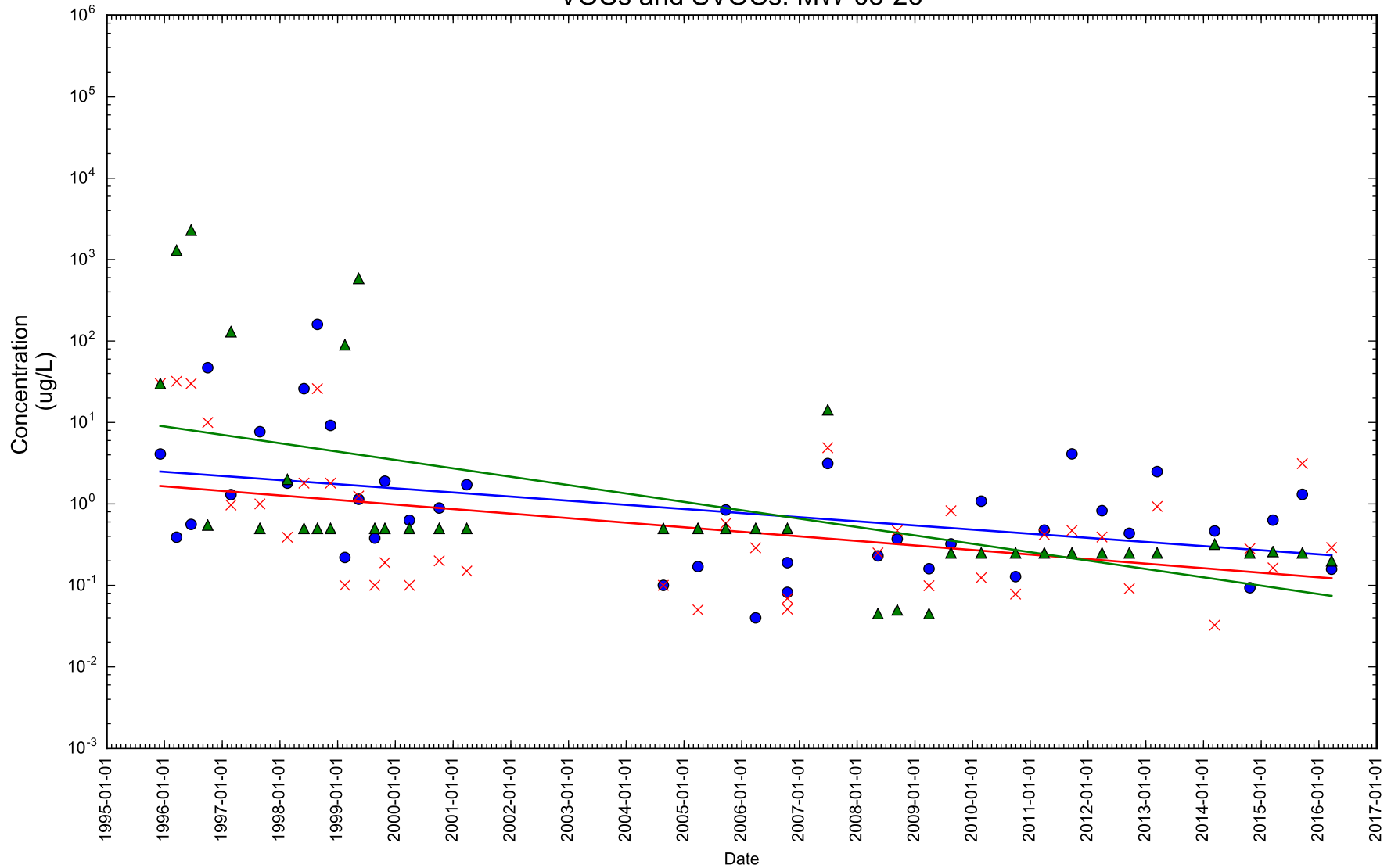


Figure 1-7

Time Series Concentration Plot



● Benzo(a)pyrene × Naphthalene ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-03-56

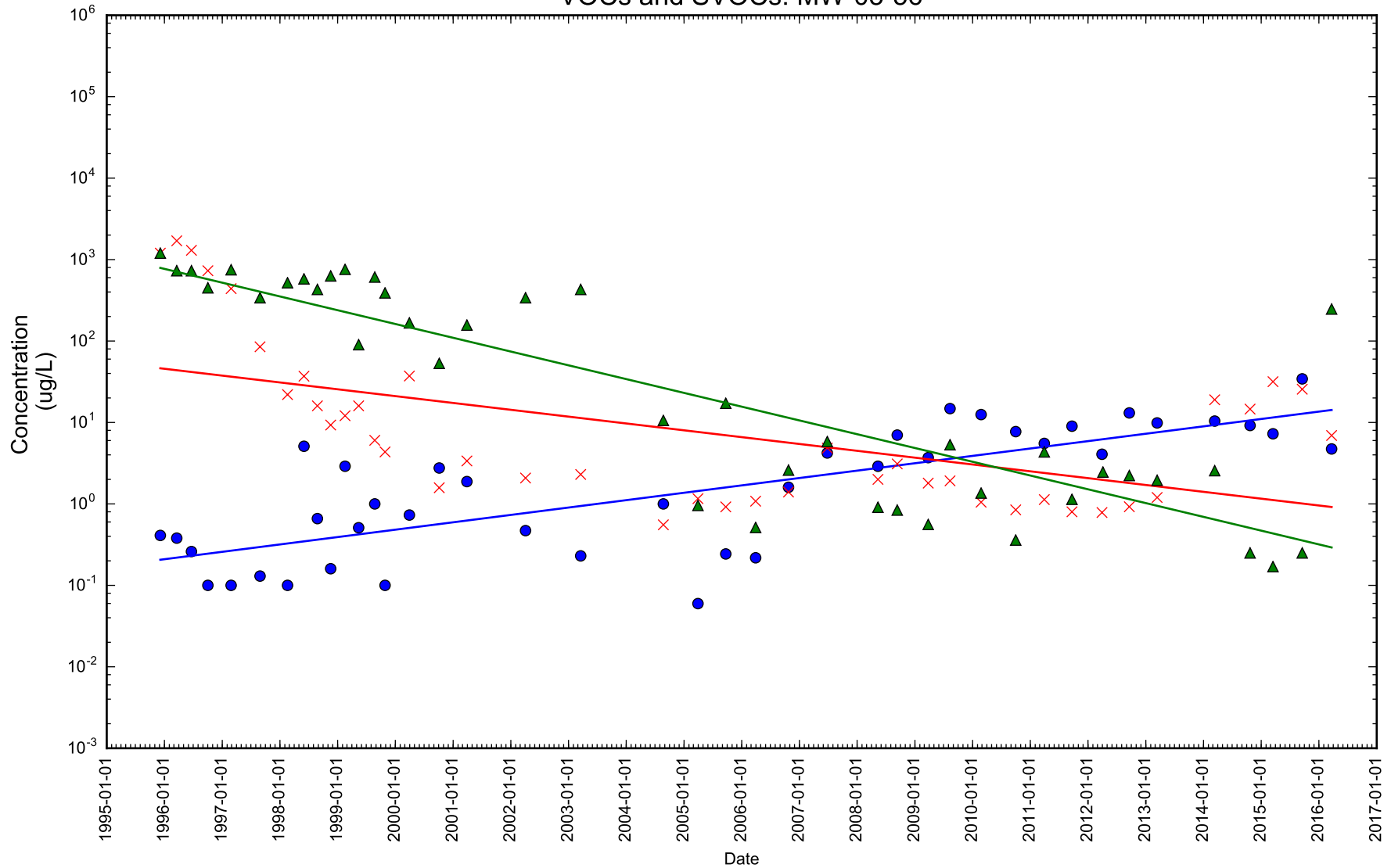


Figure 1-8

Time Series Concentration Plot



● Benzo(a)pyrene × Naphthalene ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-04-101

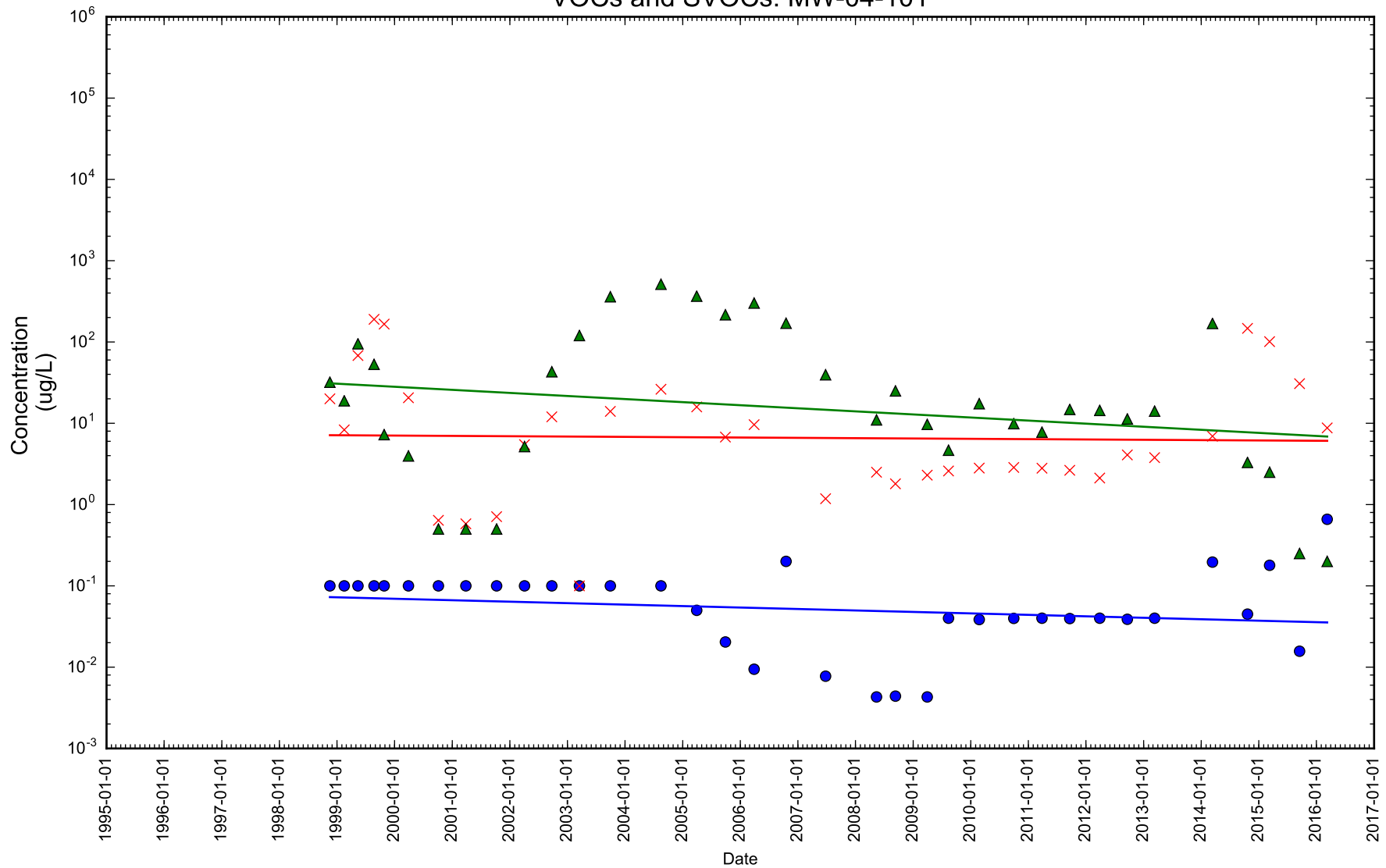


Figure 1-9

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-04-35

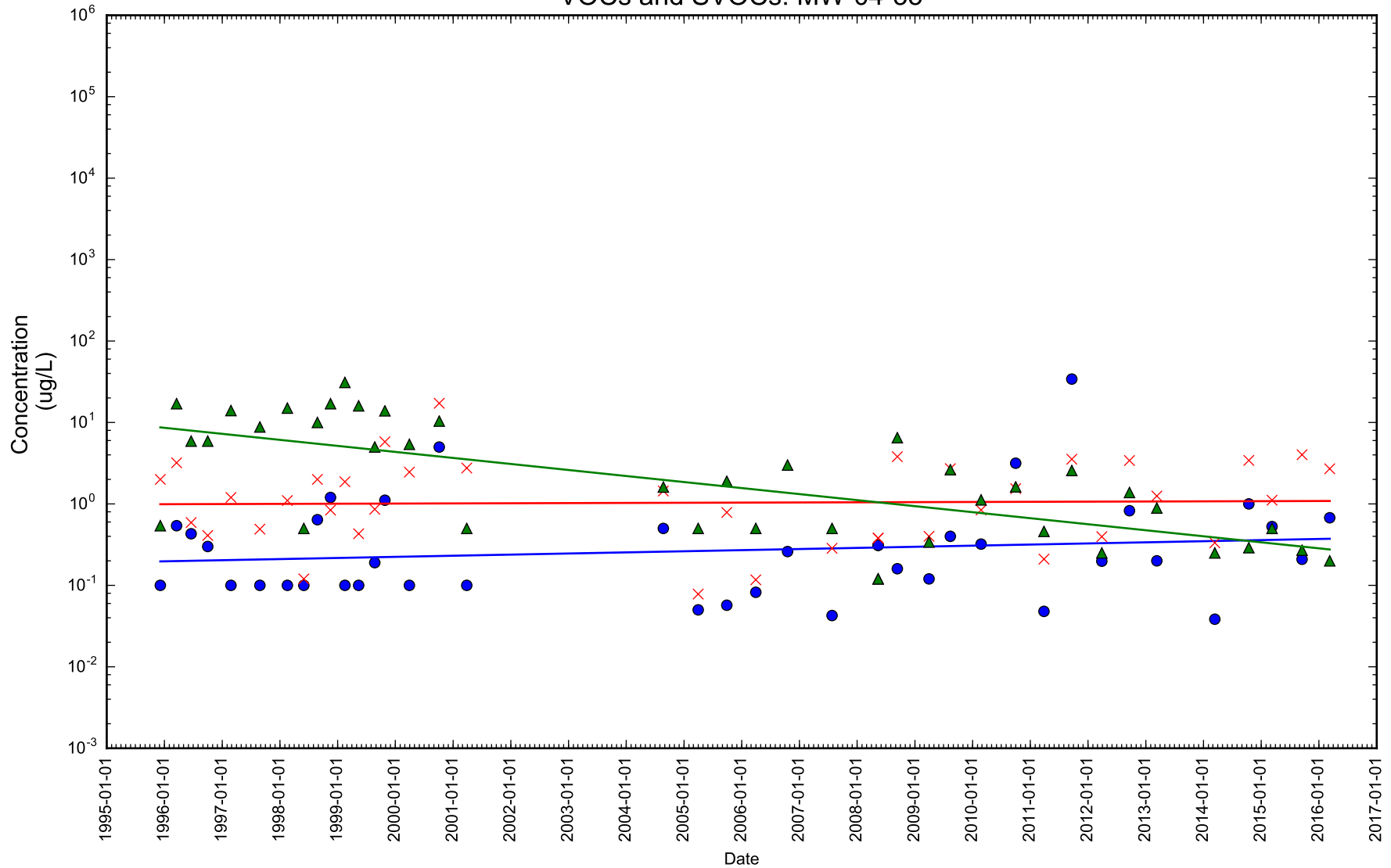


Figure 1-10

Time Series Concentration Plot



● Benzo(a)pyrene × Naphthalene ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-04-57

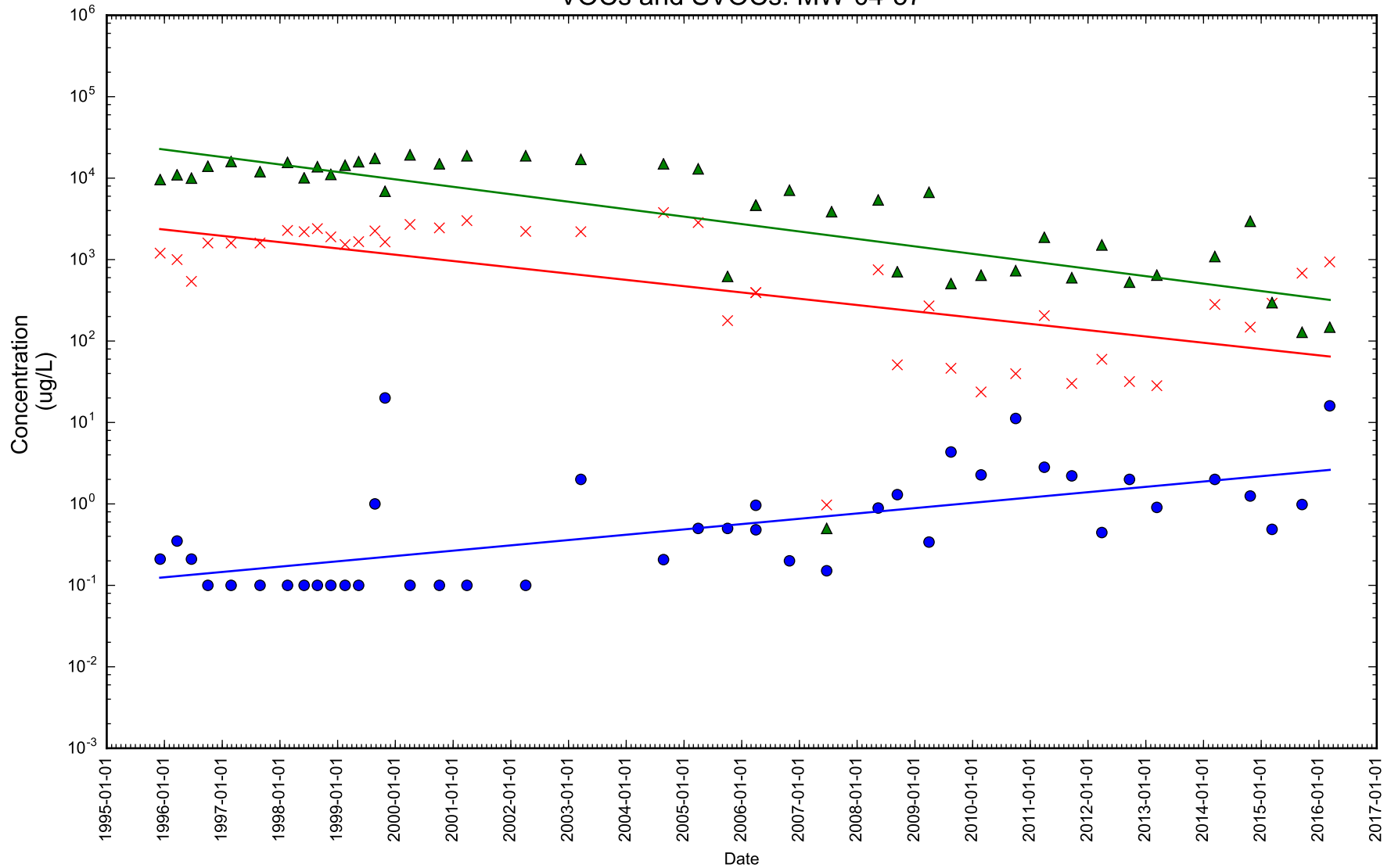


Figure 1-11

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-05-100

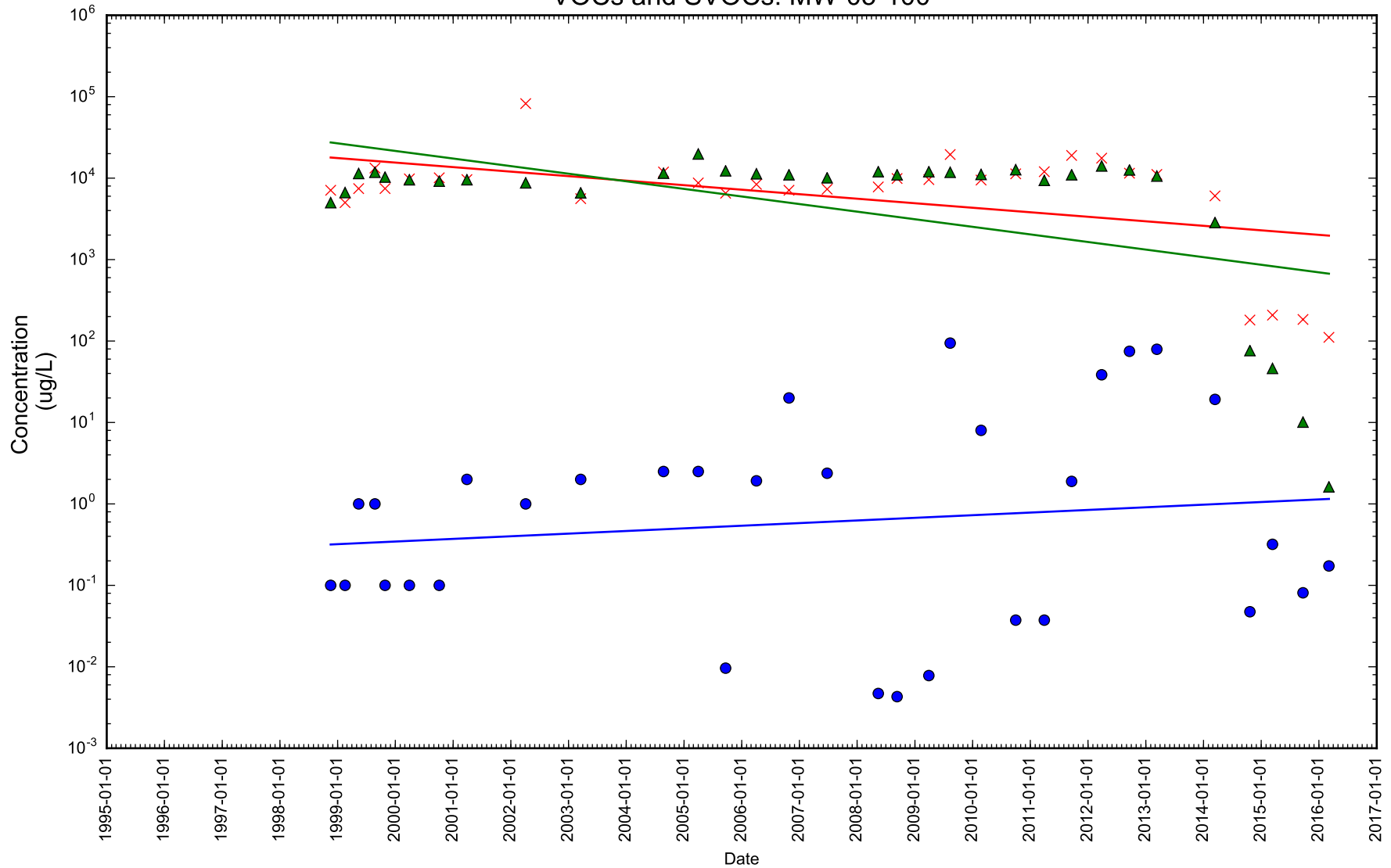


Figure 1-12

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-05-175

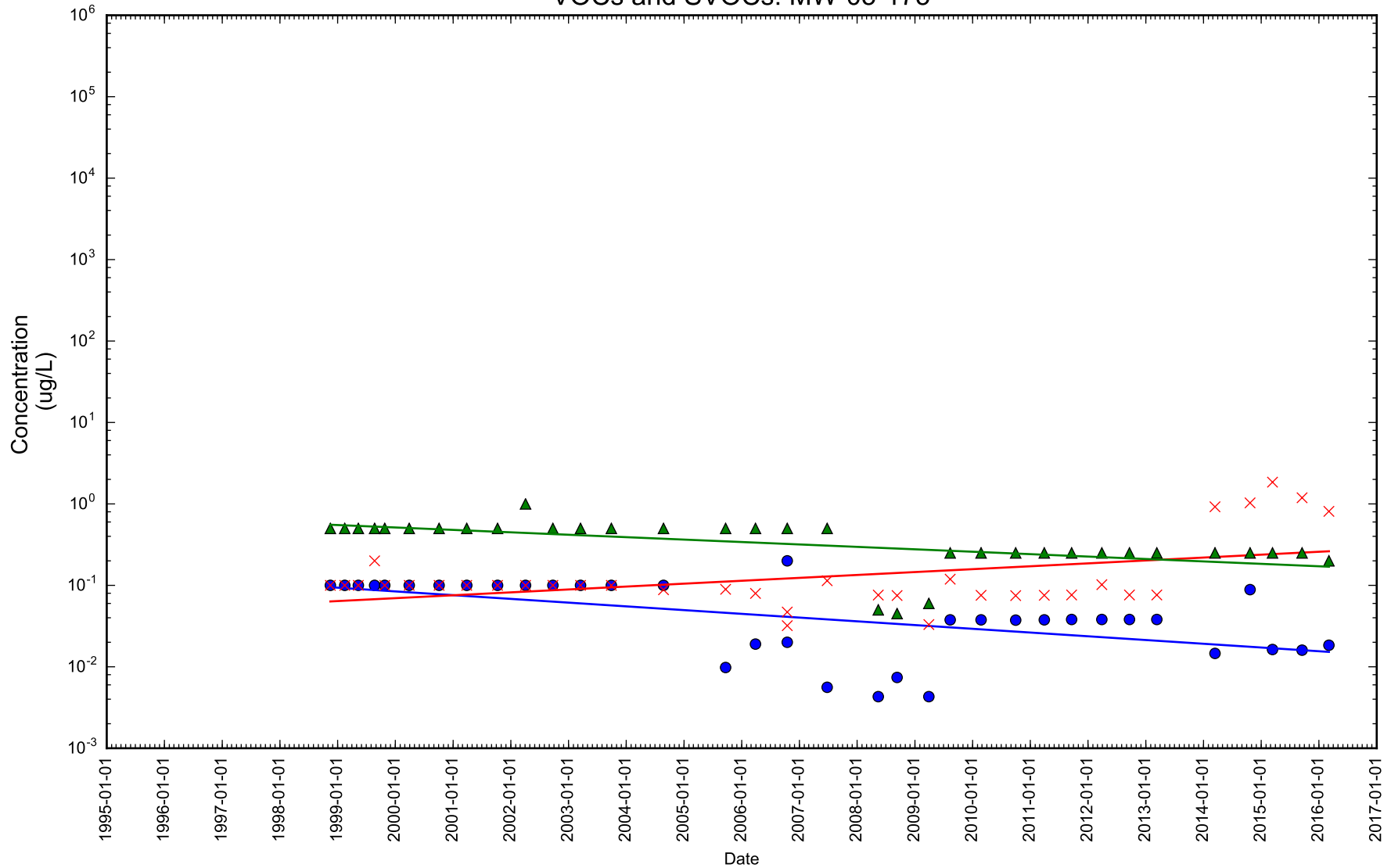


Figure 1-13

Time Series Concentration Plot



● Benzo(a)pyrene × Naphthalene ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-05-32

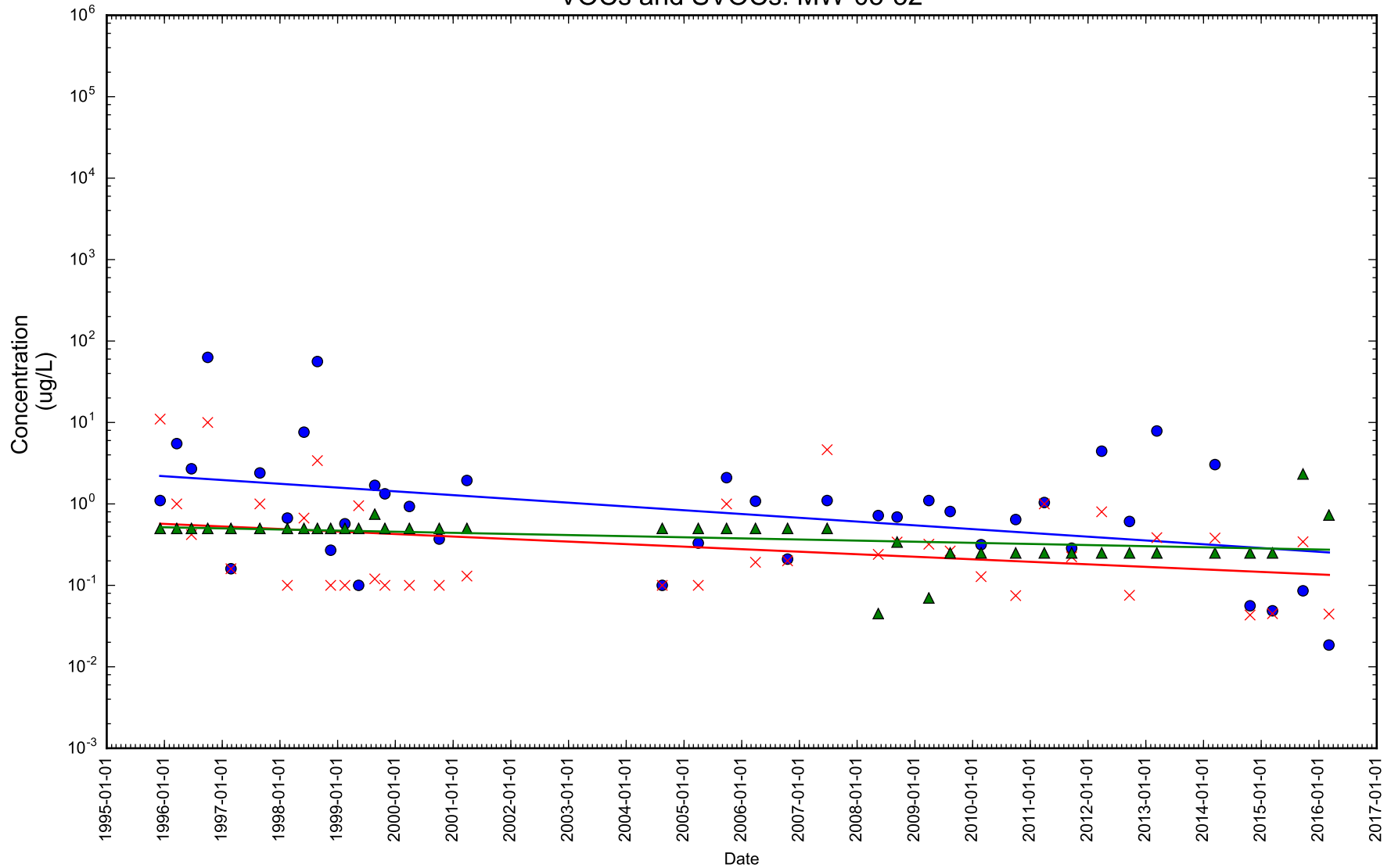


Figure 1-14

Time Series Concentration Plot



● Benzo(a)pyrene × Naphthalene ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-07-60

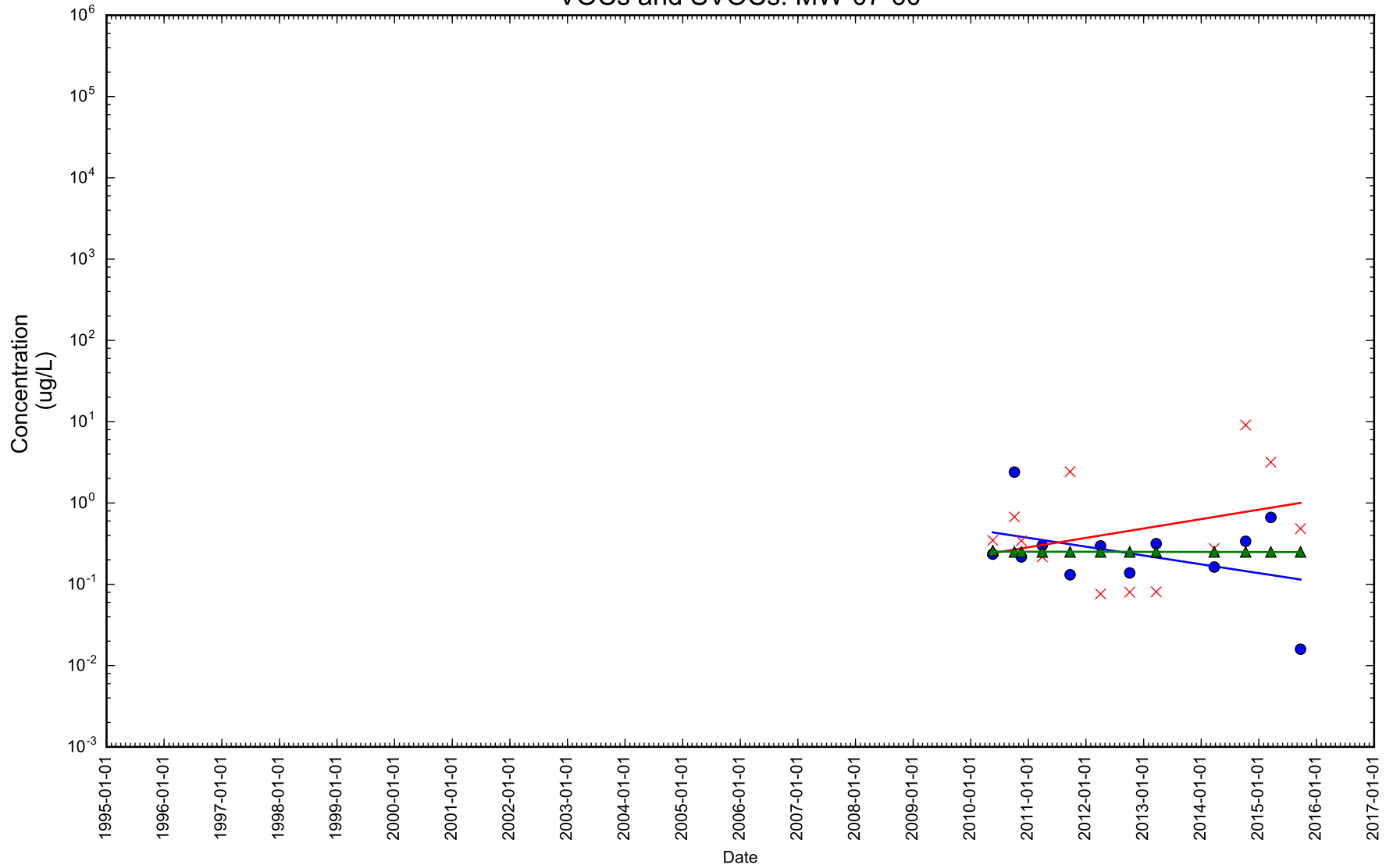


Figure 1-15

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-08-29

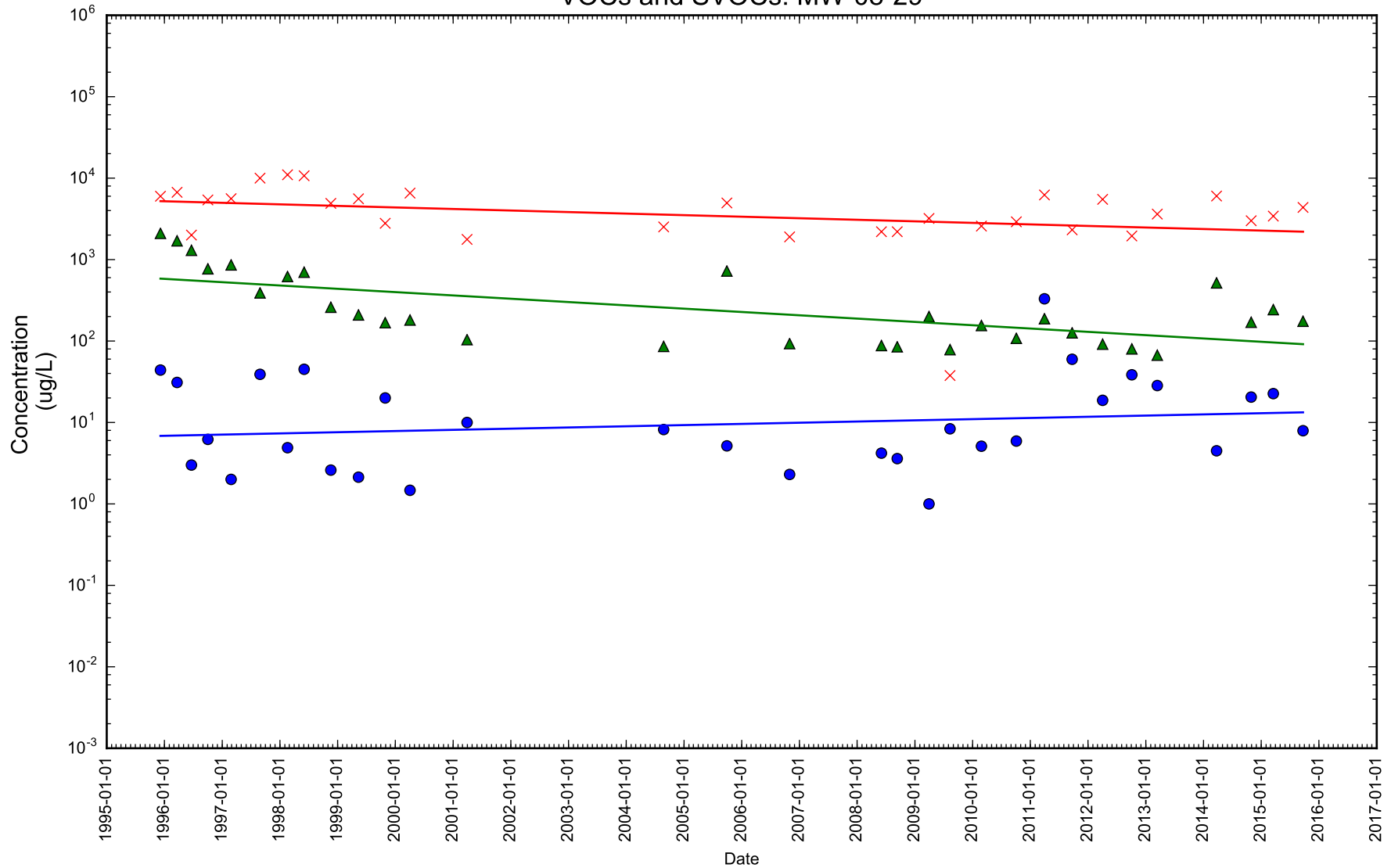


Figure 1-16

Time Series Concentration Plot



● Benzo(a)pyrene × Naphthalene ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-08-56

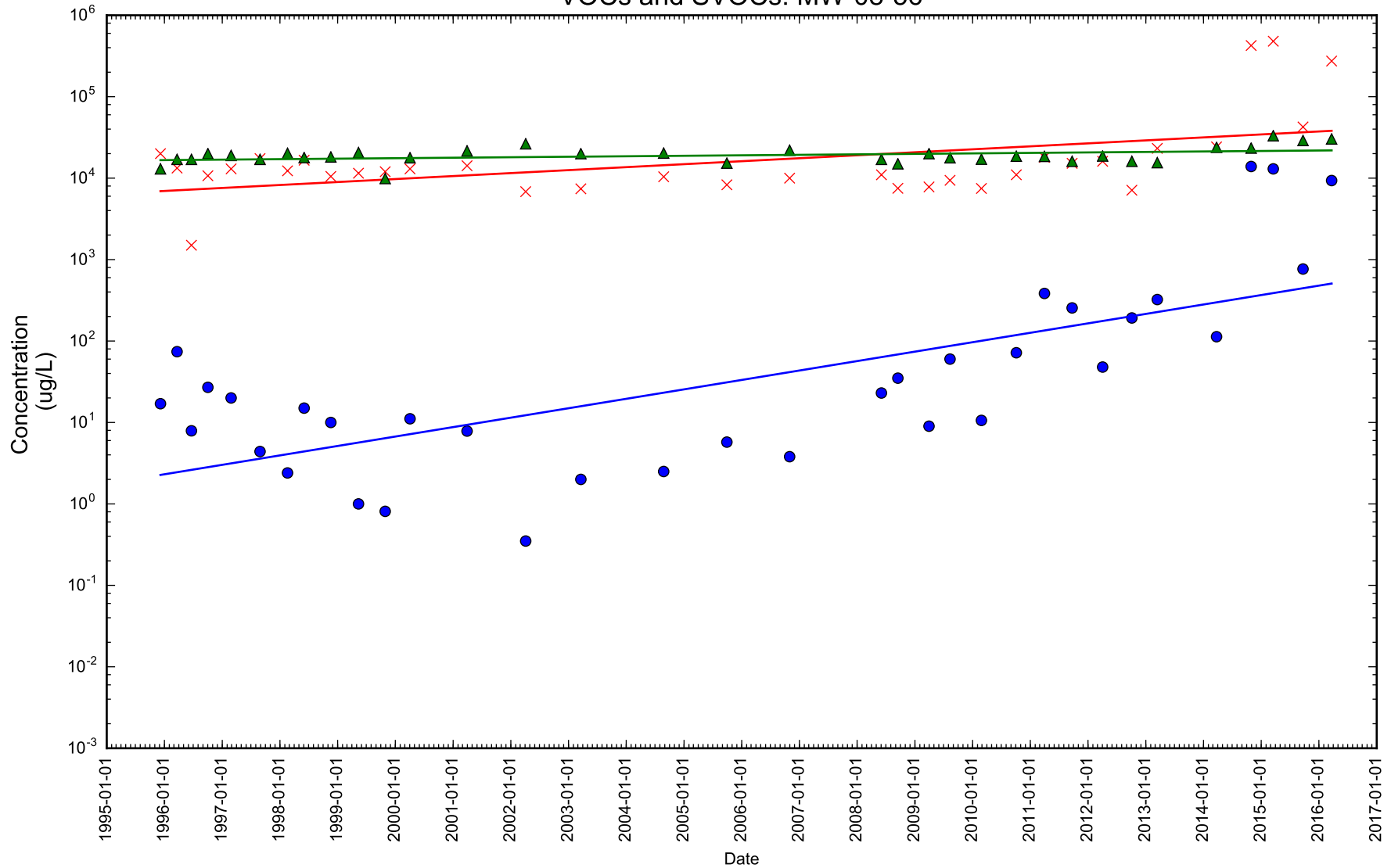


Figure 1-17

Time Series Concentration Plot



● Benzo(a)pyrene × Naphthalene ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-09-29

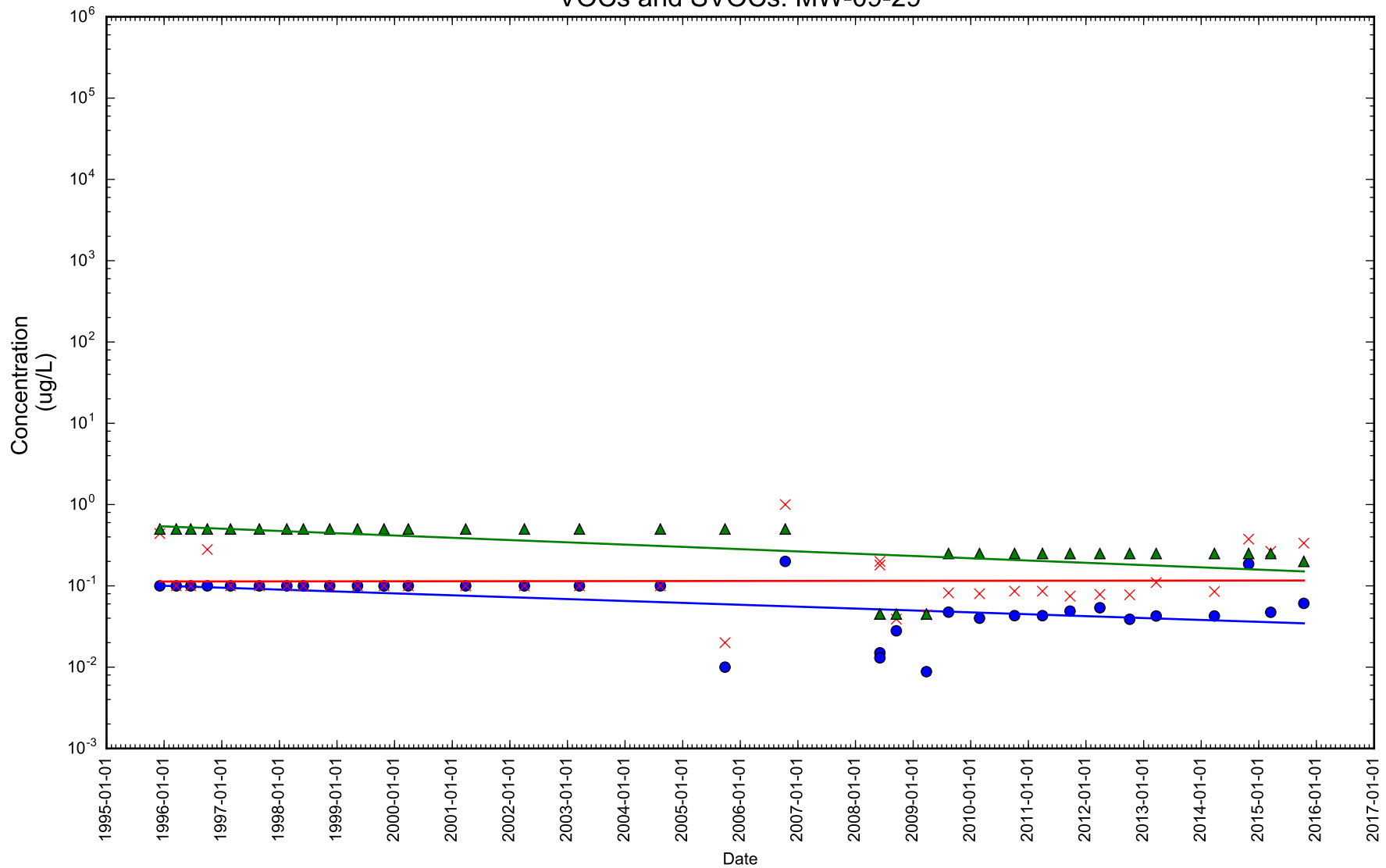


Figure 1-18

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-10-61

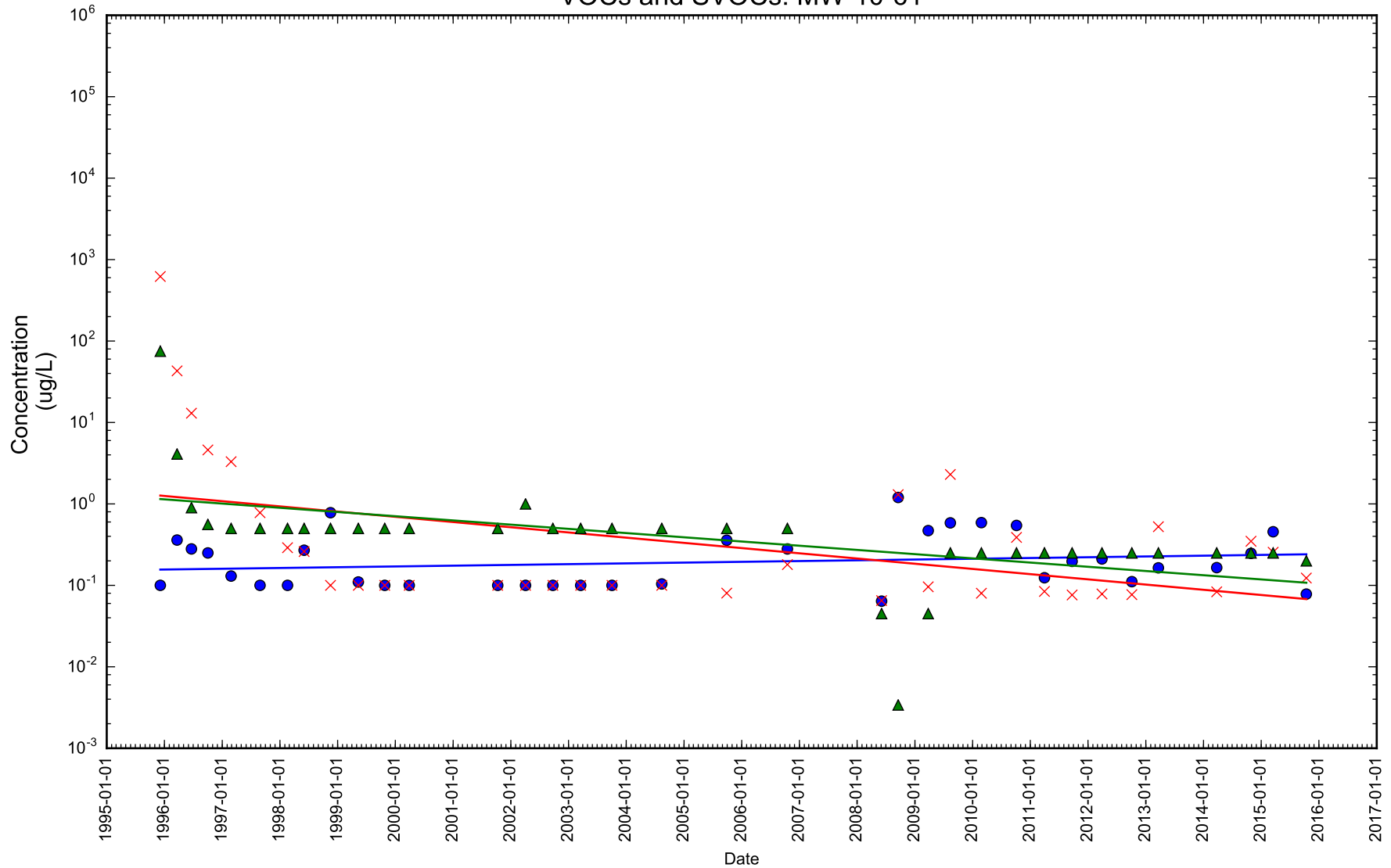


Figure 1-19

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-12-36

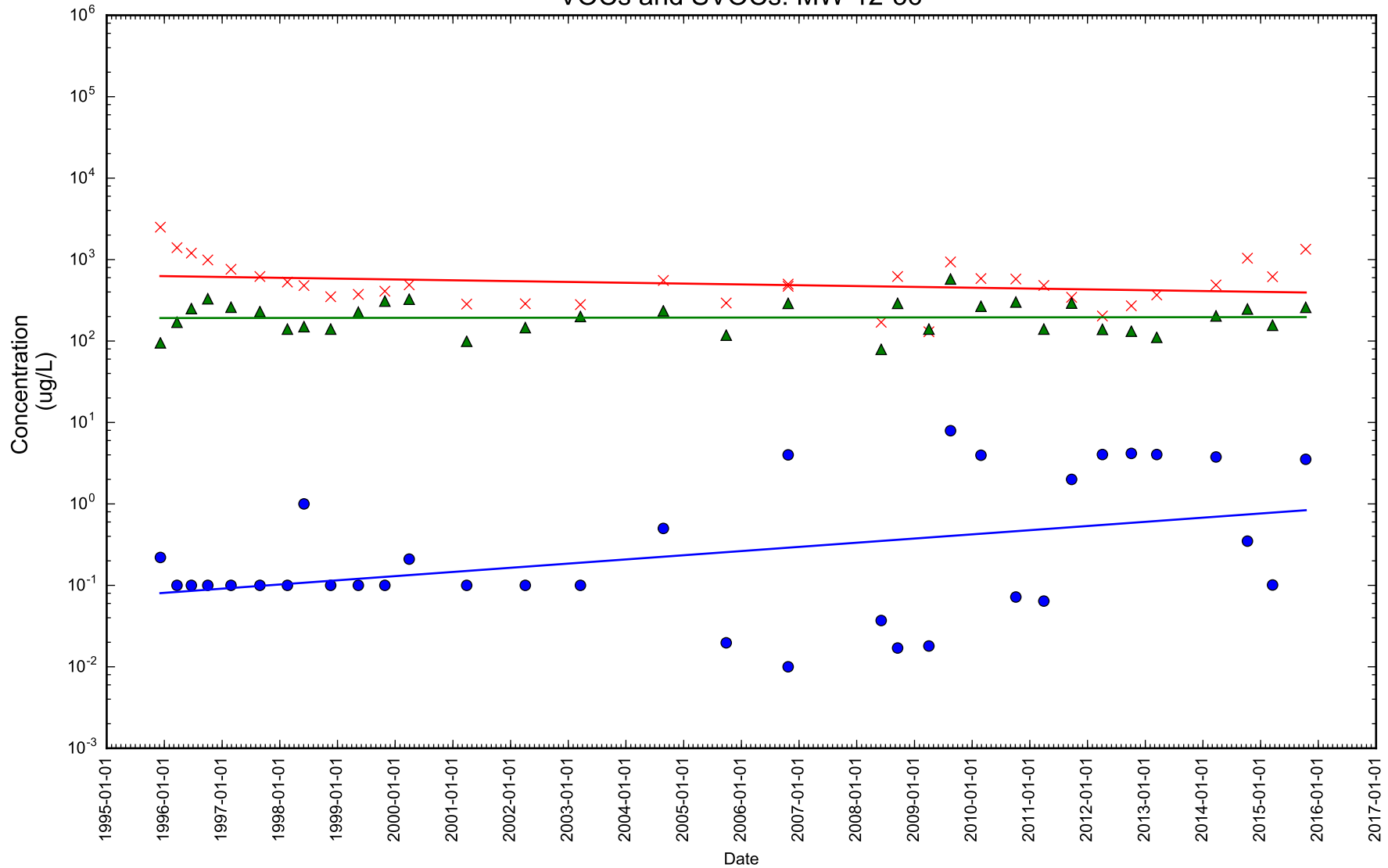


Figure 1-20

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-14-110

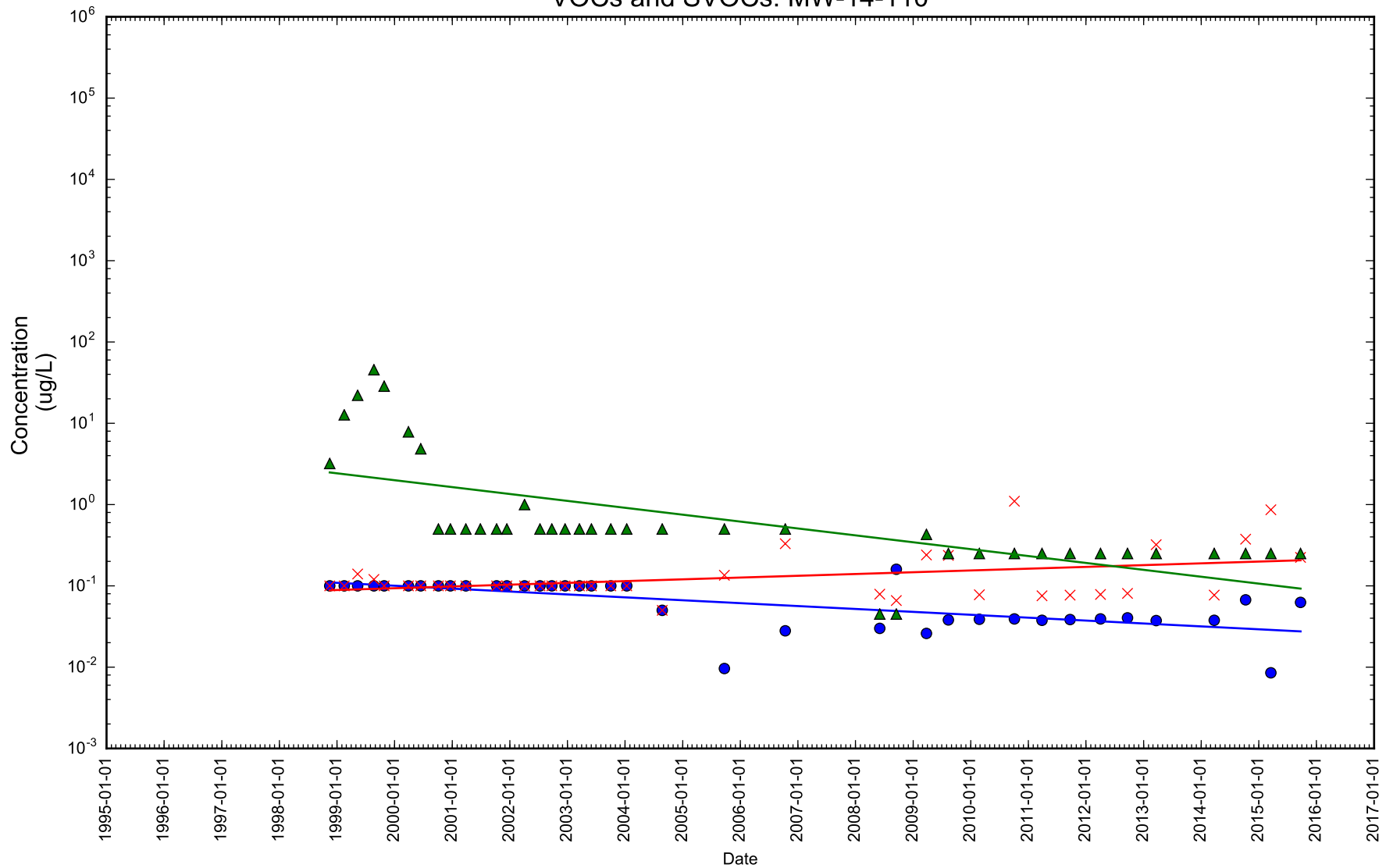


Figure 1-21

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-15-50

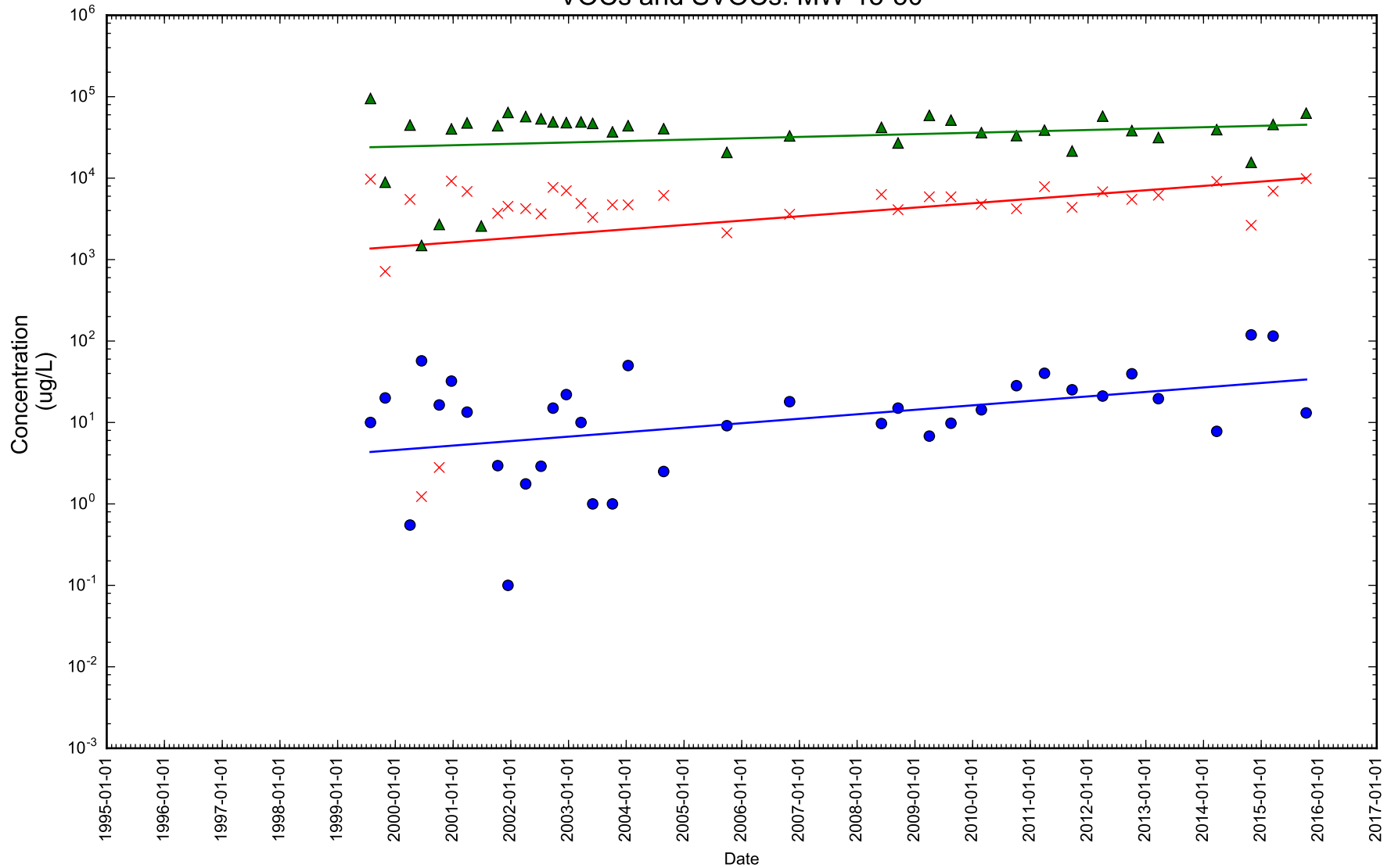


Figure 1-22

Time Series Concentration Plot



● Benzo(a)pyrene × Naphthalene ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-15-66

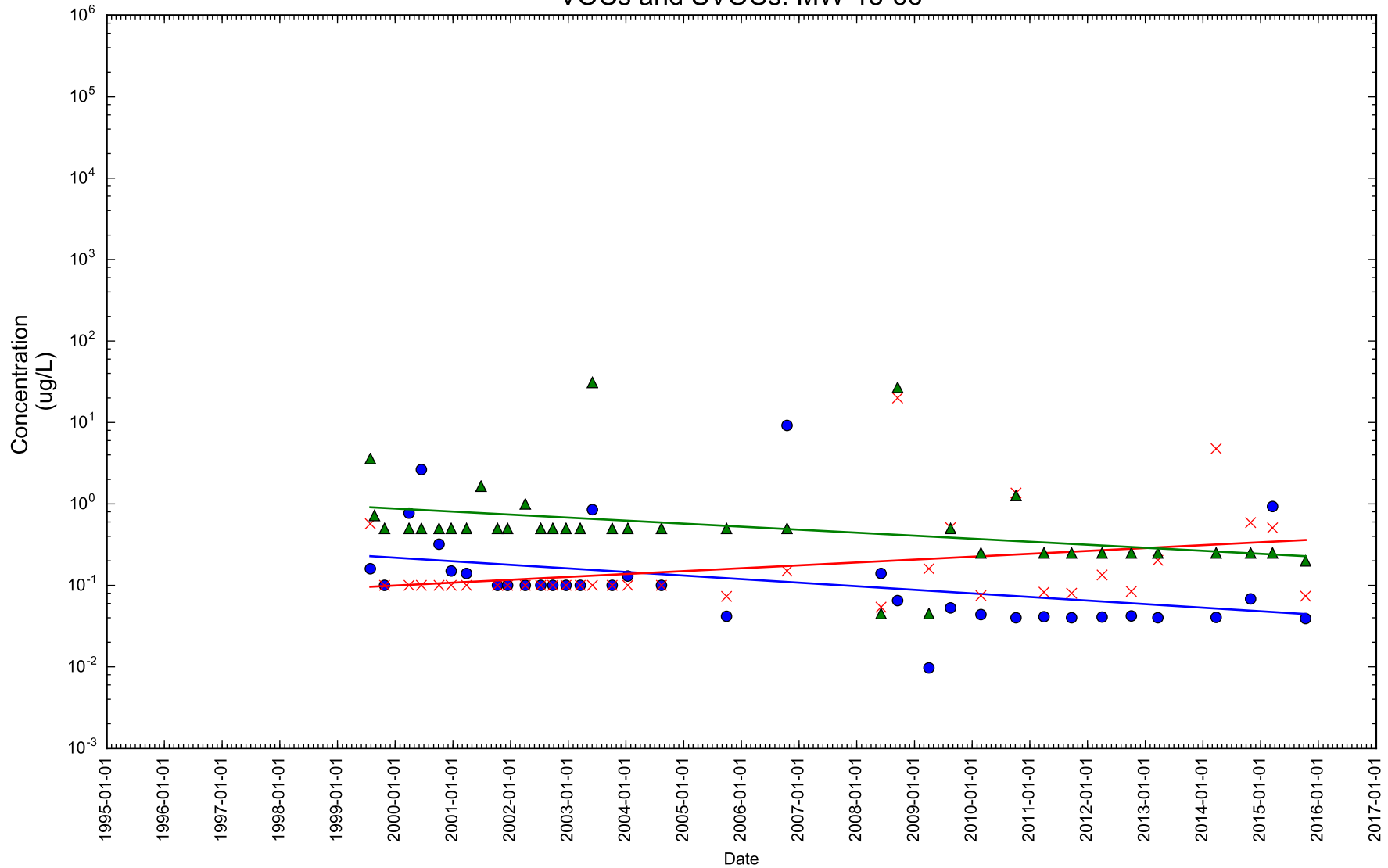


Figure 1-23

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-16-65

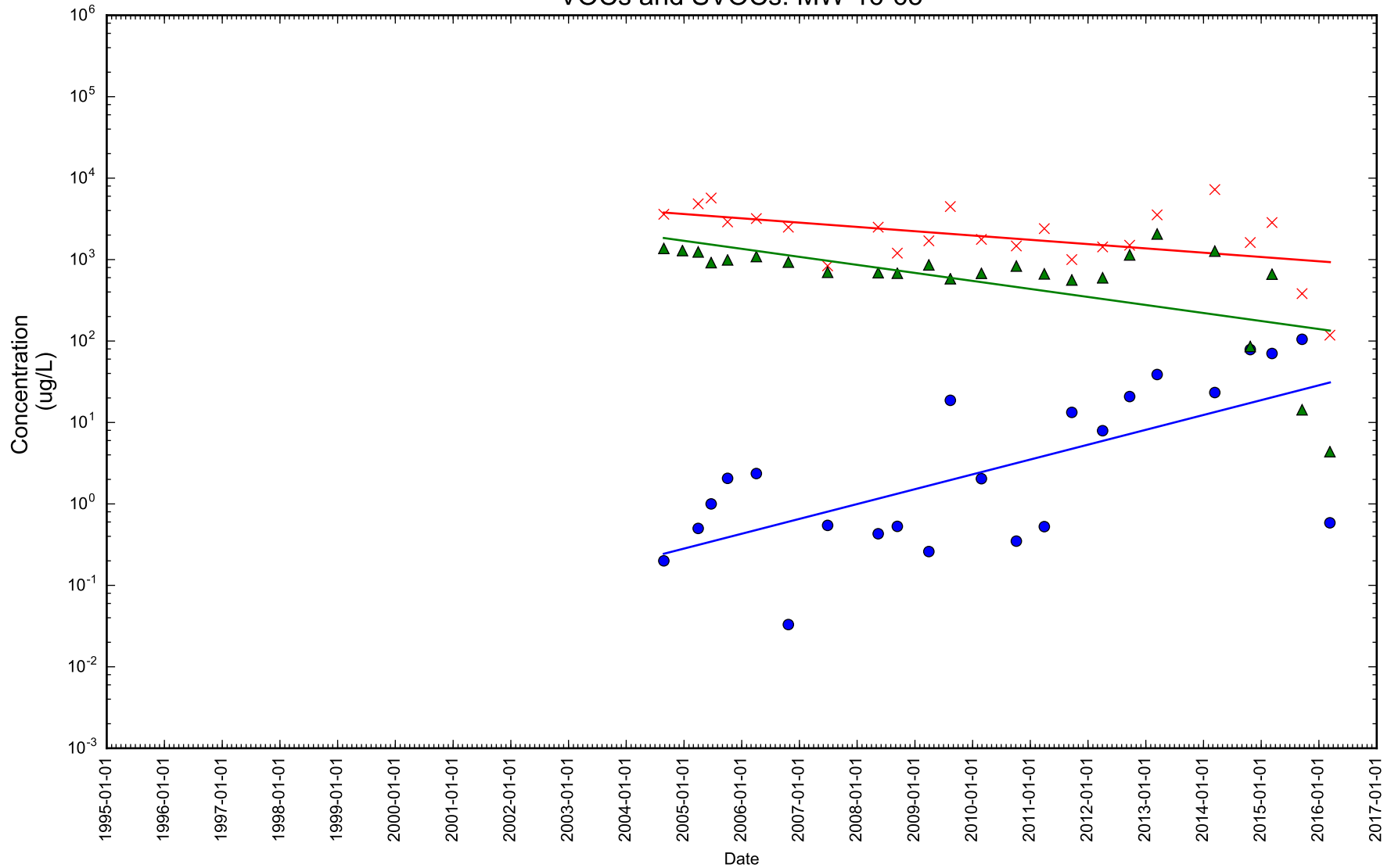


Figure 1-24

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-18-125

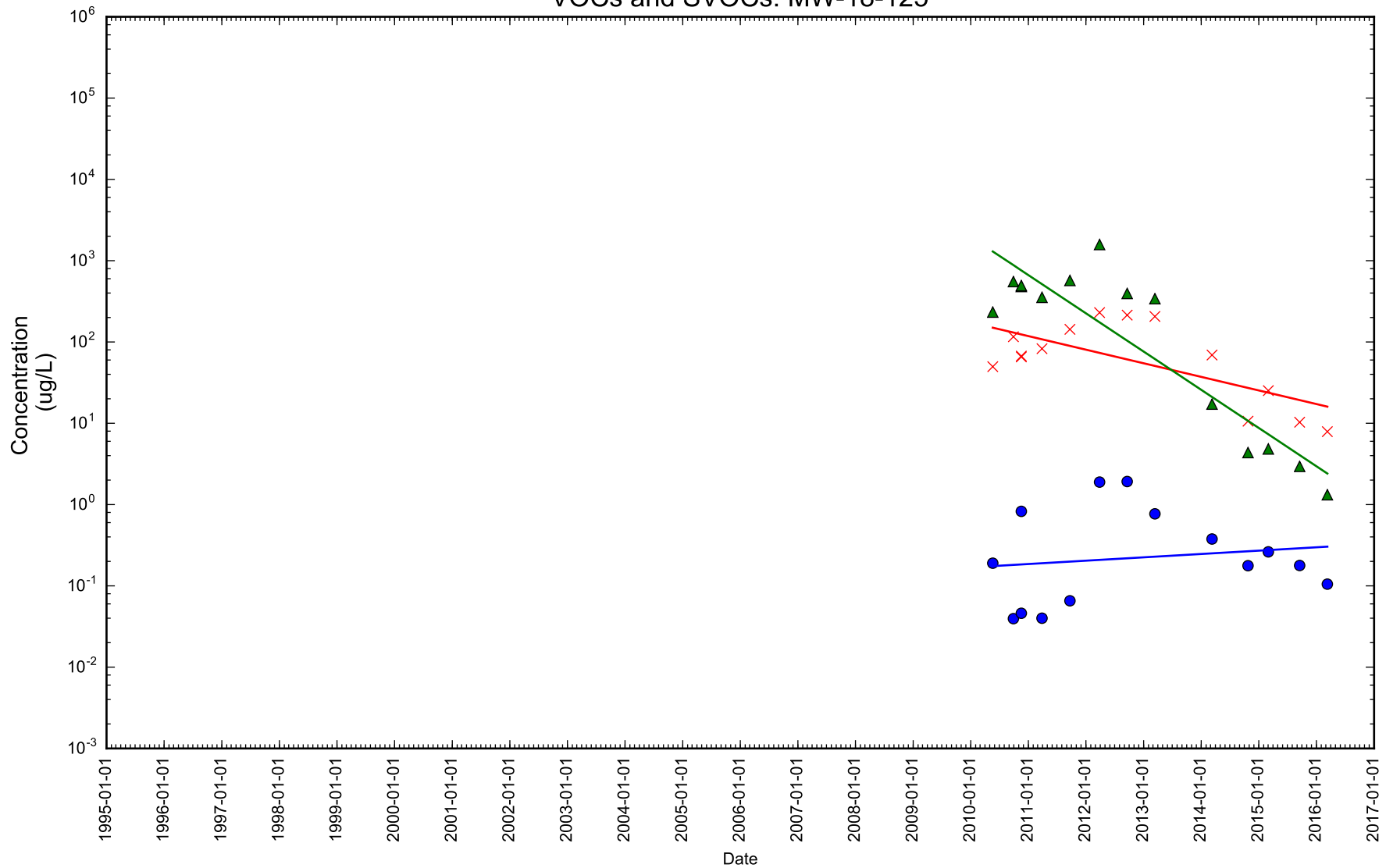


Figure 1-25

Time Series Concentration Plot

- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.



