CONESTOGA-ROVERS & ASSOCIATES

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December 18, 2012 Reference No. 017390

Mr. Glenn May, CPG
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
270 Michigan Avenue
Buffalo, New York 14203-2999

Dear Mr. May:

Re: GM Powertrain Group – Tonawanda, New York
Endoline Area Semi-Annual Groundwater Monitoring Report
Spill Number 9875474

Conestoga Rovers & Associates (CRA) has prepared this Semi Annual Groundwater Monitoring Report on behalf of the General Motors Company (GM) in accordance with the Enhanced Attenuation Work Plan for the Endoline Area Chlorinated Solvent Plume dated February 22, 2011(Work Plan). The New York State Department of Environmental Conservation (NYSDEC) approved the Work Plan on March 14, 2011.

The second round of semi annual groundwater monitoring was completed on September 20, 2012. All samples were sent to TestAmerica Laboratories of North Canton, Ohio for analysis. Groundwater samples were collected from perimeter monitoring wells MW-1, MW-9, MW-101, MW-102, and MW-103 and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) to monitor for potential plume migration. Groundwater samples collected from MW-2, MW-11, and MW-12 were analyzed for TCL VOCs and the following natural attenuation parameters:

Wet Chemistry	*Dissolved Gases*
Aerobic 1,1,1-TCA specific microbial population	Ethane
Ammonia	Methane
Alkalinity, total (as CaCO3)	
Anaerobic 1,1,1-TCA specific microbial population	
Biochemical oxygen demand (BOD)	***Field Parameters***
Chemical oxygen demand (COD)	Conductivity
Nitrate (as N)	Dissolved oxygen (DO)
Nitrite (as N)	Oxidation reduction potential (ORP)
Orthophosphate	pH
Phosphate, total	Temperature, field
Sulfate	Turbidity
Sulfite	
Total microbial population - aerobic	
Total microbial population - anaerobic	
Total organic carbon (TOC)	

Samples from monitoring wells MW-1, MW-9, MW-101, MW-102, and MW-103 were analyzed for TCL VOCs. Monitoring and injection well locations are shown on Figure 1. Figure 2 presents total chlorinated VOC (CVOC) contours. Analytical results for the chlorinated solvent plume enhanced attenuation program are summarized on Table 1. As requested, attenuation plots are provided as Attachment 1.

The data was validated by CRA. Application of quality assurance criteria was consistent with "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," EPA-540/R-99/008, October 1999. The data were found to exhibit acceptable levels of accuracy and precision with the qualifiers noted on the tables.

The data from second semi-annual event were reviewed to evaluate the enhanced biodegradation treatment at the Endoline Area. At well MW-2, both 1,1,1-TCA and 1,1-DCA were reduced to non-detect levels accompanied by a large increase in chloroethane indicating that dechlorination has occurred at well MW-2 since March 2012. It does not appear that significant conversion of chloroethane to ethane has occurred. The next sampling should show whether chloroethane is being converted to ethane.

This increase in chloroethane, and the high detection limits for 1,1,1-TCA and 1,1-DCA used by the lab skew the data so that there appears to be an increase in total CVOC in MW-2. It is most likely that the total CVOC concentration remained about the same because there appears to have been a stoichiometric conversion of 1,1,1-TCA and 1,1-DCA to chloroethane.

Concentrations of CVOC in wells MW-11 and MW-12 remained similar to those found during the March 2012 sampling event.

The three injection wells will be sampled again at the next event to monitor the migration of the organic substrate out of the injection well area and confirm that enhanced biodegradation is occurring in the injection well area. Round 3 of the semiannual sampling will be conducted in Spring 2013.

No conclusions are being made at this time. As stated in the approved Work Plan, CRA will evaluate the effectiveness of the enhanced attenuation program after two years (four rounds) of semiannual sampling. An evaluation report will be prepared and submitted to the NYSDEC with recommendations for future sampling or additional remedial actions if necessary.