VOCs and SVOCs: MW-18-180

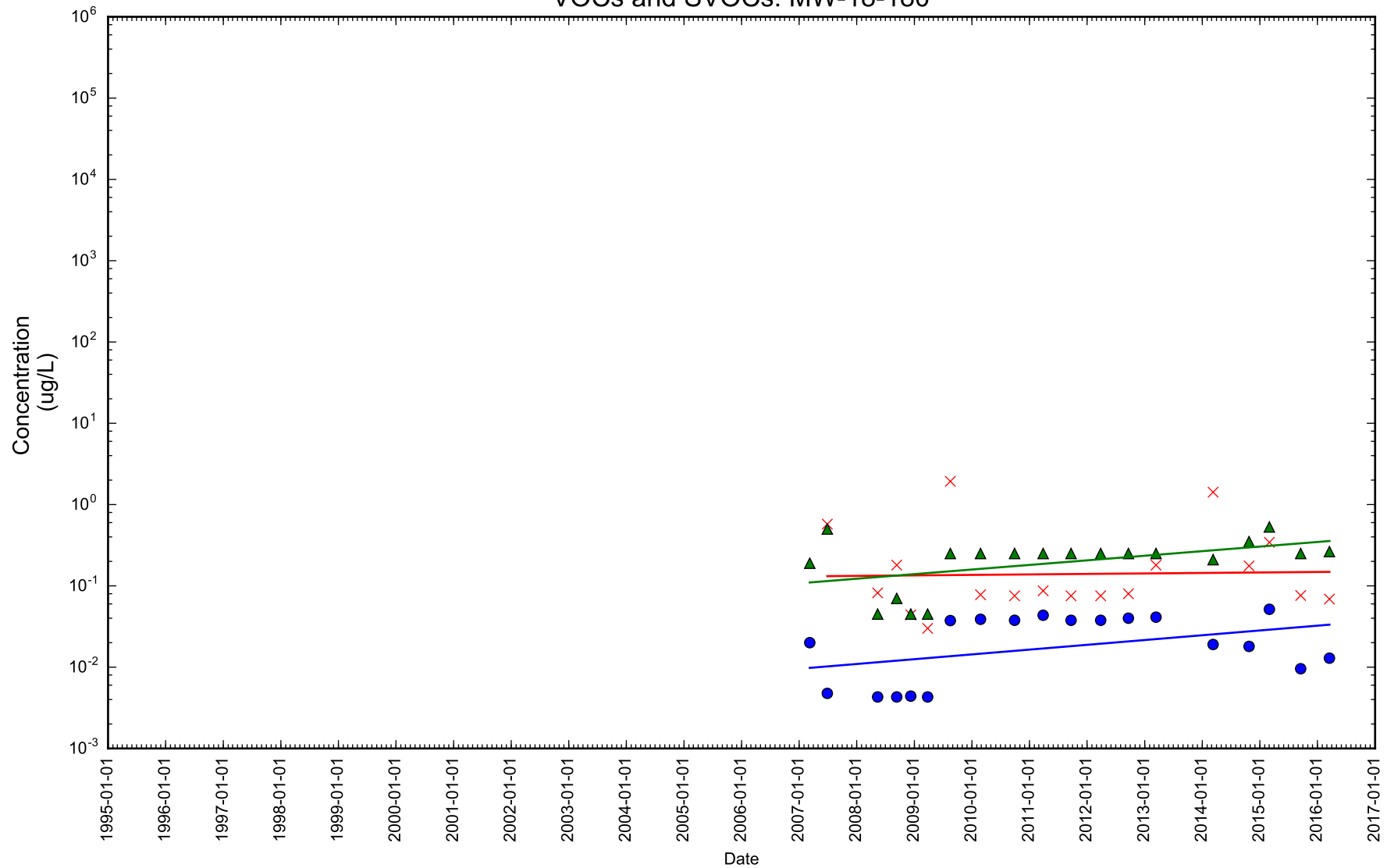


Figure 1-26

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-19-125

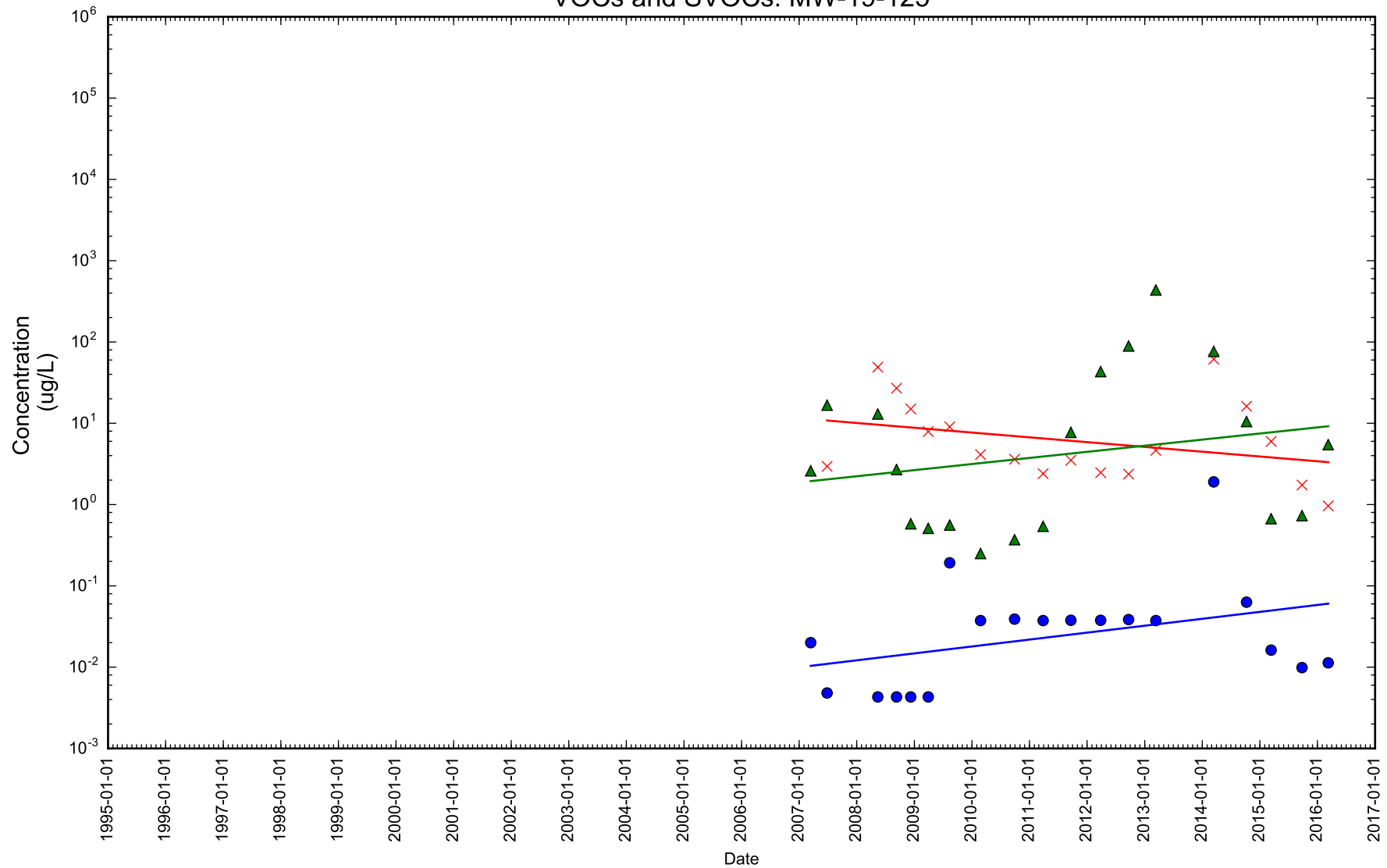


Figure 1-27

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-19-180

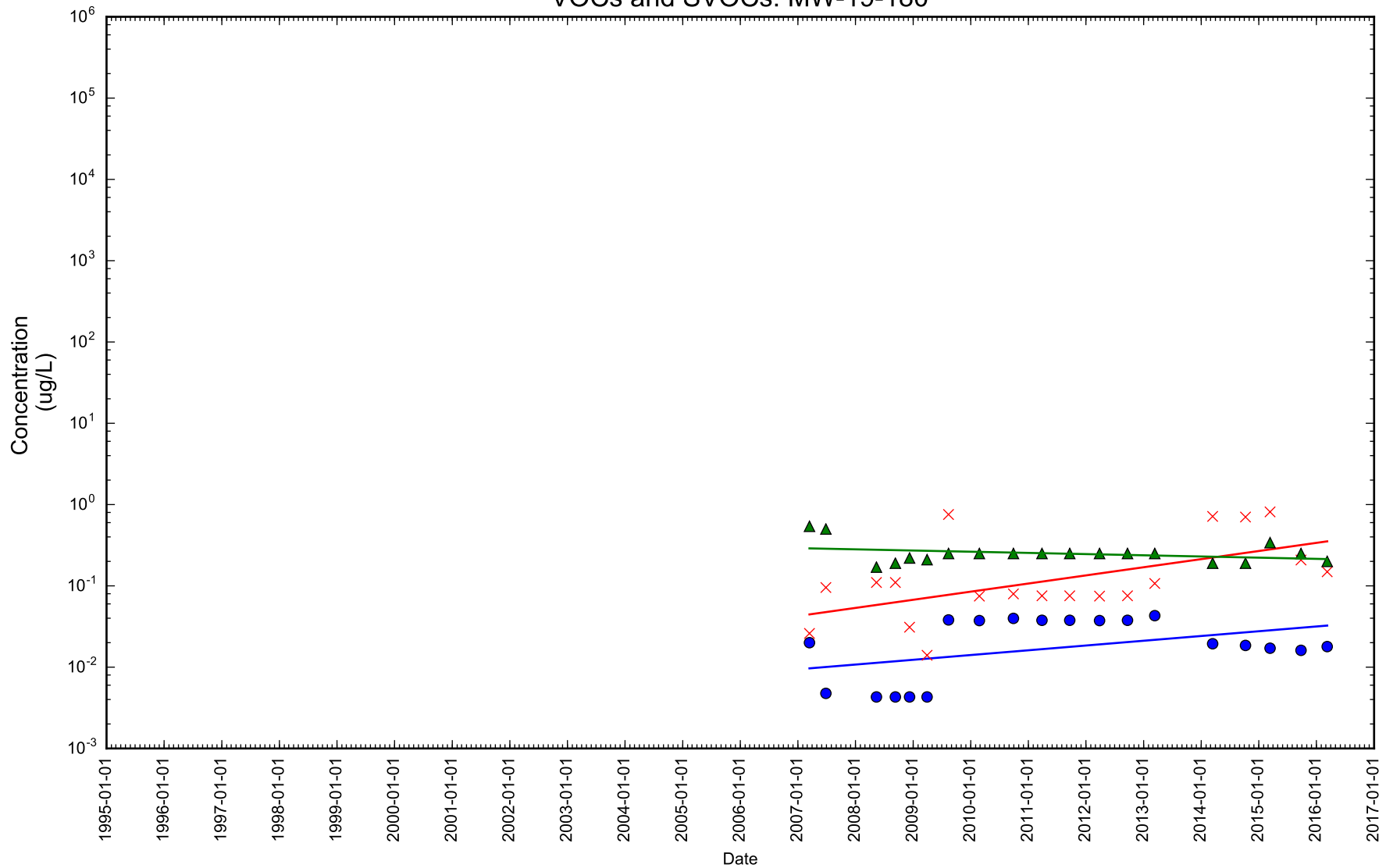


Figure 1-28

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-19-22

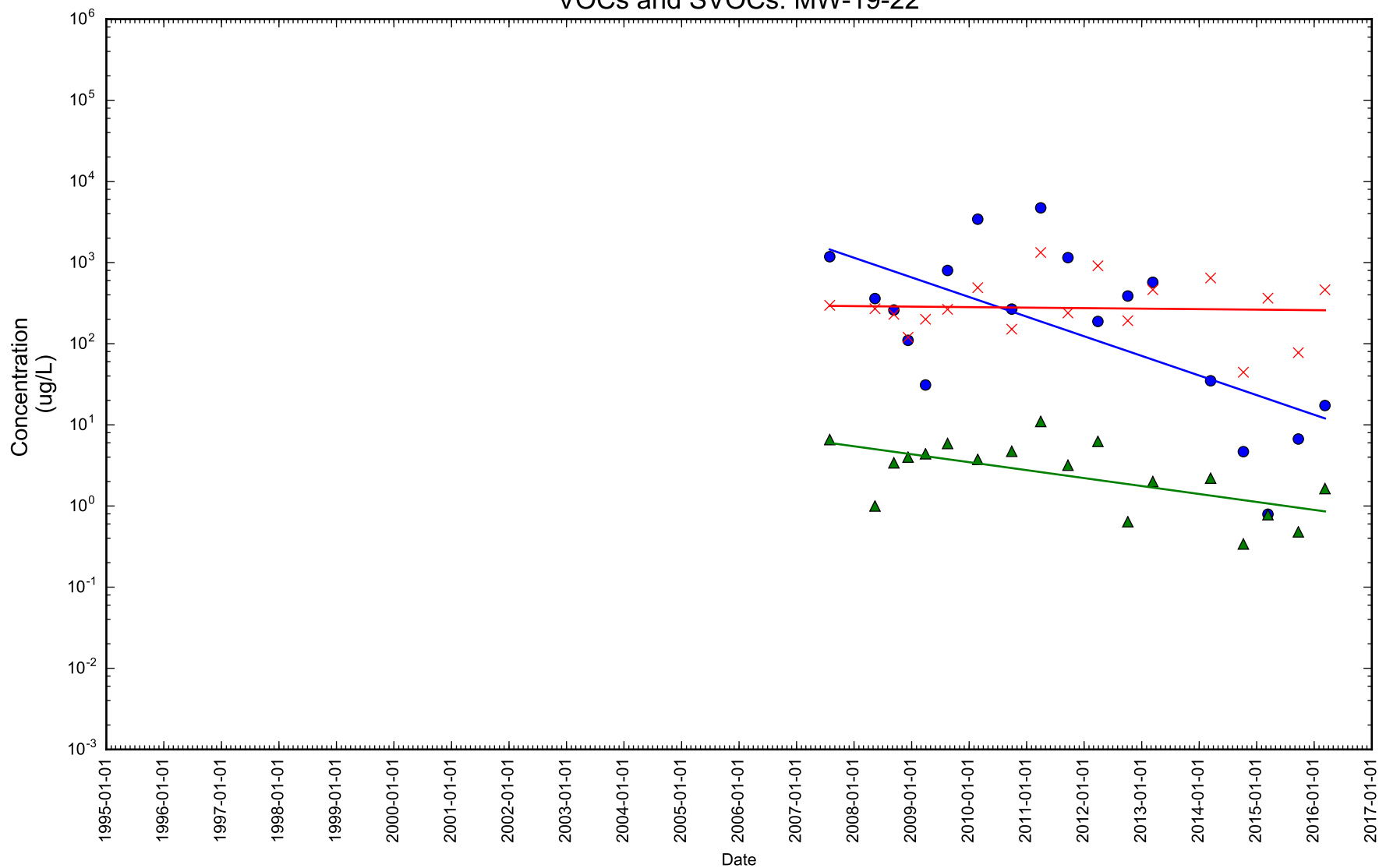


Figure 1-29

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-20-120

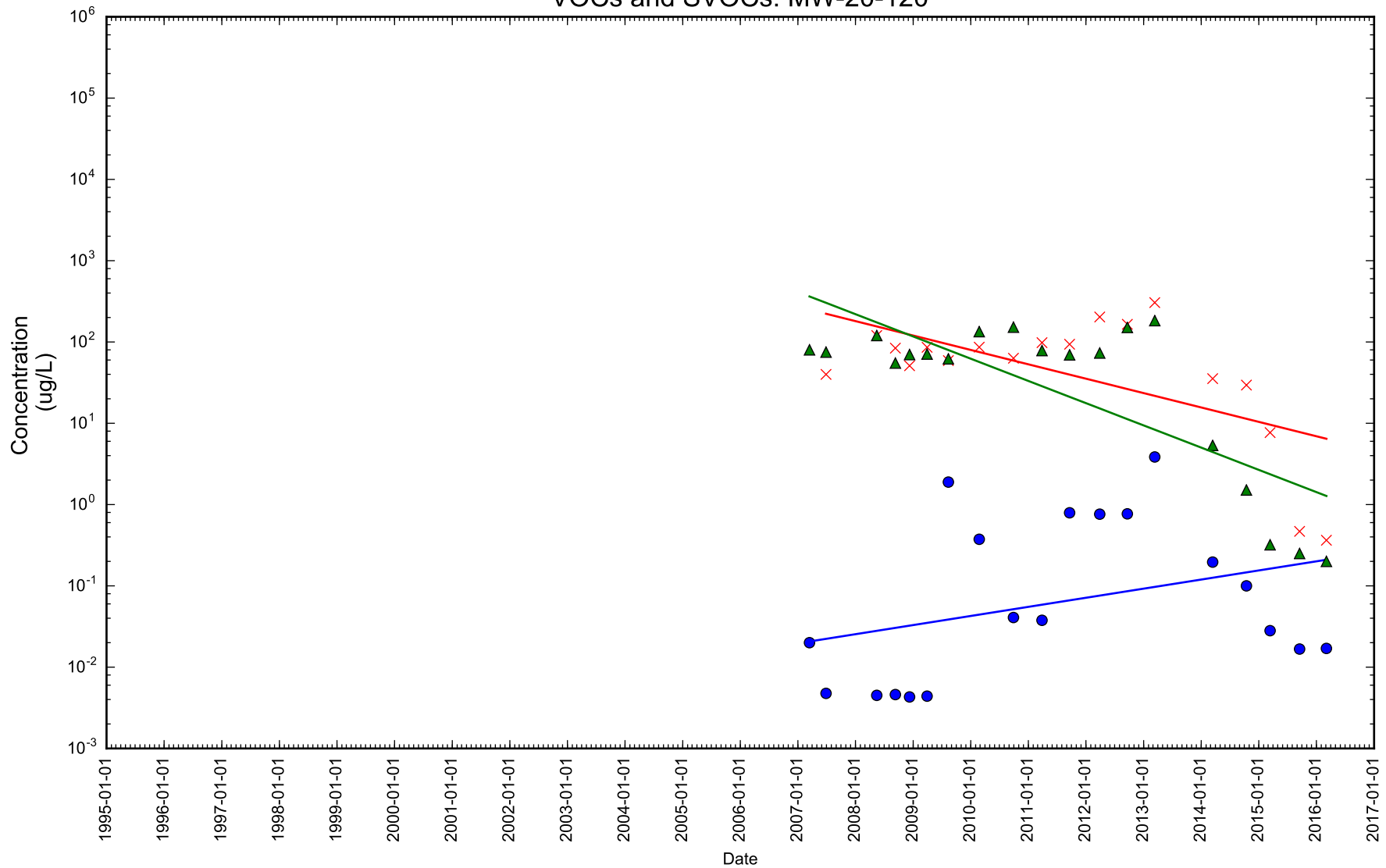


Figure 1-30

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-21-115

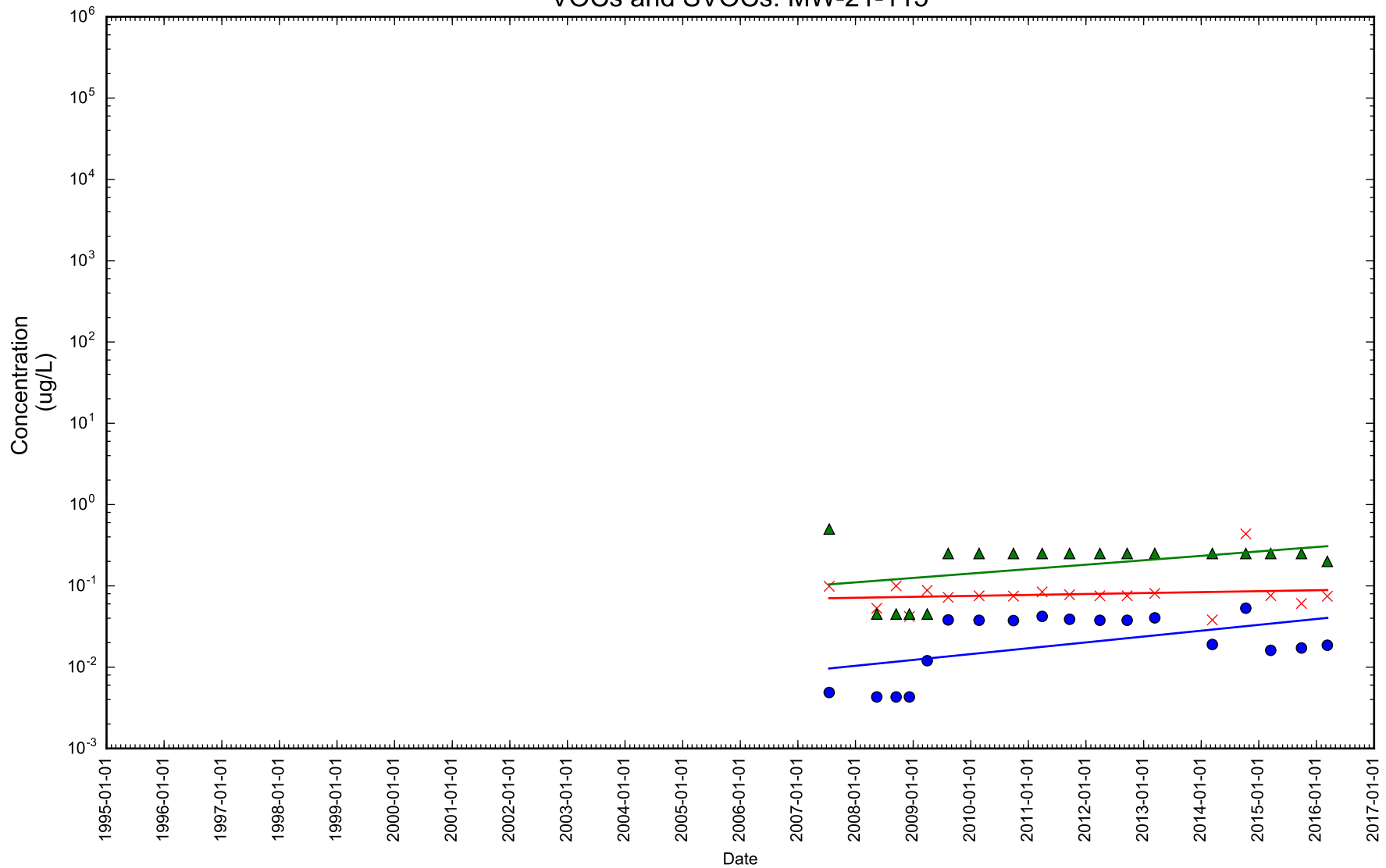


Figure 1-31

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-21-12

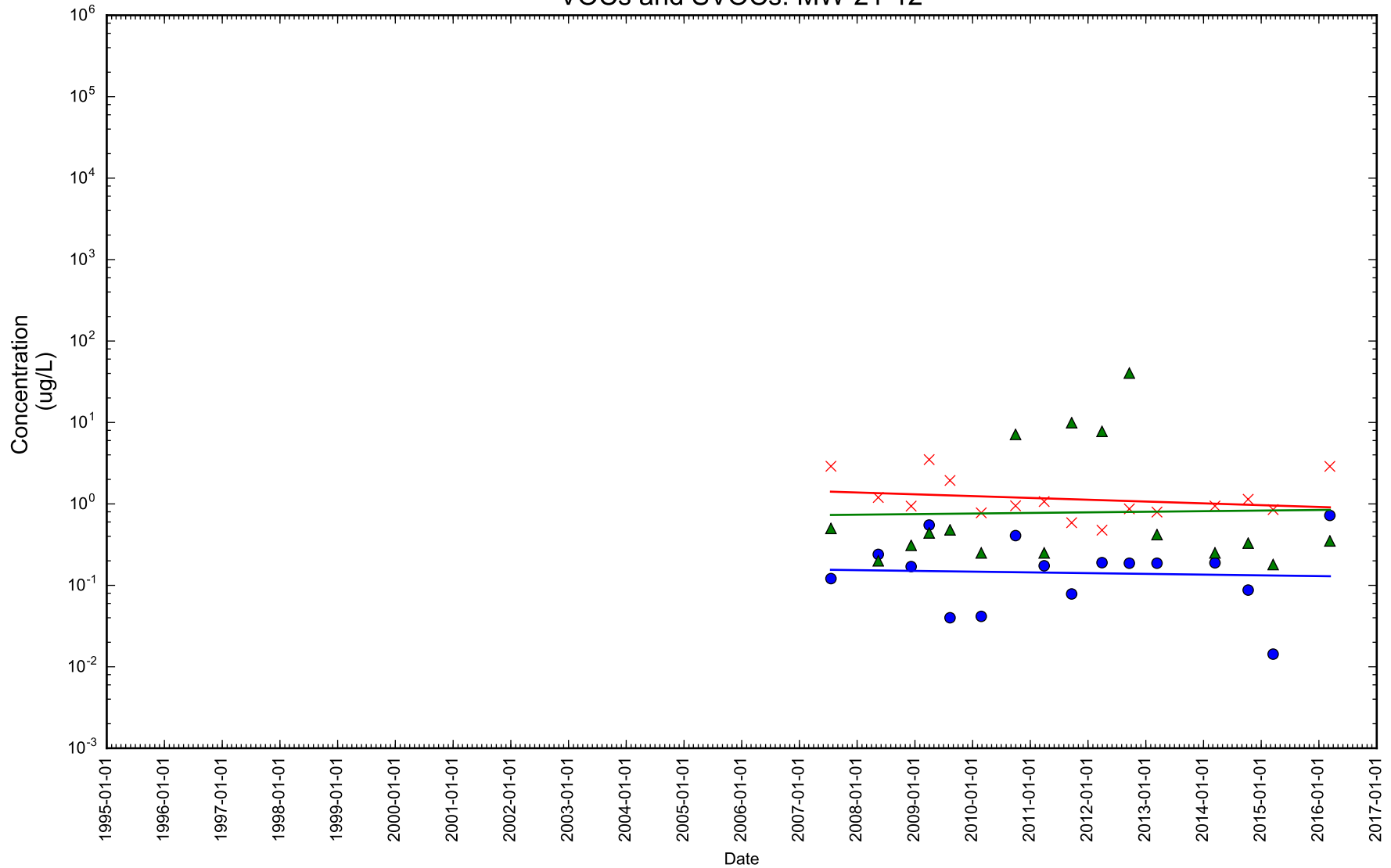


Figure 1-32

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-21-165

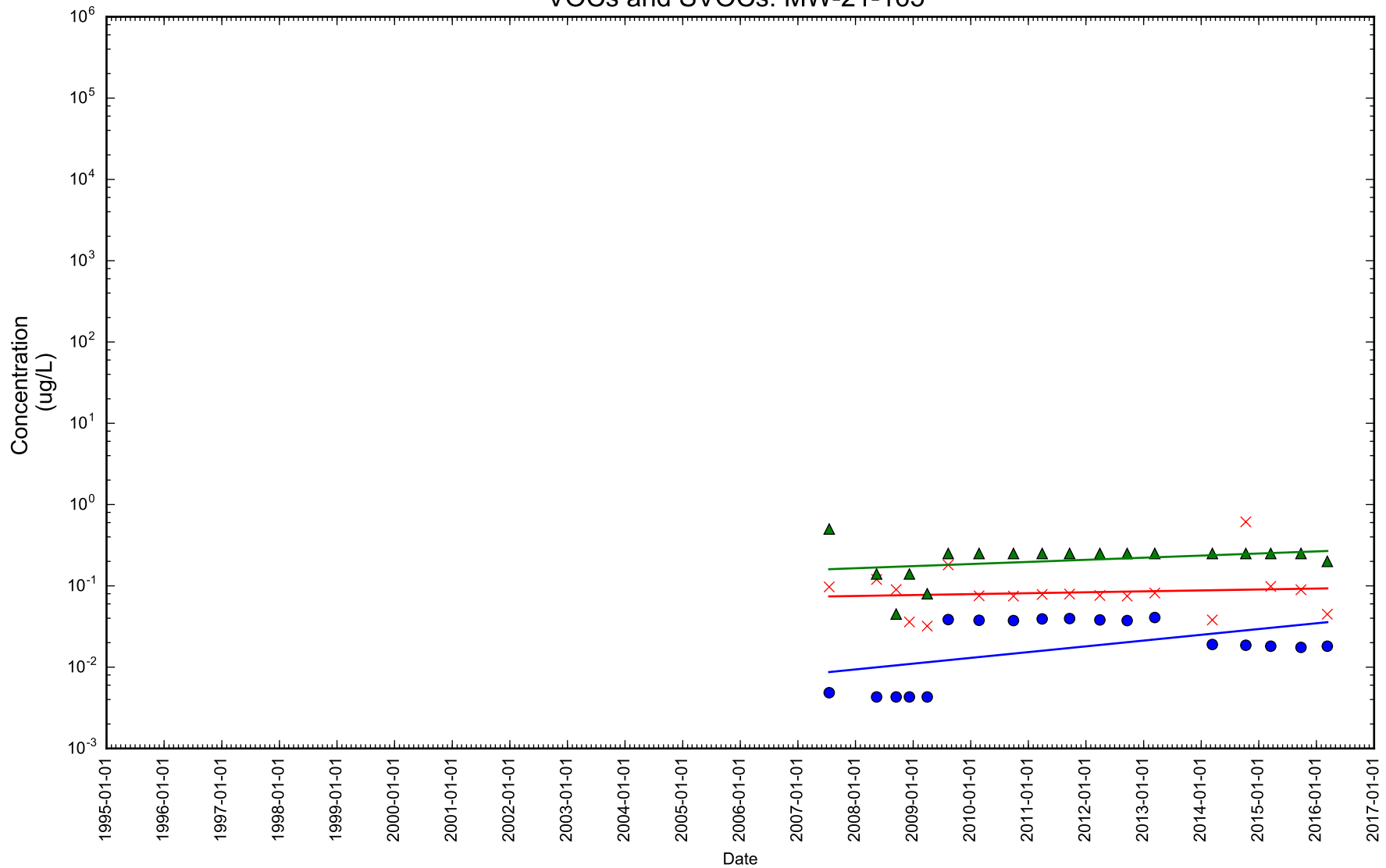


Figure 1-33

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-21-75

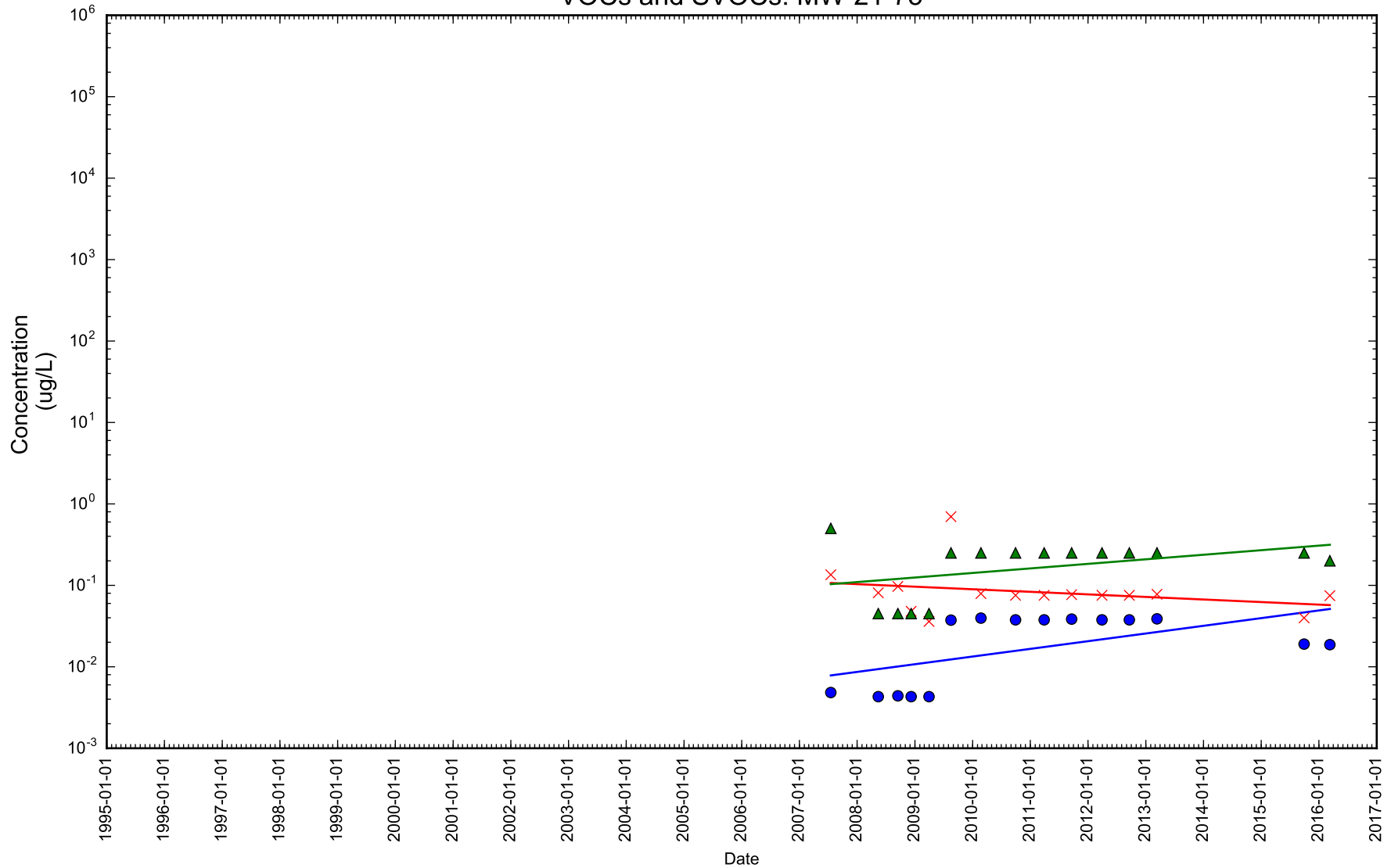


Figure 1-34

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-21U

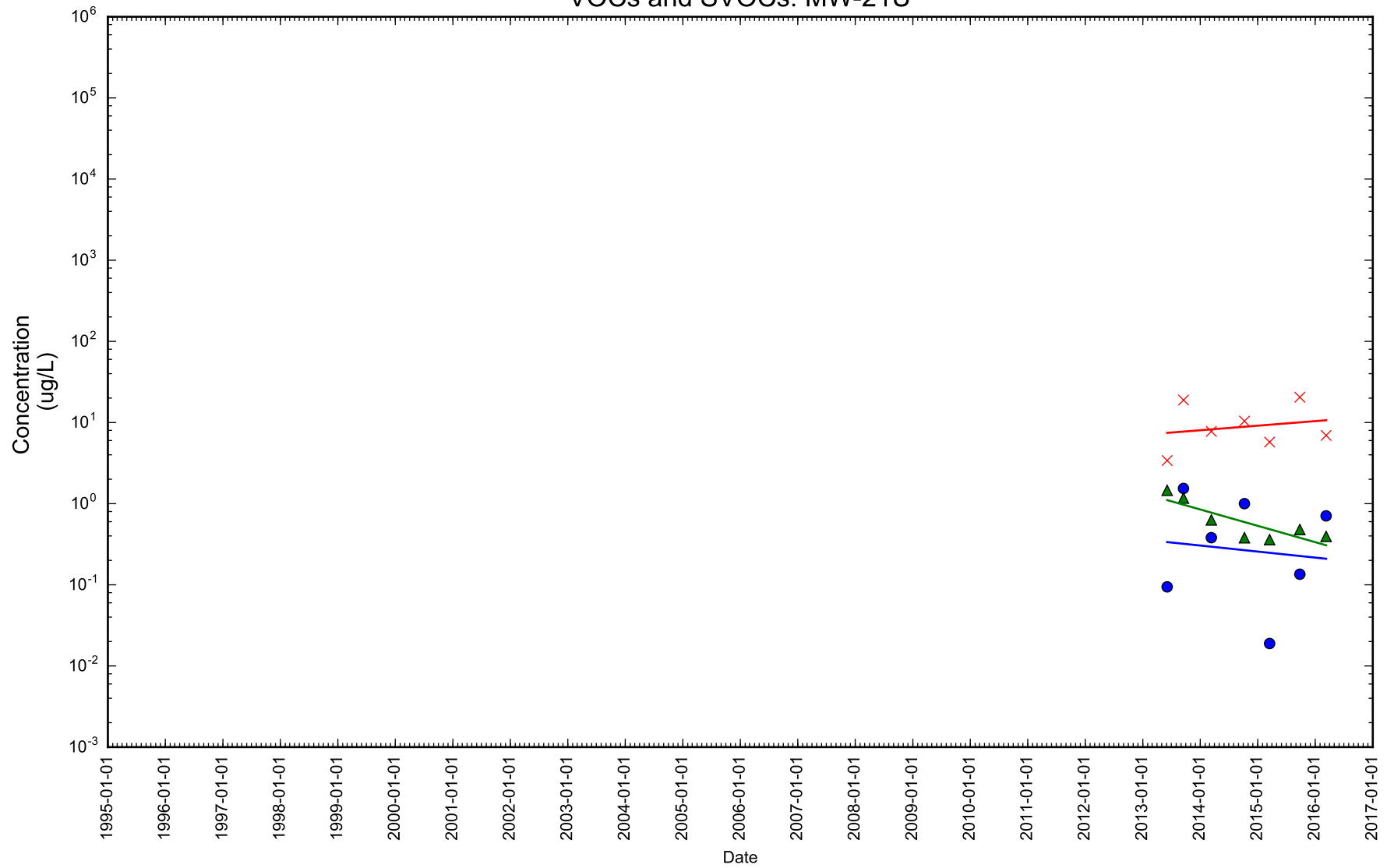


Figure 1-35

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-22U

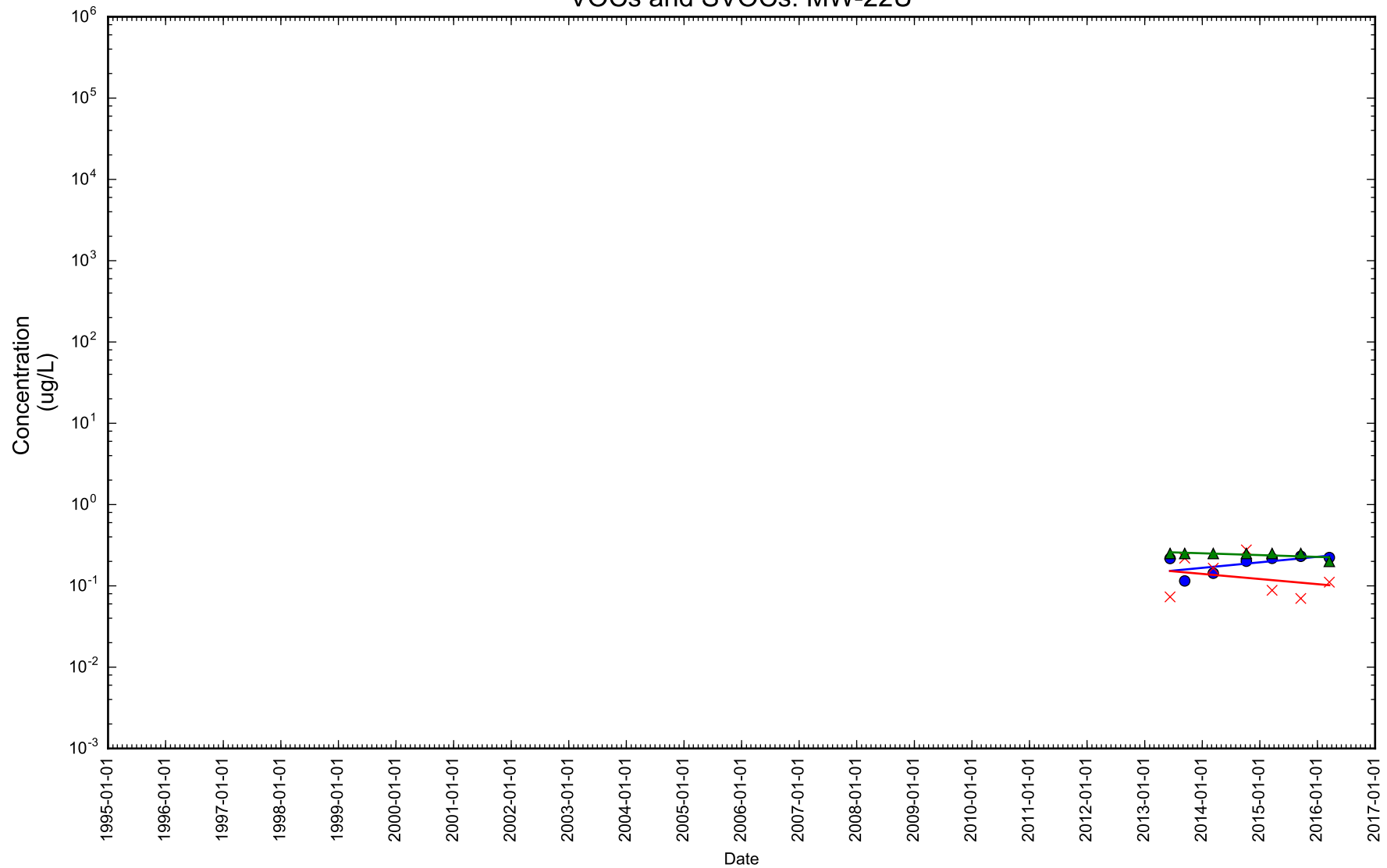


Figure 1-36

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-23-123

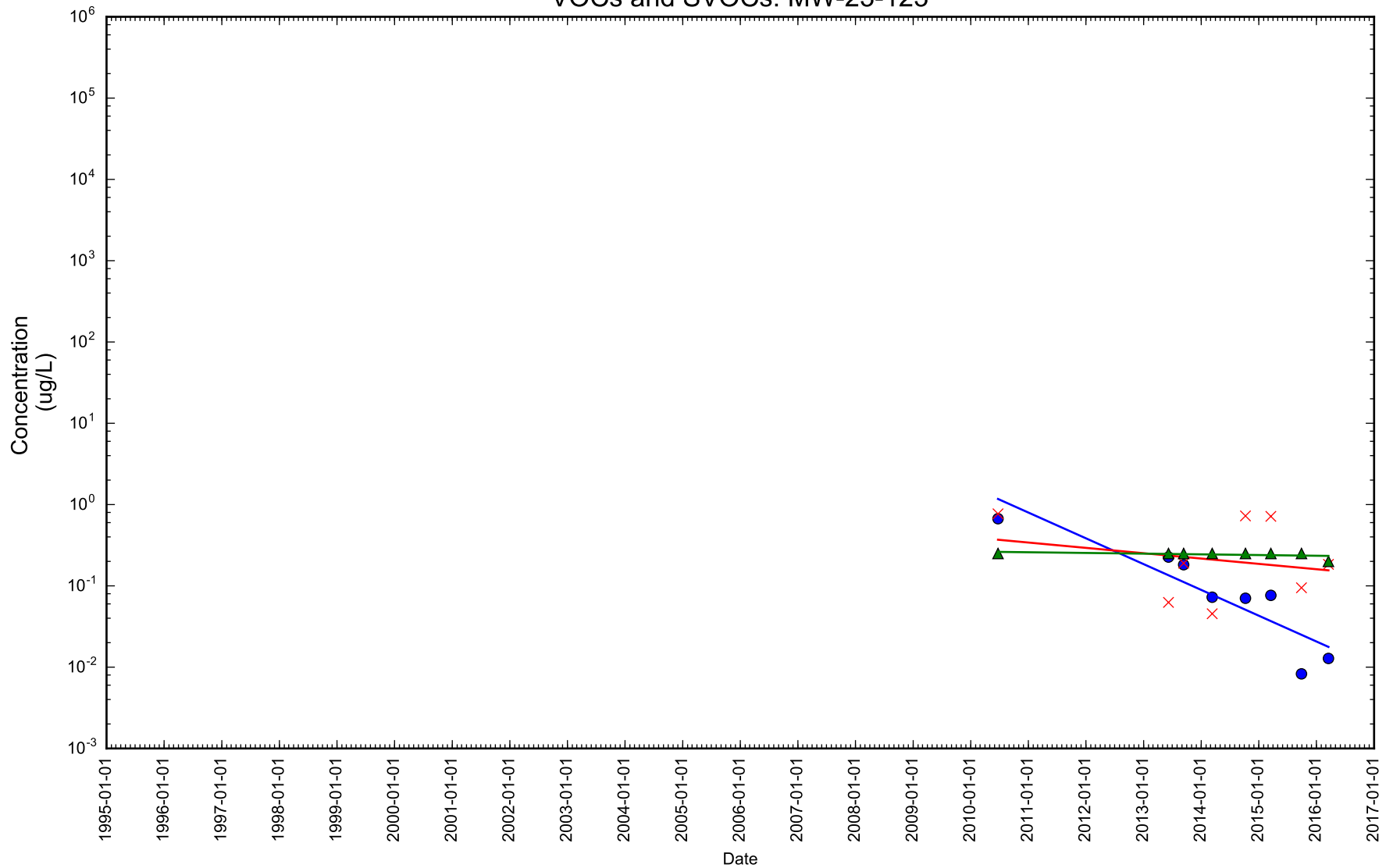


Figure 1-37

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-23-27

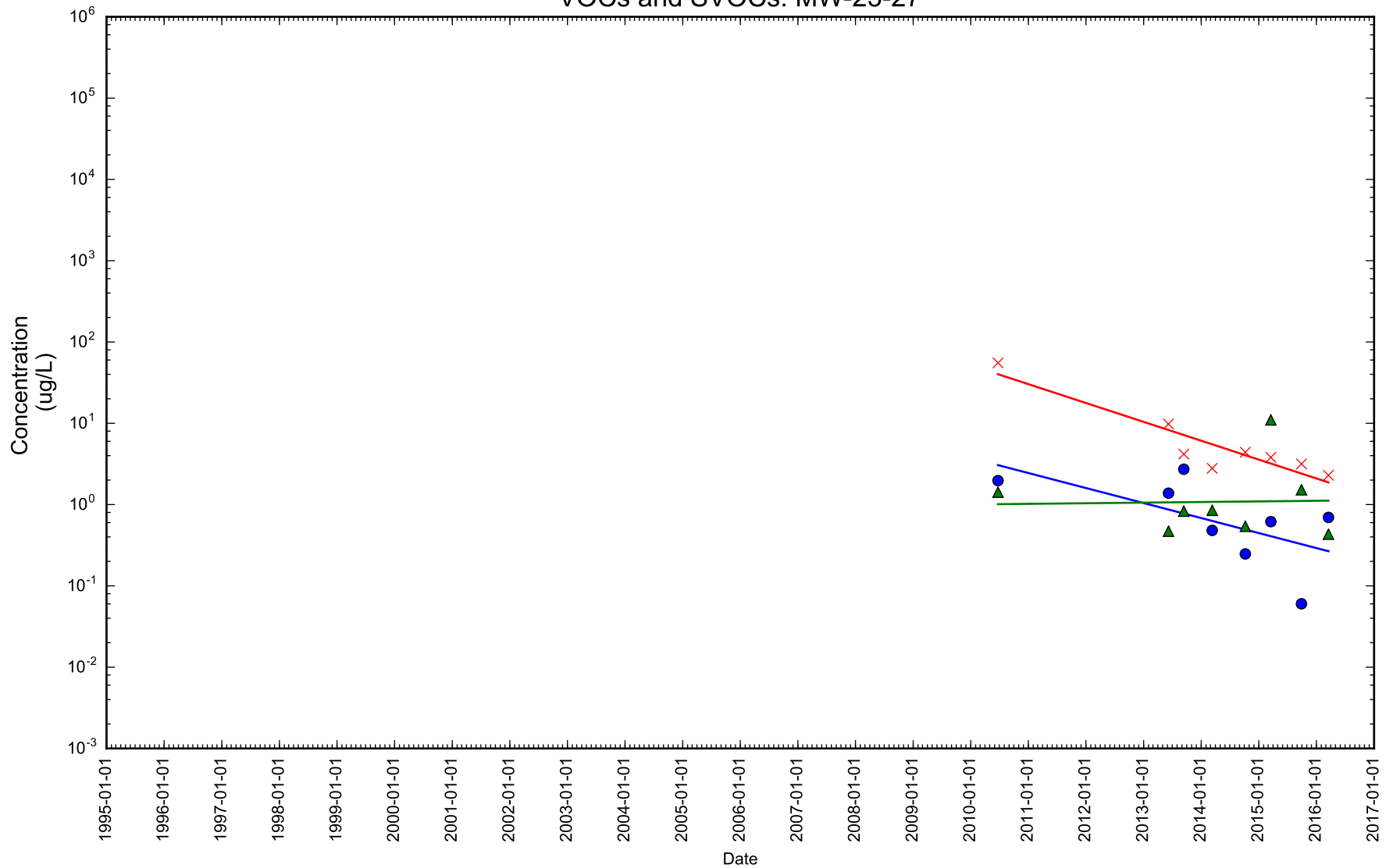


Figure 1-38

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-23U

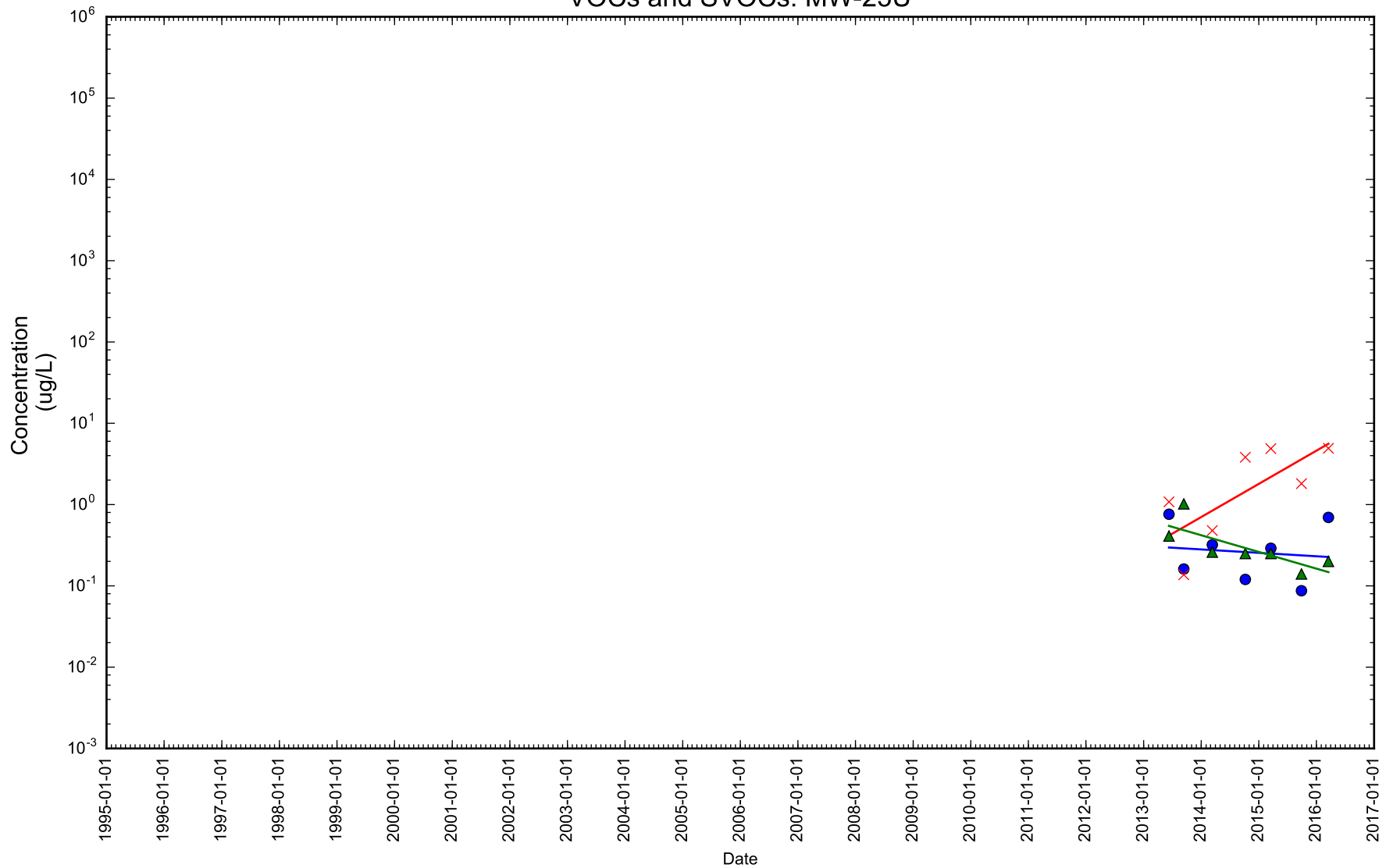


Figure 1-39

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-28U

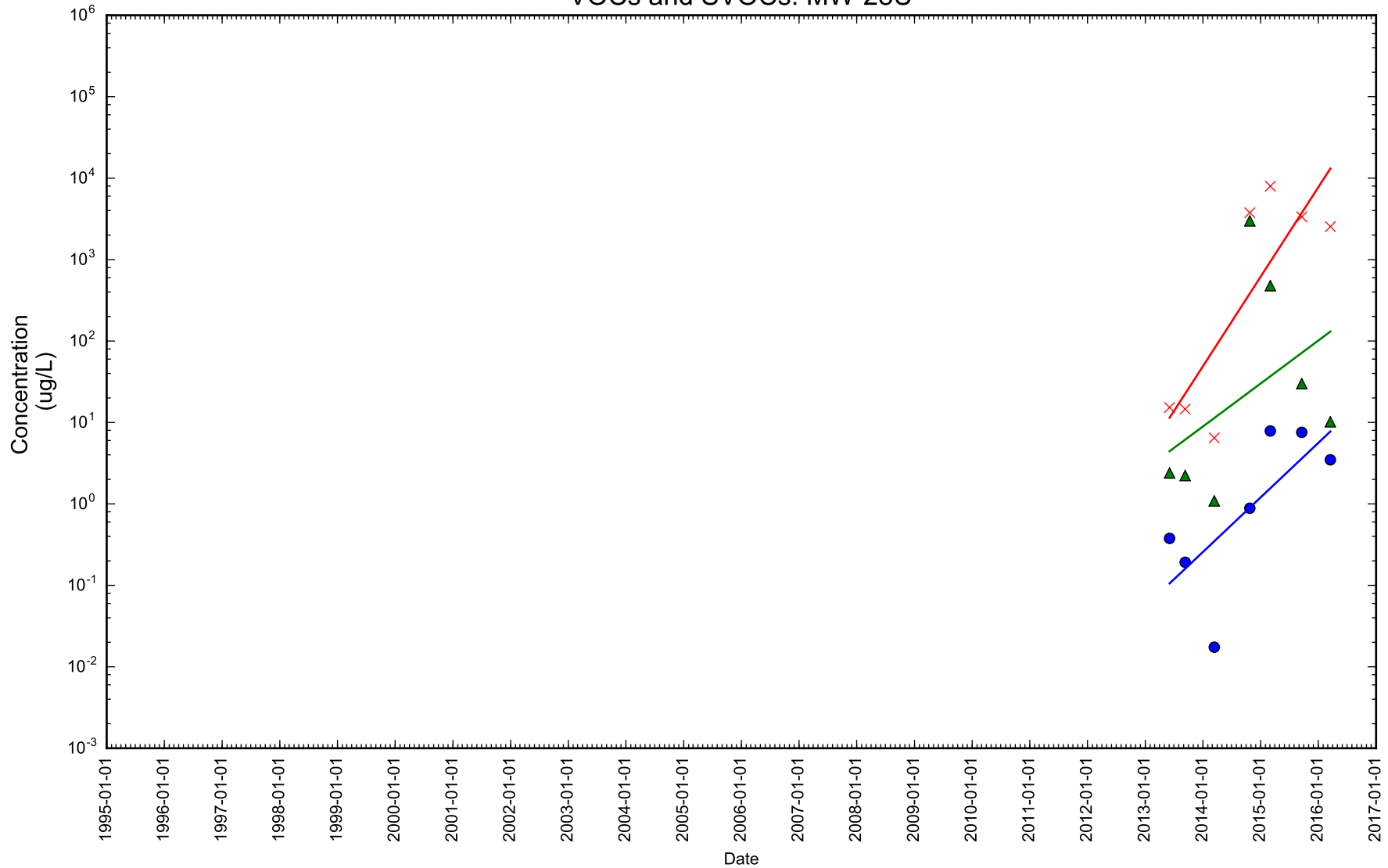


Figure 1-40

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-31U

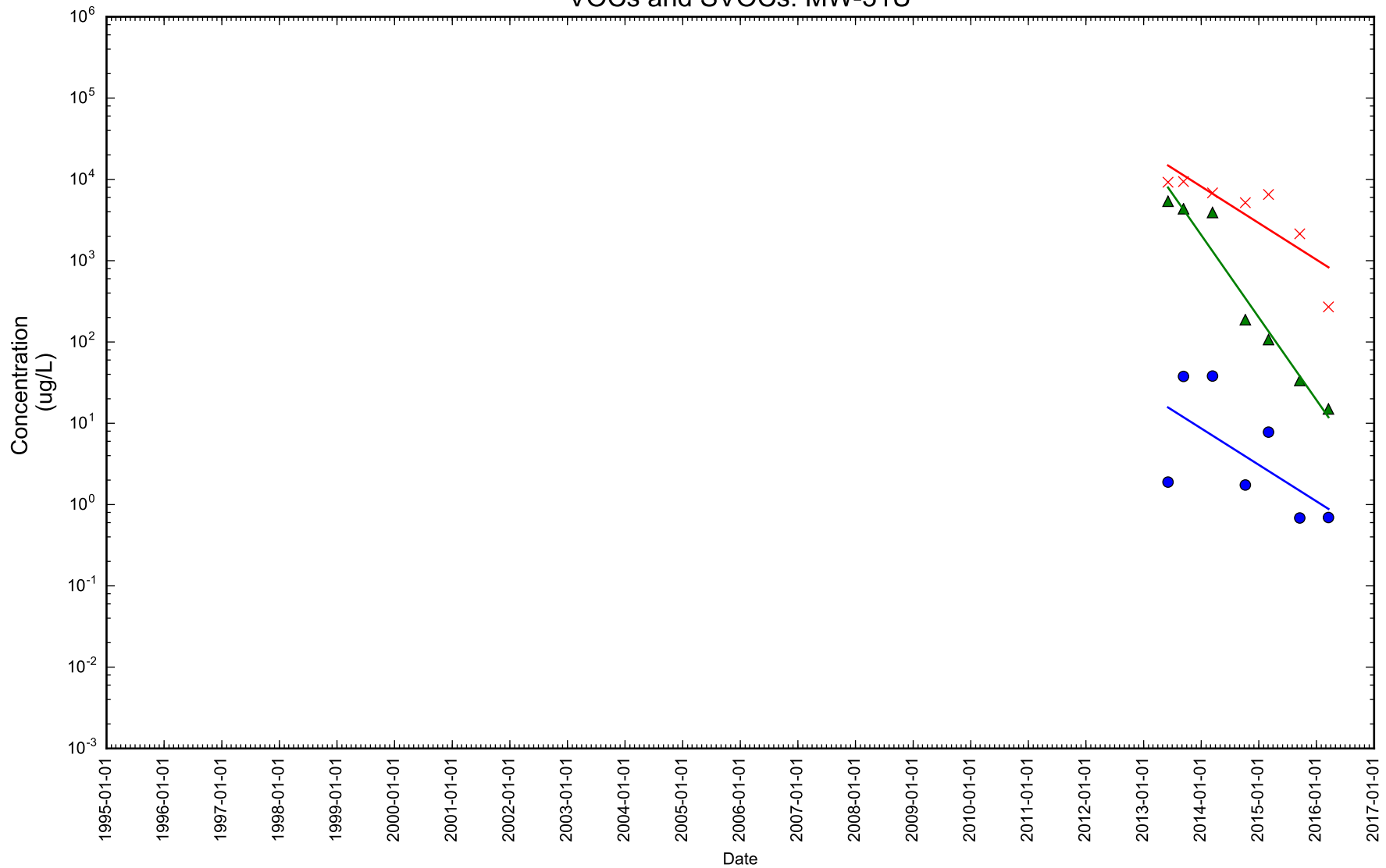


Figure 1-41

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-34U

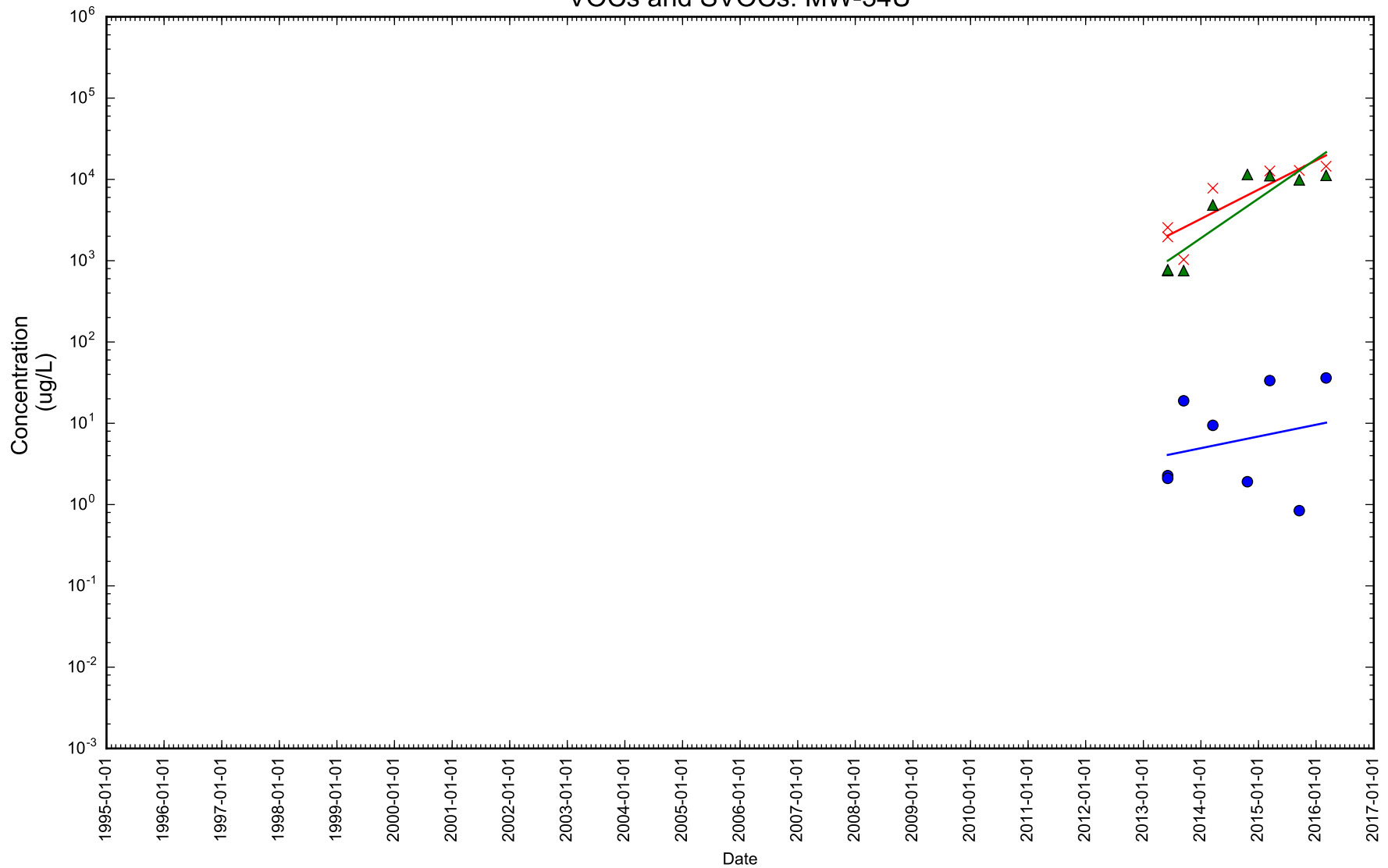


Figure 1-42

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: MW-39F

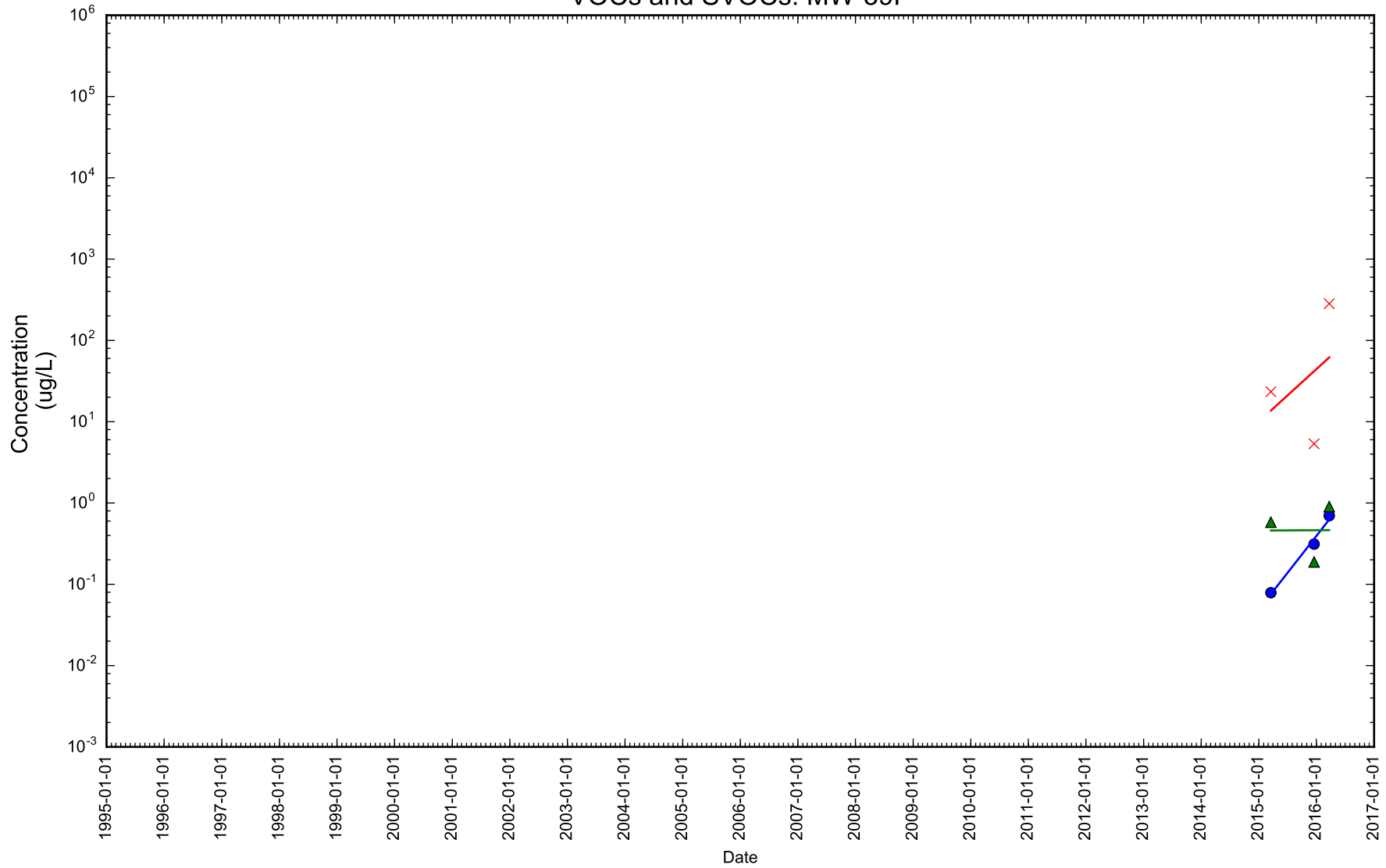


Figure 1-43

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

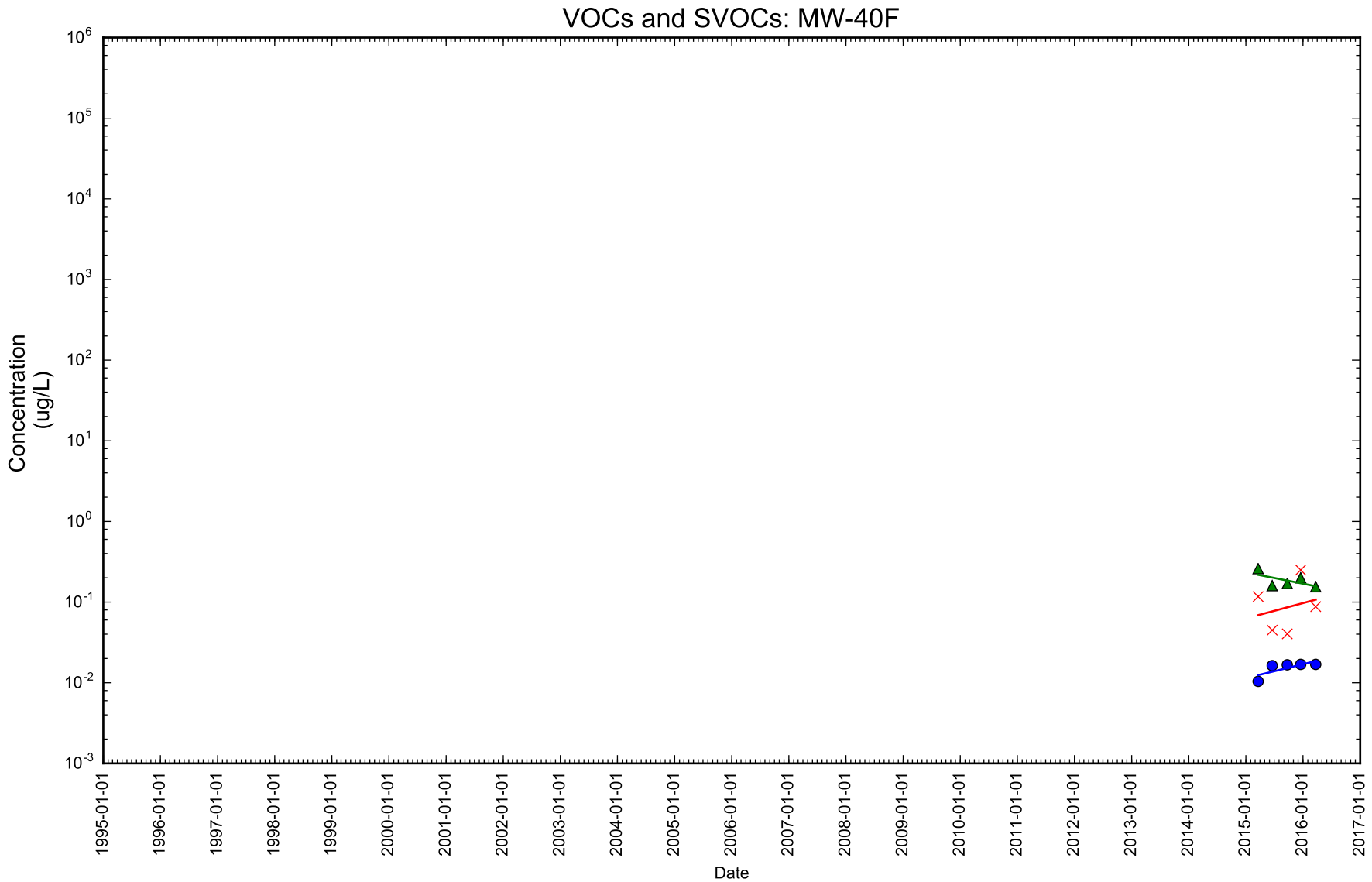


Figure 1-44

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

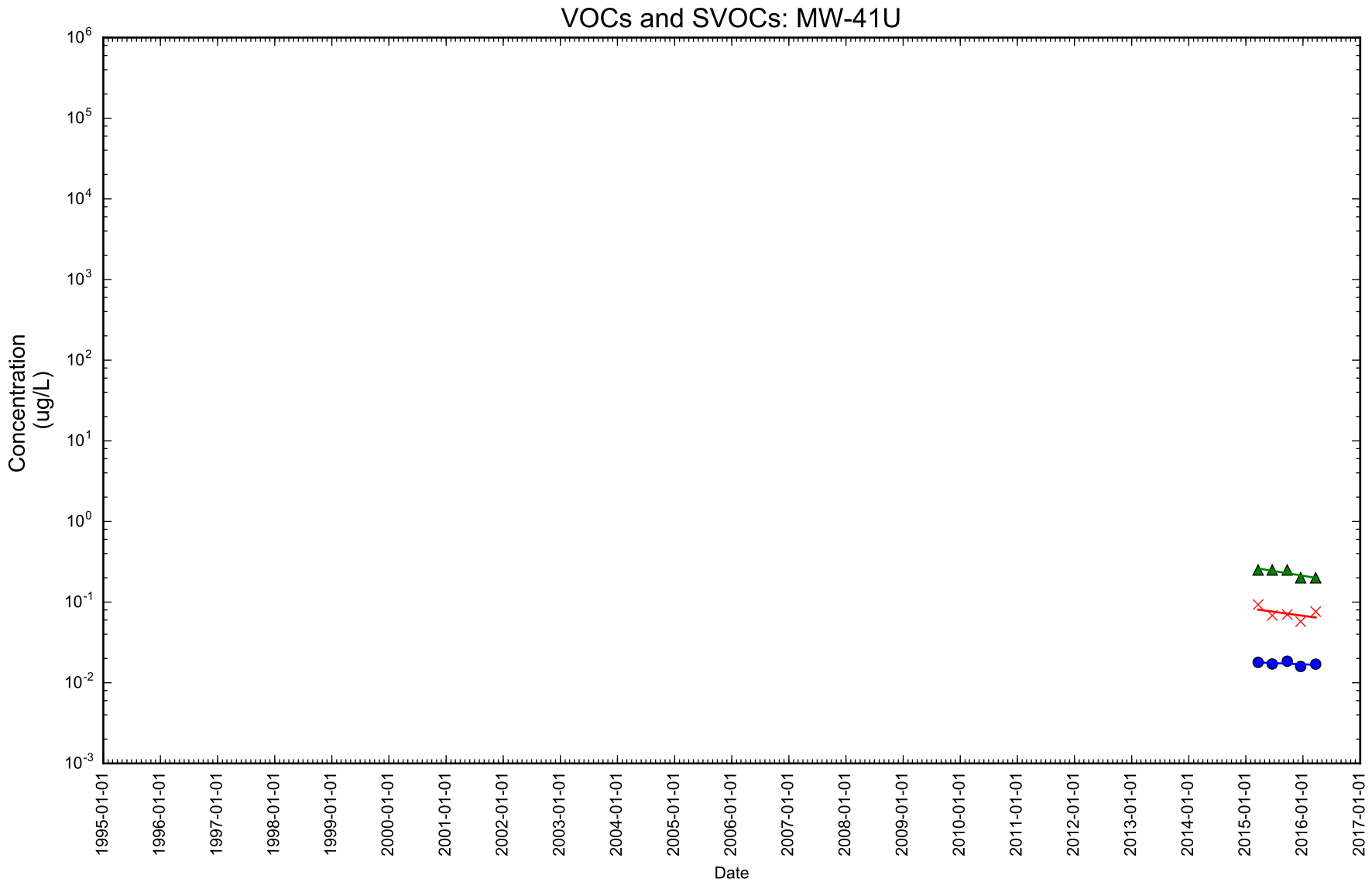


Figure 1-45

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

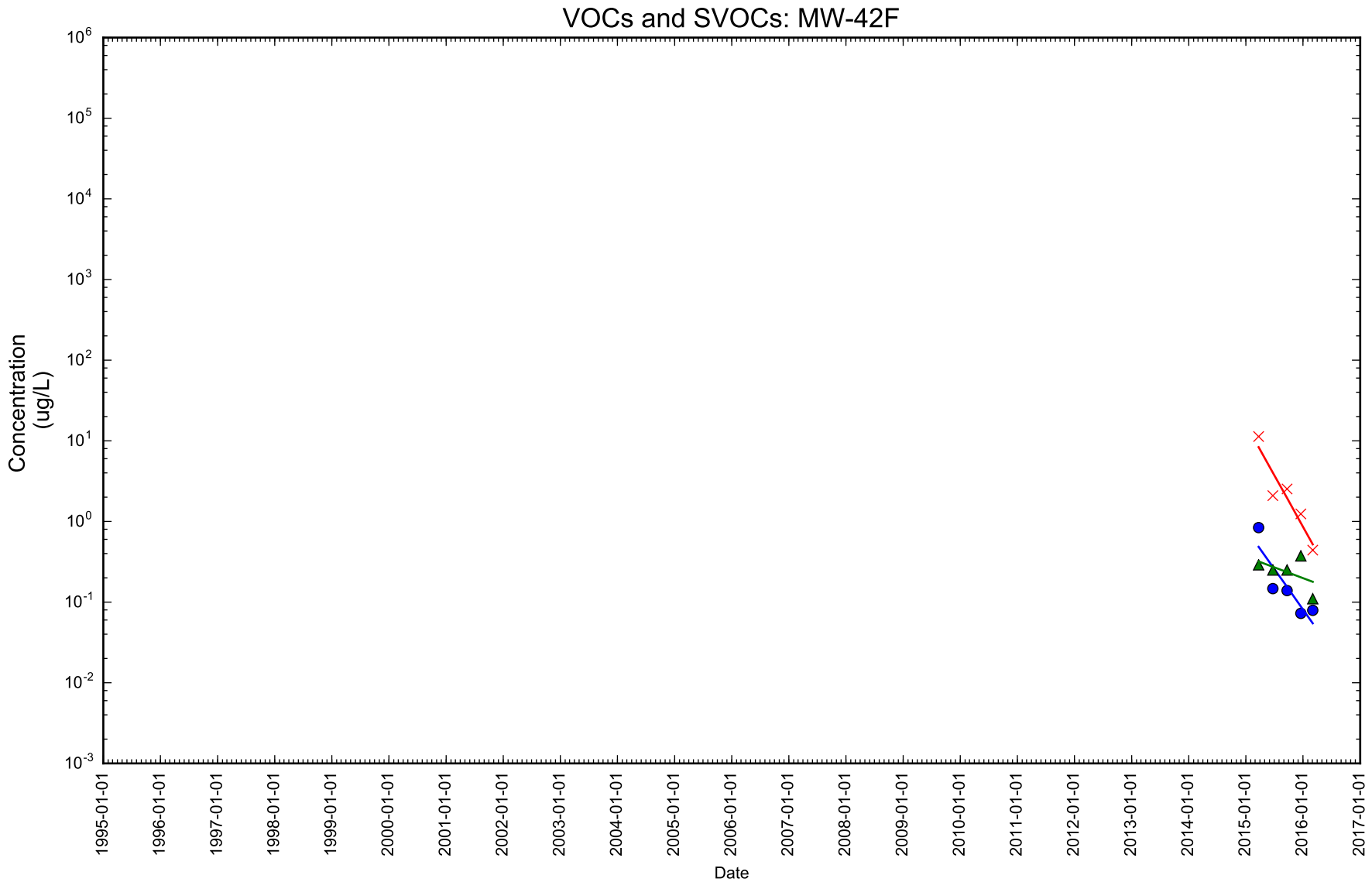


Figure 1-46

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-01-20

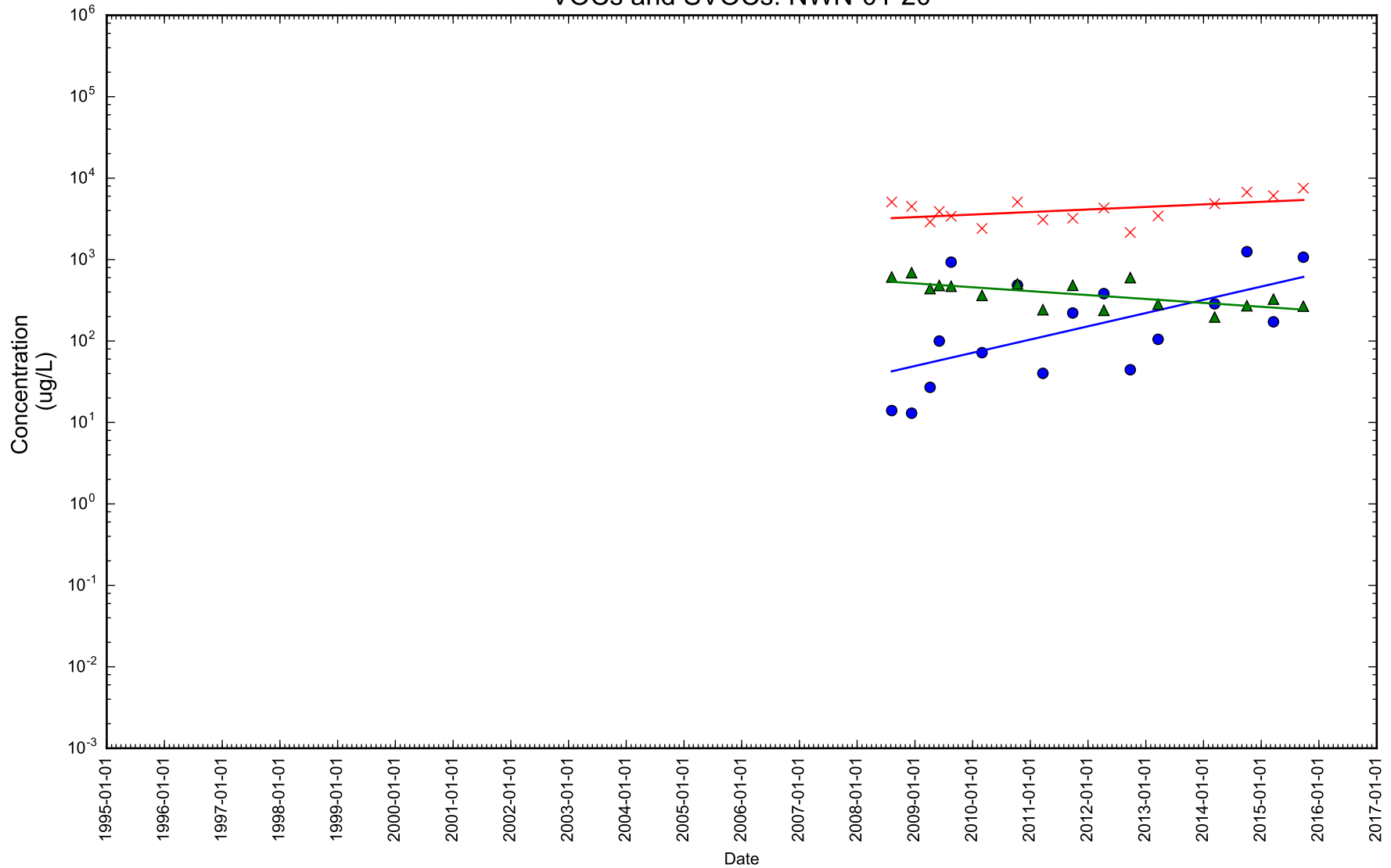


Figure 1-47

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-02-20

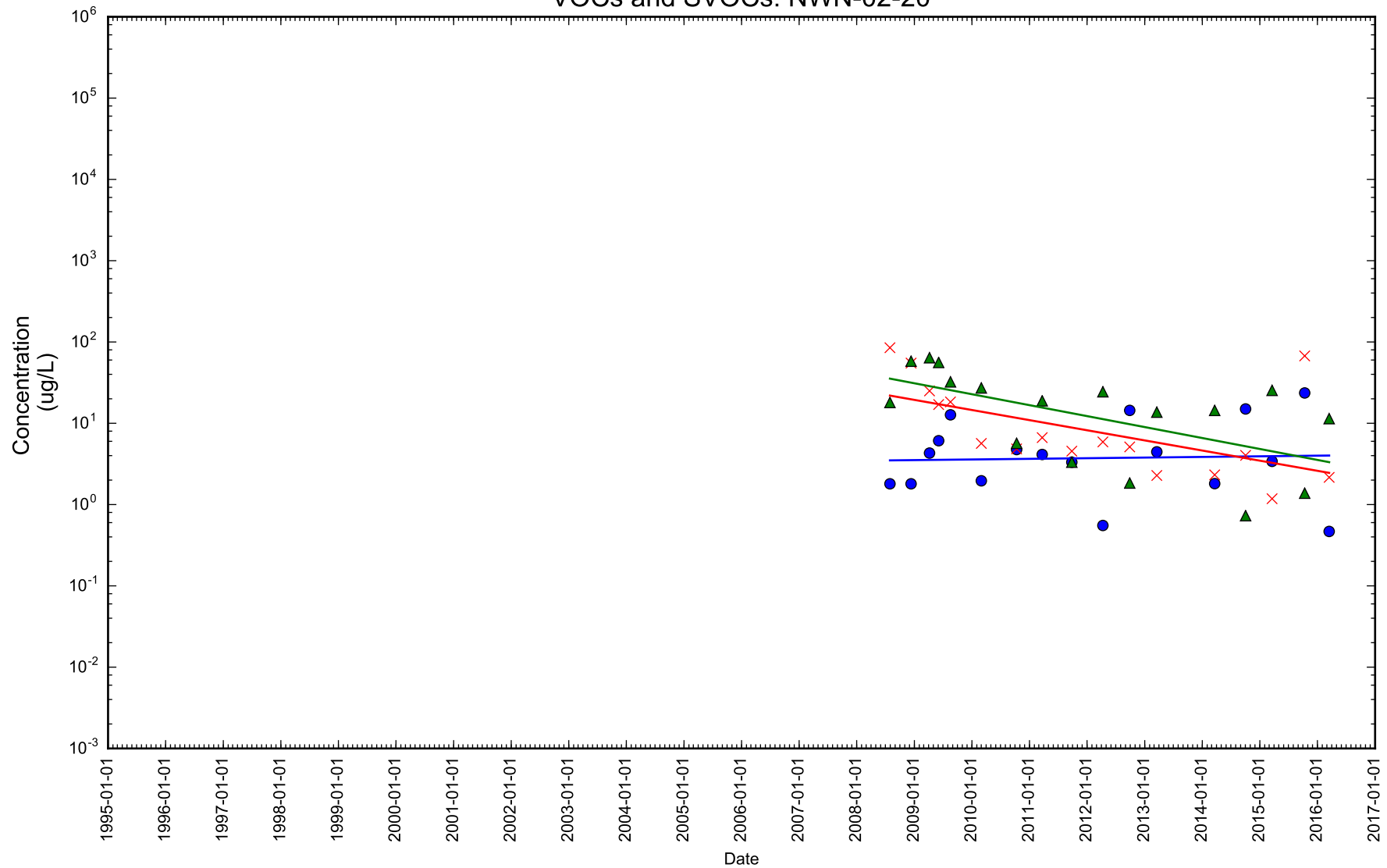


Figure 1-48

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-03-17

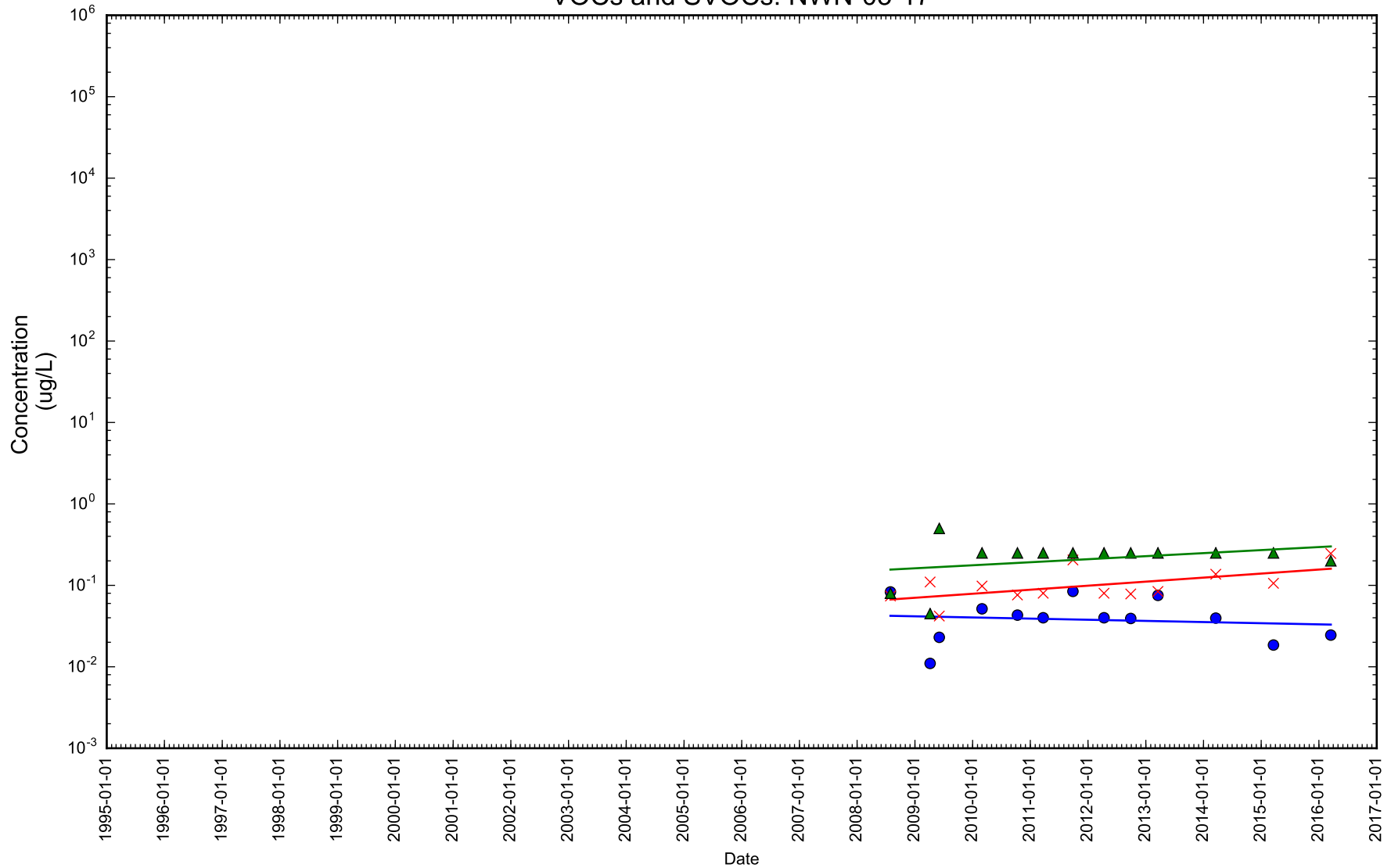


Figure 1-49

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-04-15

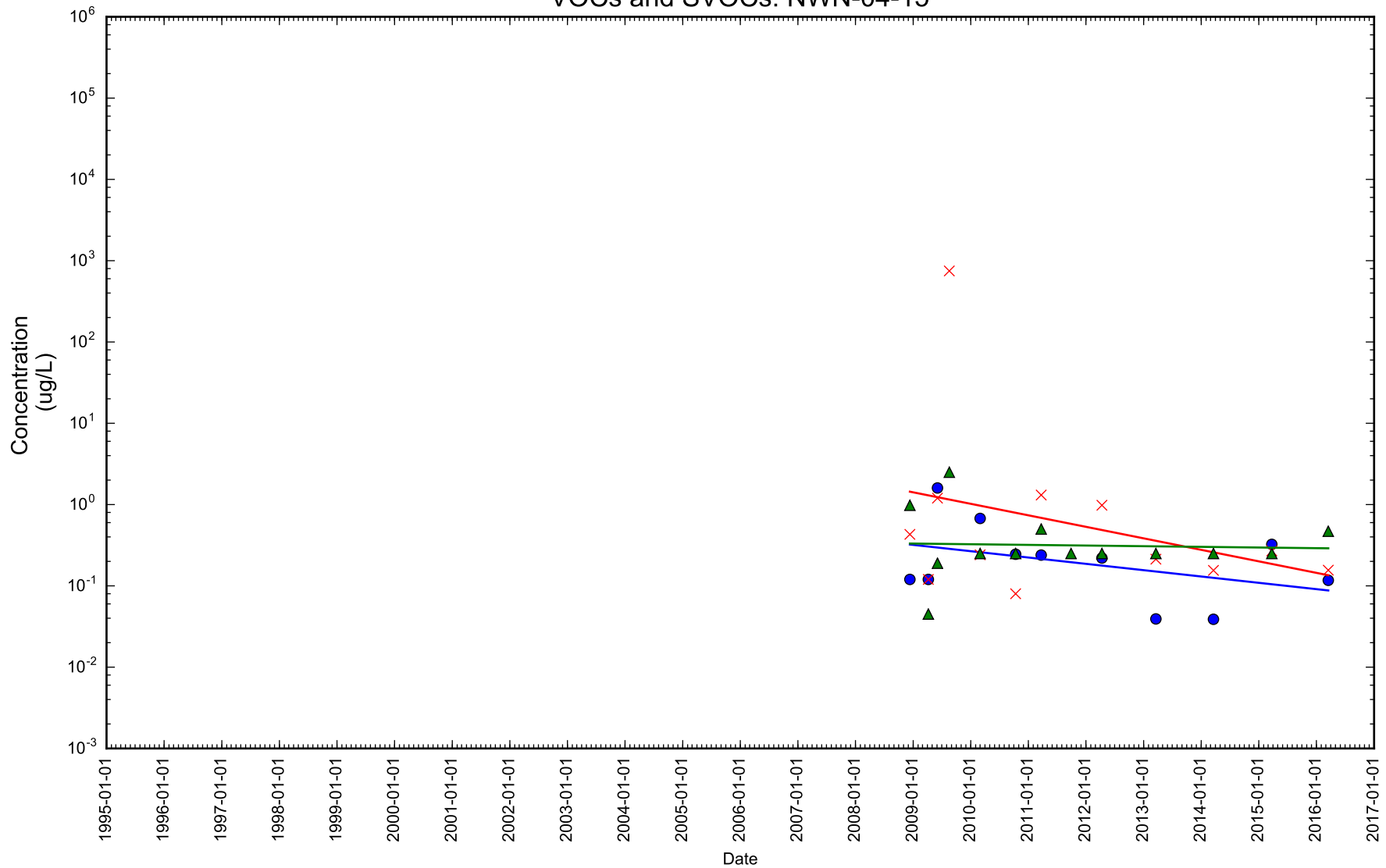


Figure 1-50

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-05-20

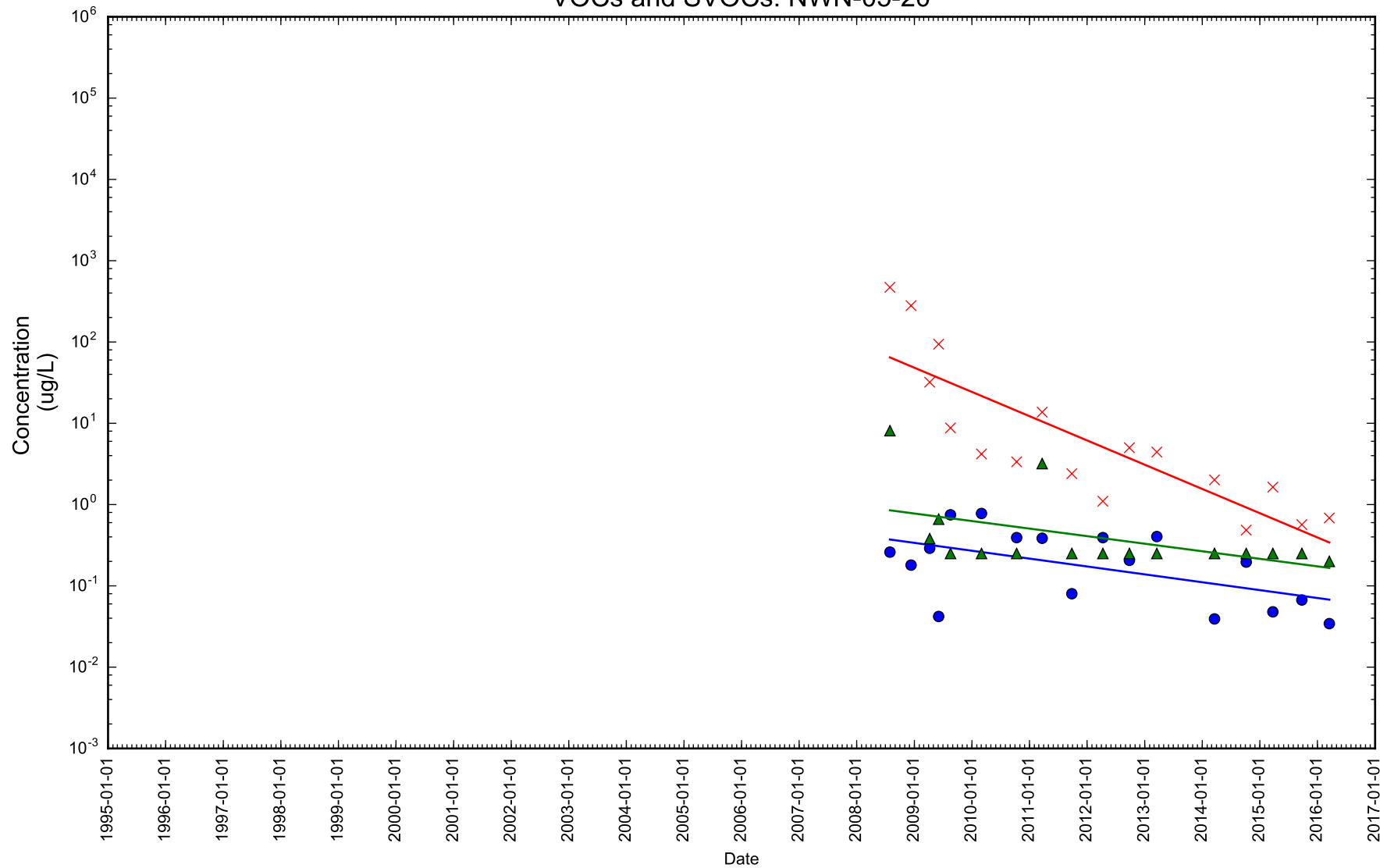


Figure 1-51

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-06-31

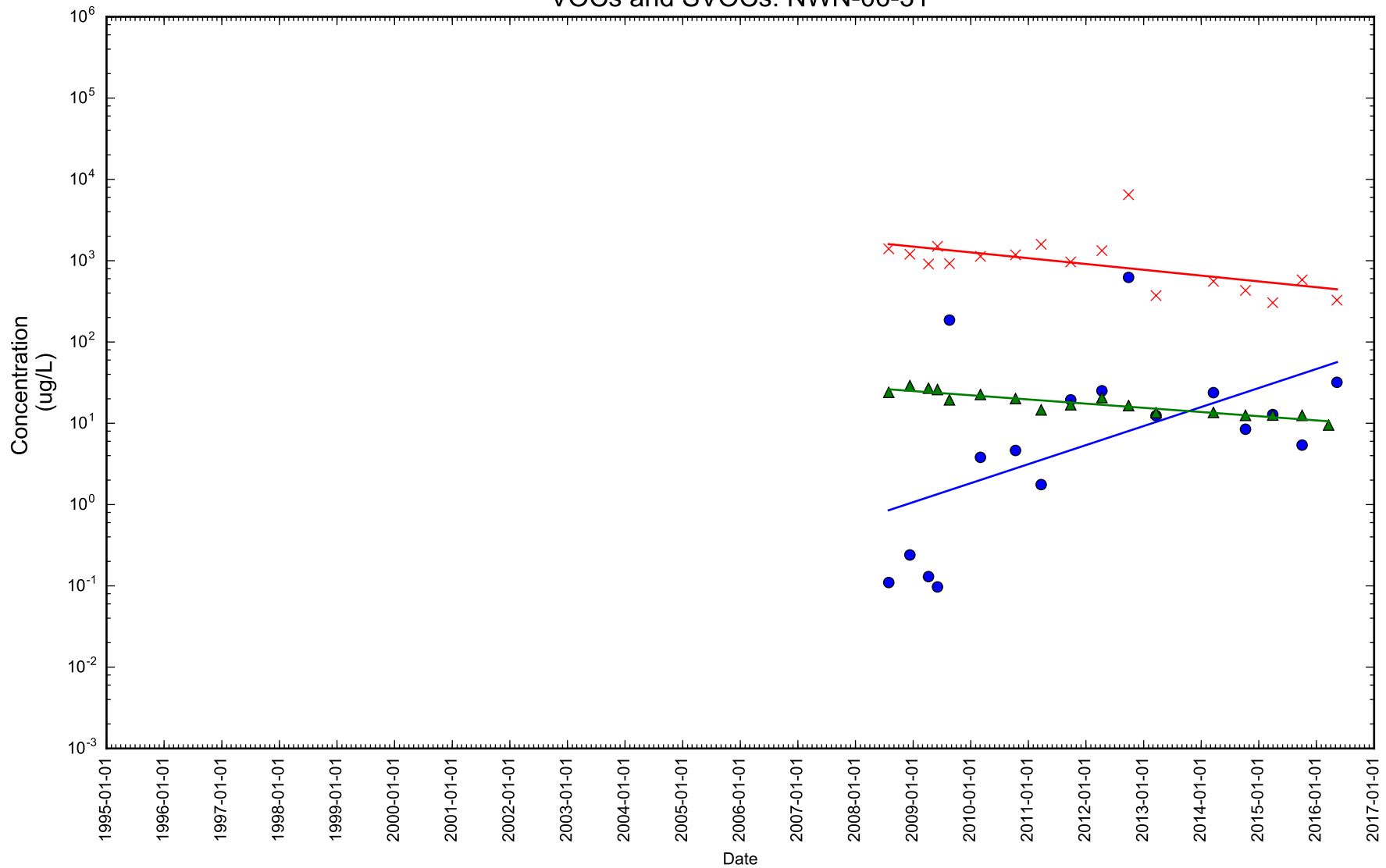


Figure 1-52

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-07-30

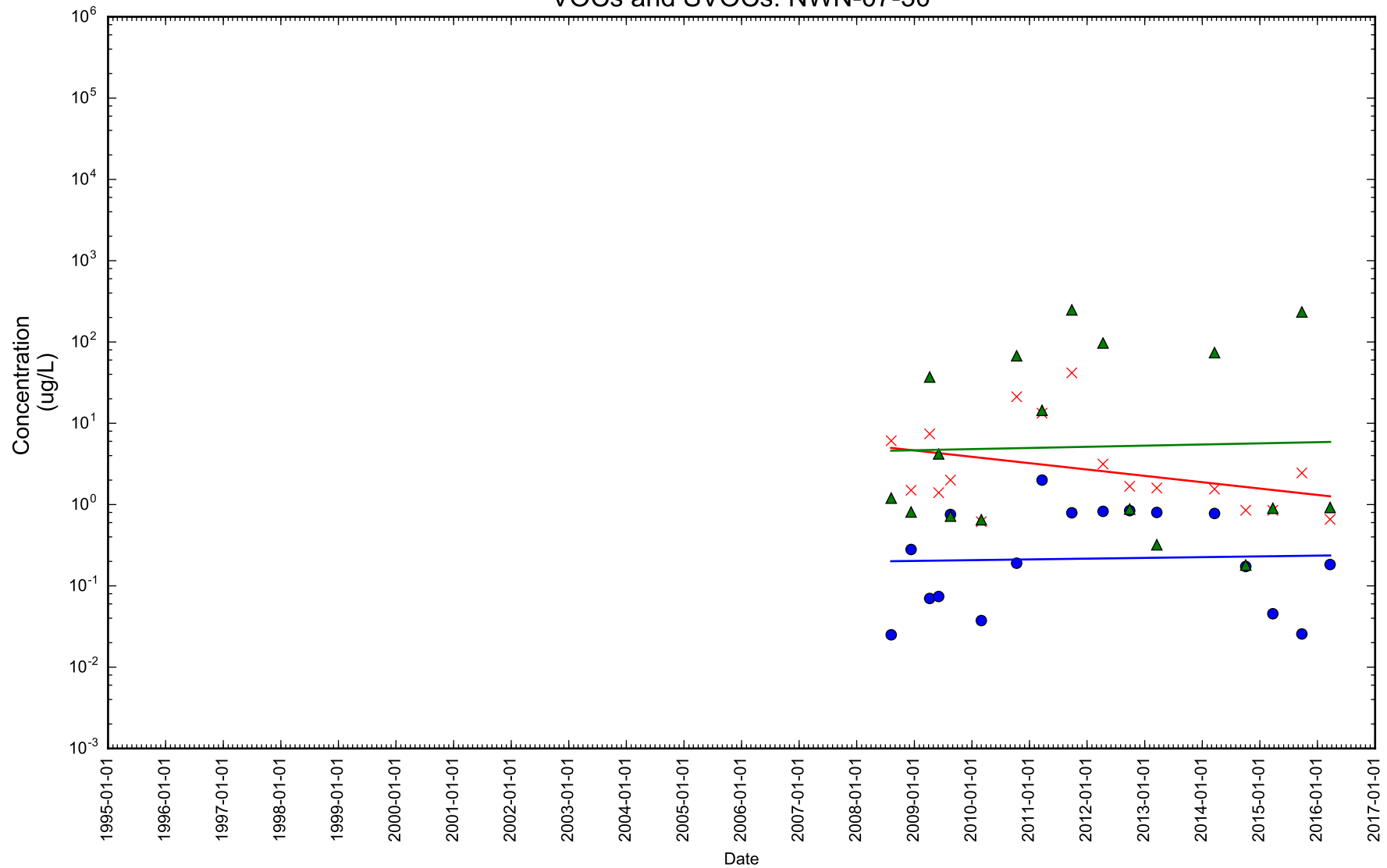


Figure 1-53

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-08-30

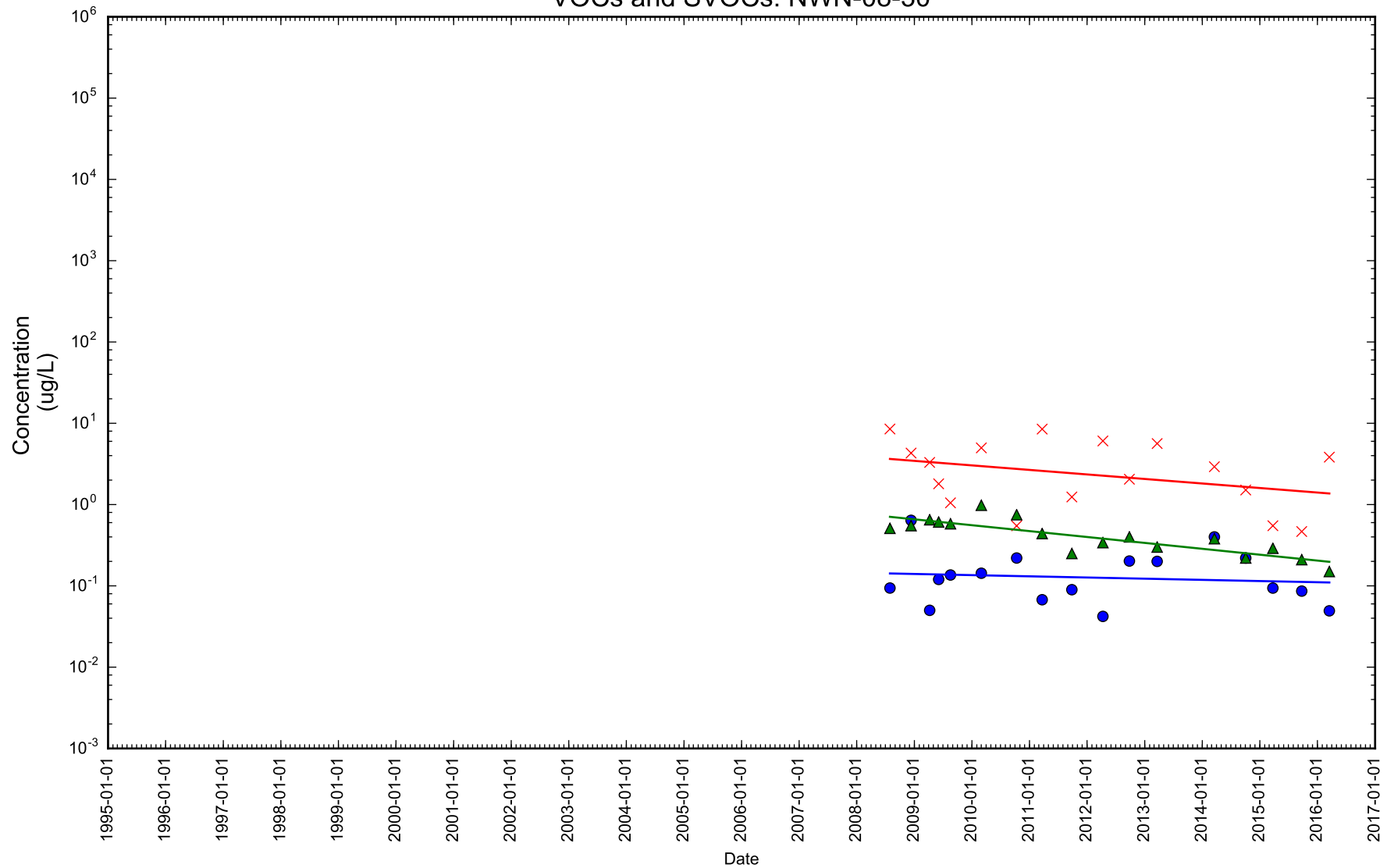


Figure 1-54

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-09-31

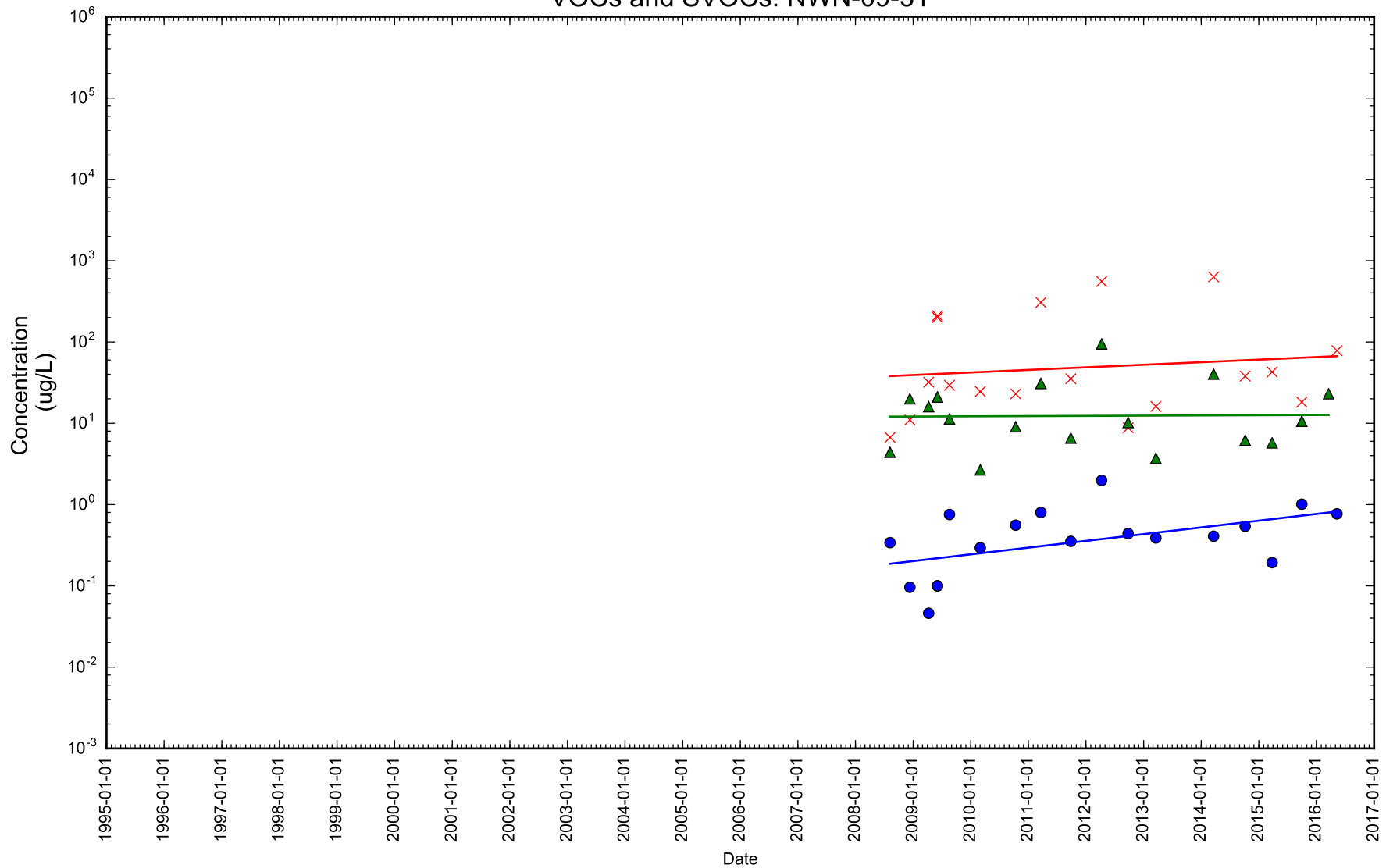


Figure 1-55

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-10-26

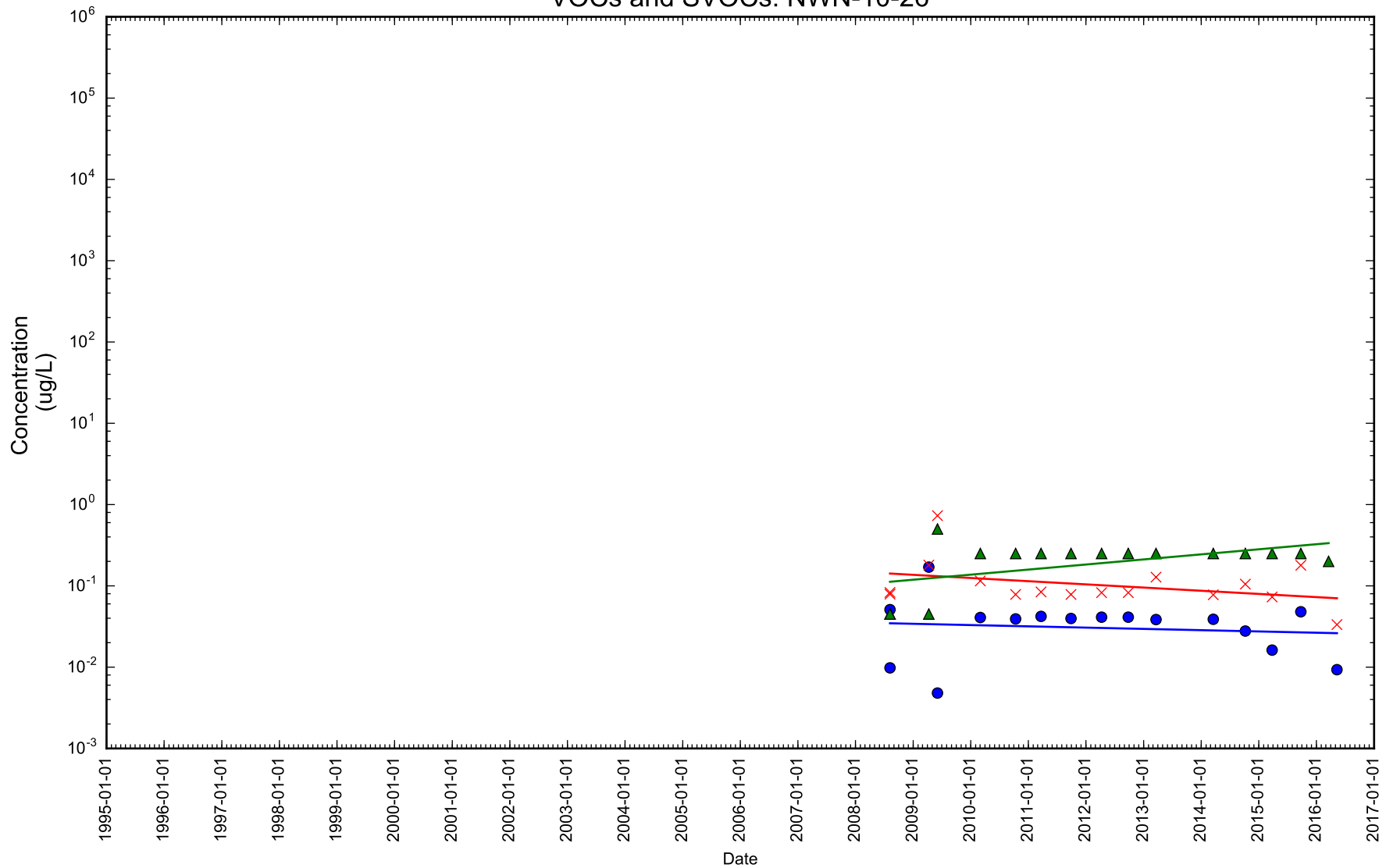


Figure 1-56

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-11-24

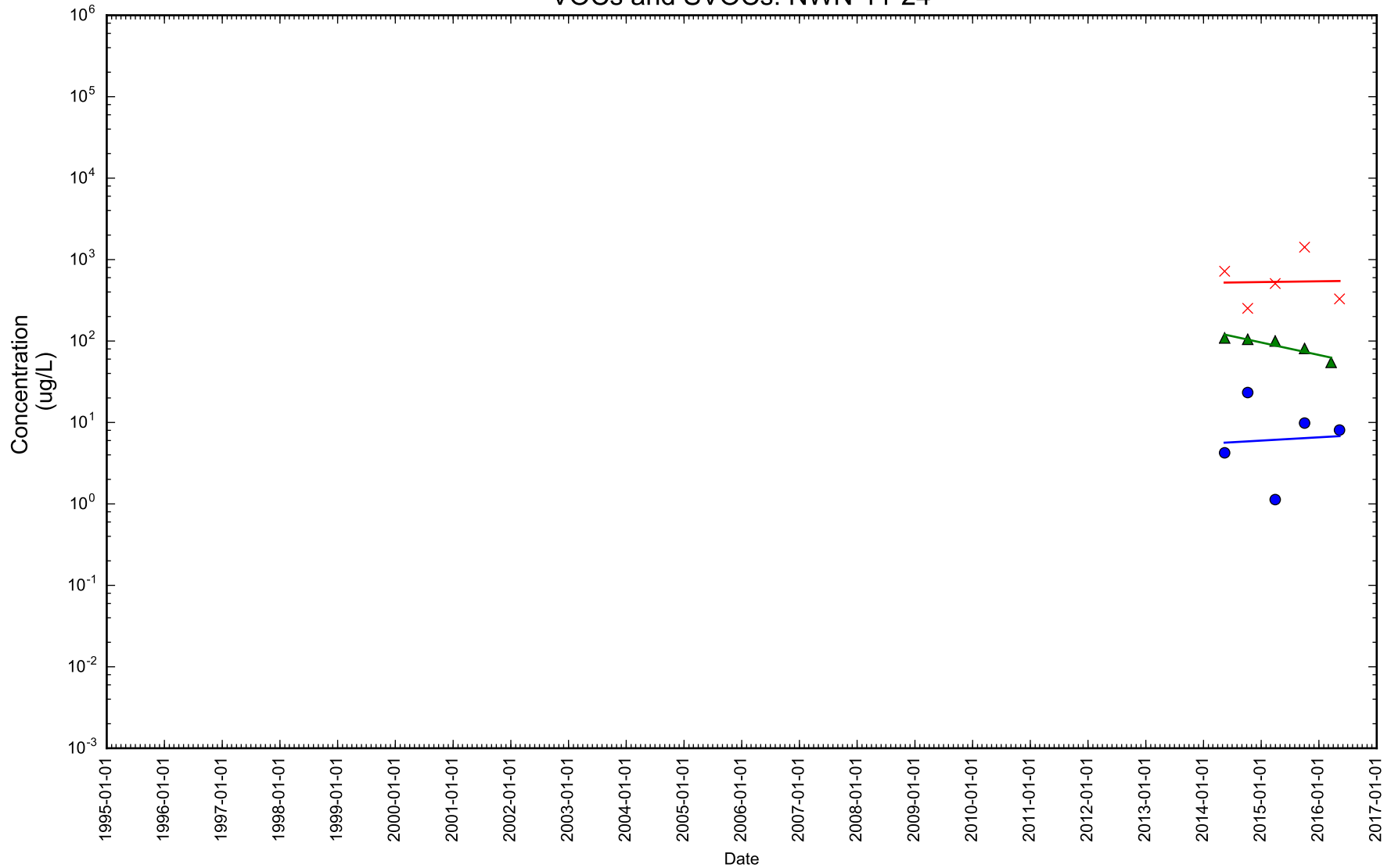


Figure 1-57

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-12-20

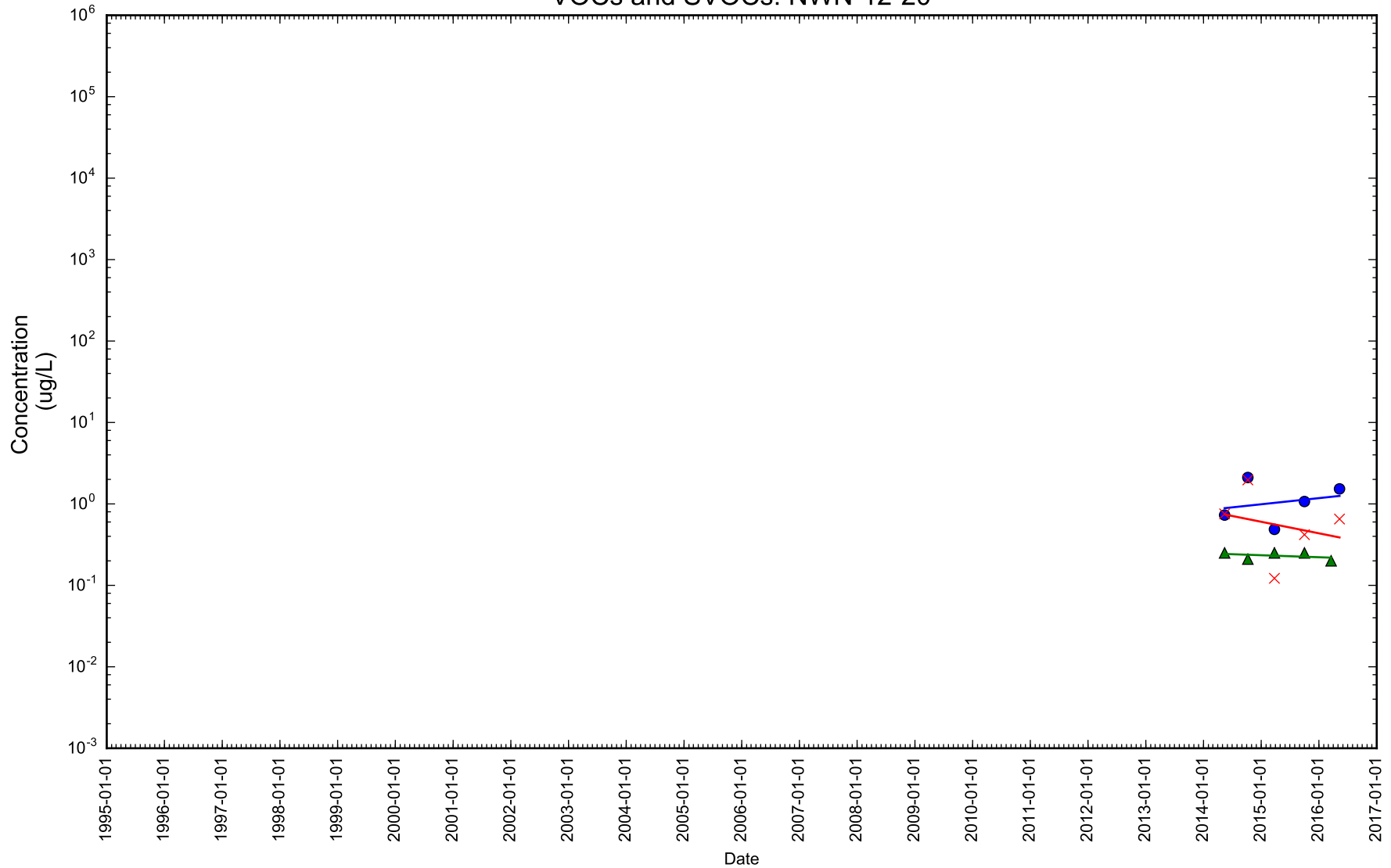


Figure 1-58

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-13-106

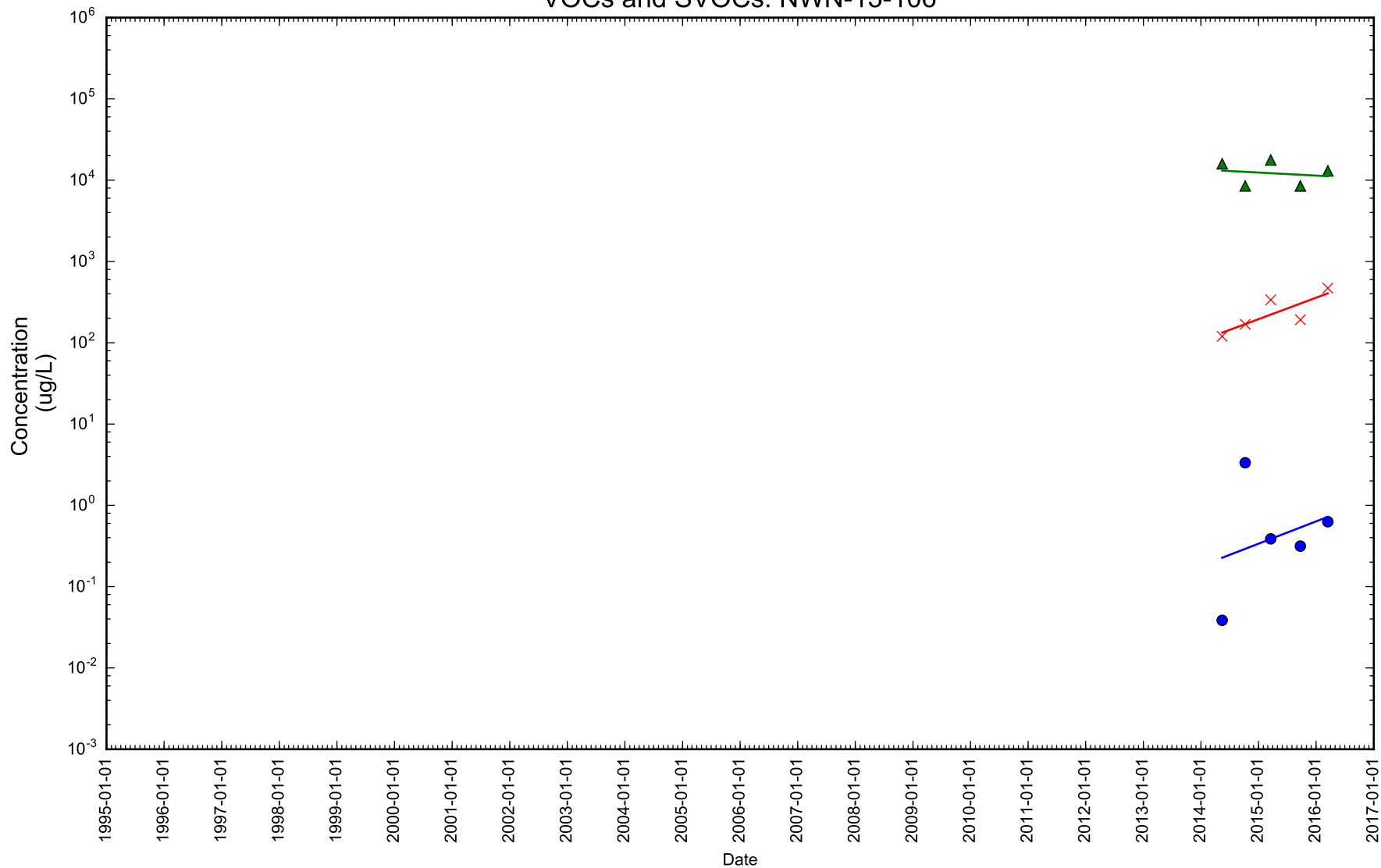


Figure 1-59

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-13-23

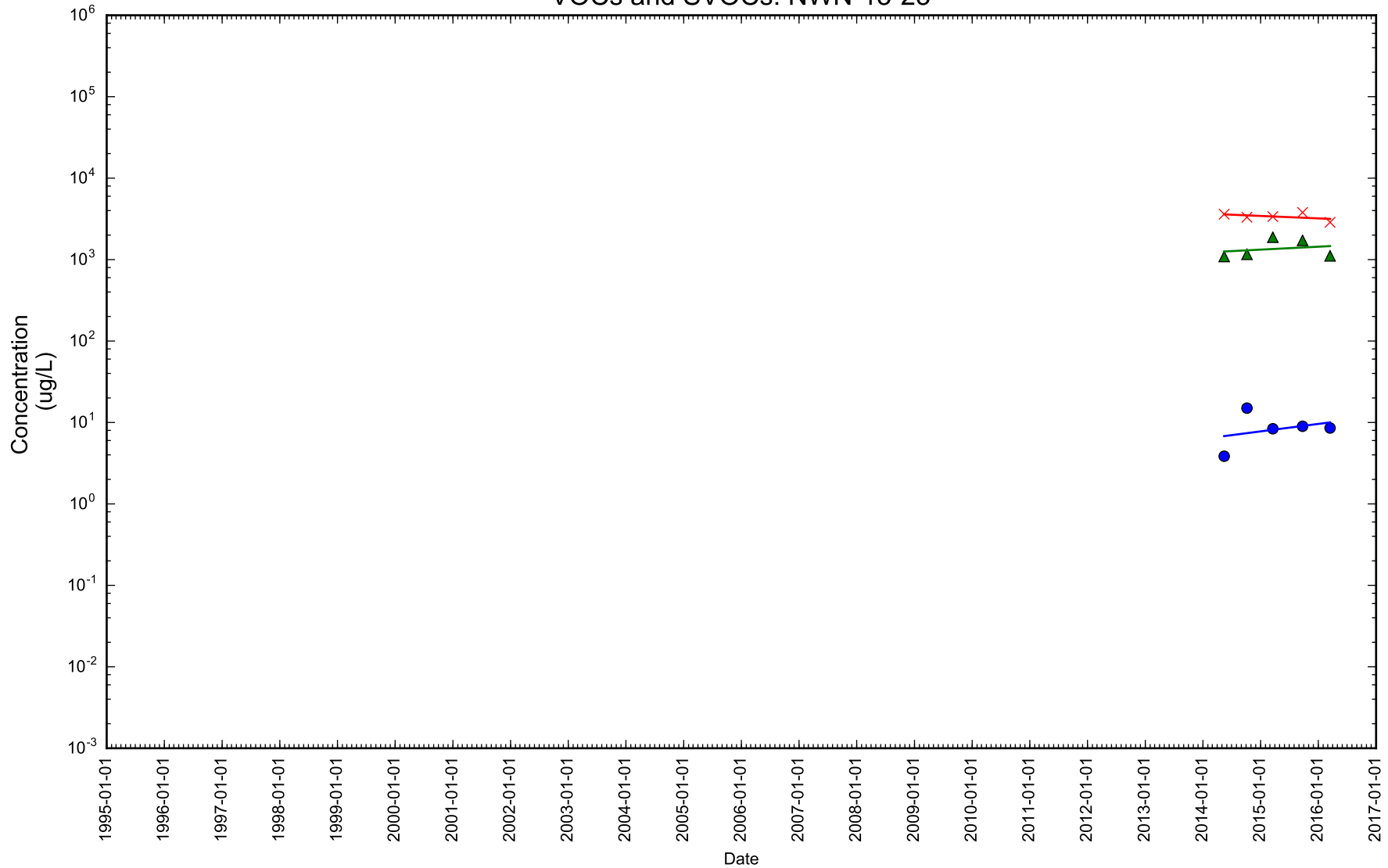


Figure 1-60

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: NWN-13-73

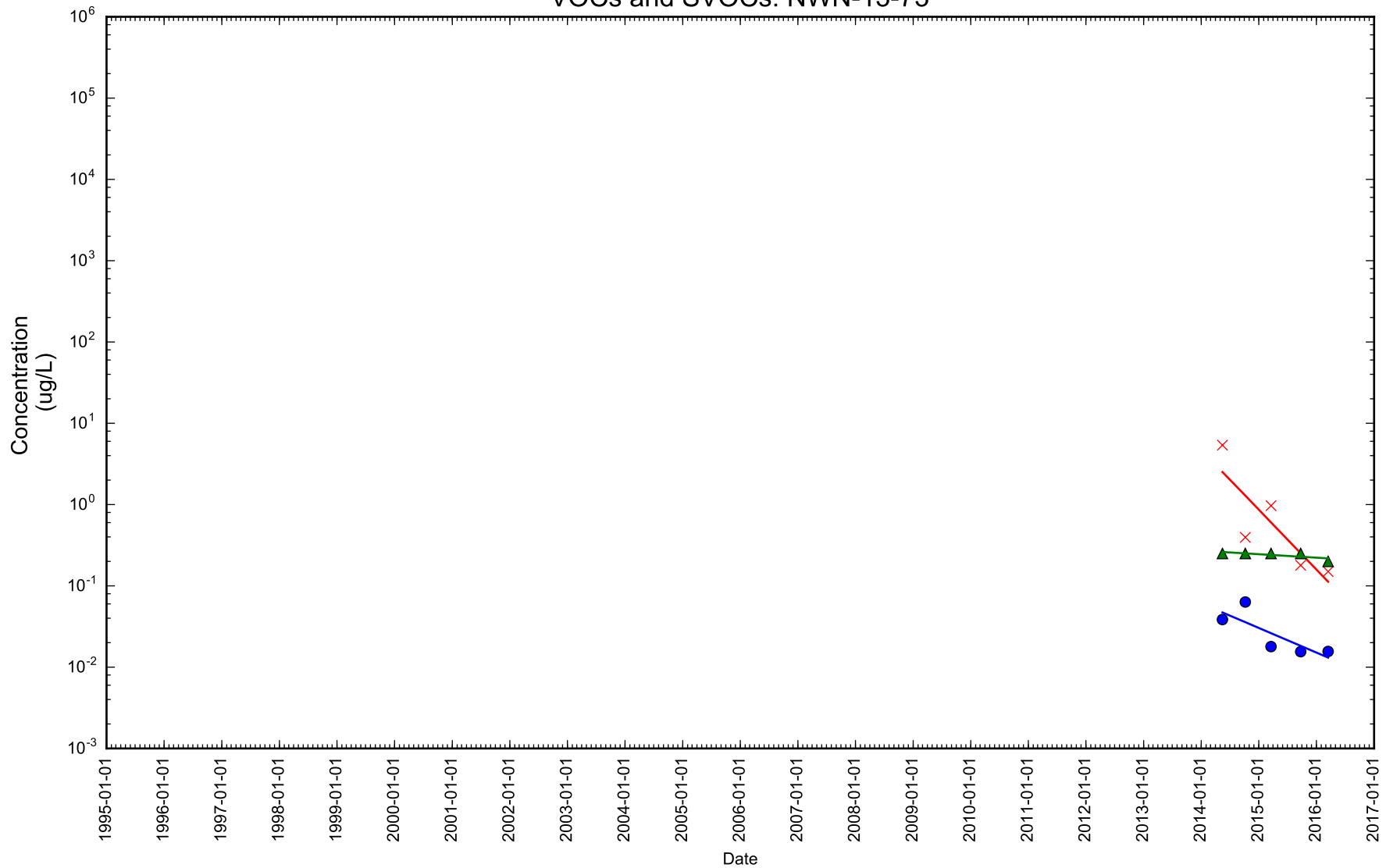


Figure 1-61

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: OW-10F

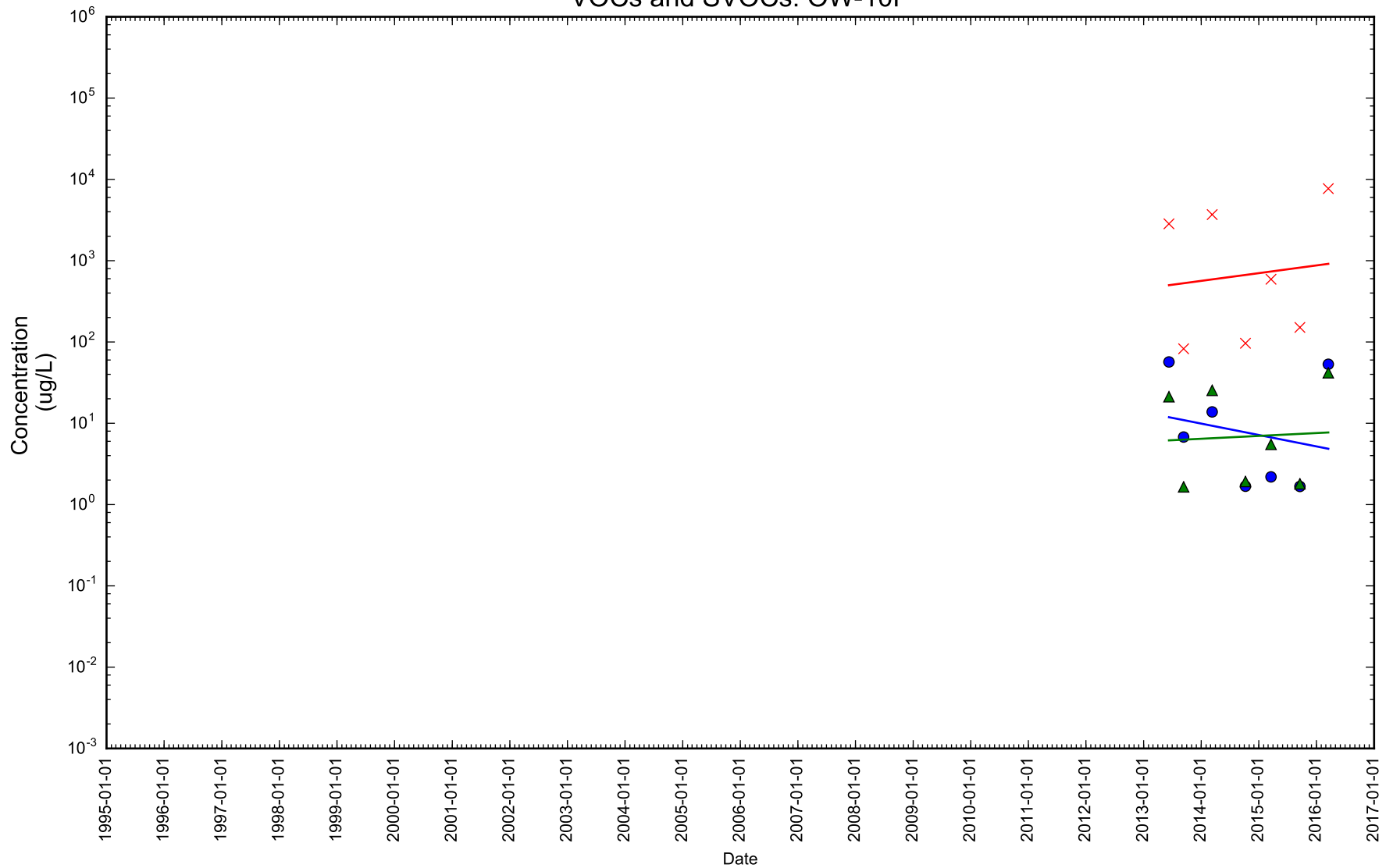


Figure 1-62

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: OW-1F

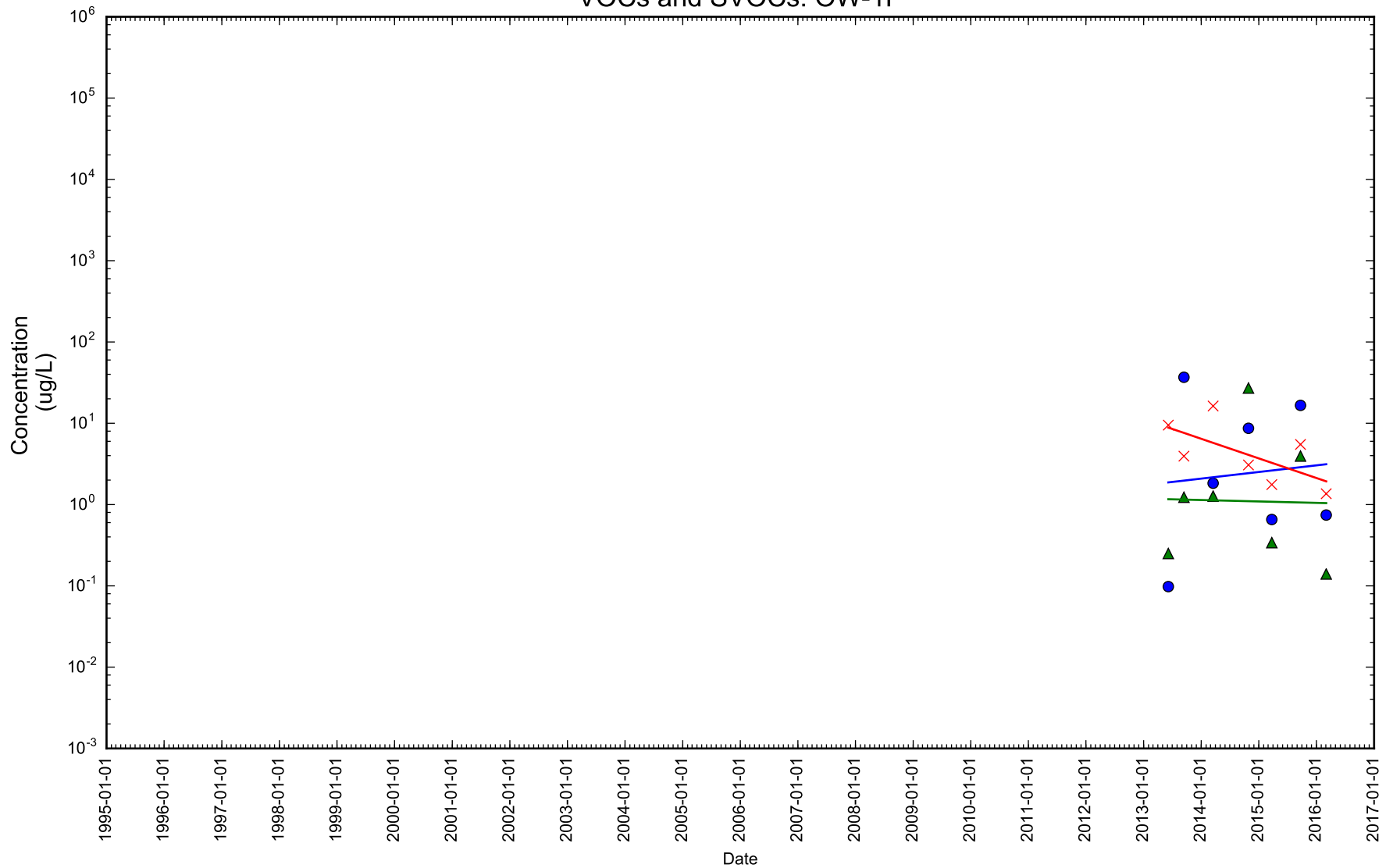


Figure 1-63

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: OW-2F

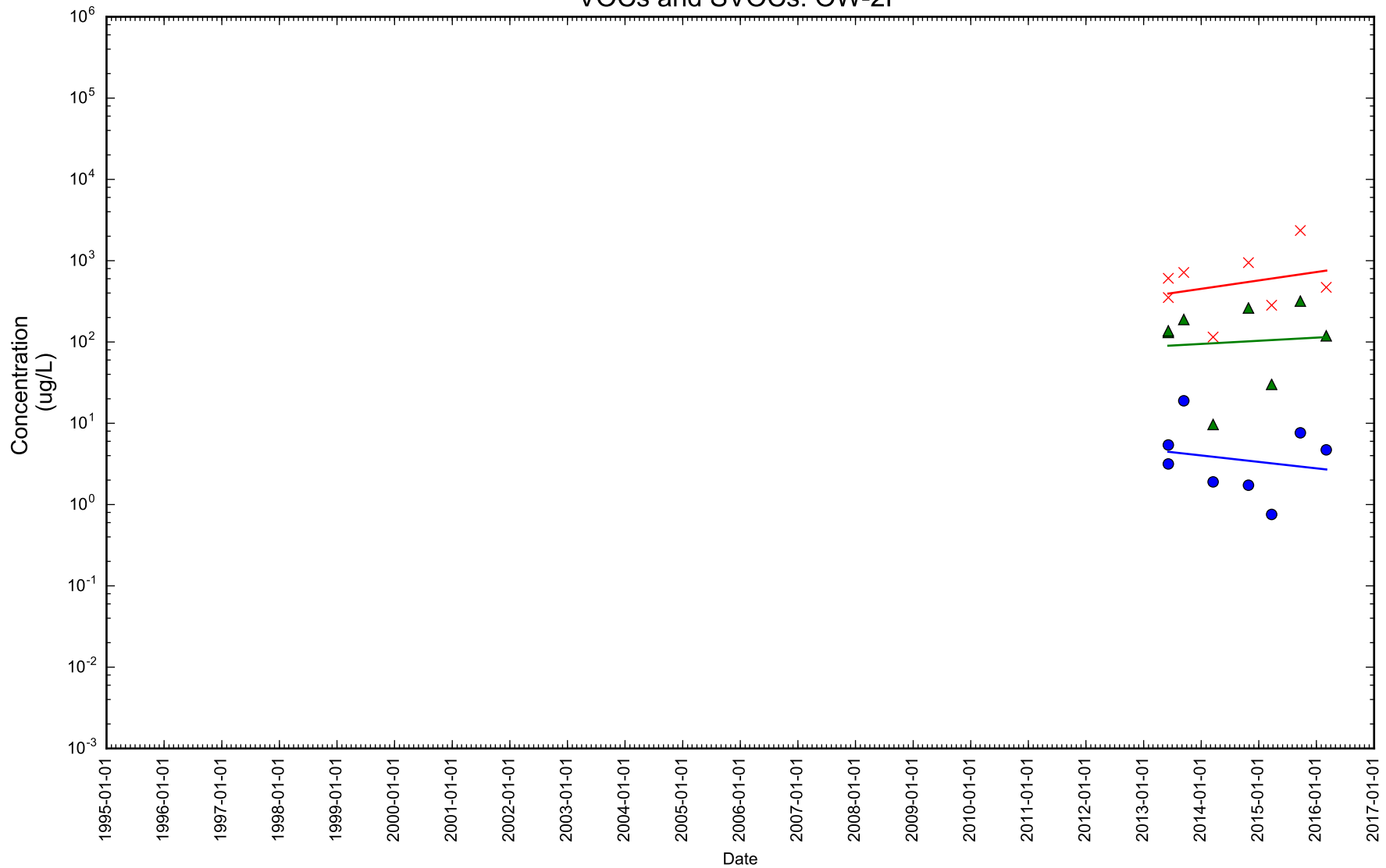


Figure 1-64

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: OW-5F

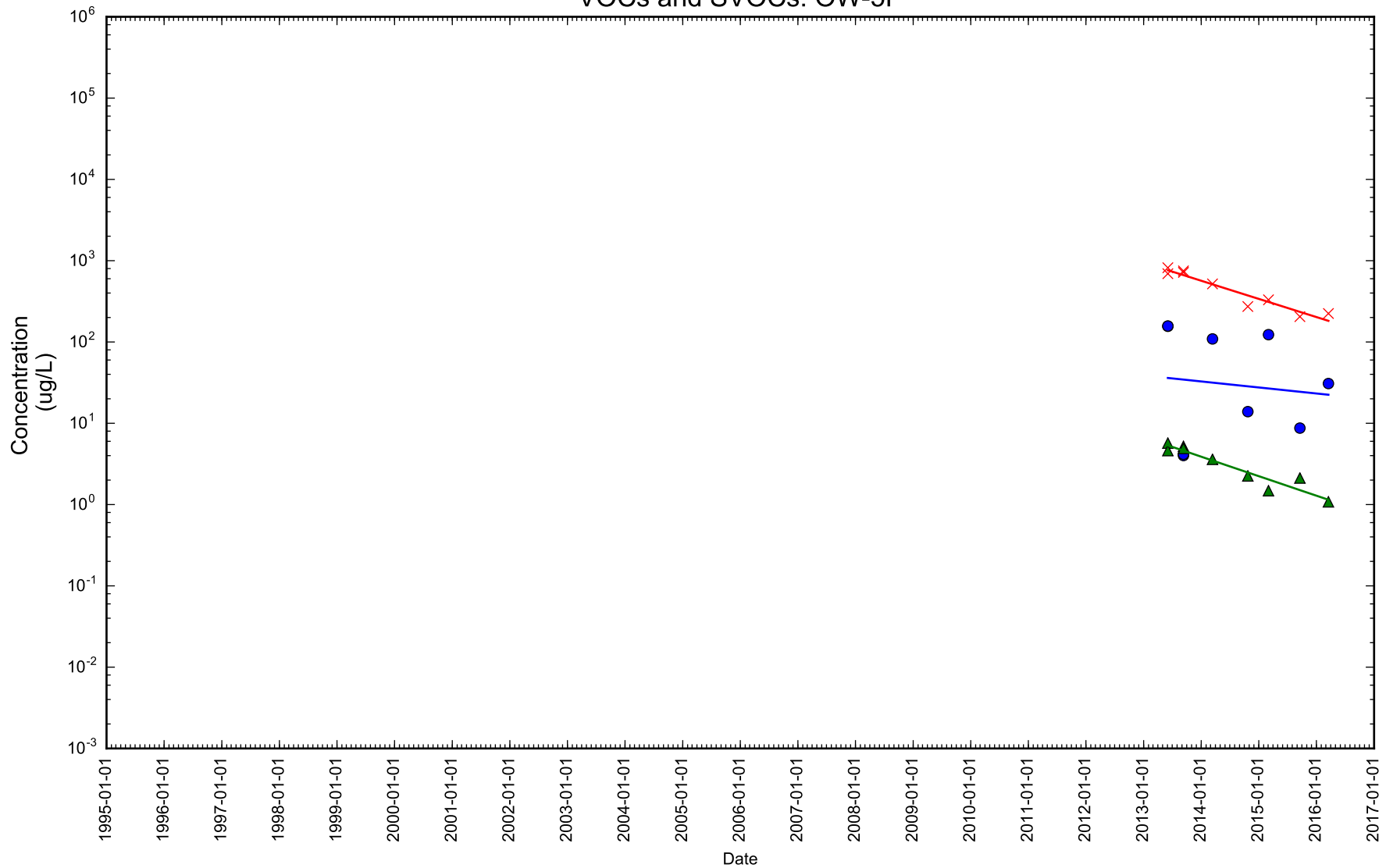


Figure 1-65

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: OW-7-17

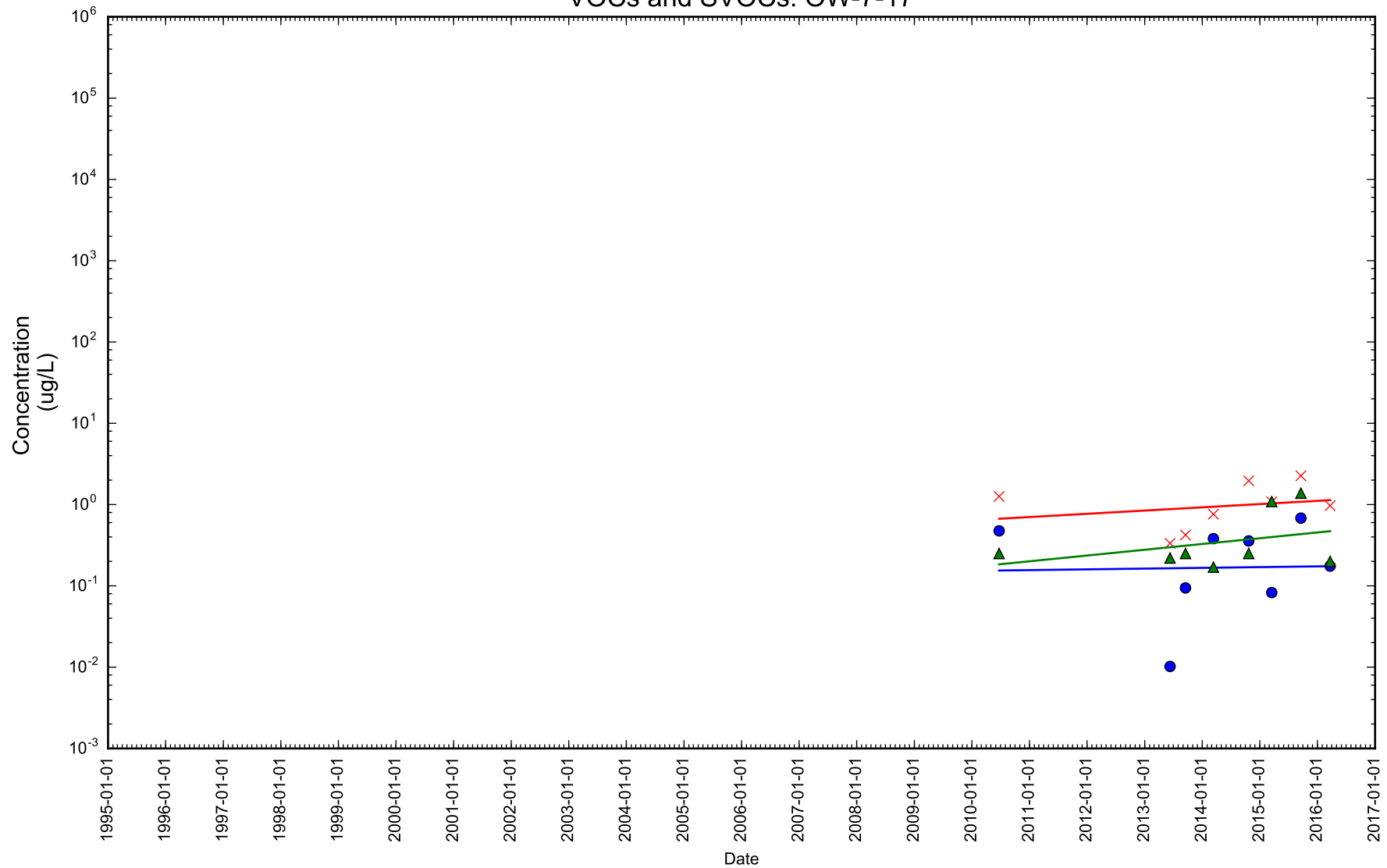


Figure 1-66

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: OW-8-15

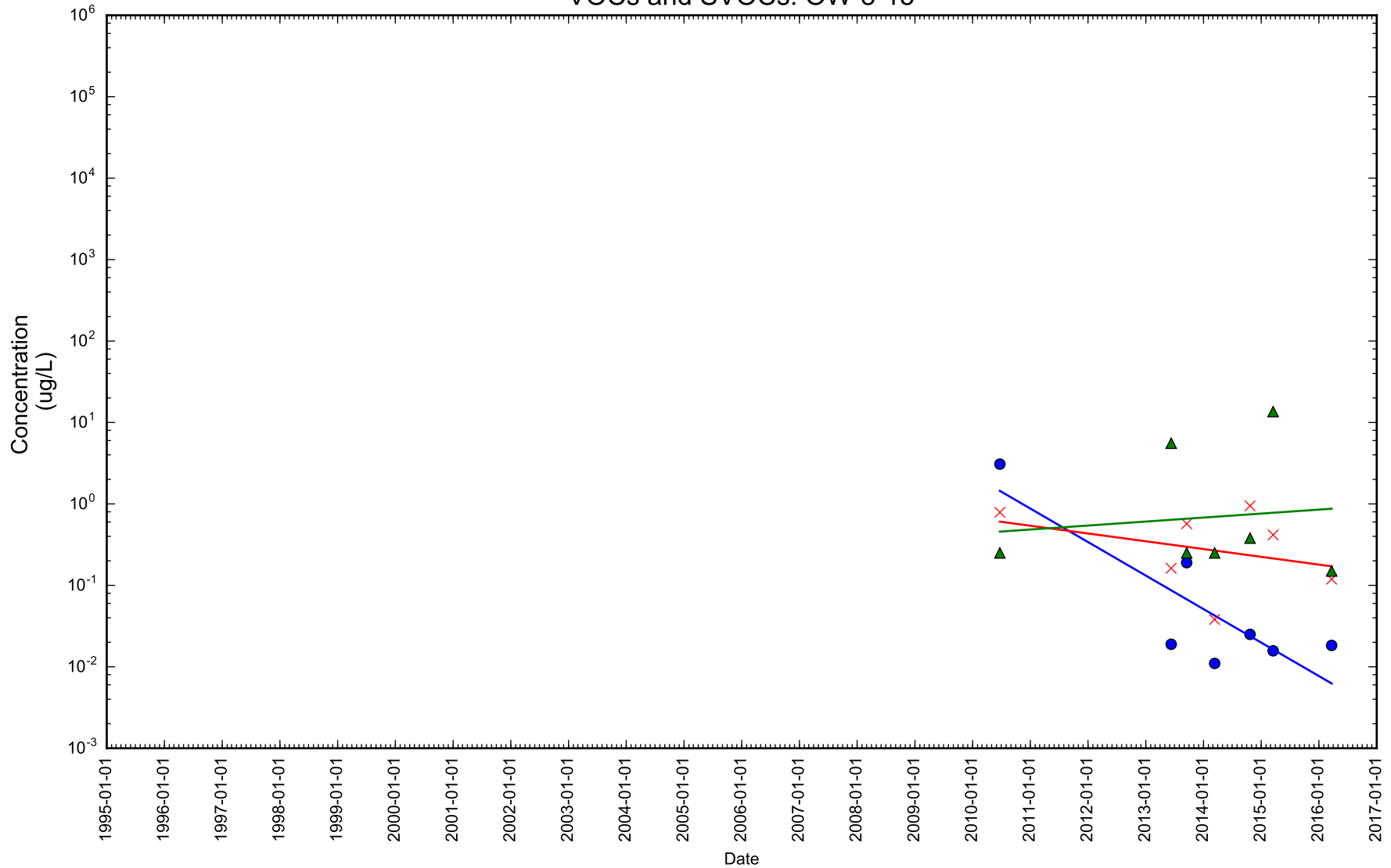


Figure 1-67

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: OW-9-25

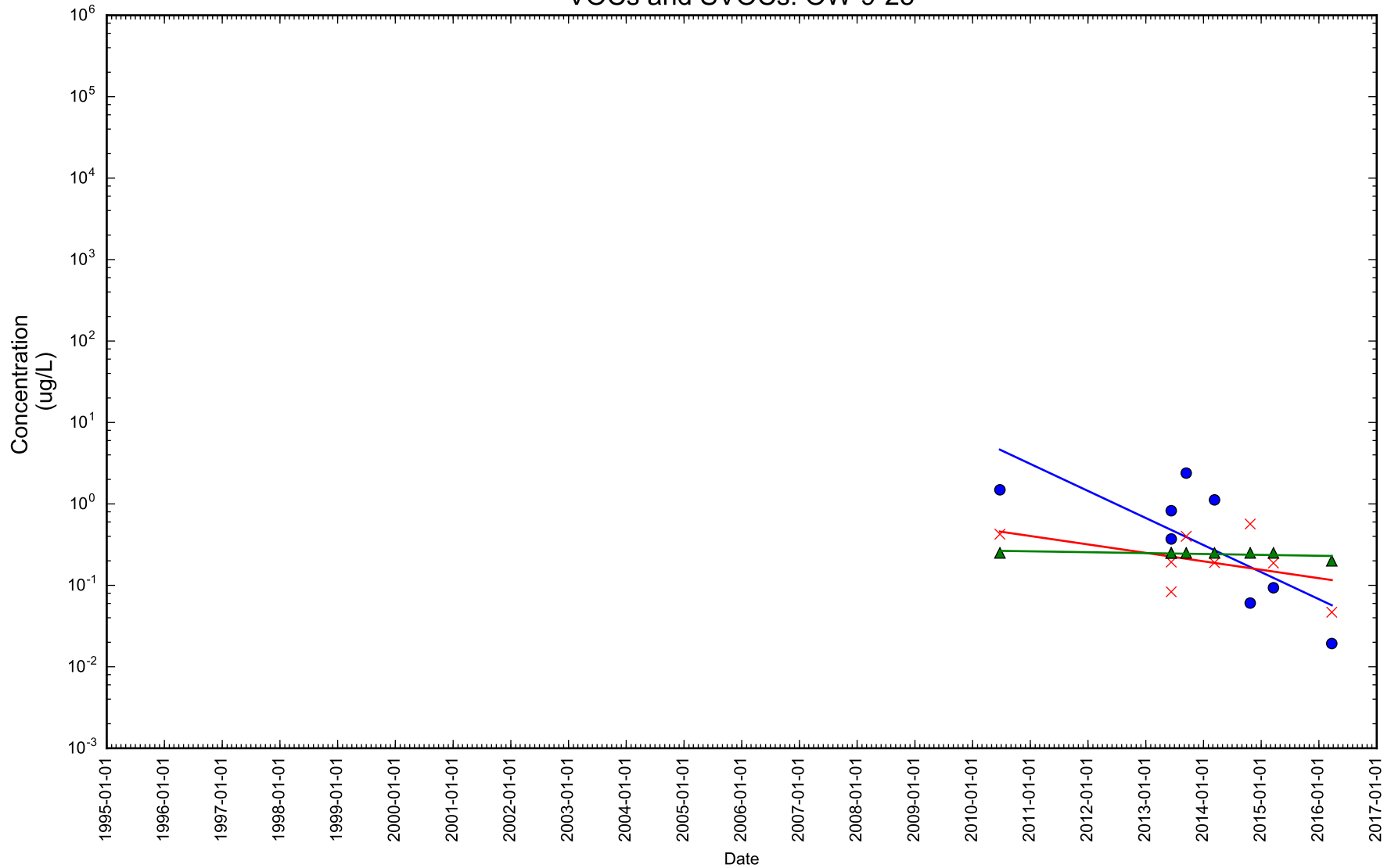


Figure 1-68

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PW-01L

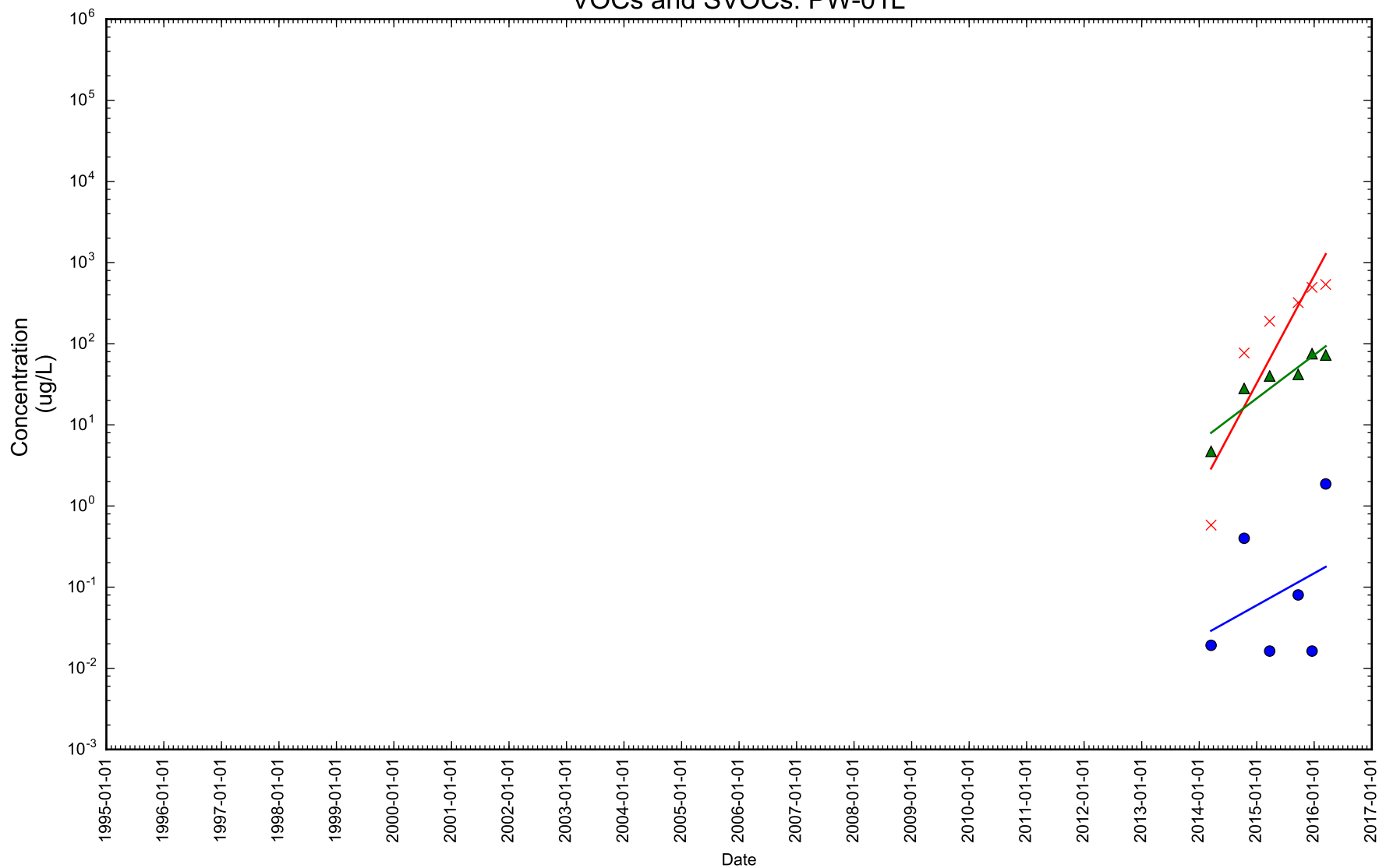


Figure 1-69

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

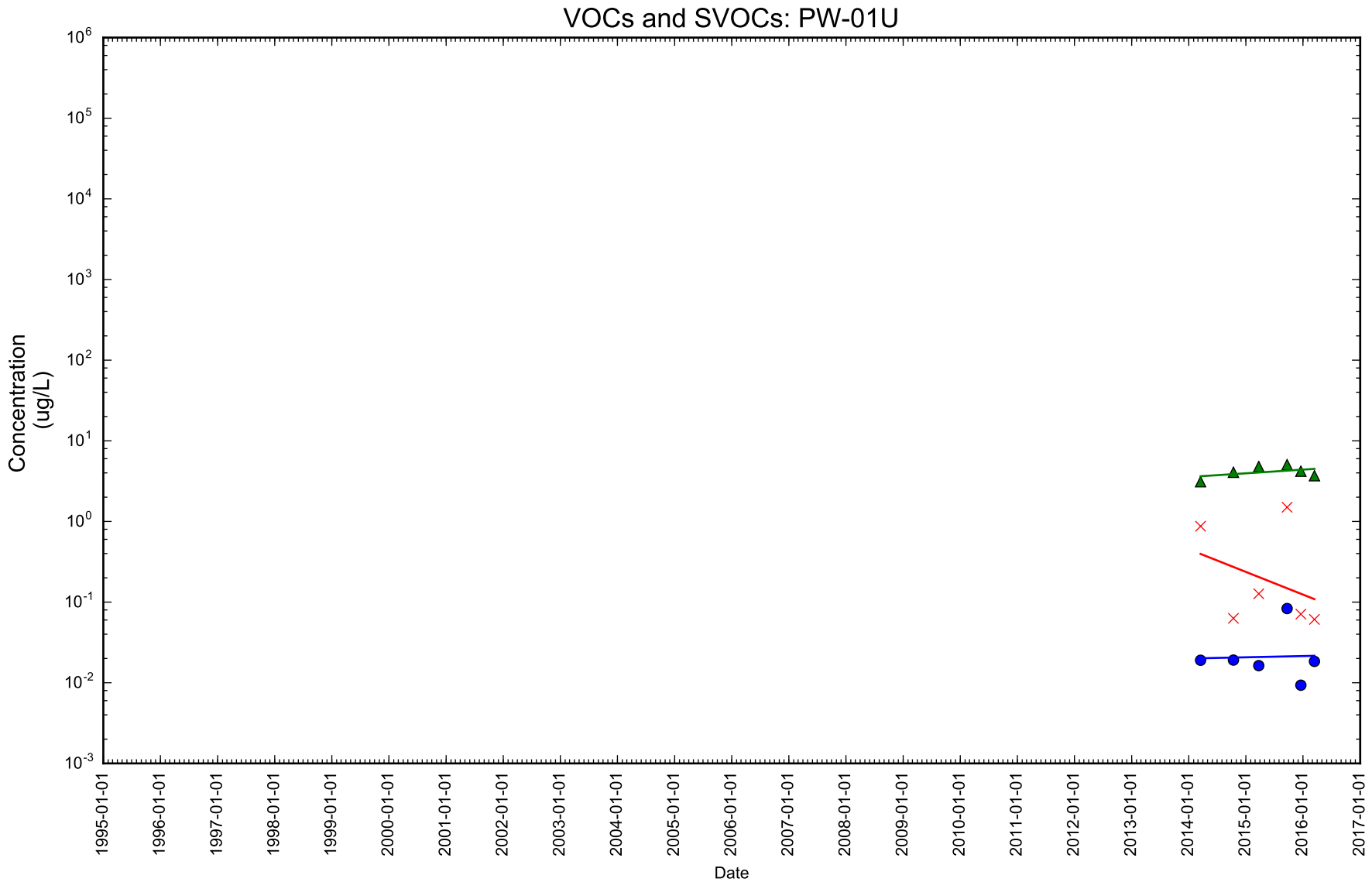


Figure 1-70

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PW-02L

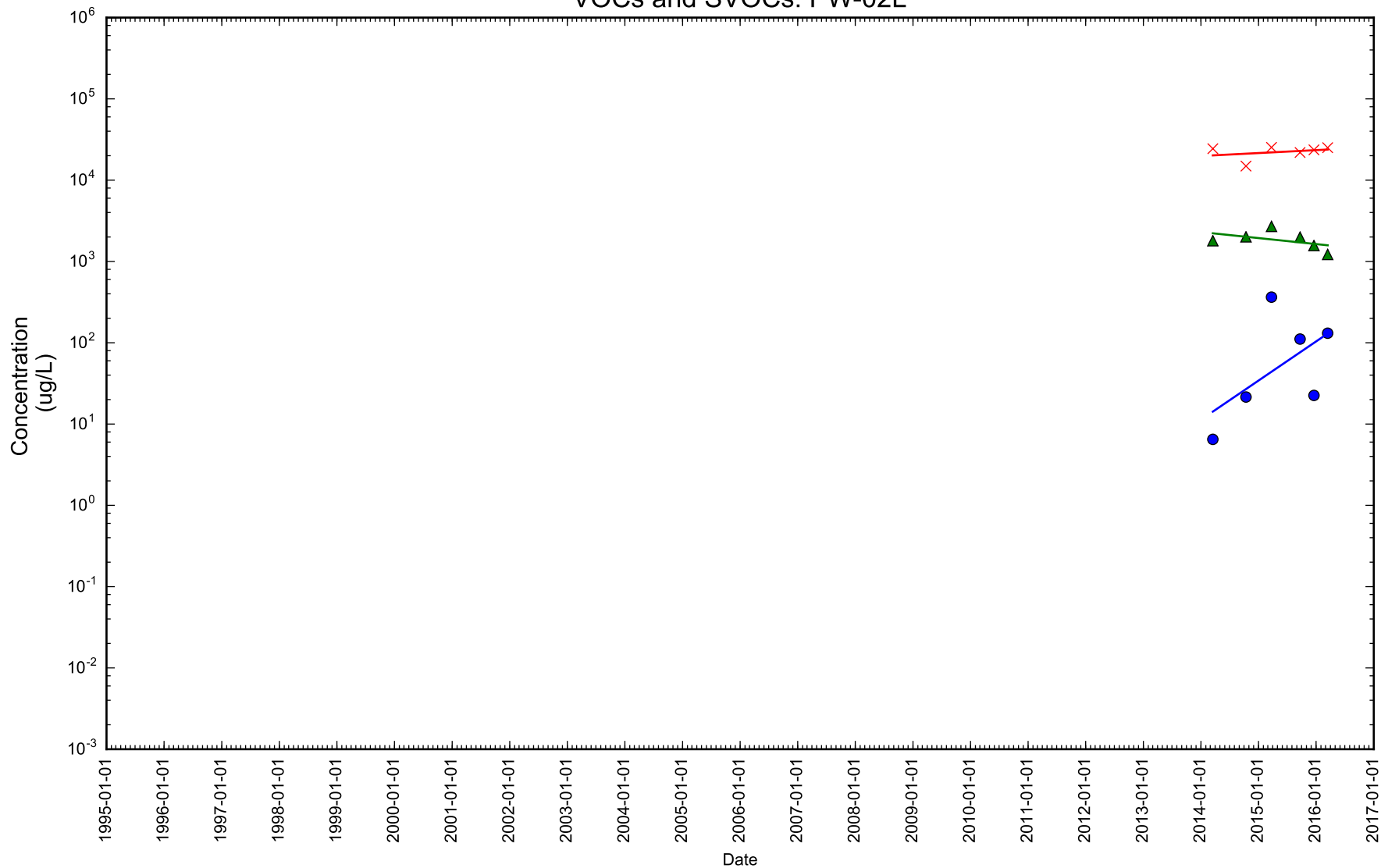


Figure 1-71

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

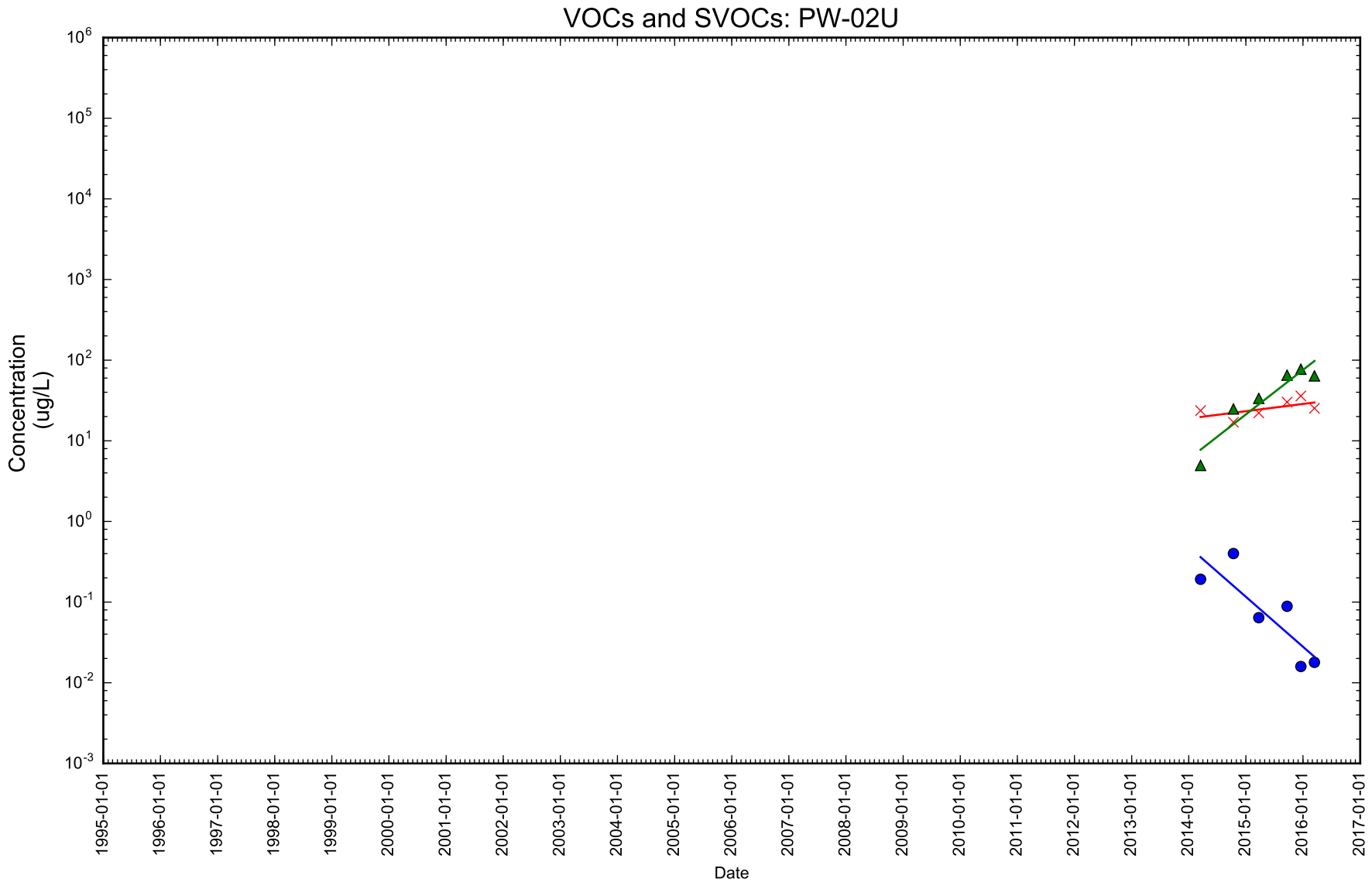


Figure 1-72

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PW-03-118

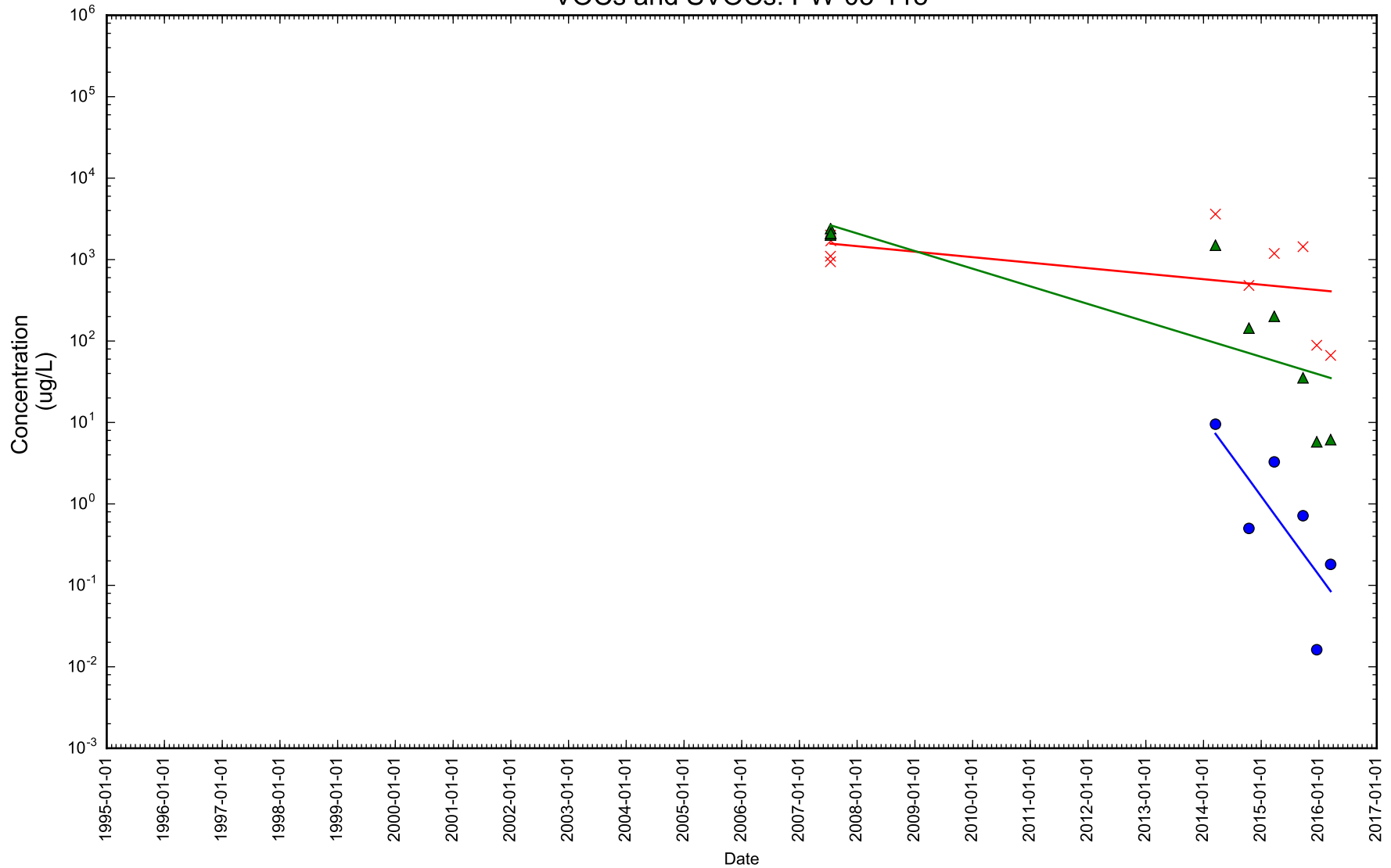


Figure 1-73

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

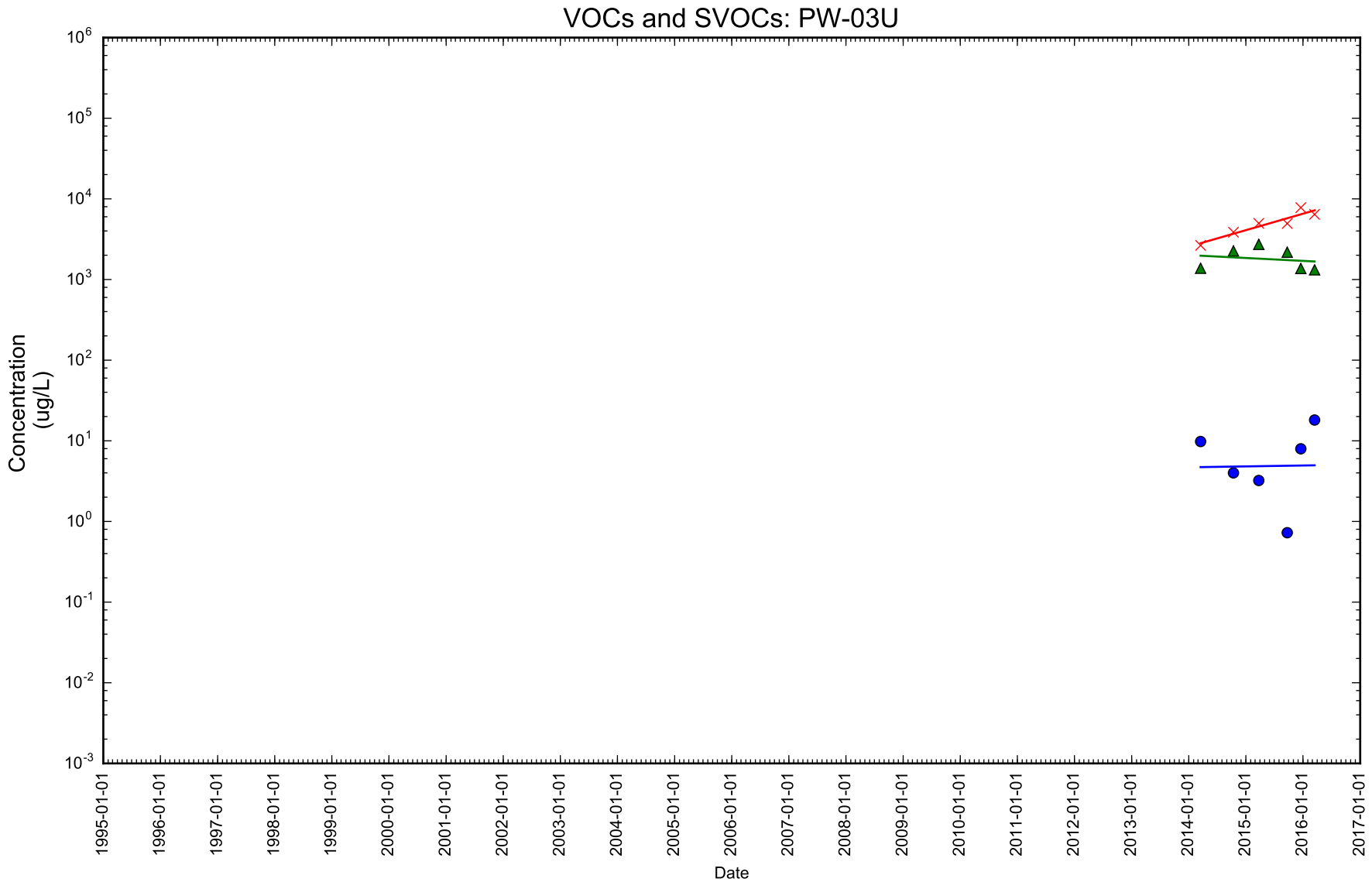


Figure 1-74

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PW-04L

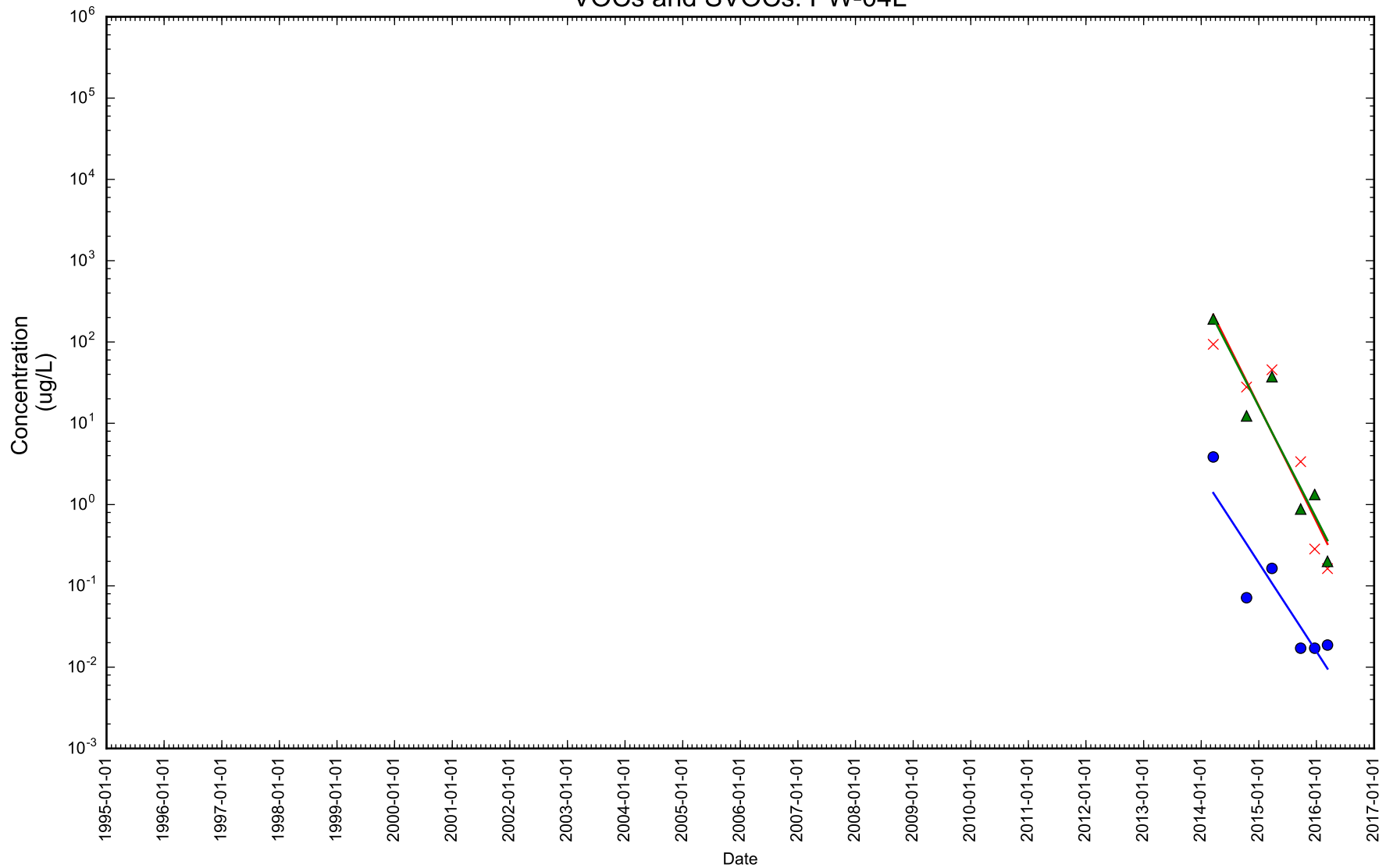


Figure 1-75

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

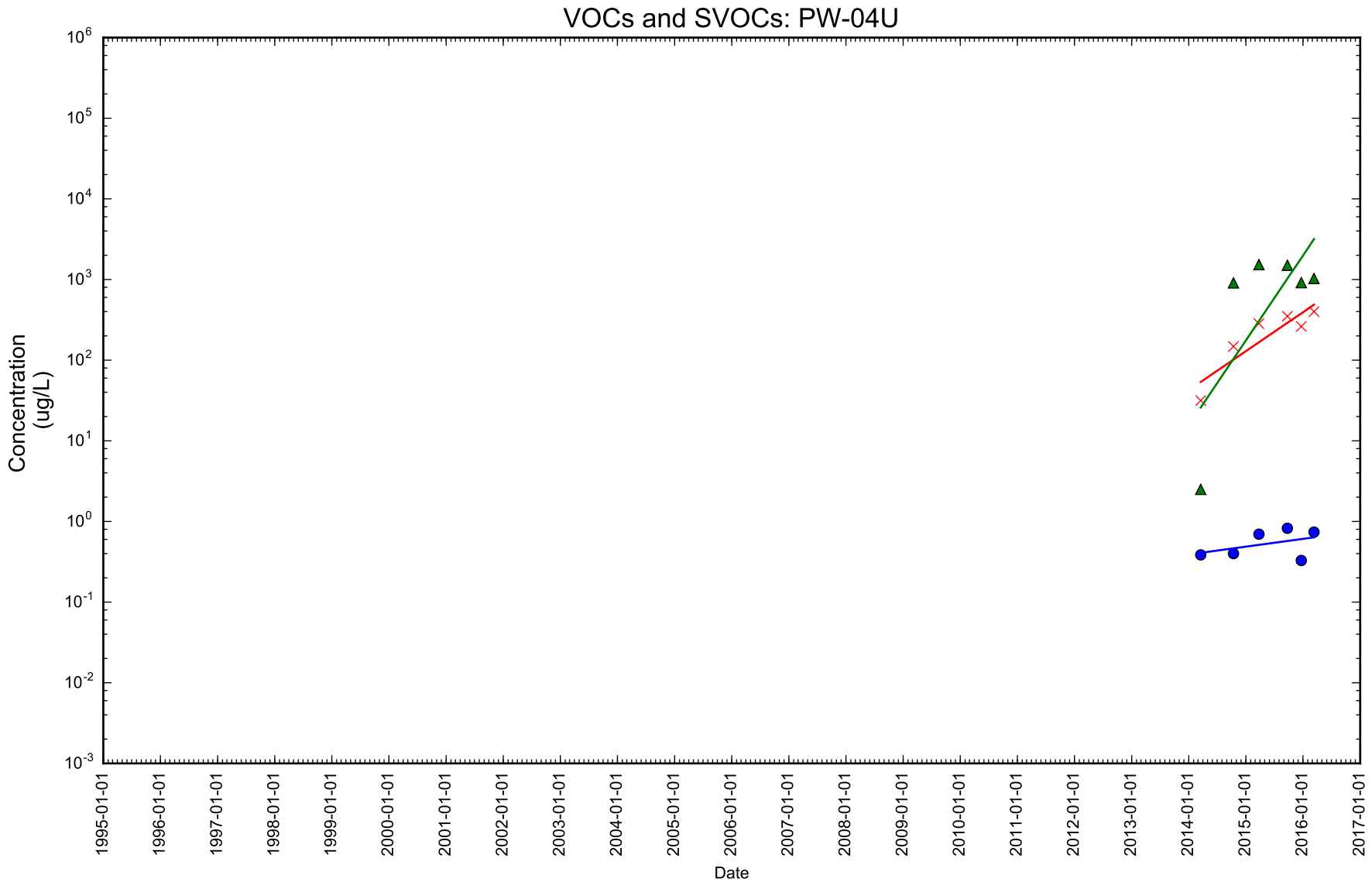


Figure 1-76

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

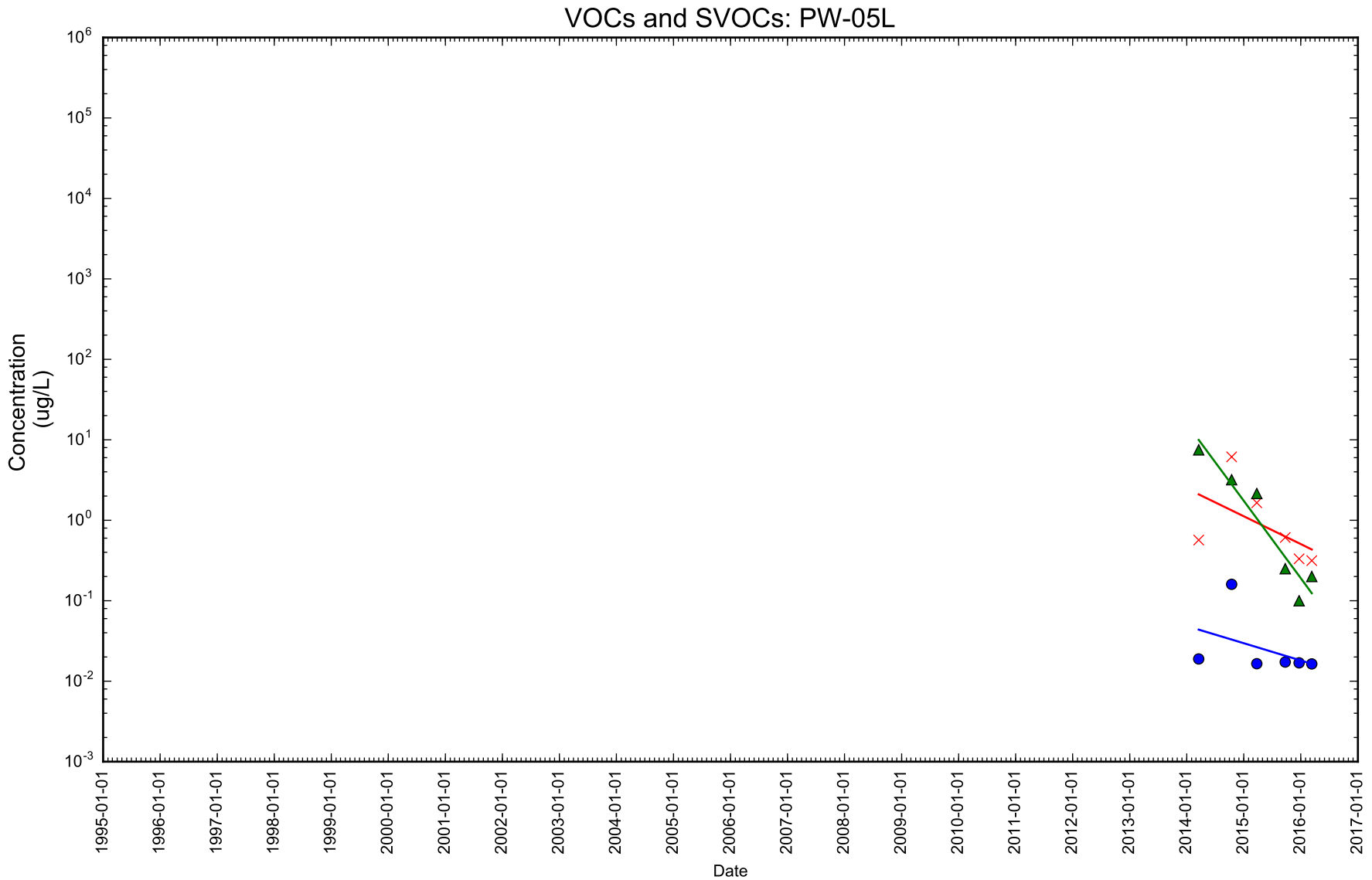


Figure 1-77

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

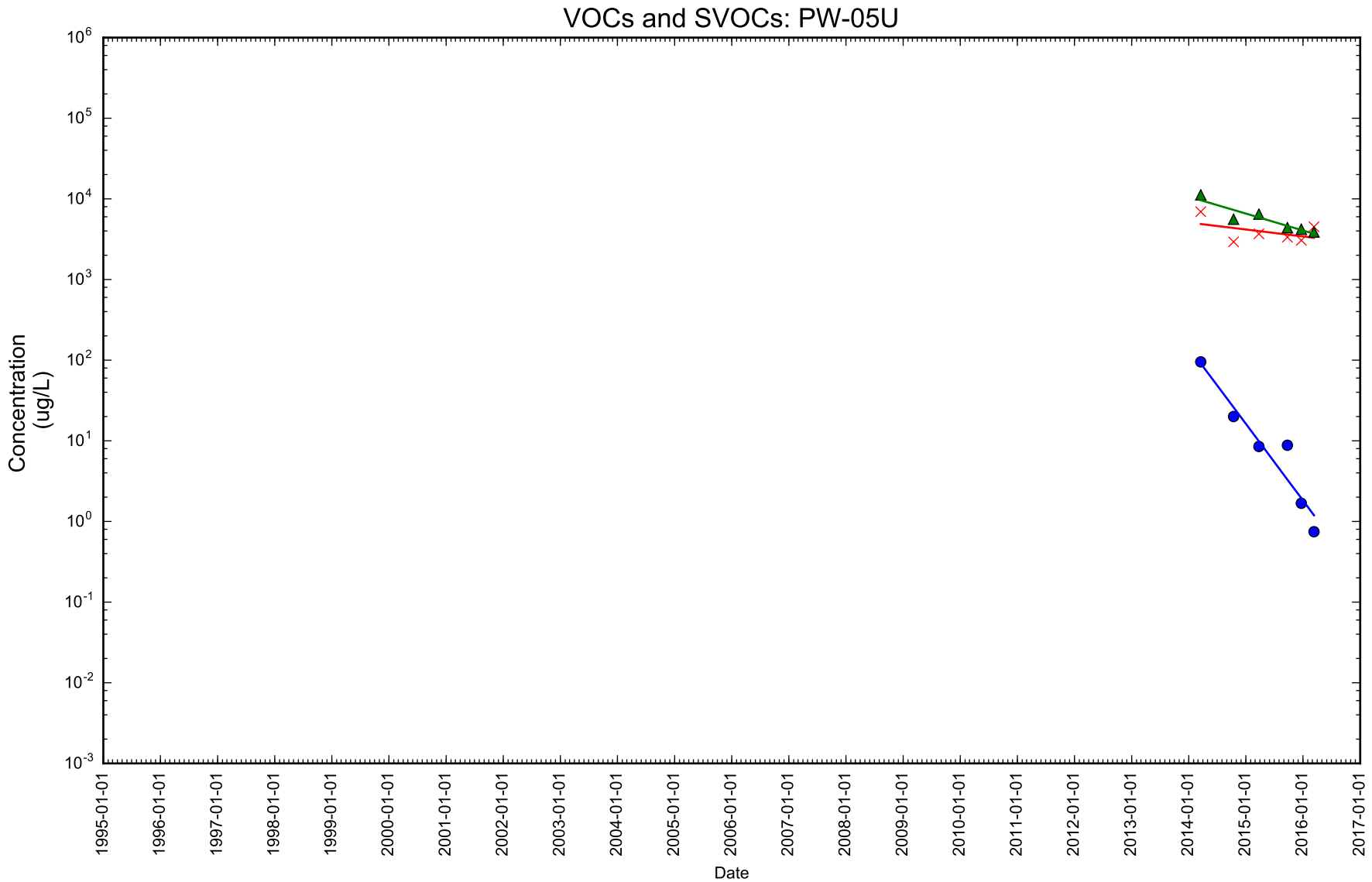


Figure 1-78

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PW-06L

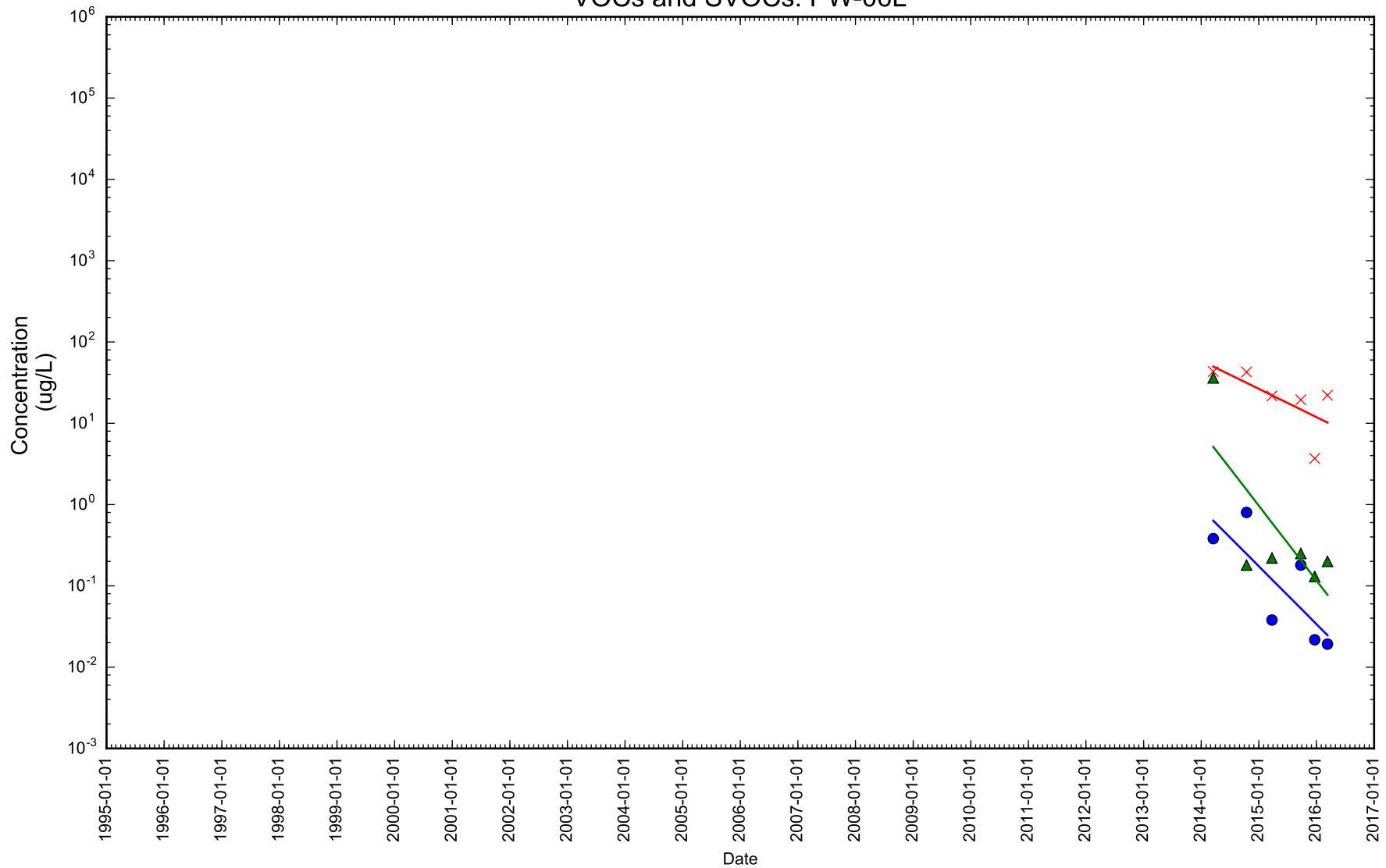


Figure 1-79

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PW-06U

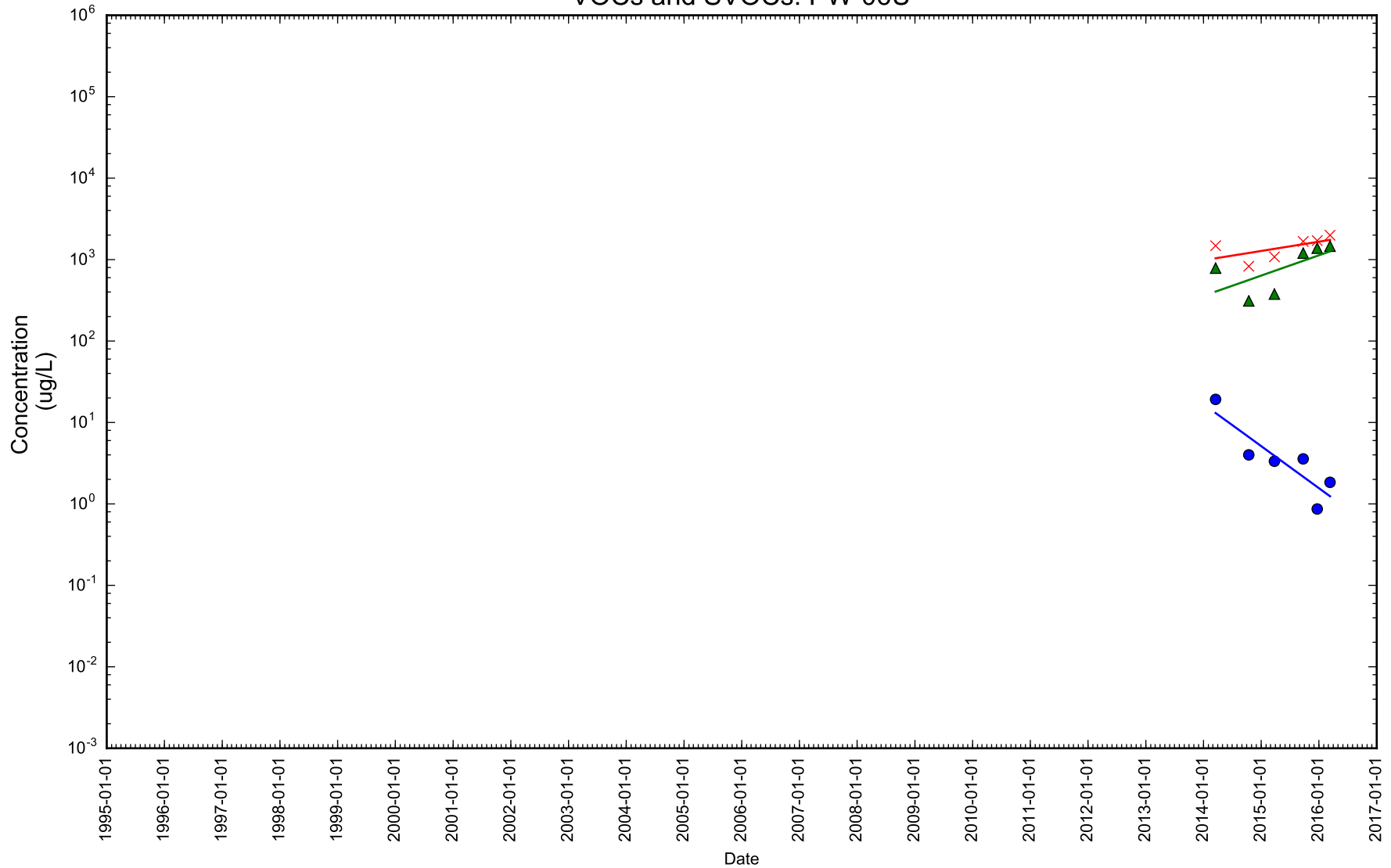


Figure 1-80

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PW-07-93

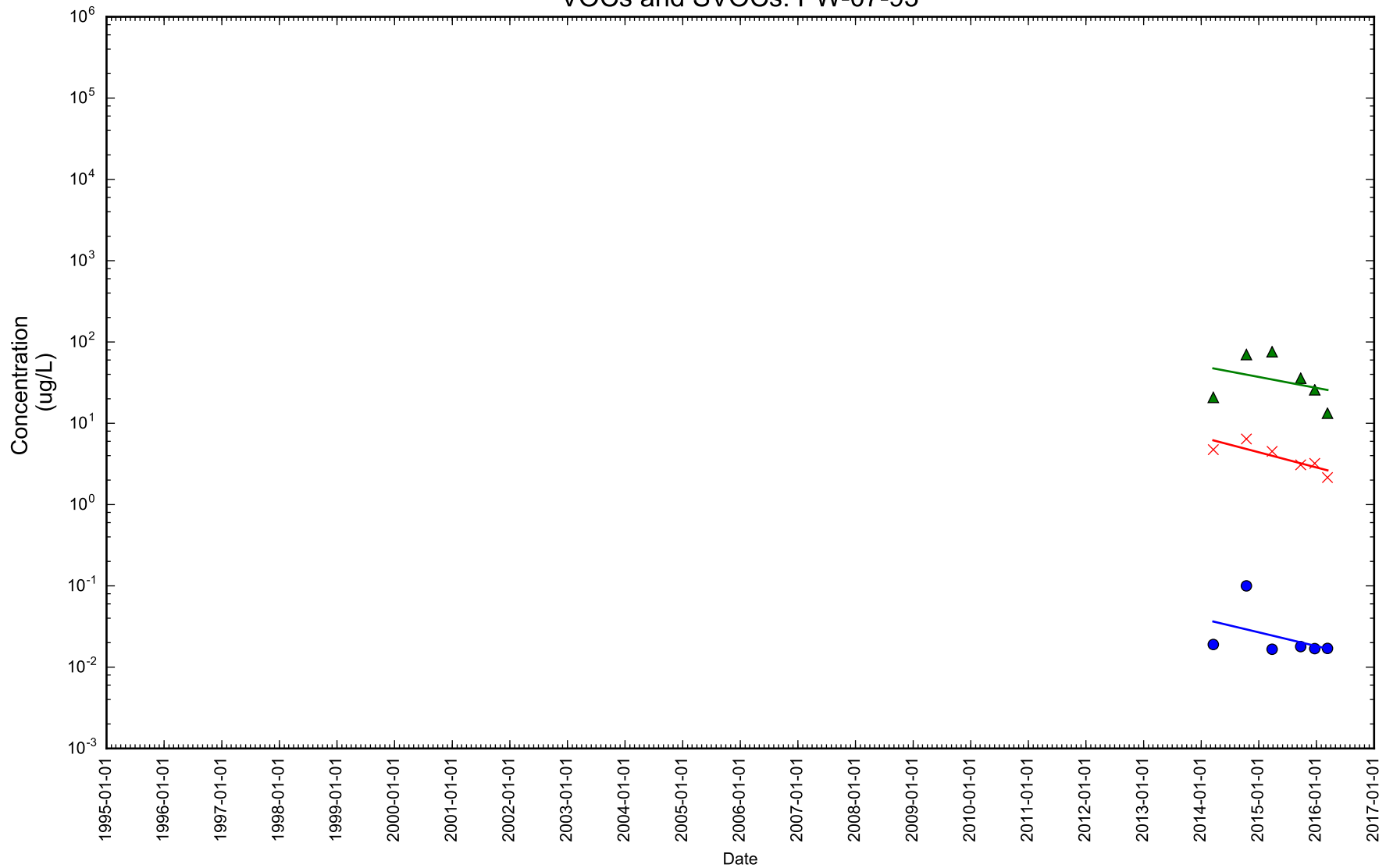


Figure 1-81

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PW-08-68

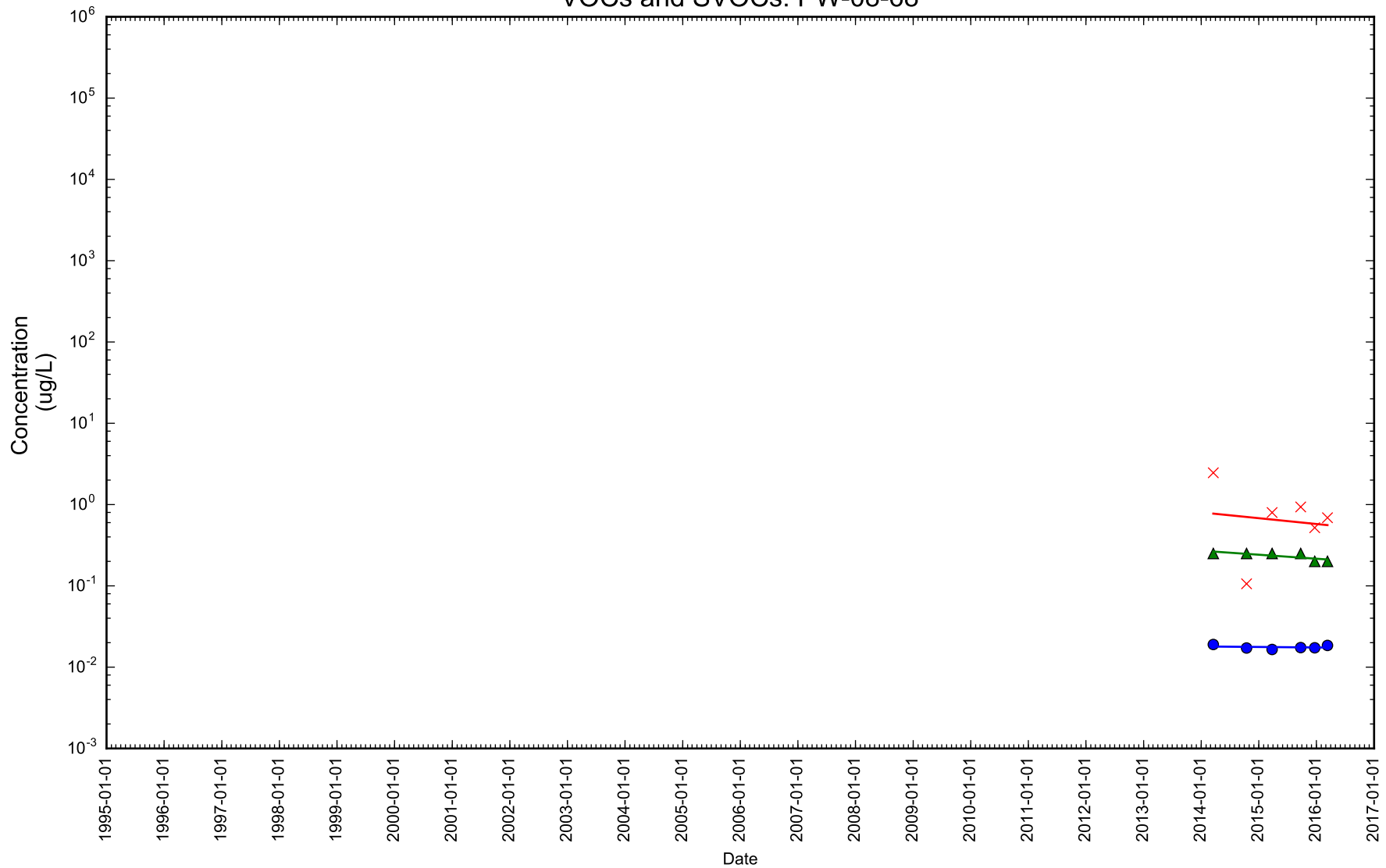


Figure 1-82

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PW-09-92

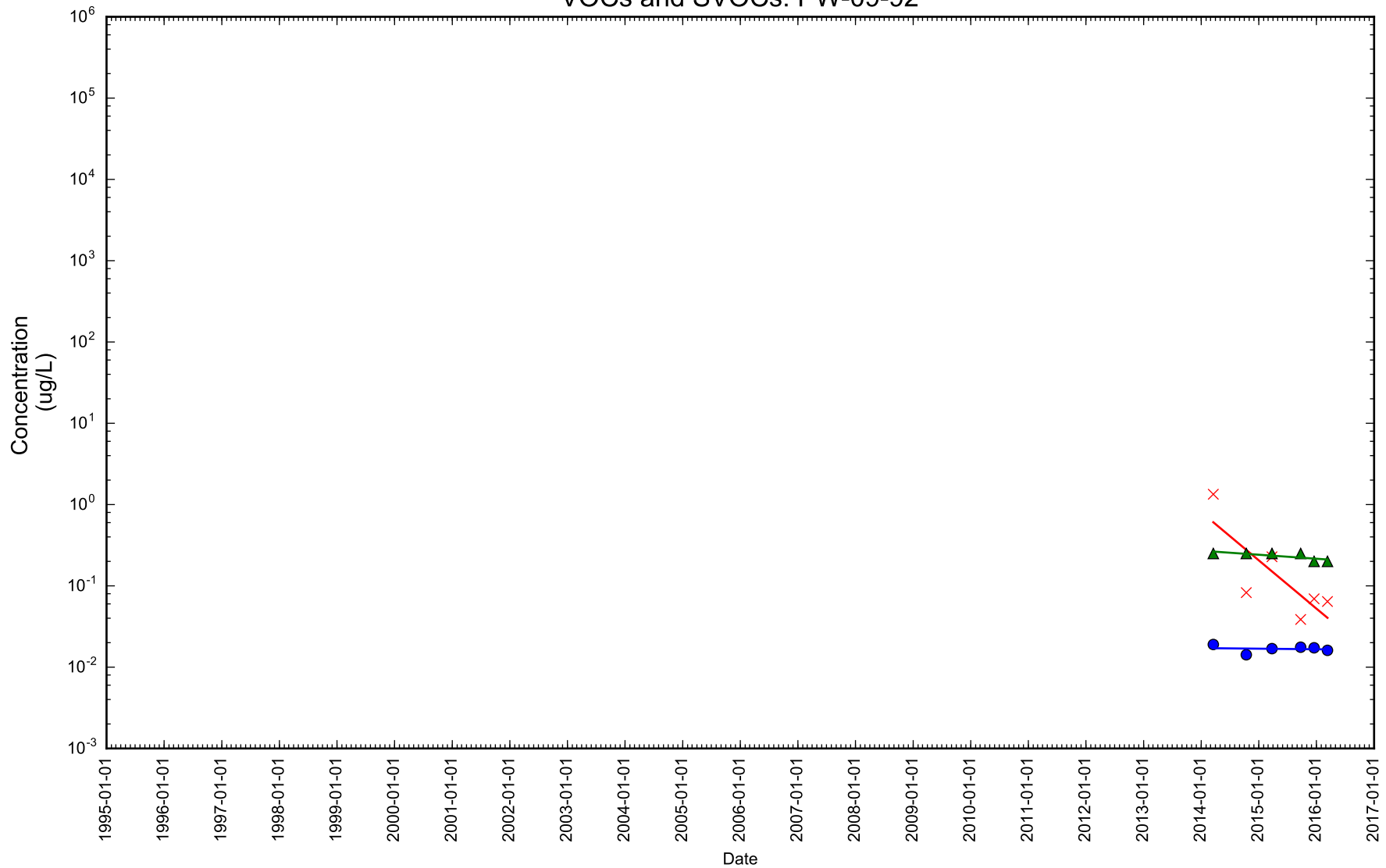


Figure 1-83

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PW-10L

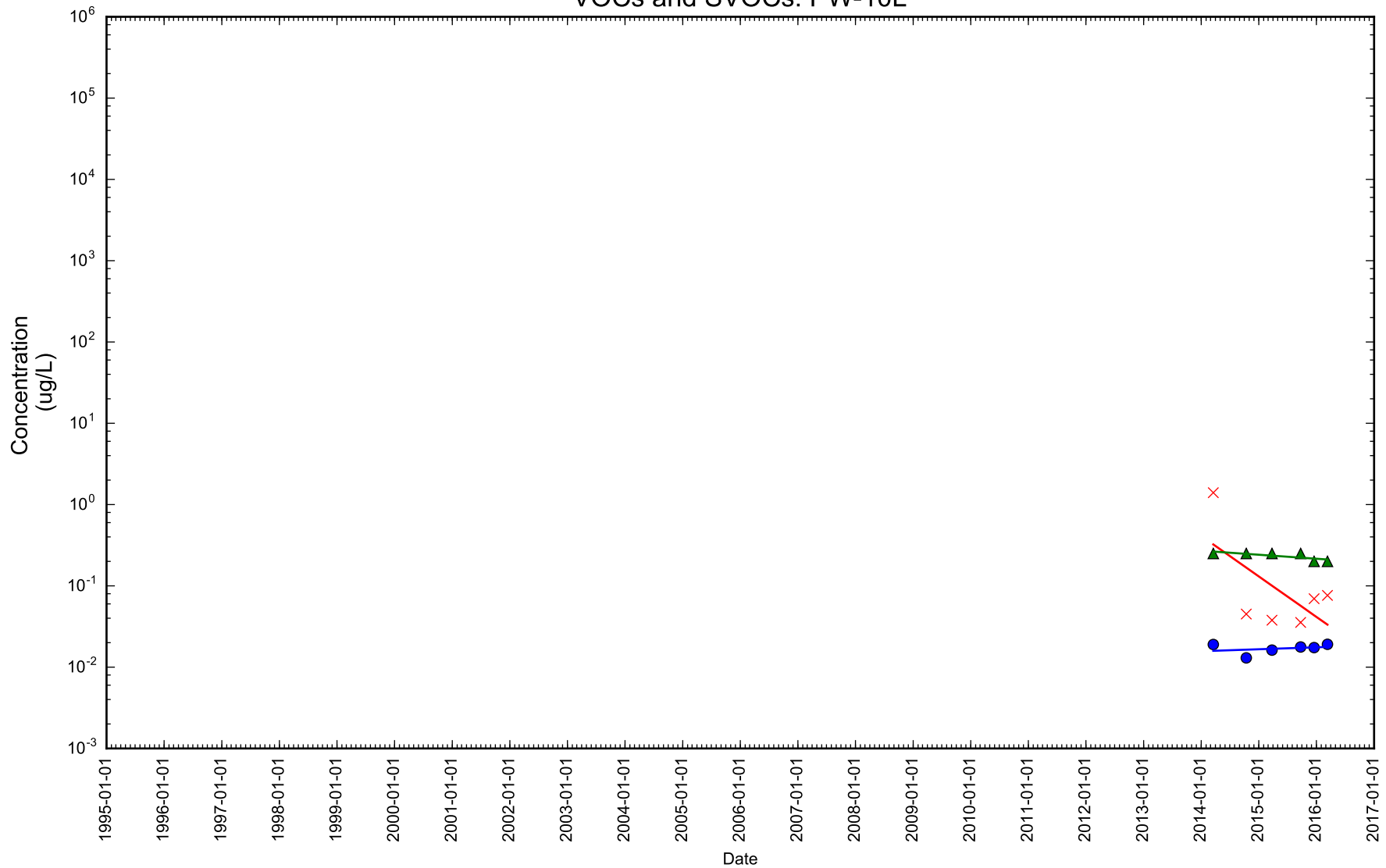


Figure 1-84

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

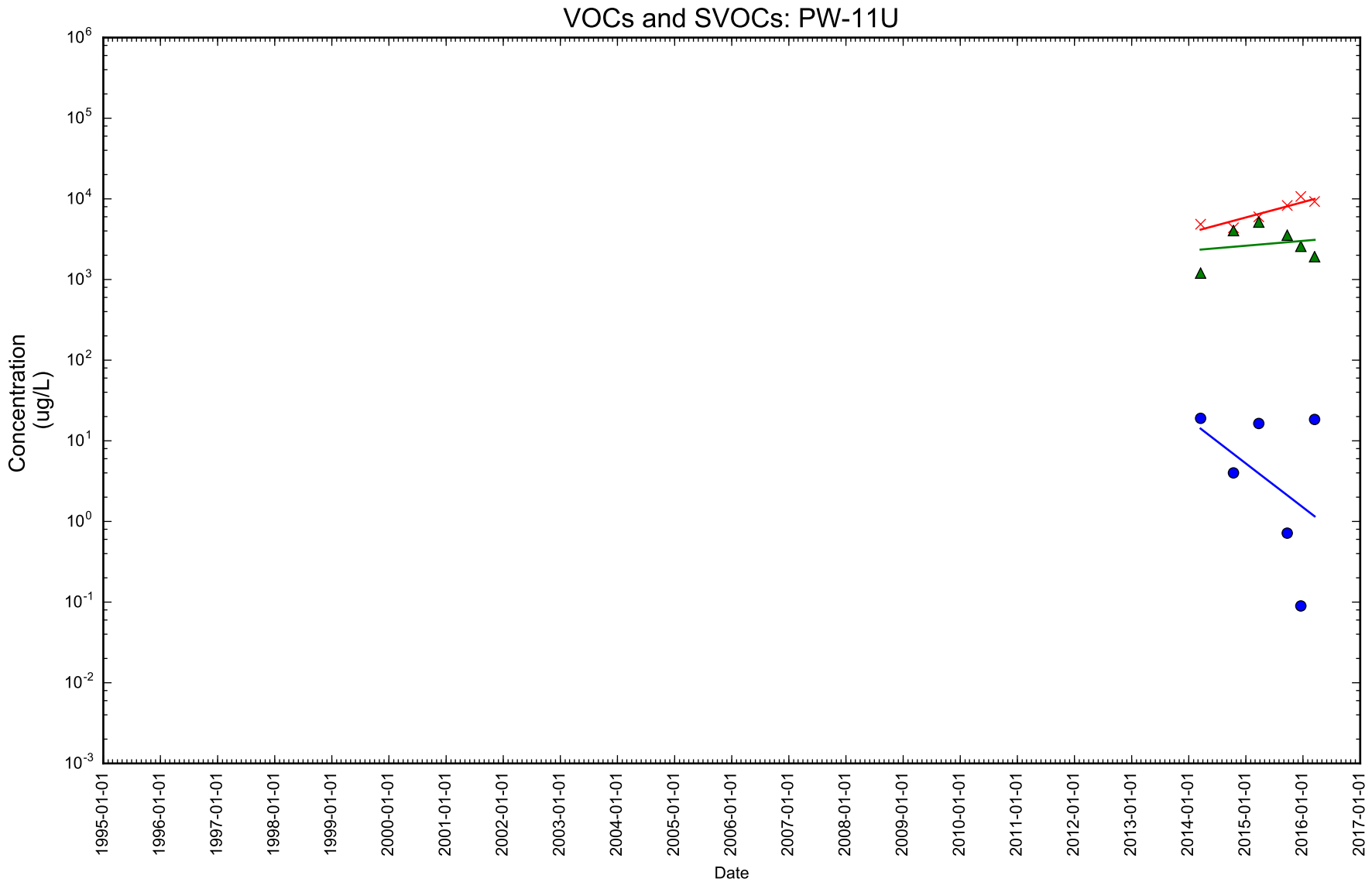


Figure 1-85

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

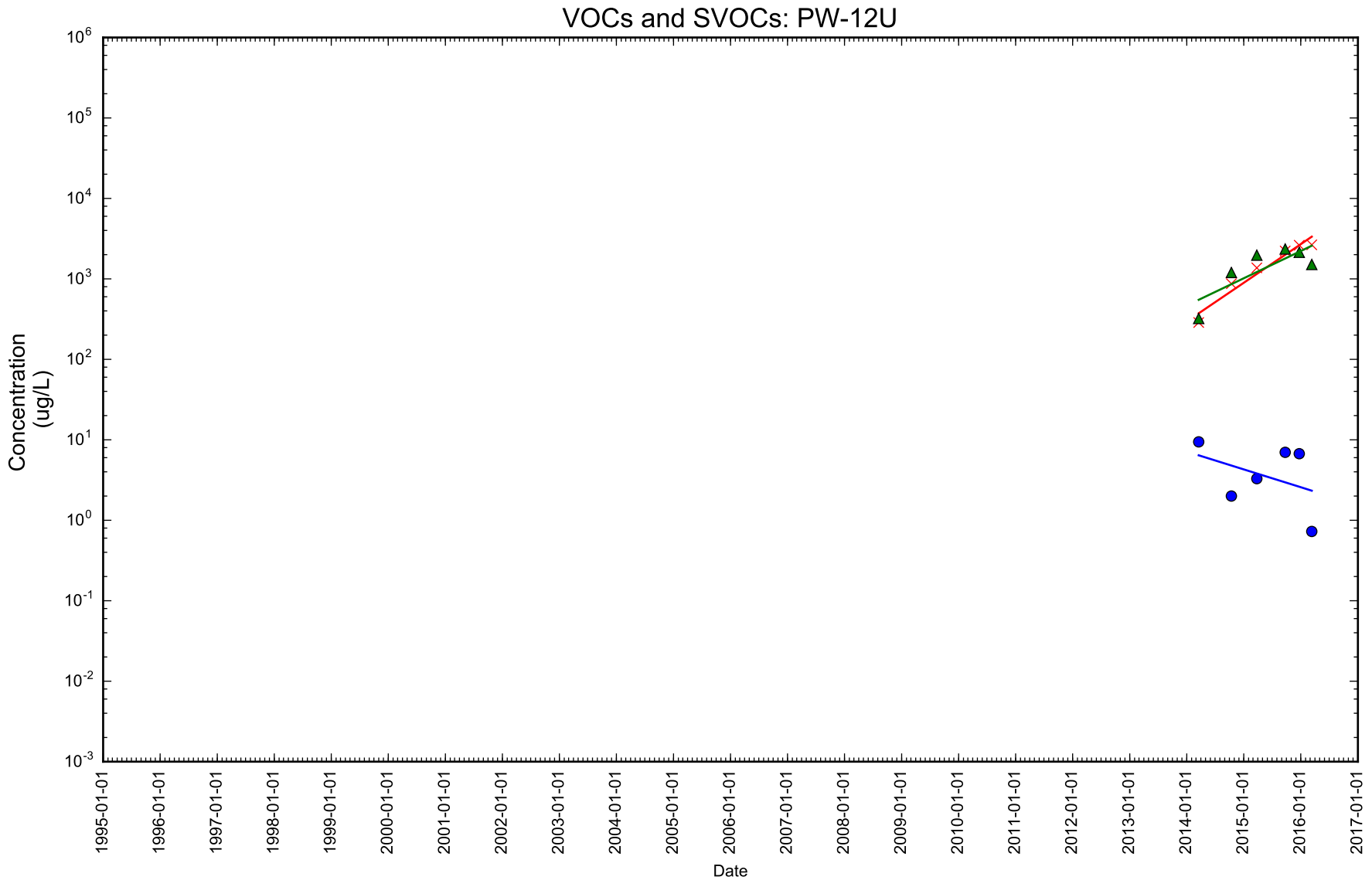


Figure 1-86

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

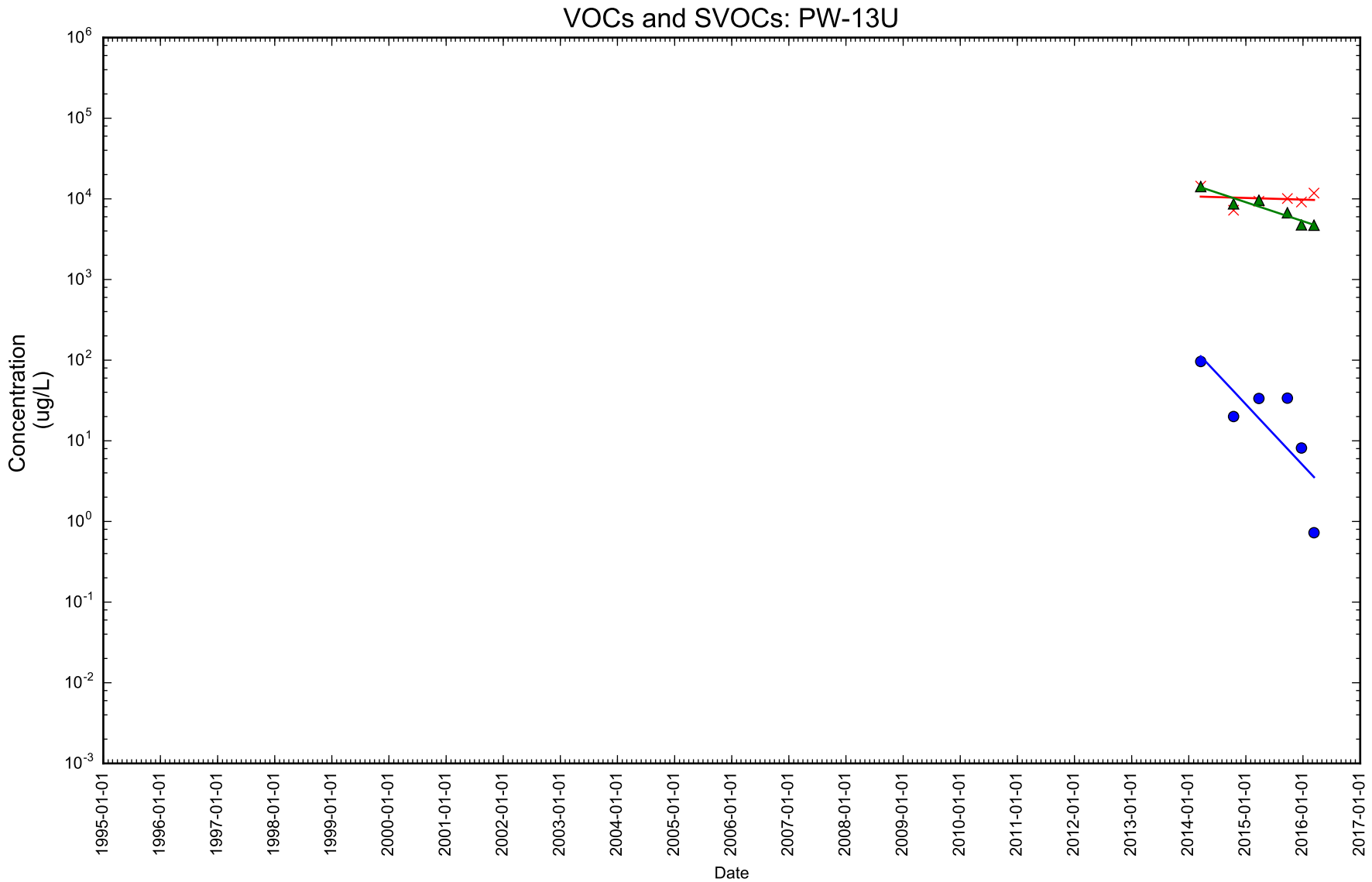


Figure 1-87

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PW-14U

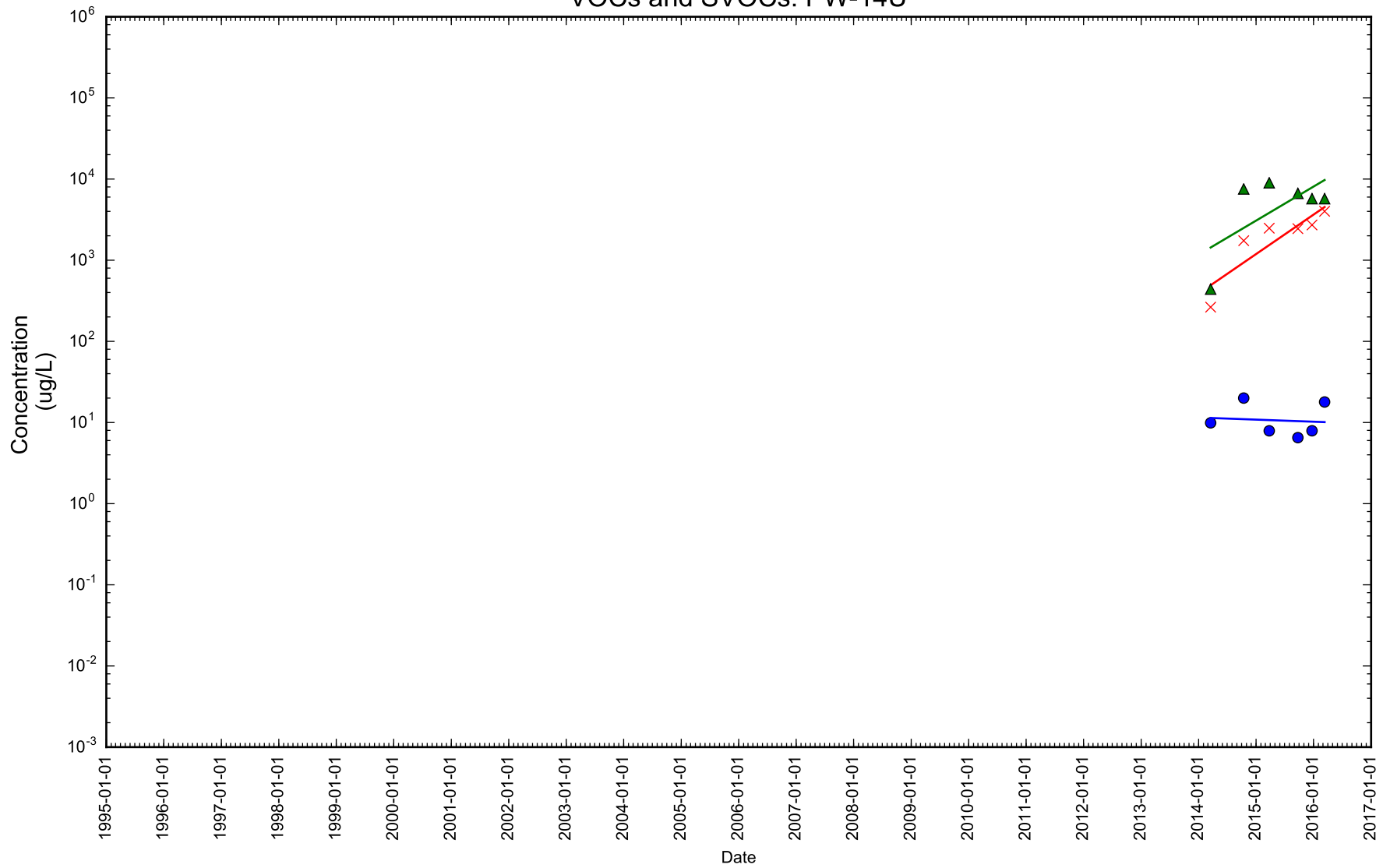


Figure 1-88

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

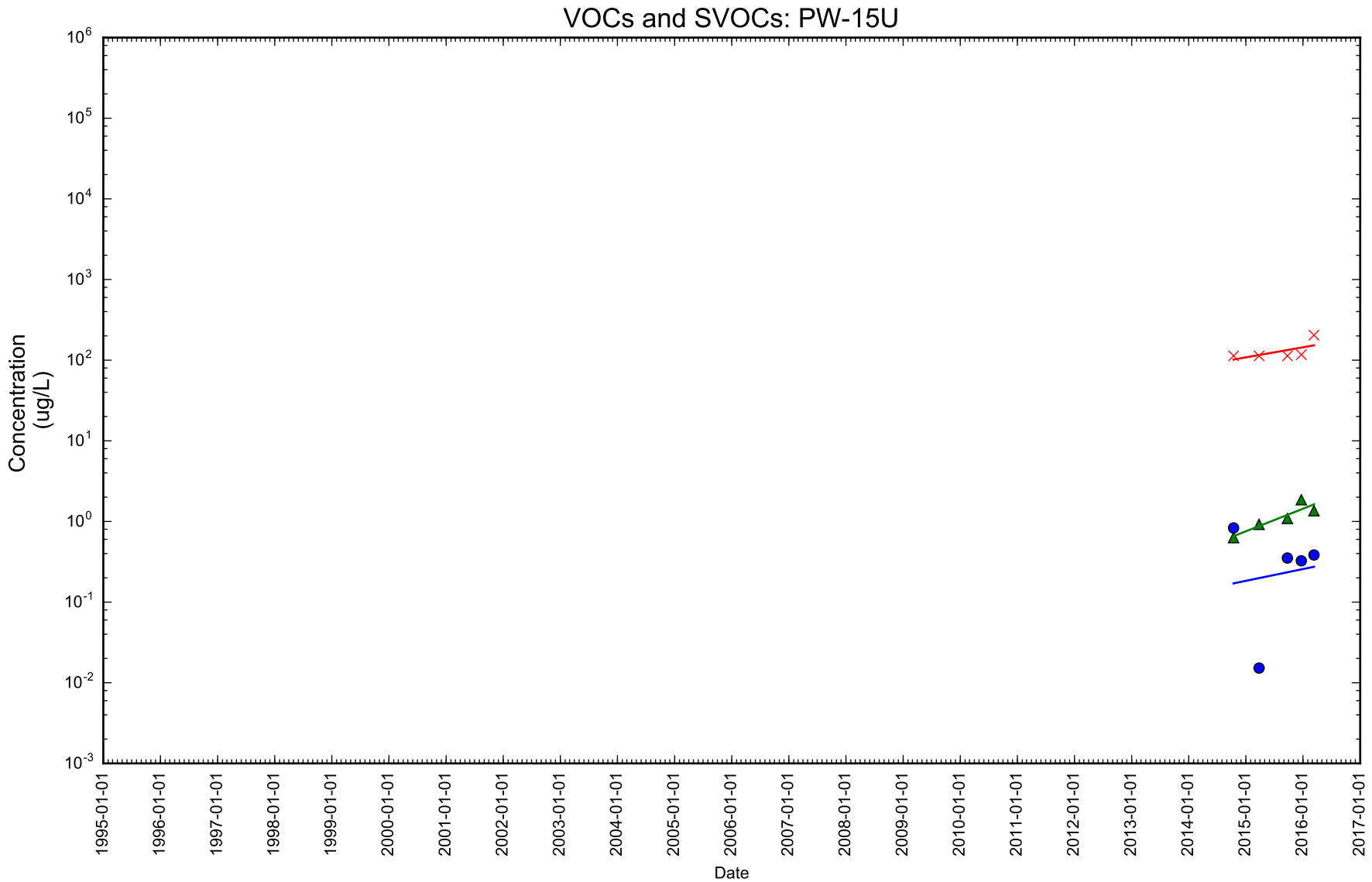


Figure 1-89

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

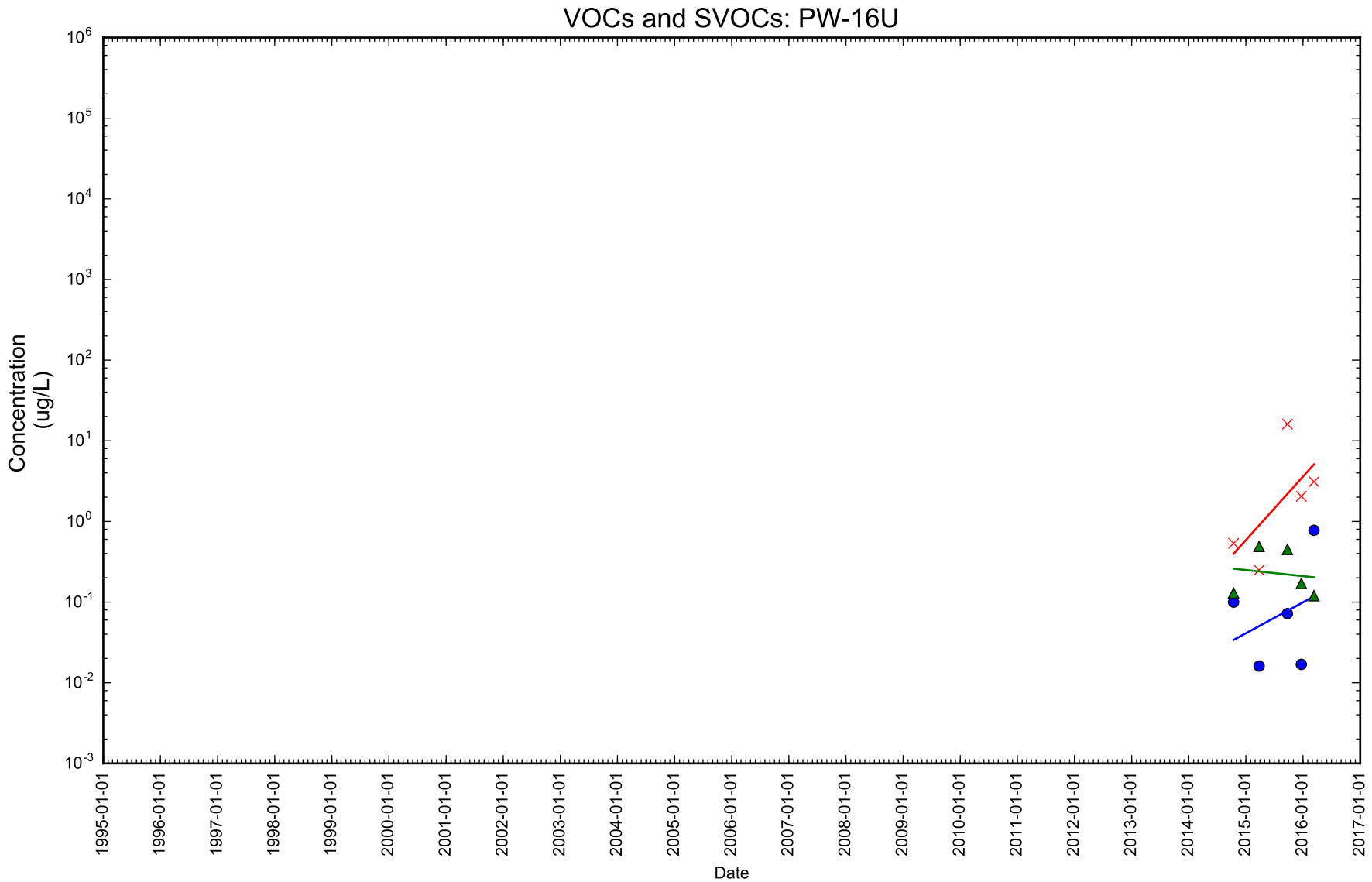


Figure 1-90

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ5-20

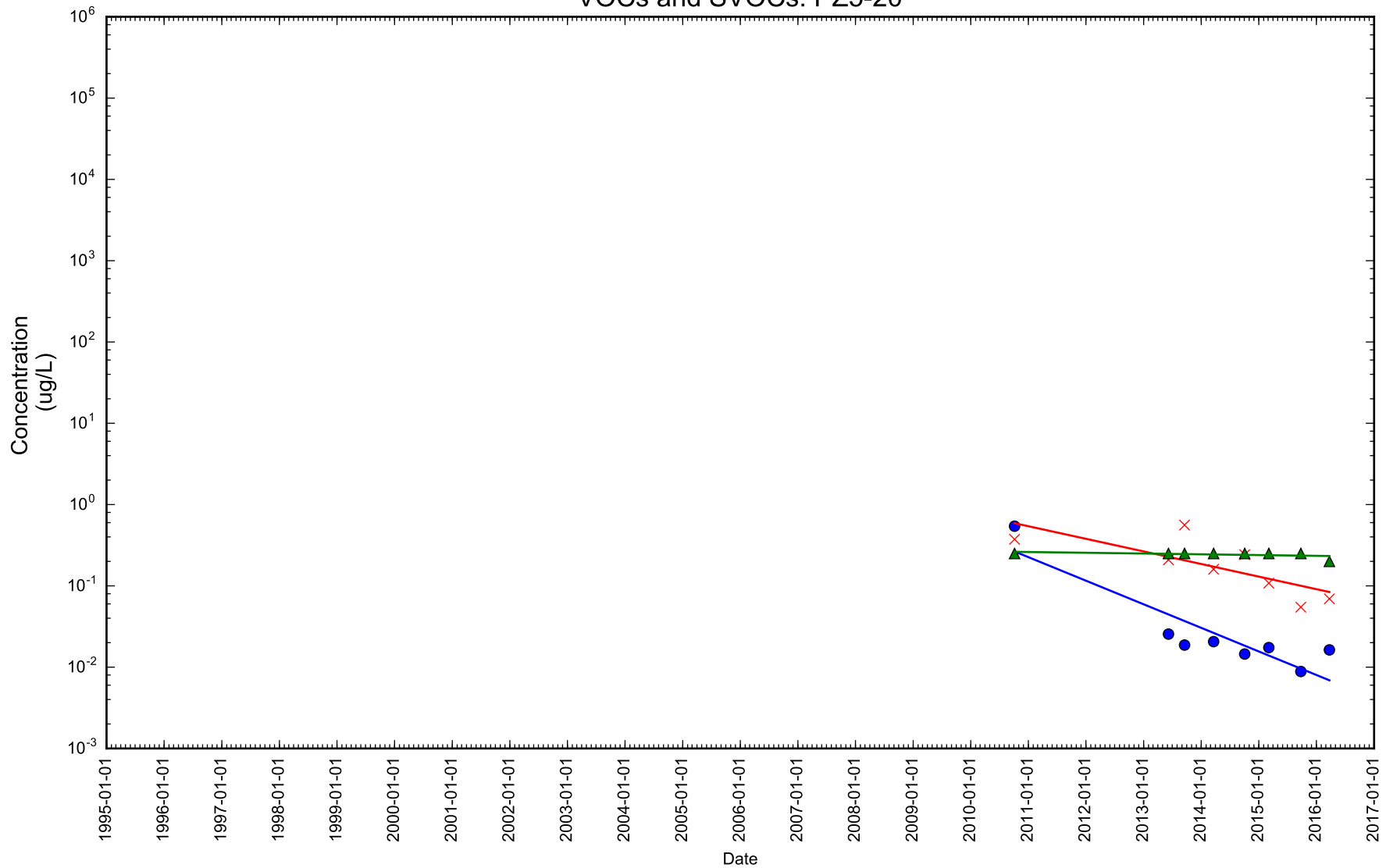


Figure 1-91

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ5-5

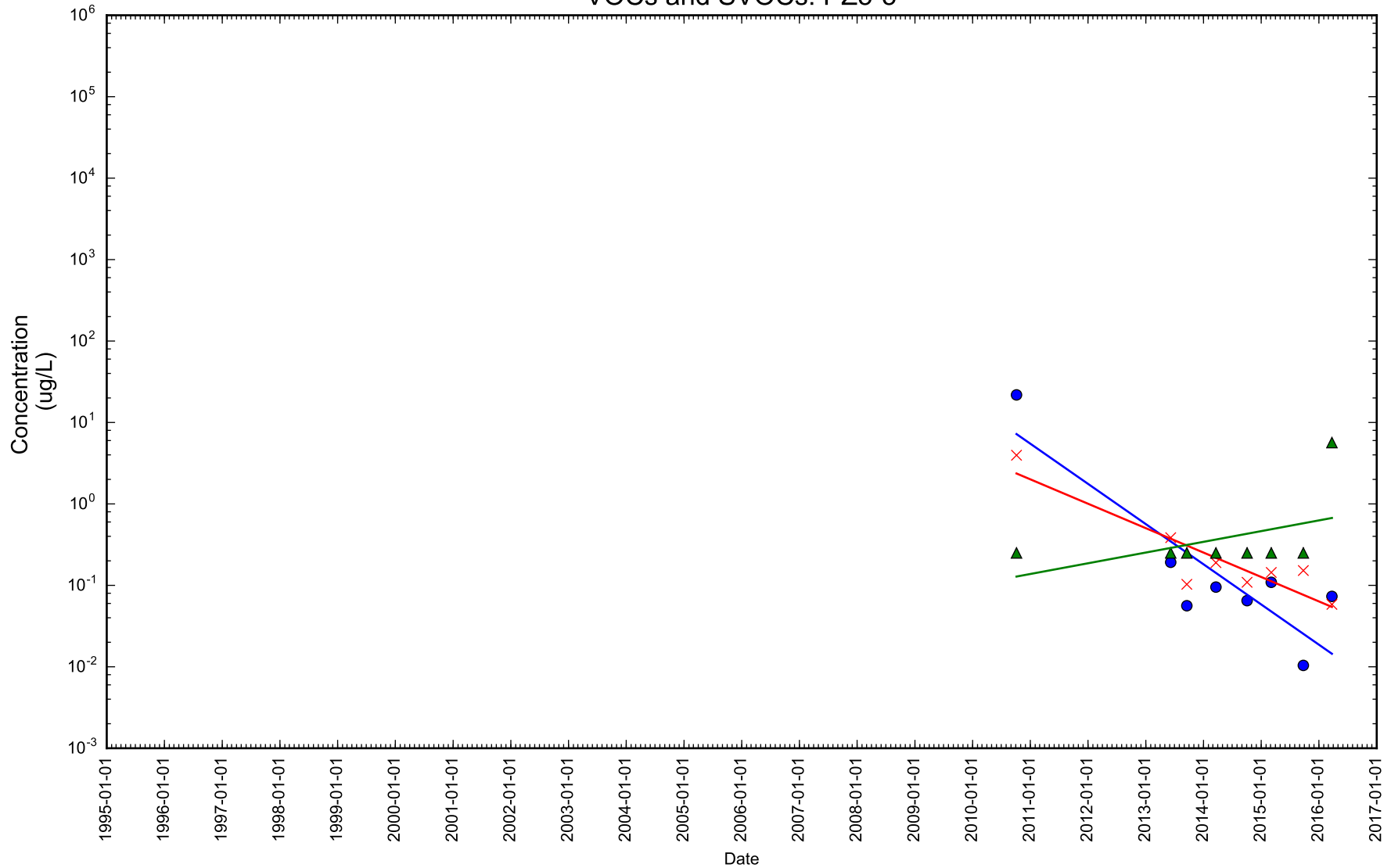