Please contact Jim Hartnett at 315-463-2391 (GM) or Katherine Galanti at 716-856-2142 (CRA) if you should have any questions or comments.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

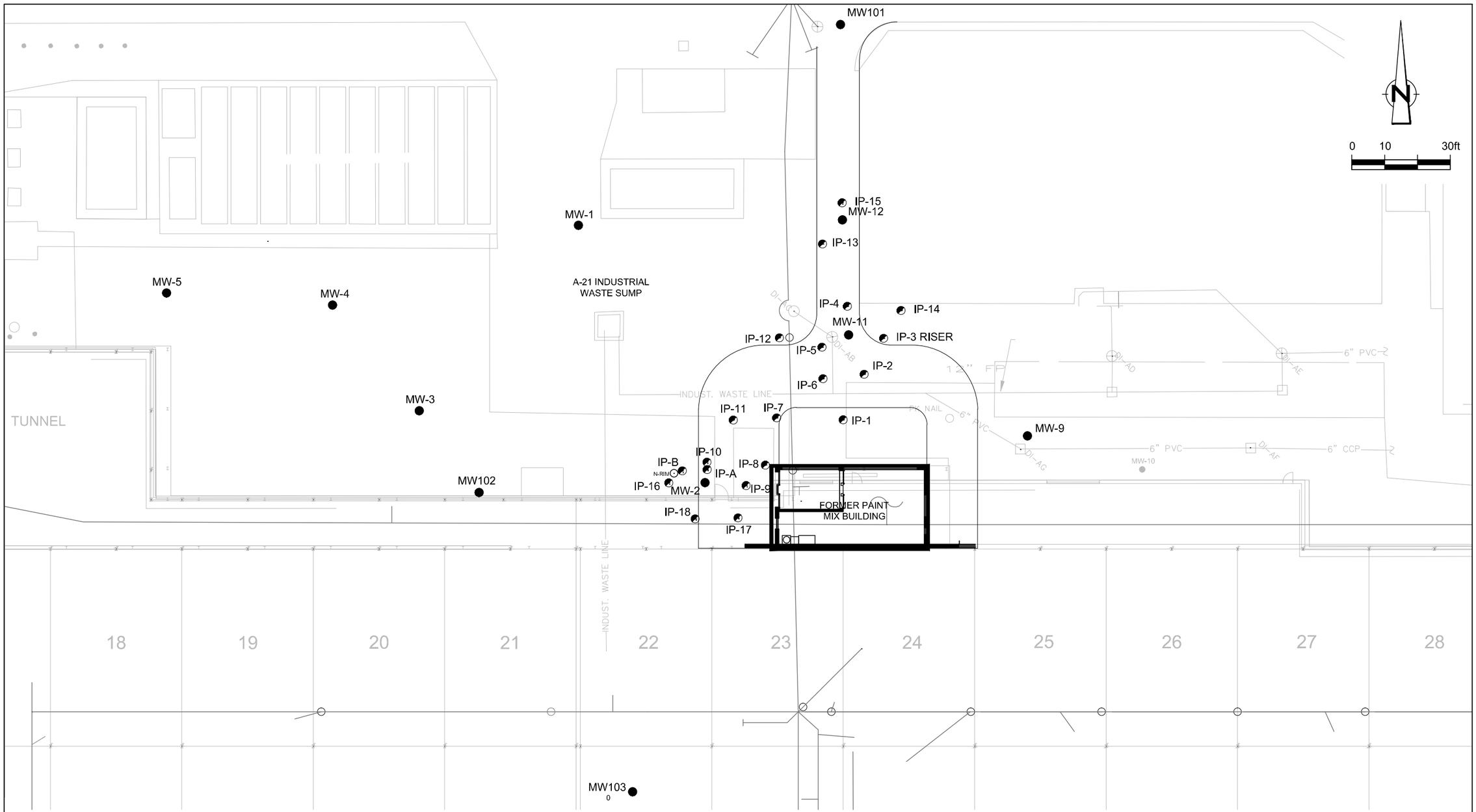
Katherine B. Galanti
Project Manager

KBG/ck/017390-May-007

Encl.

c.c.: M. Antonetti – GM
J. Hartnett – GM

FIGURES



LEGEND

MW-1 ● MONITORING WELL LOCATION

IP-11 ◐ INJECTION WELL LOCATION

figure 1

WELL LOCATIONS
ENHANCED ATTENUATION AT THE ENDOLINE AREA CHLORINATED SOLVENT PLUME
GENERAL MOTORS COMPANY TONAWANDA ENGINE PLANT
Tonawanda, New York