Figure 1-92

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ5-55

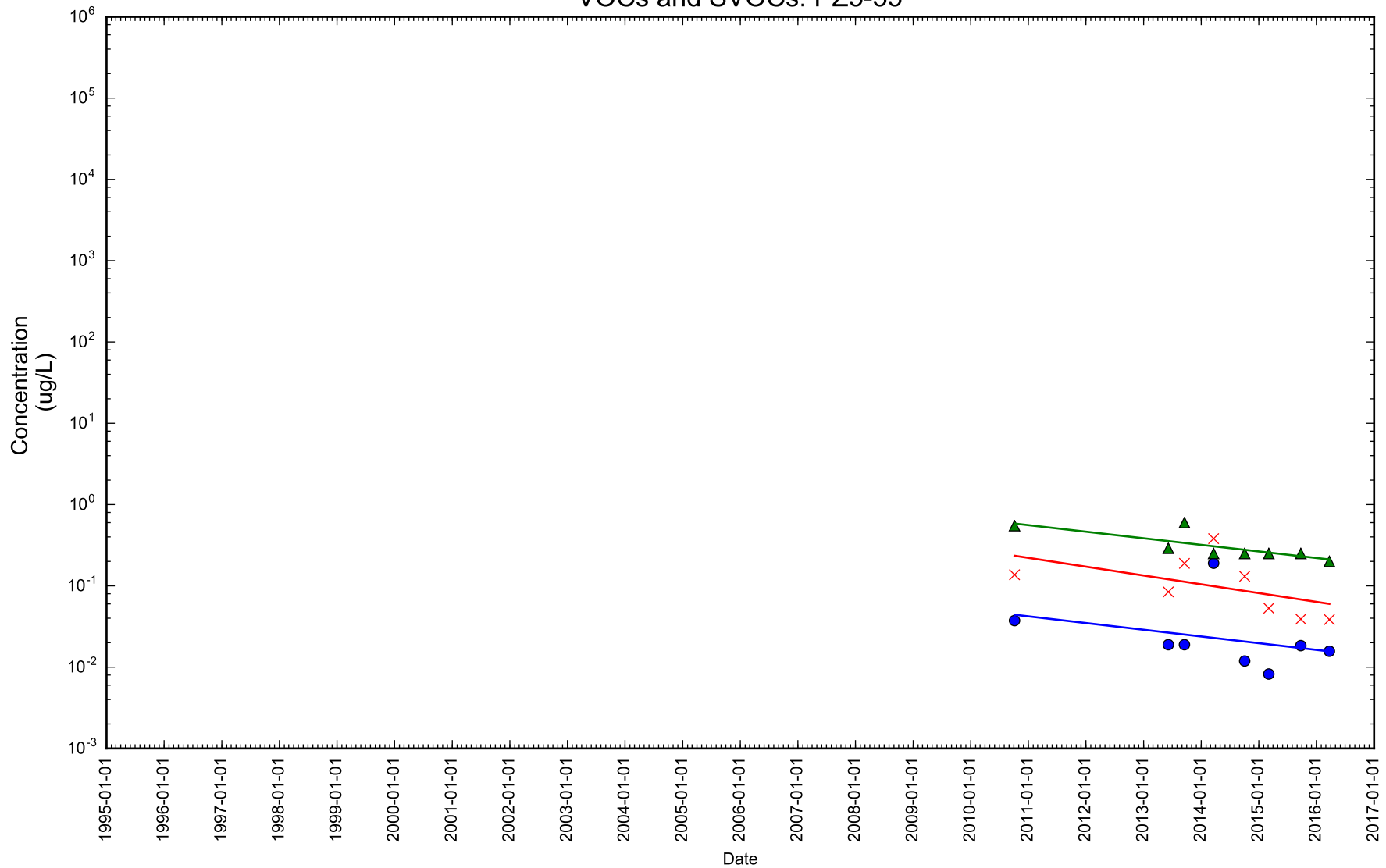


Figure 1-93

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ5-85

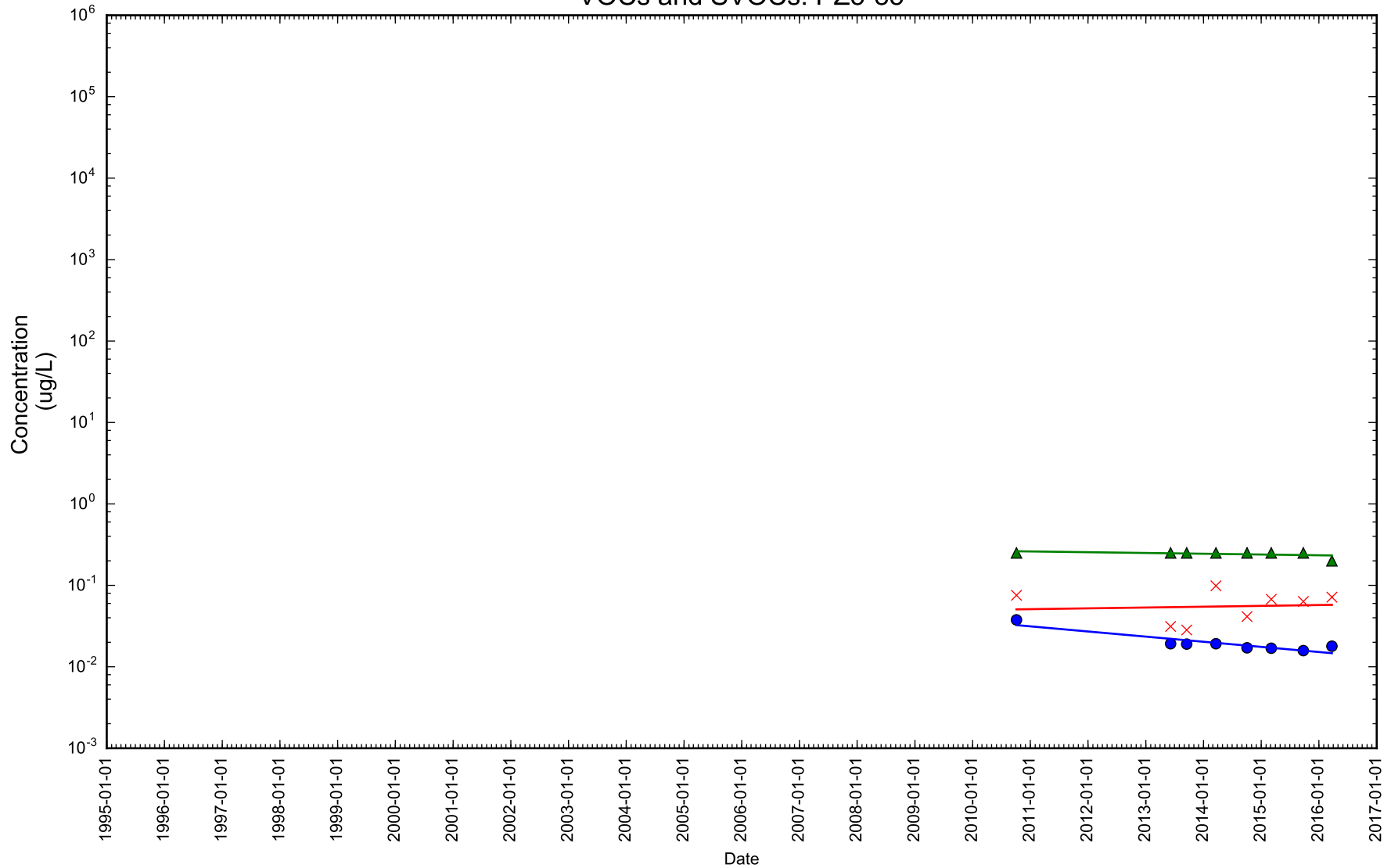


Figure 1-94

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ6-115

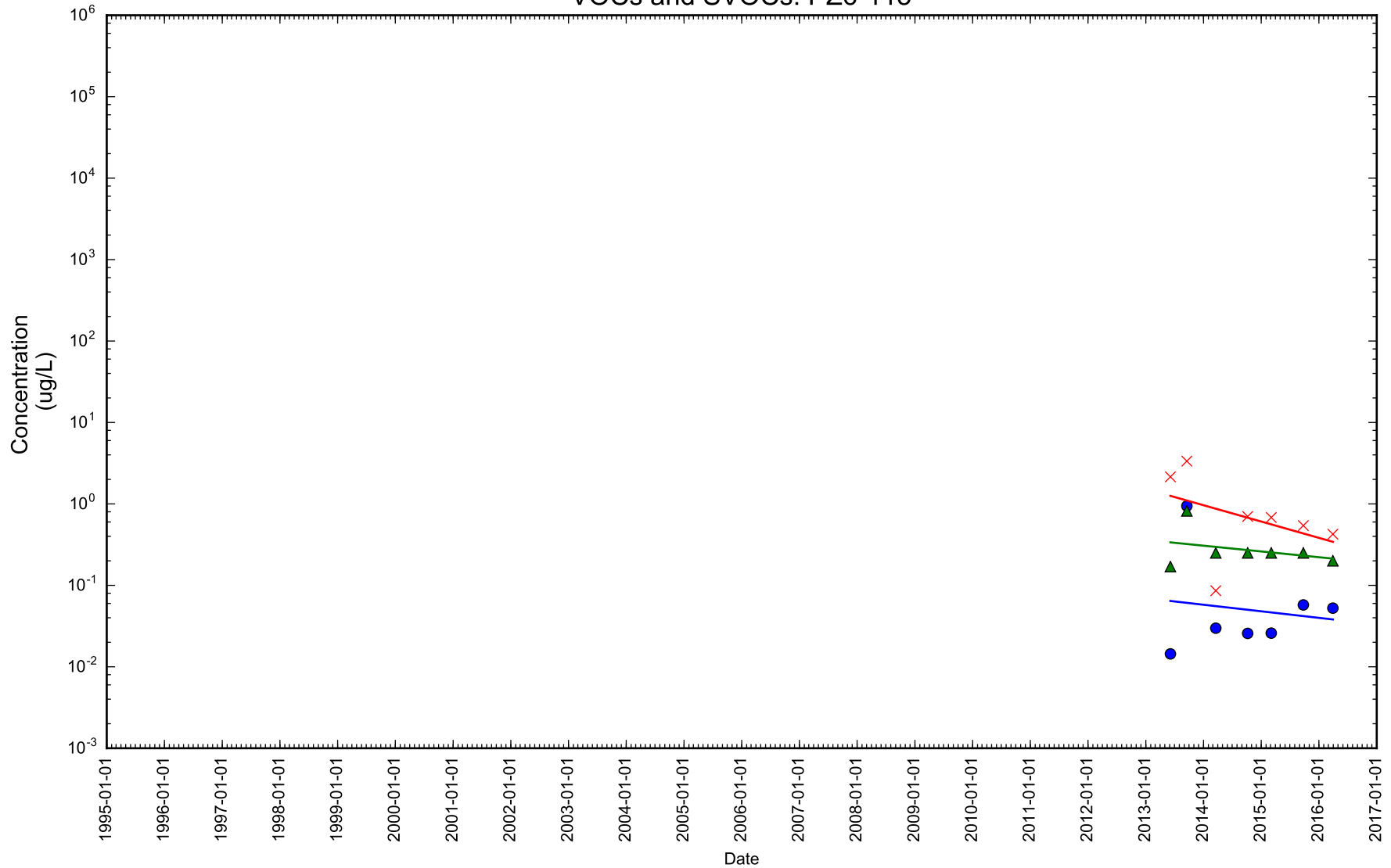


Figure 1-95

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ6-150

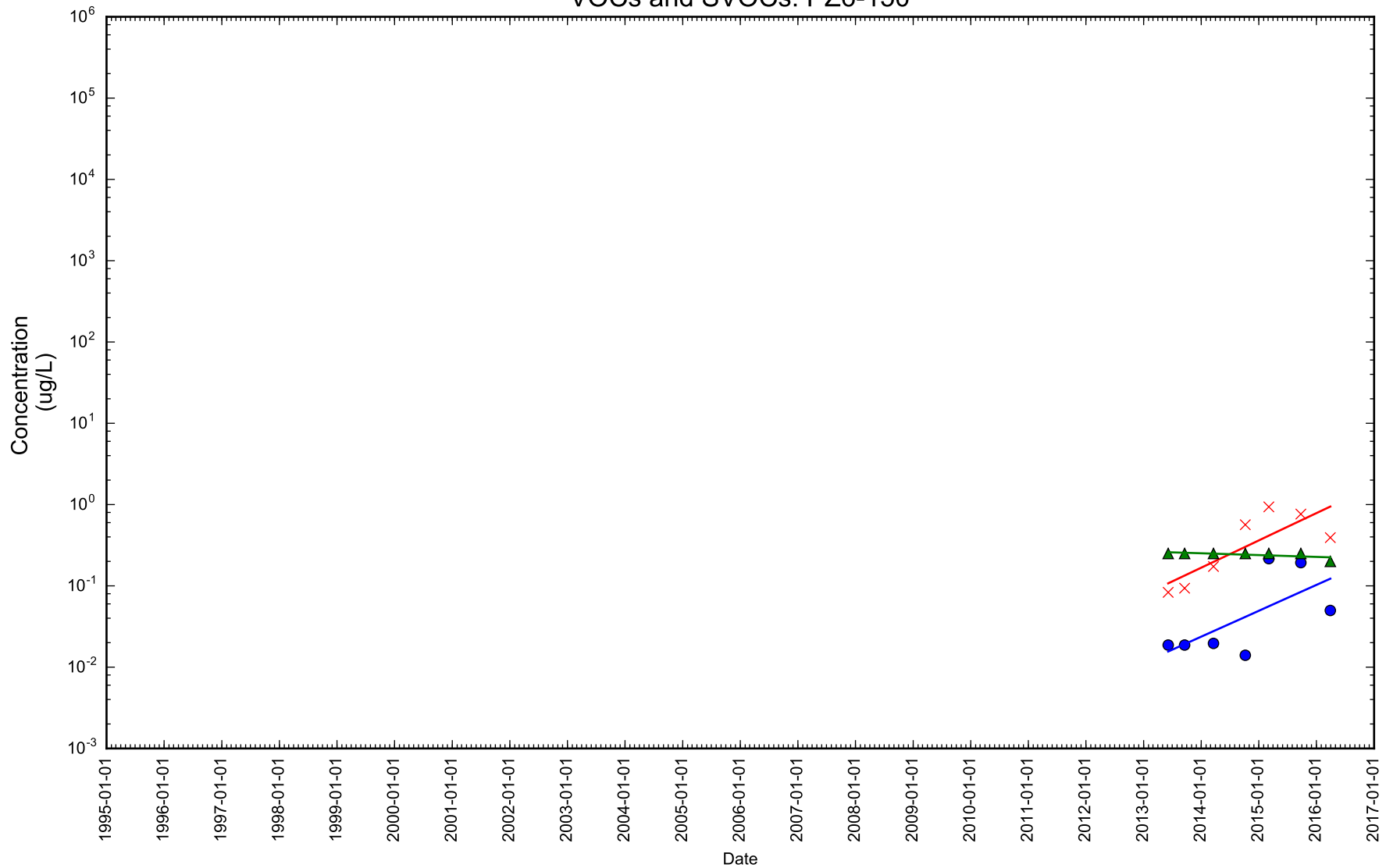


Figure 1-96

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ6-5

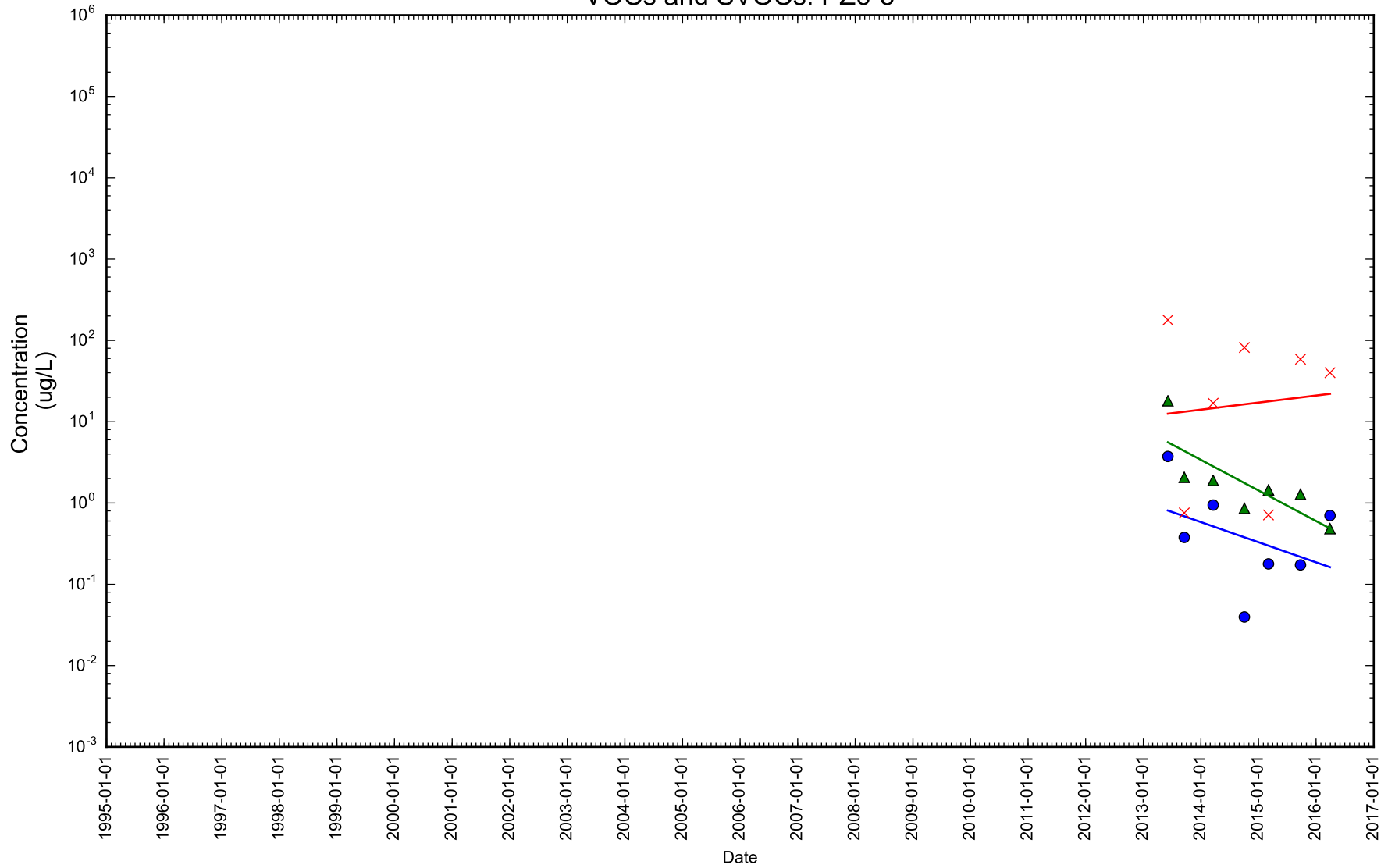


Figure 1-97

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ6-50

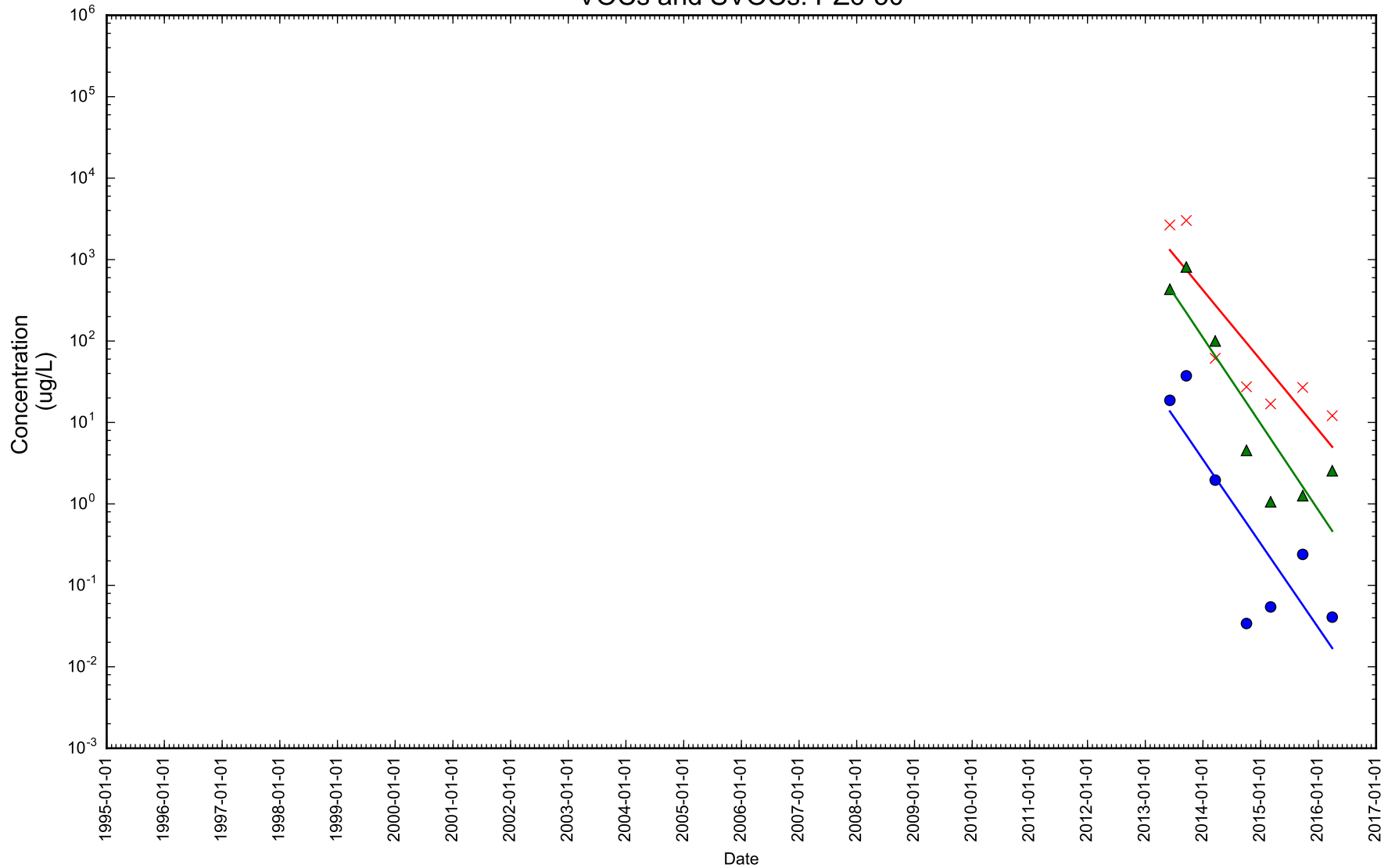


Figure 1-98

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ7-100

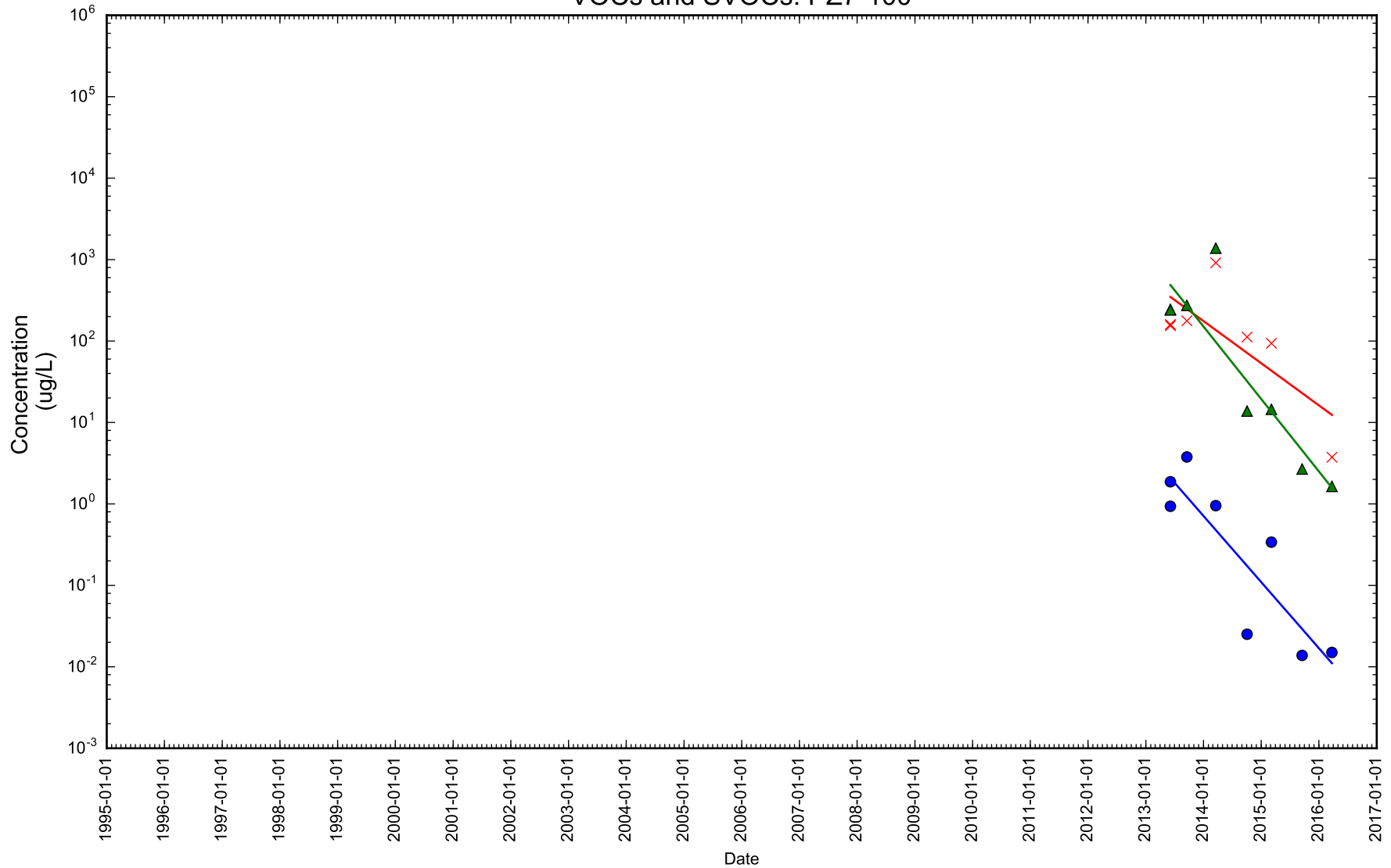


Figure 1-99

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ7-150

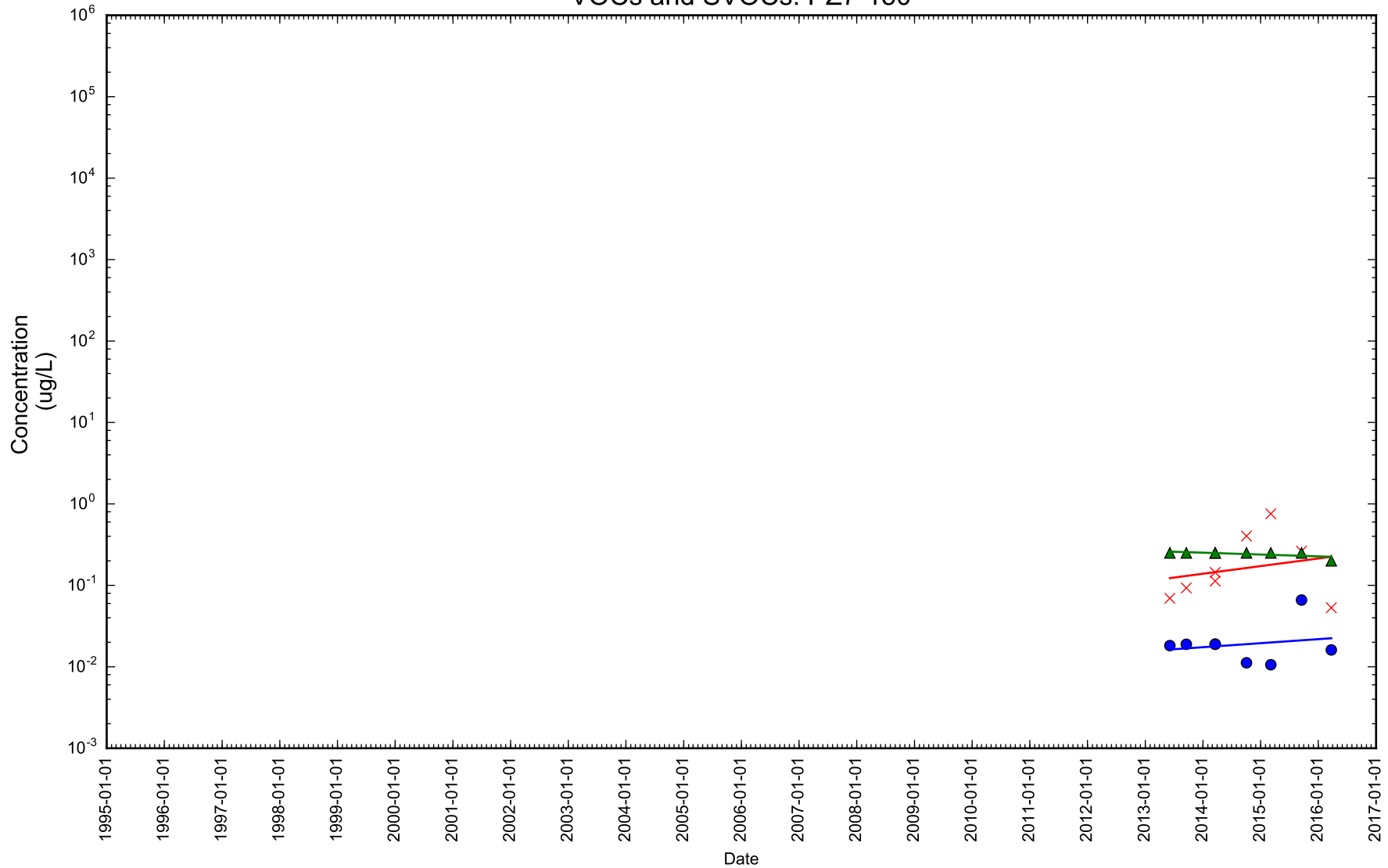


Figure 1-100

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ7-5

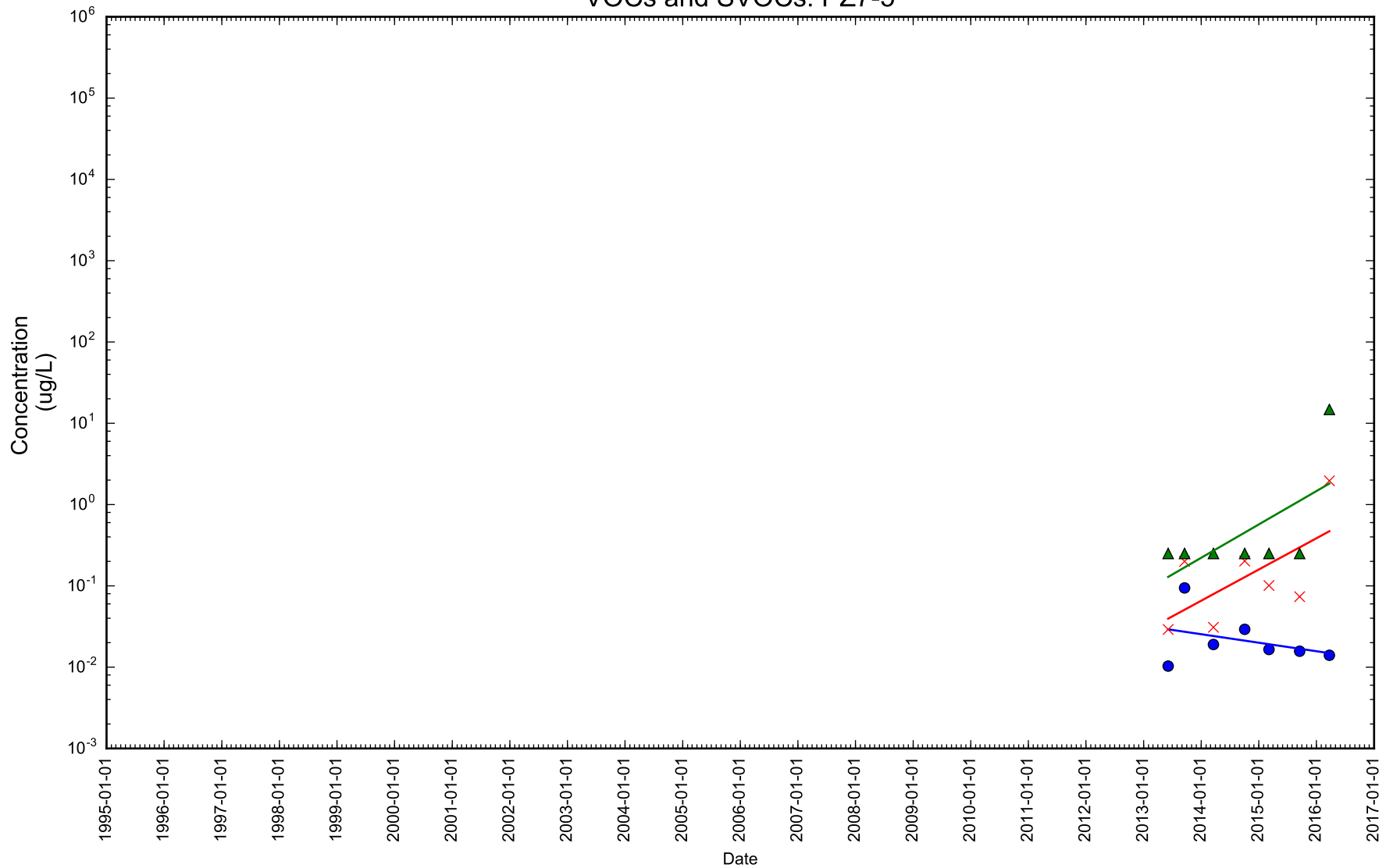


Figure 1-101

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ7-50

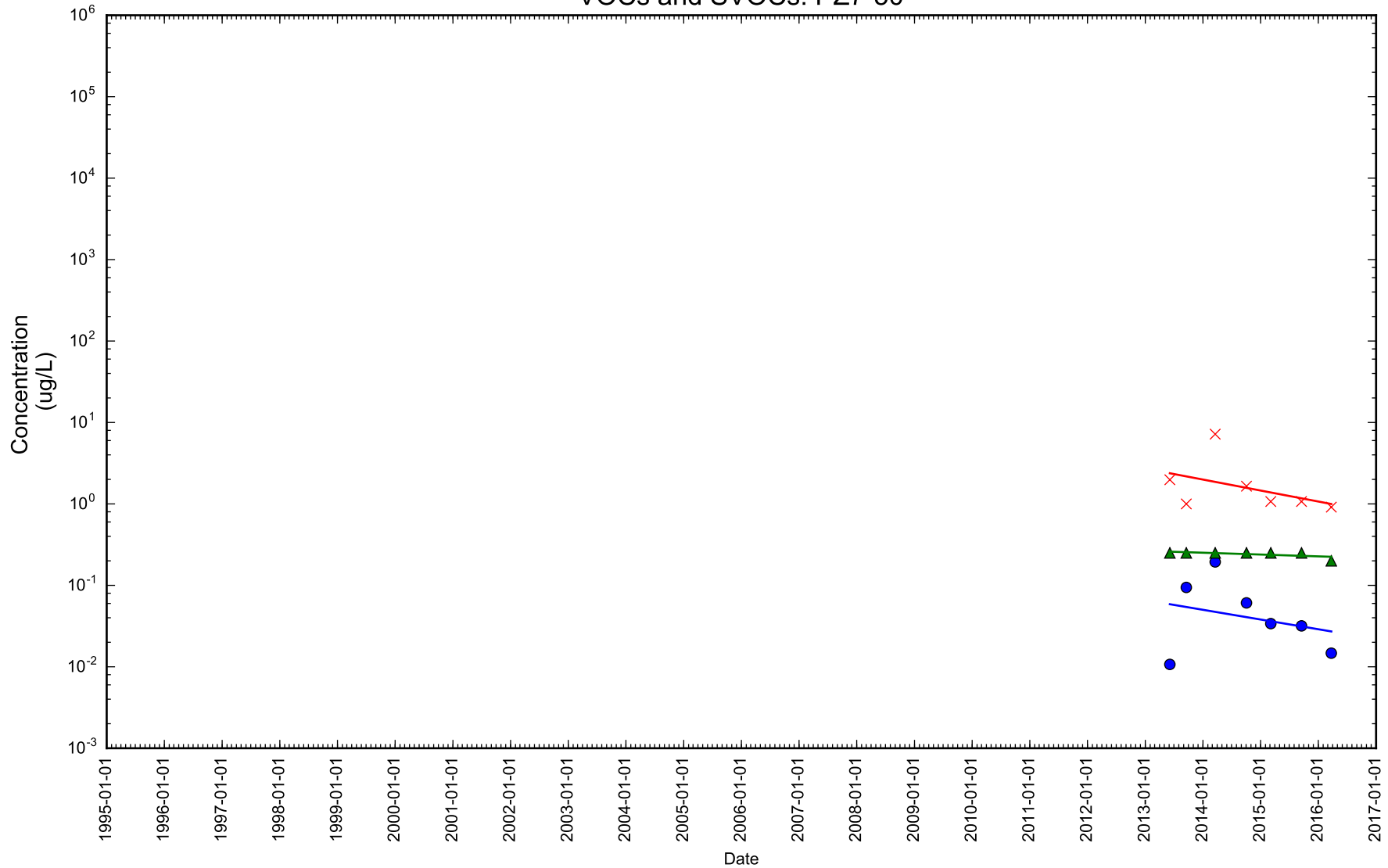


Figure 1-102

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ8-5

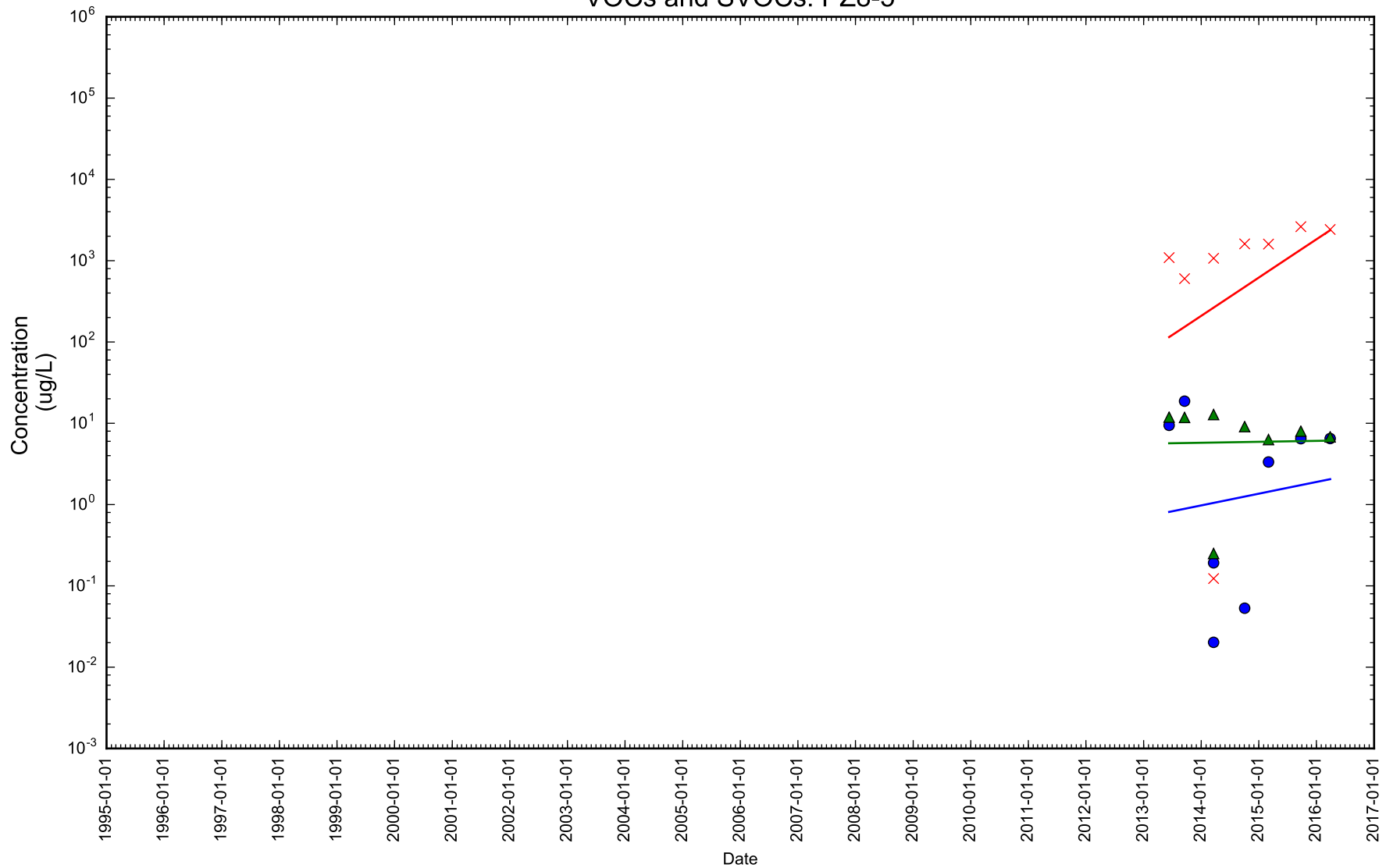


Figure 1-103

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ8-50

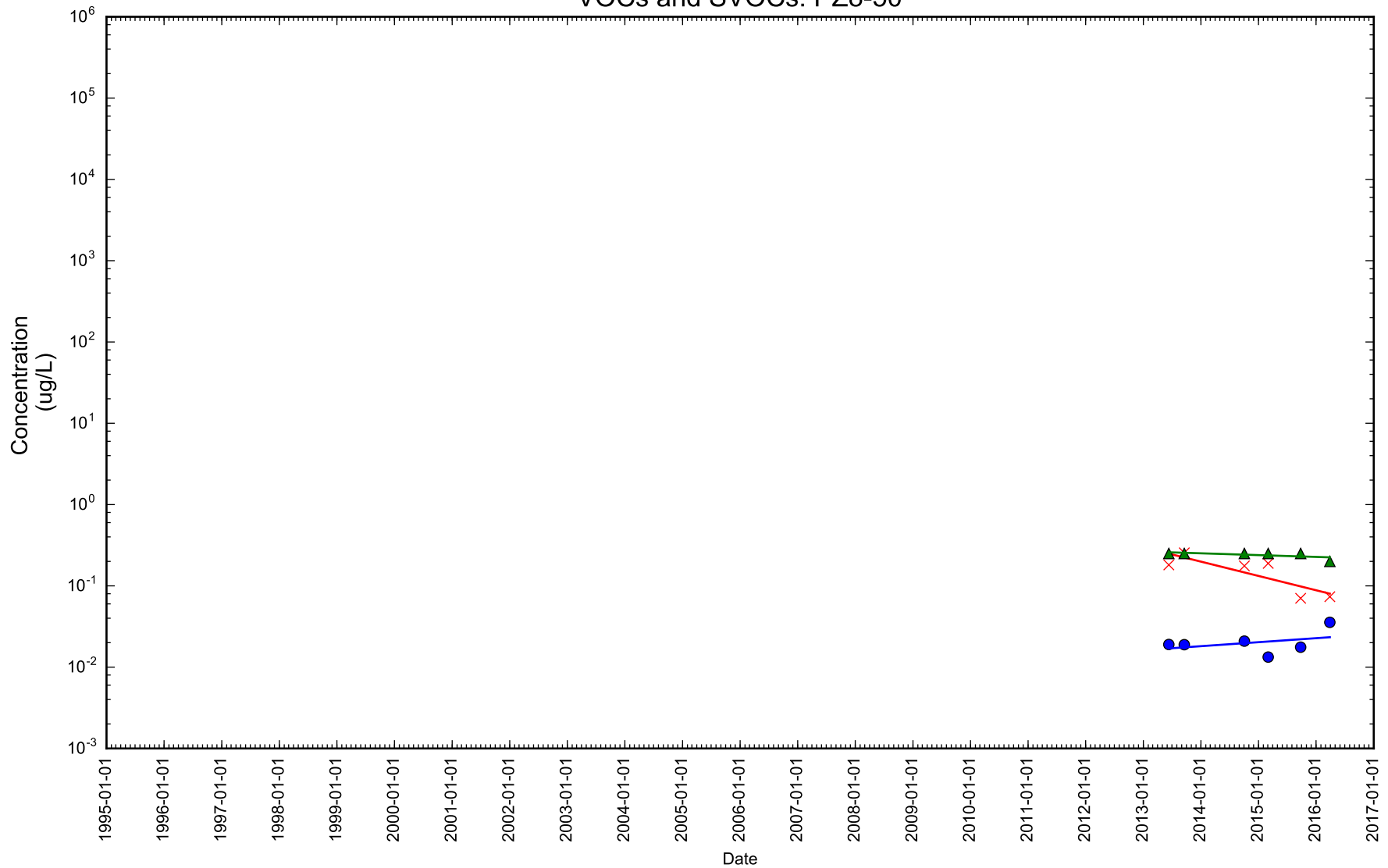


Figure 1-104

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ9-110

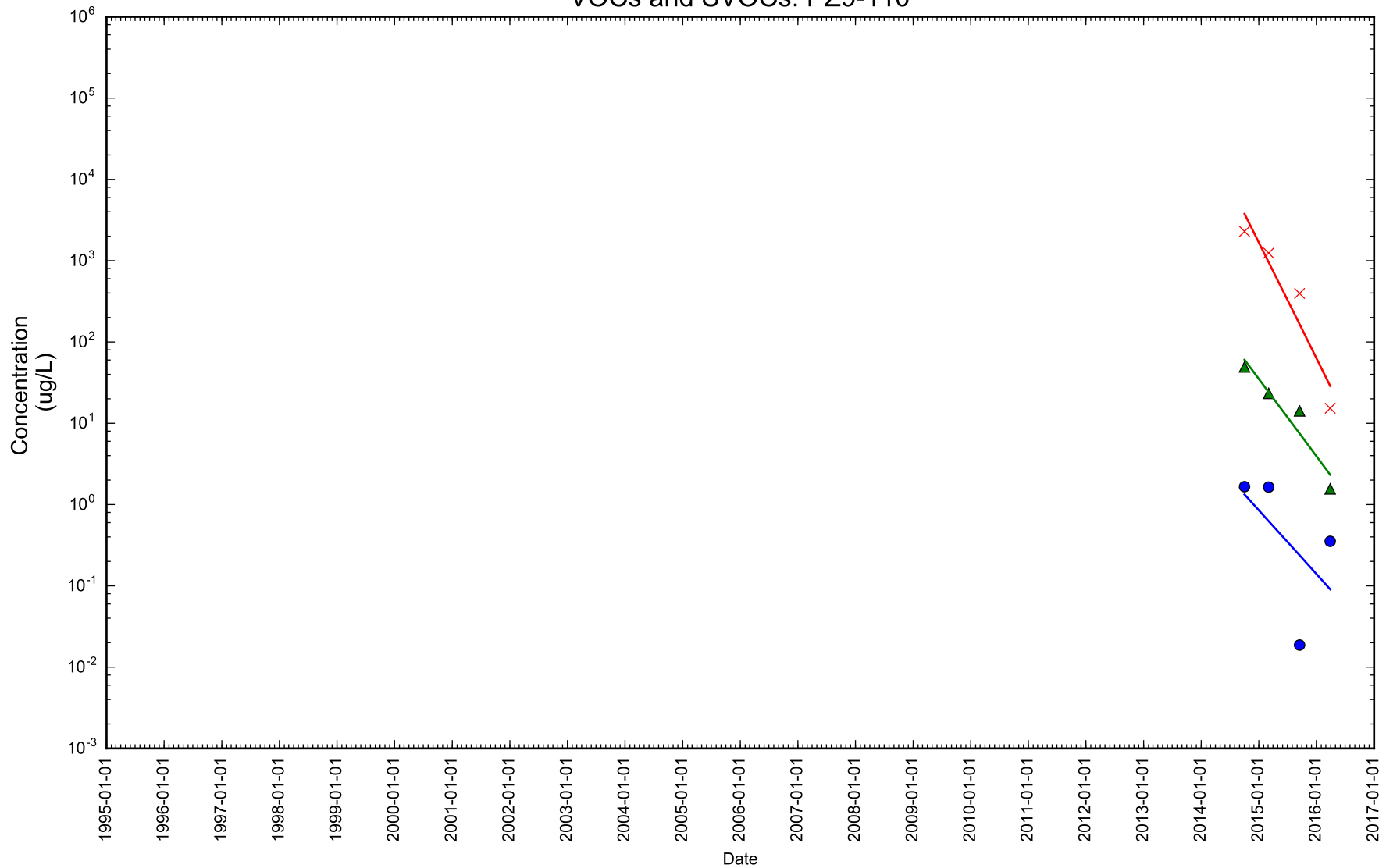


Figure 1-105

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

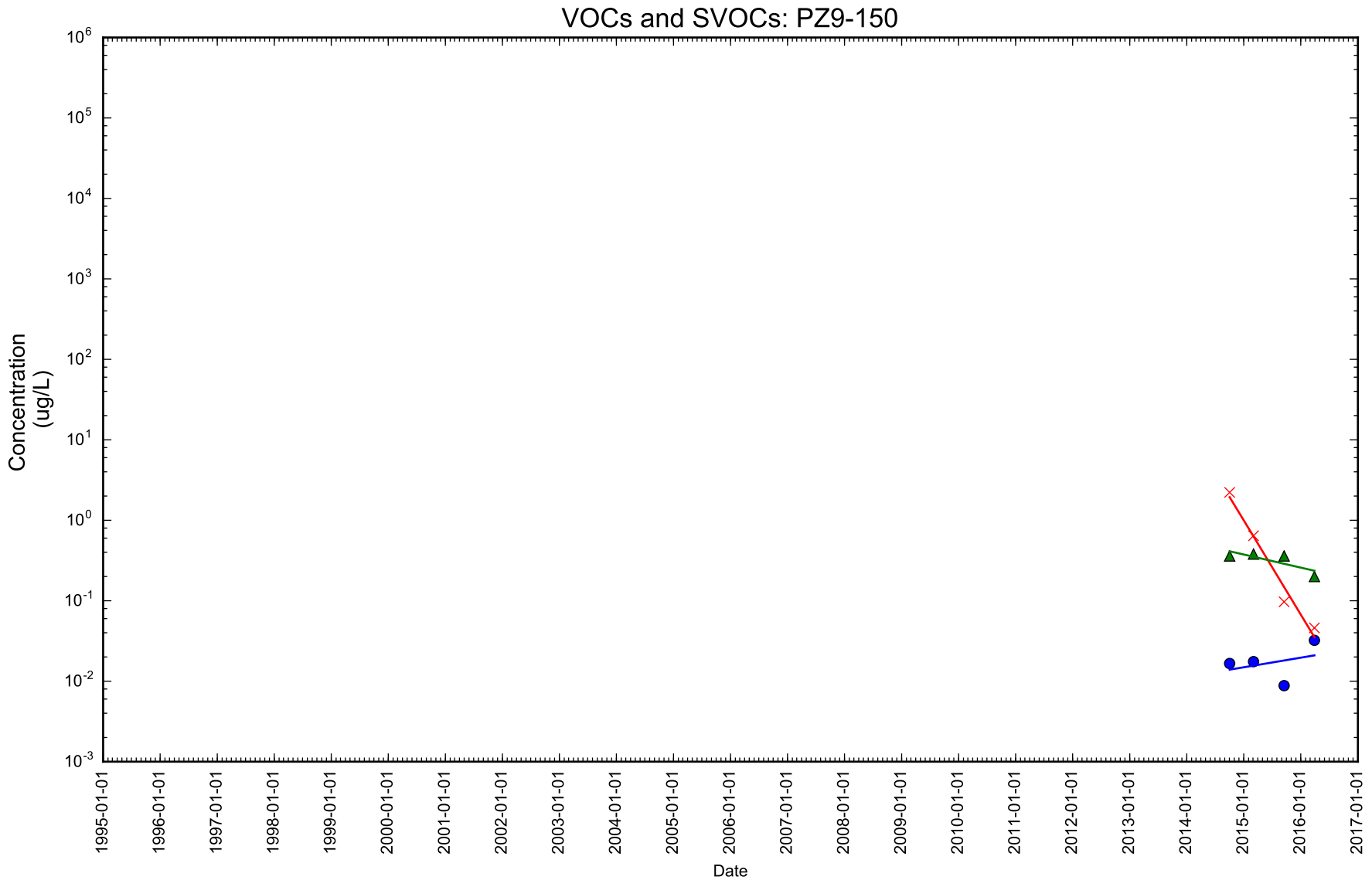


Figure 1-106

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ9-5

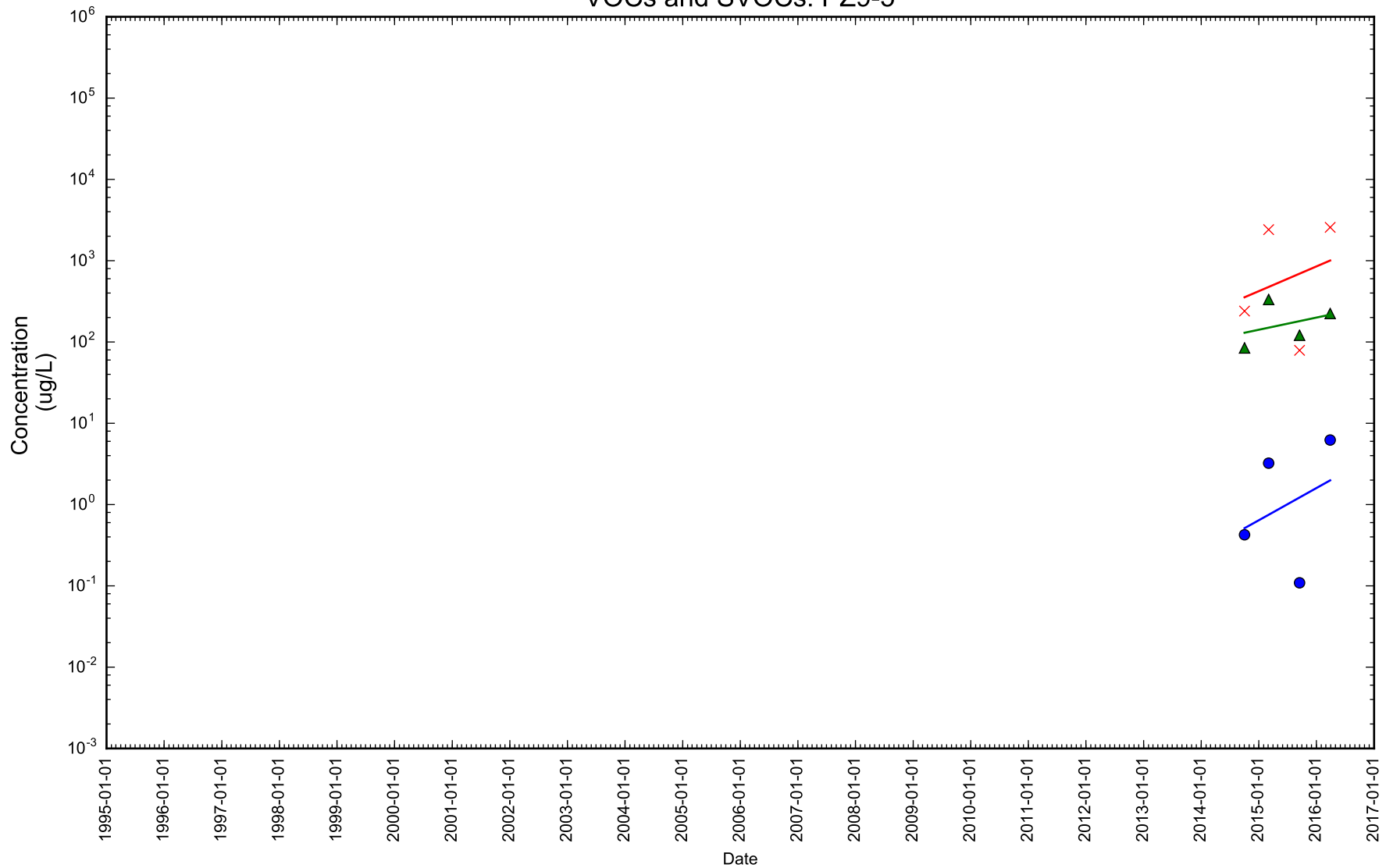


Figure 1-107

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ9-50

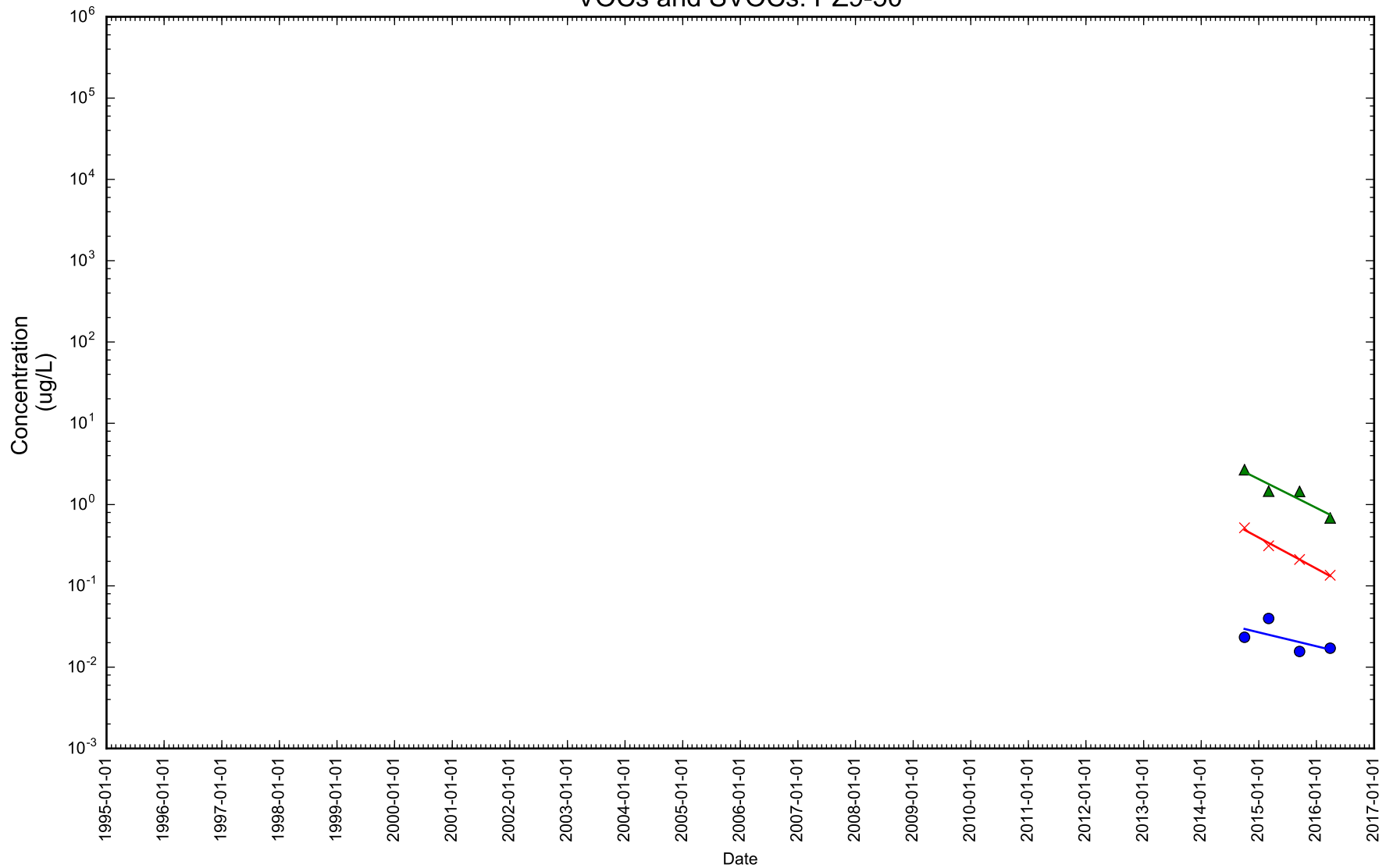


Figure 1-108

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: PZ9-75

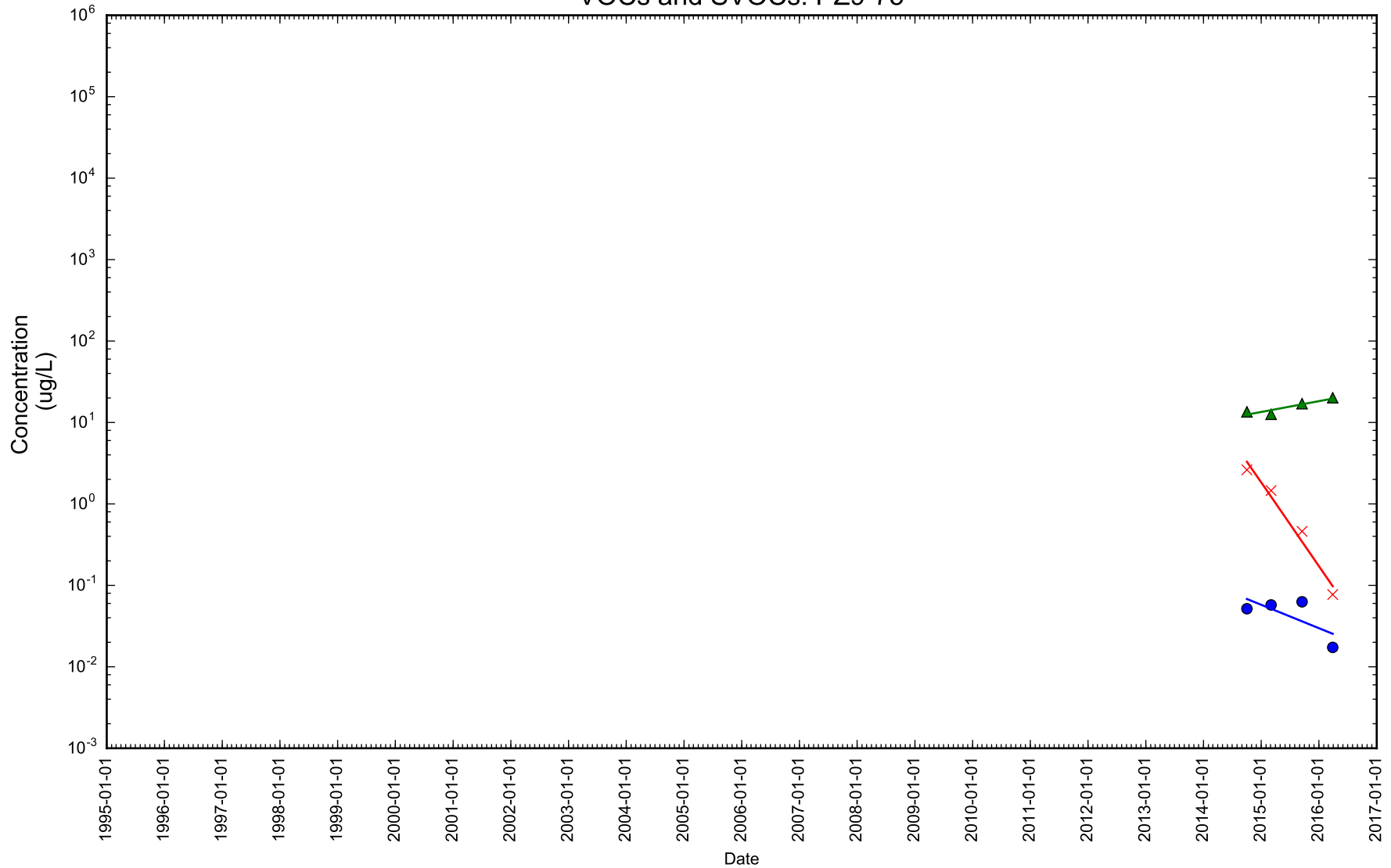


Figure 1-109

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: WS-08-33

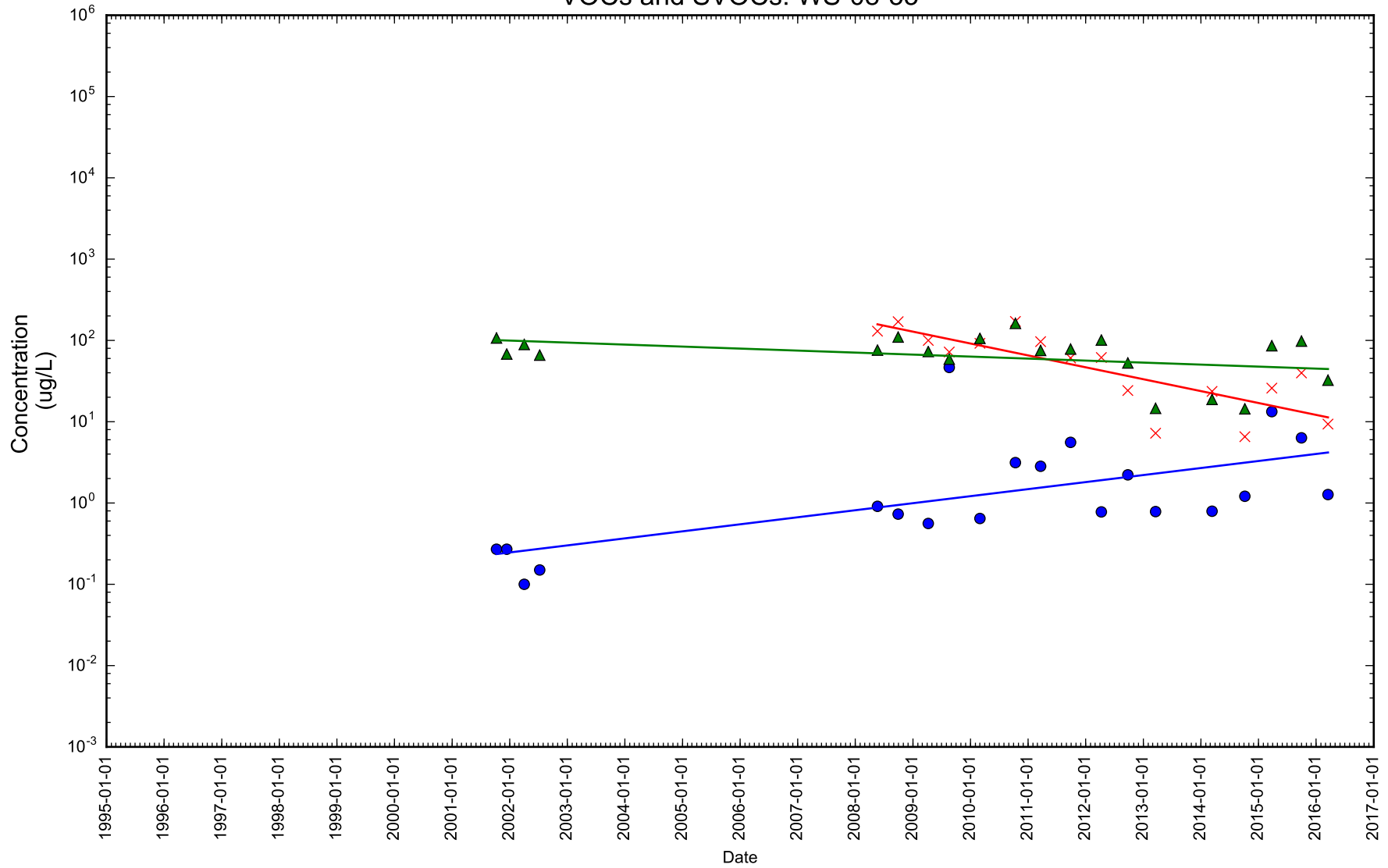


Figure 1-110

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: WS-08-59

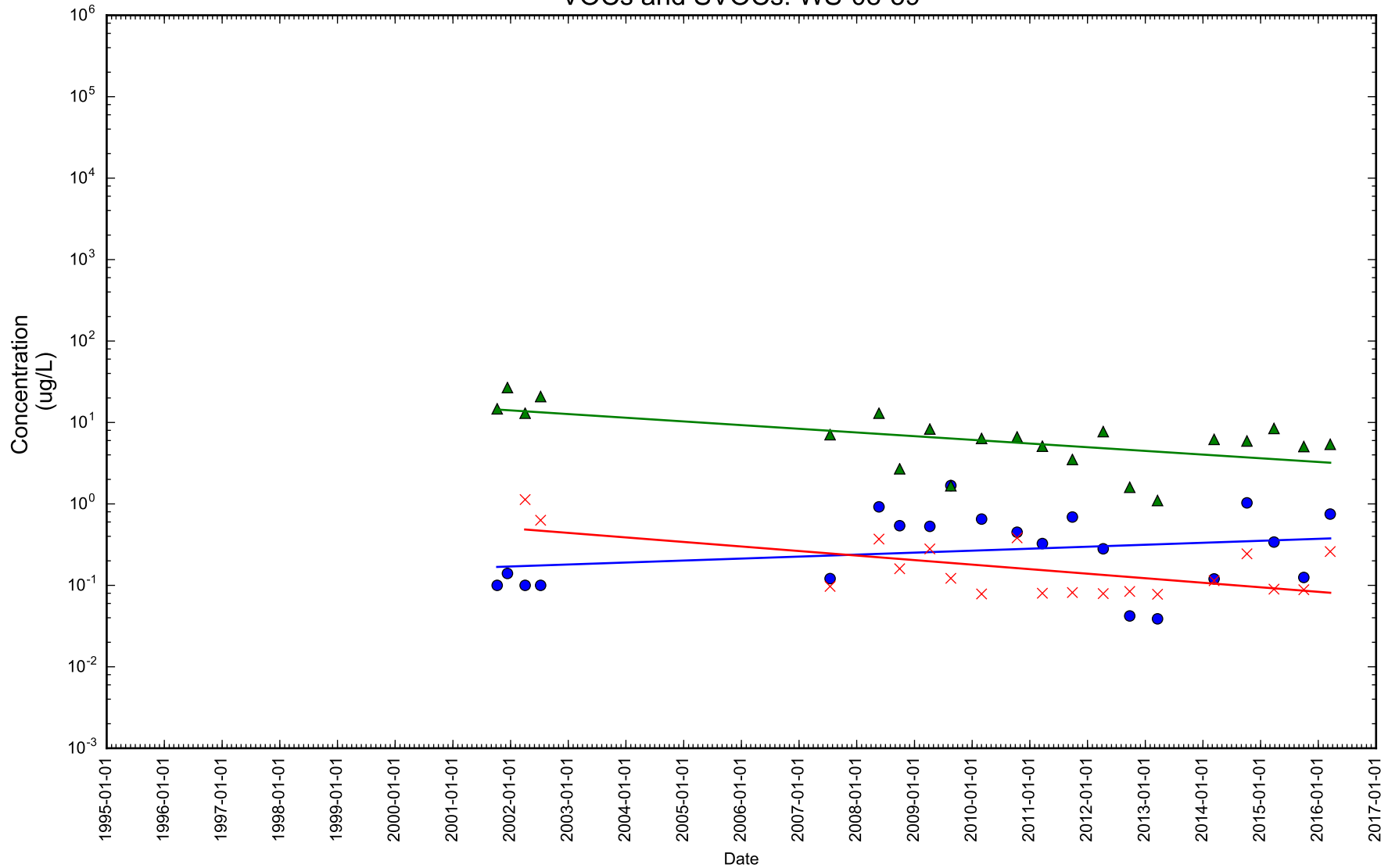


Figure 1-111

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: WS-09-34

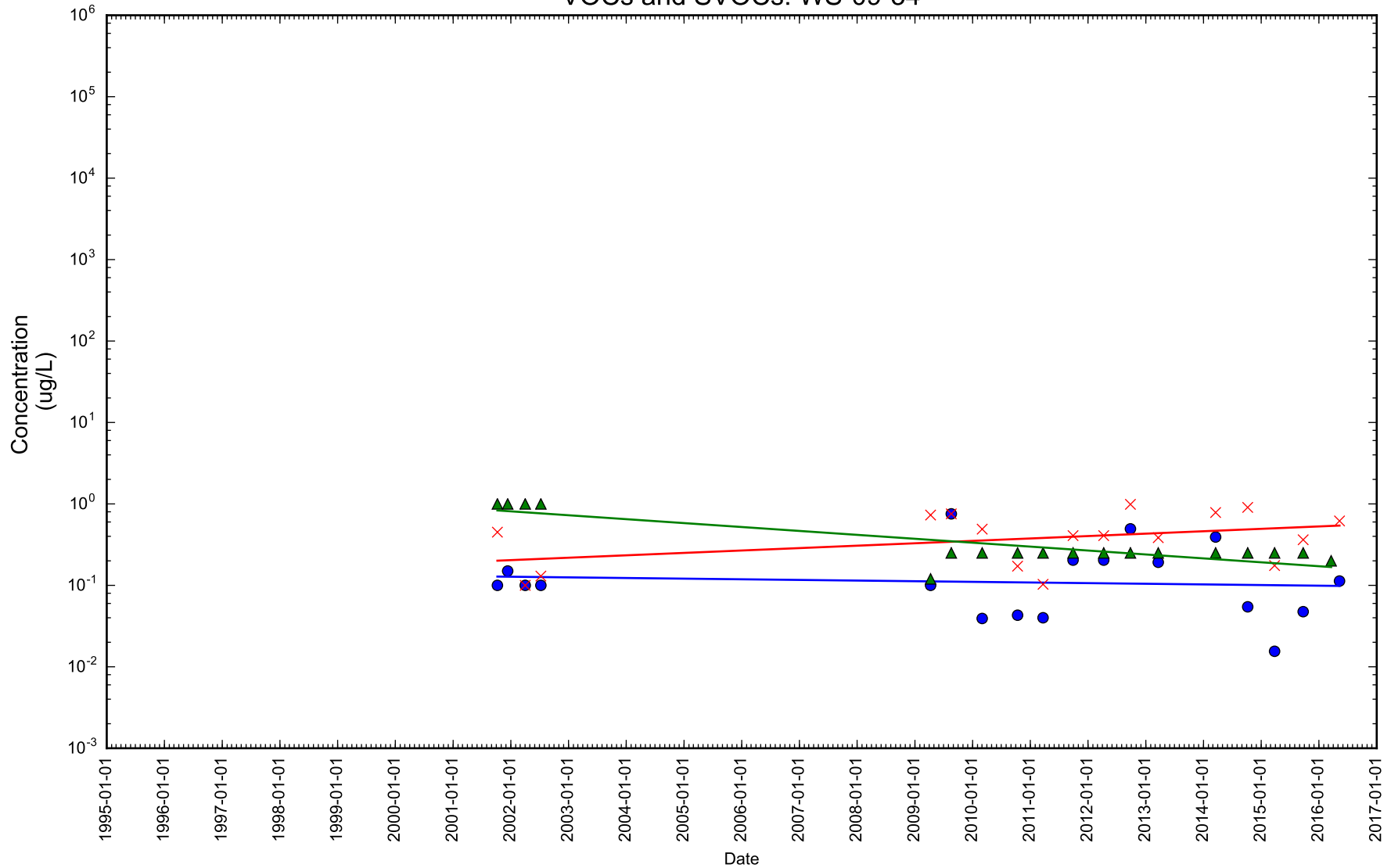


Figure 1-112

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: WS-12-125

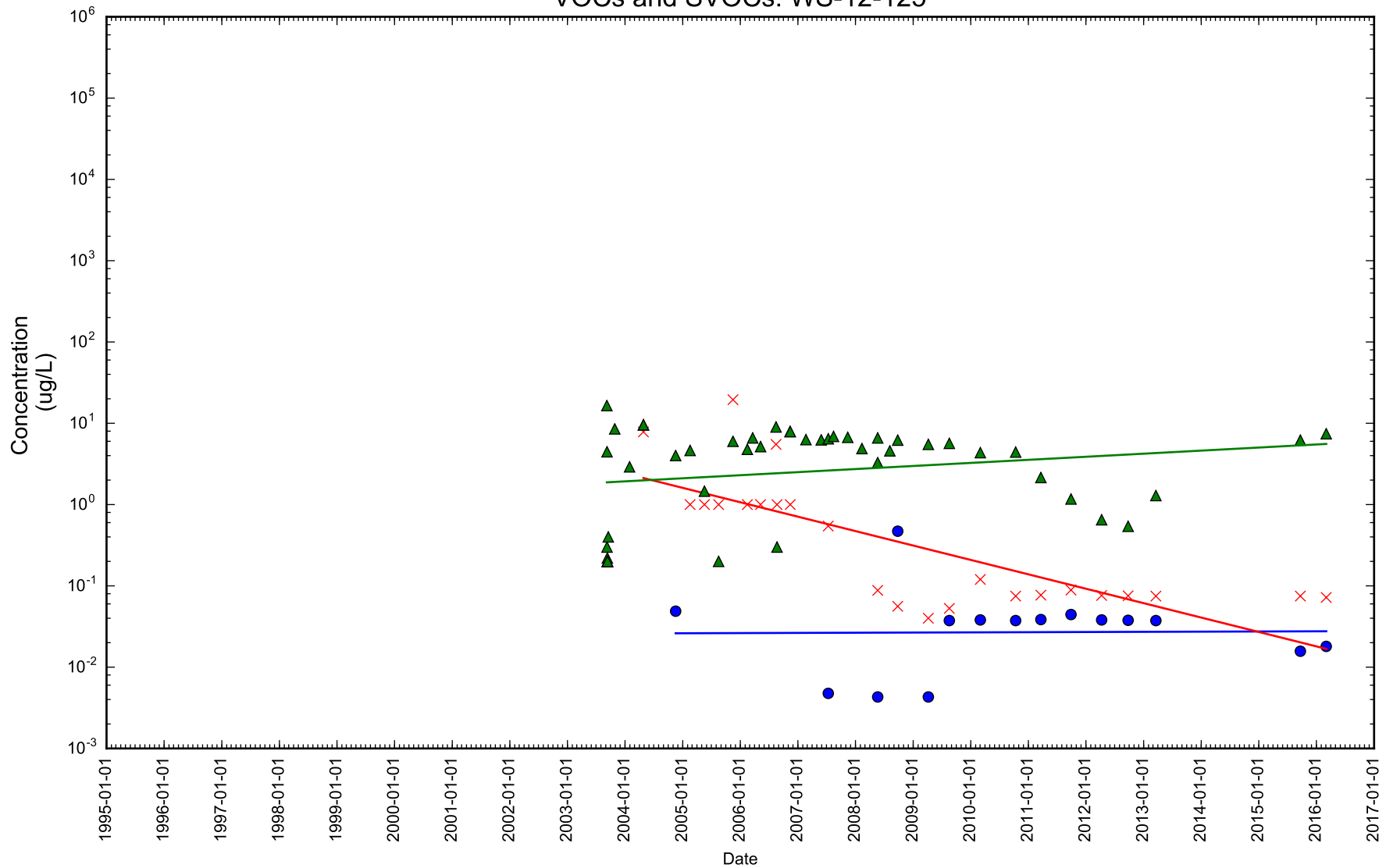


Figure 1-113

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: WS-12-161

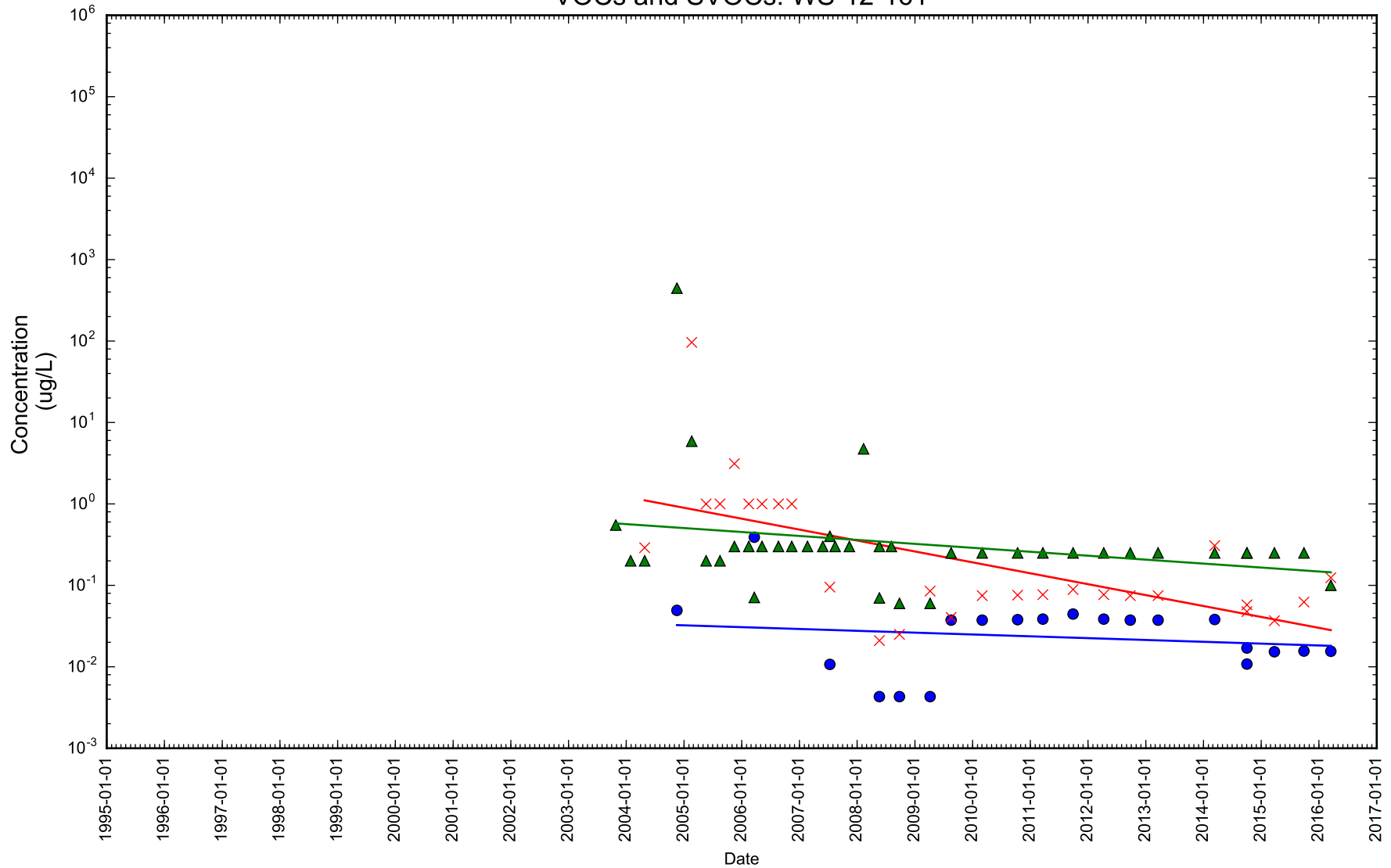


Figure 1-114

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: WS-13-105

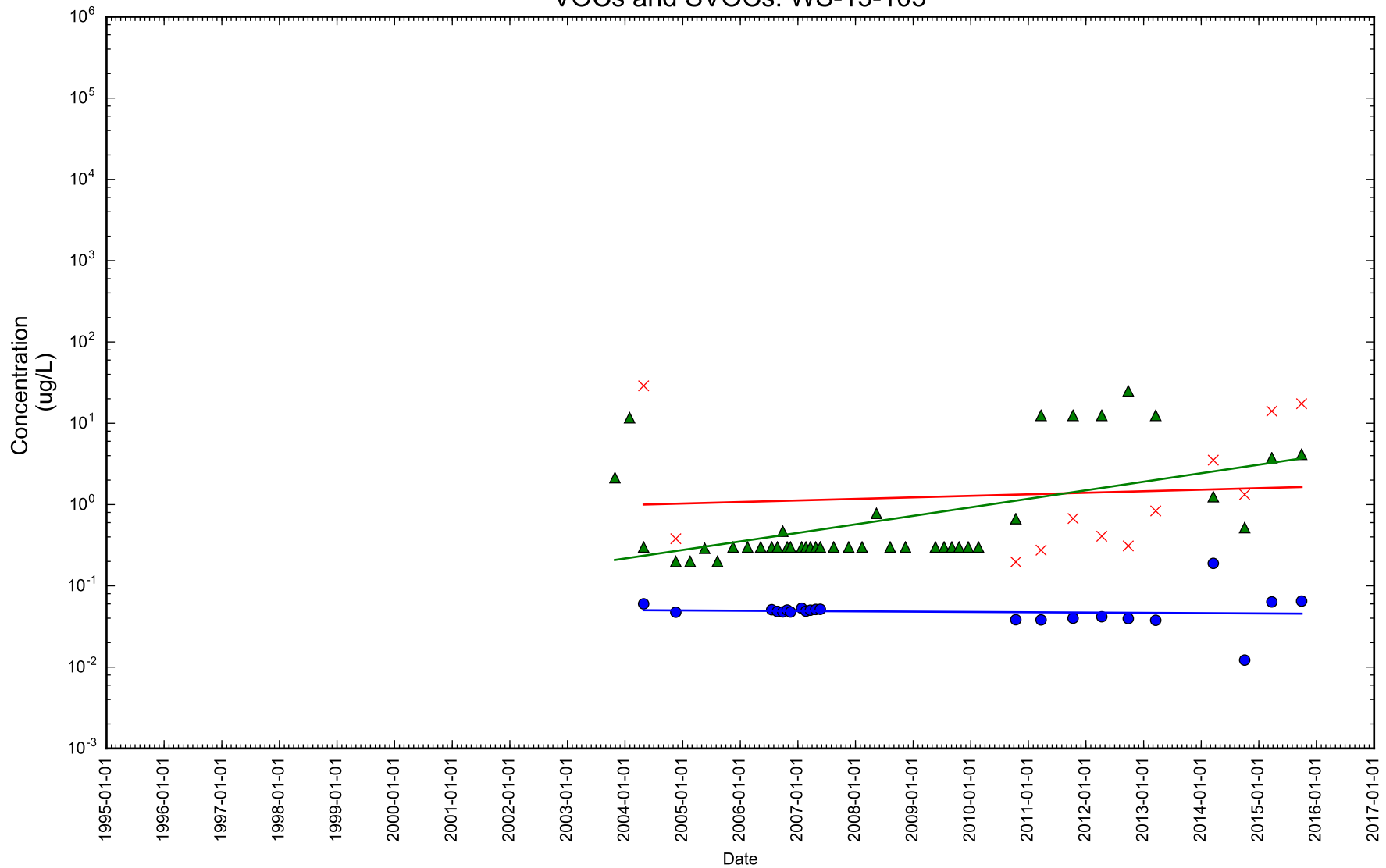


Figure 1-115

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: WS-13-69

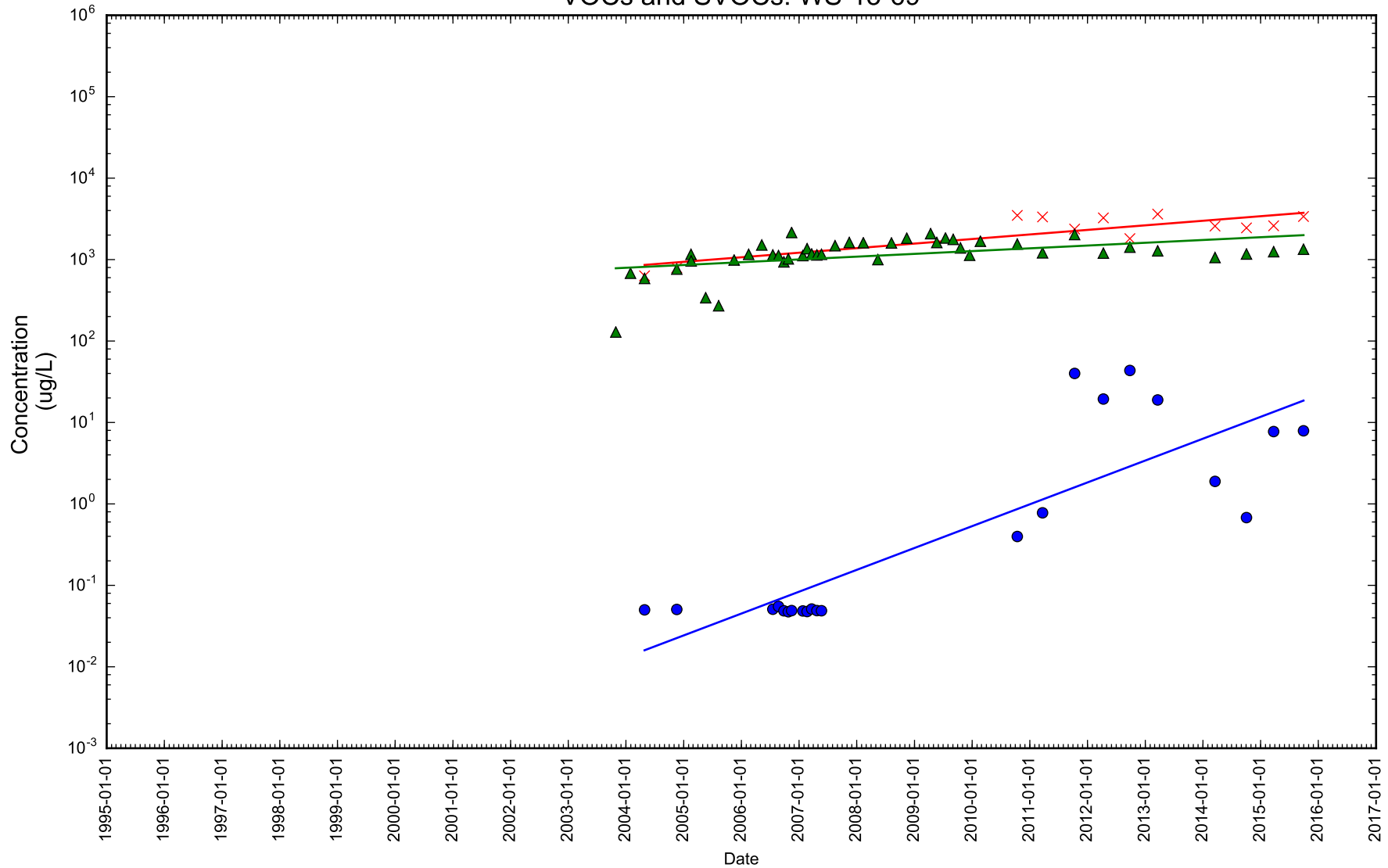


Figure 1-116

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: WS-16-161

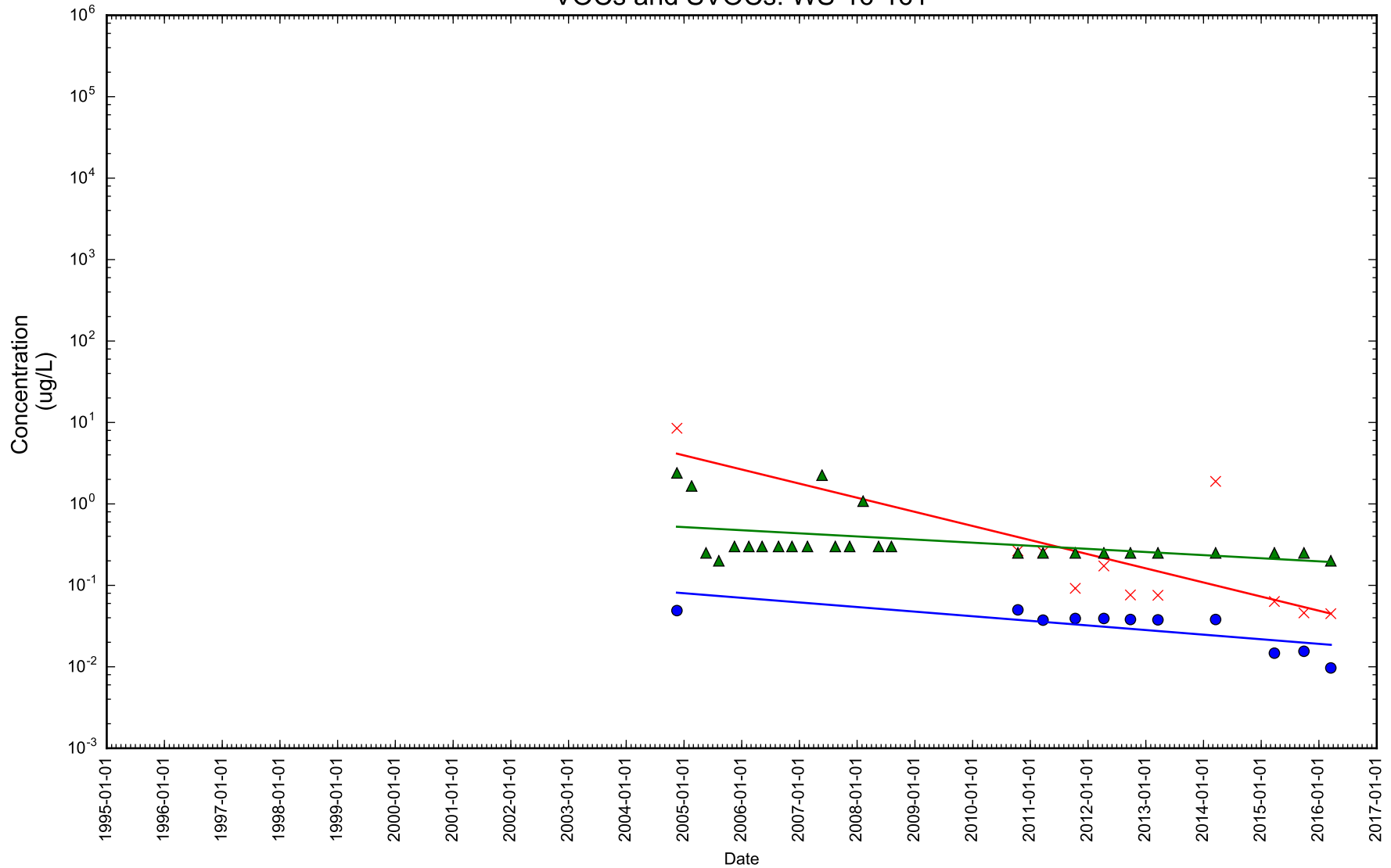


Figure 1-117

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: WS-17-52

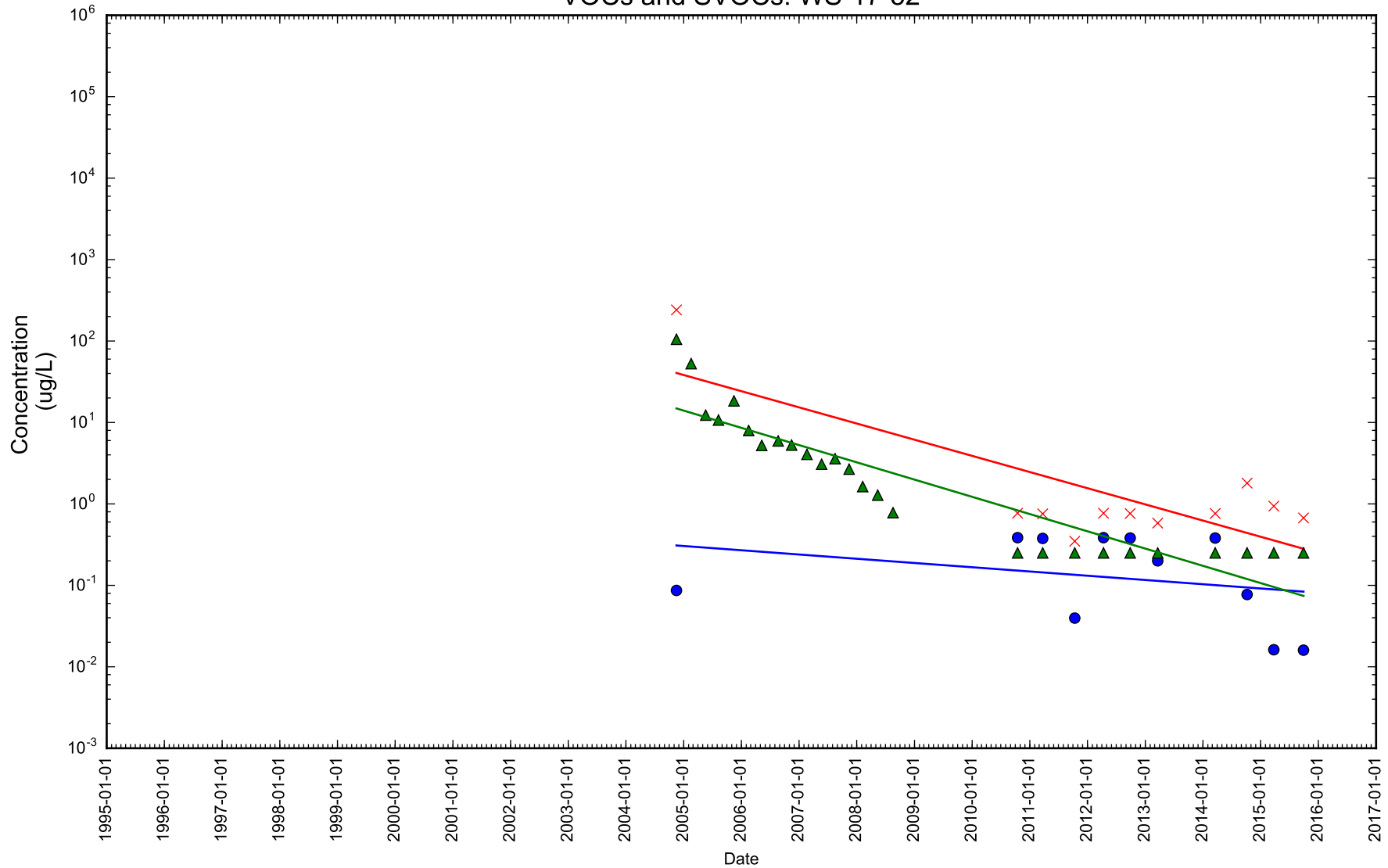


Figure 1-118

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: WS-17-94

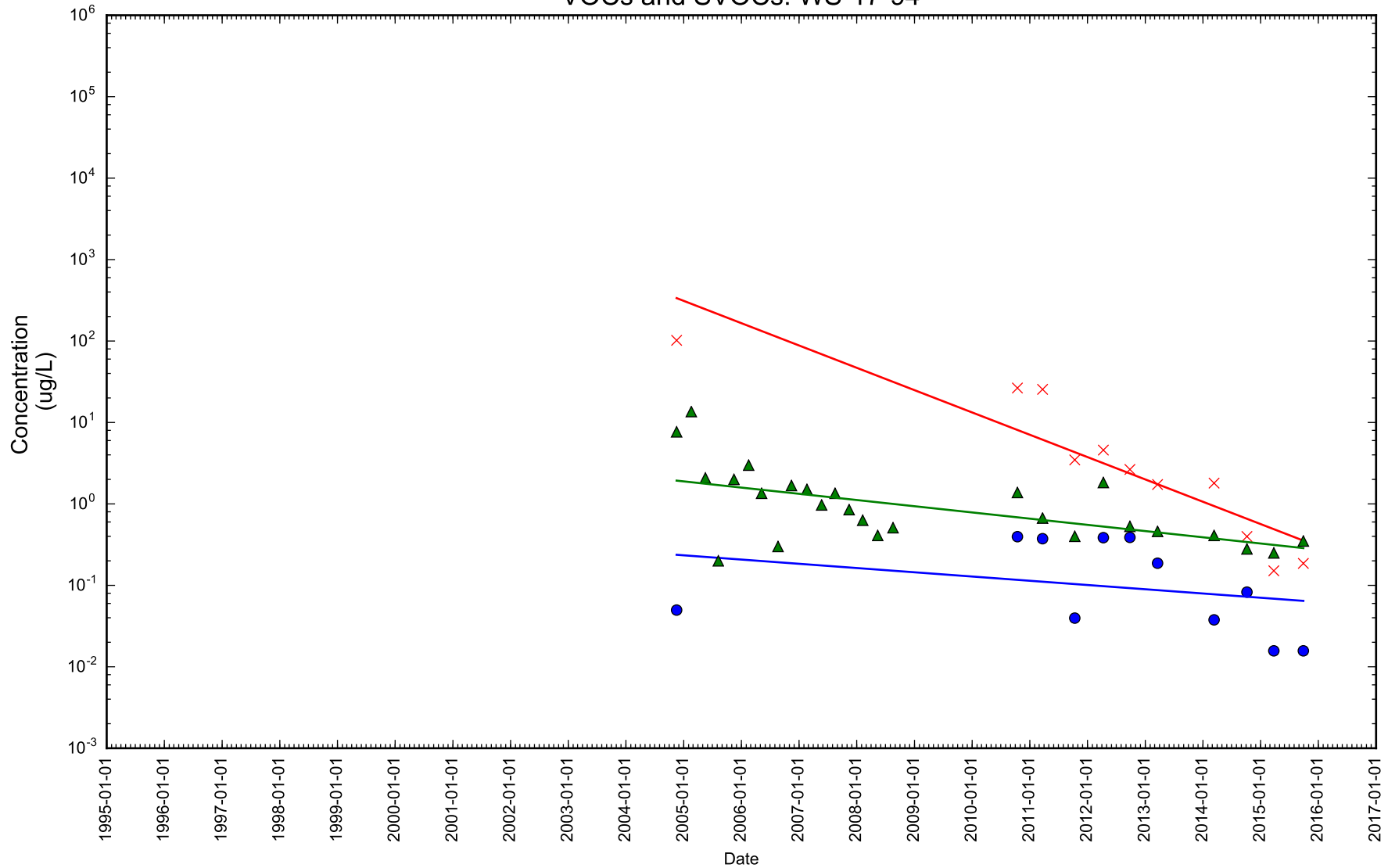


Figure 1-119

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

VOCs and SVOCs: WS-47-183

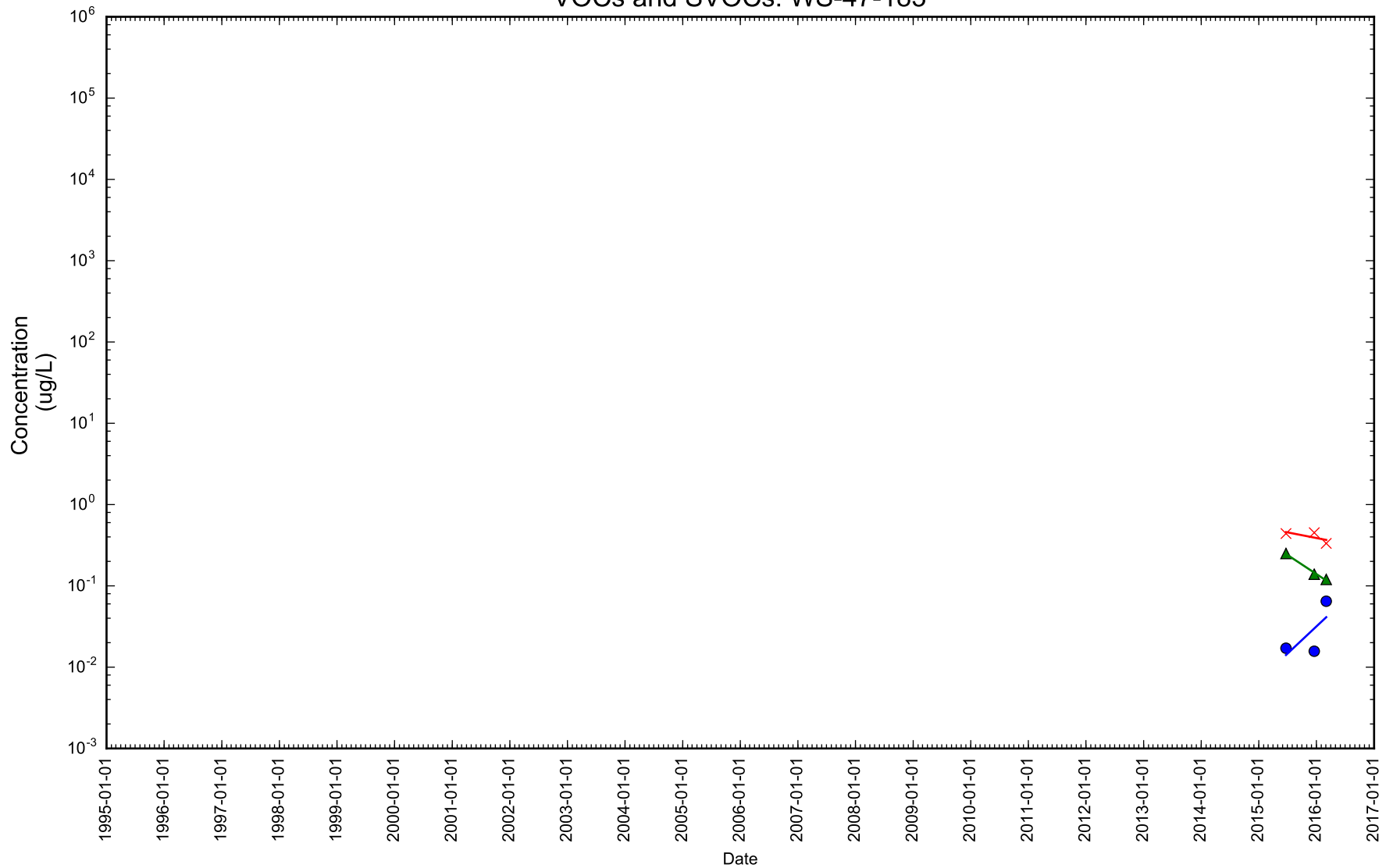


Figure 1-120

Time Series Concentration Plot



- Benzo(a)pyrene
- × Naphthalene
- ▲ Benzene

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-01-22

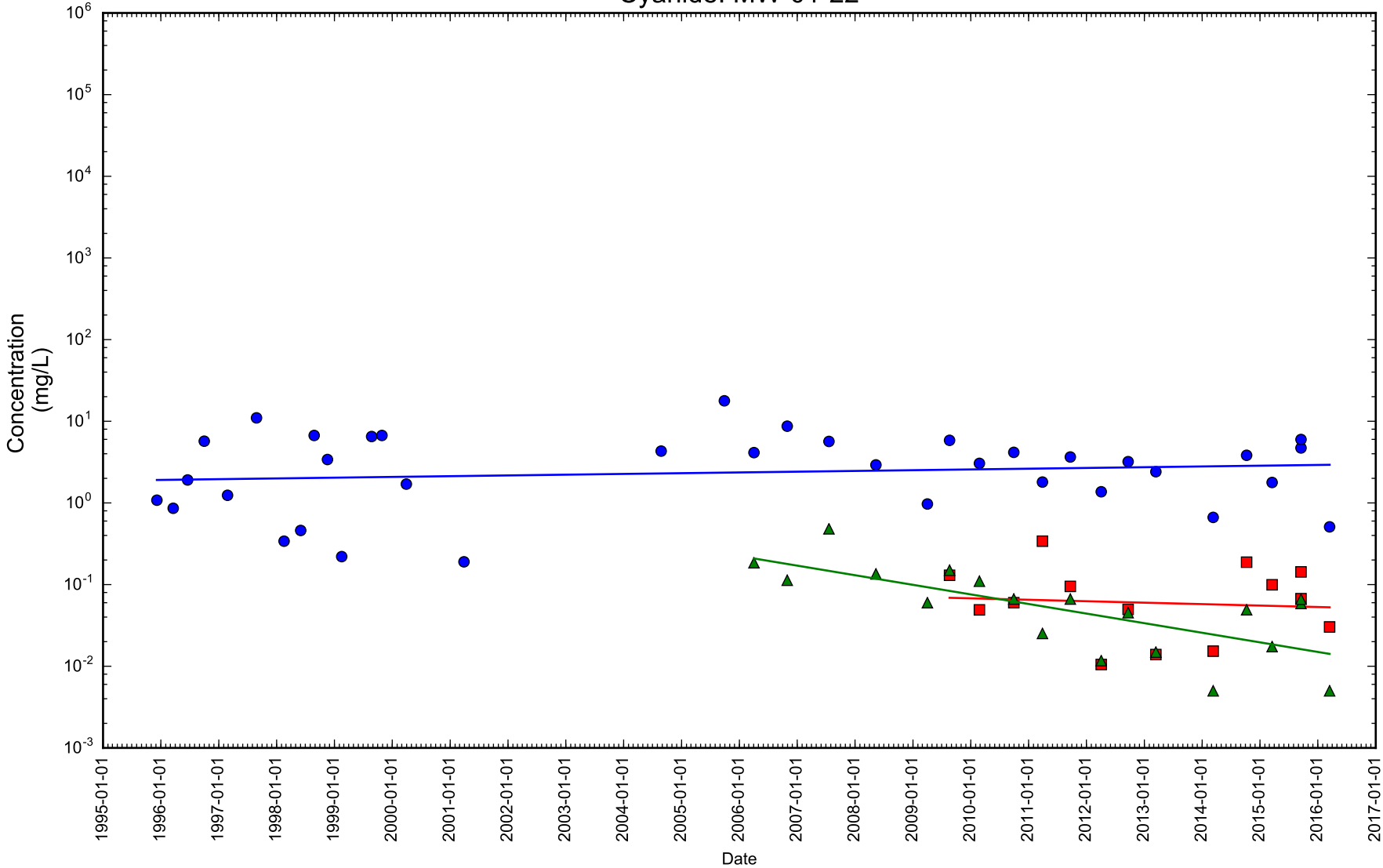


Figure 2-1

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-01-55

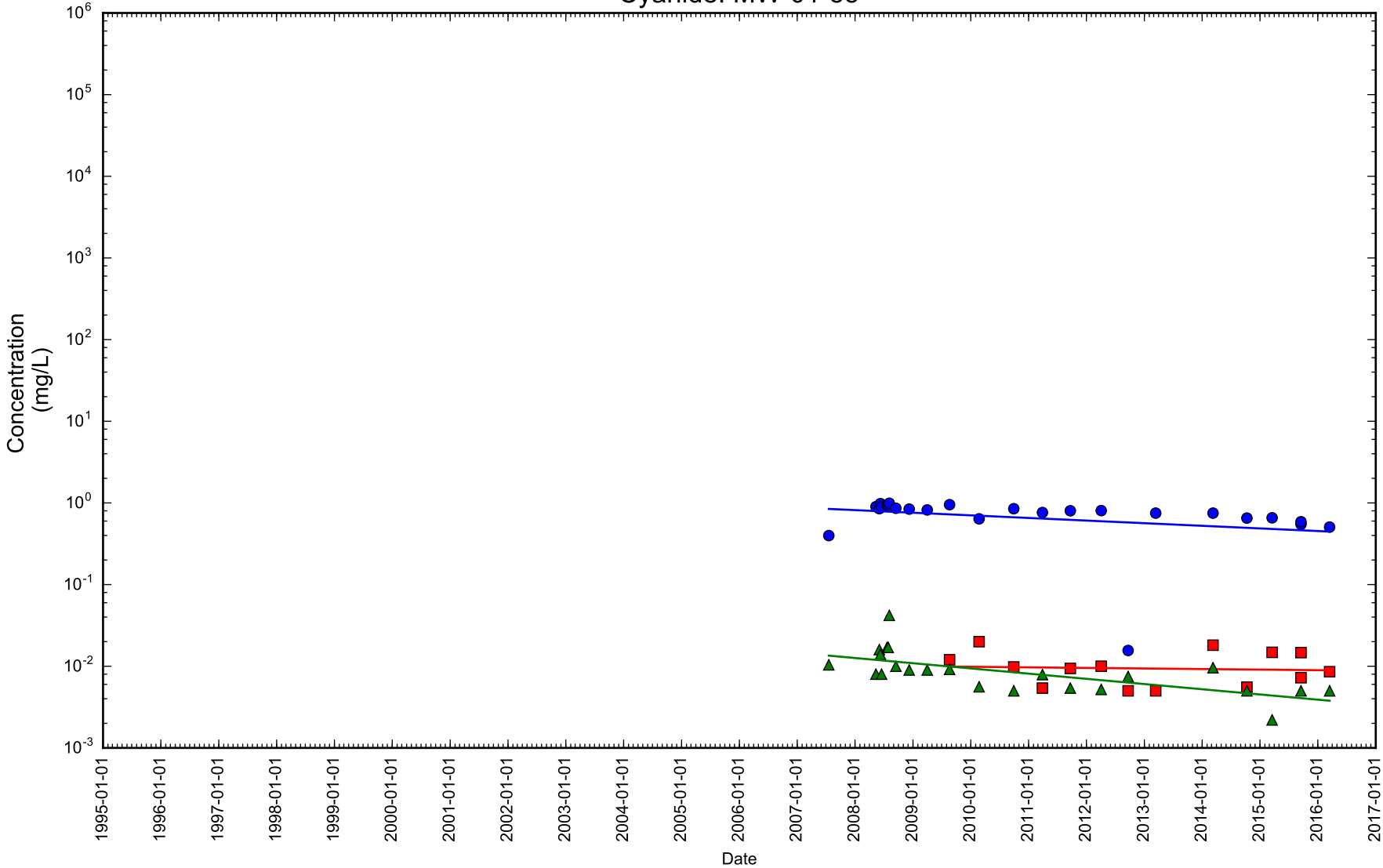


Figure 2-2

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-01-82

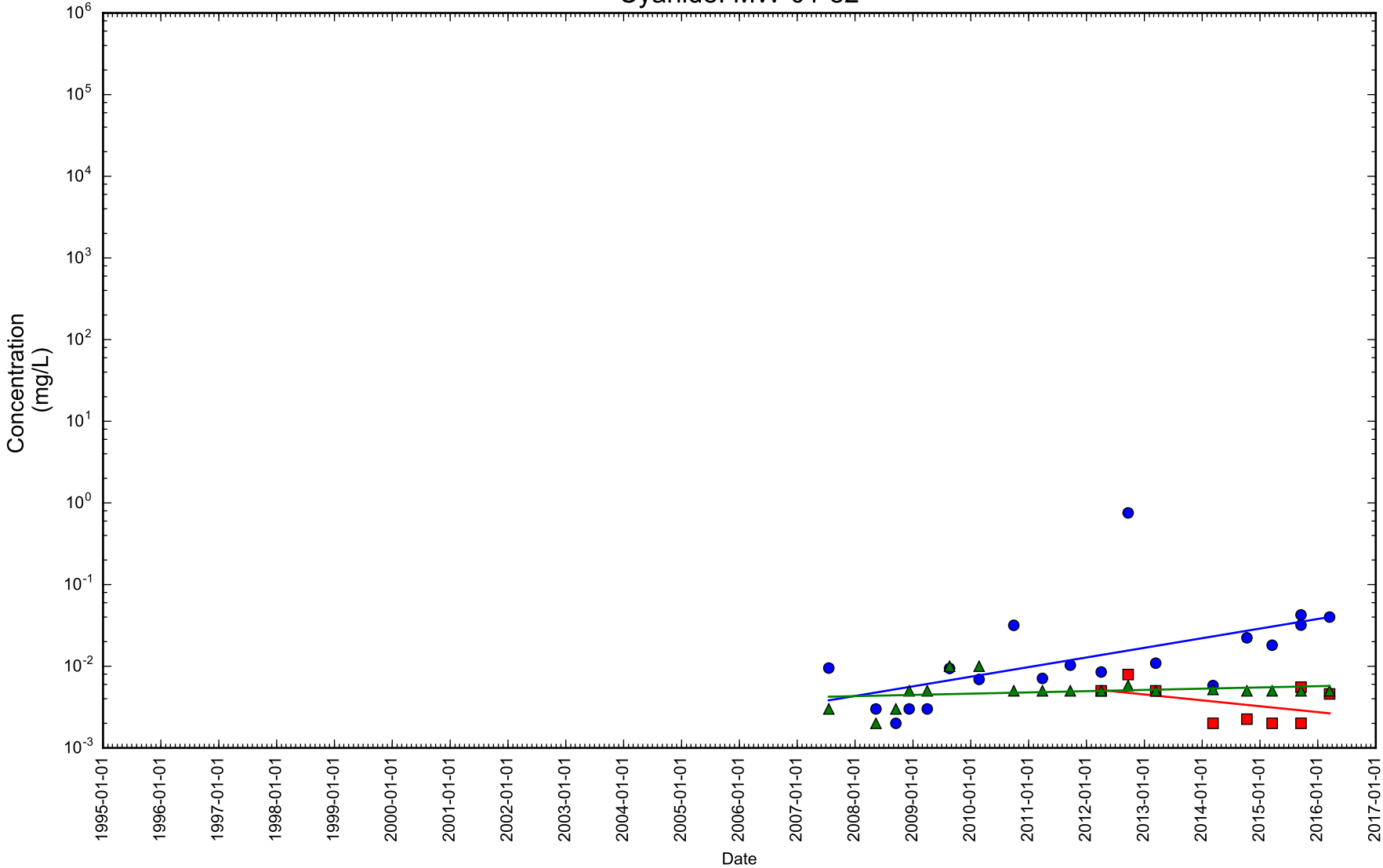


Figure 2-3

Time Series Concentration Plot

- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.



Cyanide: MW-02-104

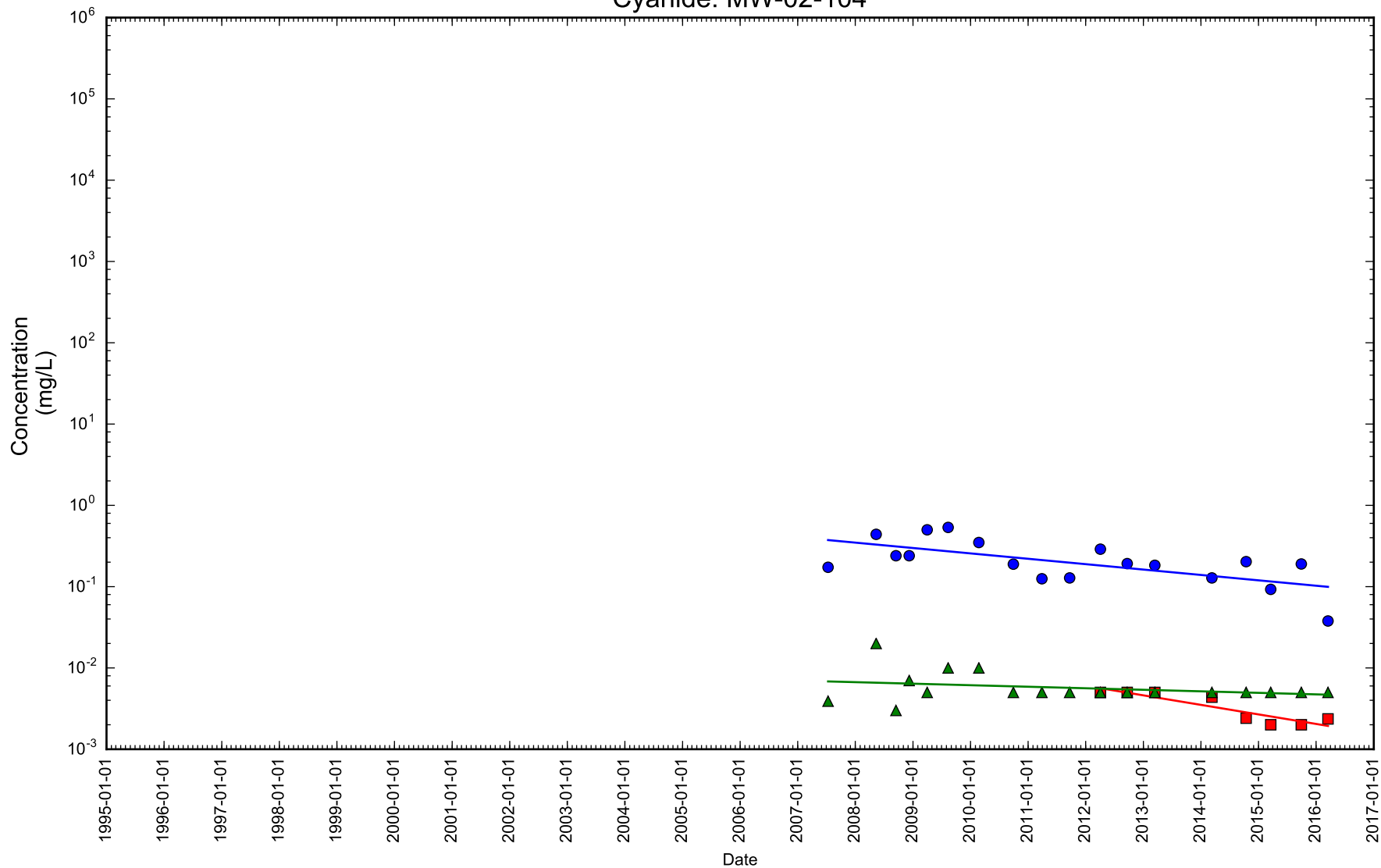


Figure 2-4

Time Series Concentration Plot

- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.



Cyanide: MW-02-32

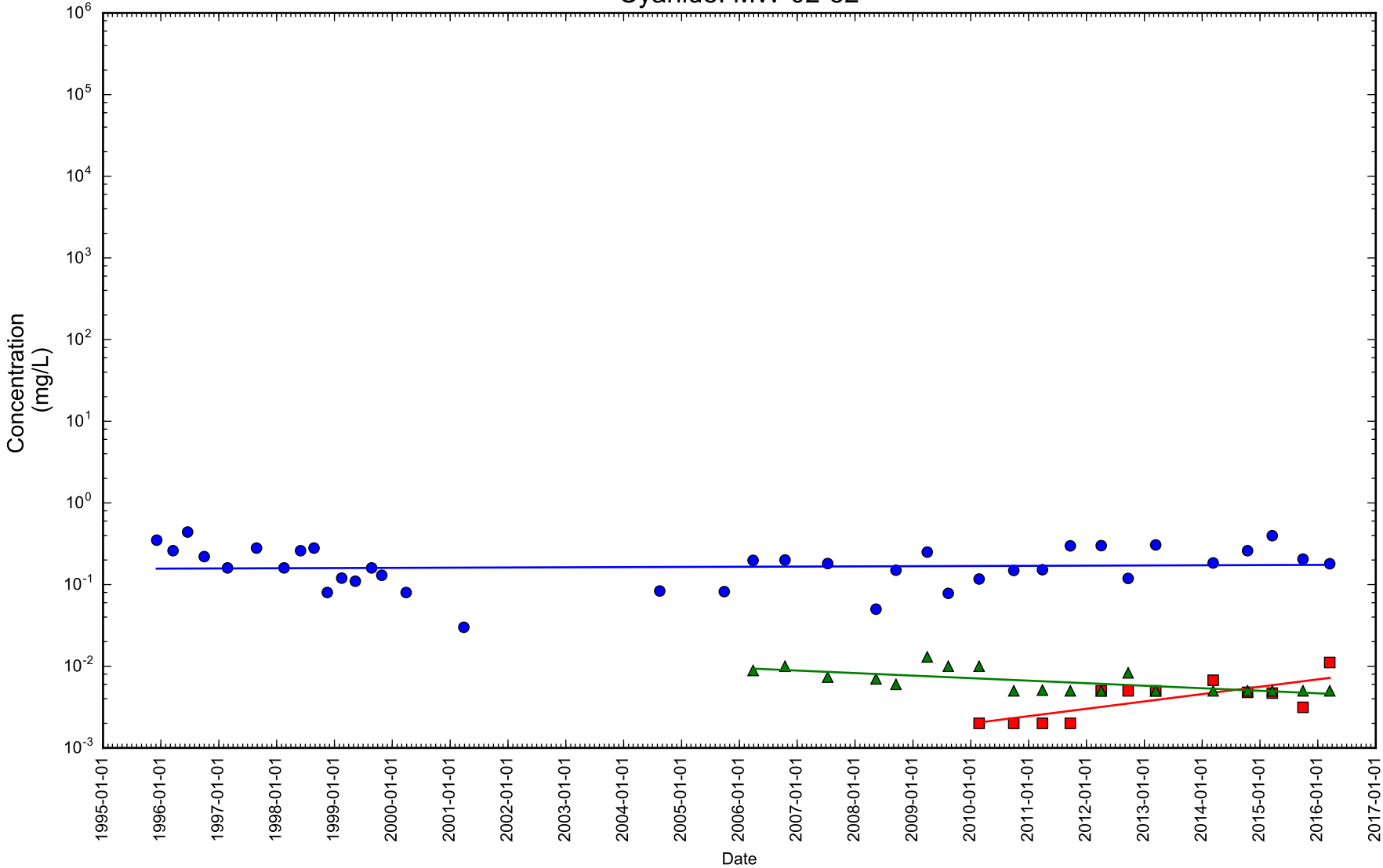


Figure 2-5

Time Series Concentration Plot



● Cyanide ■ Cyanide, available ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-02-61

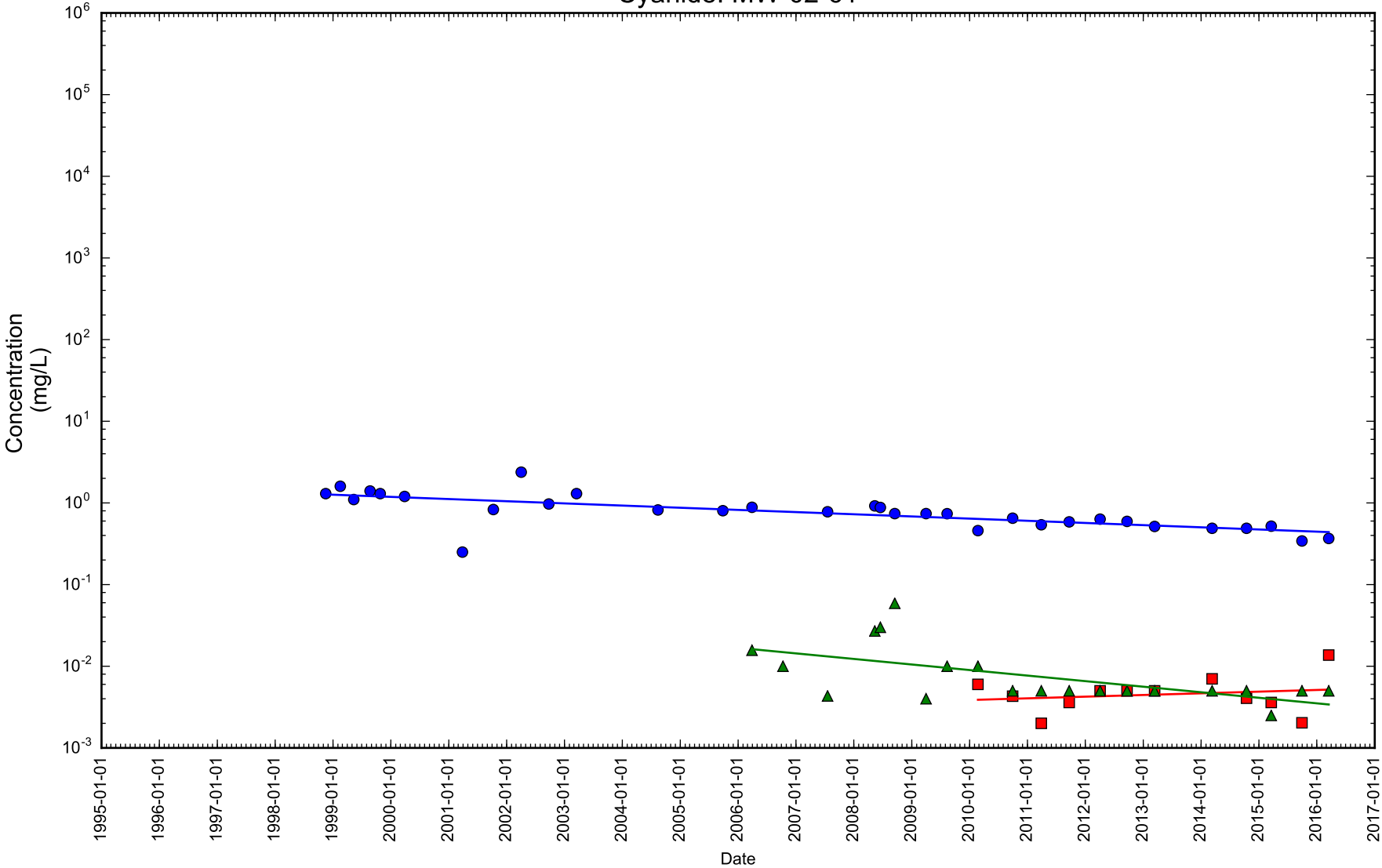


Figure 2-6

Time Series Concentration Plot

- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.



Cyanide: MW-03-26

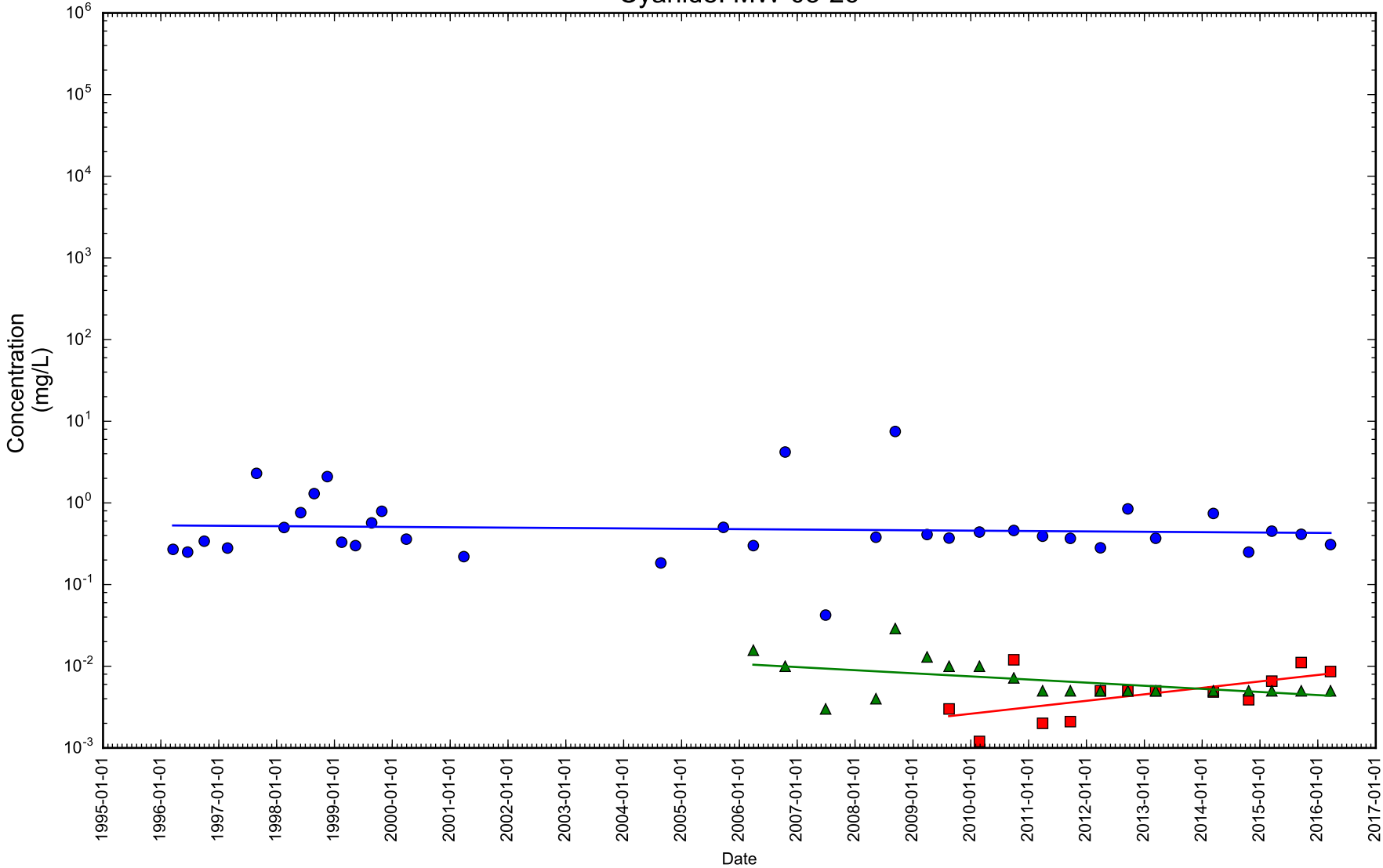


Figure 2-7

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-03-56

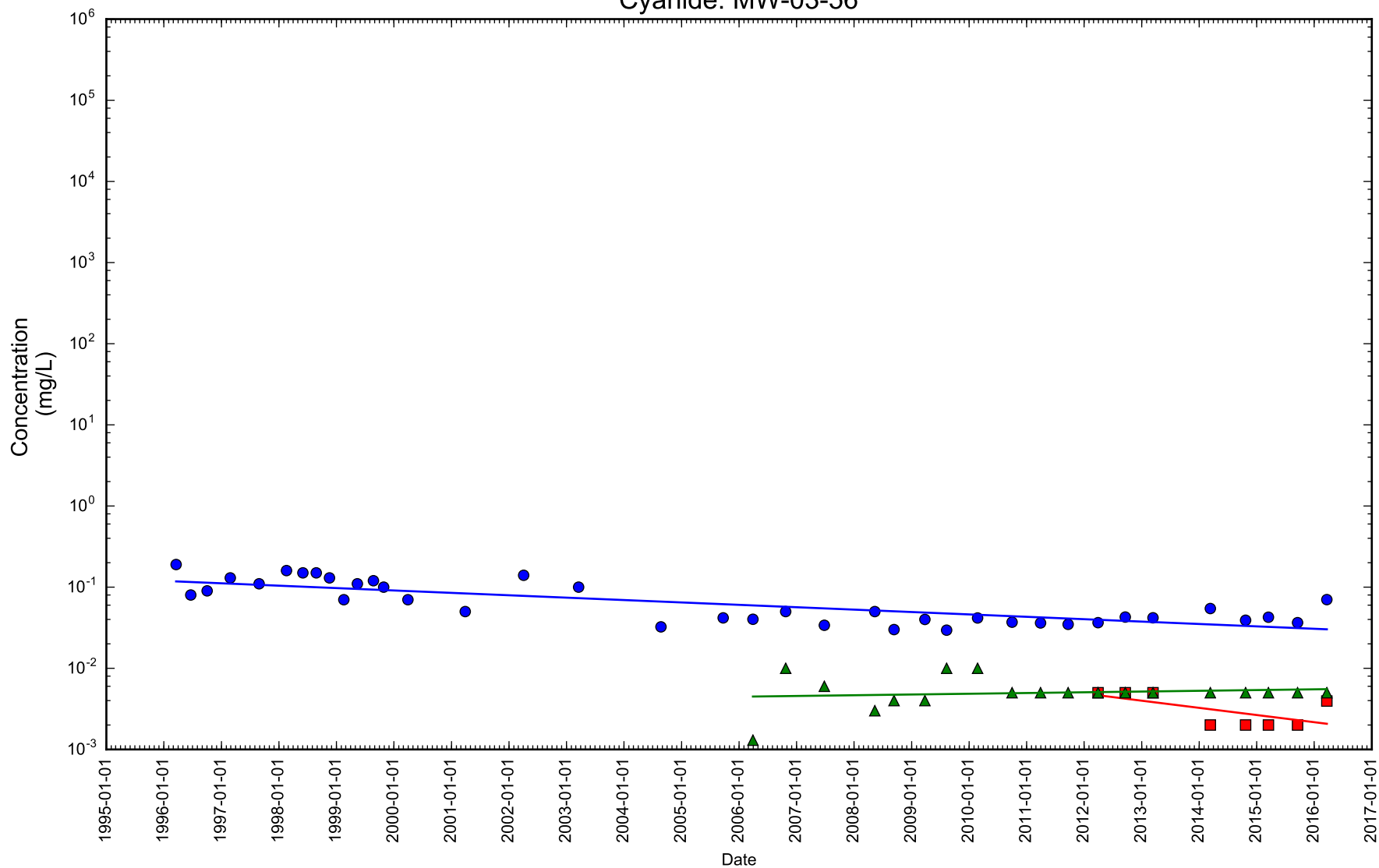


Figure 2-8

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-04-101

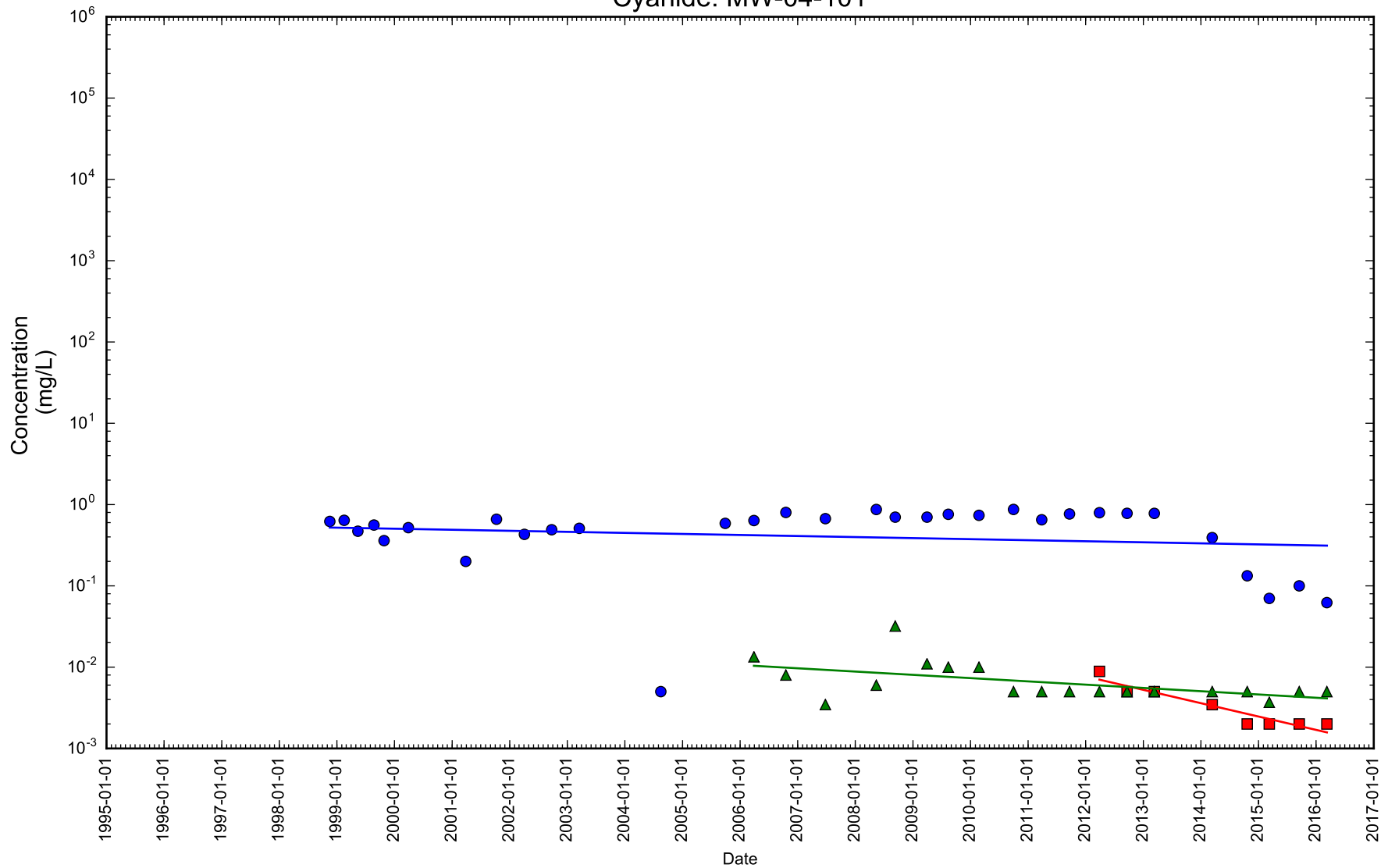


Figure 2-9

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-04-35

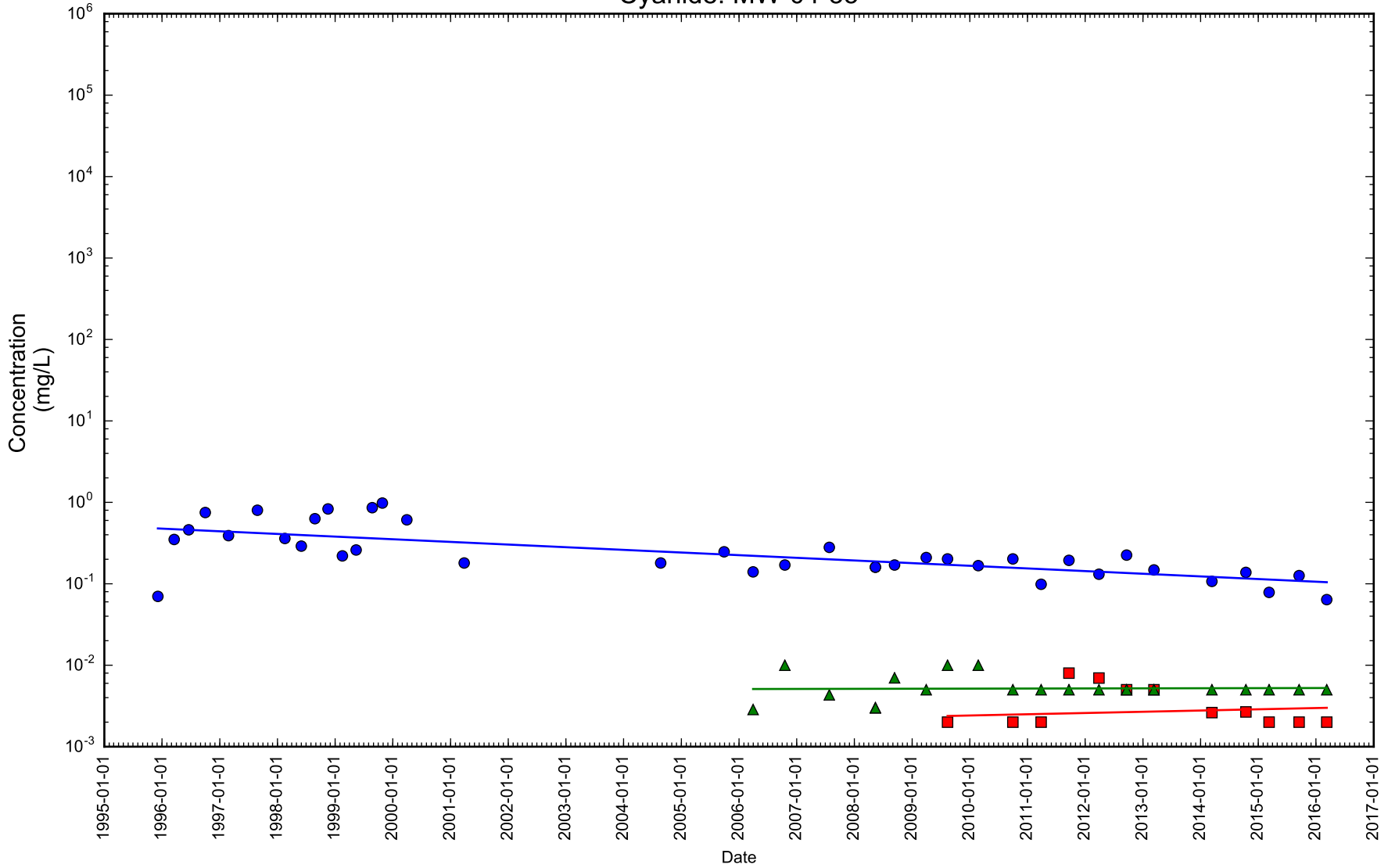


Figure 2-10

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-04-57

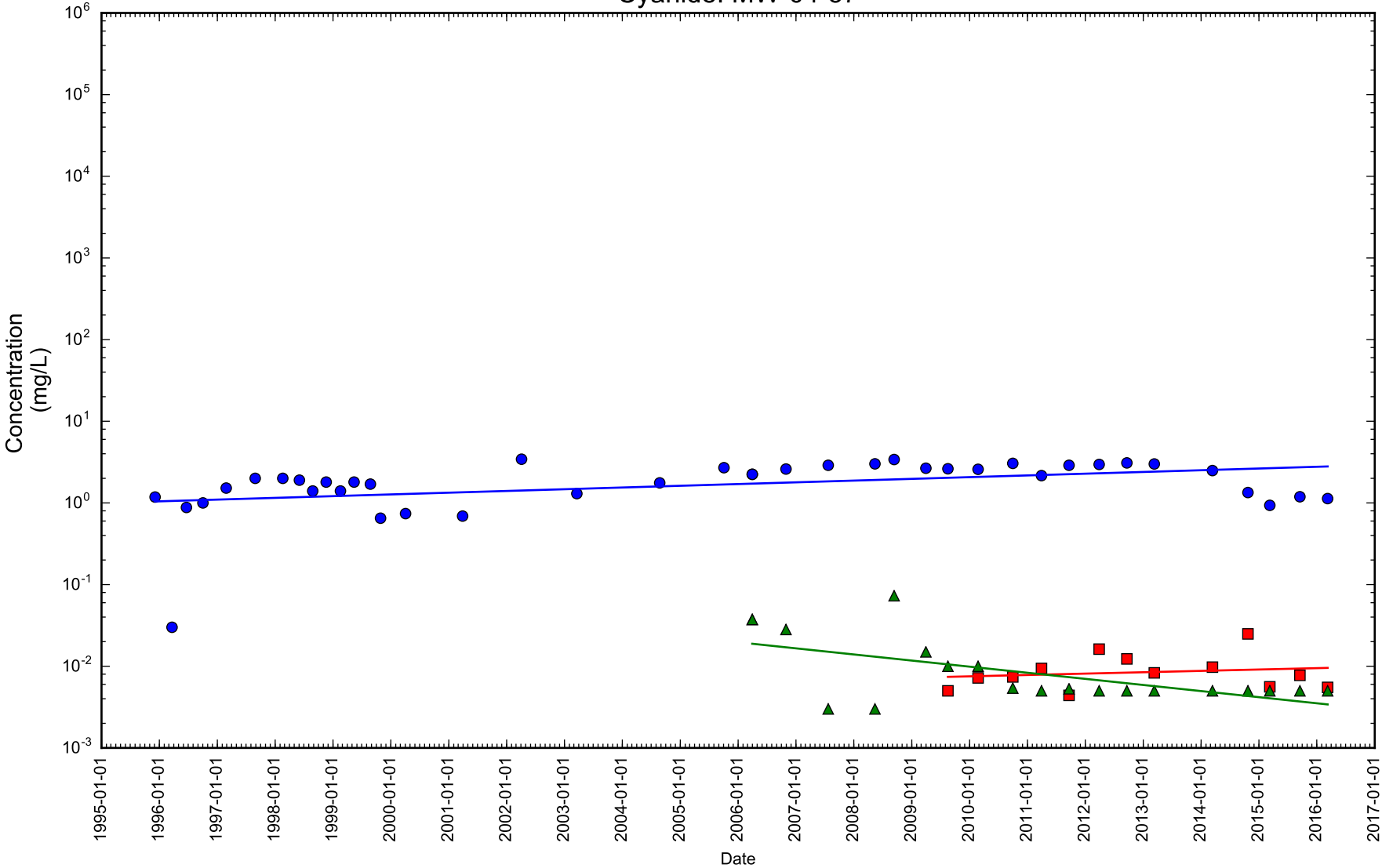


Figure 2-11

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-05-100

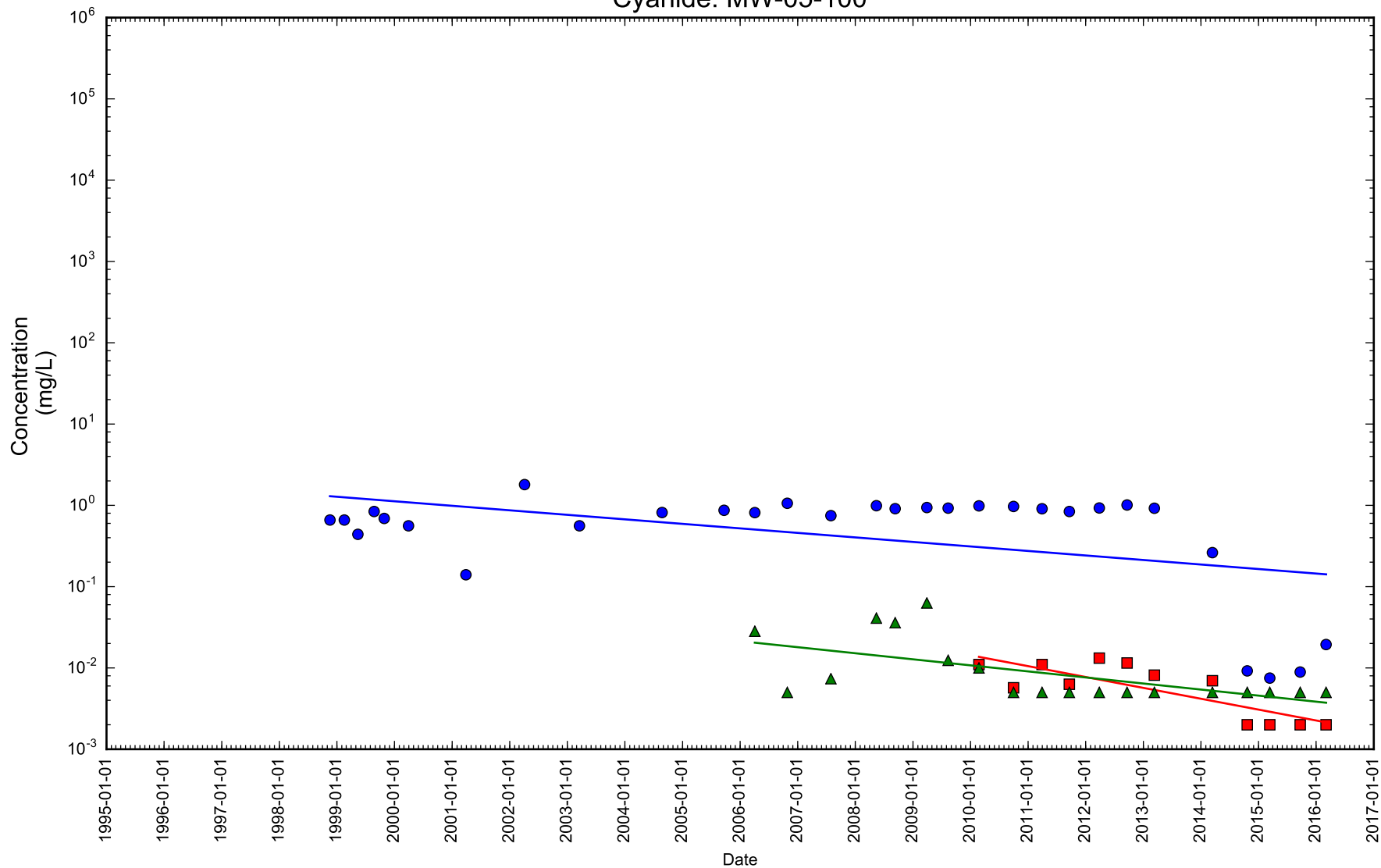


Figure 2-12

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-05-175

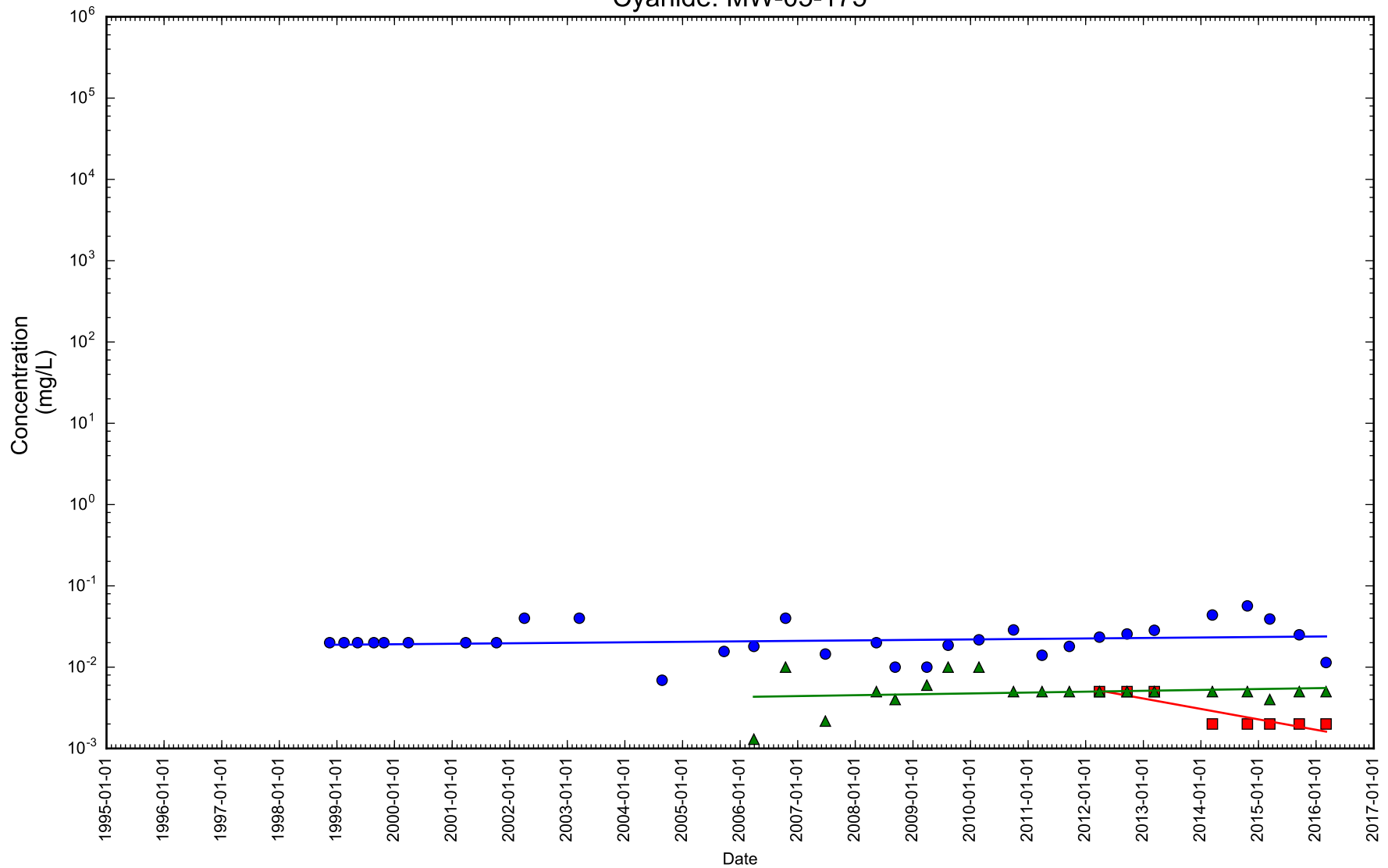


Figure 2-13

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-05-32

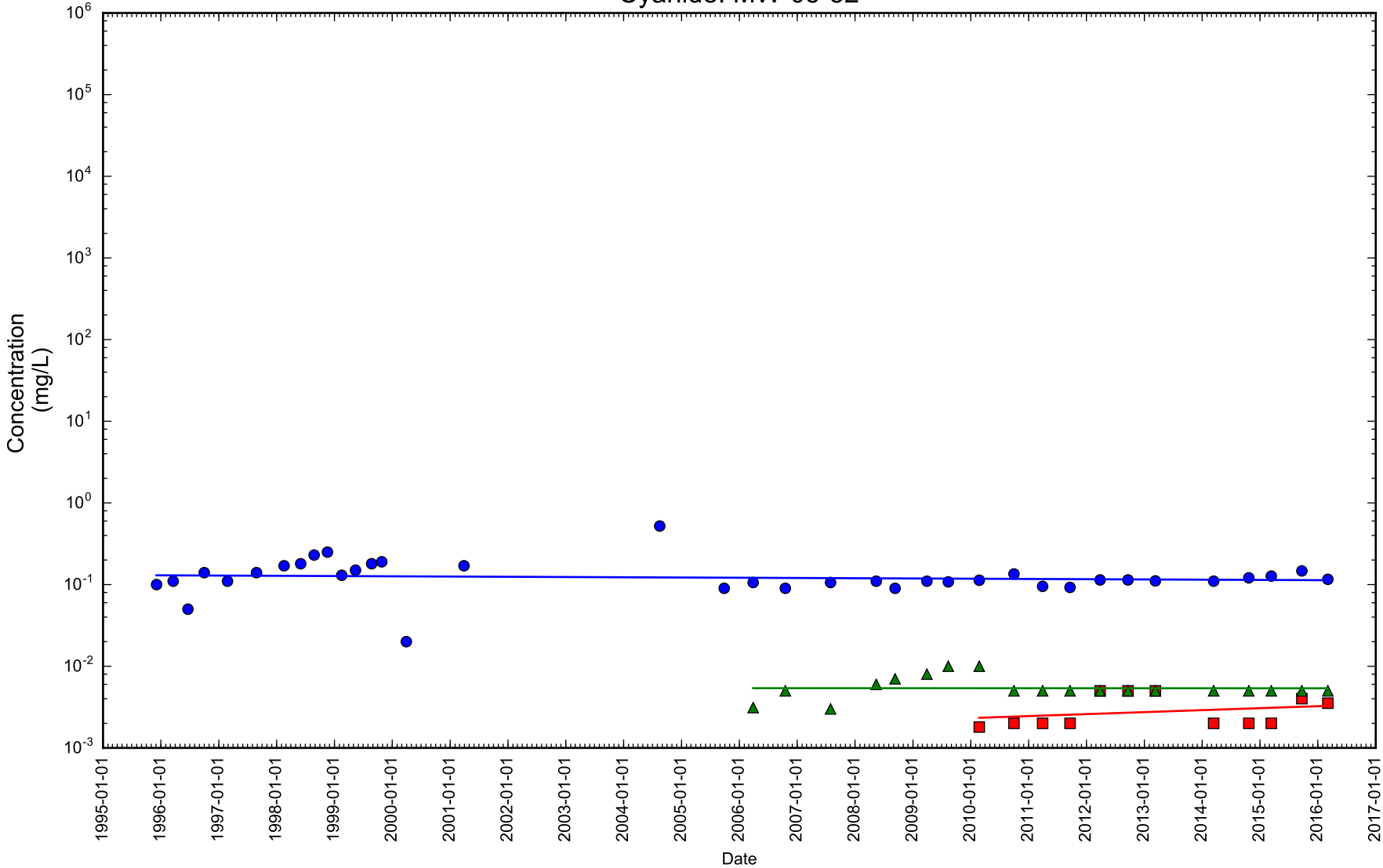


Figure 2-14

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-07-60

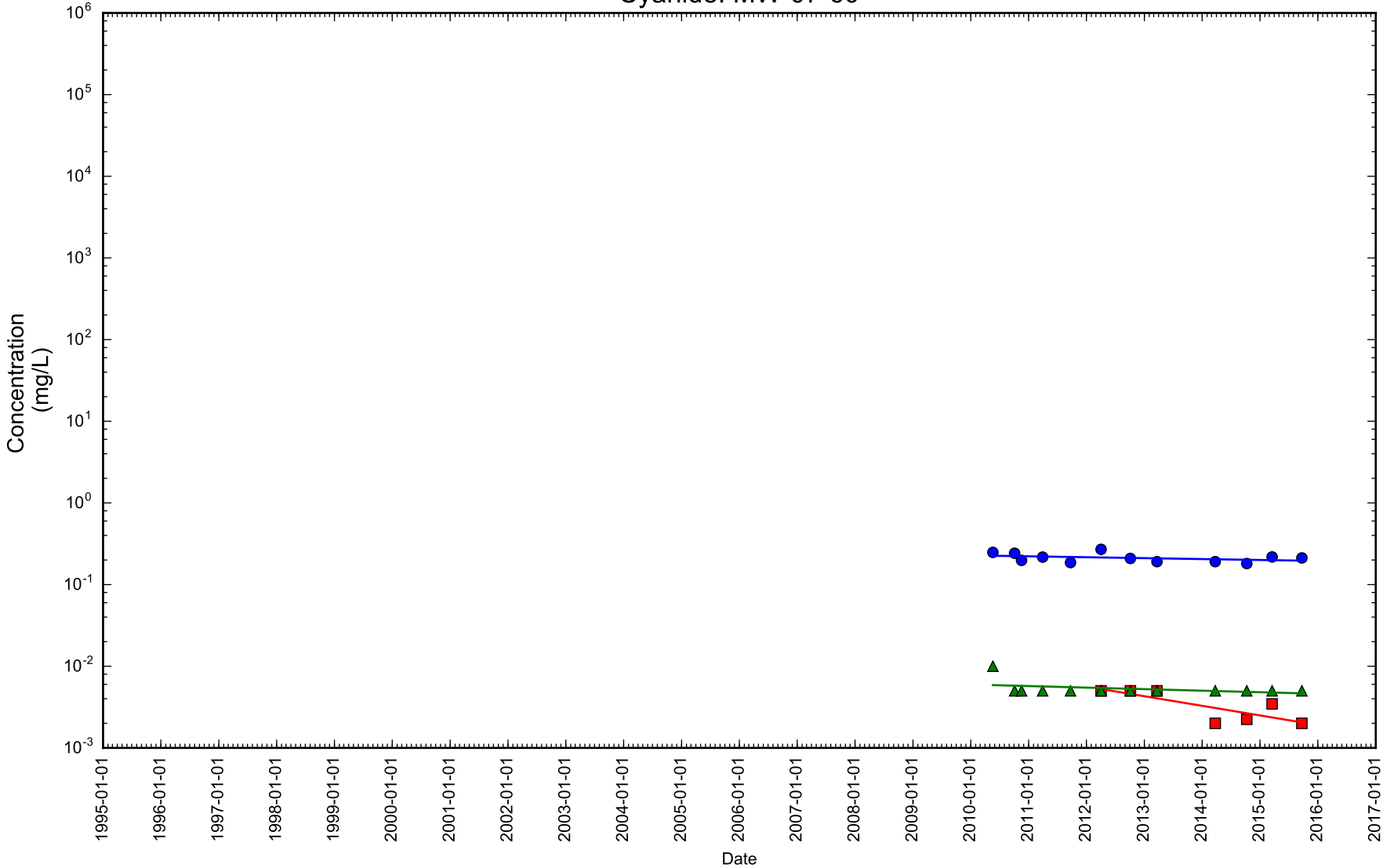


Figure 2-15

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-08-29

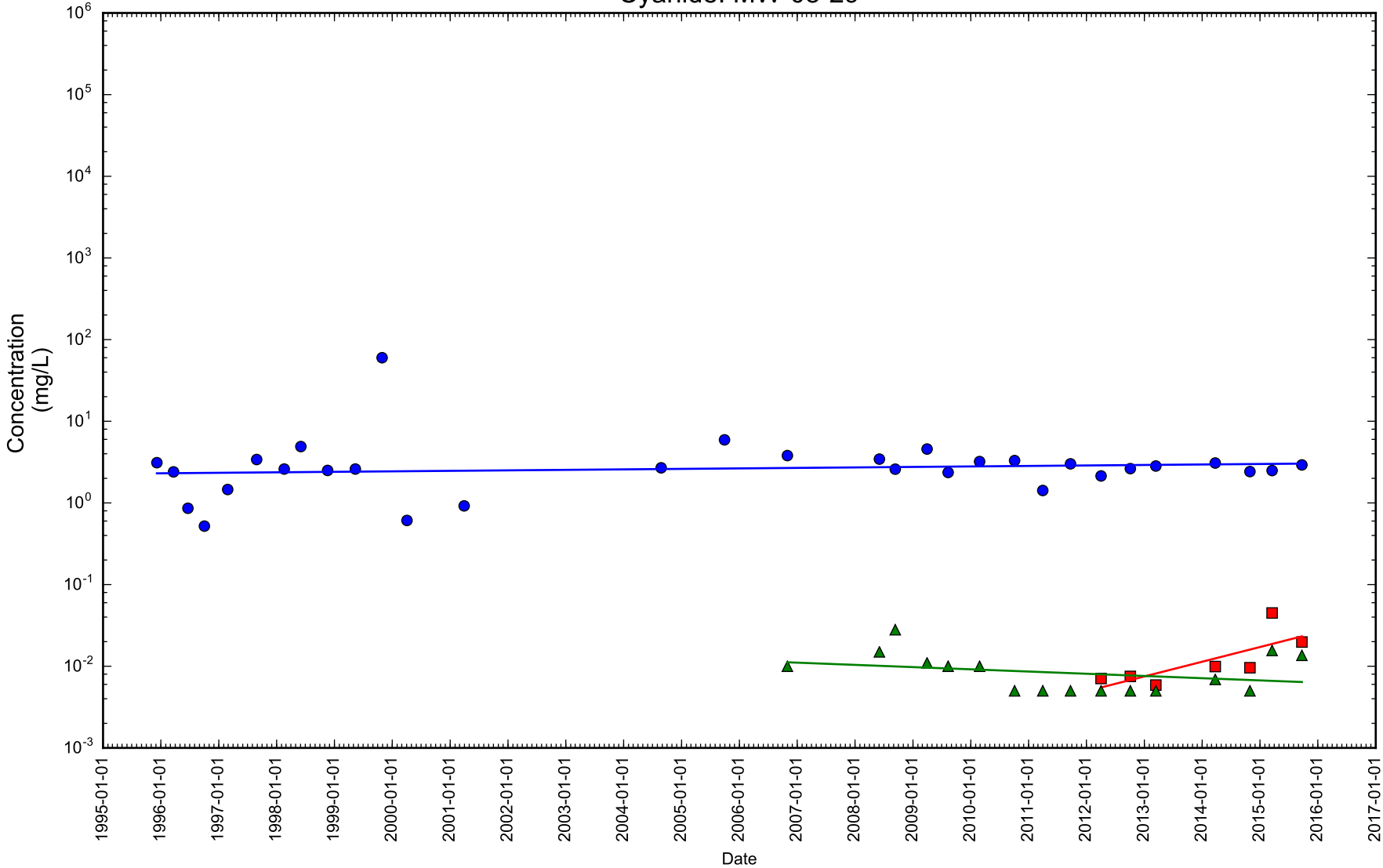


Figure 2-16

Time Series Concentration Plot



● Cyanide ■ Cyanide, available ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-08-56

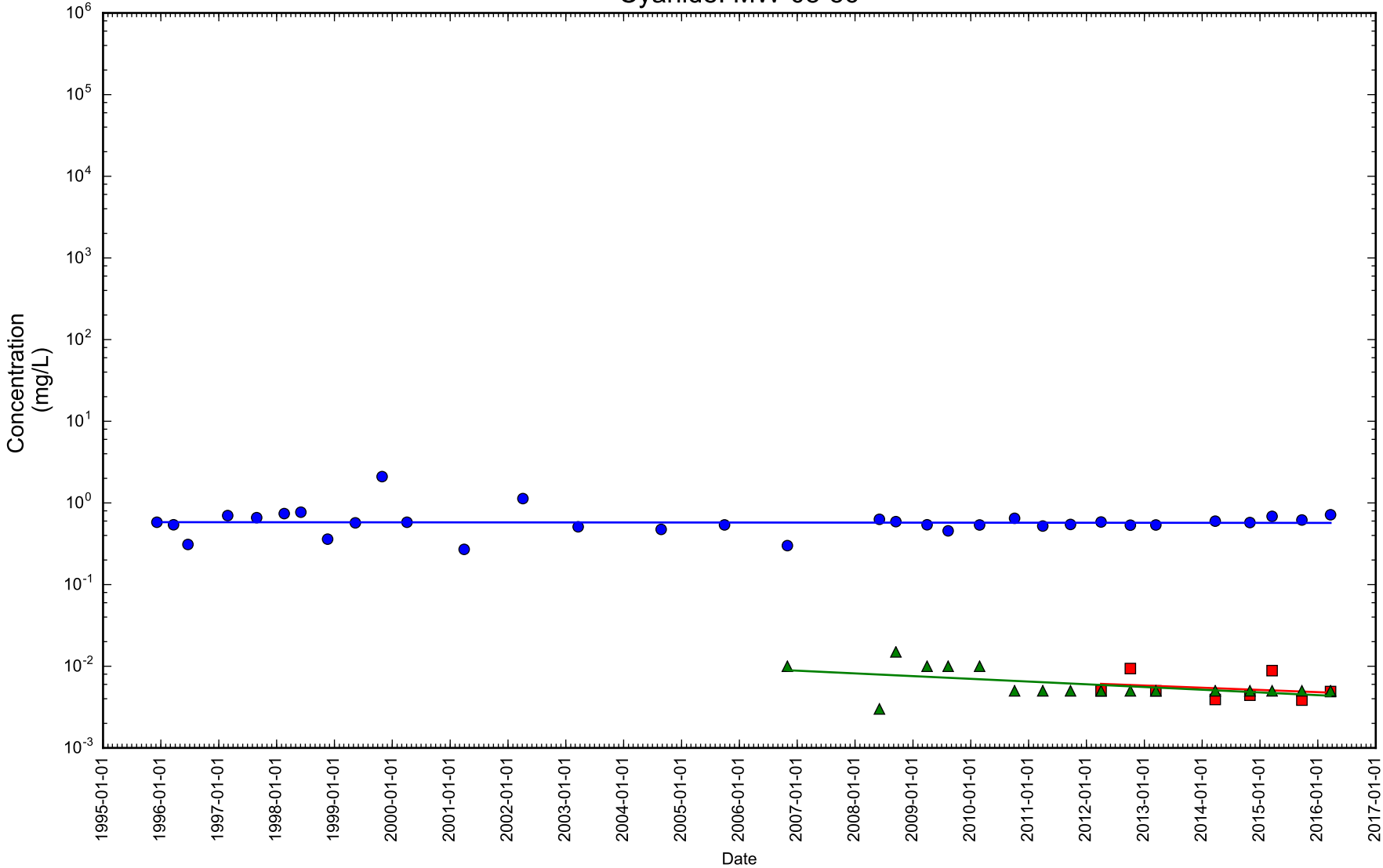


Figure 2-17

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-09-29

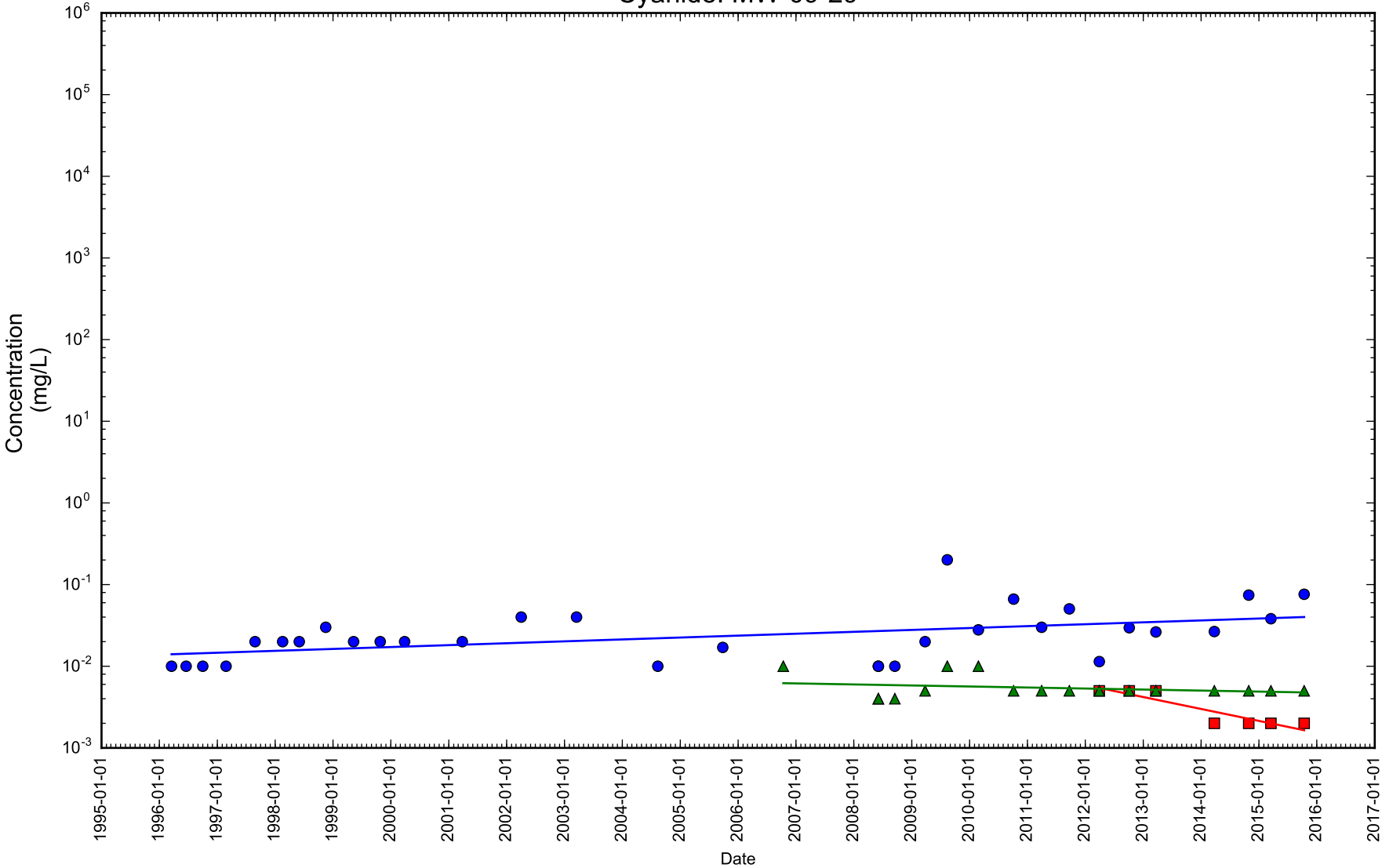


Figure 2-18

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-10-61

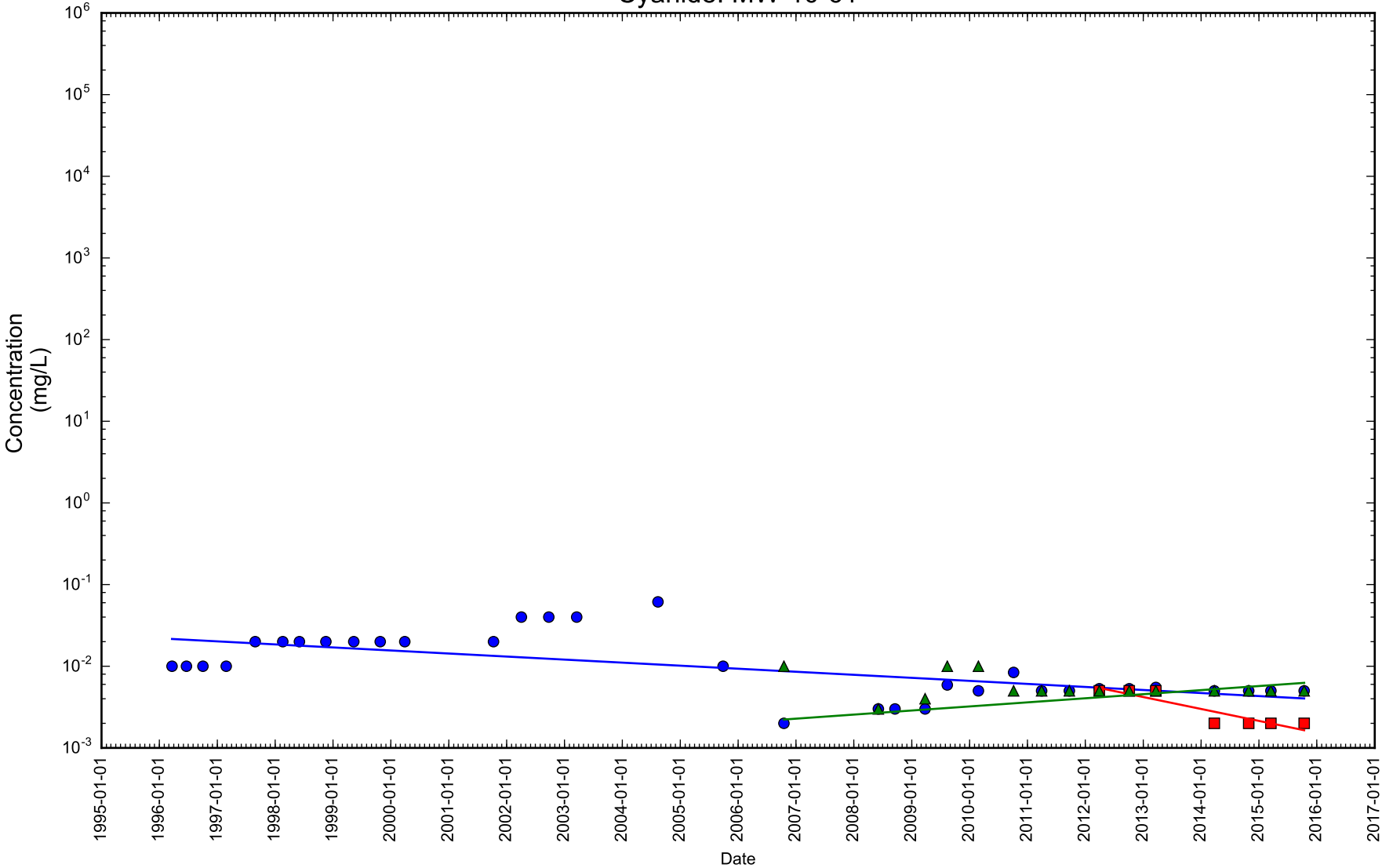


Figure 2-19

Time Series Concentration Plot

- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.



Cyanide: MW-12-36

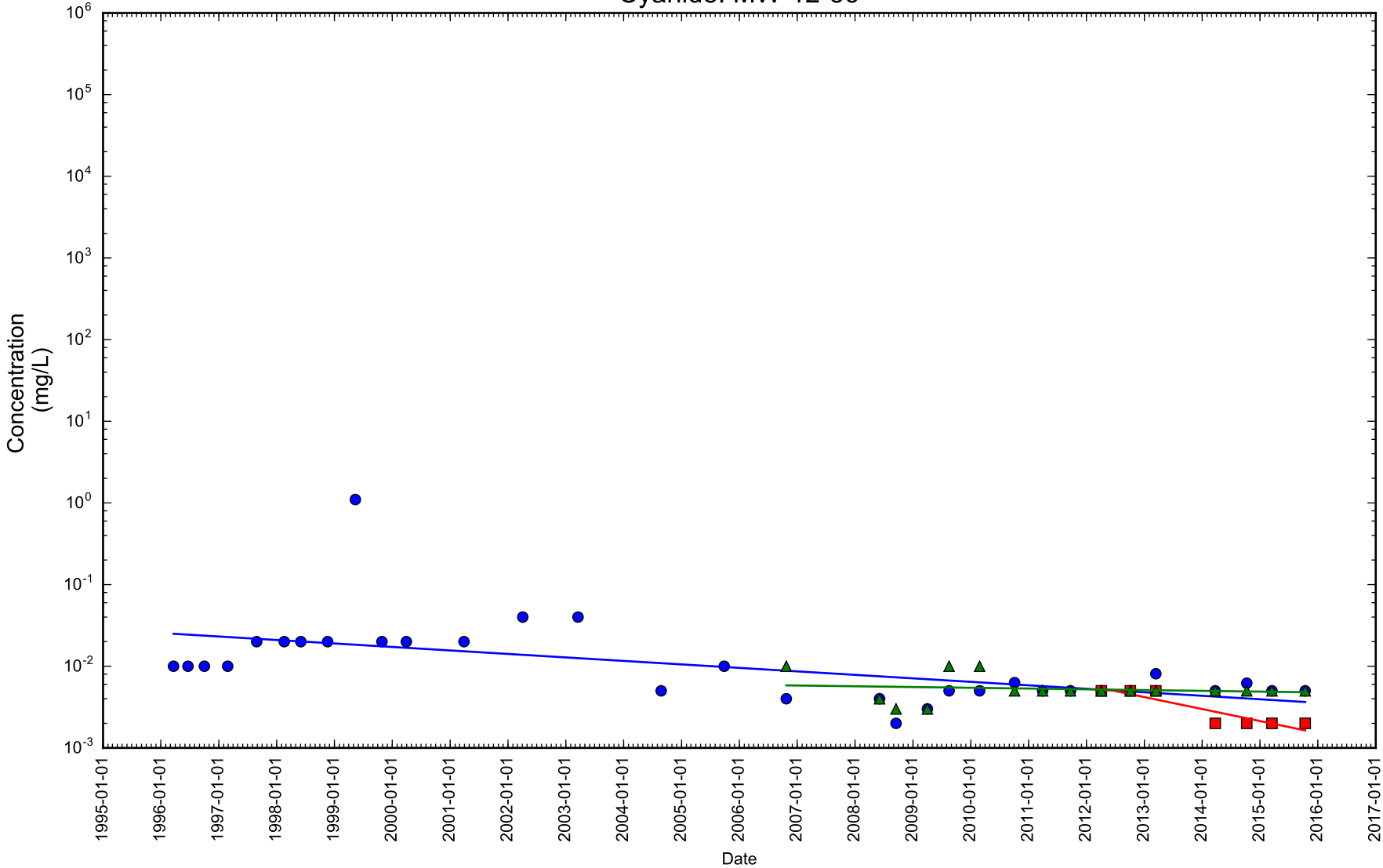


Figure 2-20

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-14-110

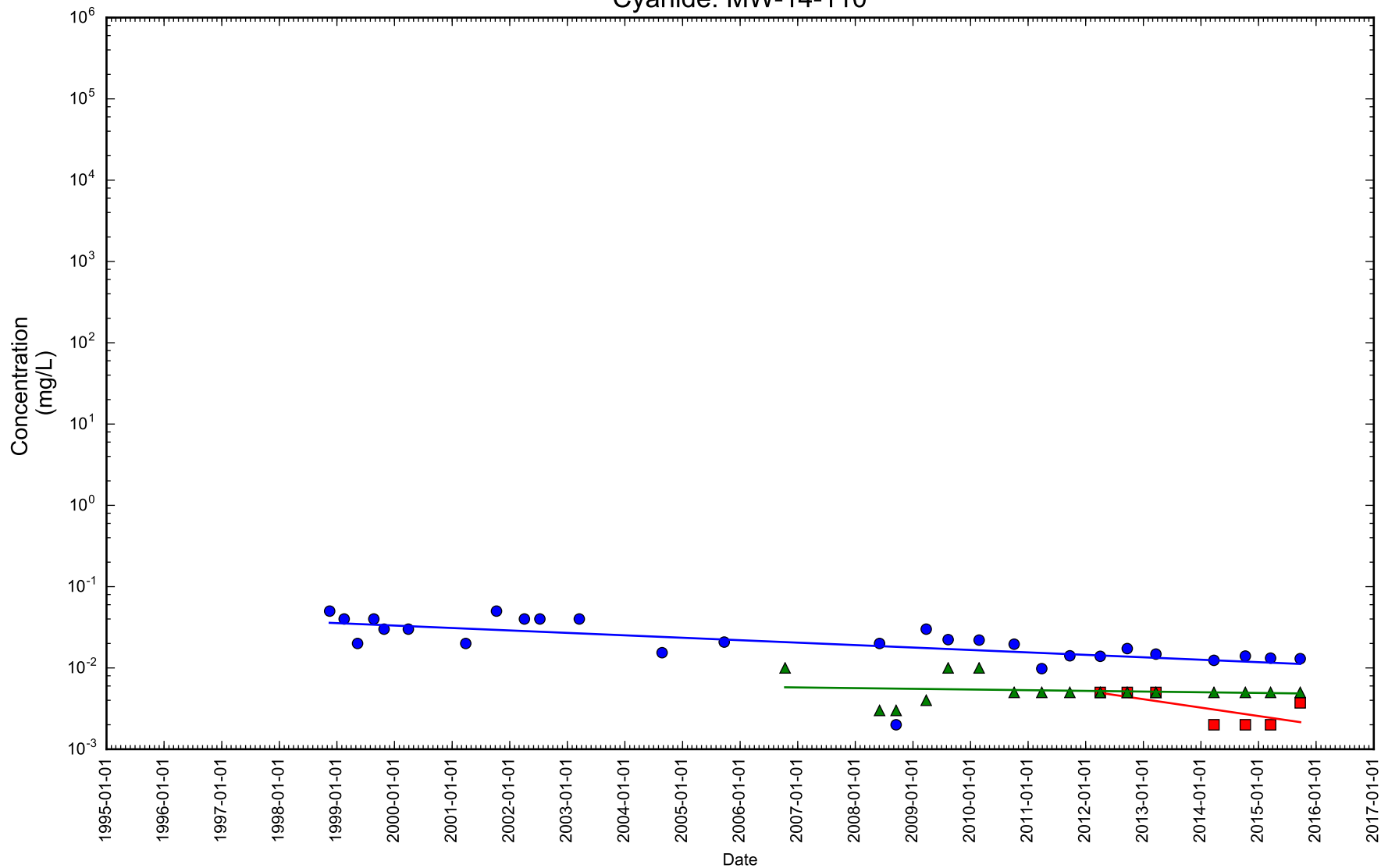


Figure 2-21

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-15-50

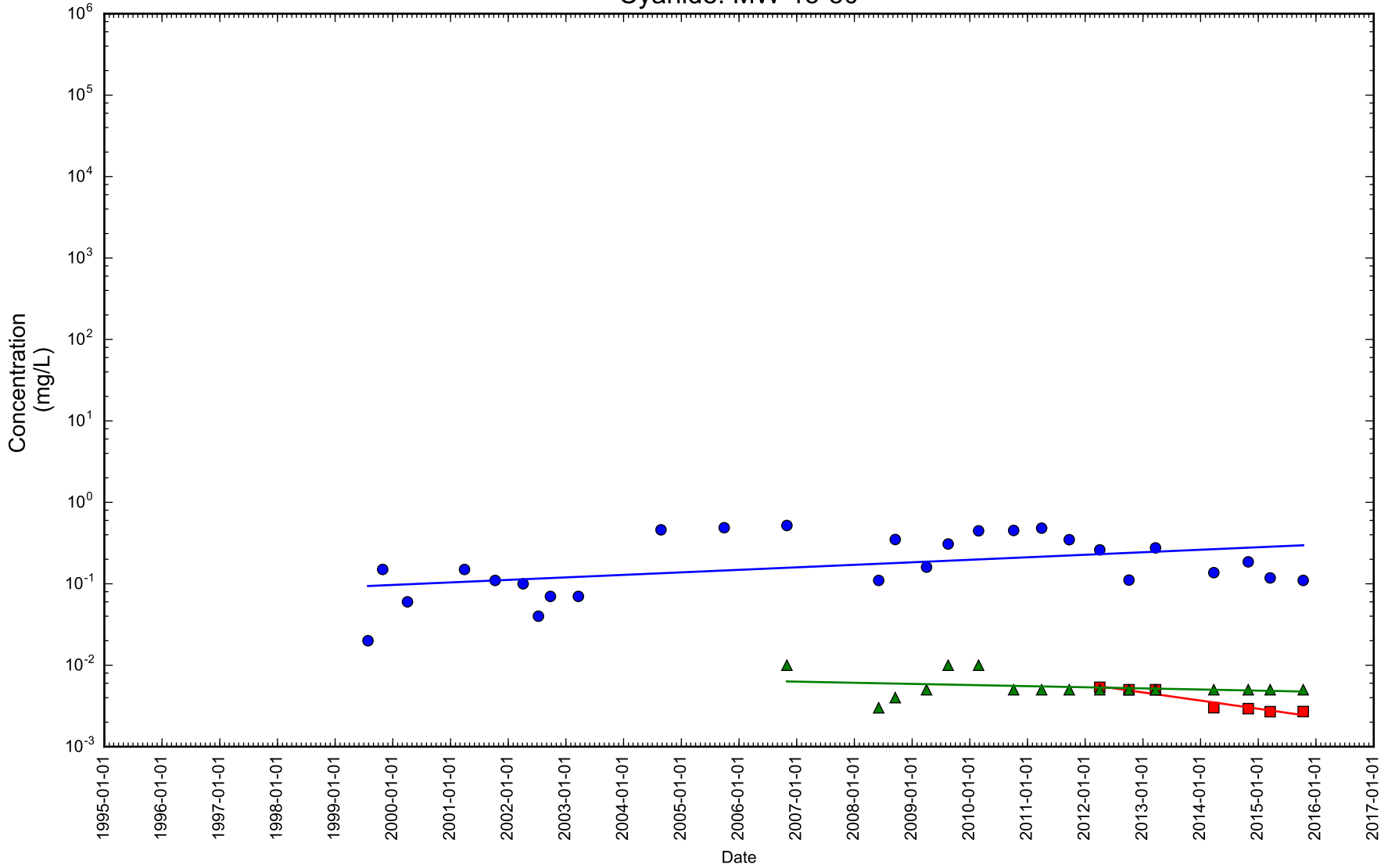


Figure 2-22

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-15-66

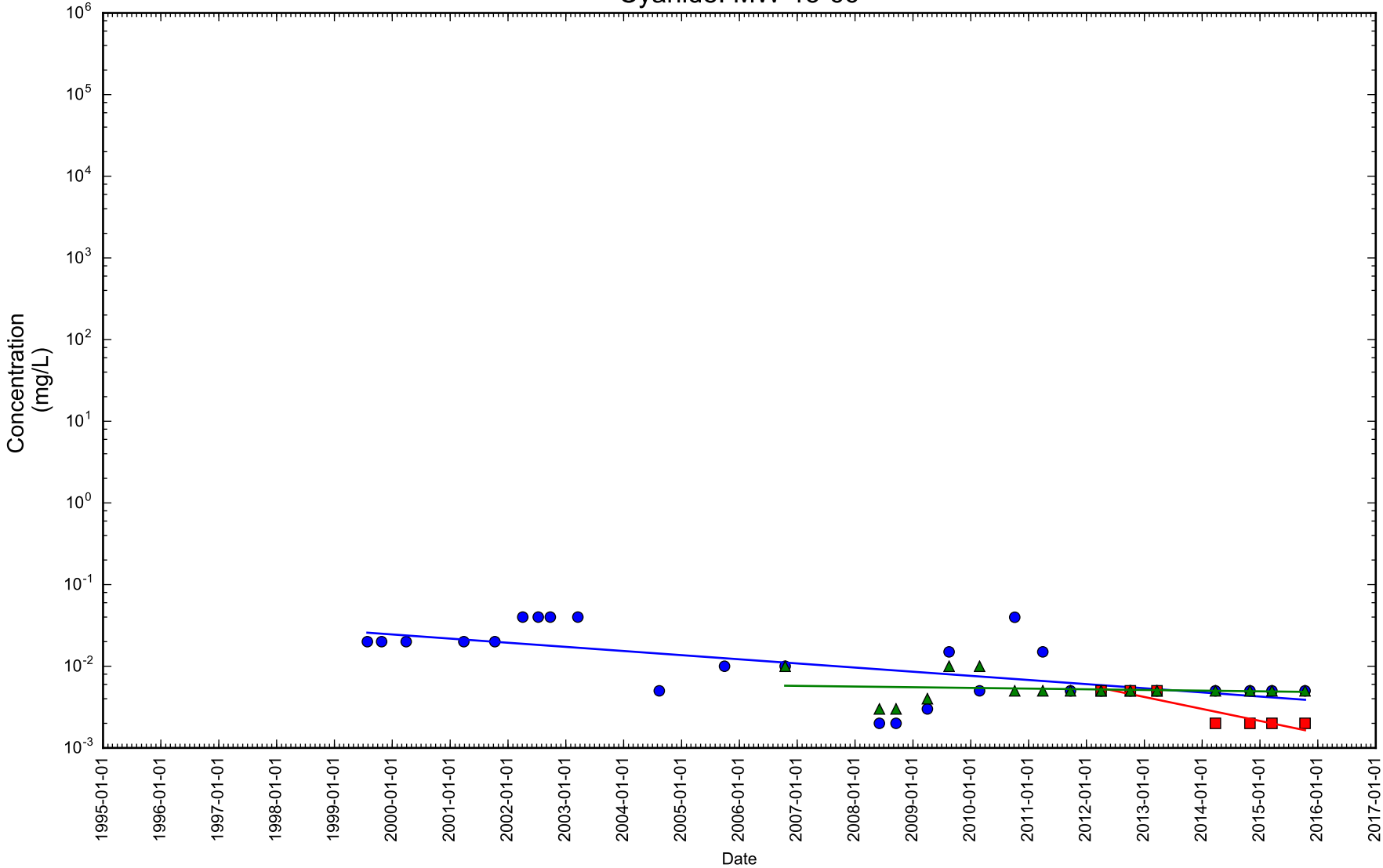


Figure 2-23

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-16-65

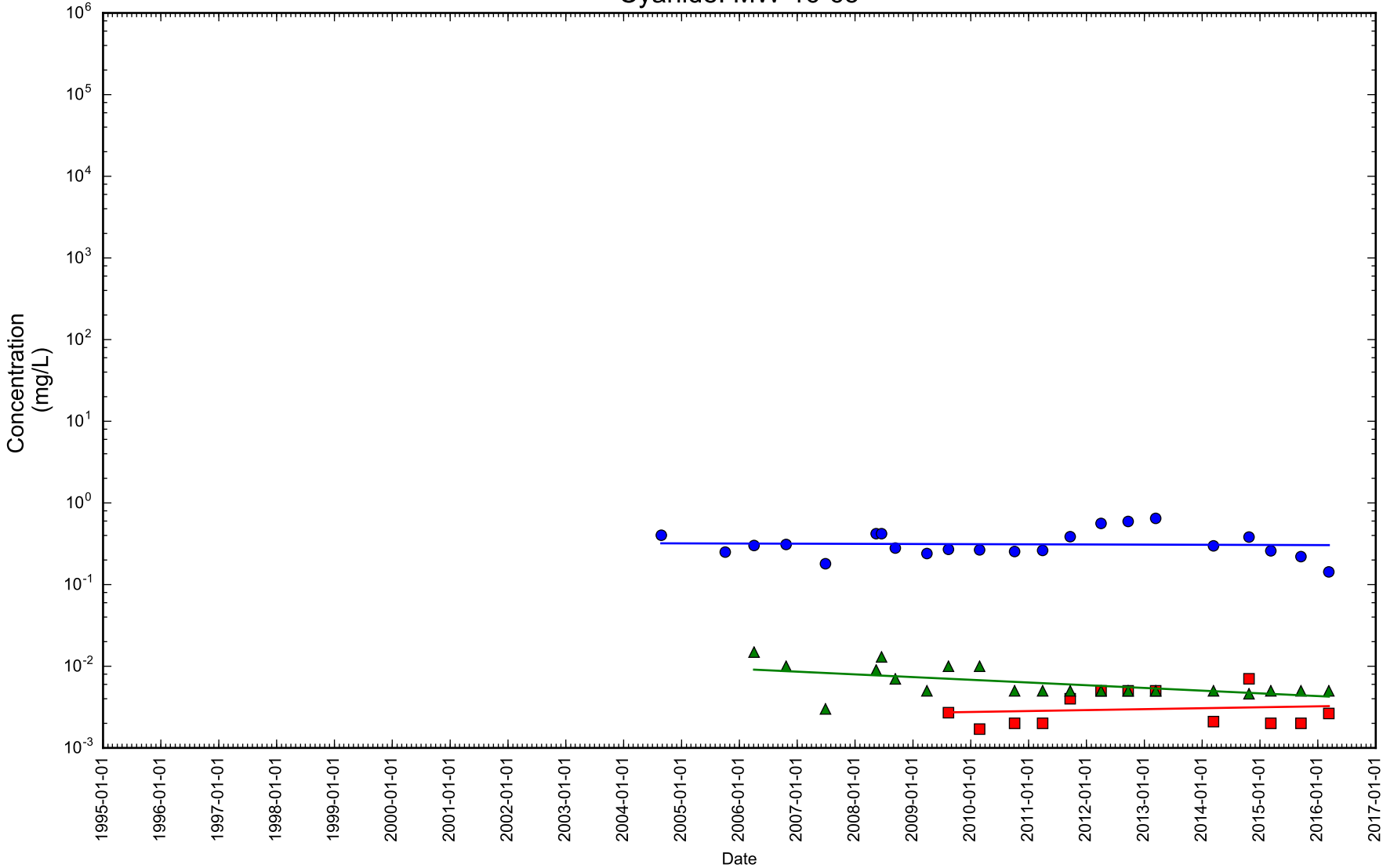


Figure 2-24

Time Series Concentration Plot

- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.



Cyanide: MW-18-125

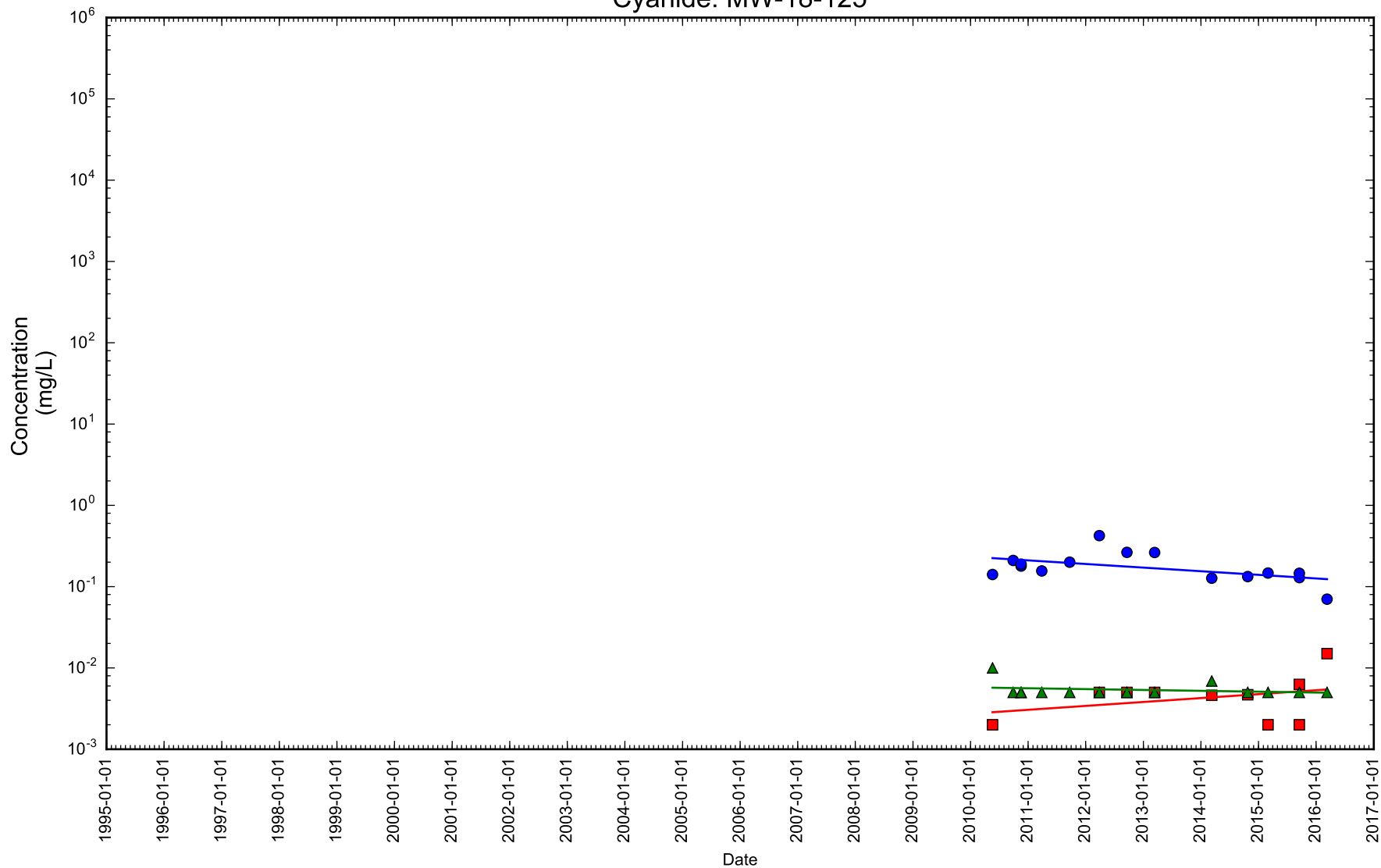


Figure 2-25

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-18-180

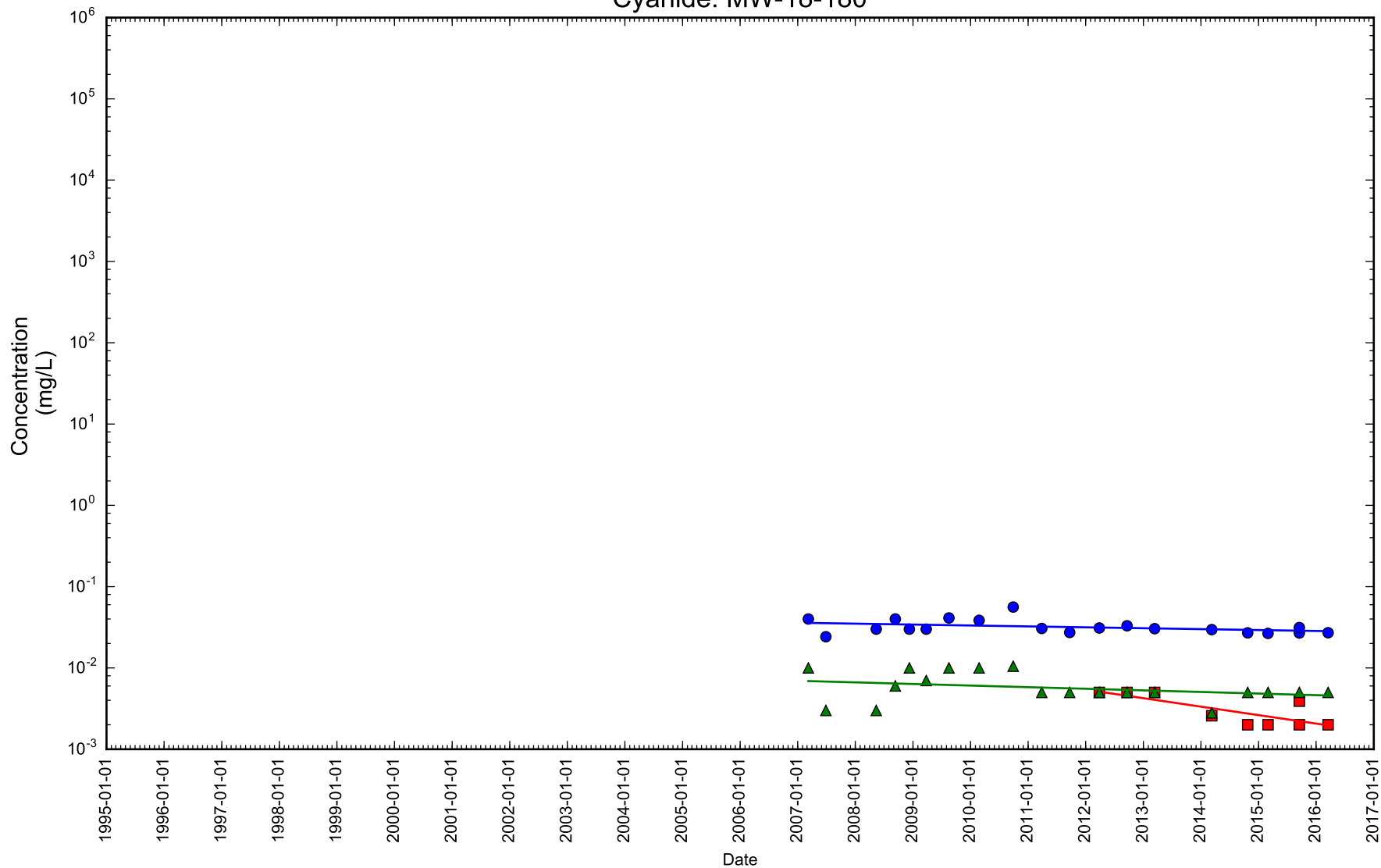


Figure 2-26

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-19-125

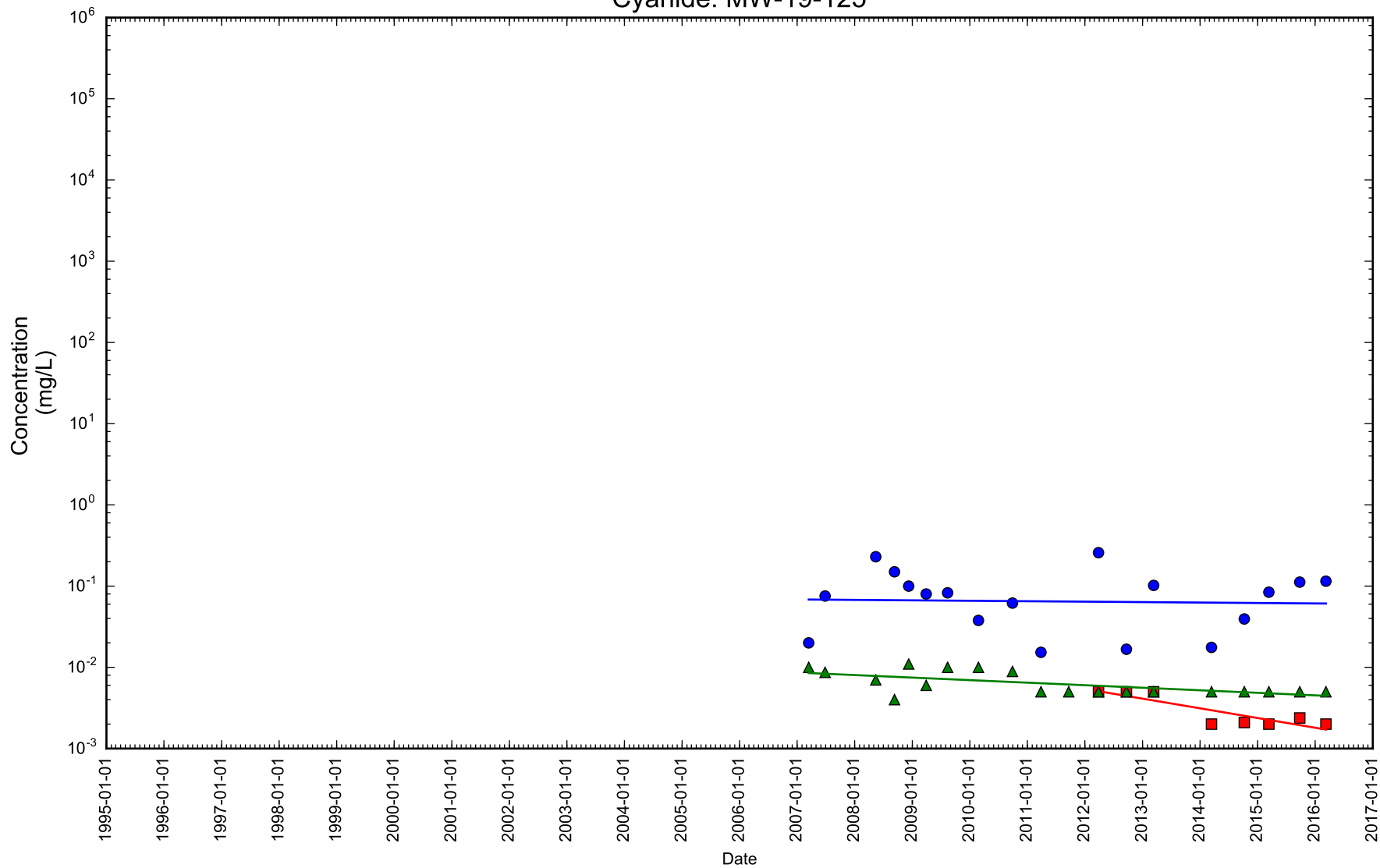


Figure 2-27

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-19-180

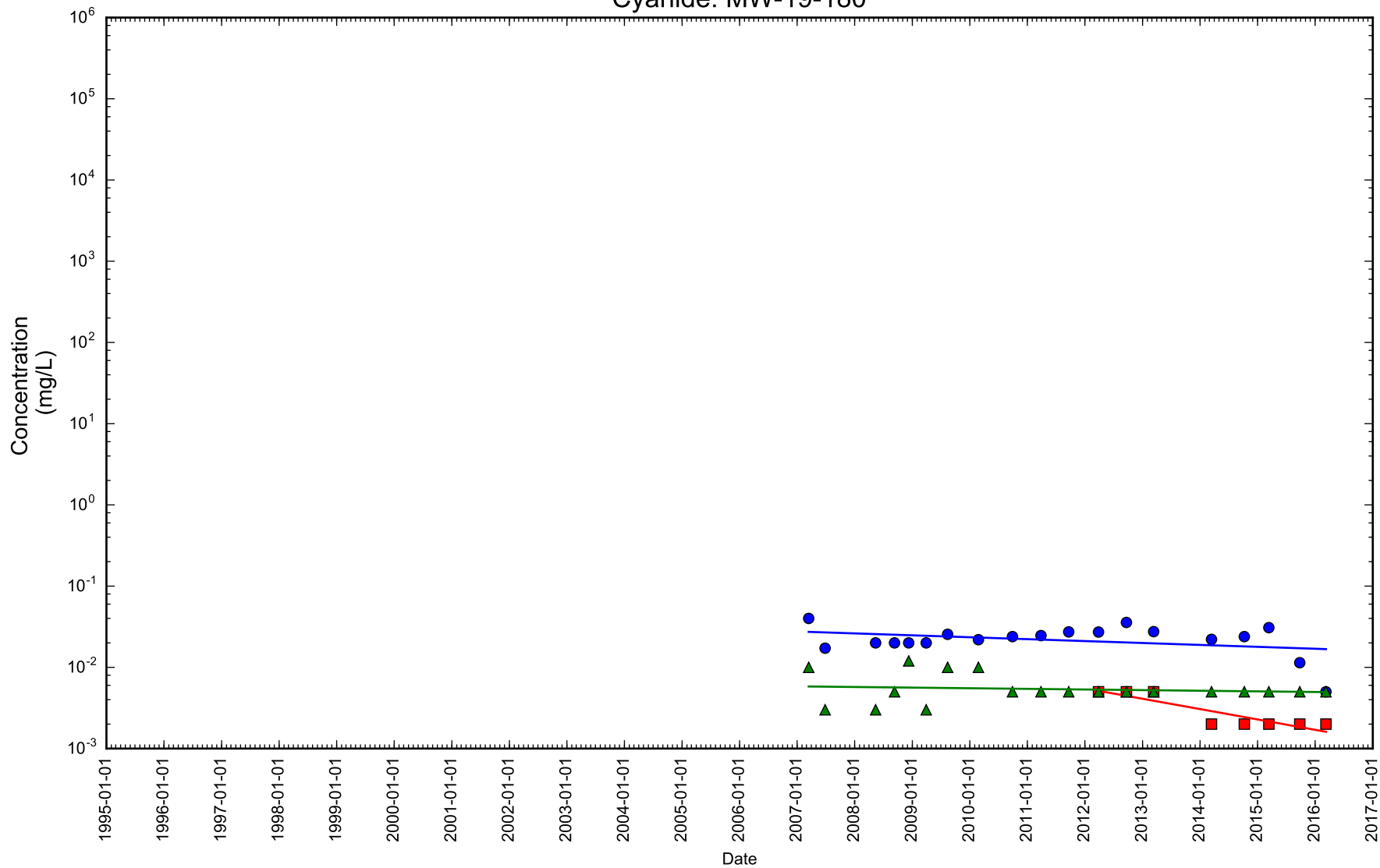


Figure 2-28

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-19-22

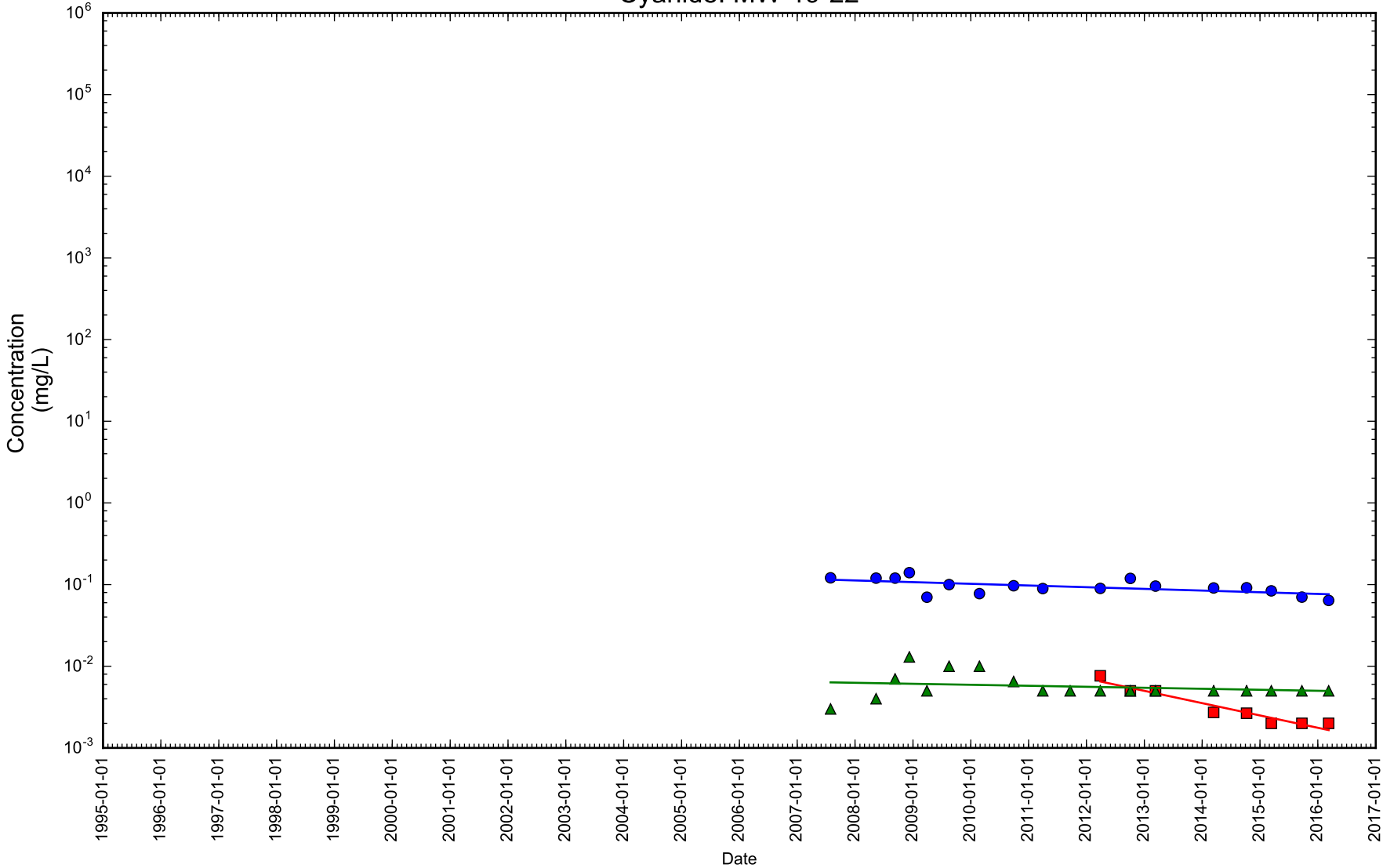


Figure 2-29

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-20-120

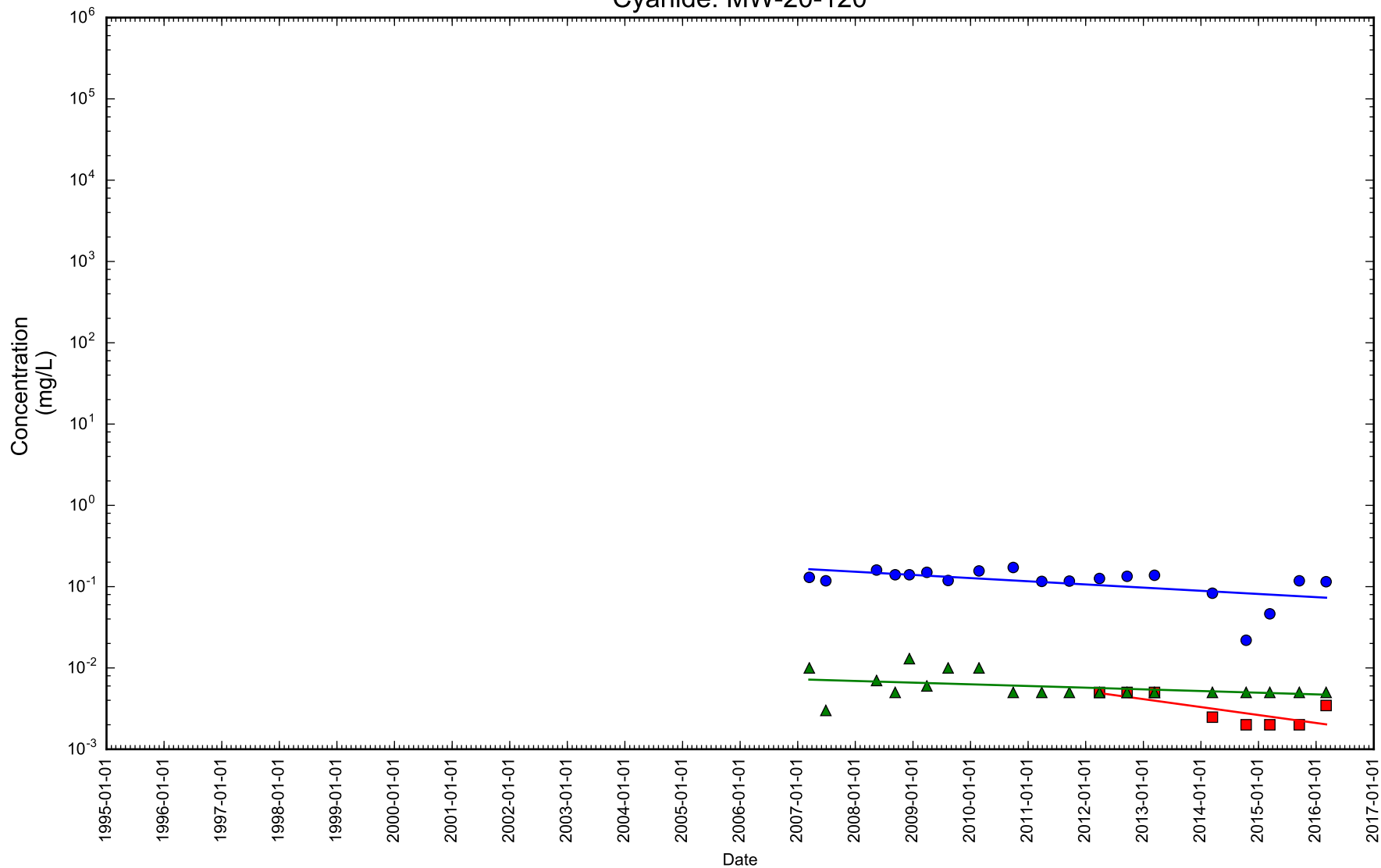


Figure 2-30

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-21-115

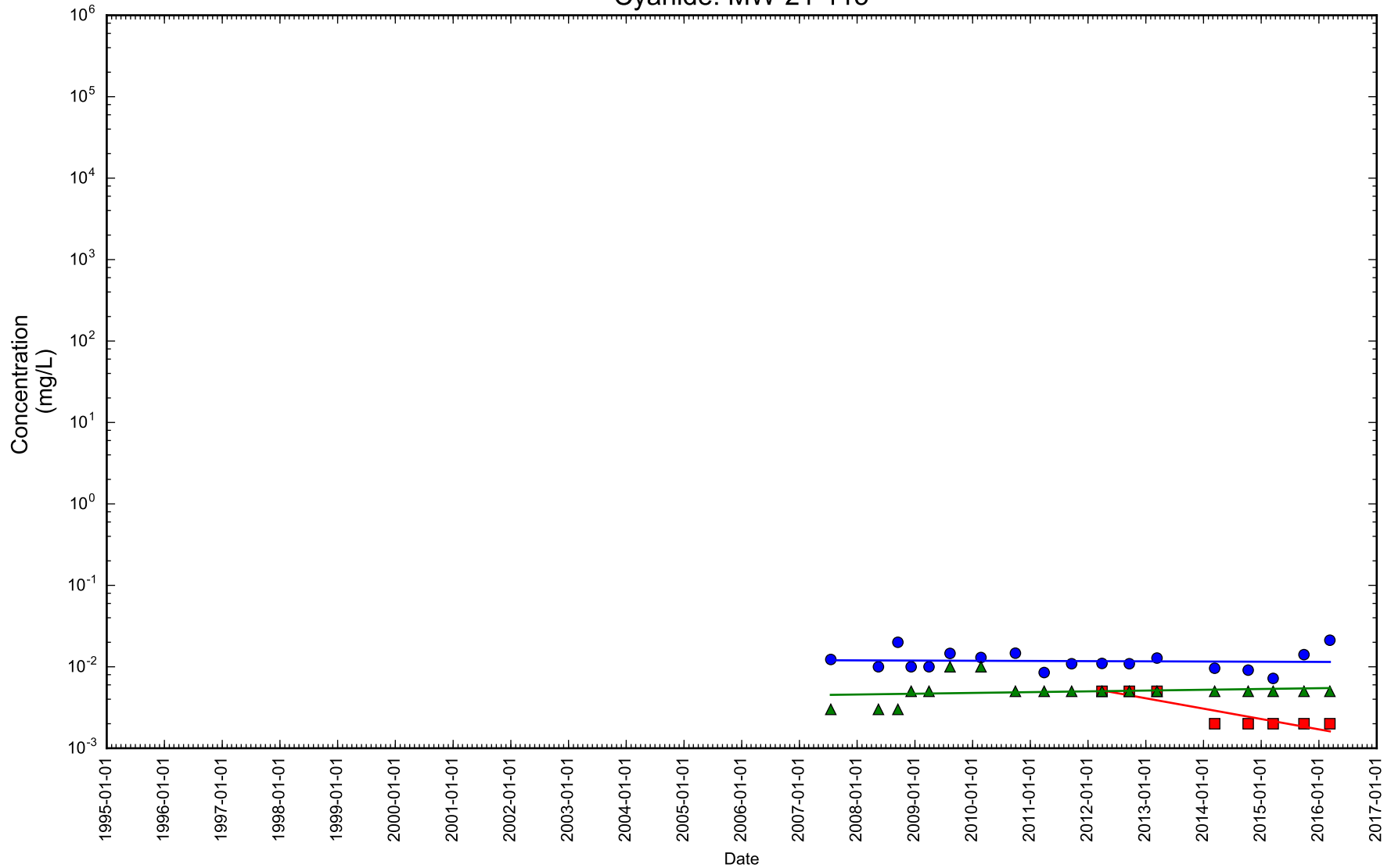


Figure 2-31

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-21-12

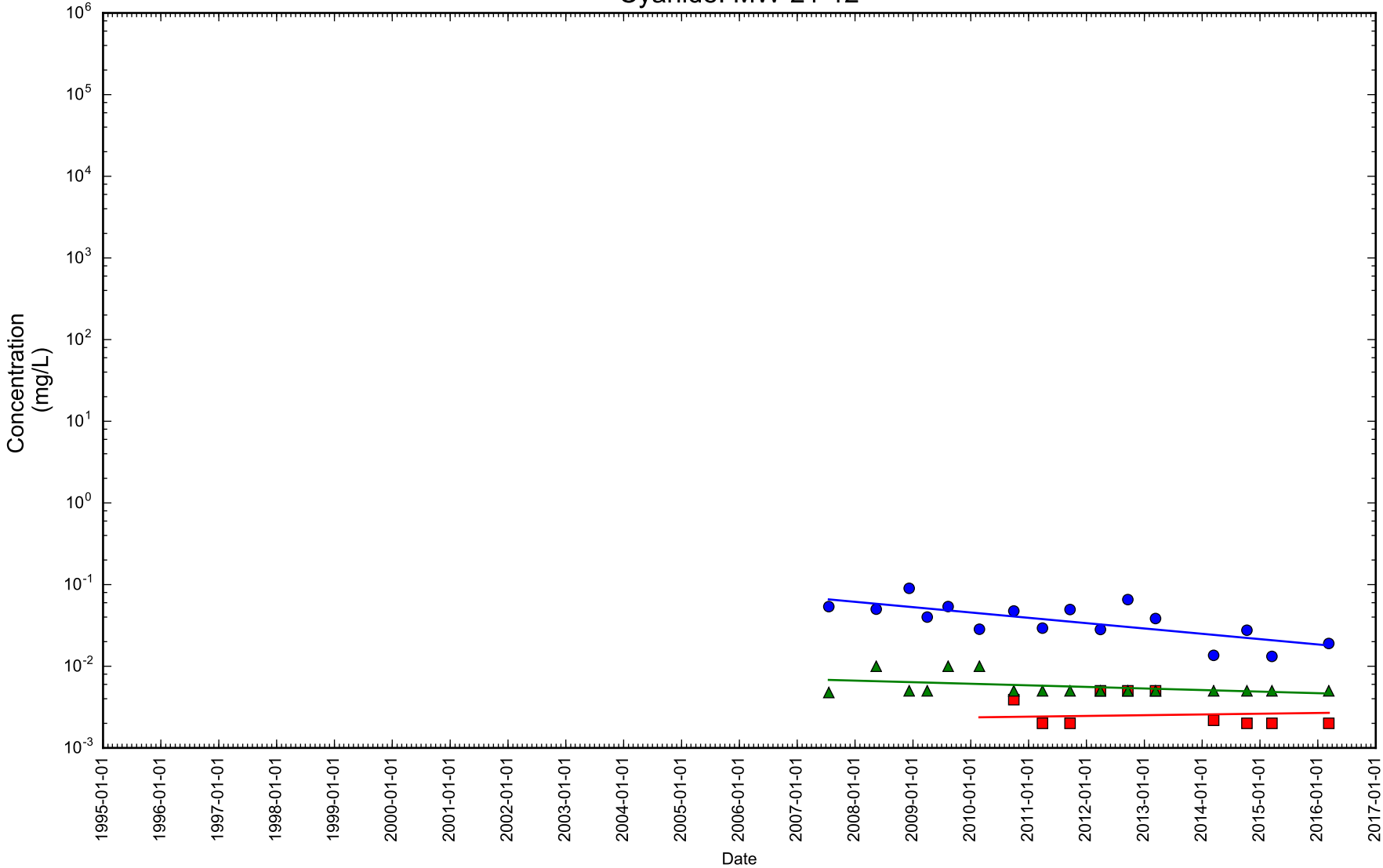


Figure 2-32

Time Series Concentration Plot

- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.



Cyanide: MW-21-165

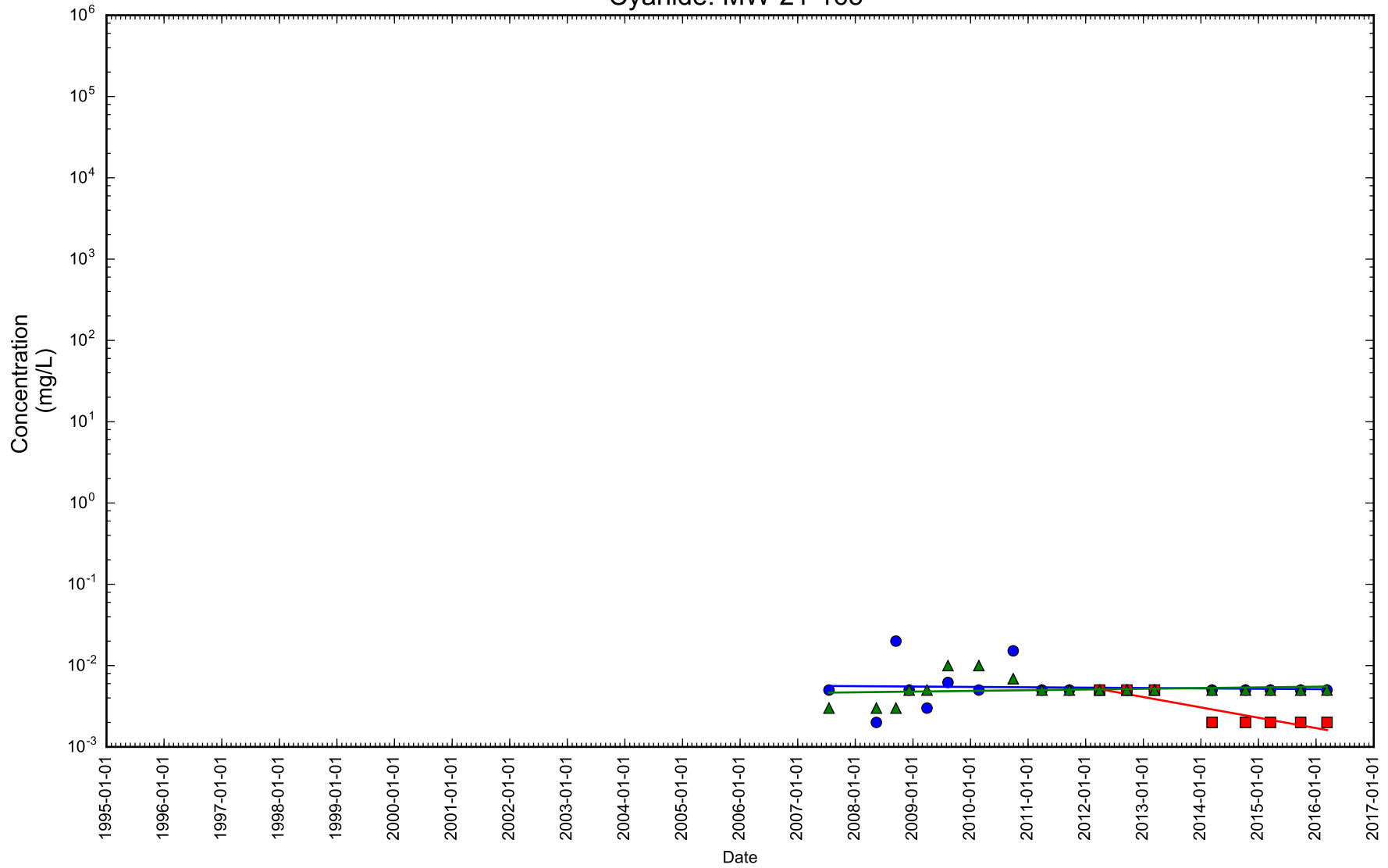


Figure 2-33

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-21-75

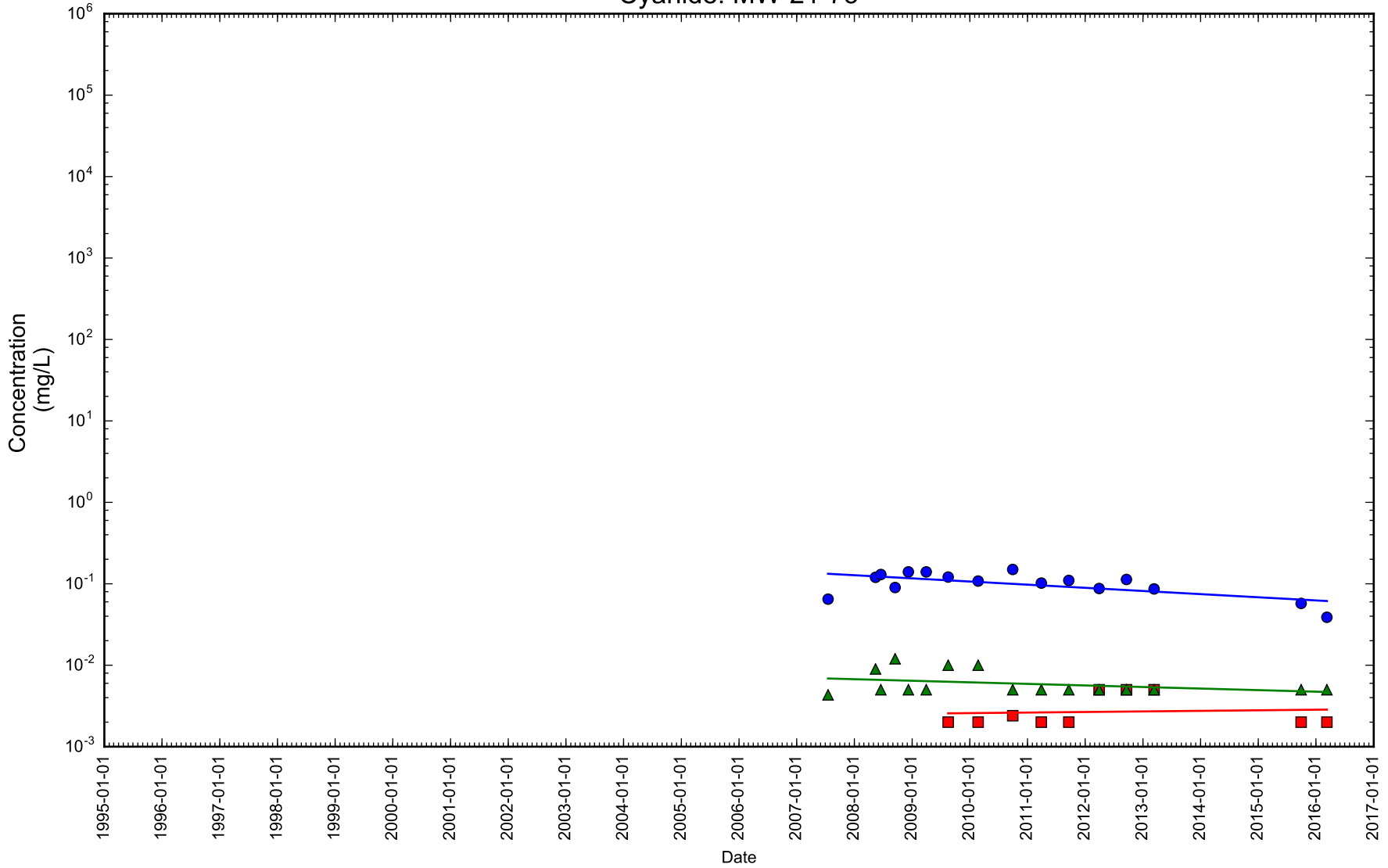


Figure 2-34

Time Series Concentration Plot

- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.



Cyanide: MW-21U

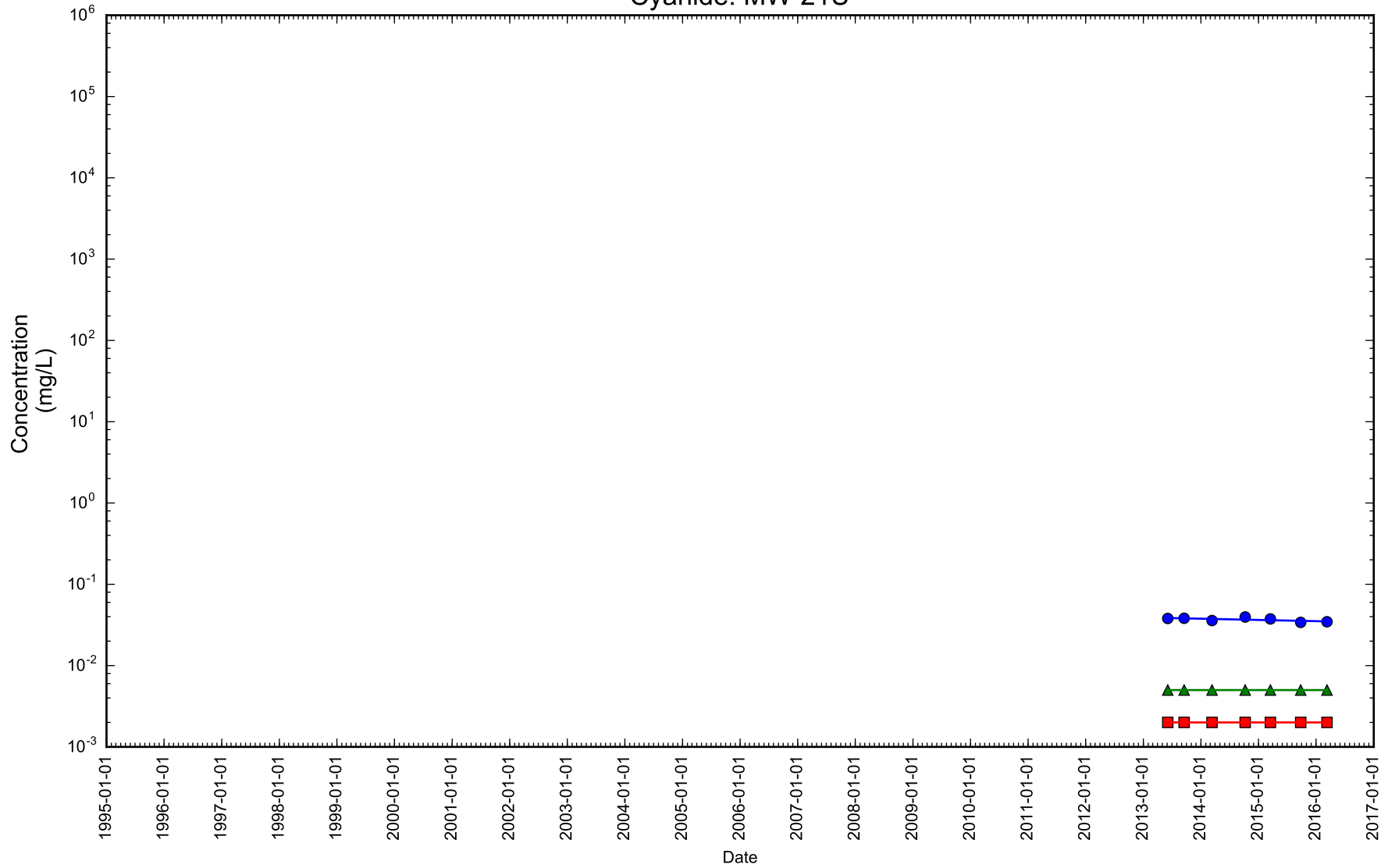


Figure 2-35

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-22U

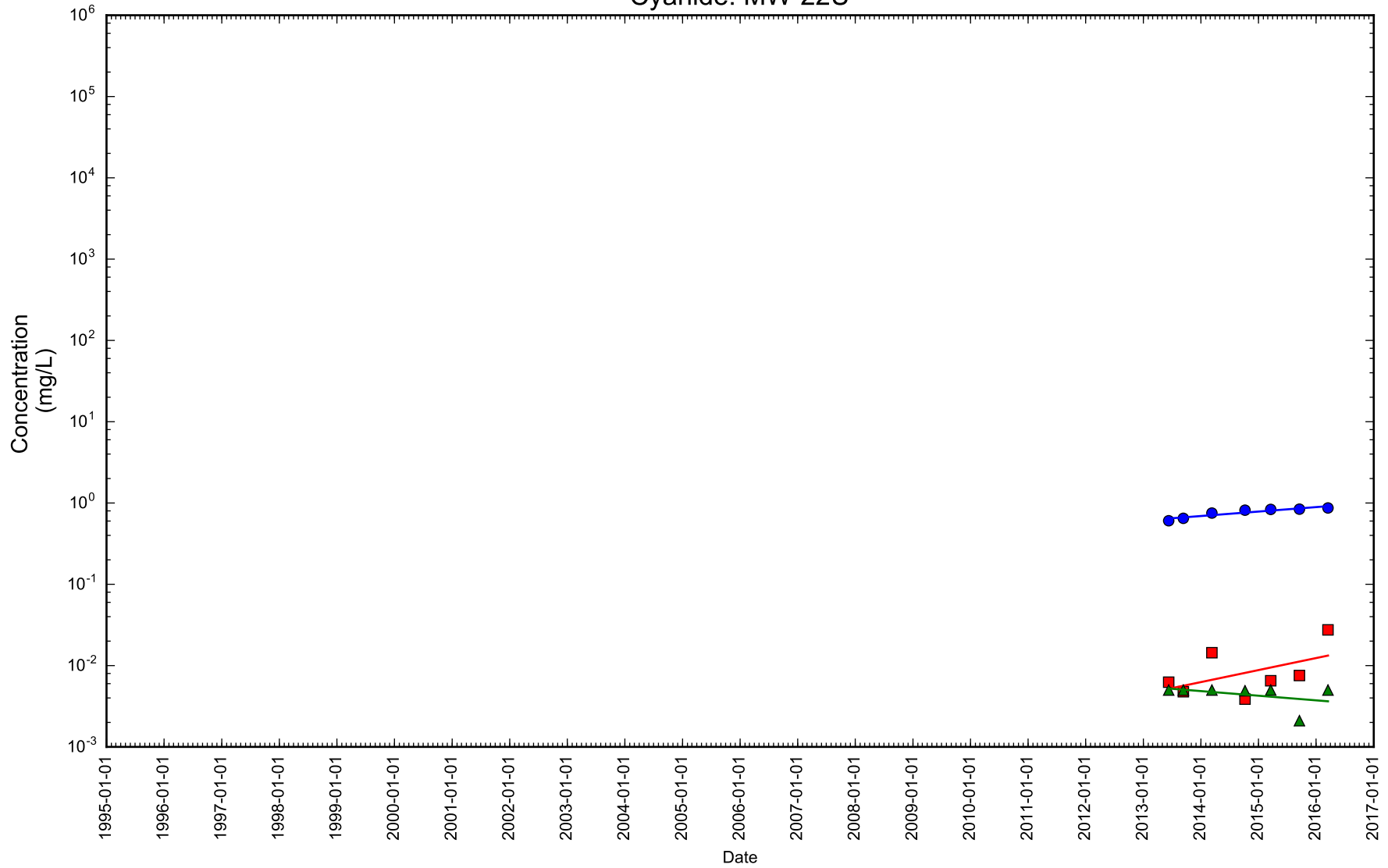


Figure 2-36

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-23-123

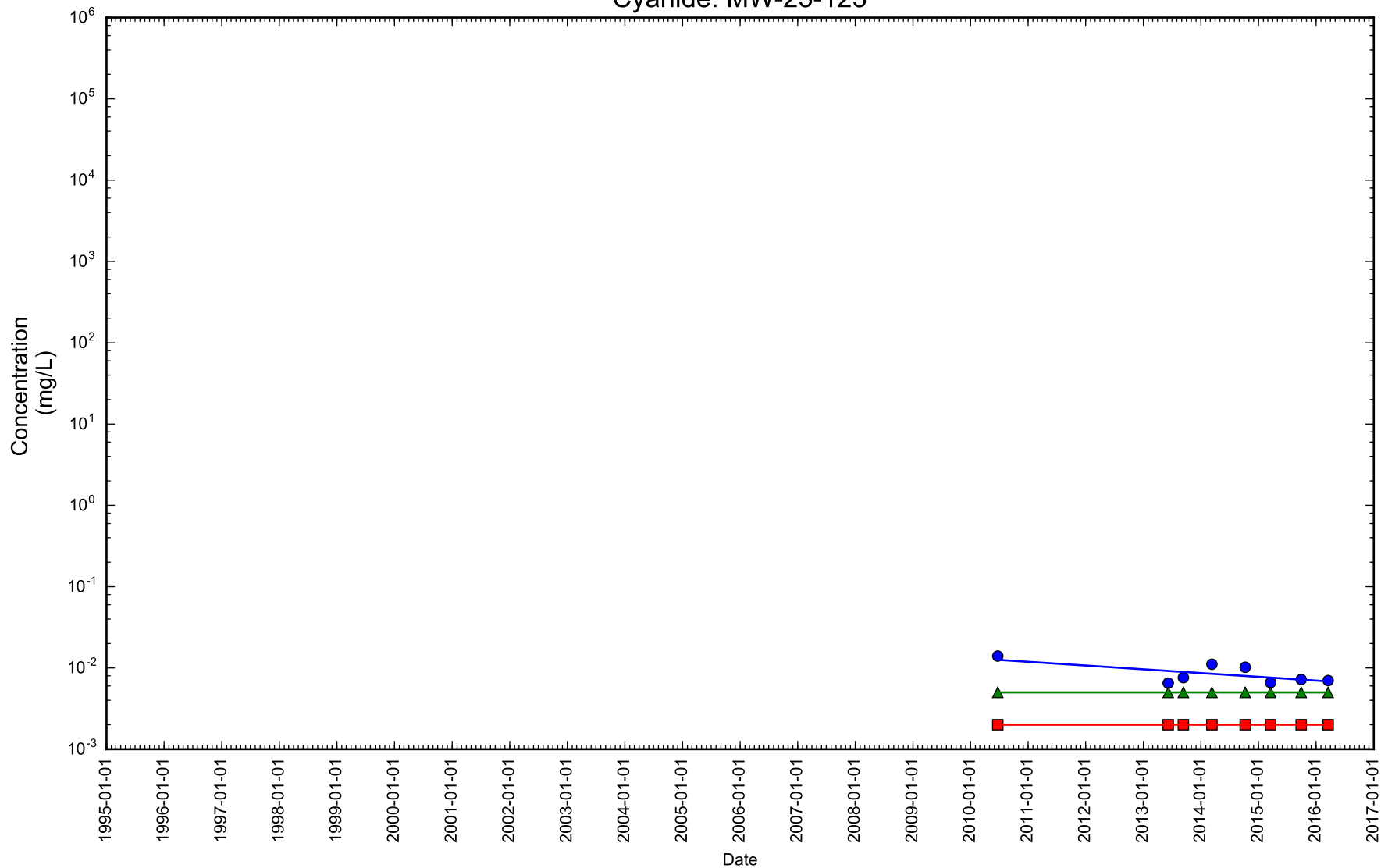


Figure 2-37

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-23-27

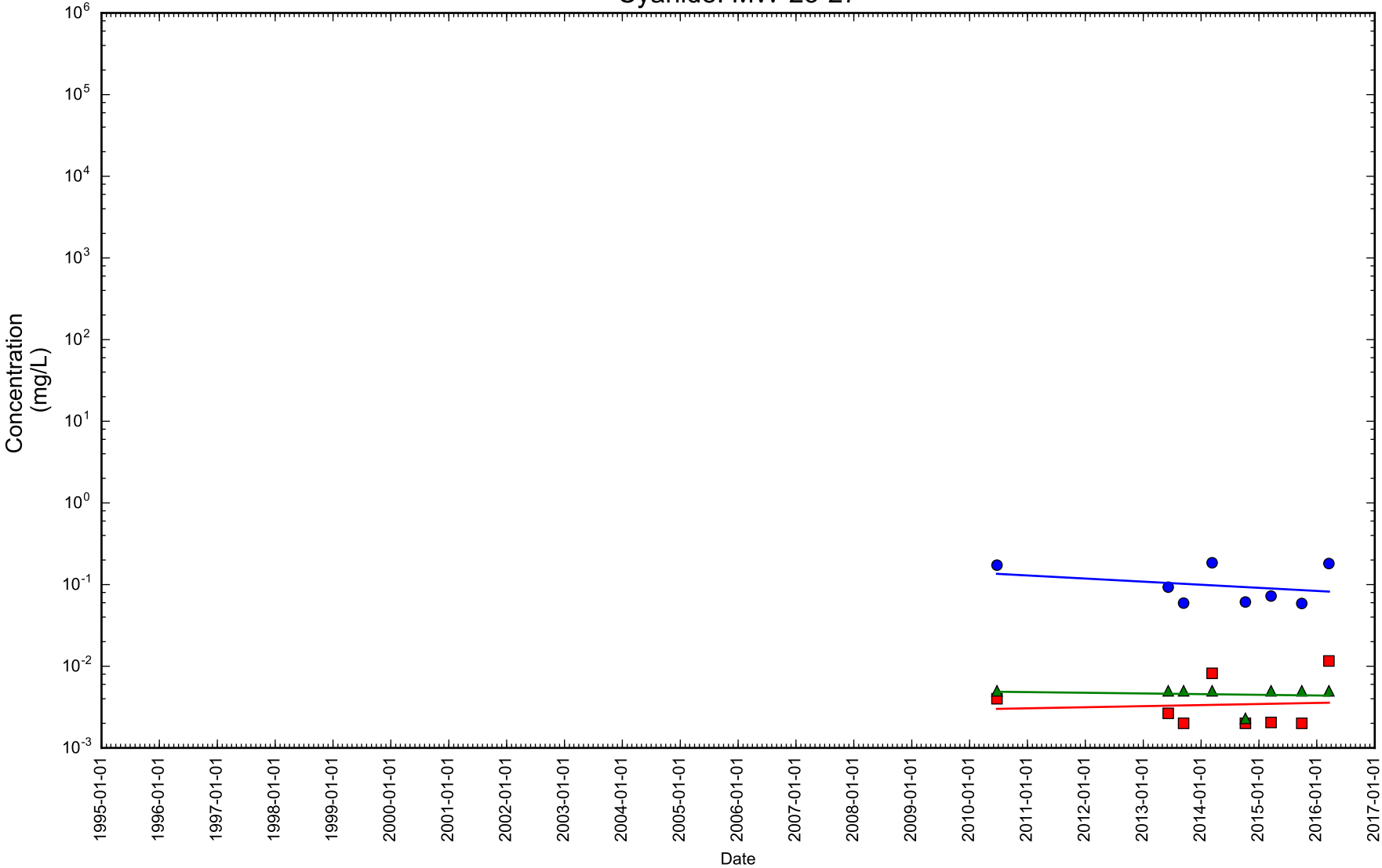


Figure 2-38

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-23U

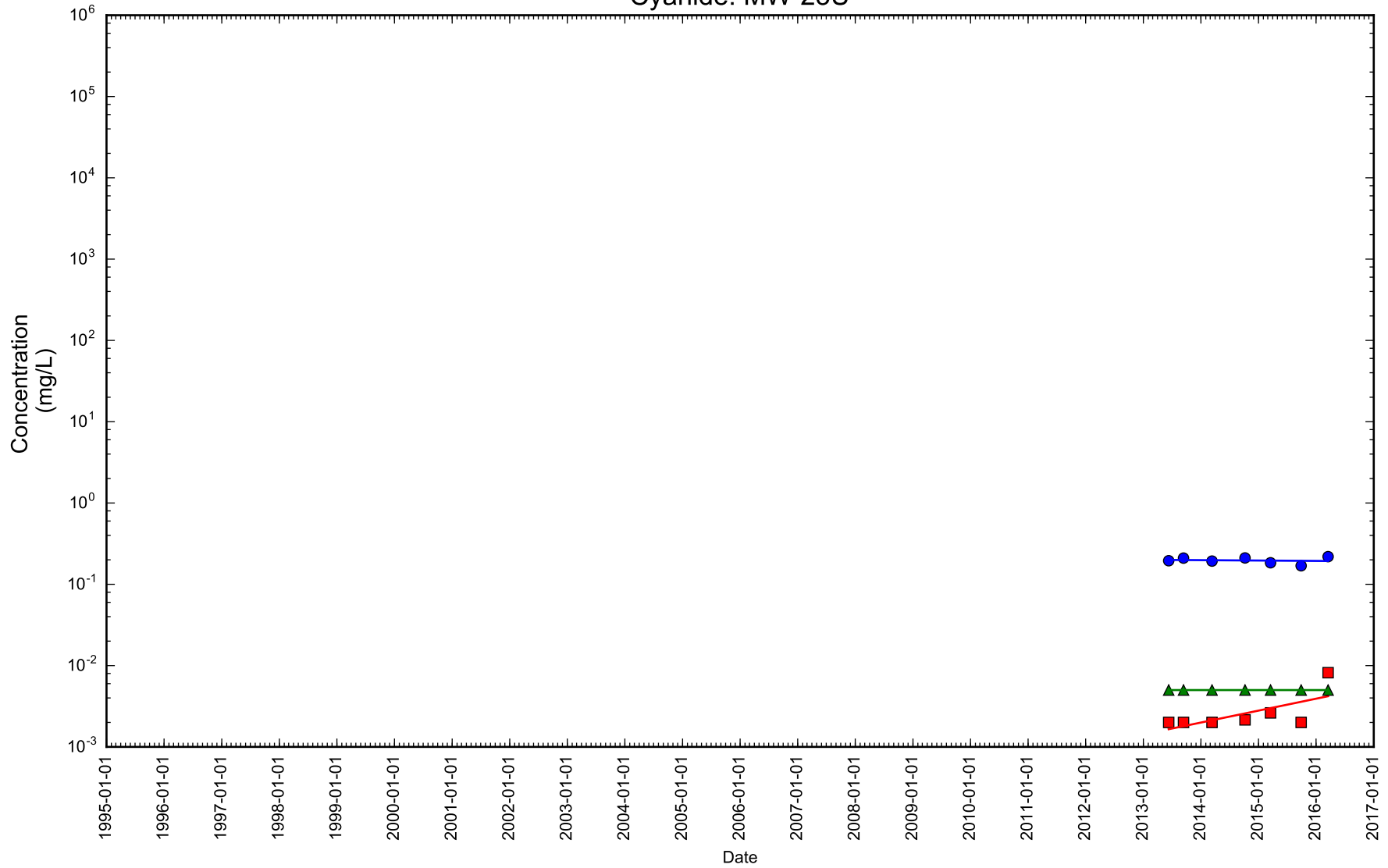


Figure 2-39

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-28U

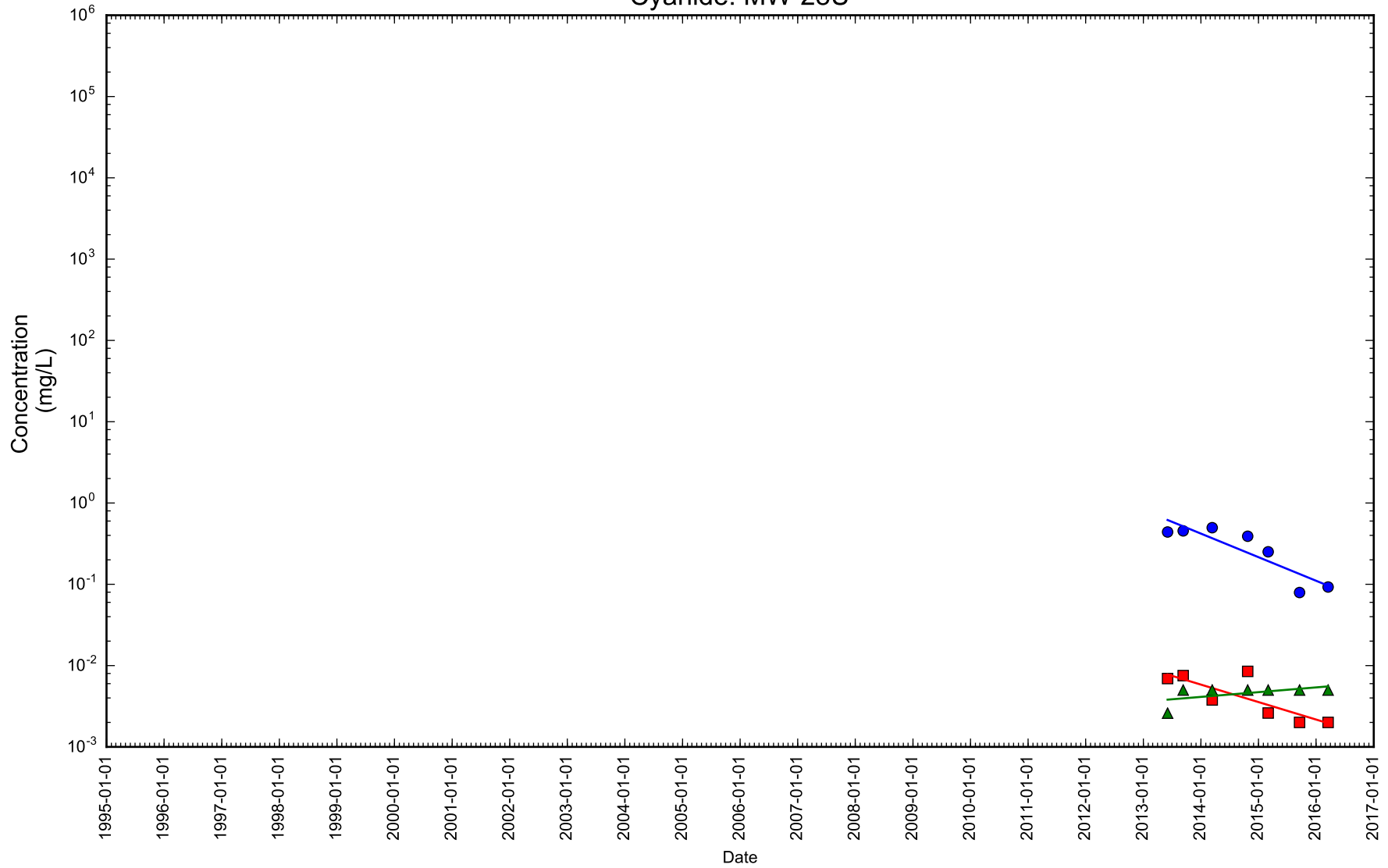


Figure 2-40

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-31U

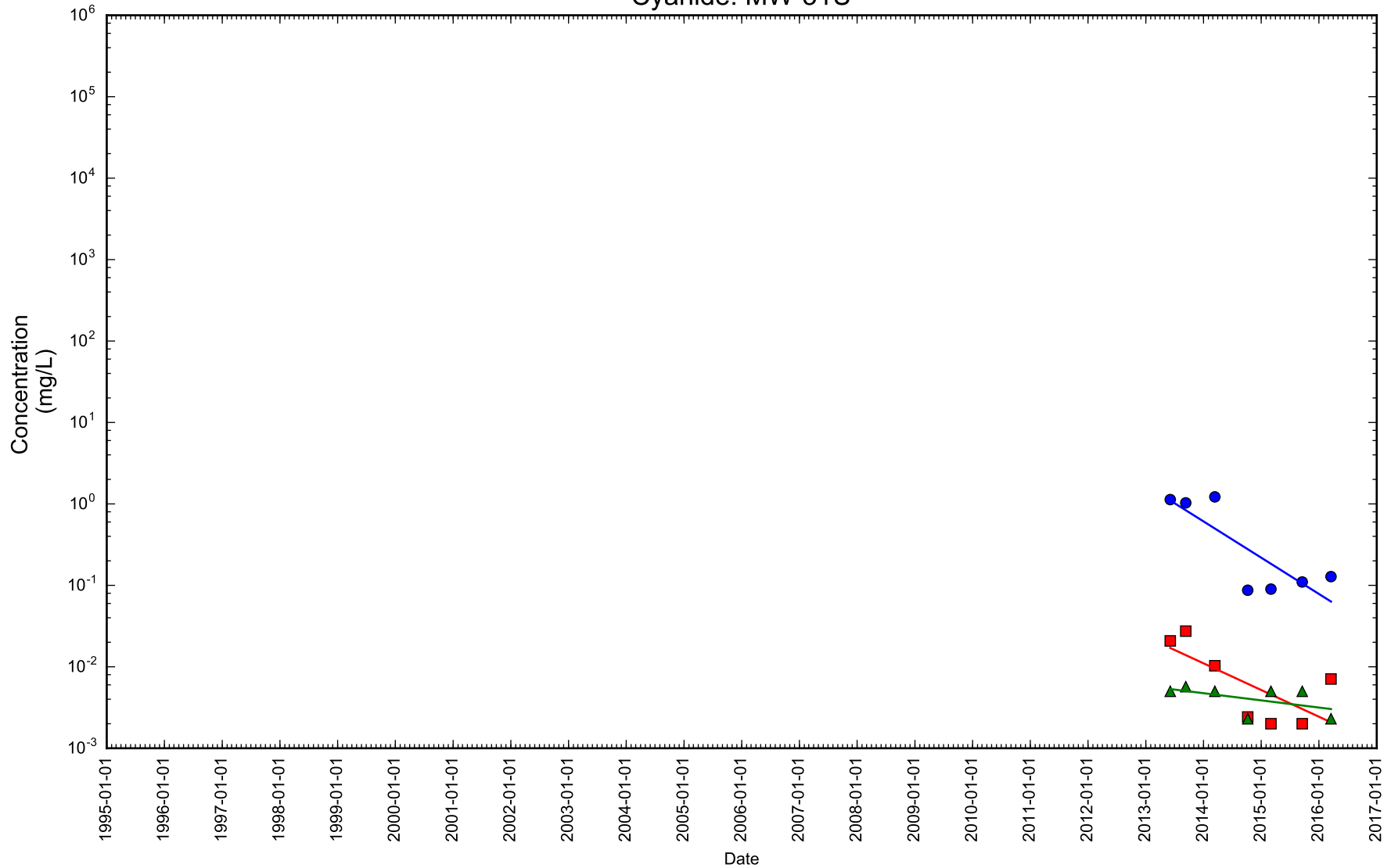


Figure 2-41

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-34U

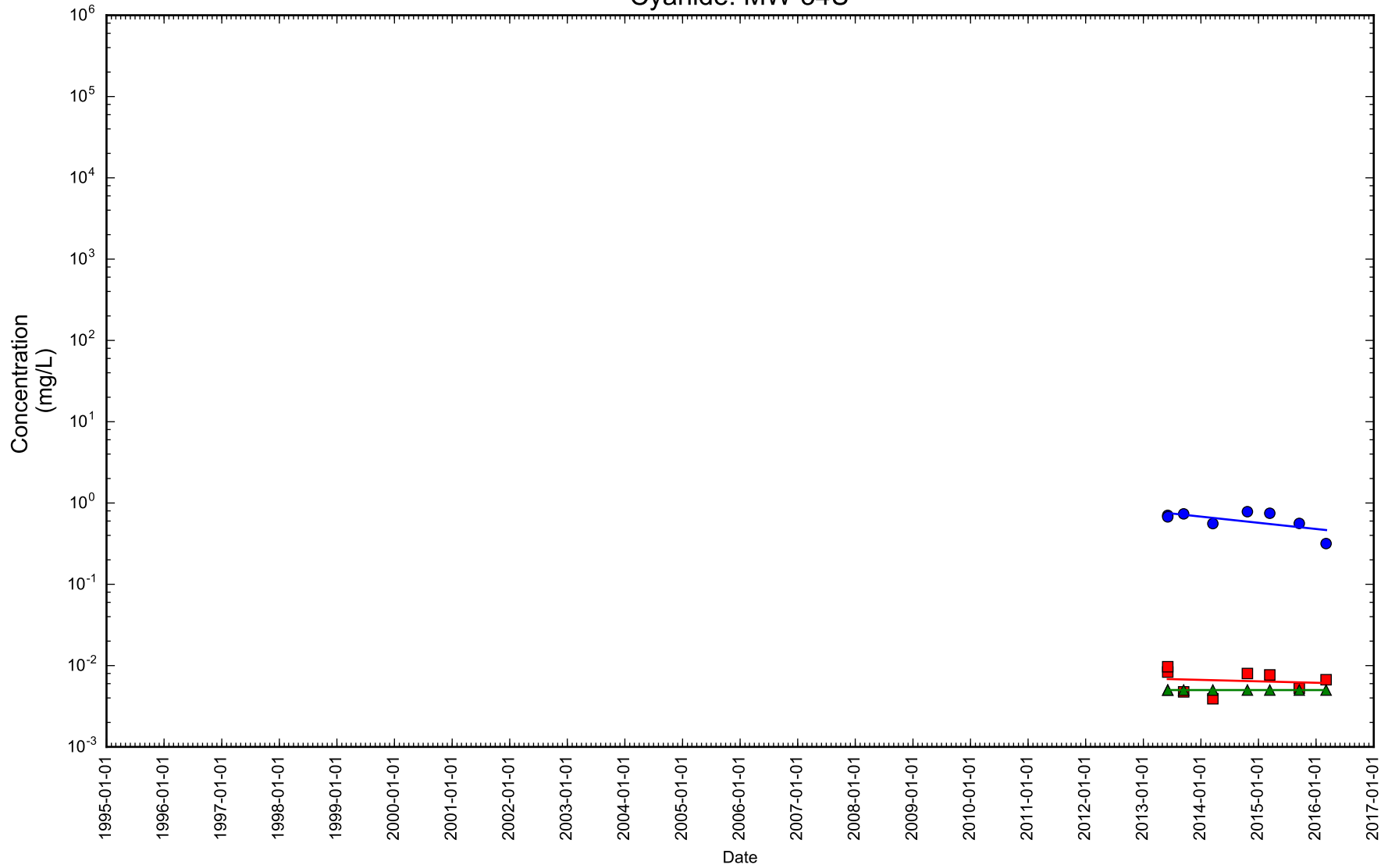


Figure 2-42

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: MW-39F

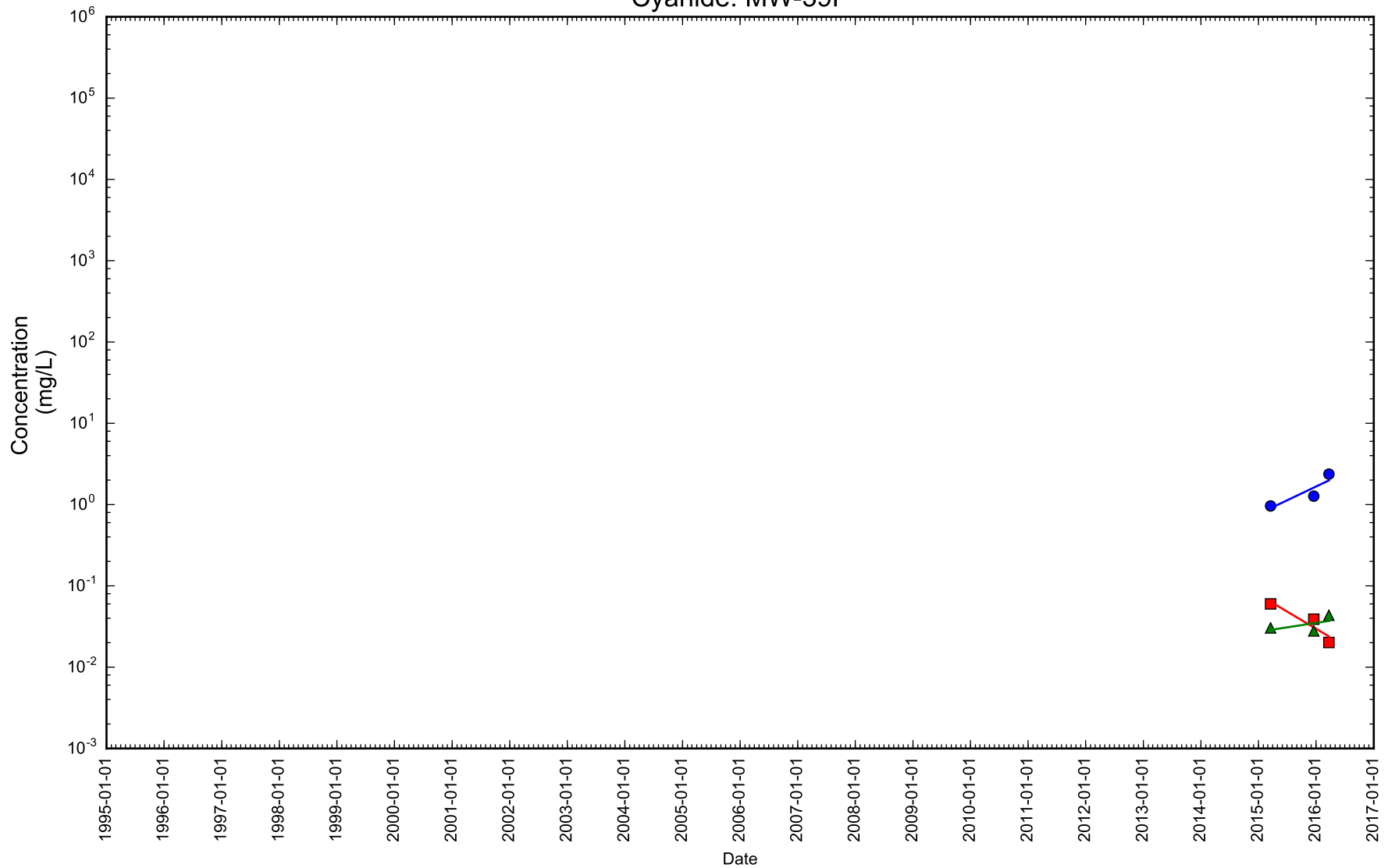


Figure 2-43

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

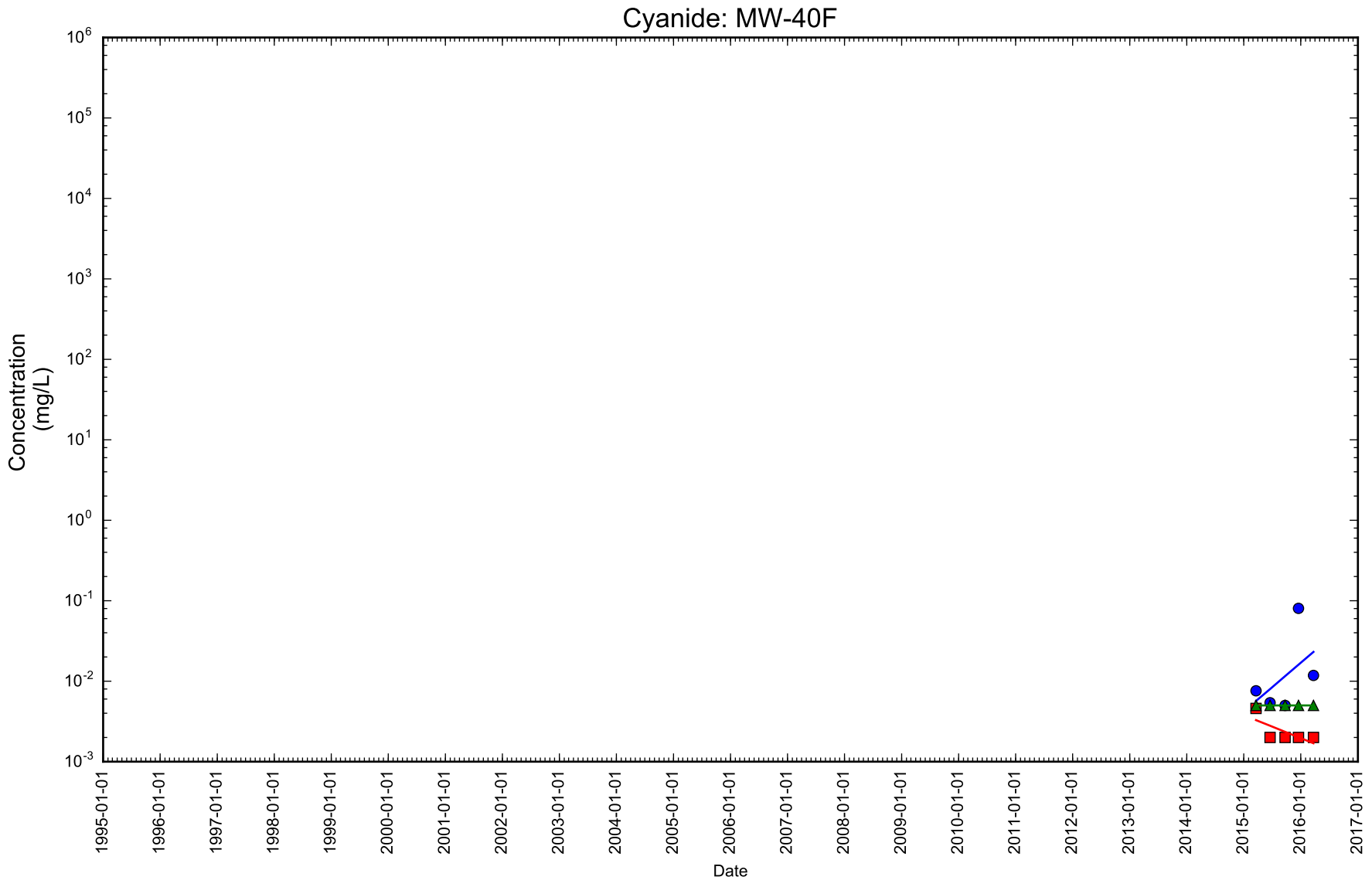


Figure 2-44

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

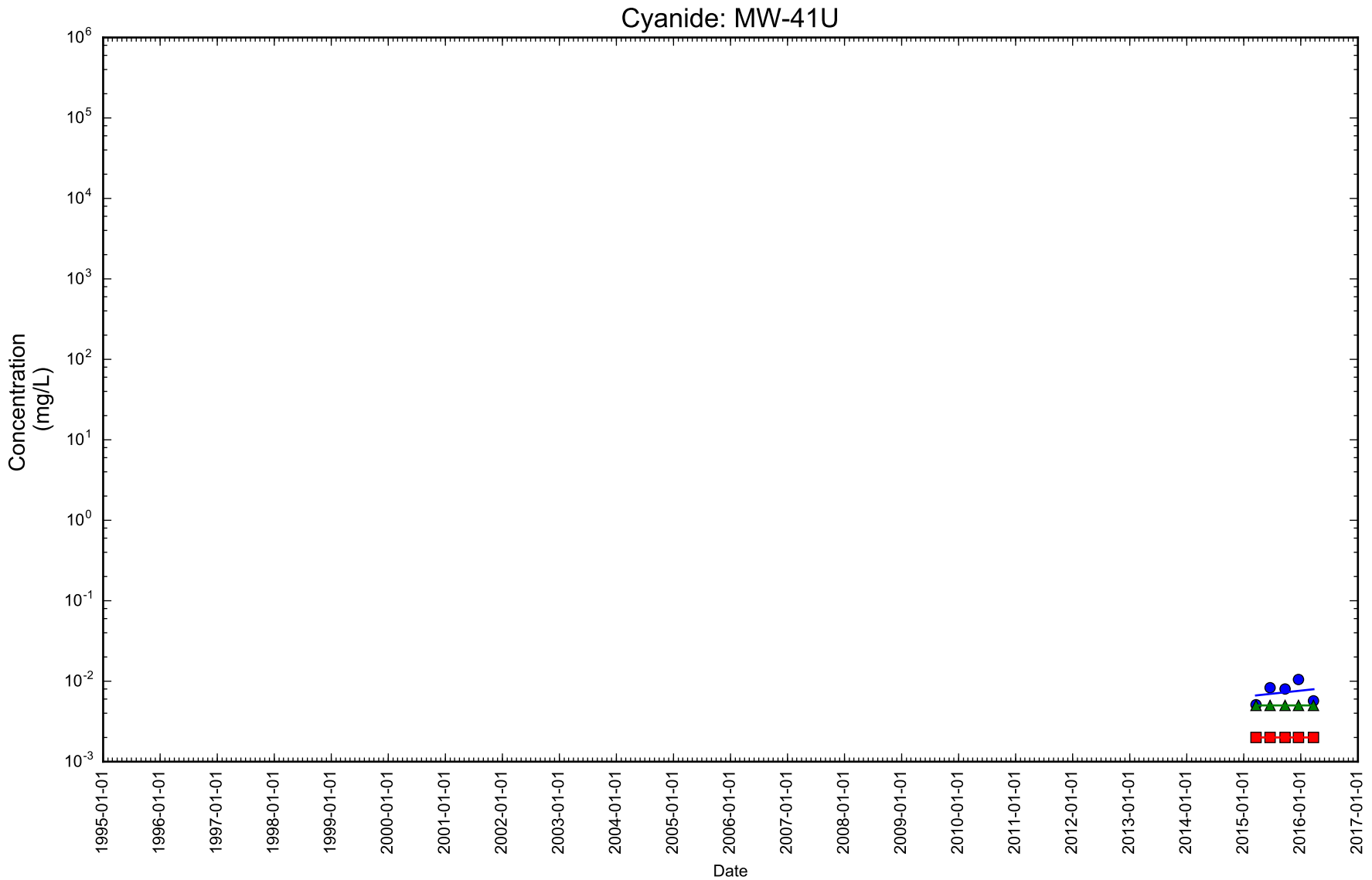


Figure 2-45

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

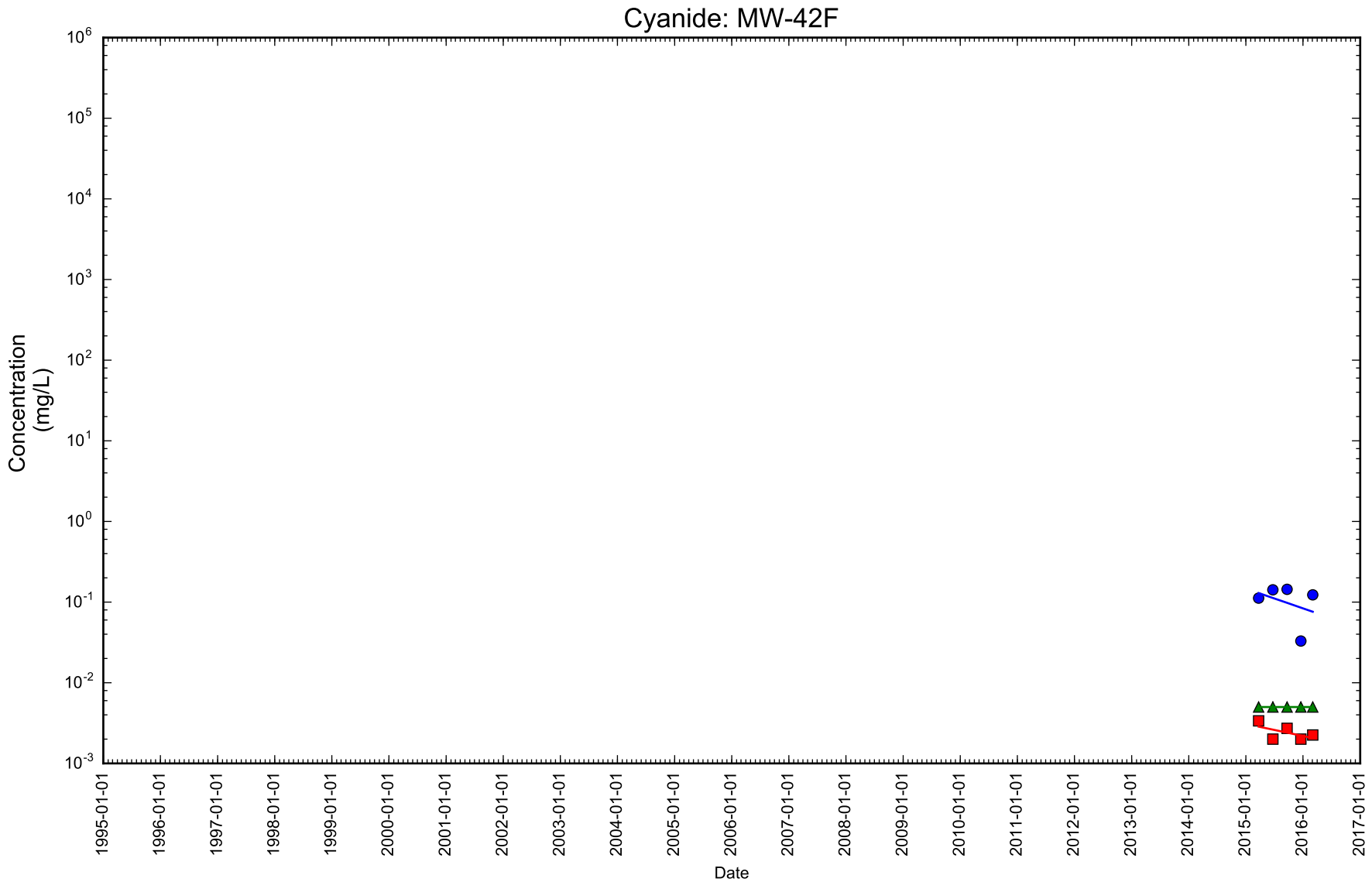


Figure 2-46

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-01-20

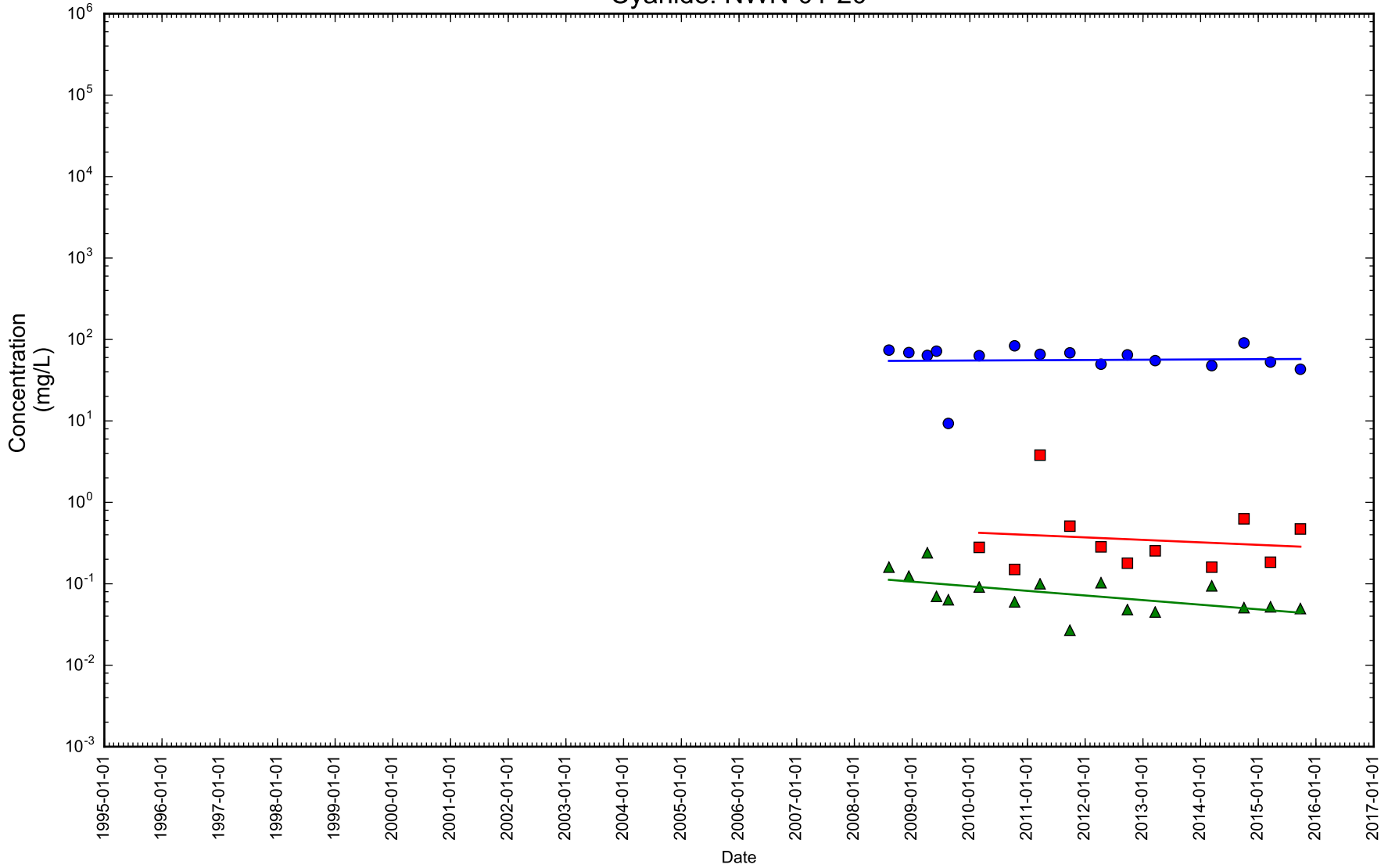


Figure 2-47

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-02-20

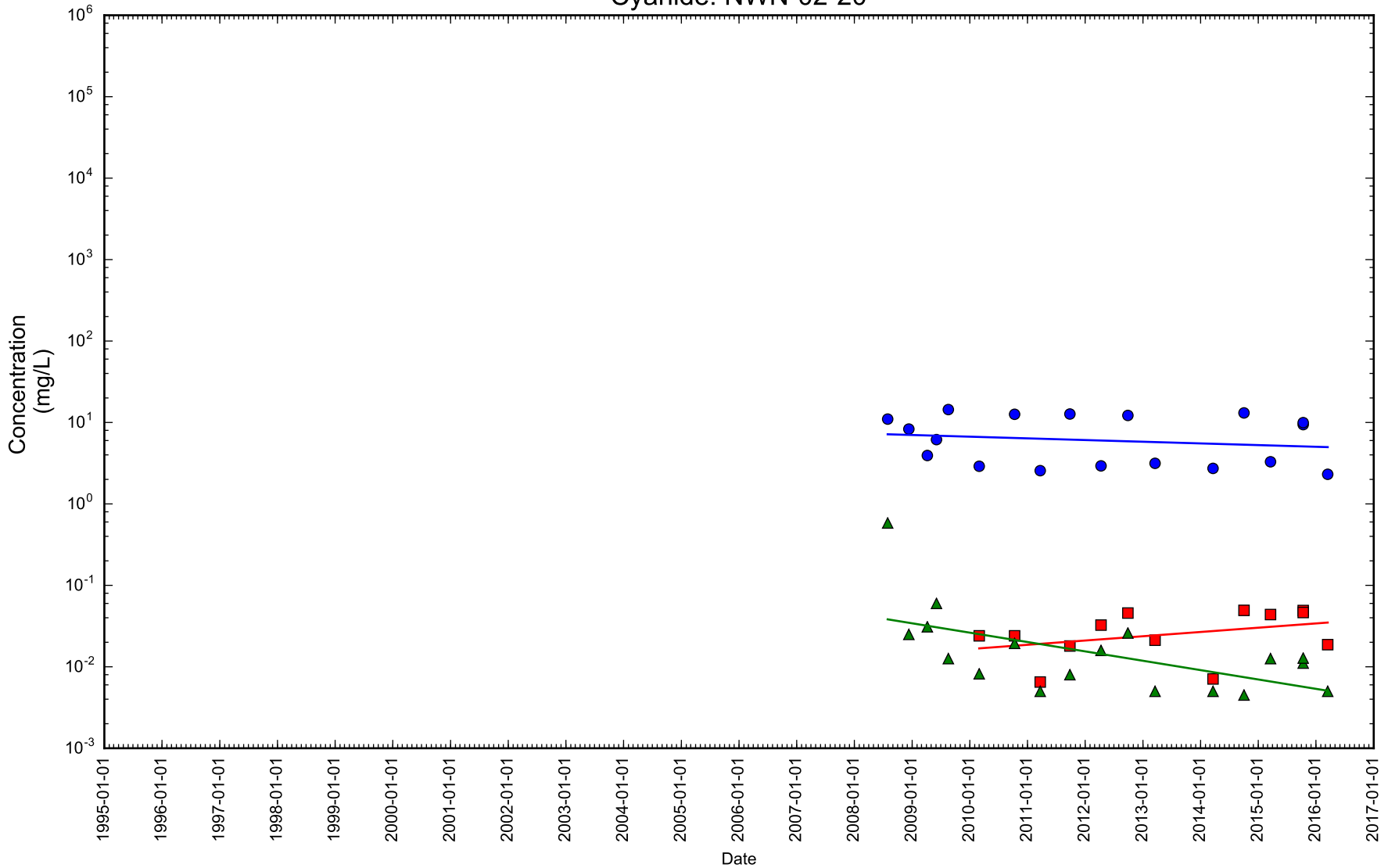


Figure 2-48

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-03-17

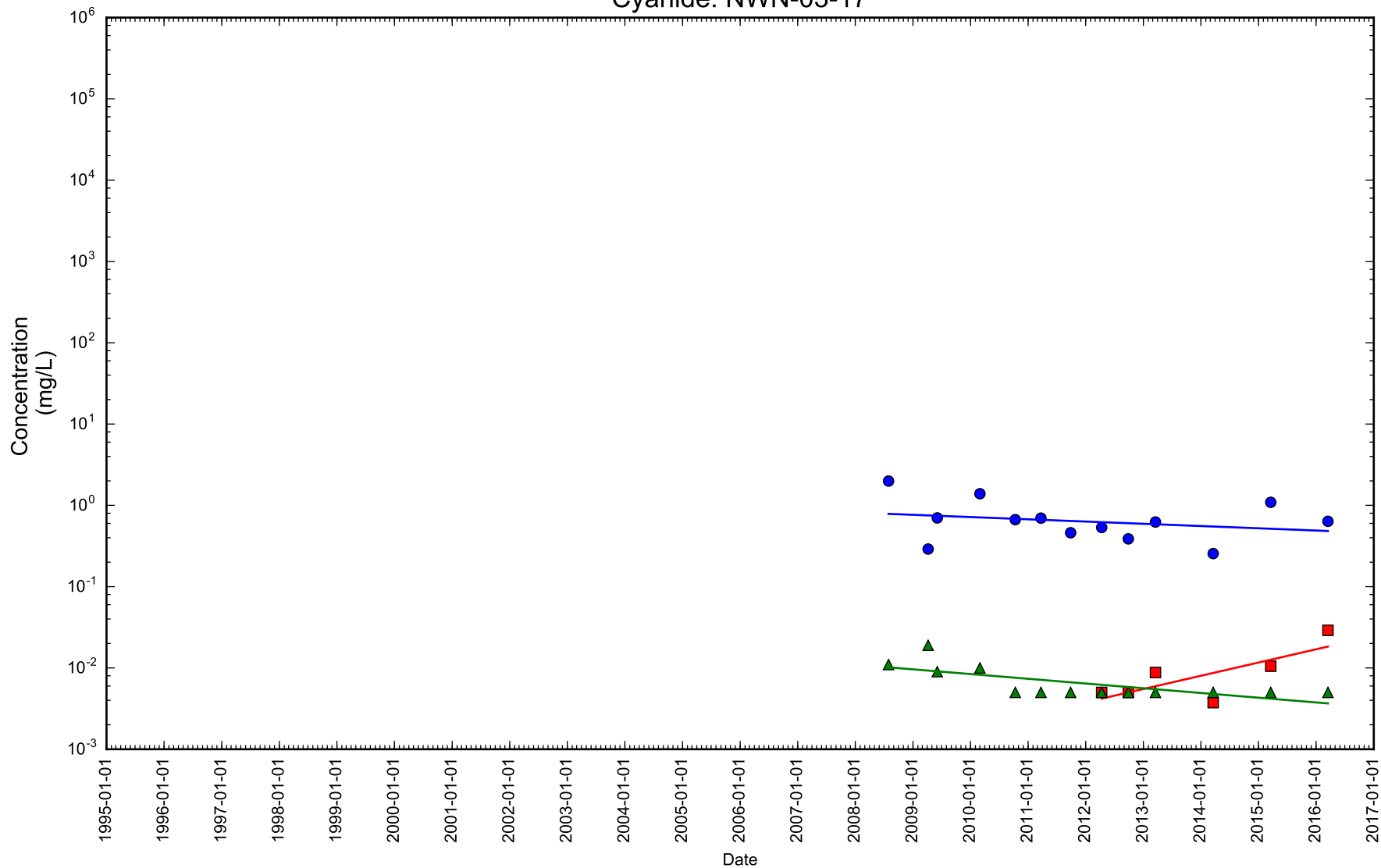


Figure 2-49

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-04-15

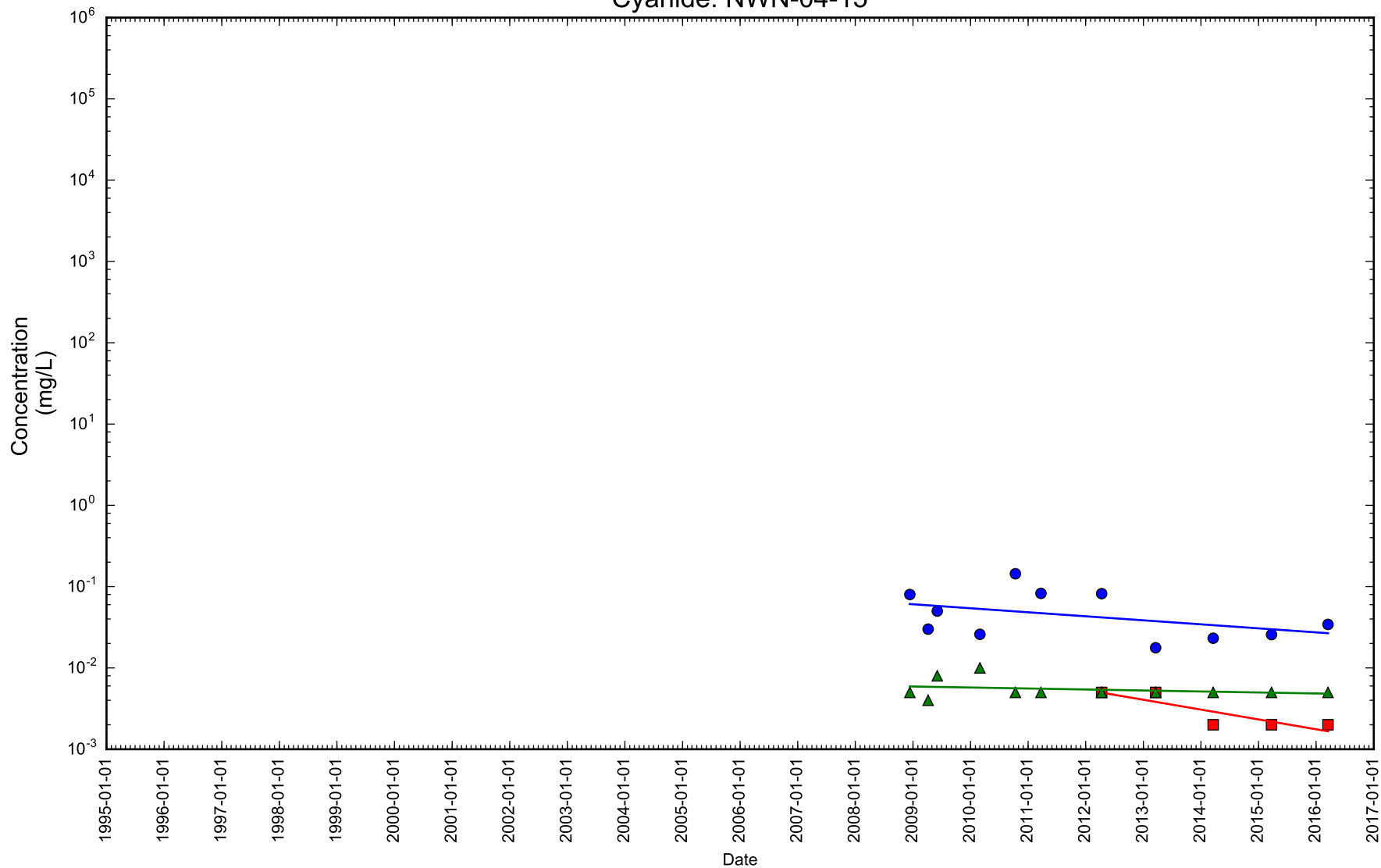


Figure 2-50

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-05-20

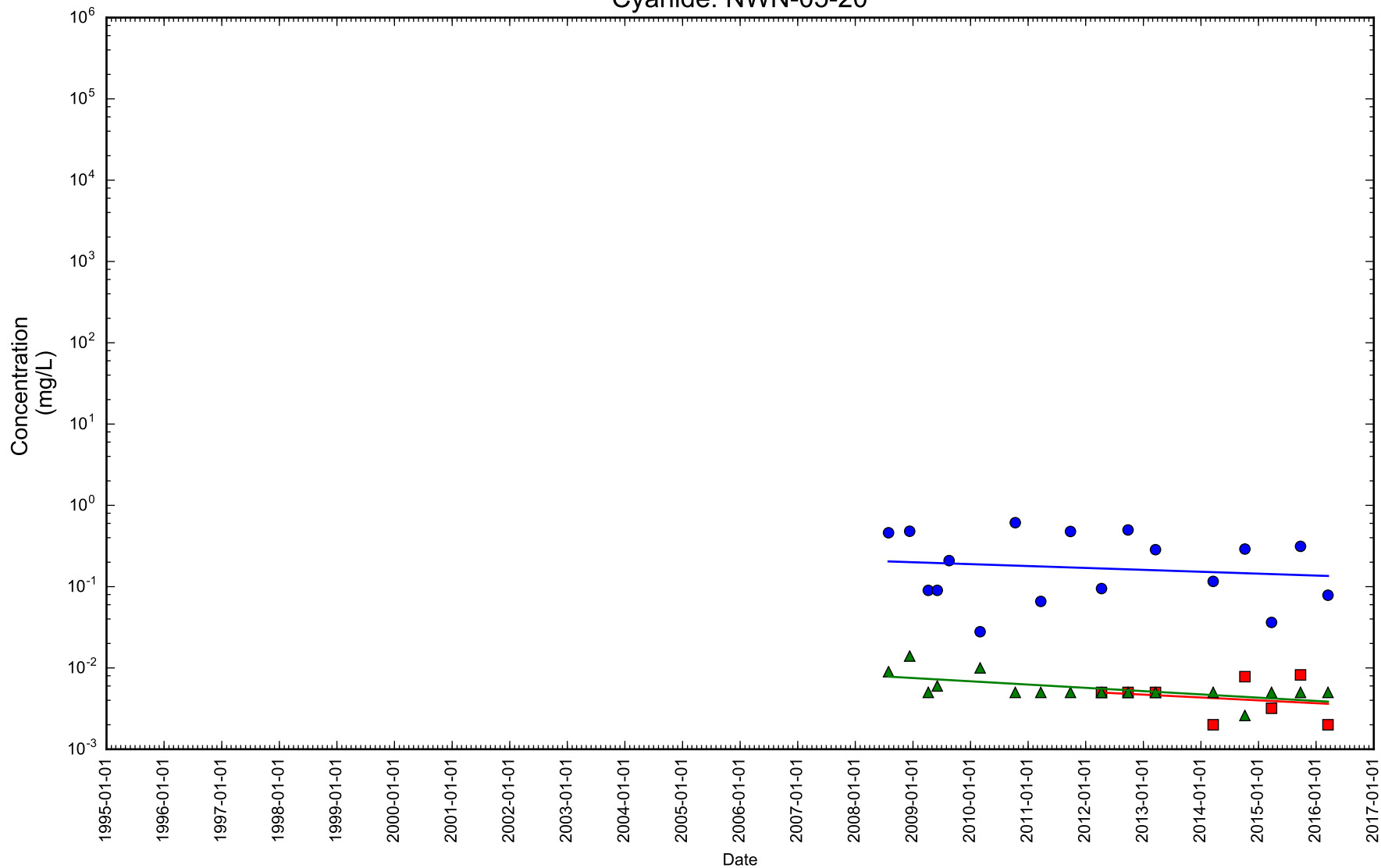


Figure 2-51

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-06-31

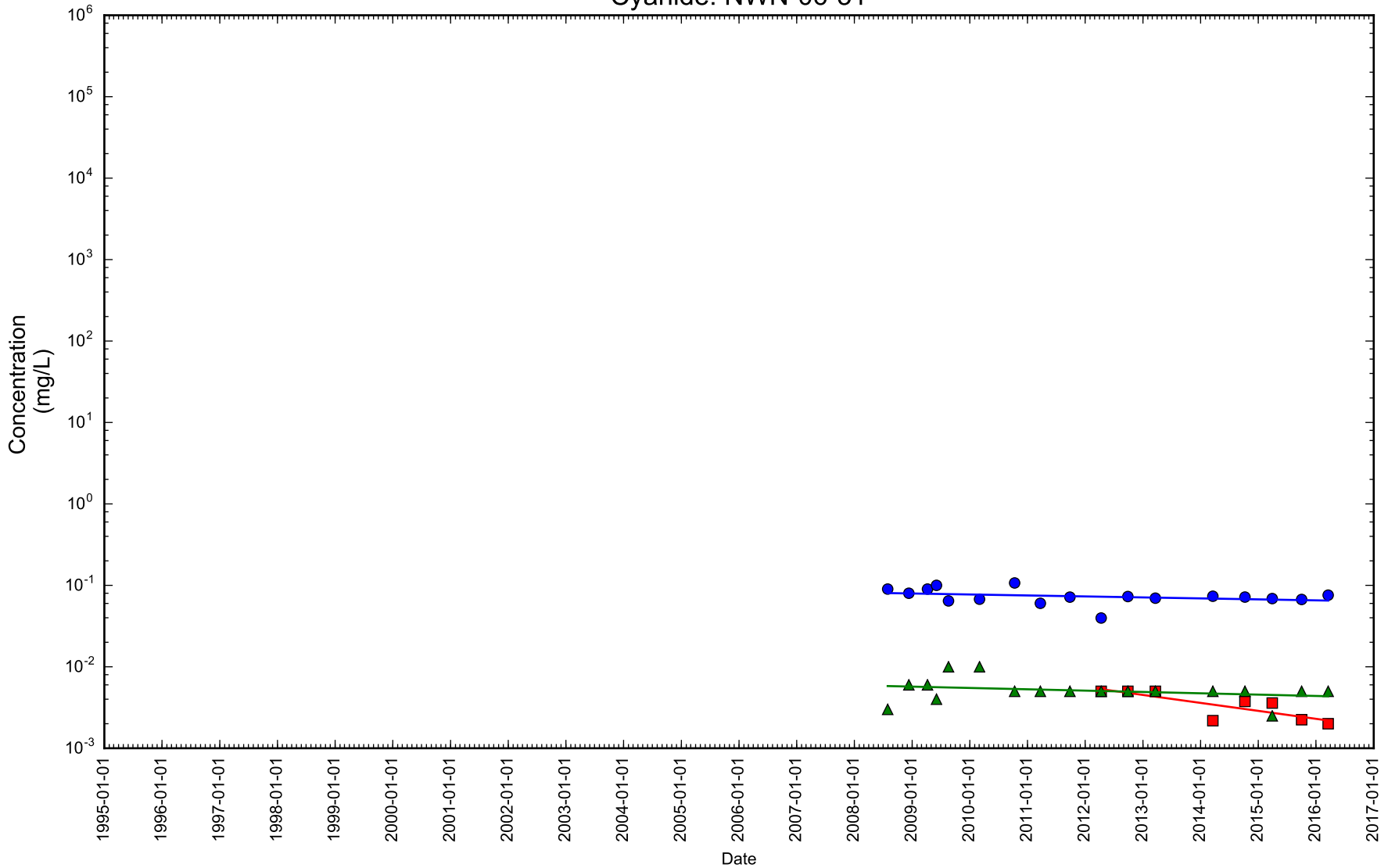


Figure 2-52

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-07-30

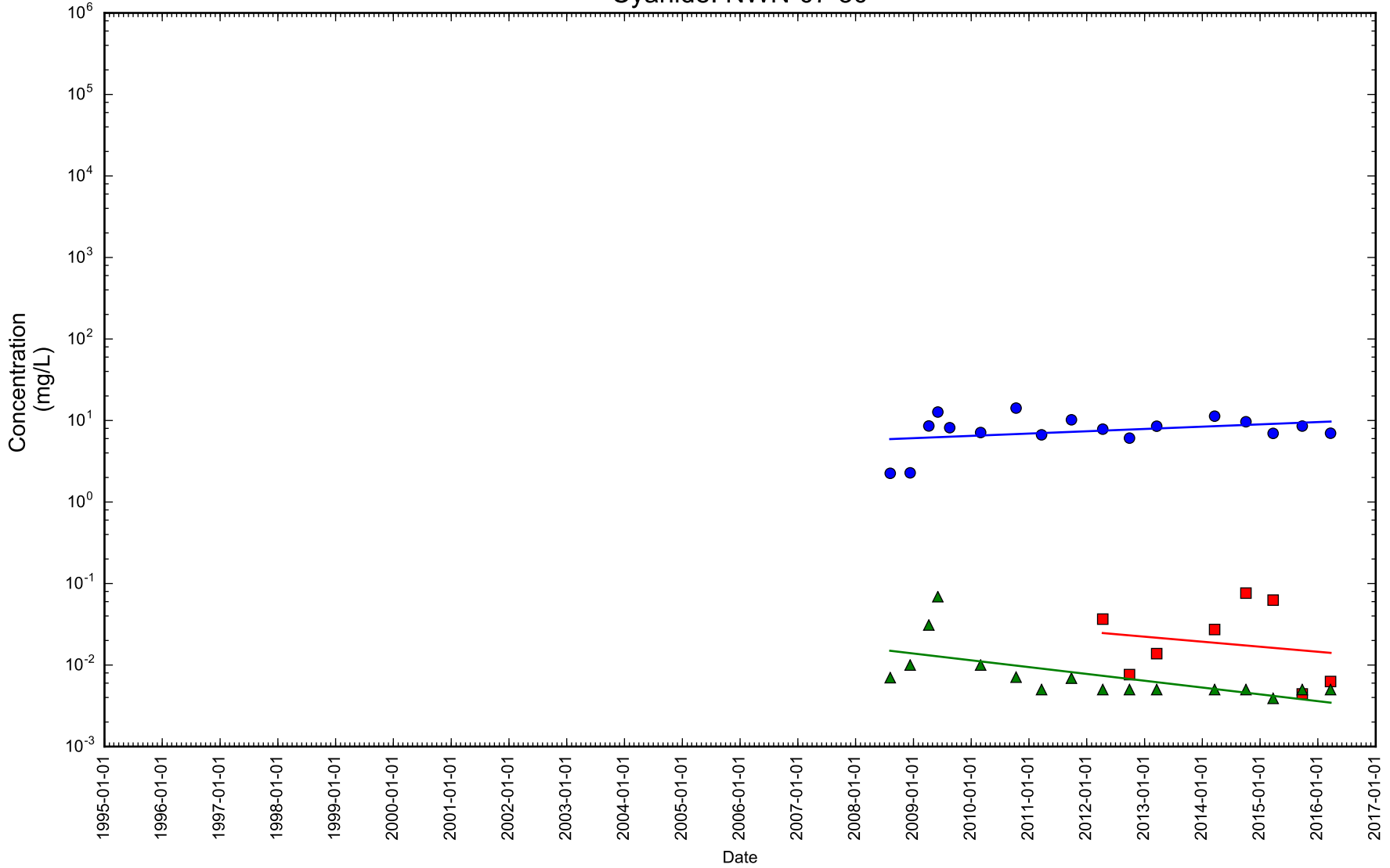


Figure 2-53

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-08-30

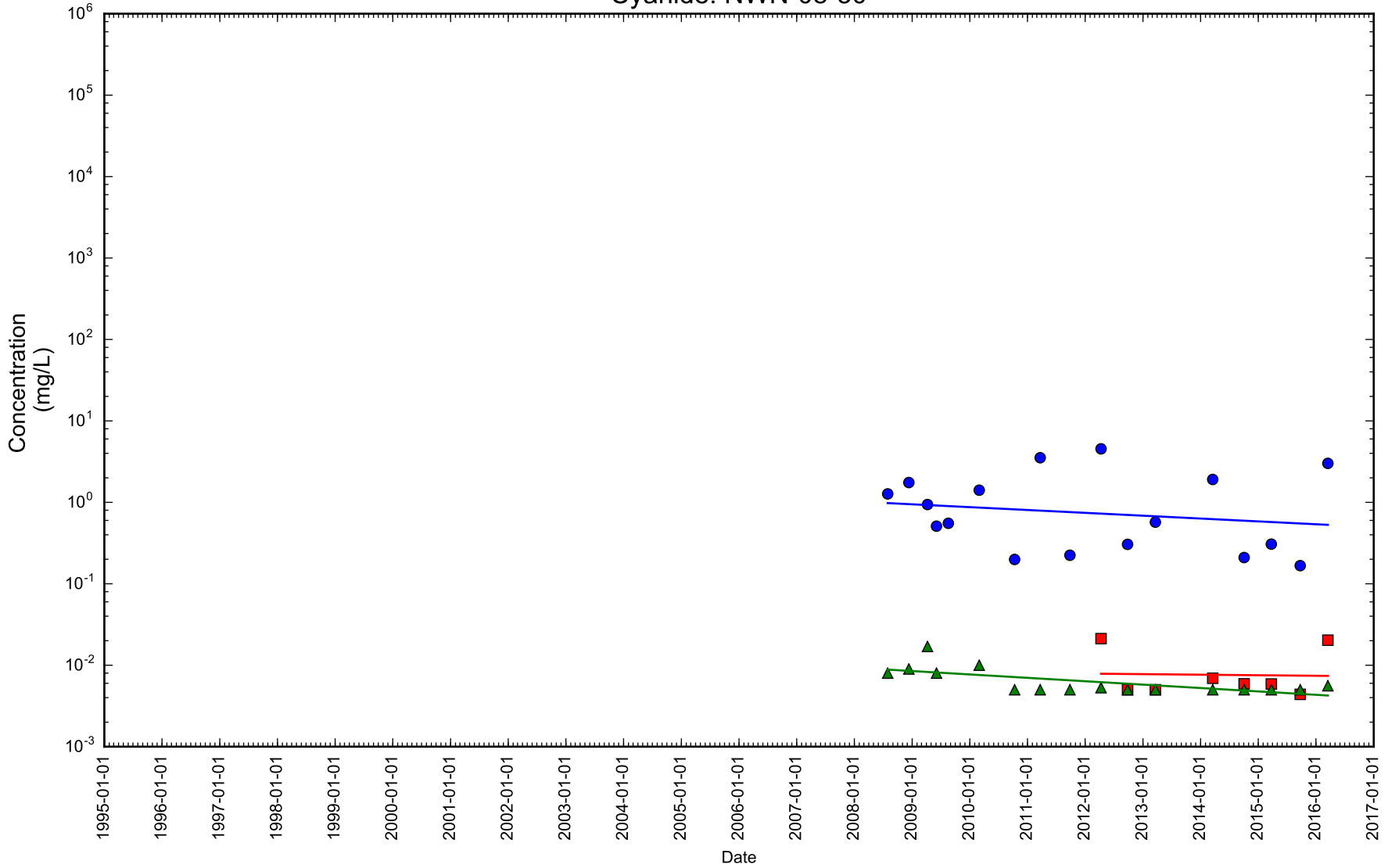


Figure 2-54

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-09-31

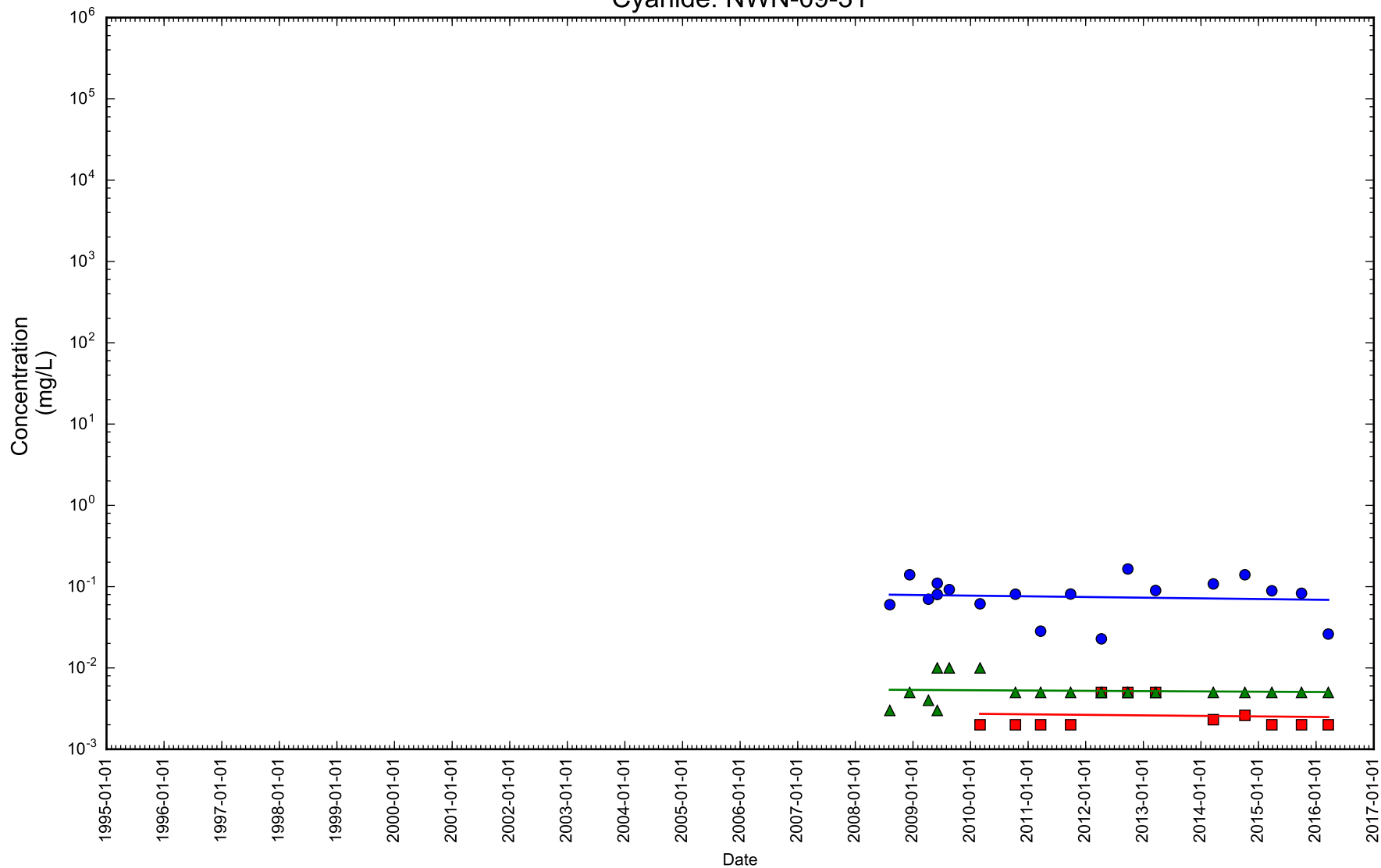


Figure 2-55

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-10-26

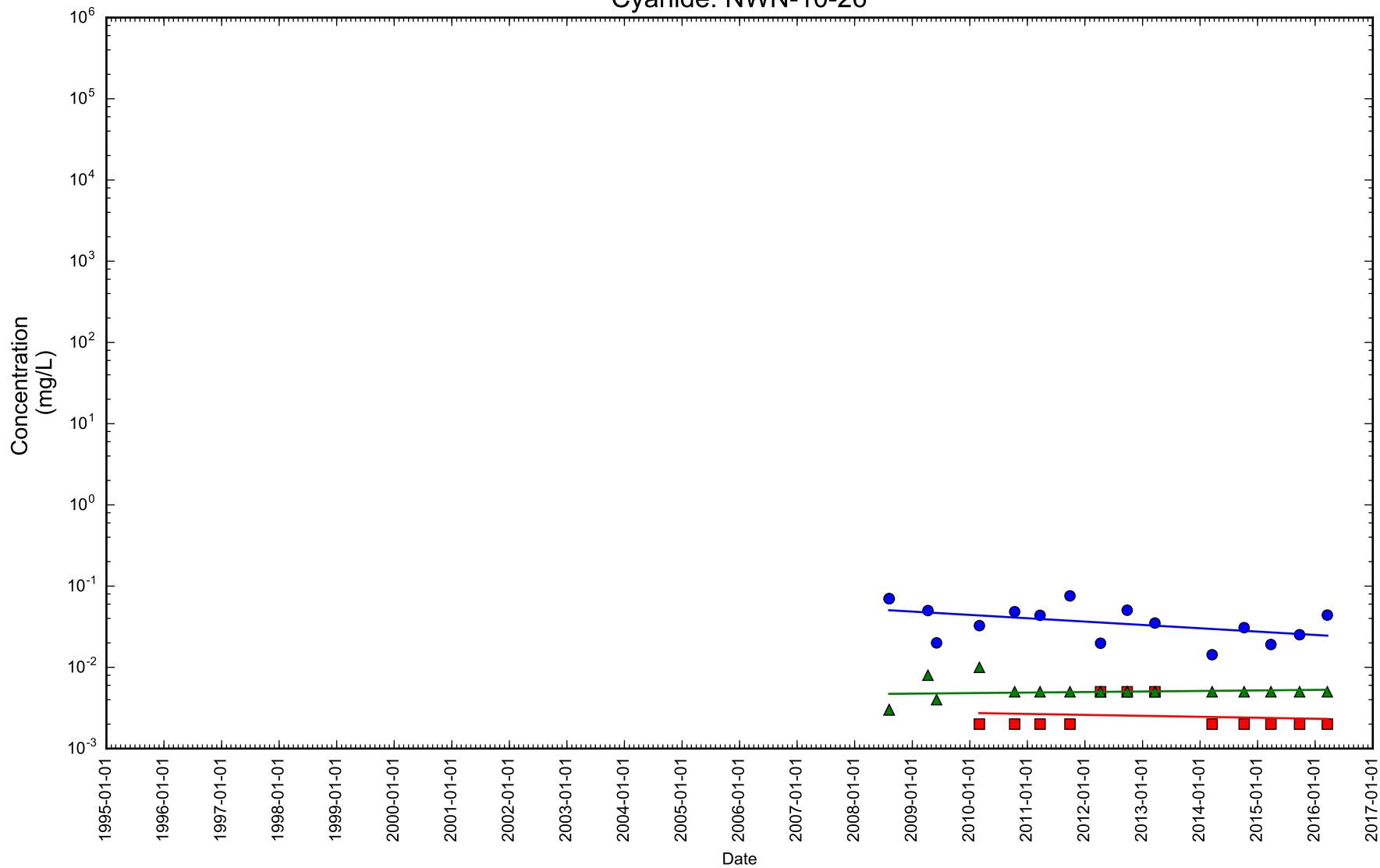


Figure 2-56

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-11-24

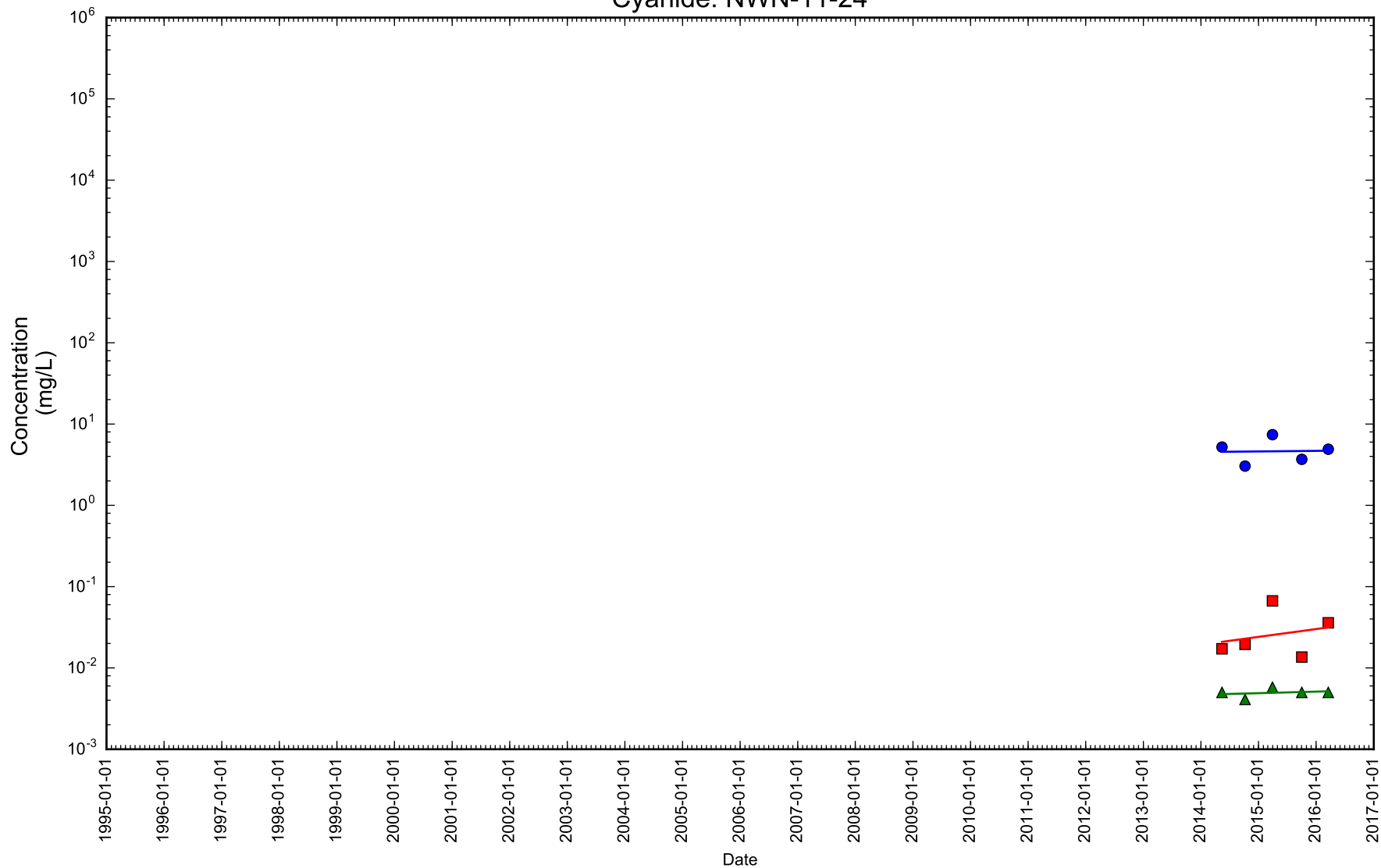


Figure 2-57

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

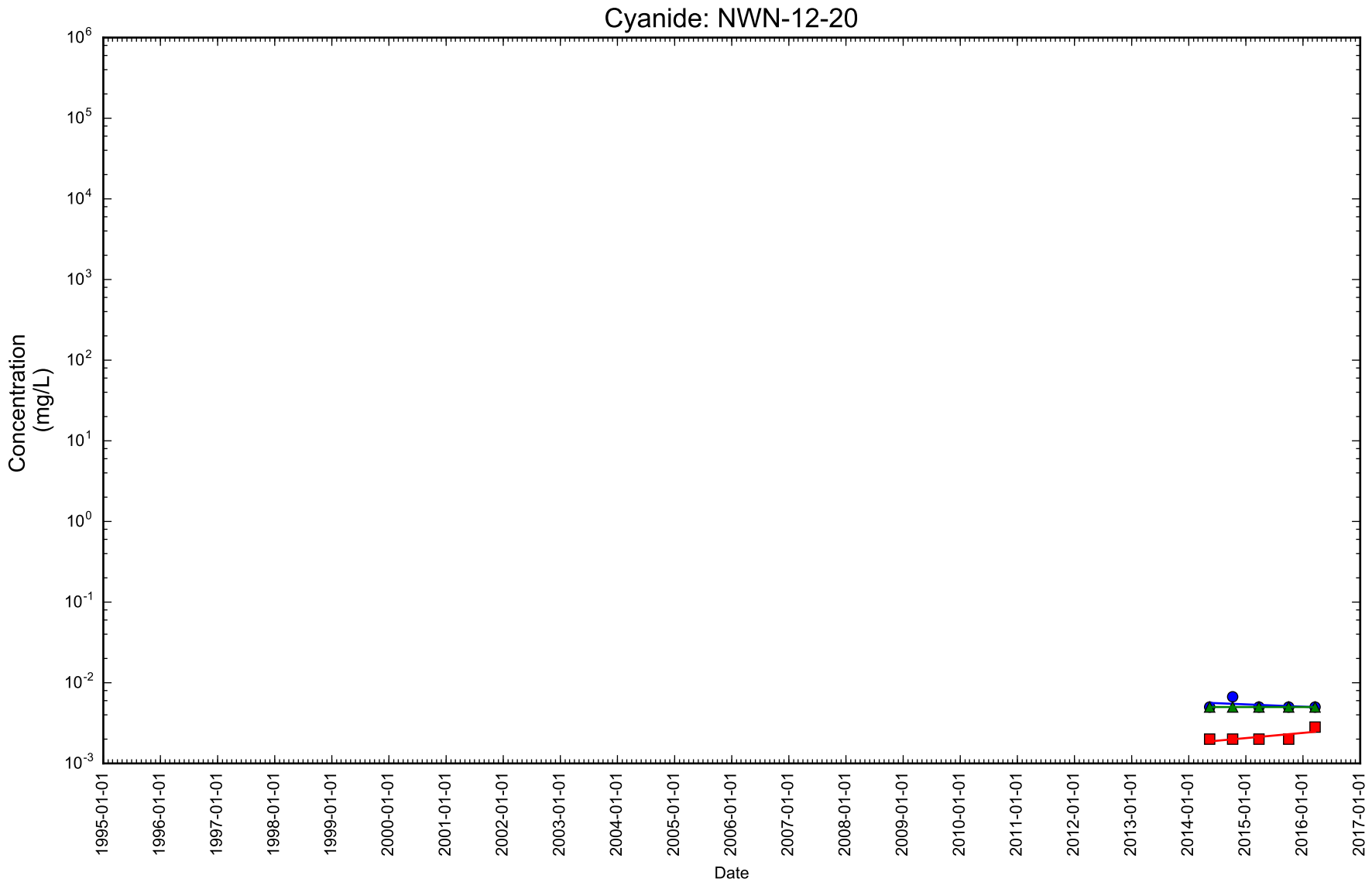


Figure 2-58

Time Series Concentration Plot



● Cyanide ■ Cyanide, available ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-13-106

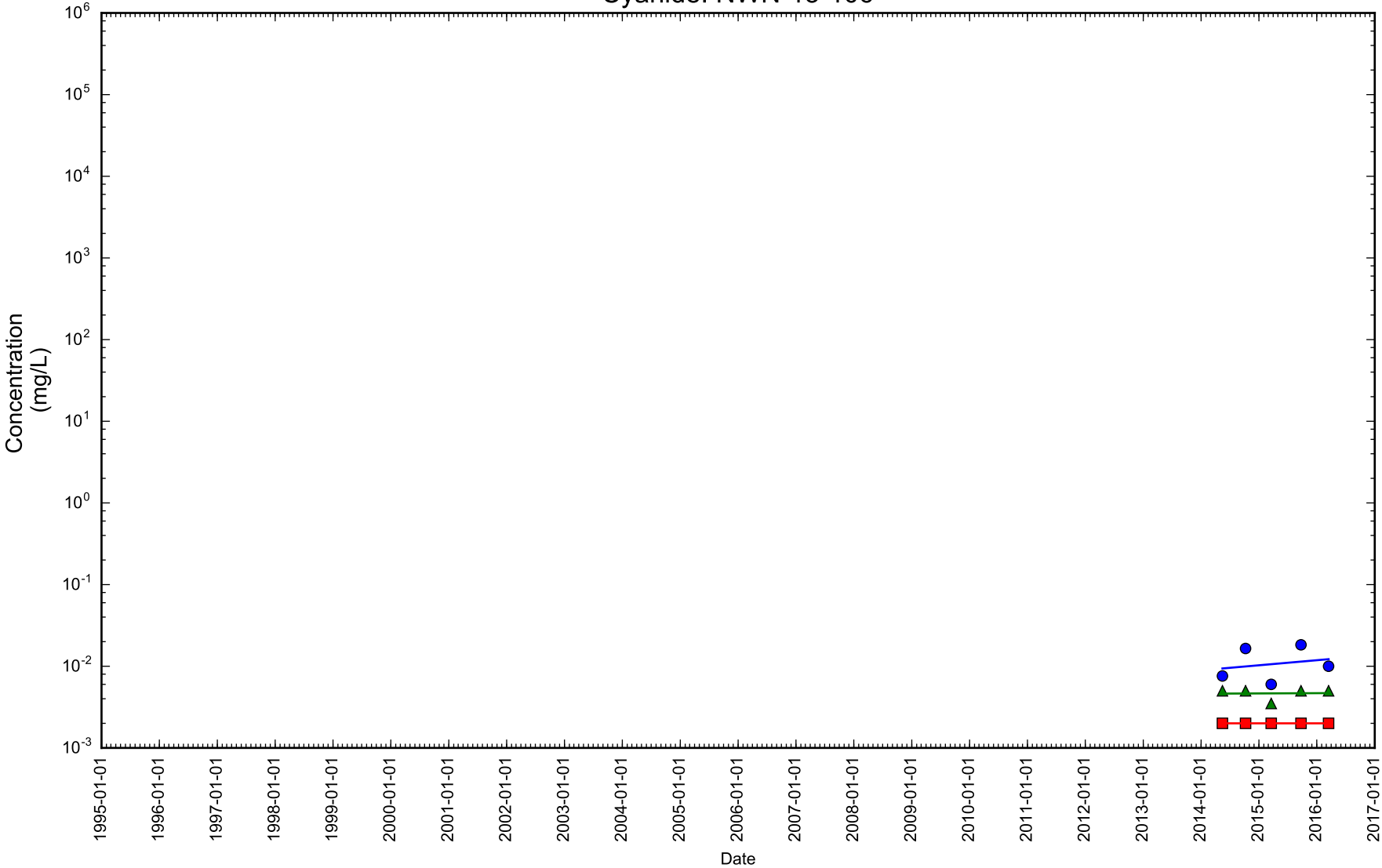


Figure 2-59

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-13-23

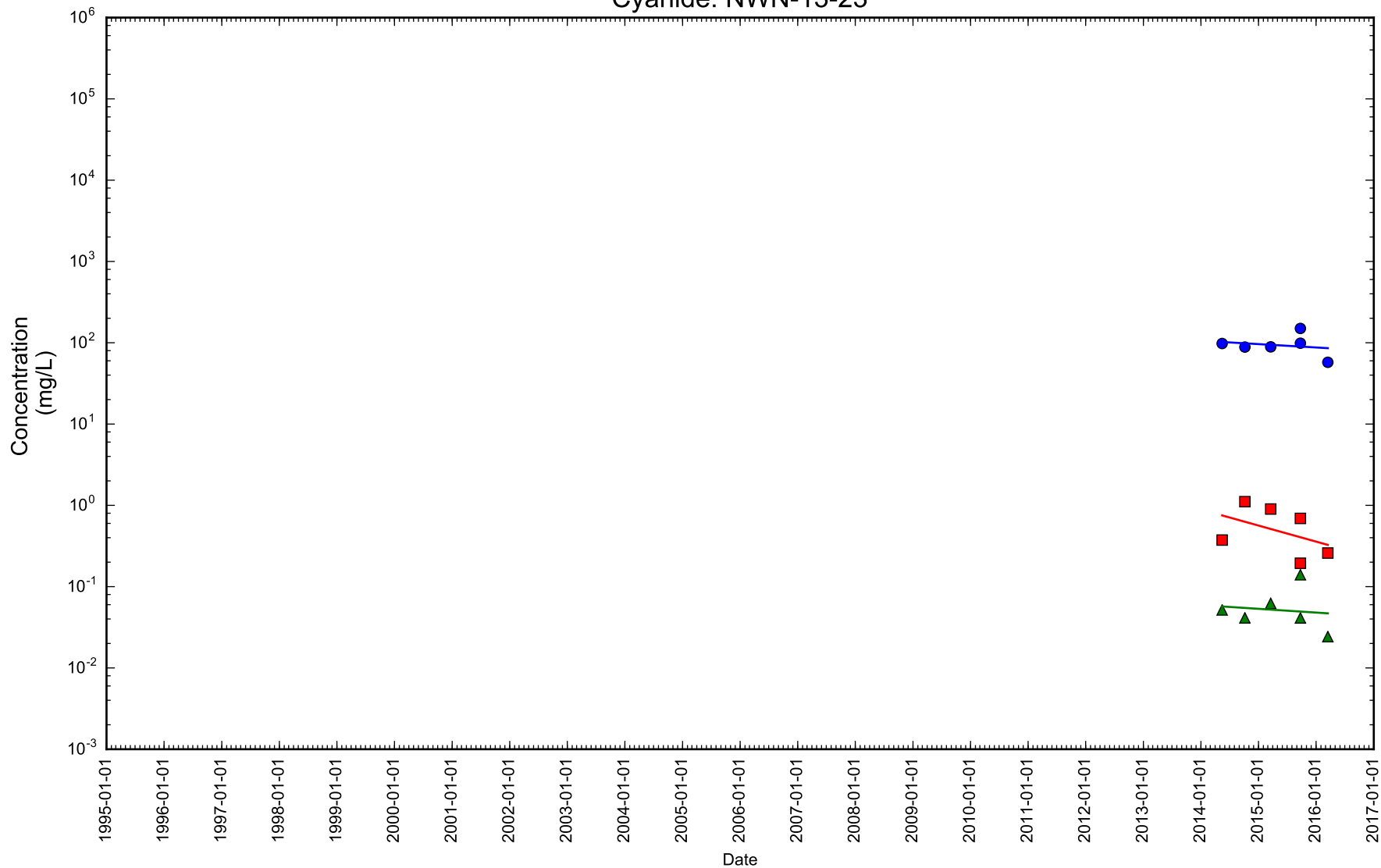


Figure 2-60

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: NWN-13-73

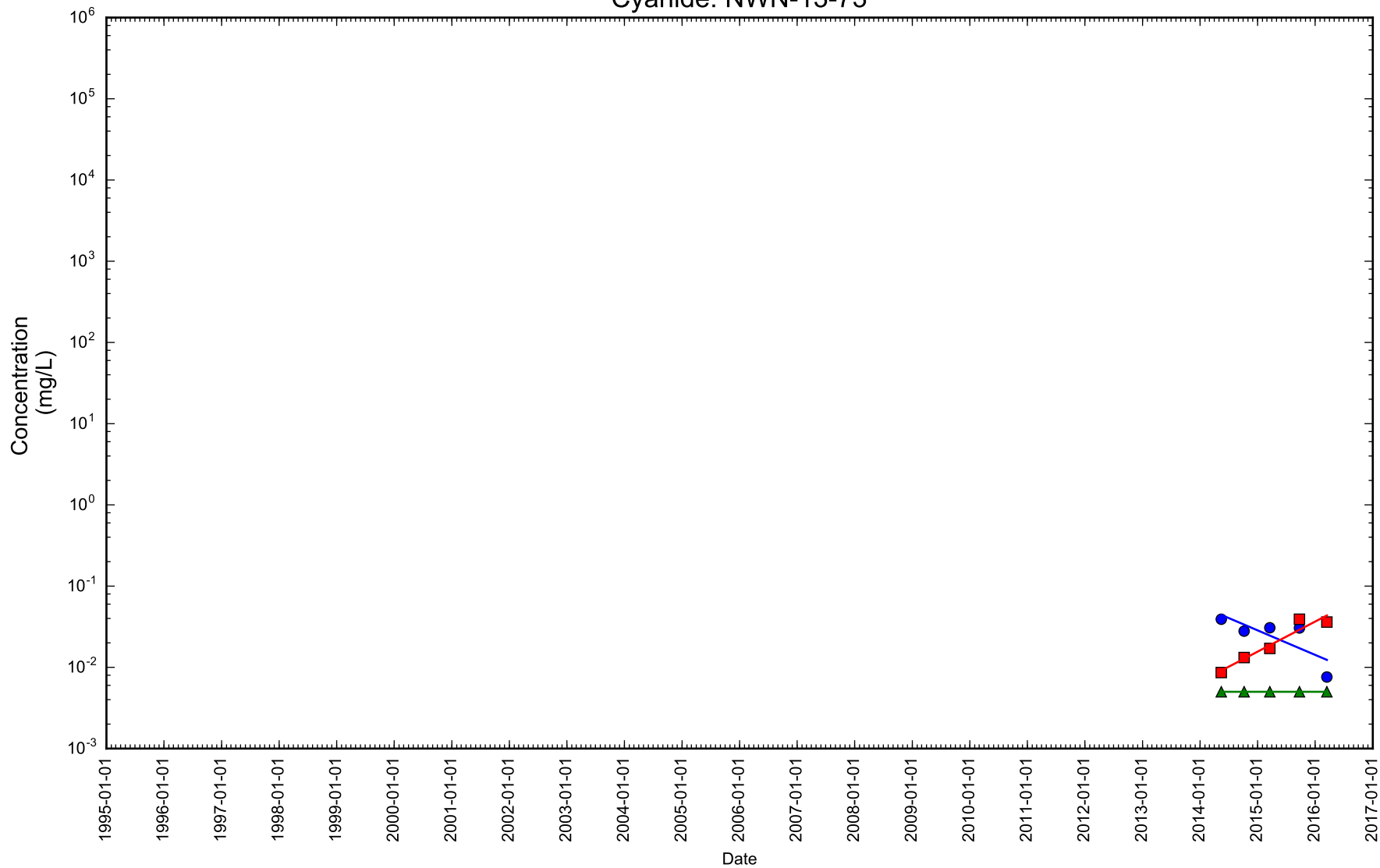


Figure 2-61

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: OW-10F

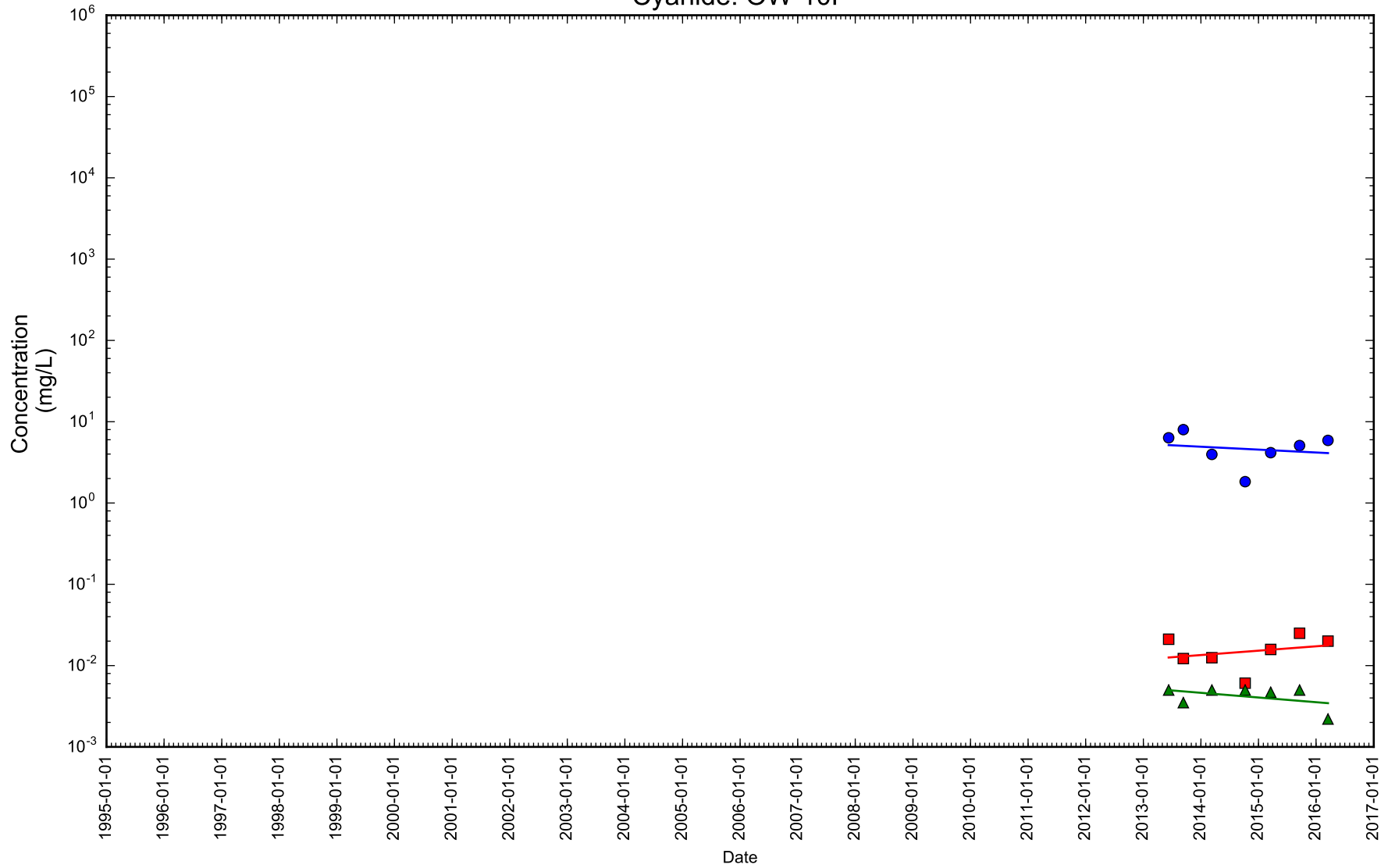


Figure 2-62

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: OW-1F

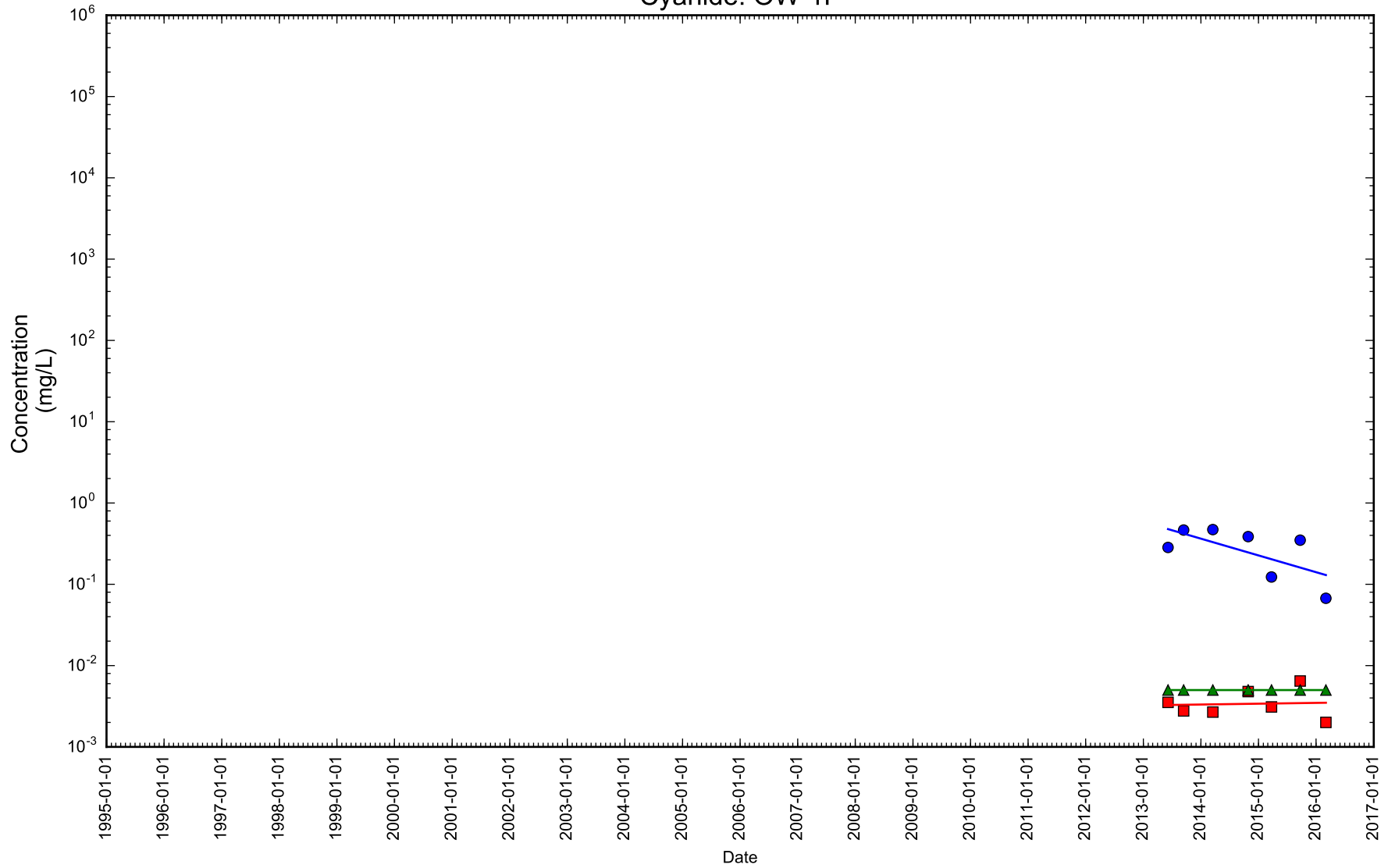


Figure 2-63

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: OW-2F

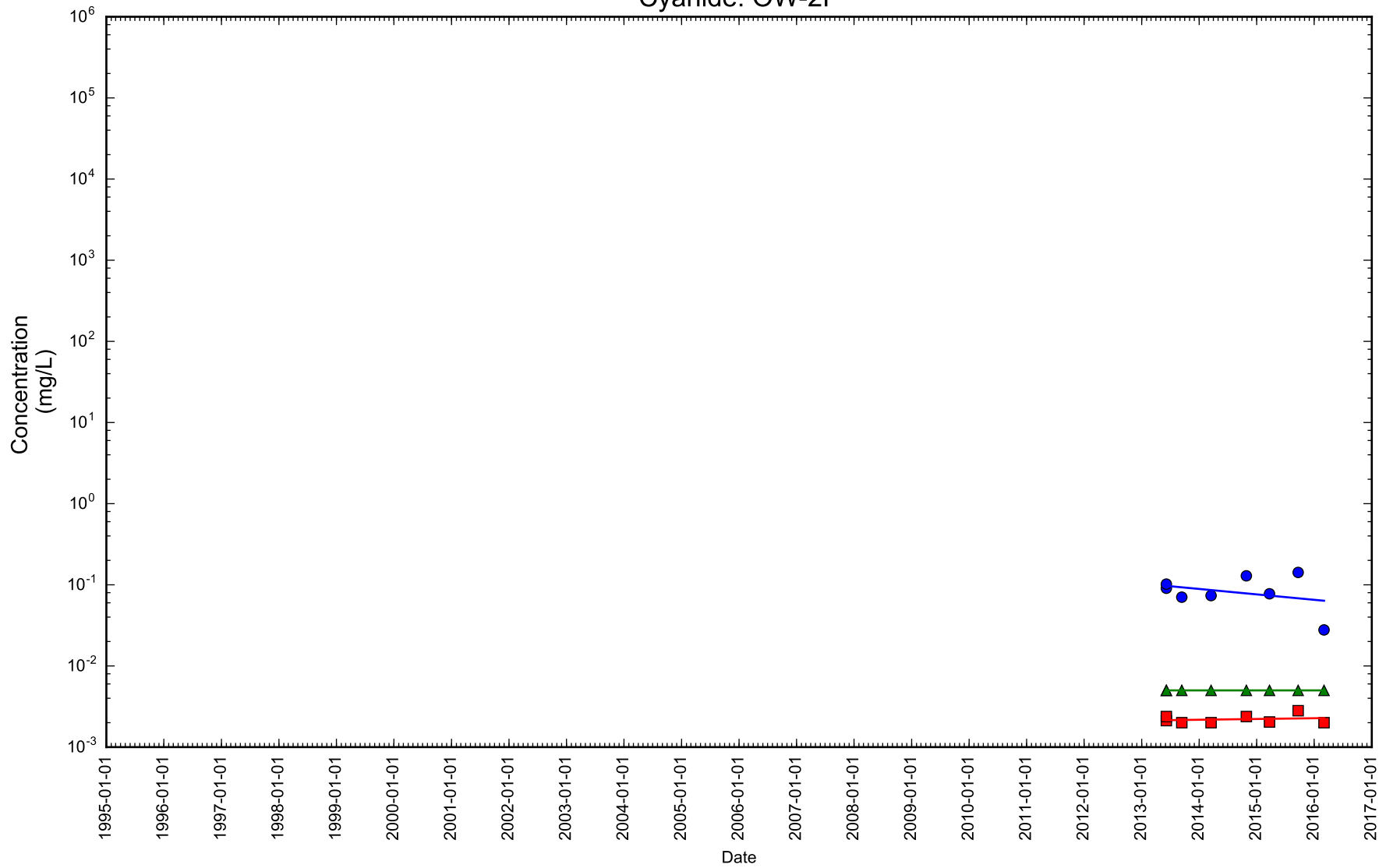


Figure 2-64

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: OW-5F

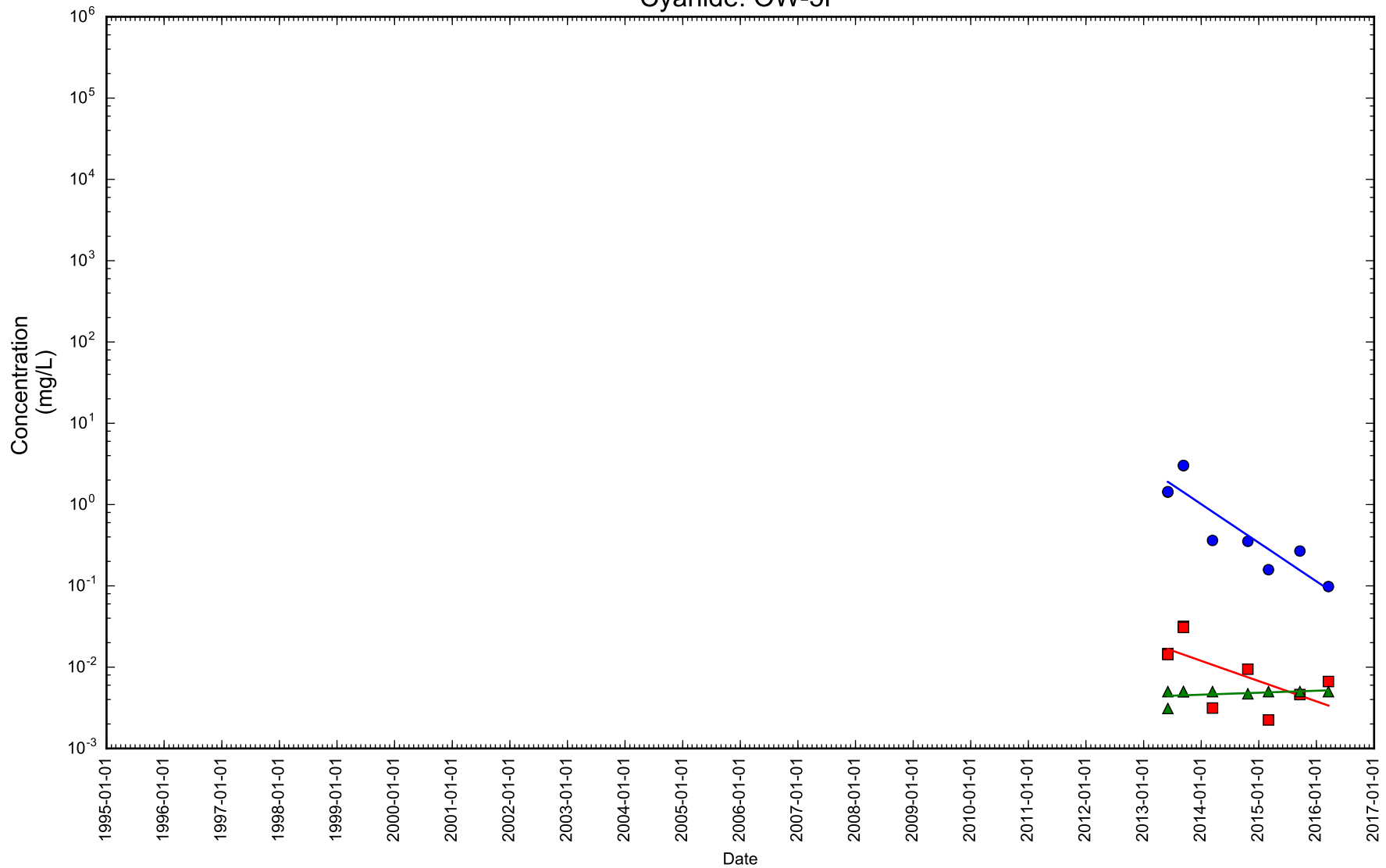


Figure 2-65

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: OW-7-17

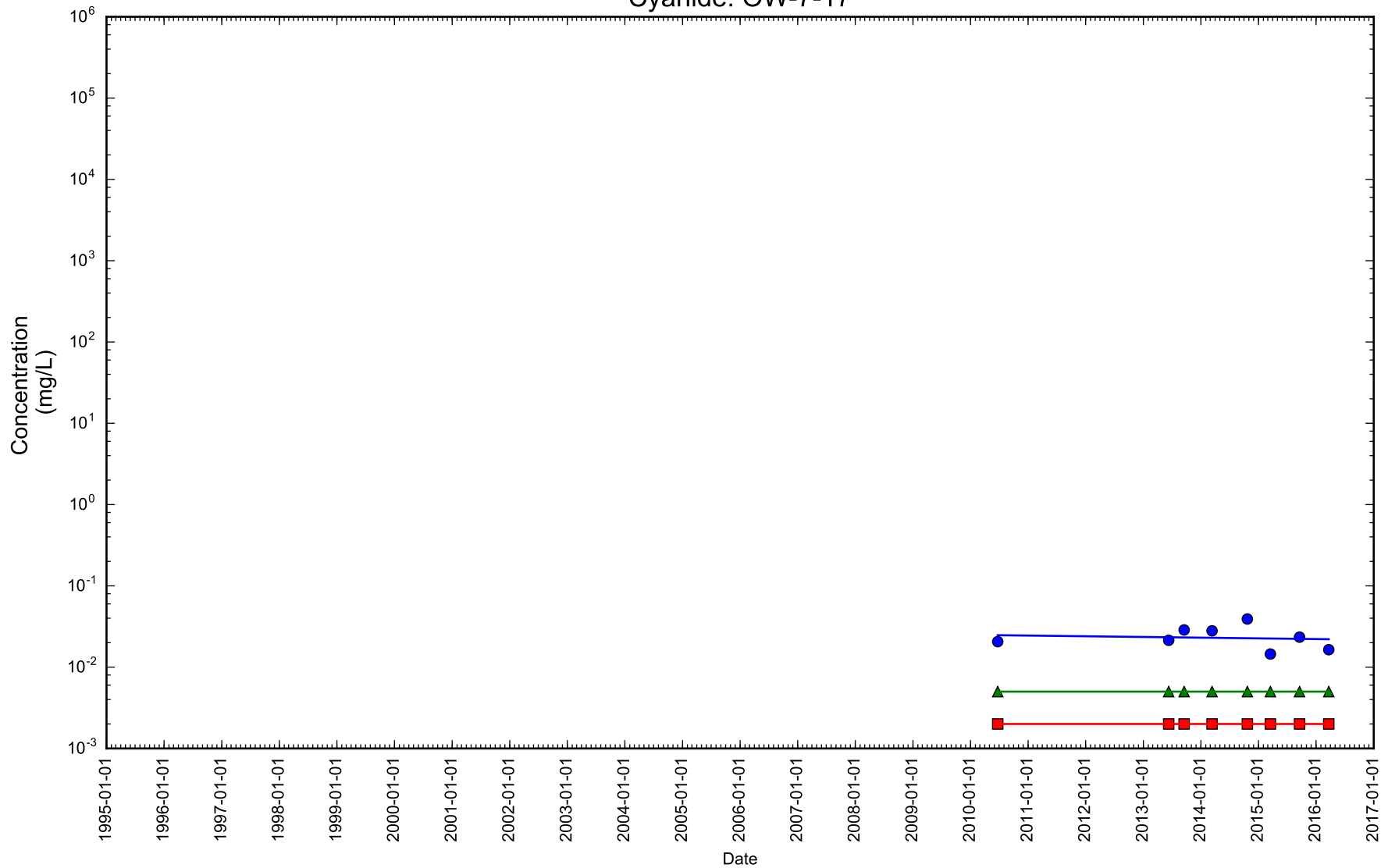


Figure 2-66

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: OW-8-15

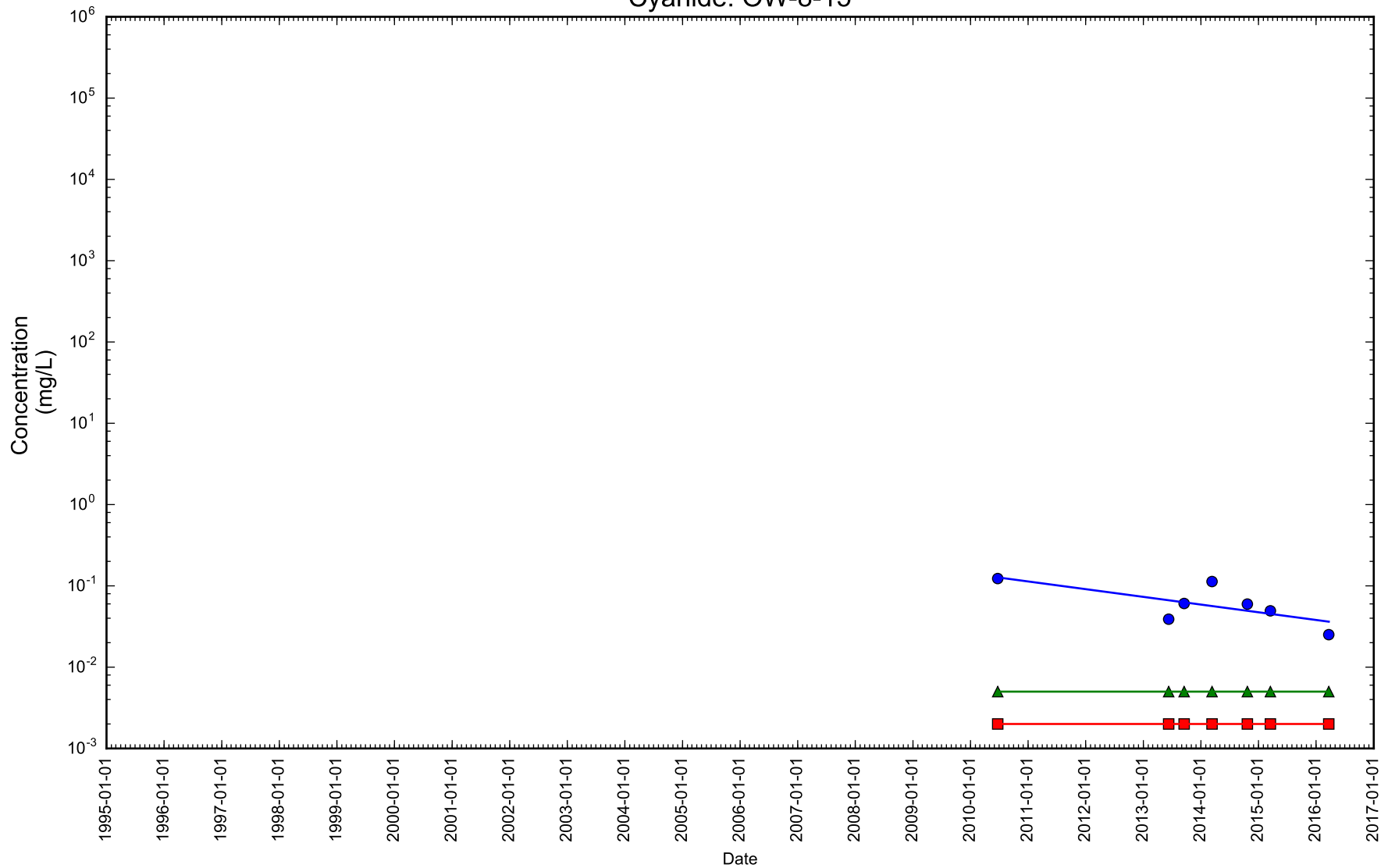


Figure 2-67

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: OW-9-25

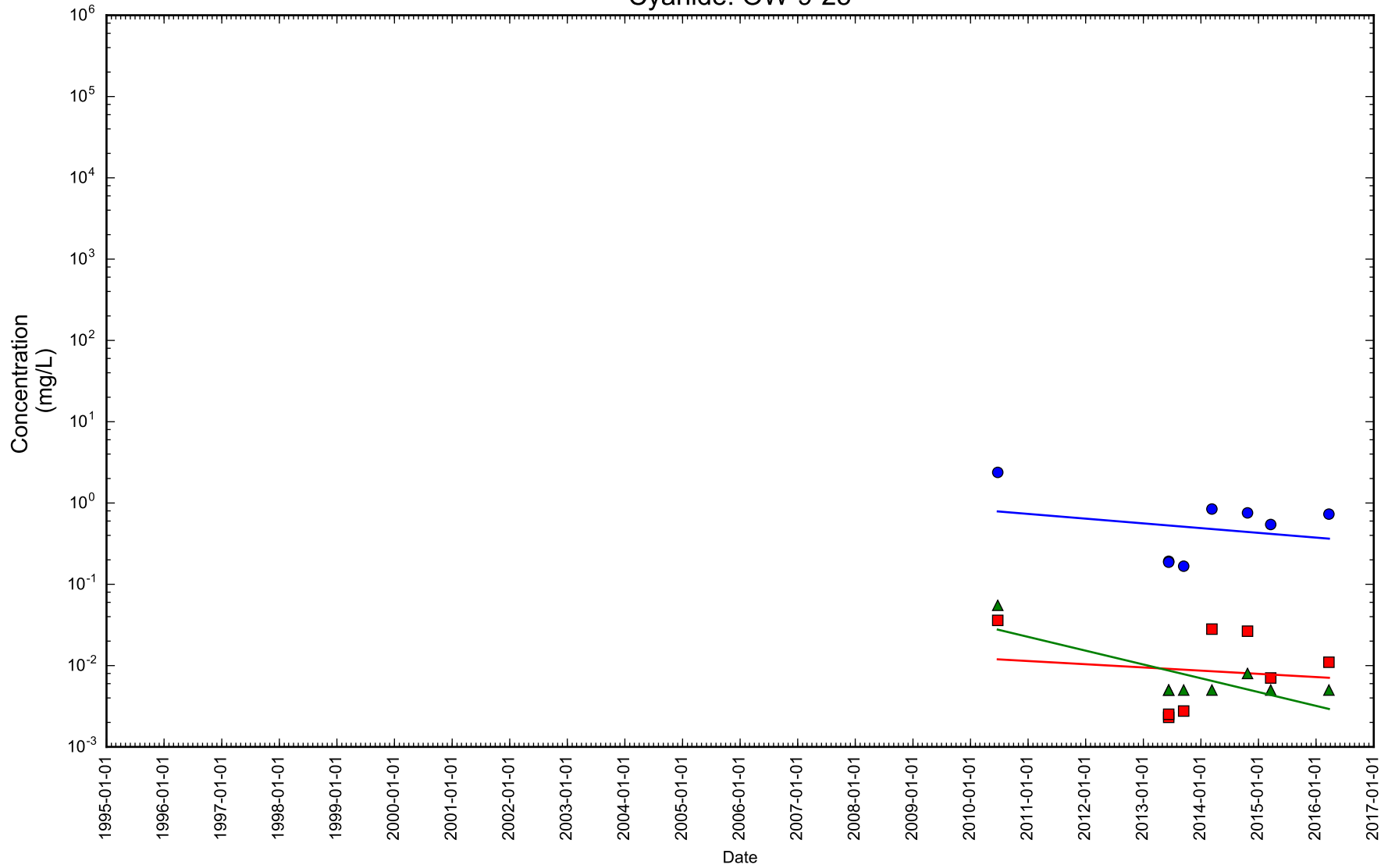


Figure 2-68

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

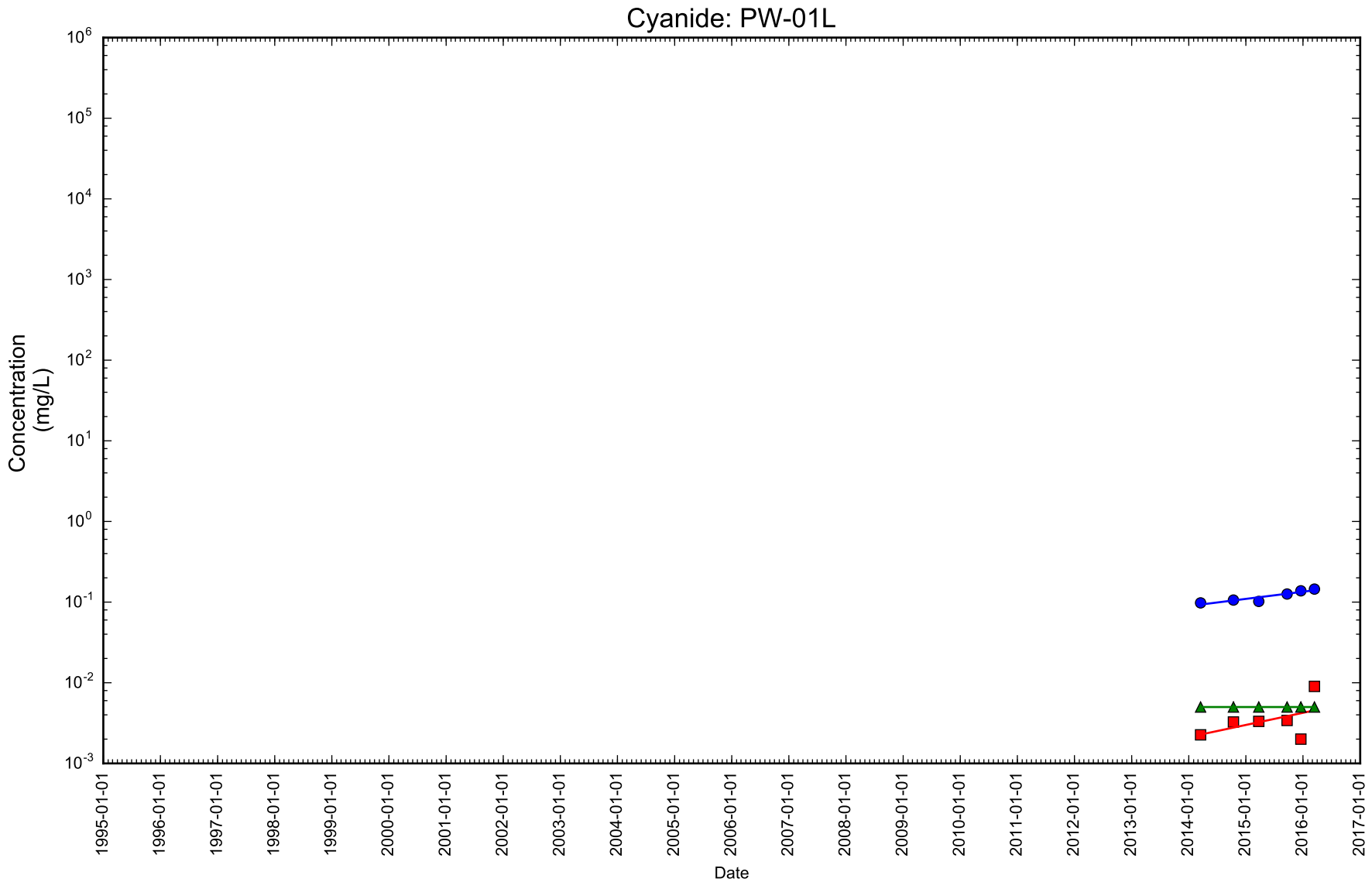


Figure 2-69

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

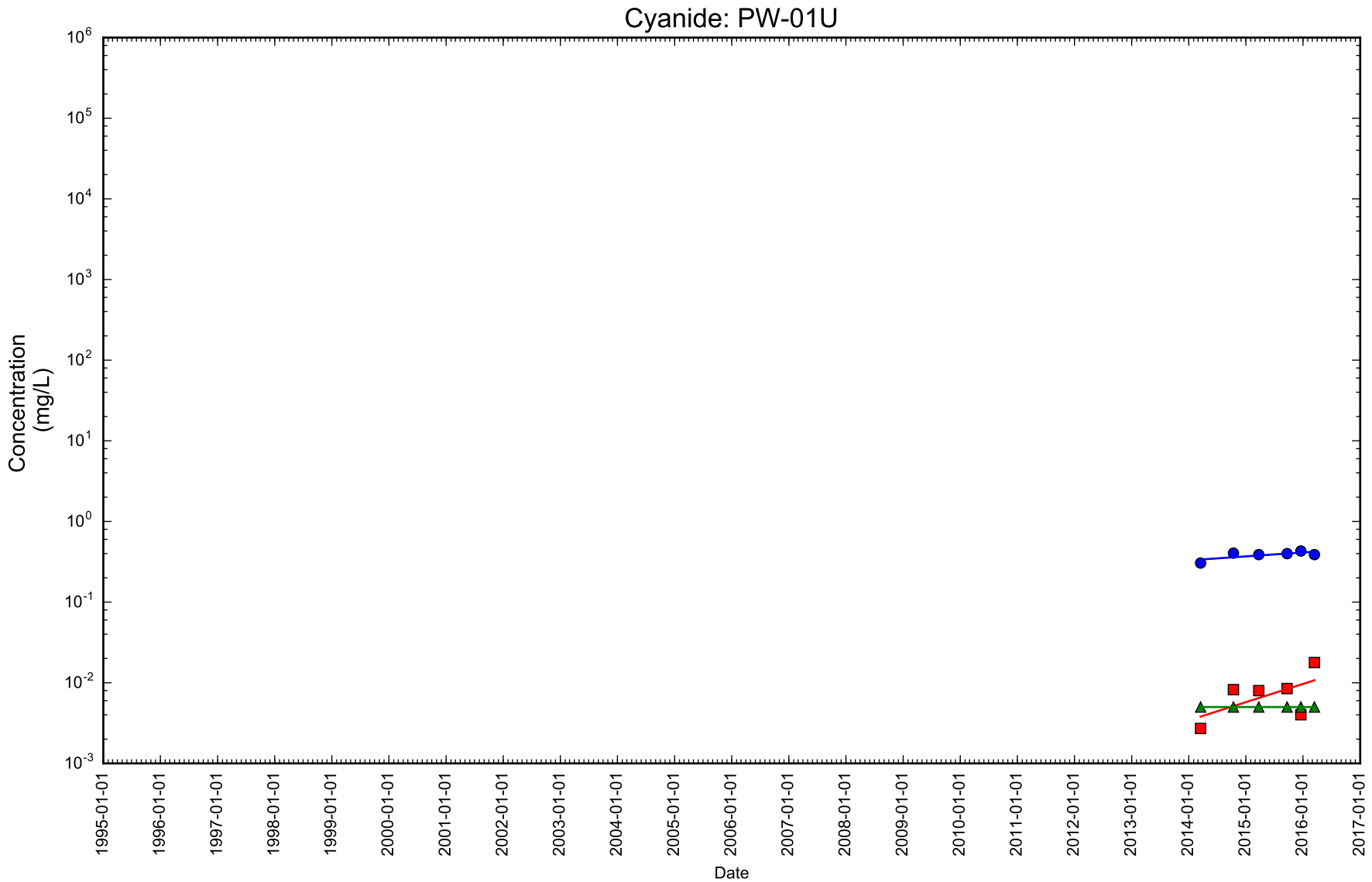


Figure 2-70

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-02L

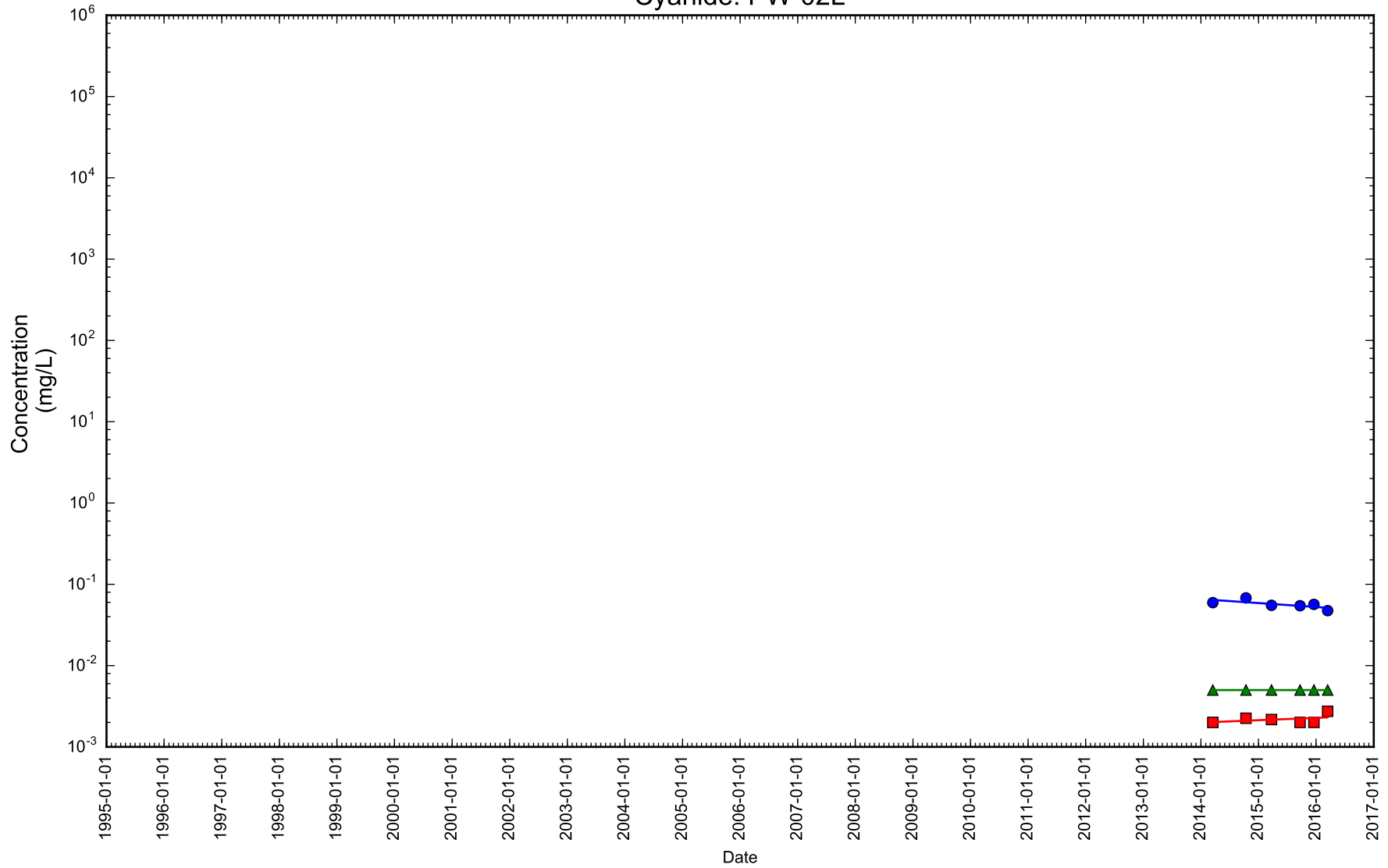


Figure 2-71

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

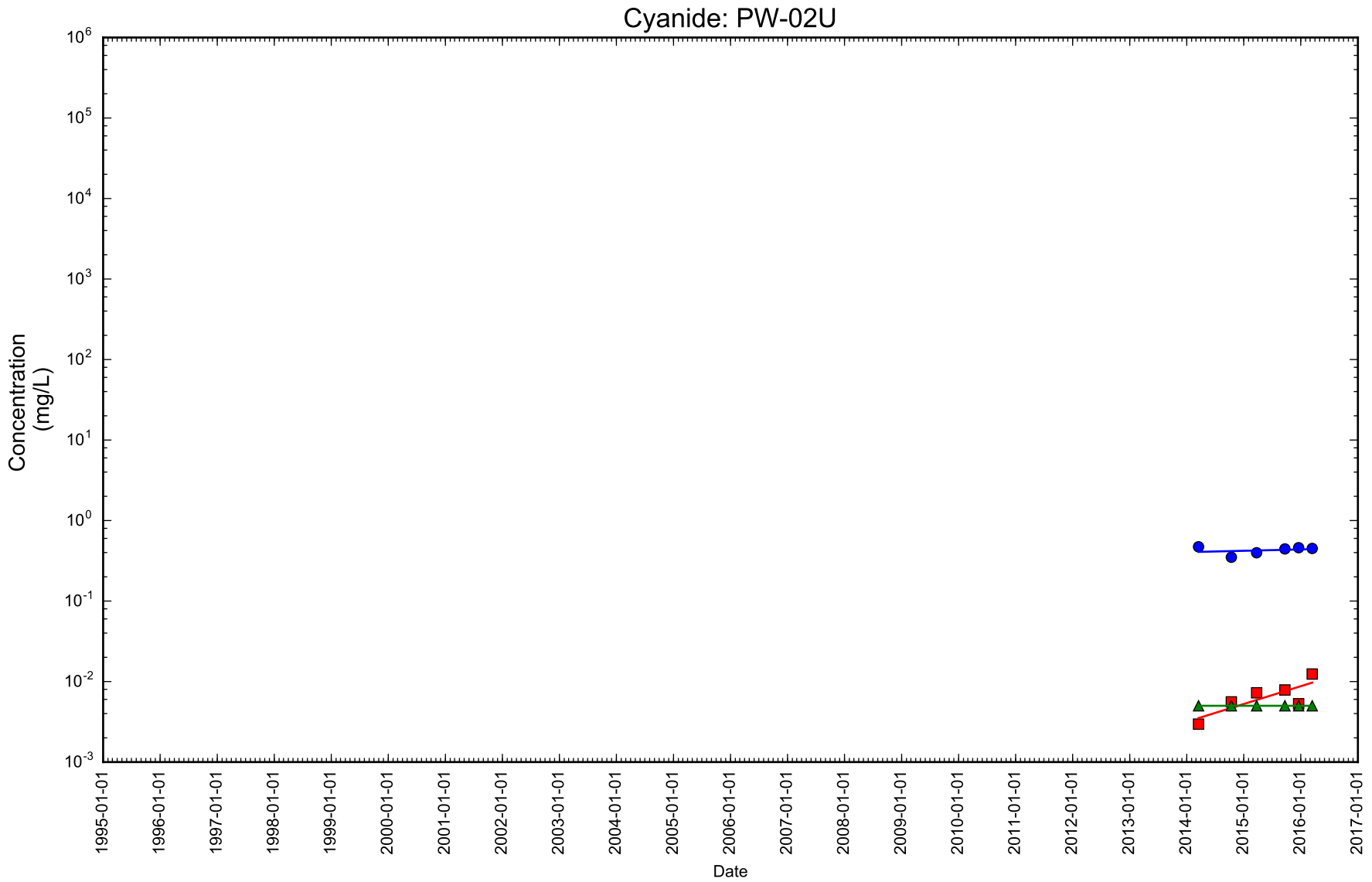


Figure 2-72

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-03-118

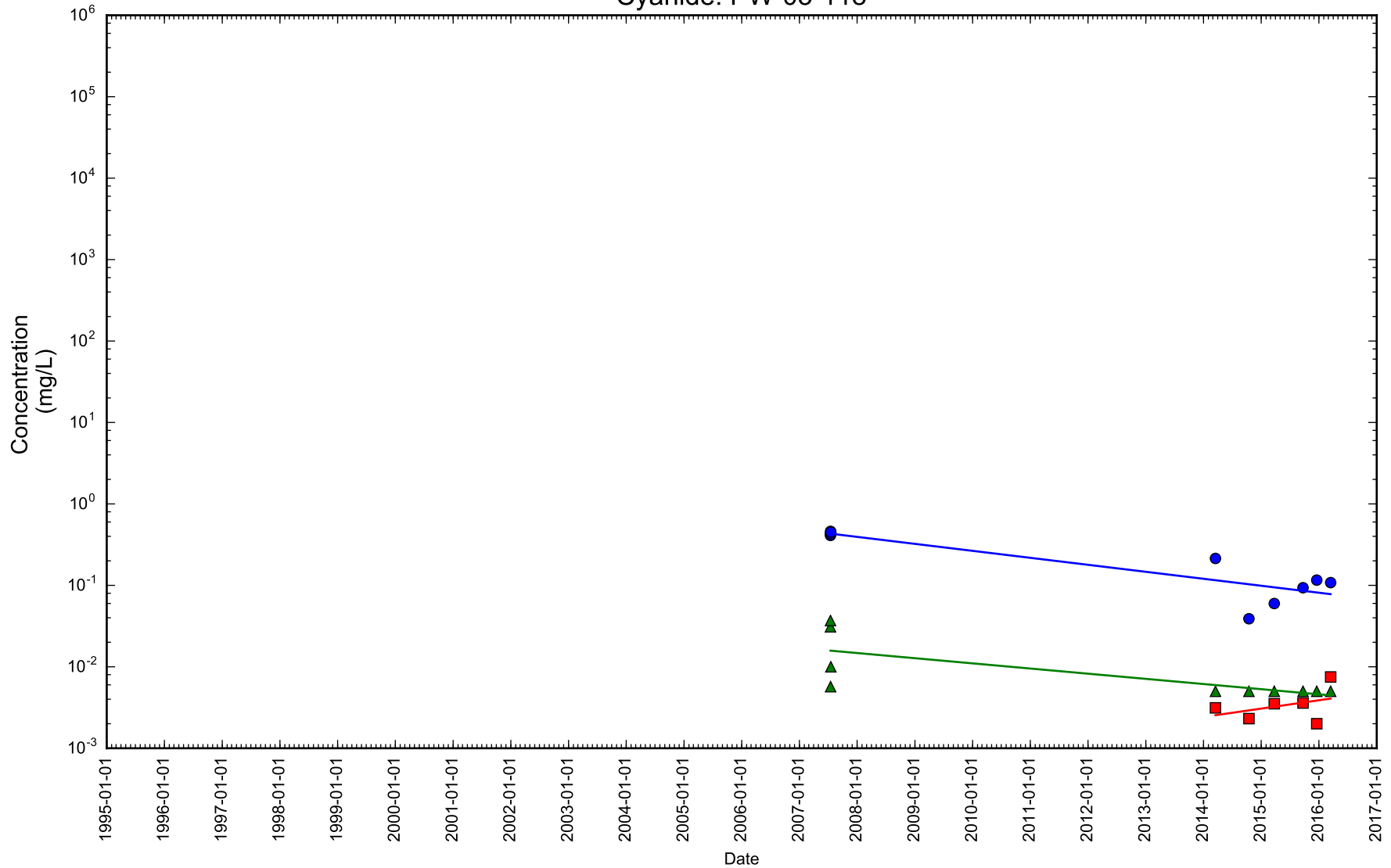


Figure 2-73

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-03U

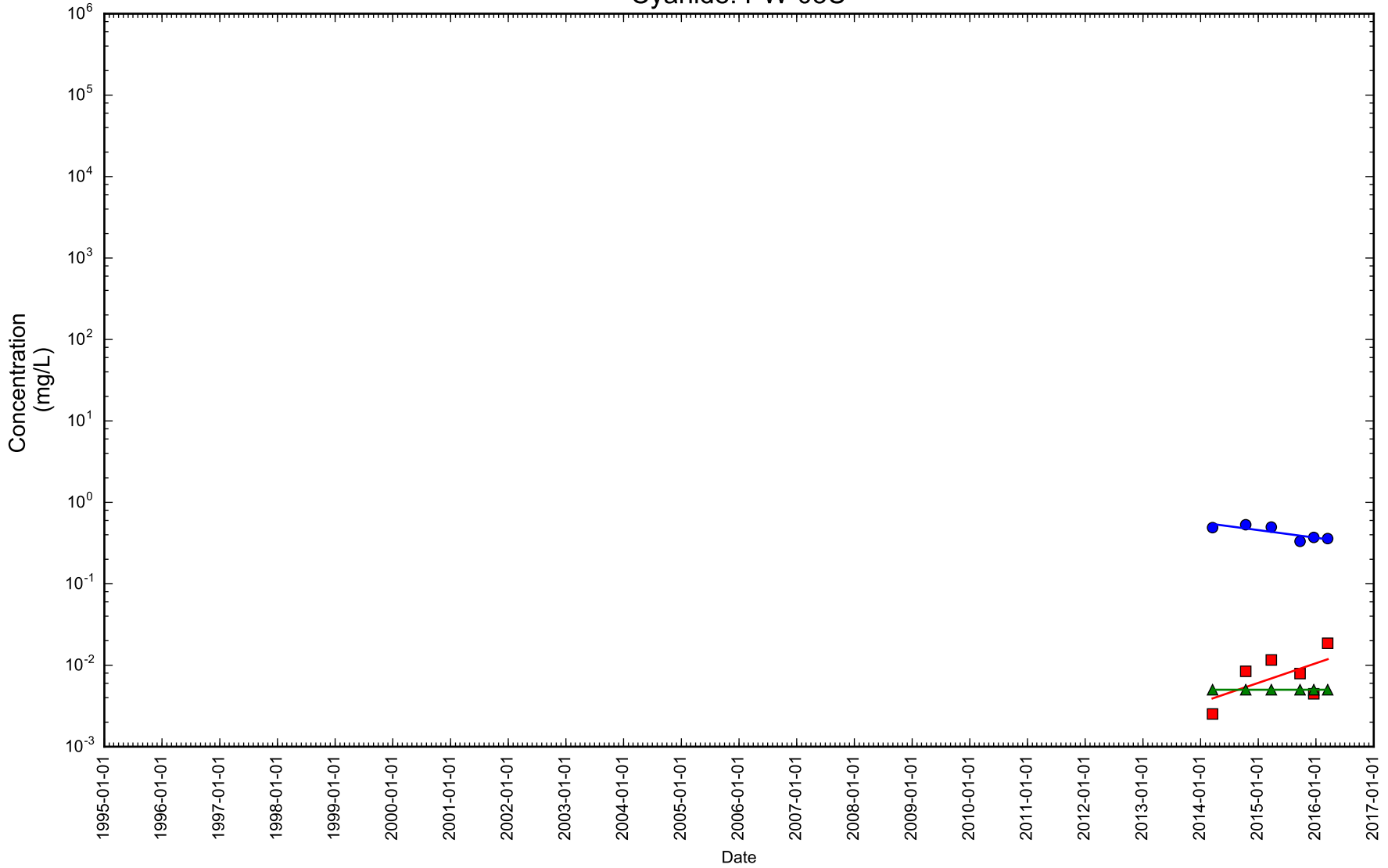


Figure 2-74

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-04L

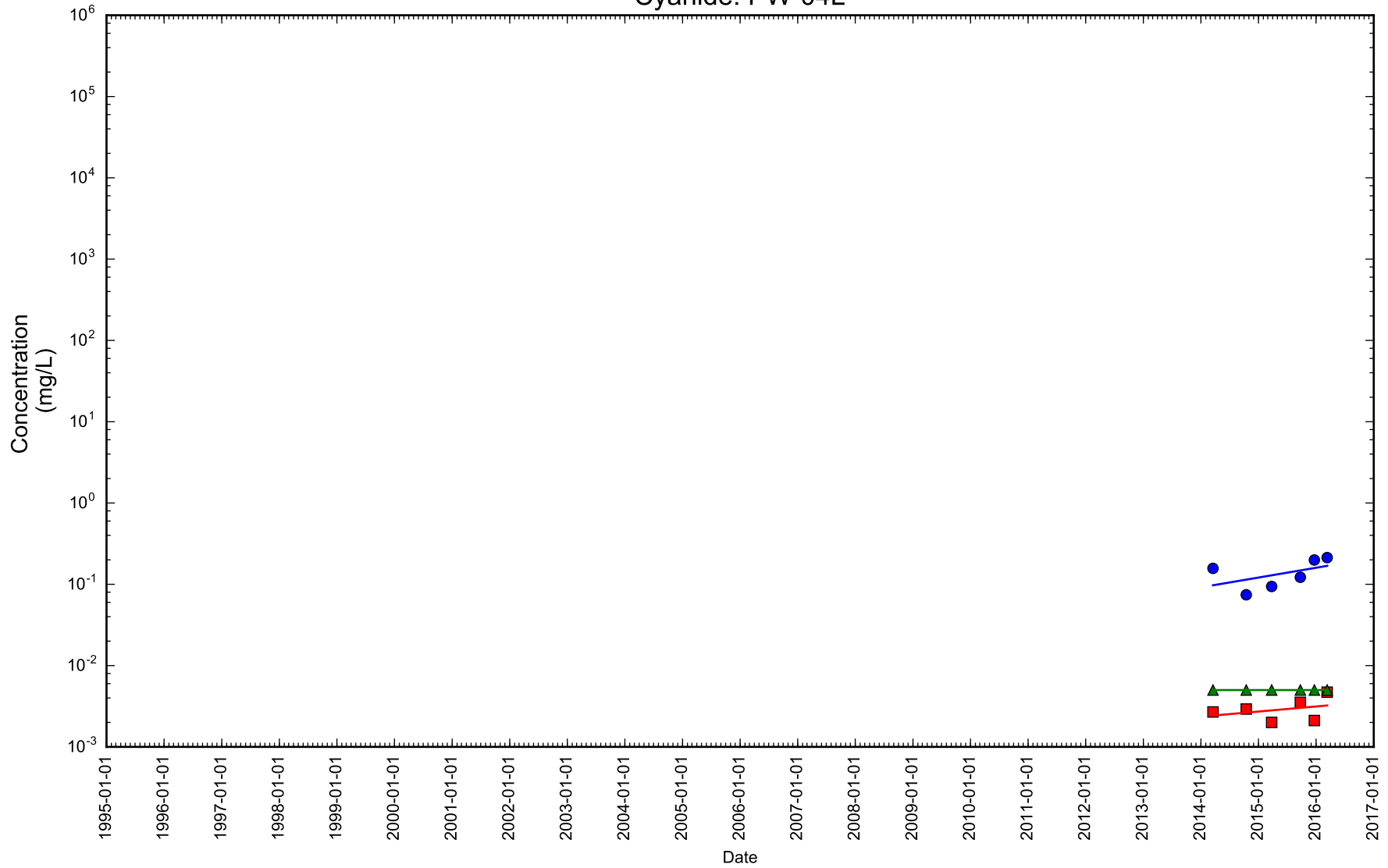


Figure 2-75

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

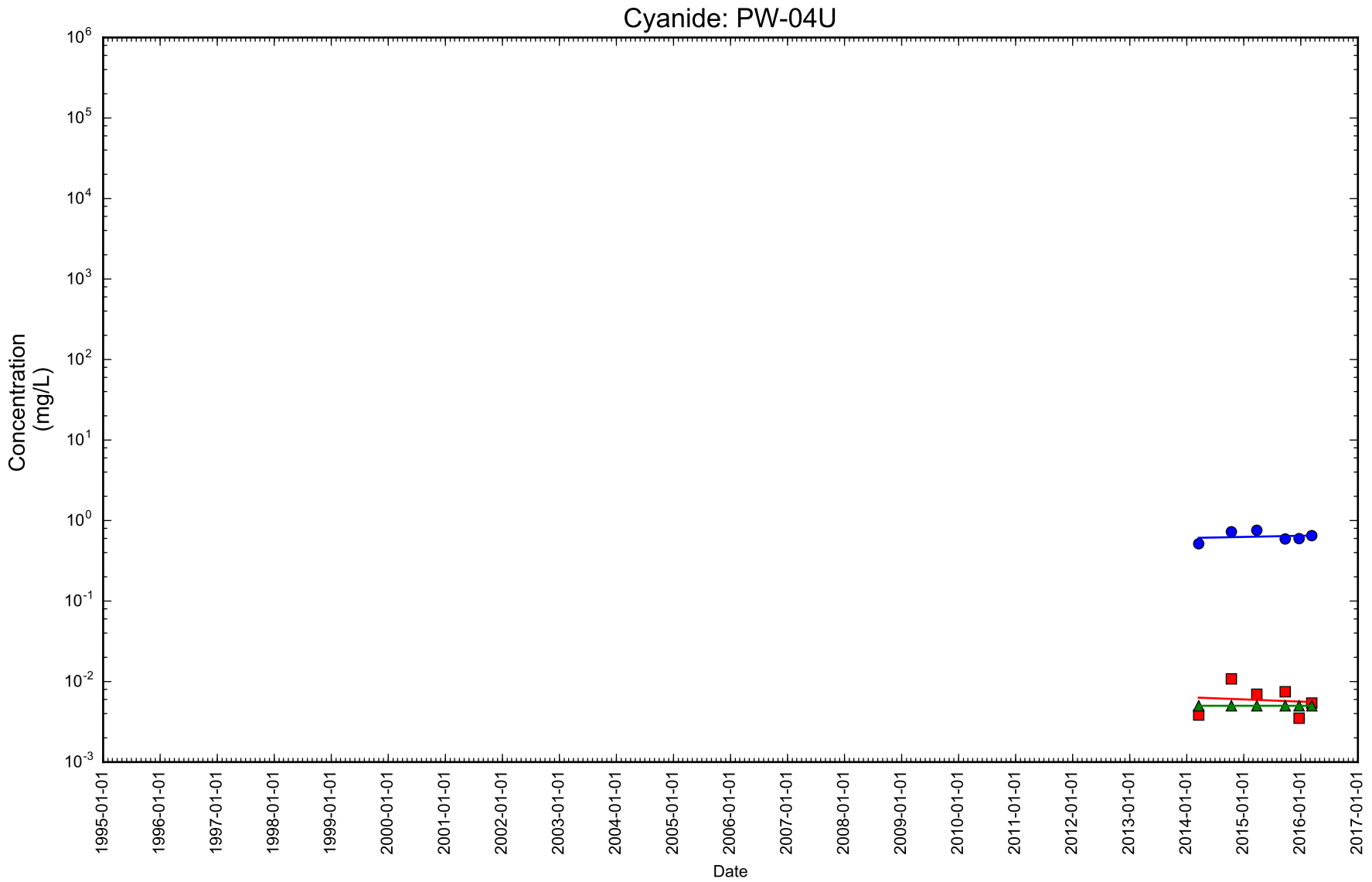


Figure 2-76

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

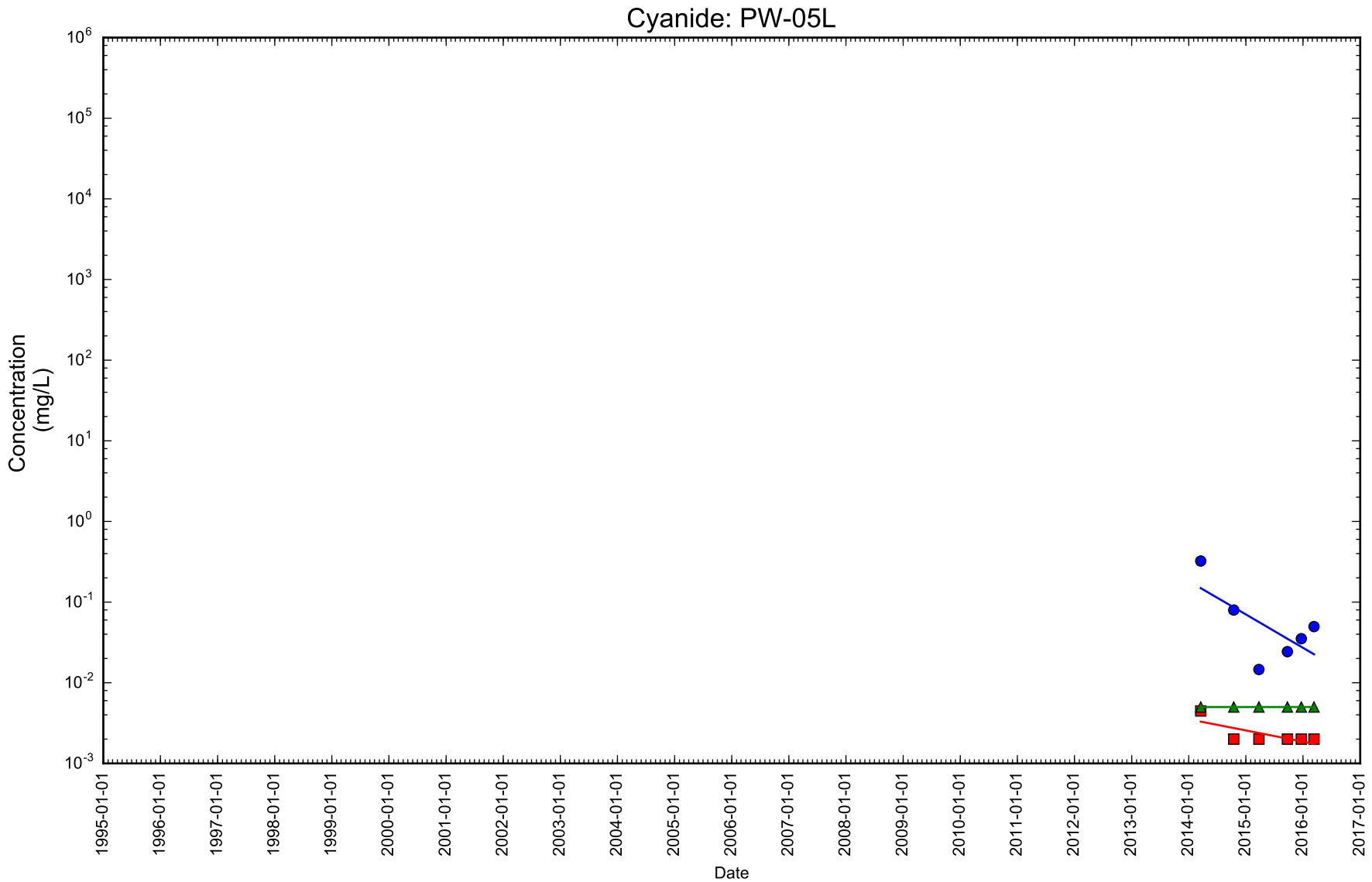


Figure 2-77

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-05U

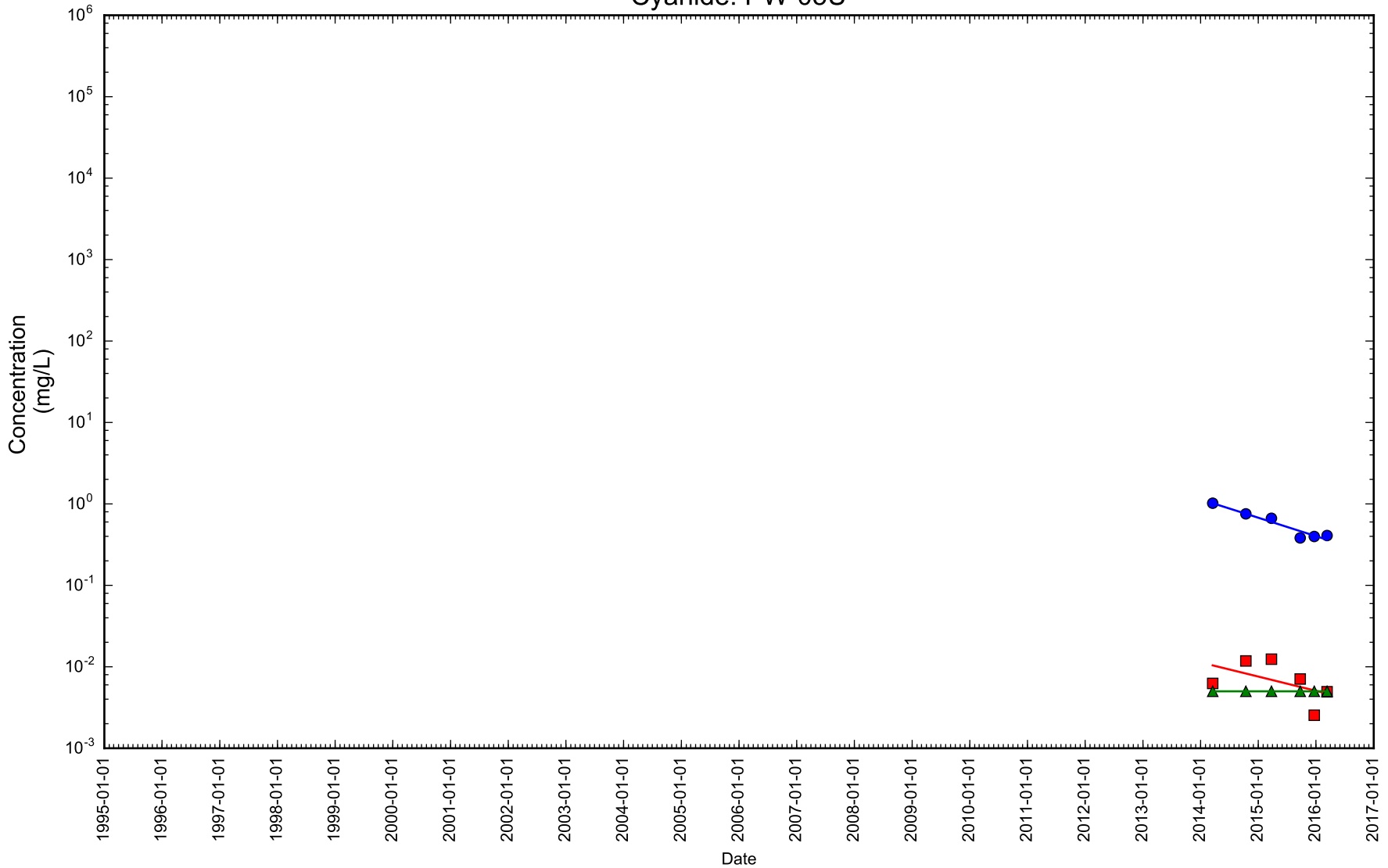


Figure 2-78

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-06L

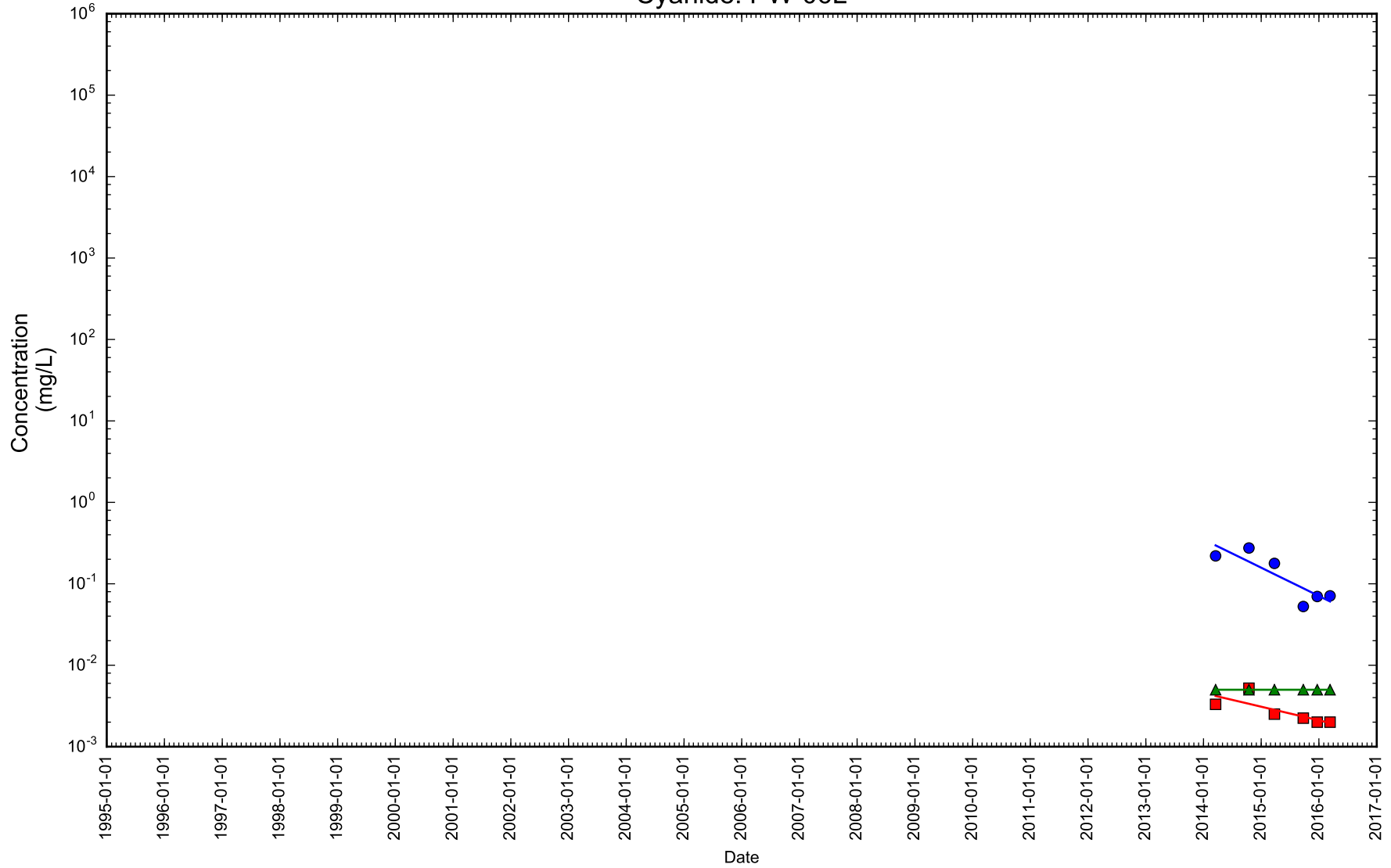


Figure 2-79

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-06U

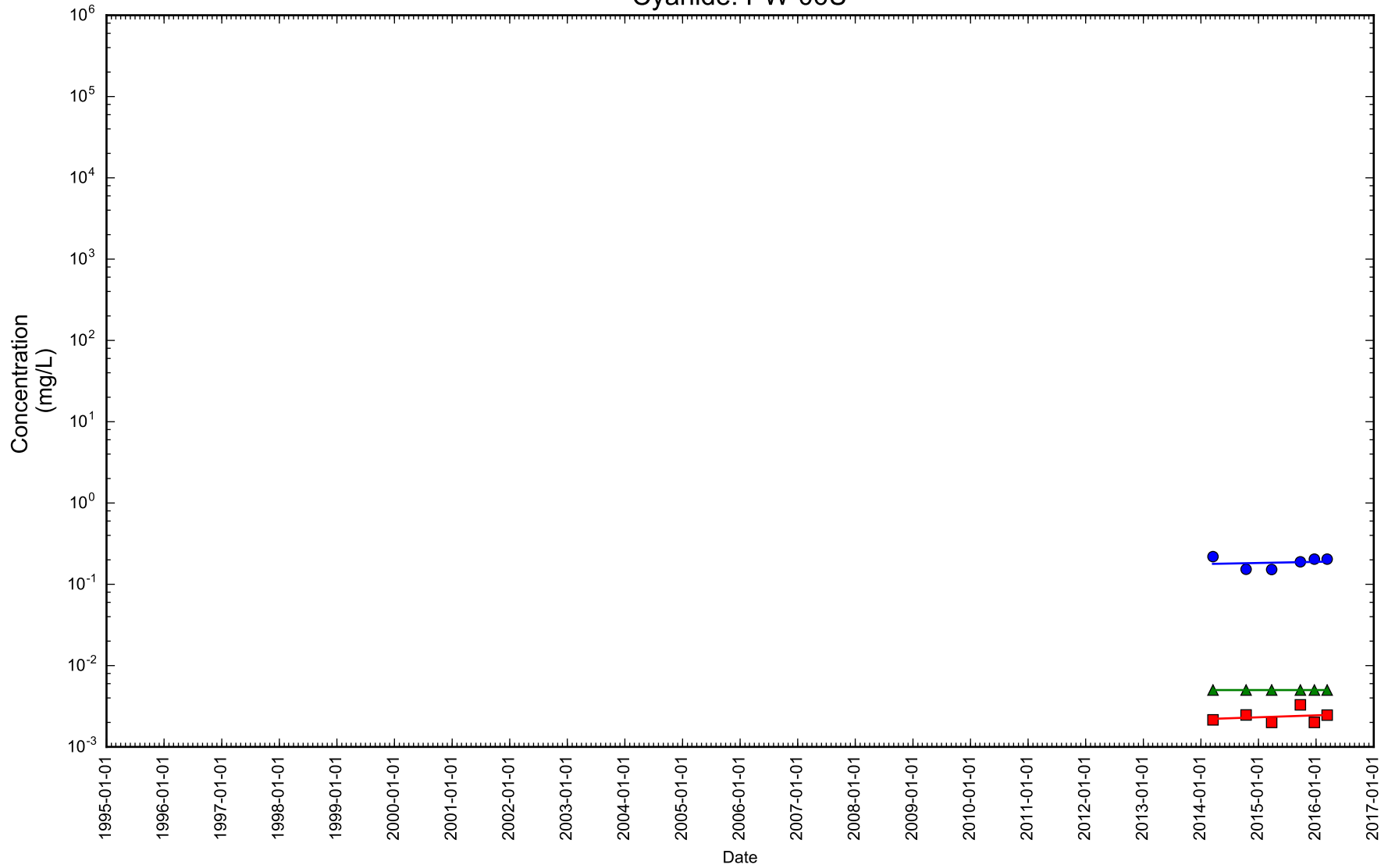


Figure 2-80

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-07-93

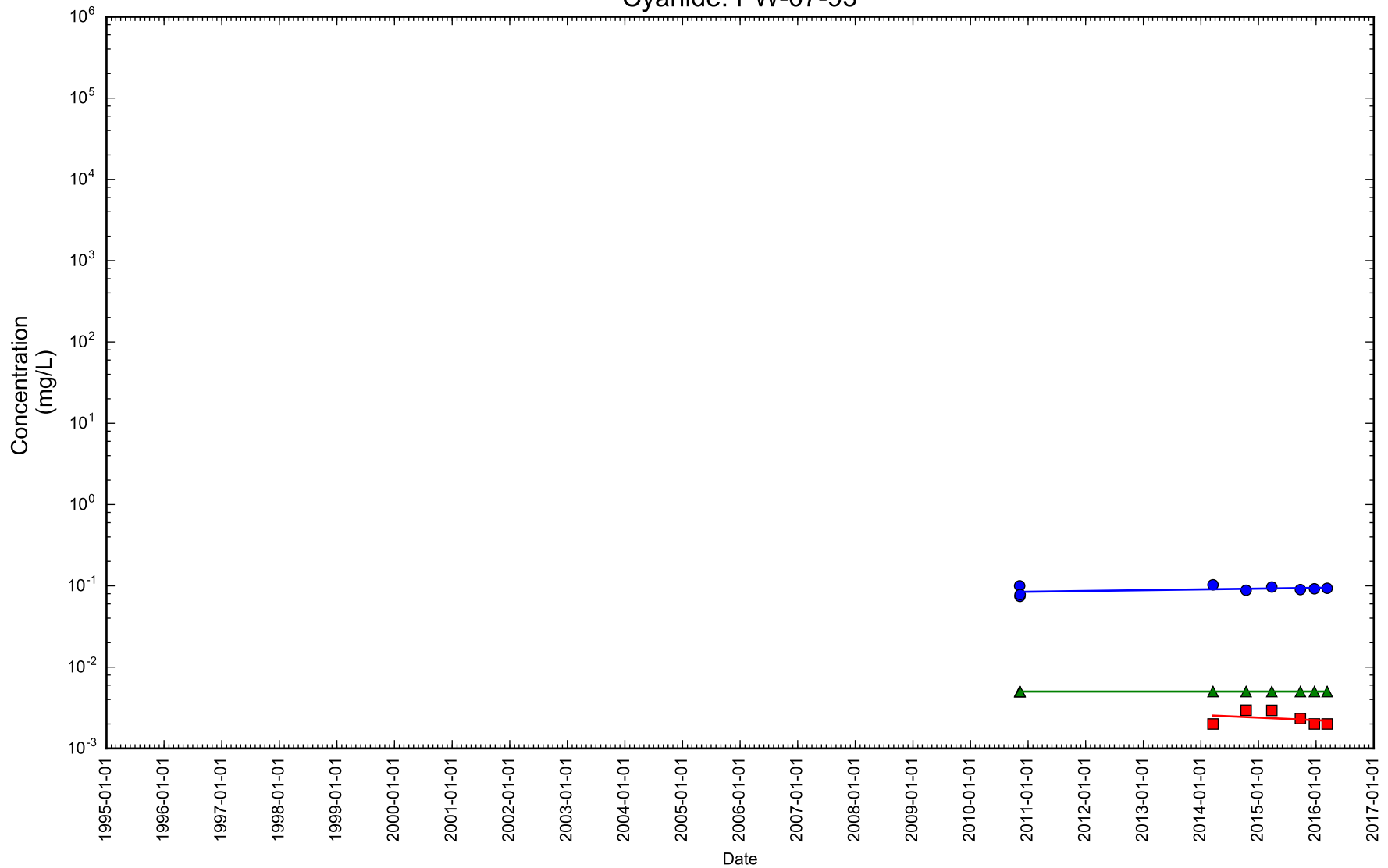


Figure 2-81

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-08-68

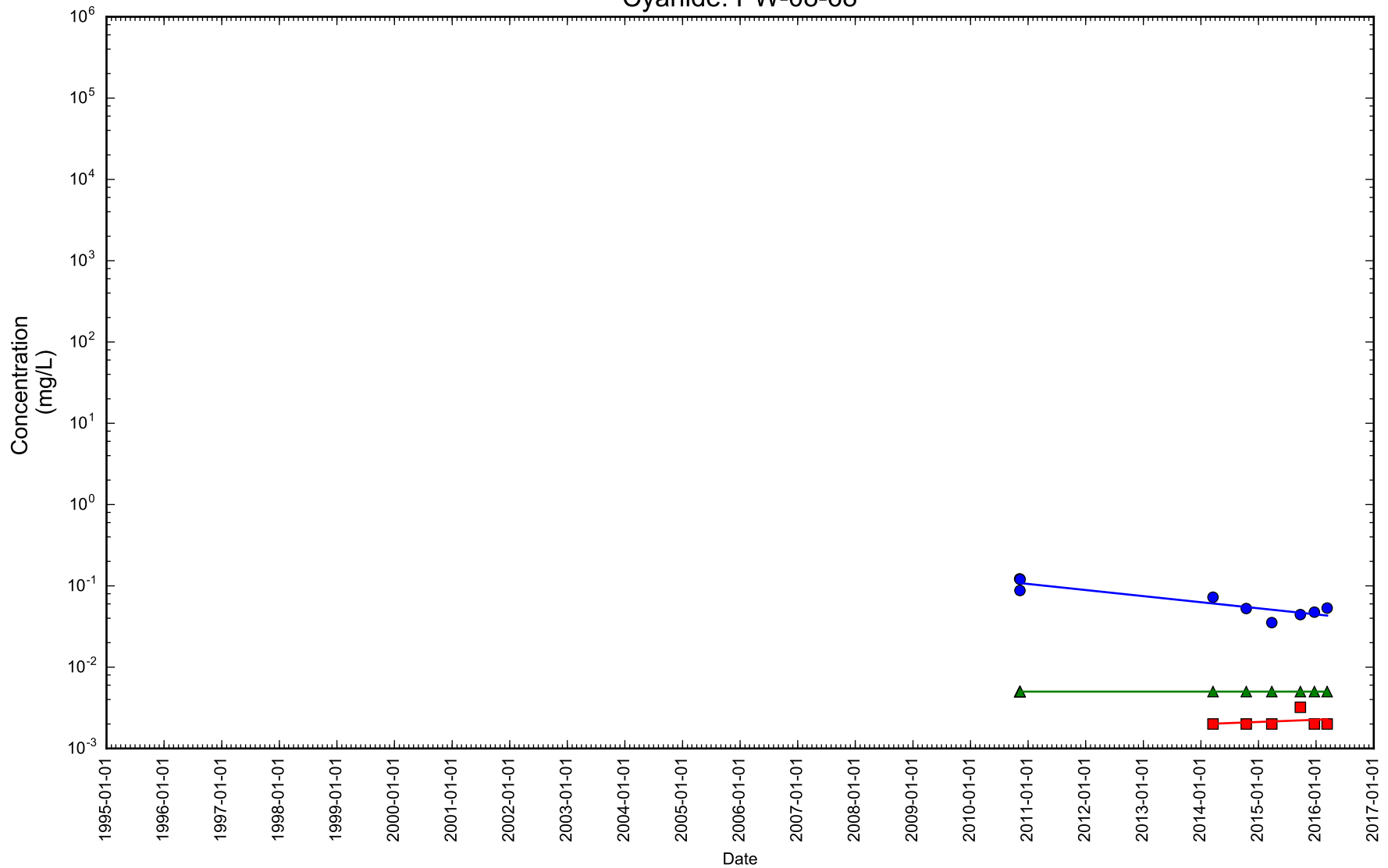


Figure 2-82

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-09-92

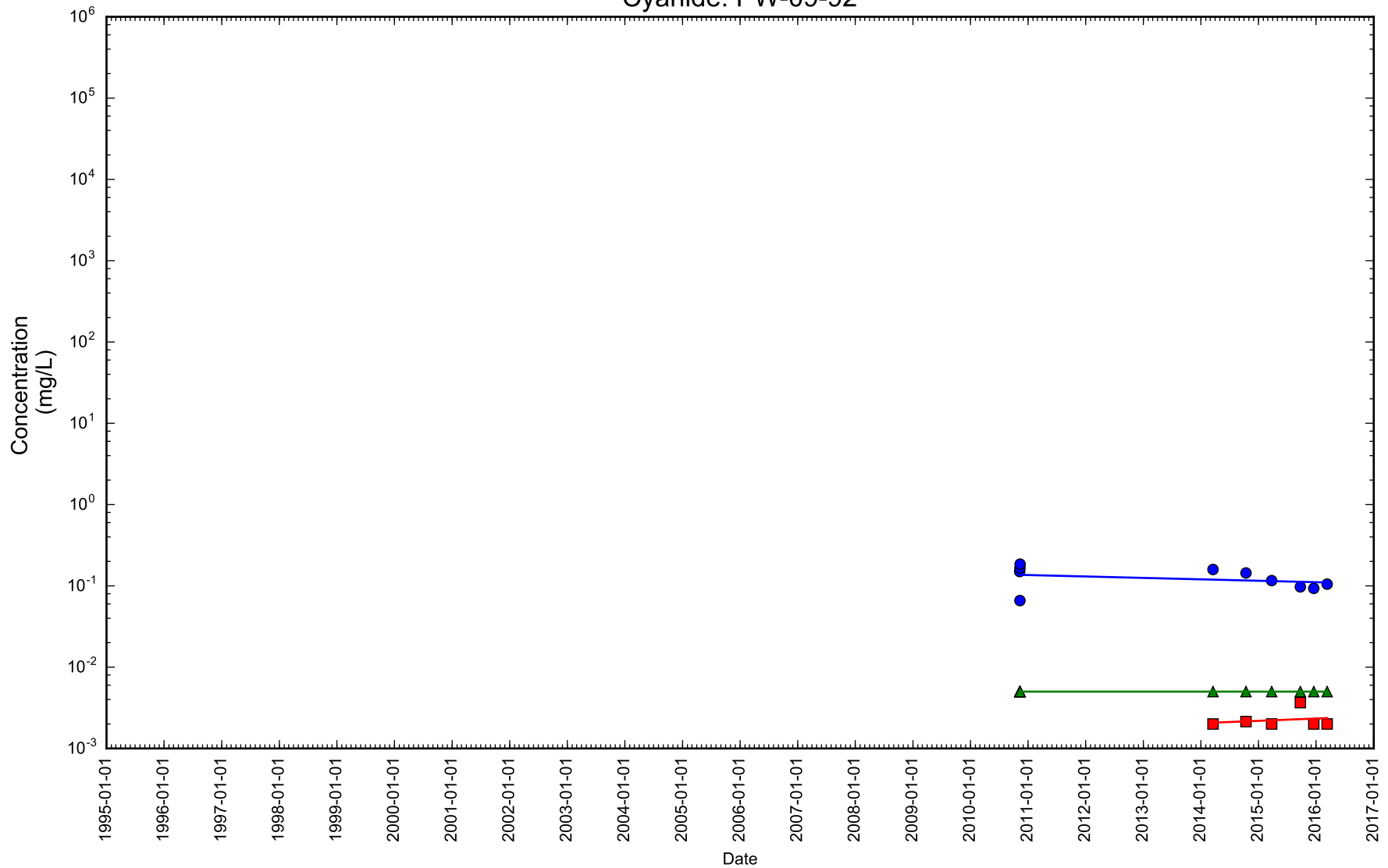


Figure 2-83

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-10L

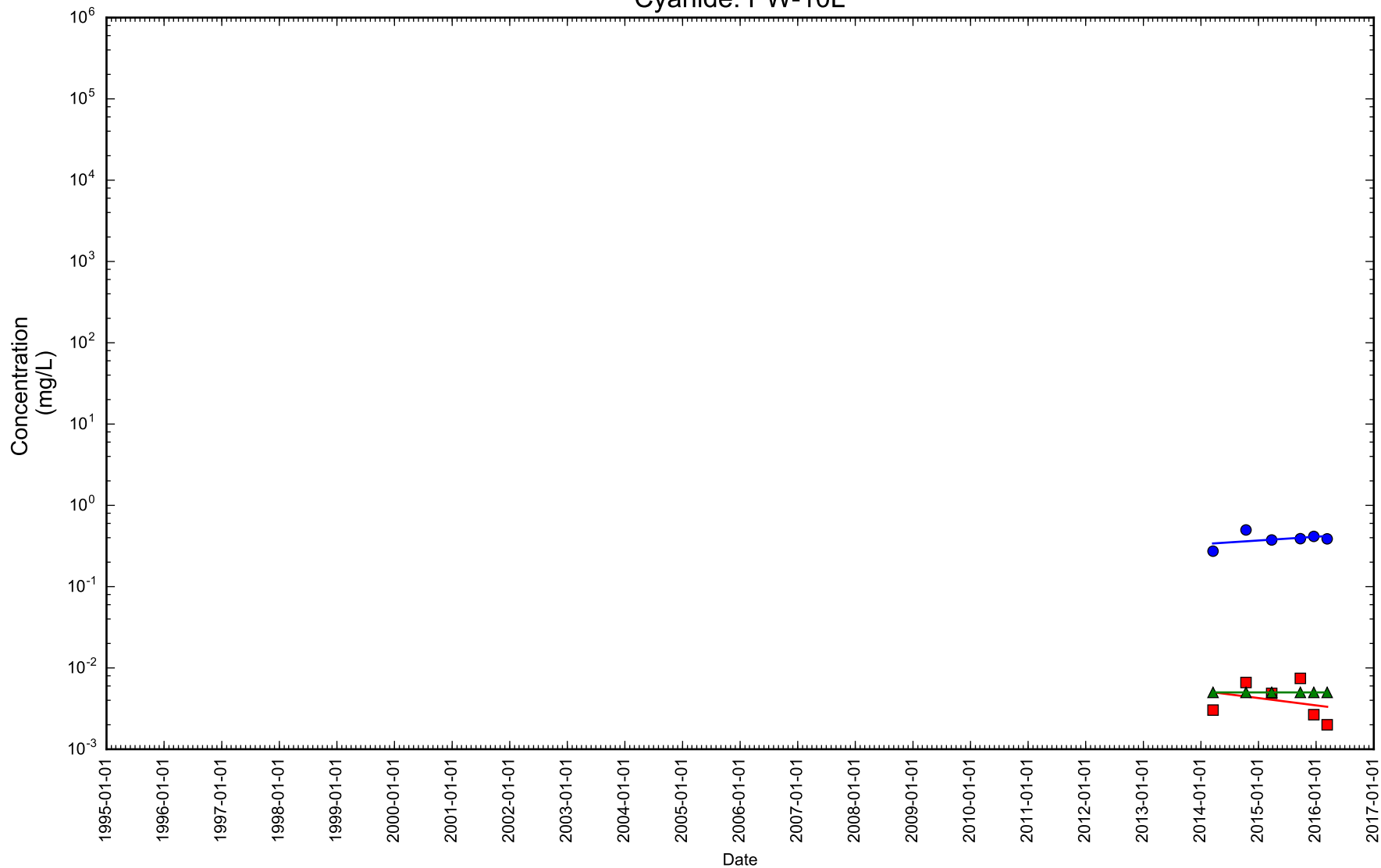


Figure 2-84

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-11U

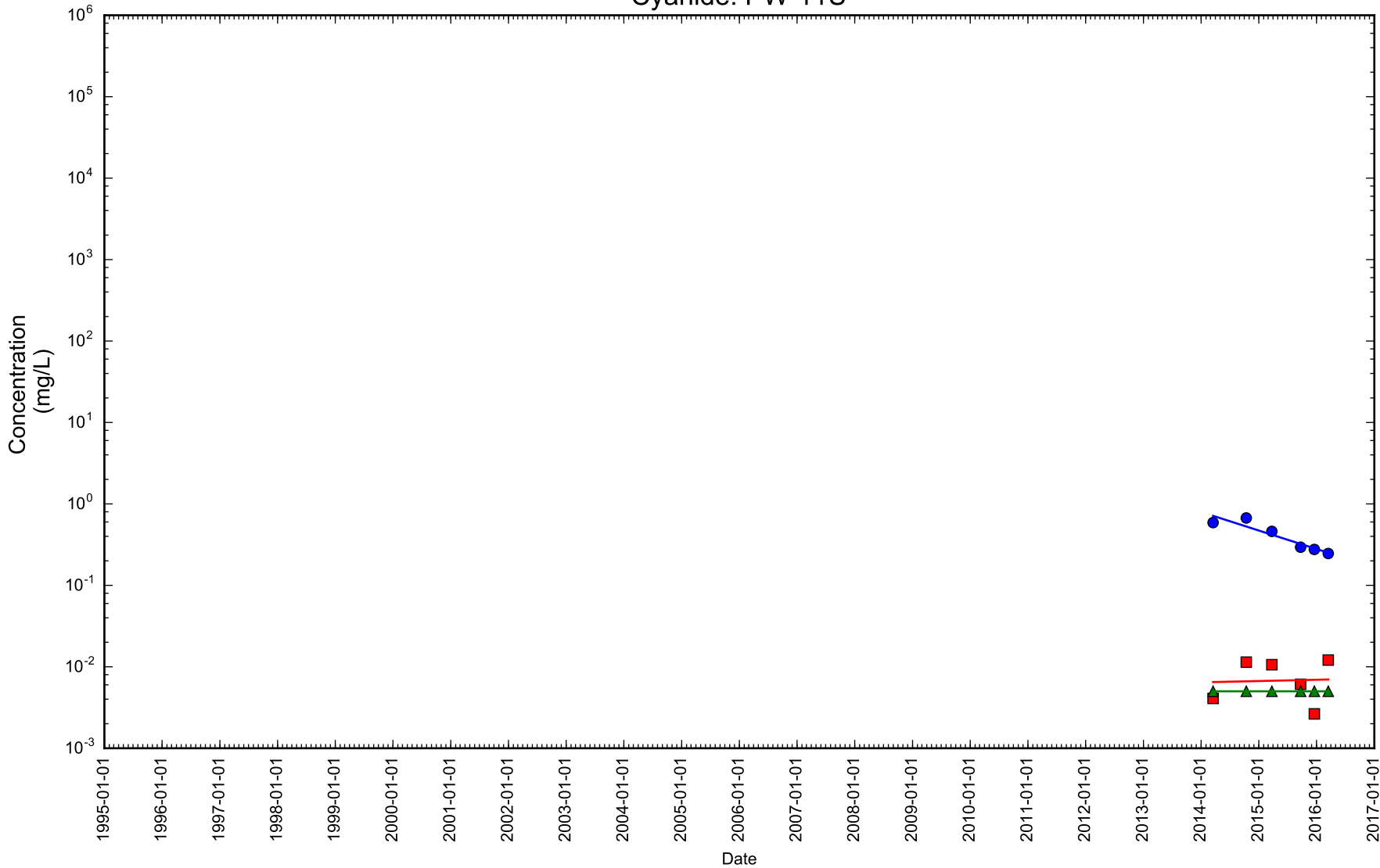


Figure 2-85

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

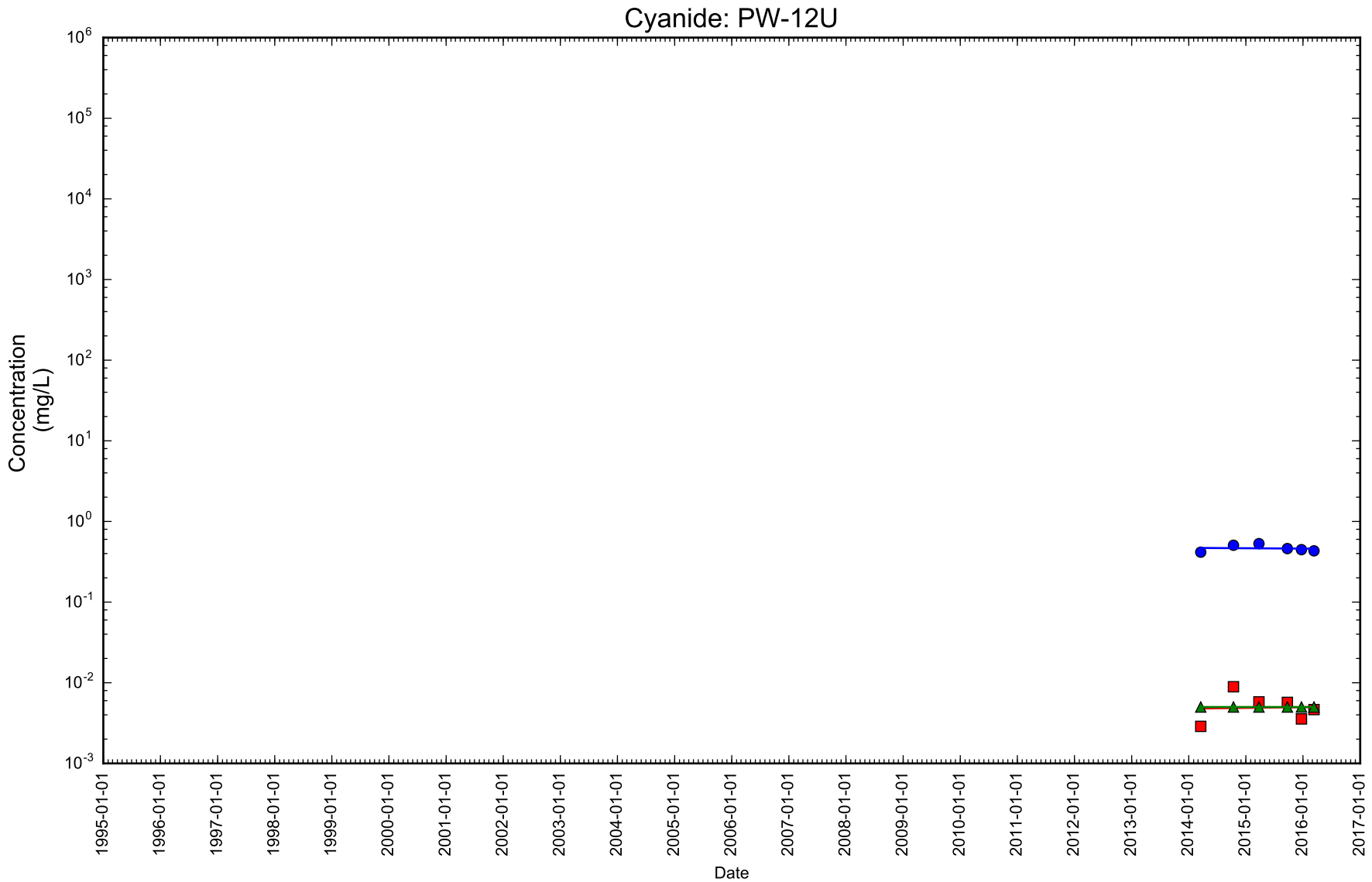


Figure 2-86

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-13U

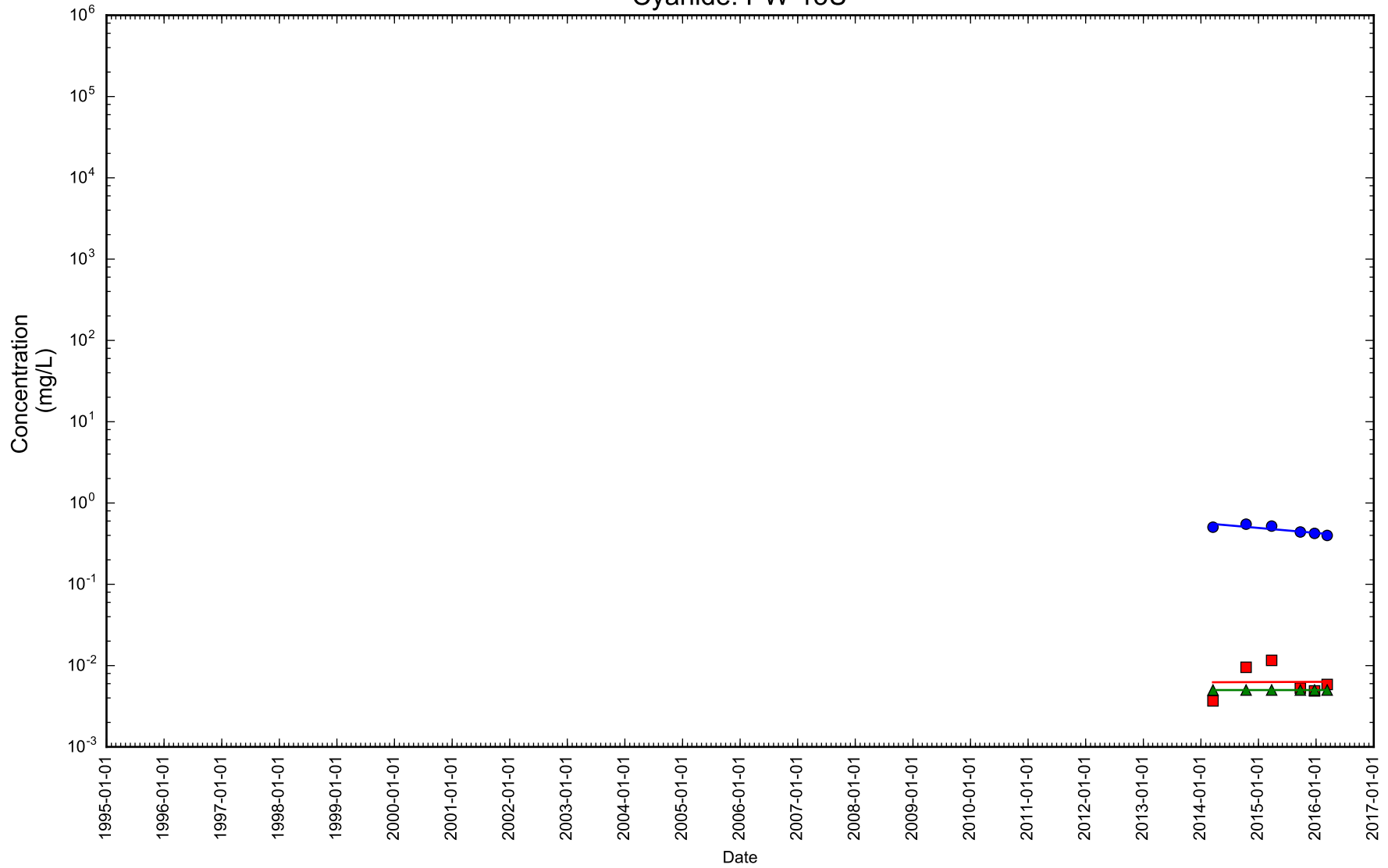


Figure 2-87

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-14U

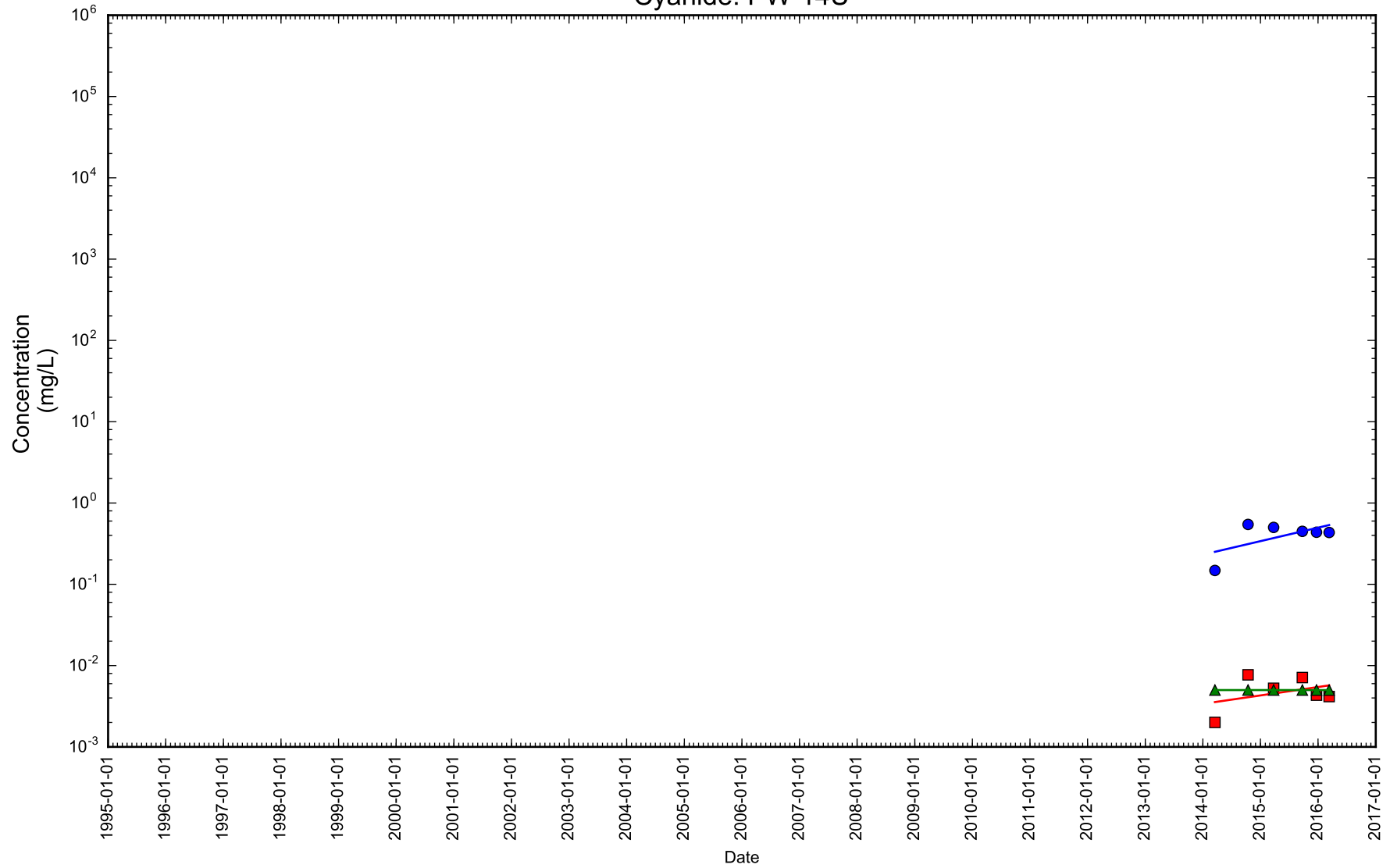


Figure 2-88

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

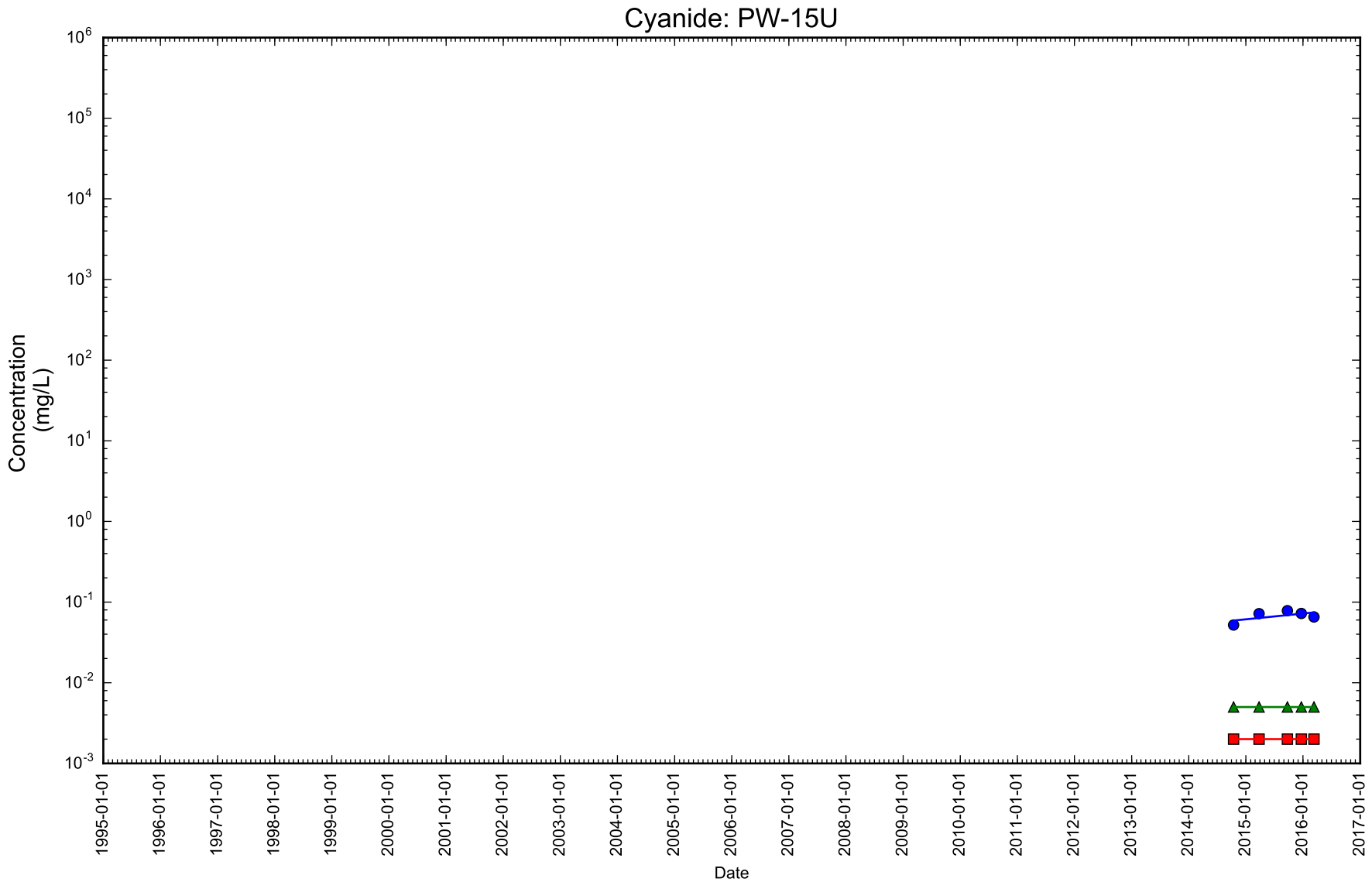


Figure 2-89

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PW-16U

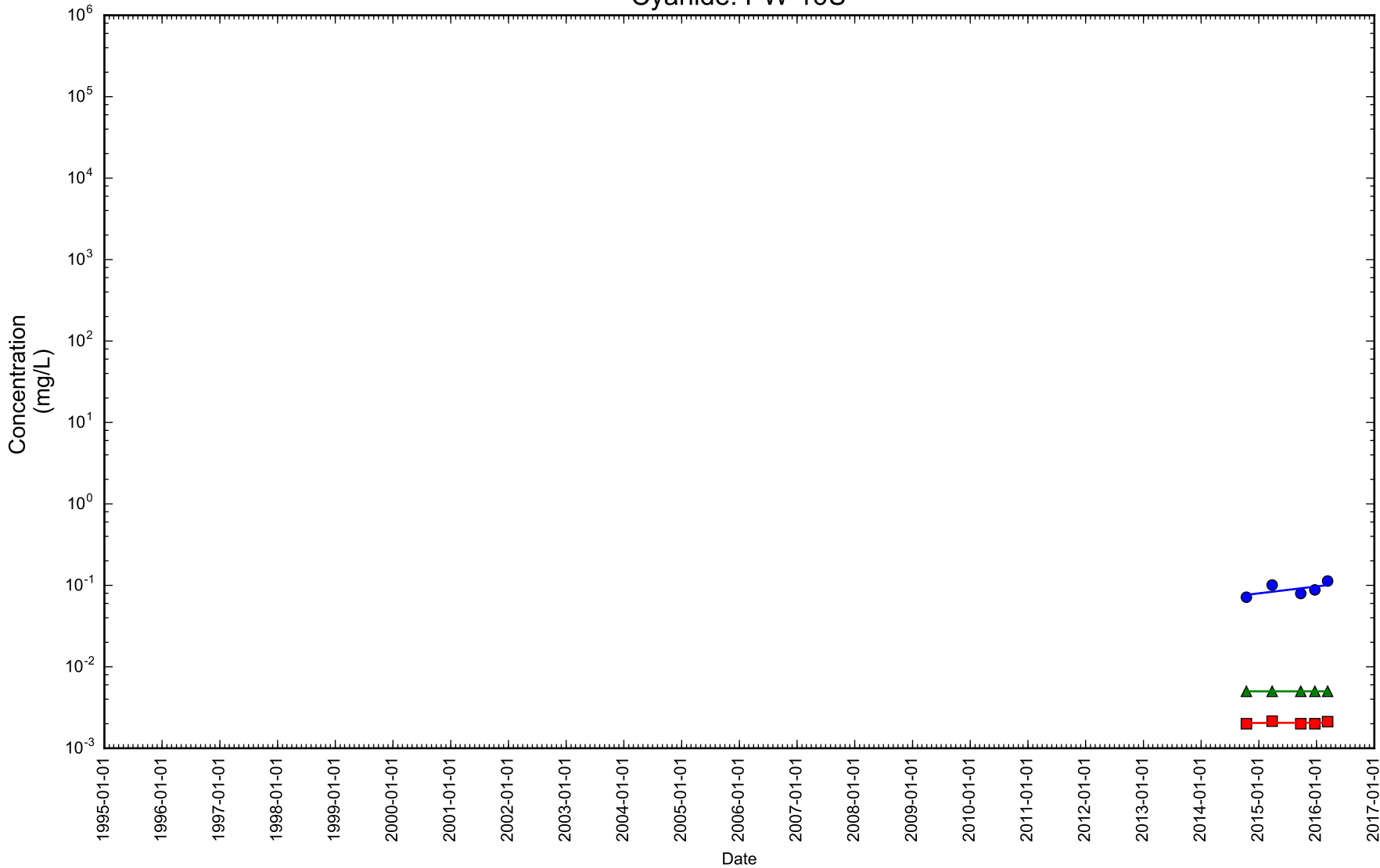


Figure 2-90

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ5-20

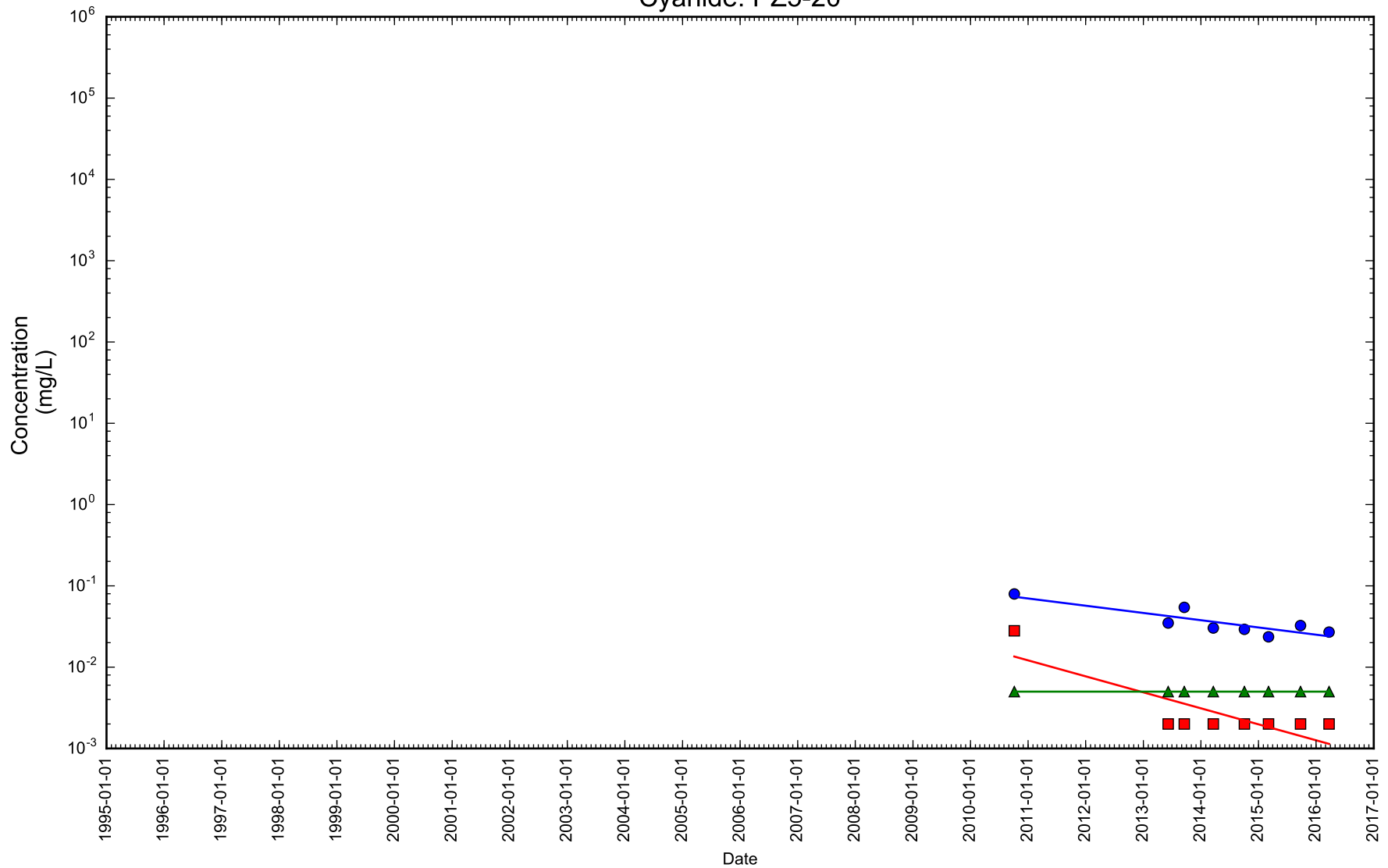


Figure 2-91

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ5-5

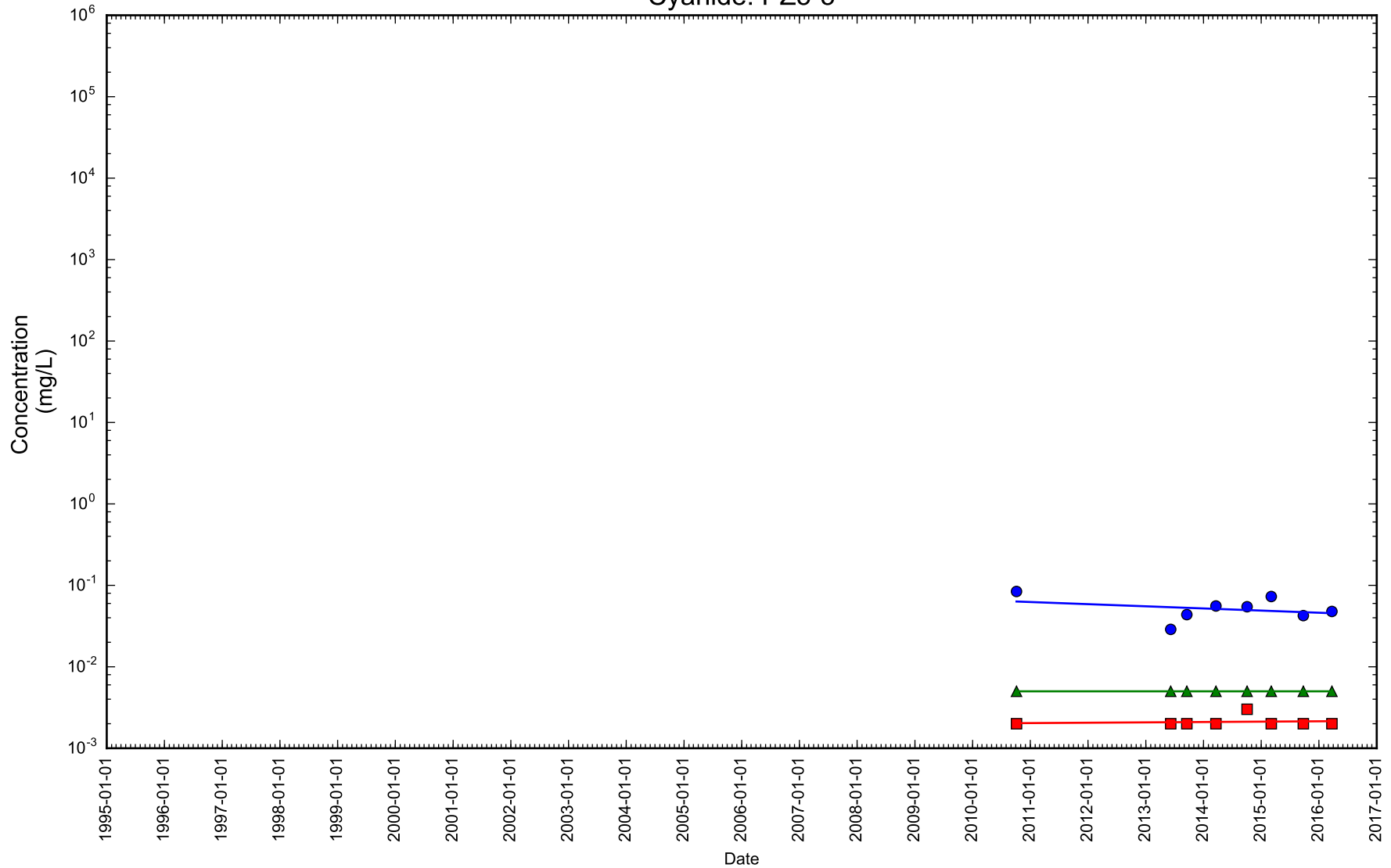


Figure 2-92

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ5-55

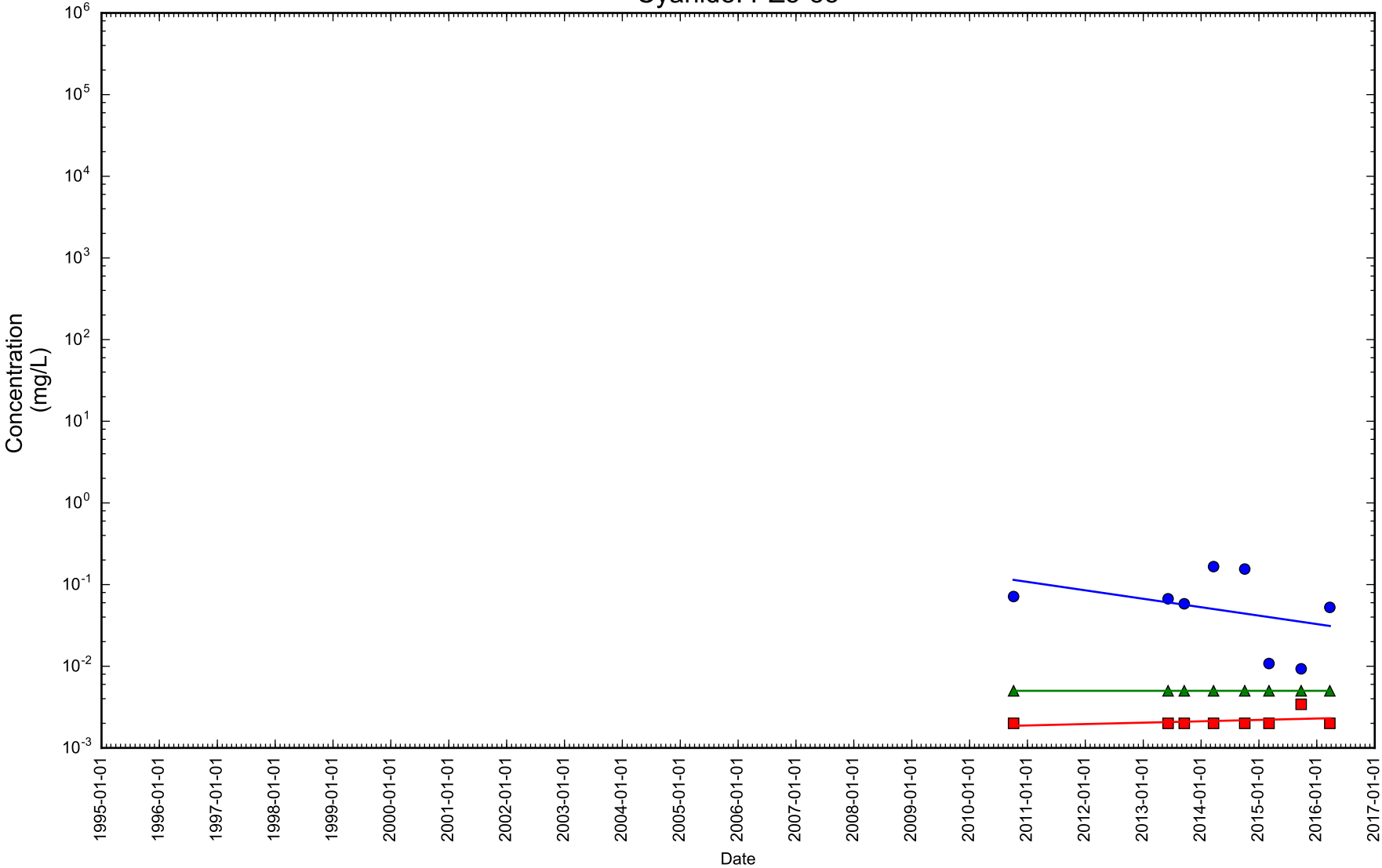


Figure 2-93

Time Series Concentration Plot

- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.



Cyanide: PZ5-85

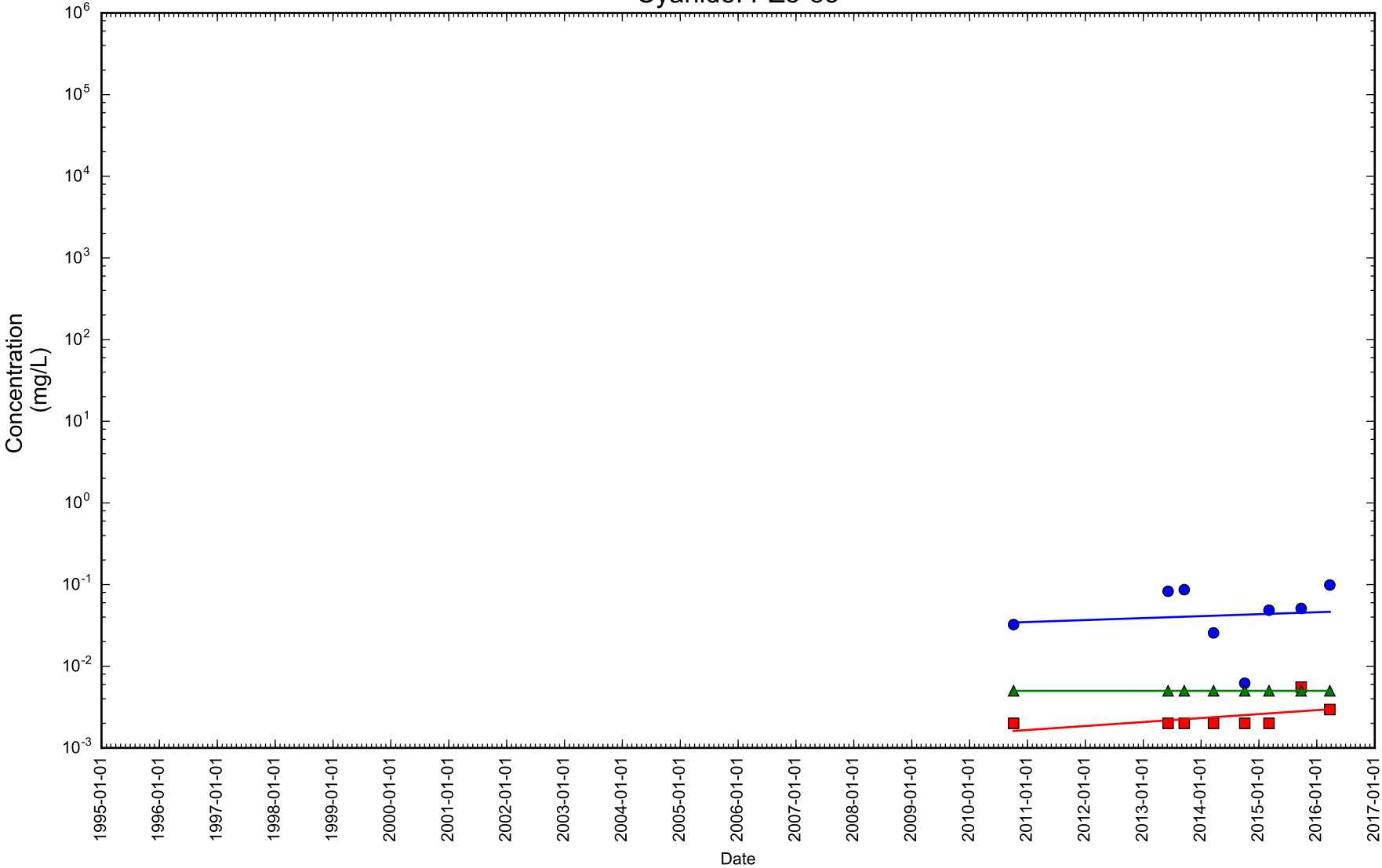


Figure 2-94

Time Series Concentration Plot

- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.



Cyanide: PZ6-115

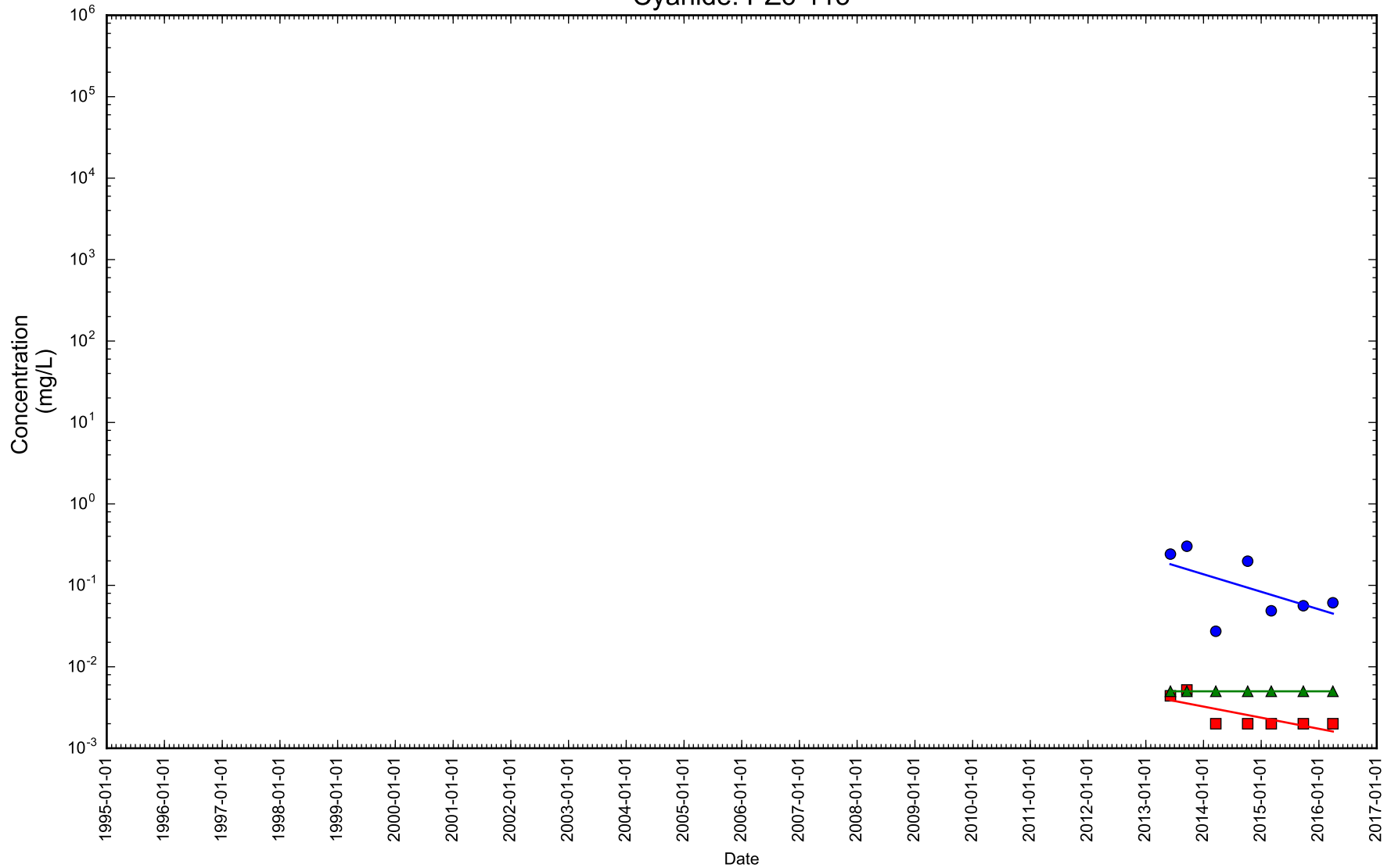


Figure 2-95

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ6-150

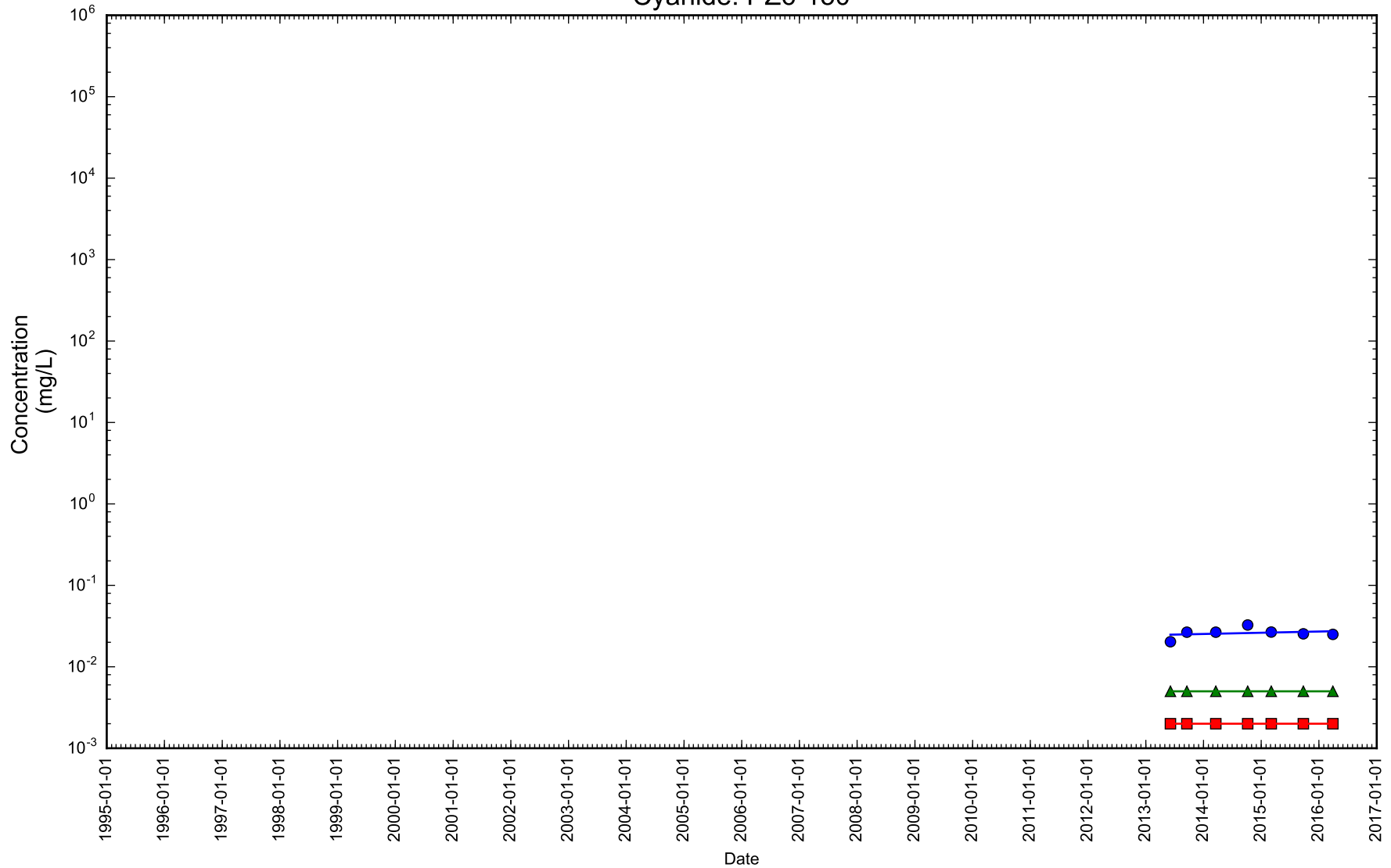


Figure 2-96

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ6-5

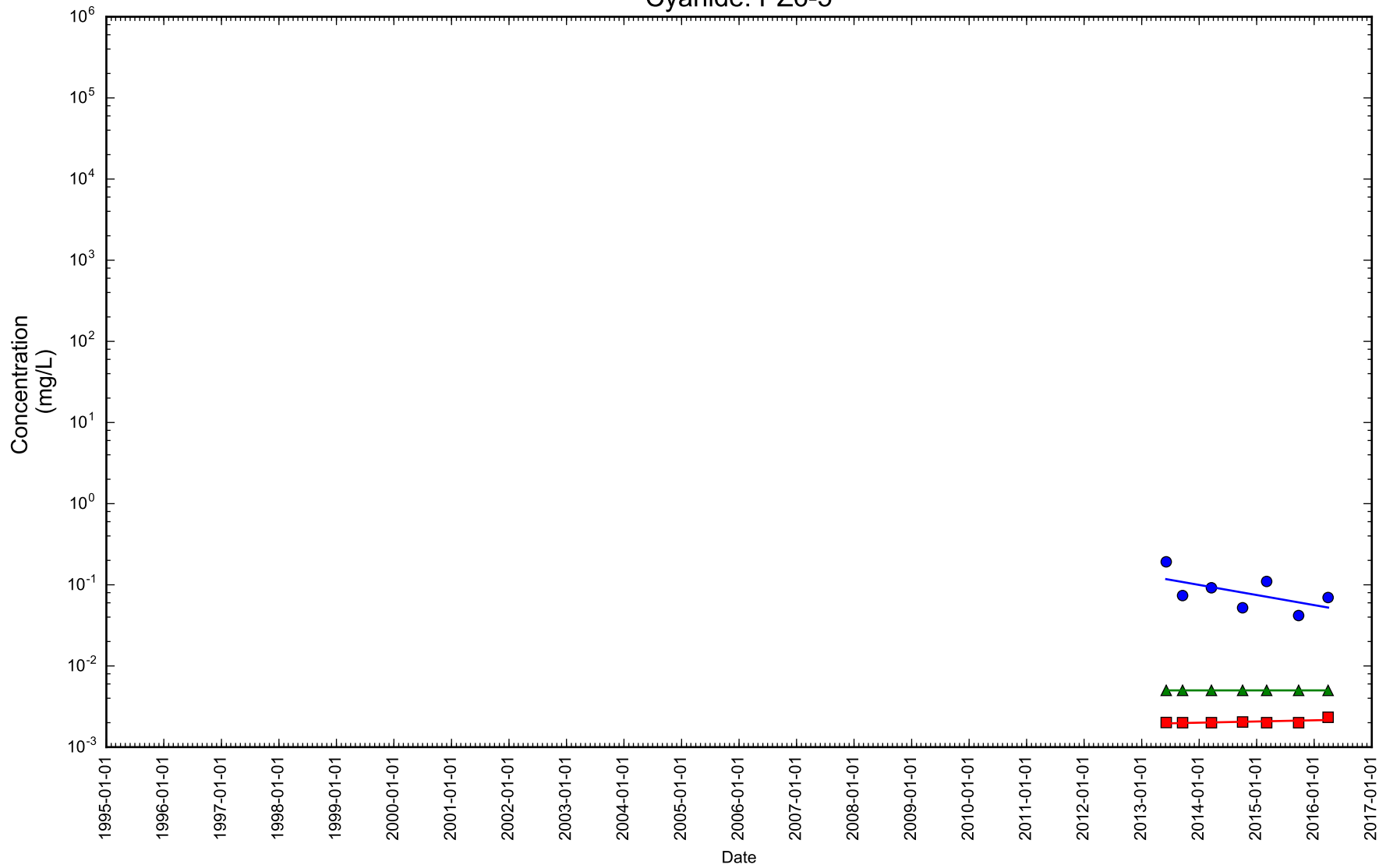


Figure 2-97

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ6-50

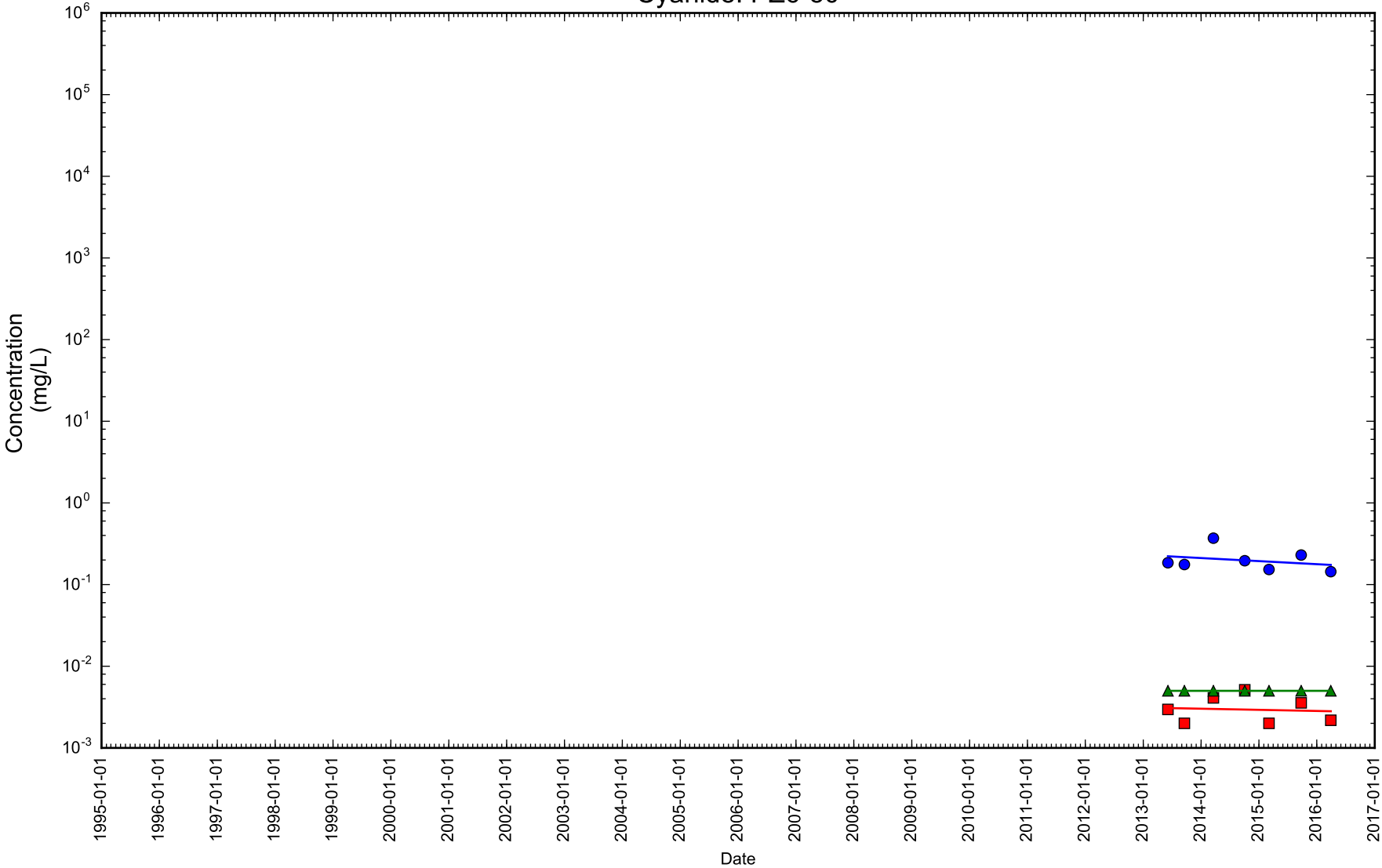


Figure 2-98

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ7-100

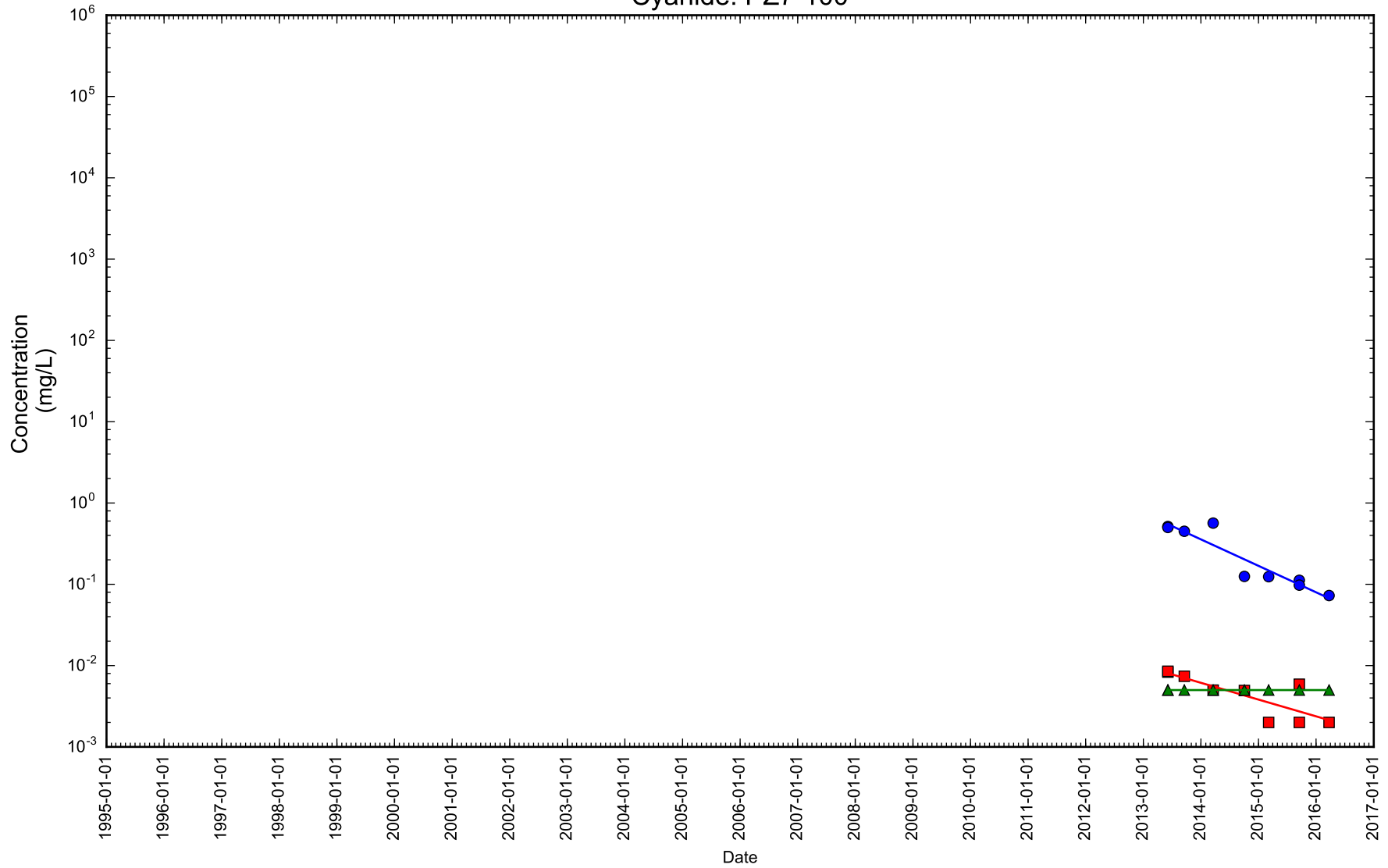


Figure 2-99

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ7-150

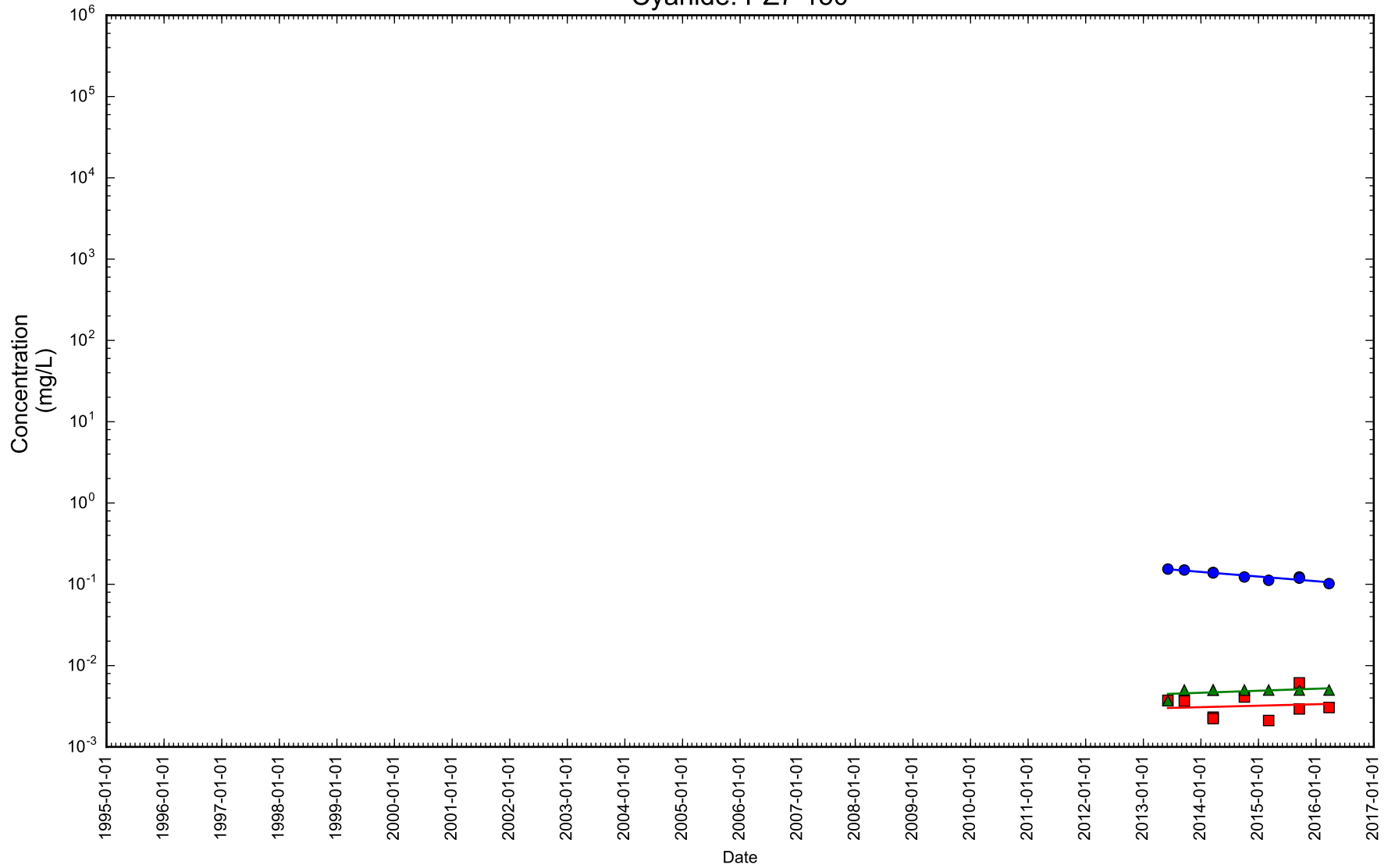


Figure 2-100

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ7-5

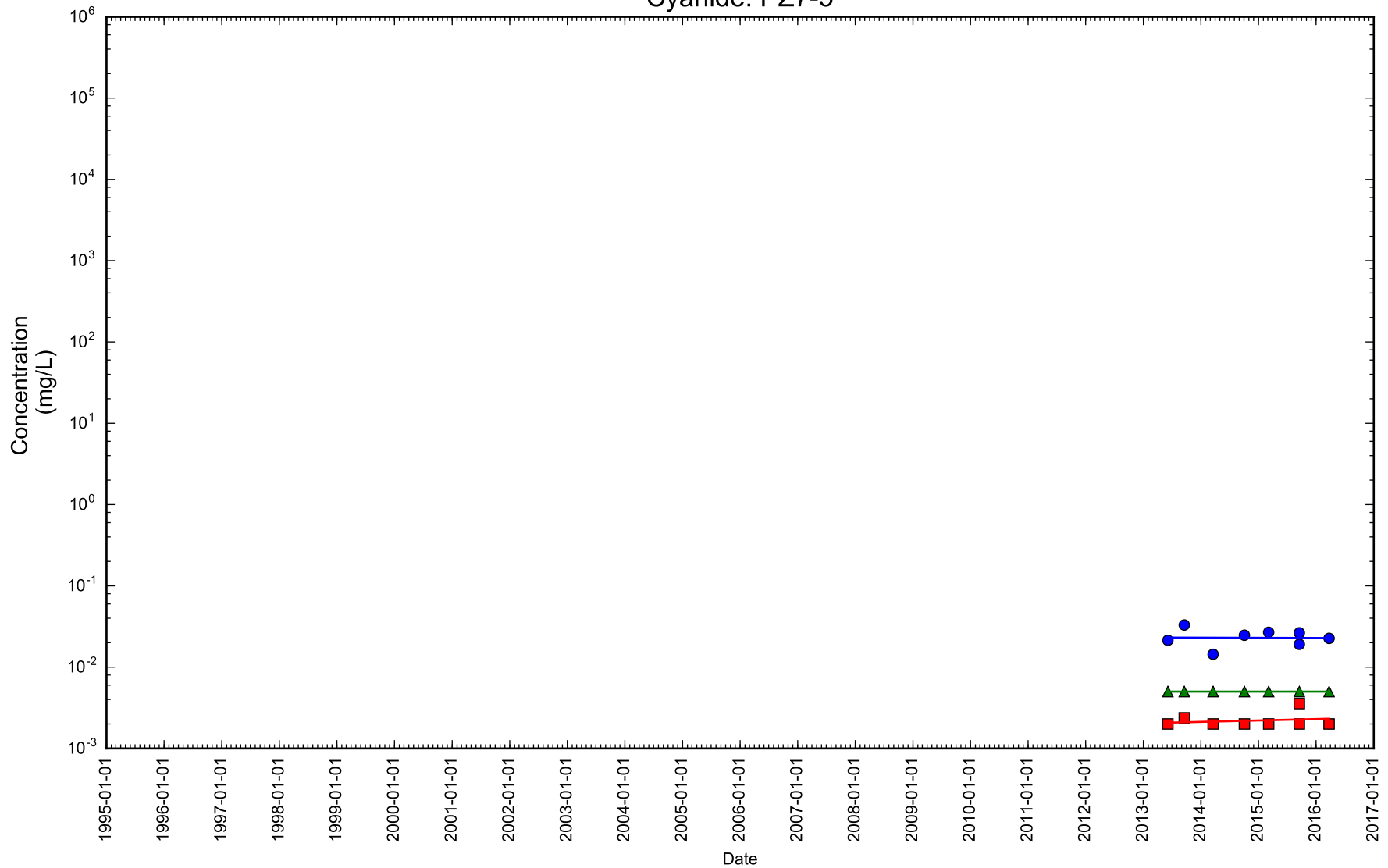


Figure 2-101

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ7-50

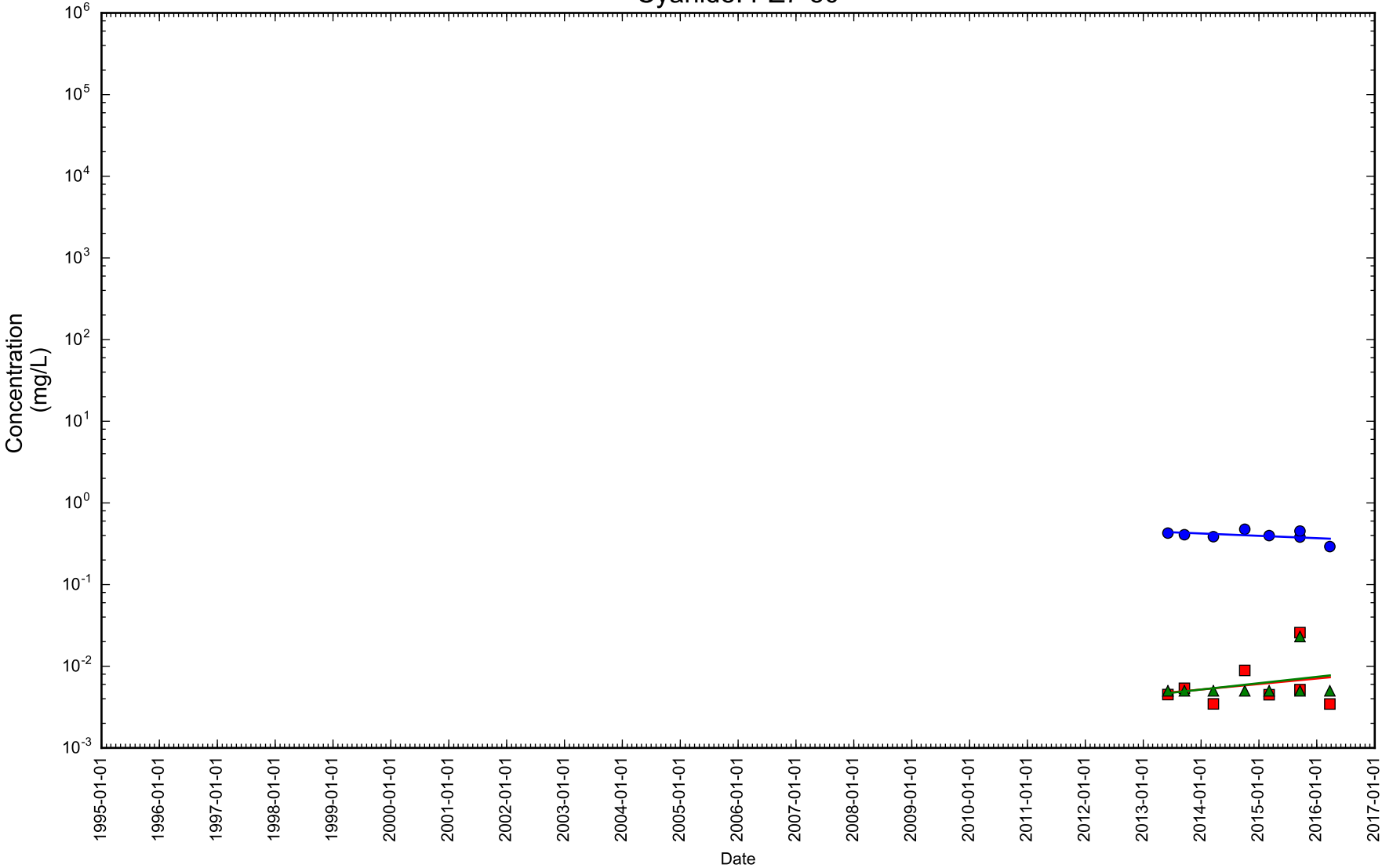


Figure 2-102

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ8-5

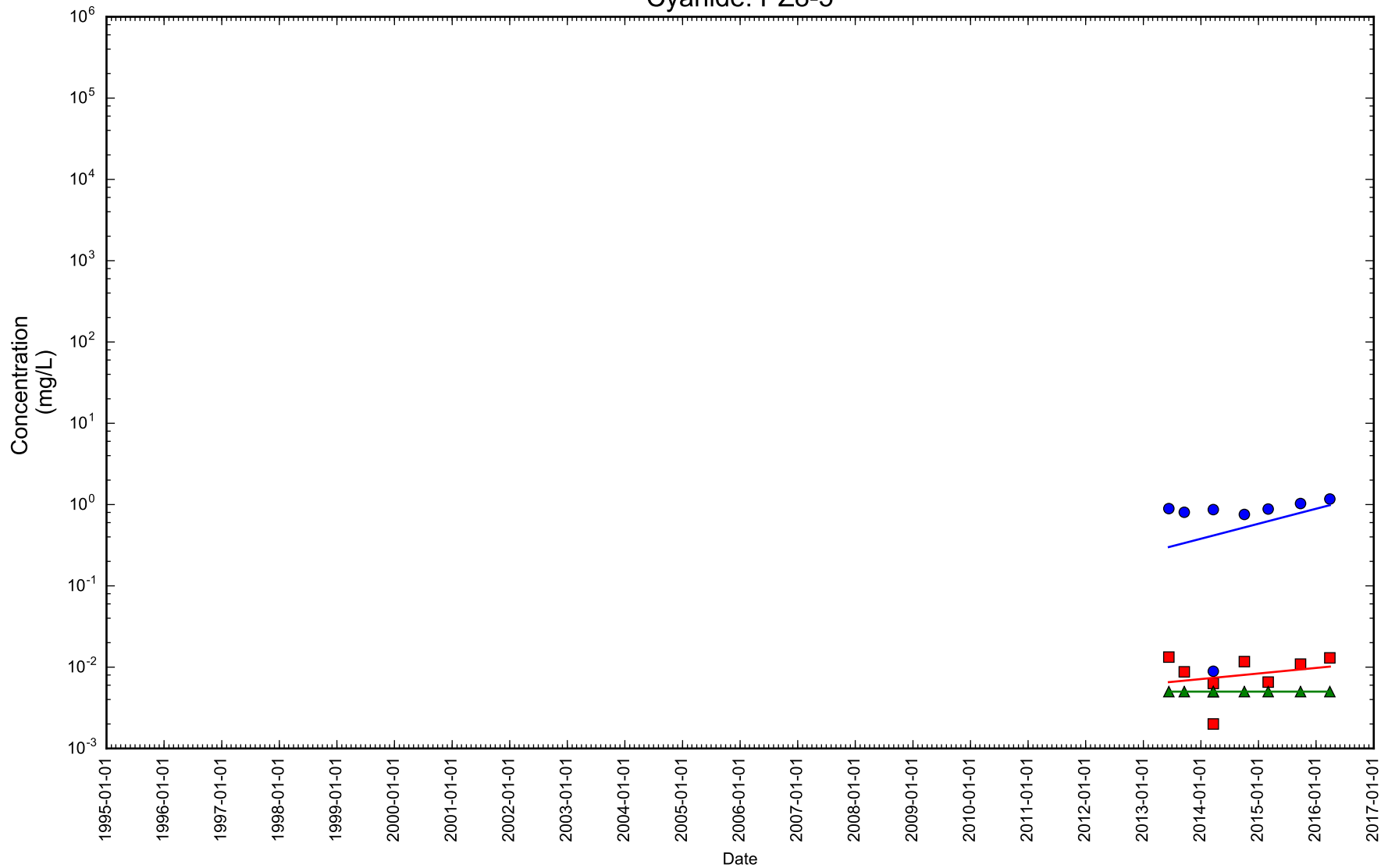


Figure 2-103

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

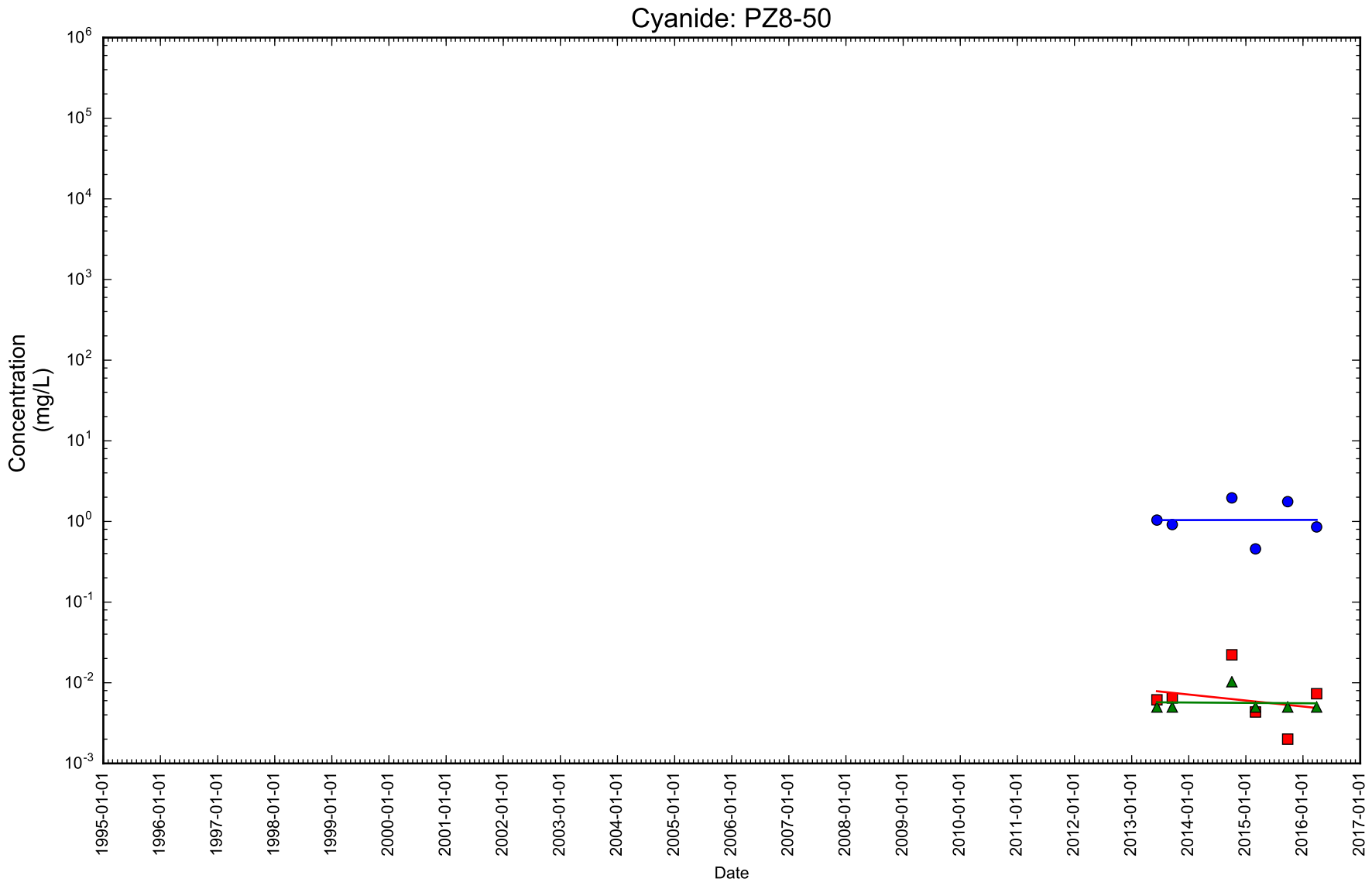


Figure 2-104

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

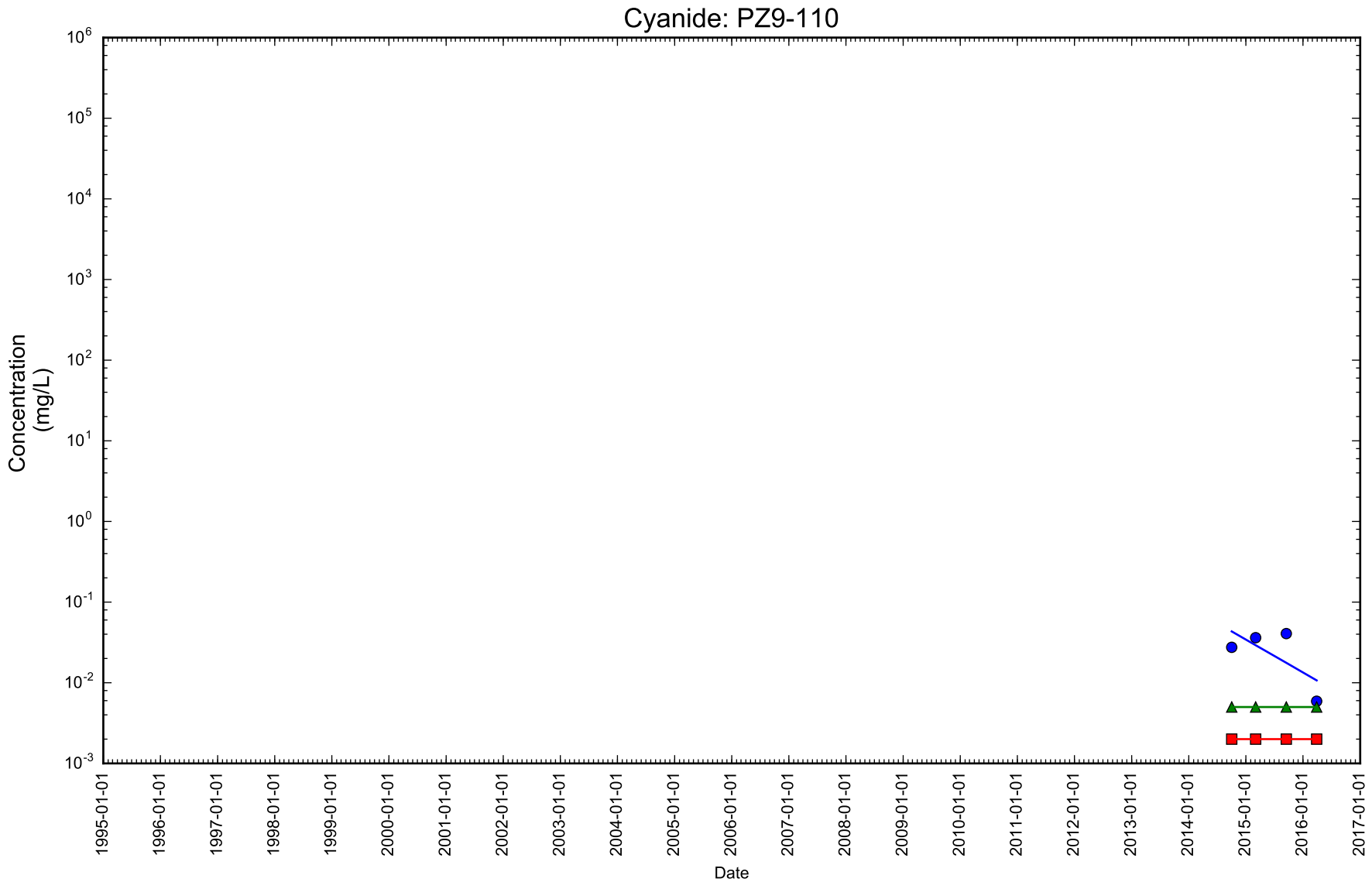


Figure 2-105

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

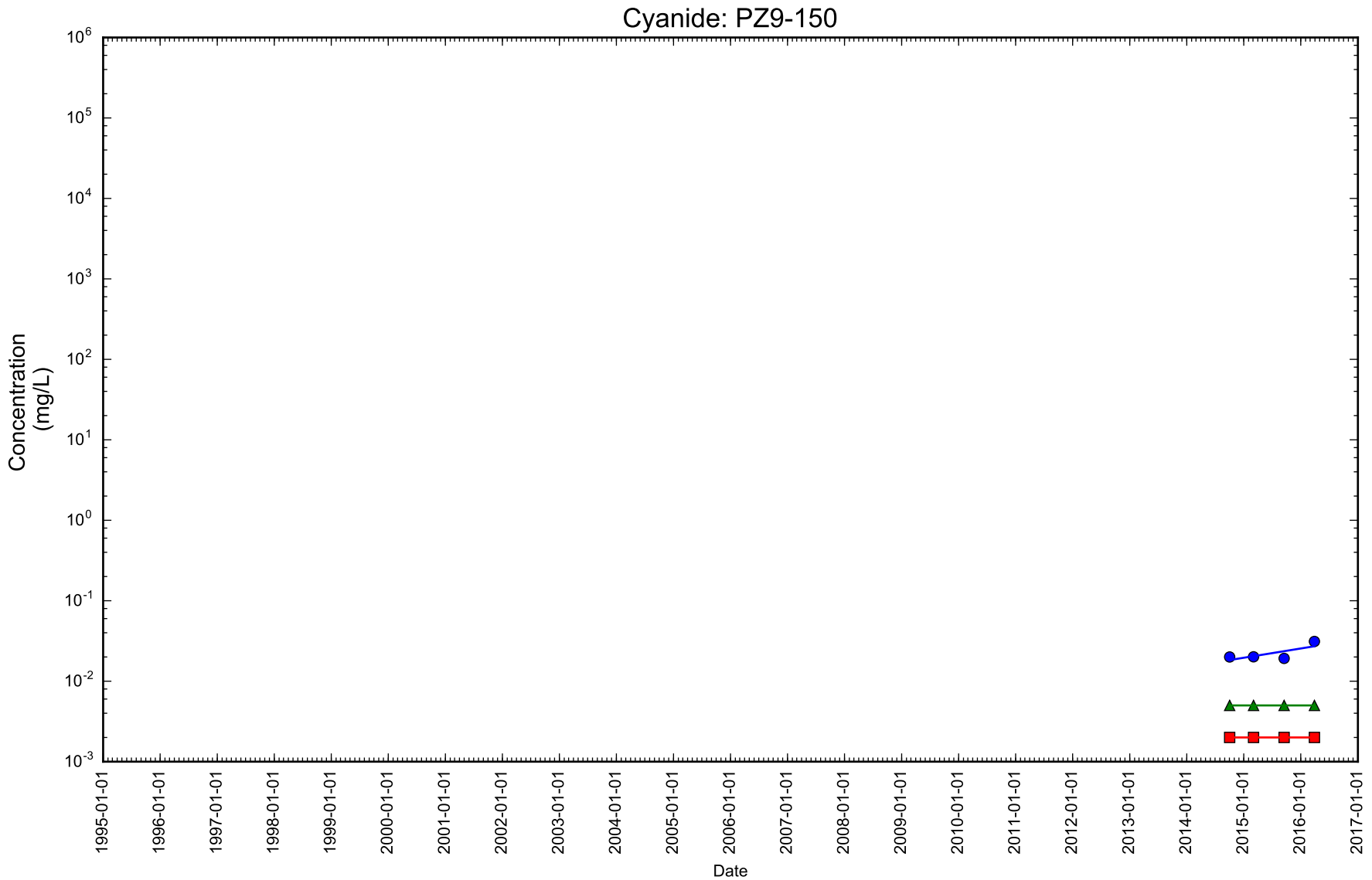


Figure 2-106

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ9-5

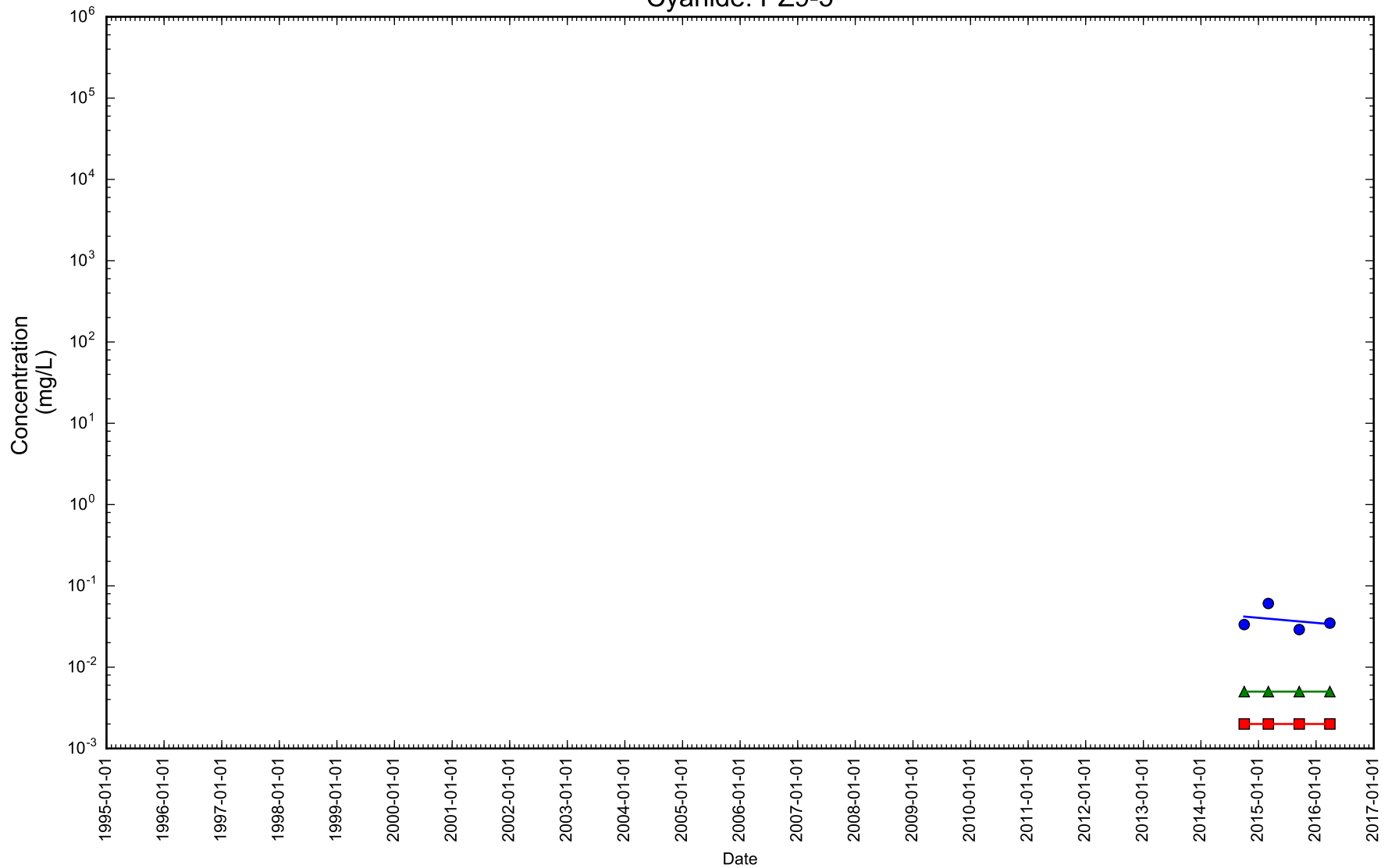


Figure 2-107

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: PZ9-50

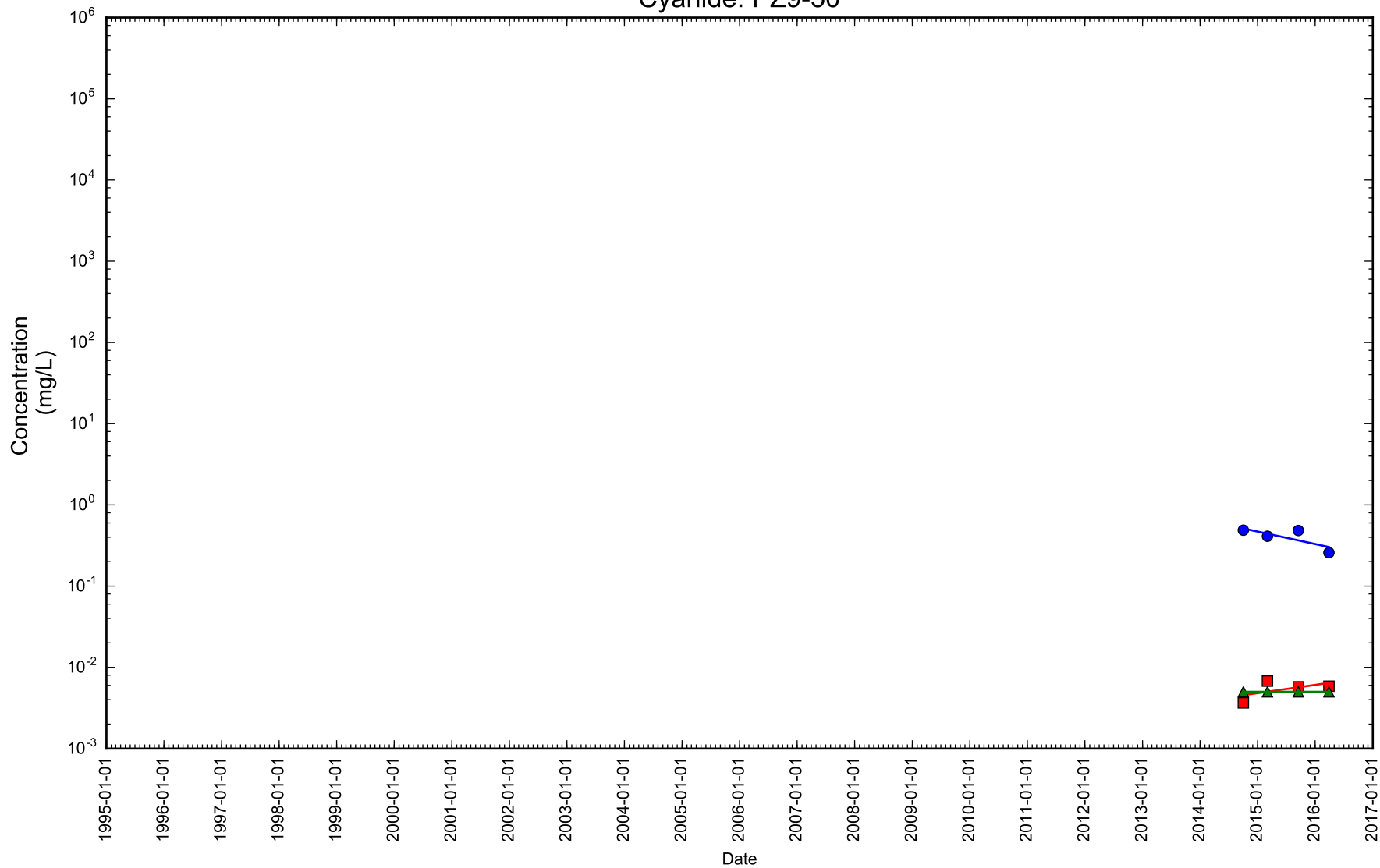


Figure 2-108

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

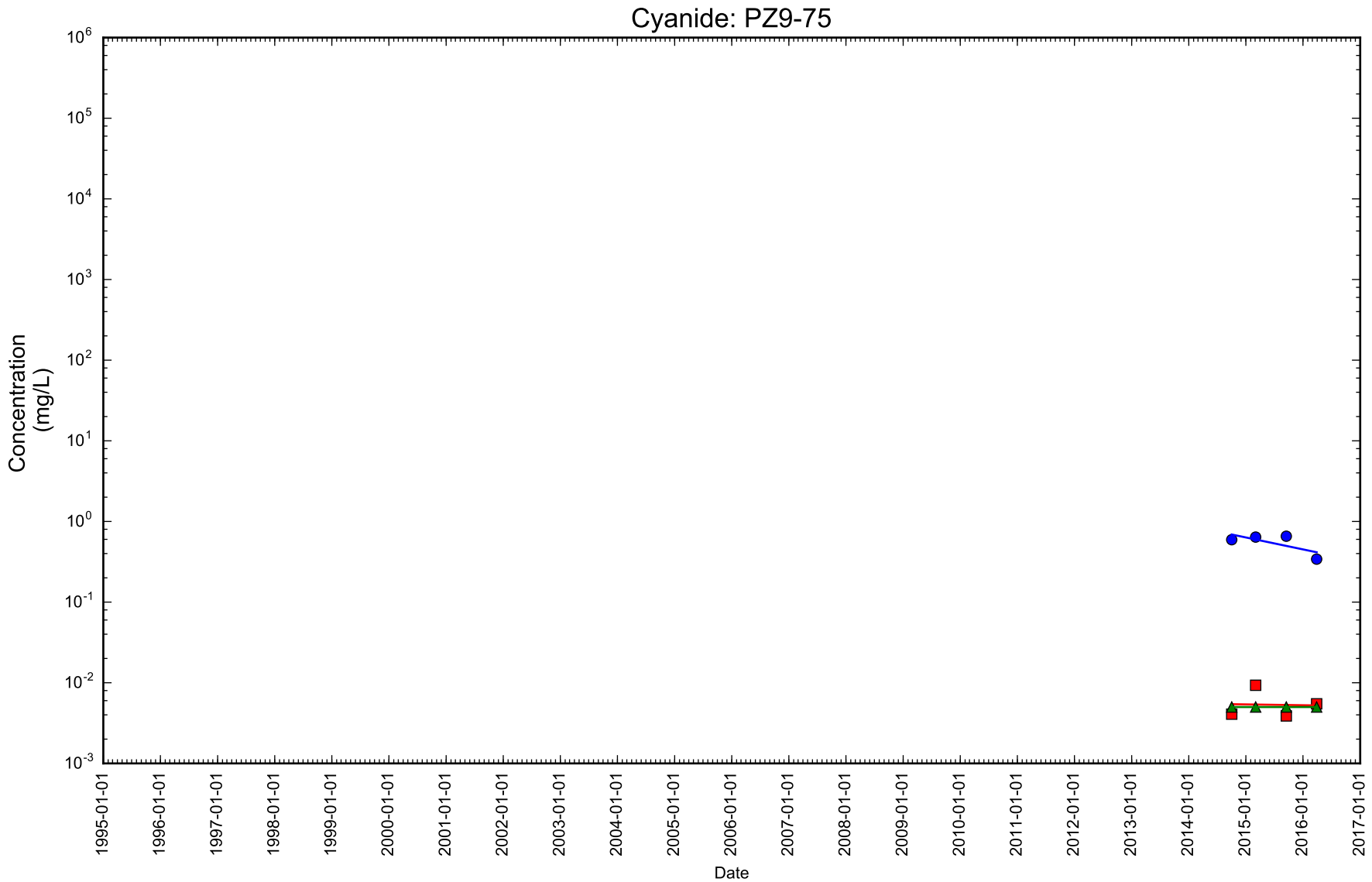


Figure 2-109

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: WS-08-59

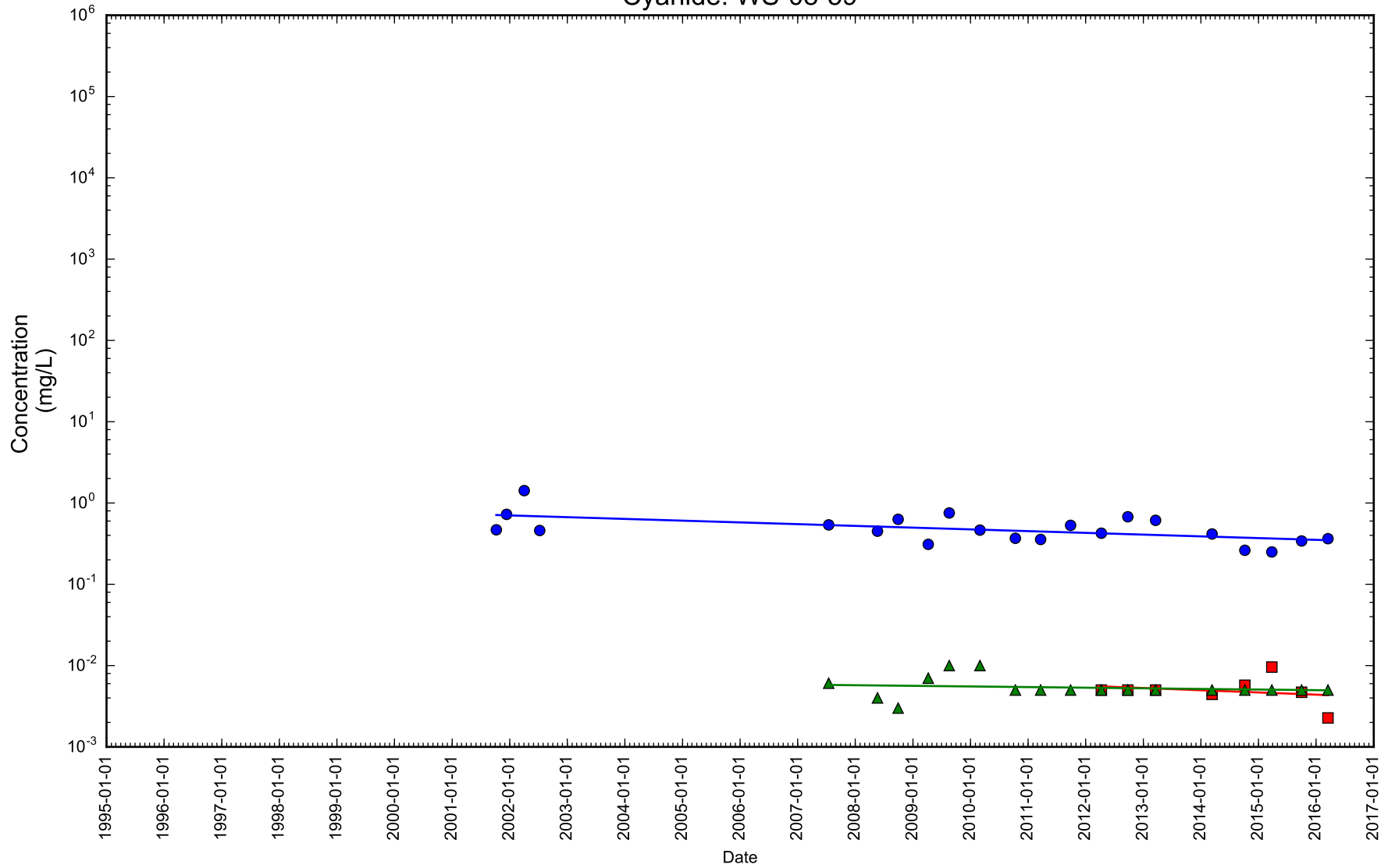


Figure 2-111

Time Series Concentration Plot

- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.



Cyanide: WS-09-34

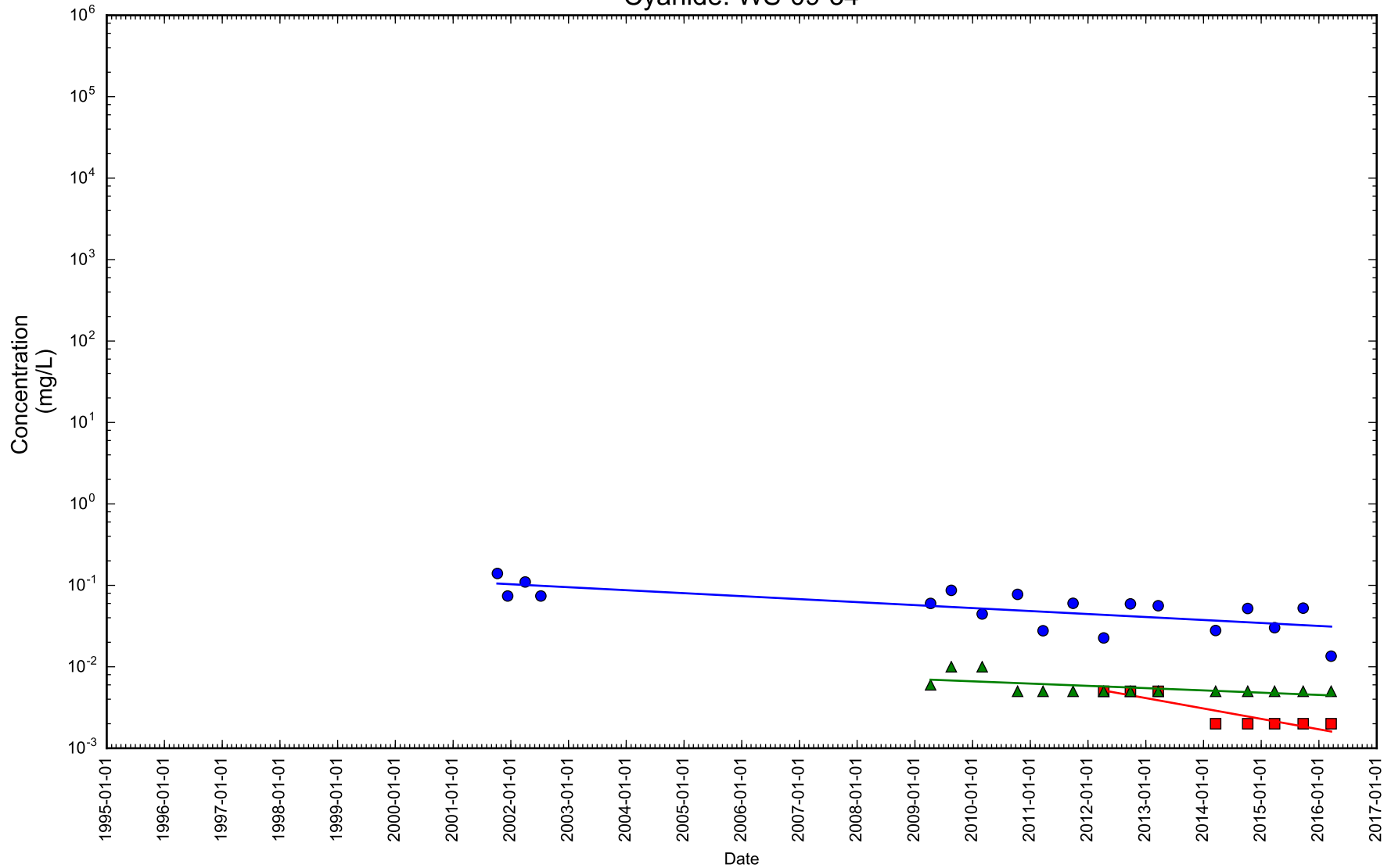


Figure 2-112

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: WS-12-125

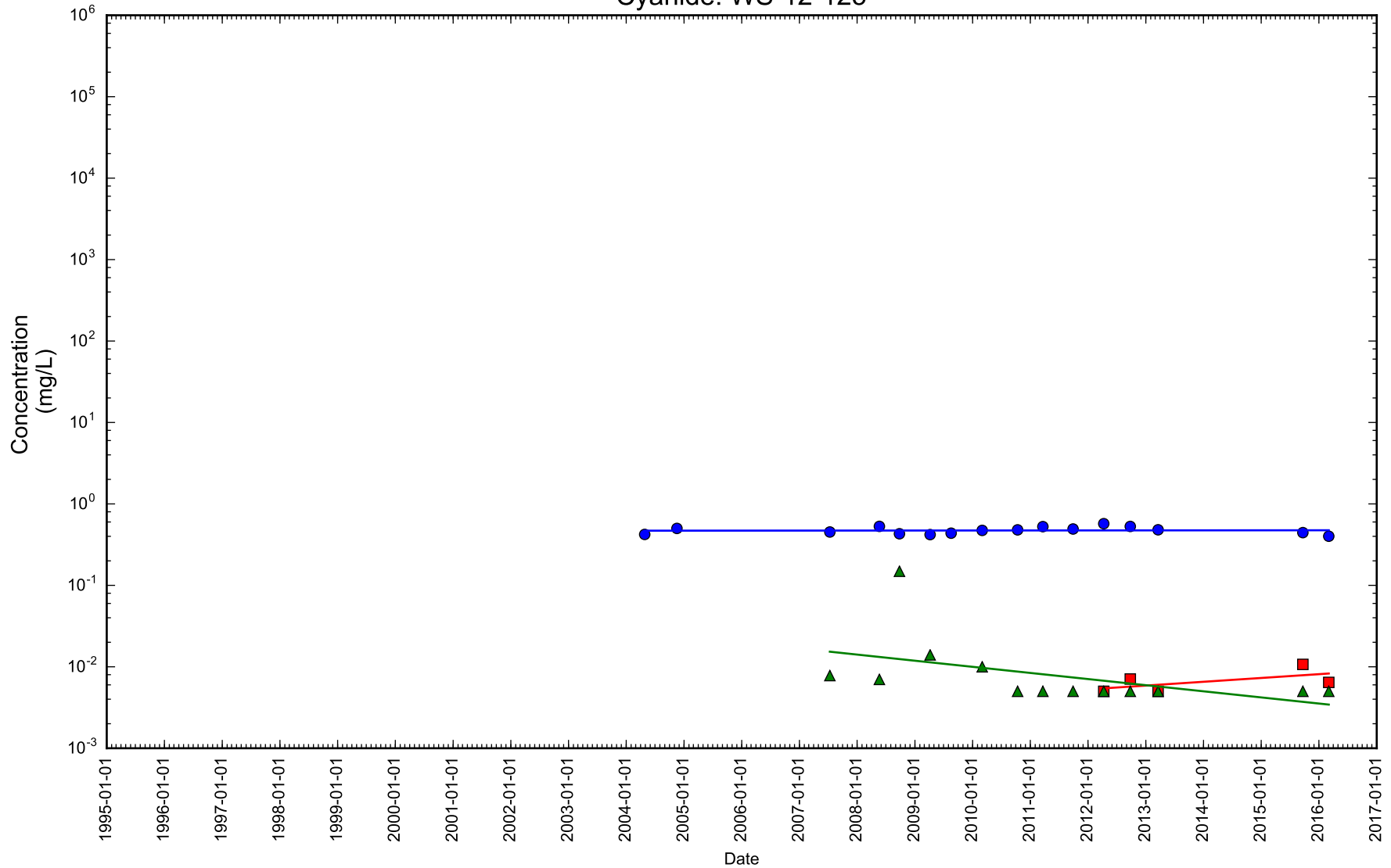


Figure 2-113

Time Series Concentration Plot



● Cyanide ■ Cyanide, available ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: WS-12-161

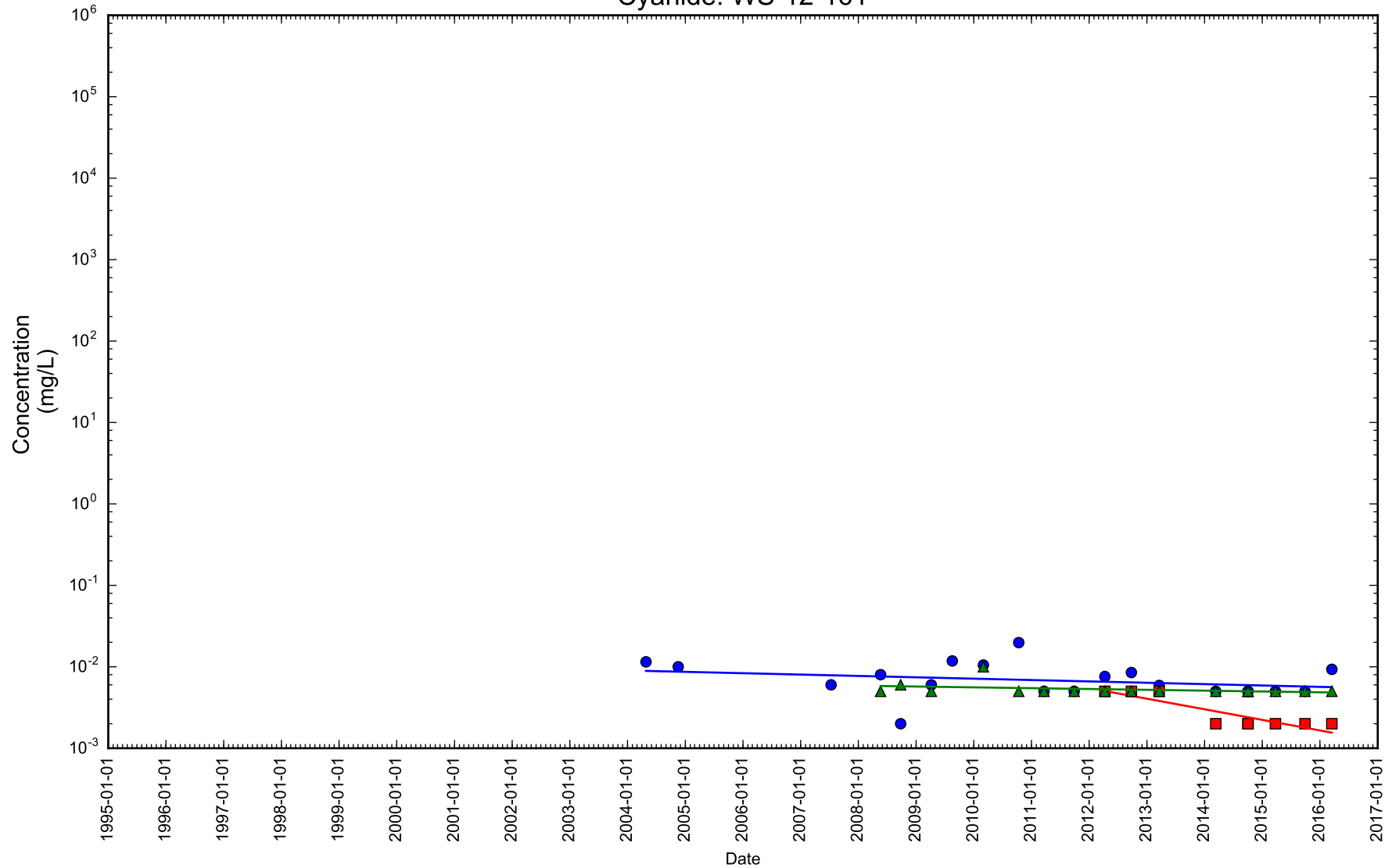


Figure 2-114

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: WS-13-105

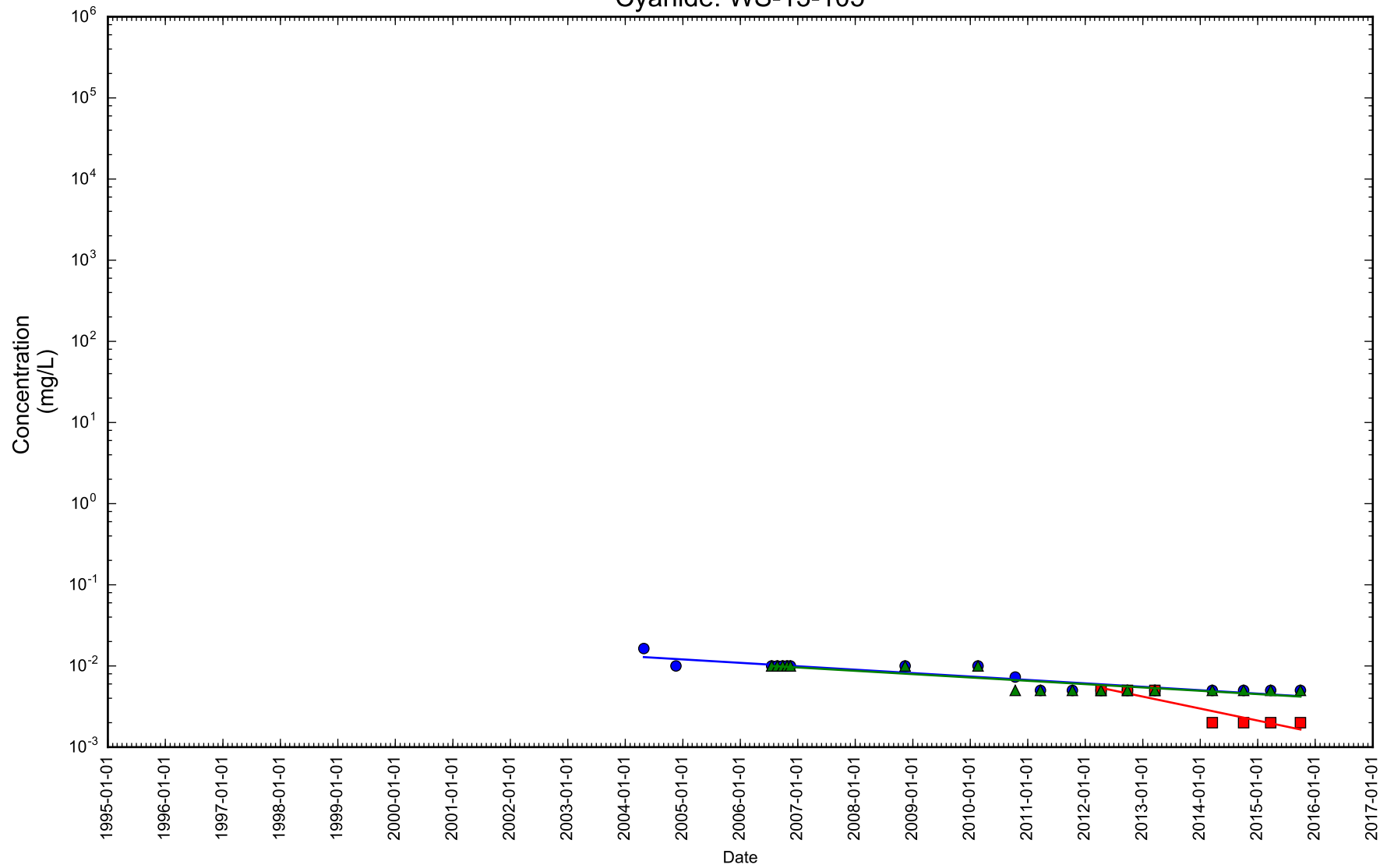


Figure 2-115

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: WS-13-69

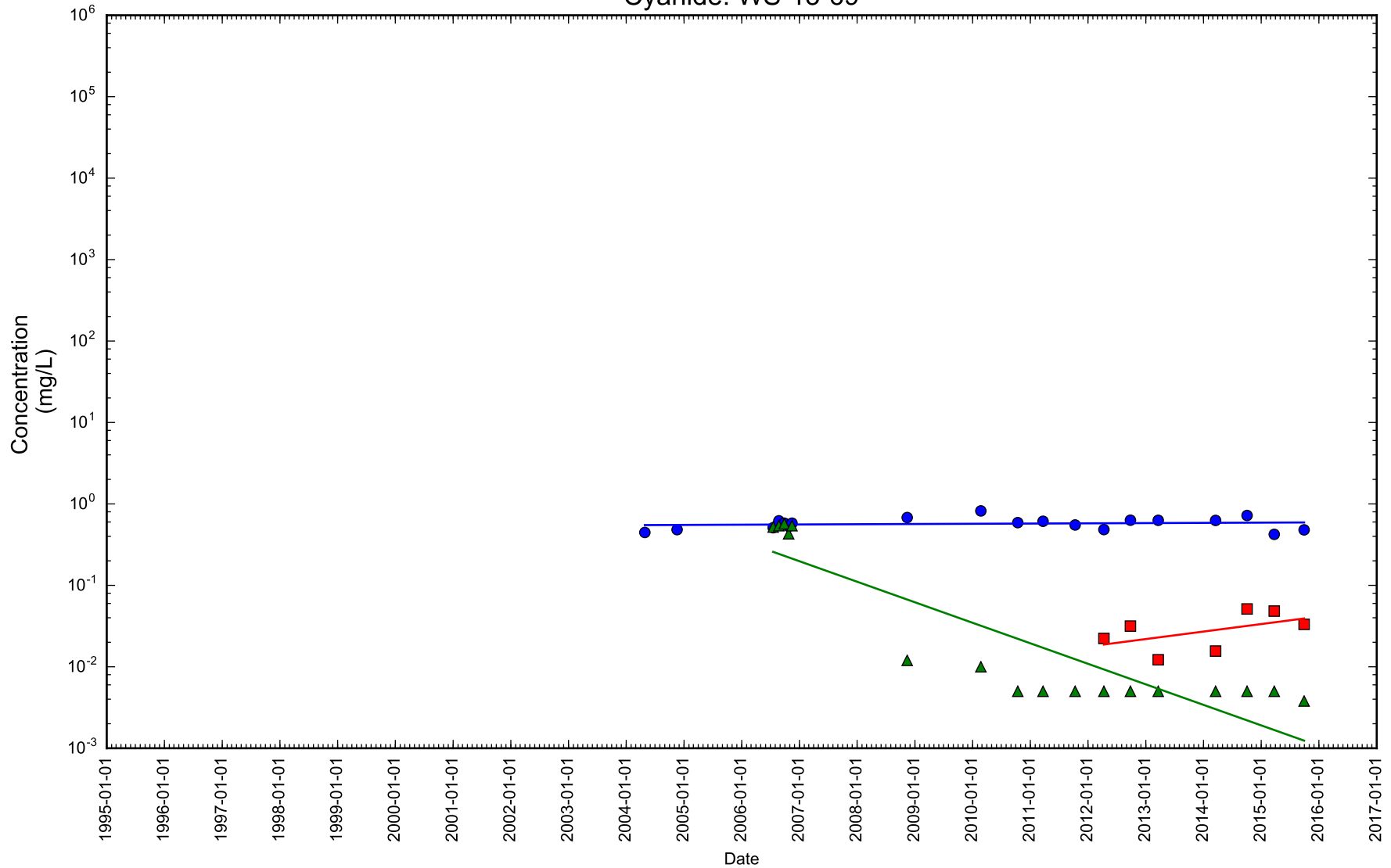


Figure 2-116

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: WS-16-161

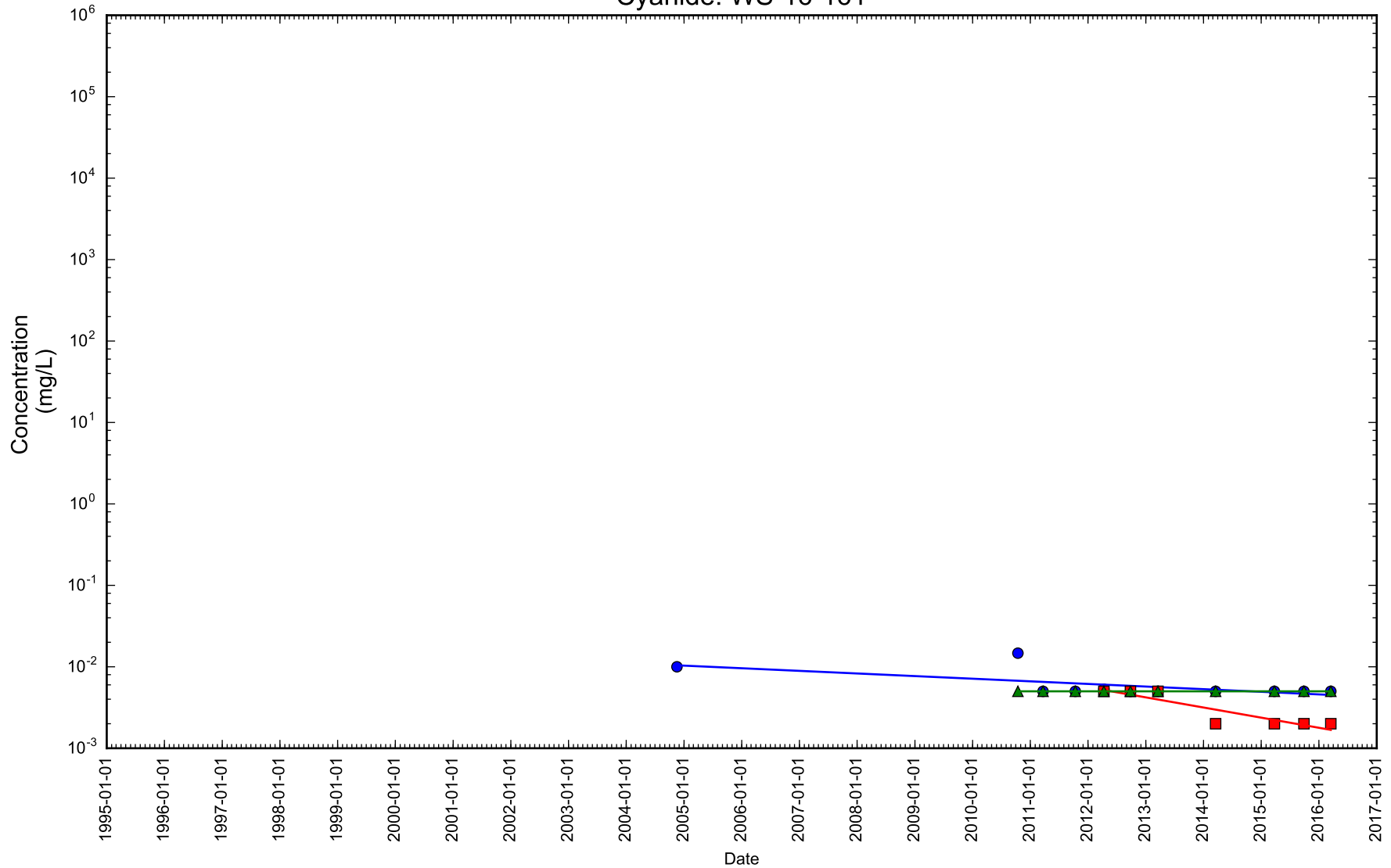


Figure 2-117

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: WS-17-52

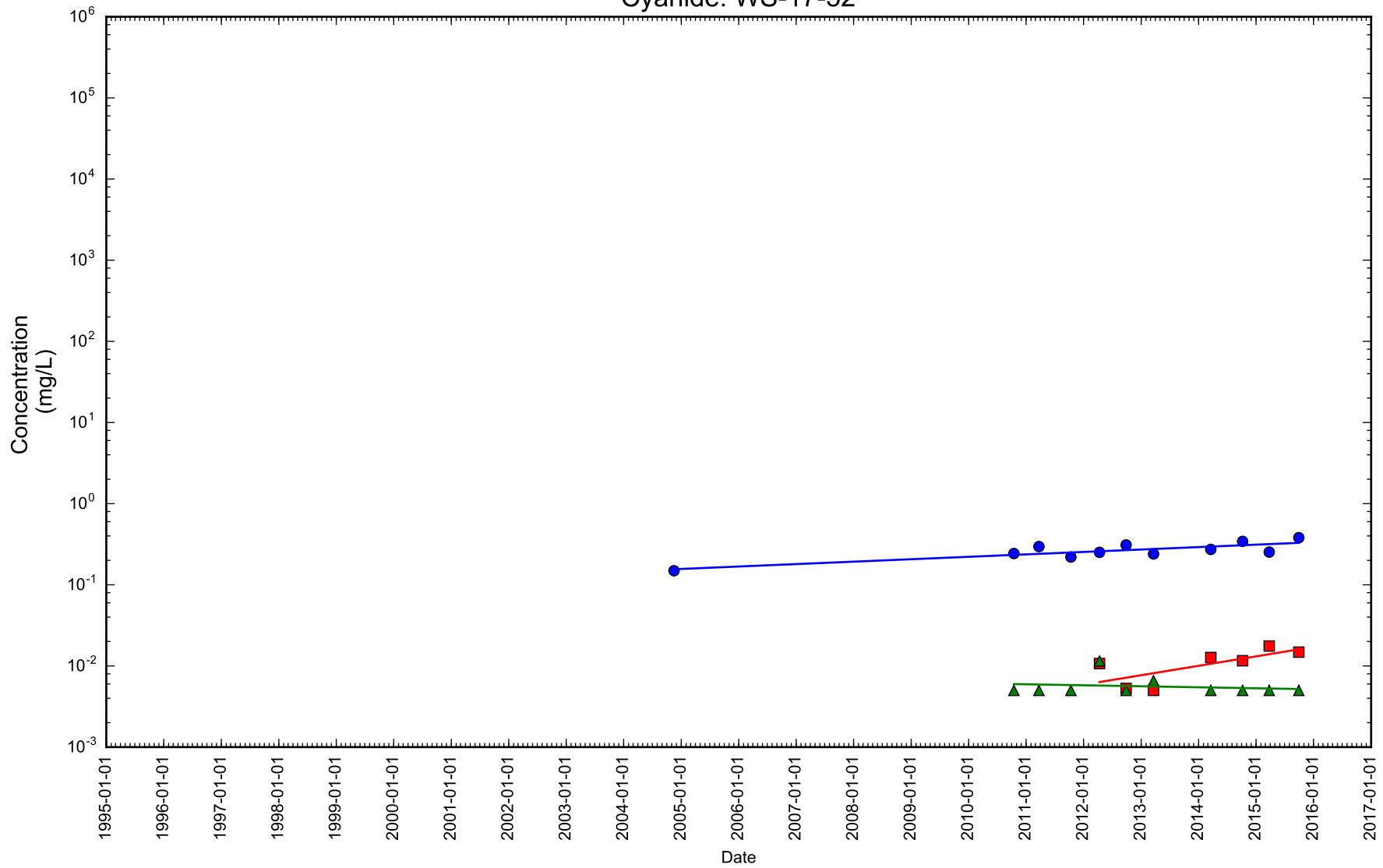


Figure 2-118

Time Series Concentration Plot



● Cyanide ■ Cyanide, available ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: WS-17-94

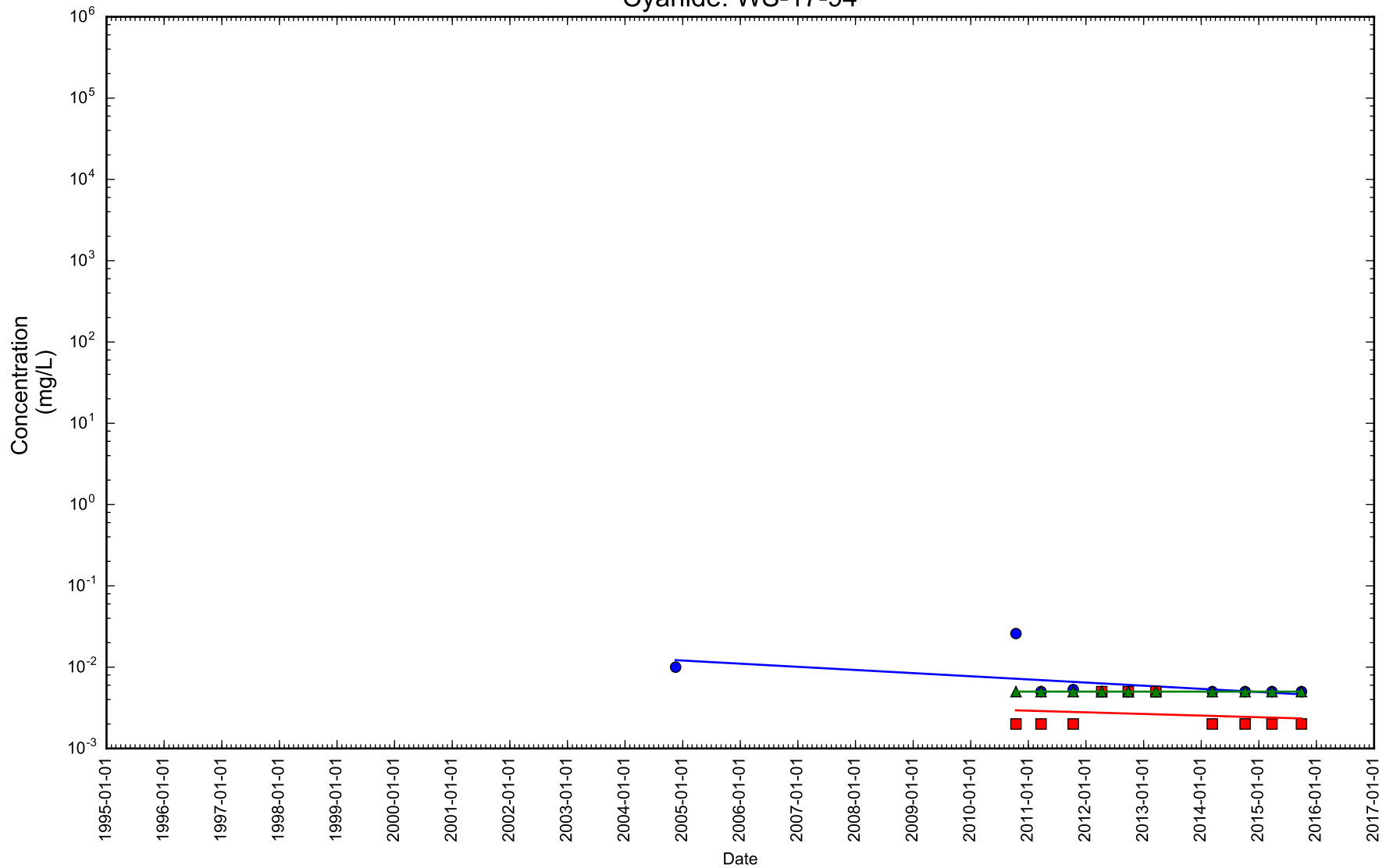


Figure 2-119

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

Cyanide: WS-47-183

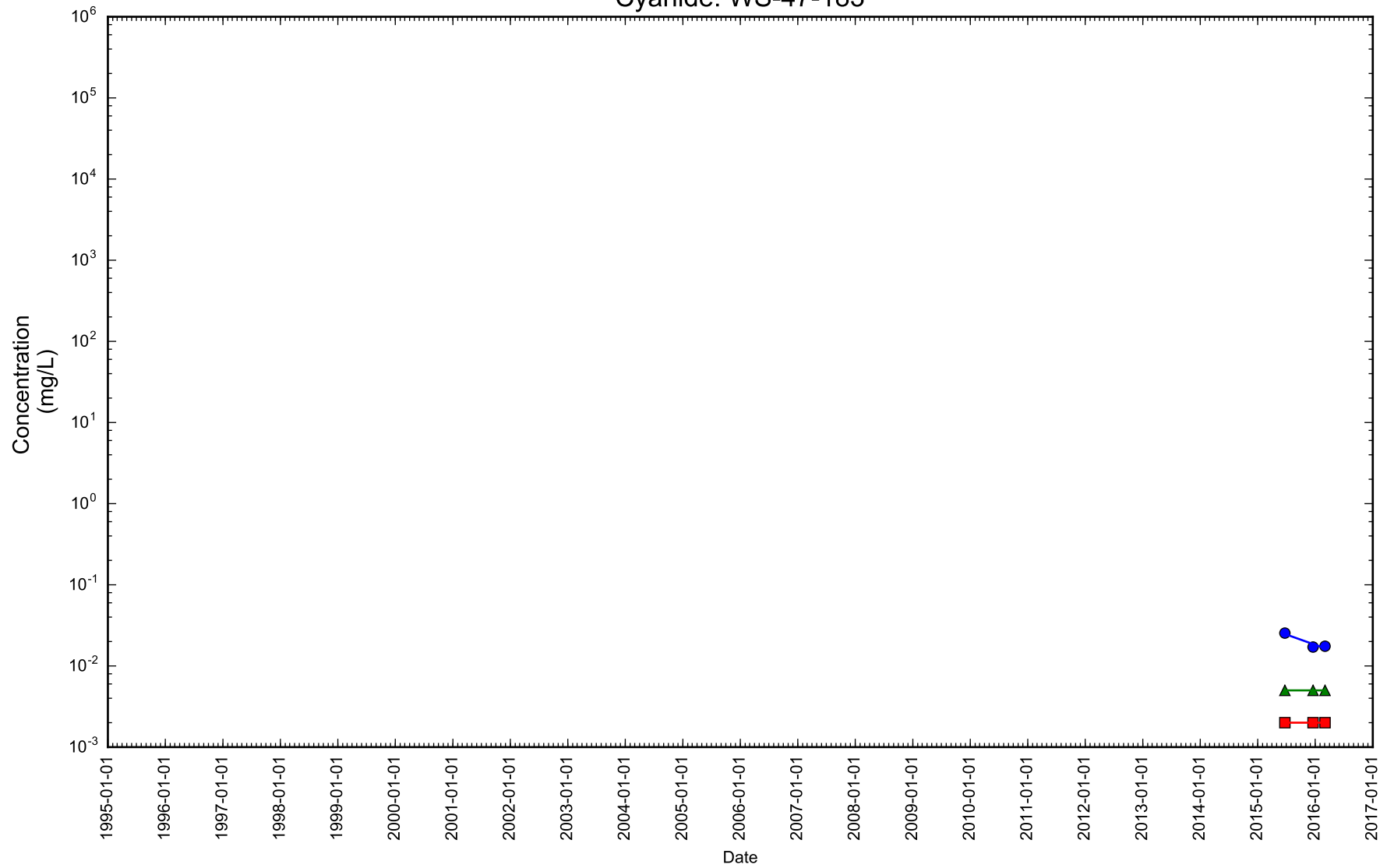


Figure 2-120

Time Series Concentration Plot



- Cyanide
- Cyanide, available
- ▲ Cyanide, free

Notes: Dissolved concentration excluded. Rejected samples excluded.