17390-00(MAY007)GN-BU001 DEC 03/2012

MW101
ND
<1

MW-1
ND
<1

MW-12
88

IP-13

A-21 INDUSTRIAL
WASTE SUMP

MW-5

MW-4

MW-11
5256

IP-2

1000

MW-3

TUNNEL

INDUST. WASTE LINE

MW-9
1.5

IP-10

MW102
3.2

N-RIM
MW-2
600

FORMER PAINT
MIX BUILDING

100

10

2

MW103
ND
<1

18 19 20 21 22 23 24 25 26 27 28

0 10 30ft

NOTES

THE ANALYTICAL RESULTS FOR MW-2 CVOCS WERE NON-DETECT AT AN ELEVATED DETECTION LIMIT. A VALUE OF 600 ug/L (1/2 OF THE DETECTION LIMIT FOR 1,1,1-TCA) IS USED AS THE TOTAL CVOC CONCENTRATION.

LEGEND

- MW-1 ● MONITORING WELL LOCATION
- IP-11 ◐ INJECTION WELL LOCATIONS
- CVOC CONCENTRATION CONTOUR
- MW-1 <1 ● TOTAL CHLORINATED VOC CONCENTRATION IN GROUNDWATER (ppb)

figure 2

TOTAL CVOC CONTOURS - SEPTEMBER 2012
ENHANCED ATTENUATION AT THE ENDOLINE AREA CHLORINATED SOLVENT PLUME
GENERAL MOTORS COMPANY TONAWANDA ENGINE PLANT
Tonawanda, New York

17390-00(MAY007)GN-BU002 DEC 03/2012

TABLES

TABLE 1

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
TONAWANDA, NEW YORK
SEPTEMBER 2012

	Location:	***MW-1***	***MW-2***	***MW-9***	***MW-101***	***MW-101***
	Sample Name:	***WG-17390-092112-007***	***WG-17390-092012-001***	***WG-17390-092012-002***	***WG-17390-092112-005***	***WG-17390-092112-006***
	Sample Date:	***9/21/2012***	***9/20/2012***	***9/20/2012***	***9/21/2012***	***9/21/2012 (Duplicate)***
	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1300 U	1.5	0.39 J	0.29 J
1,1-Dichloroethene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	2.0 U	2500 U	2.0 U	2.0 U	2.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	µg/L	50 U	63000 U	50 U	50 U	50 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	13000 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	13000 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	13000 U	10 U	10 U	10 U
Acetone	µg/L	1.1 J	13000 U	10 U	1.1 J	1.4 J
Benzene	µg/L	1.0 U	320 J	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1.0 U	1300 U	0.87 J	1.0 U	1.0 U
Carbon tetrachloride	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	1.0 U	42000	1.0 U	1.0	0.53 J
Chloroform (Trichloromethane)	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Isopropyl benzene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Methyl acetate	µg/L	10 U	13000 U	10 U	10 U	10 U

TABLE 1

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
TONAWANDA, NEW YORK
SEPTEMBER 2012

	Location:	***MW-1***	***MW-2***	***MW-9***	***MW-101***	***MW-101***
	Sample Name:	***WG-17390-092112-007***	***WG-17390-092012-001***	***WG-17390-092012-002***	***WG-17390-092112-005***	***WG-17390-092112-006***
	Sample Date:	***9/21/2012***	***9/20/2012***	***9/20/2012***	***9/21/2012***	***9/21/2012 (Duplicate)***
	Units					
Volatile Organic Compounds Cont'd.						
Methyl cyclohexane	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	1.3 J	6300 U	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	390 J	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (Freon 113)	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1300 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	2.0 U	410 J	2.0 U	2.0 U	2.0 U
Wet Chemistry						
Alkalinity, total (as CaCO3)	mg/L	-	230	-	-	-
Ammonia	mg/L	-	4.2	-	-	-
Biochemical oxygen demand (BOD)	mg/L	-	91 J	-	-	-
Chemical oxygen demand (COD)	mg/L	-	210	-	-	-
Nitrate (as N)	mg/L	-	0.10 U	-	-	-
Nitrite (as N)	mg/L	-	0.10 U	-	-	-
Orthophosphate	mg/L	-	0.040 J	-	-	-
Sulfate	mg/L	-	4.7	-	-	-
Sulfide	mg/L	-	2.1	-	-	-
Total organic carbon (TOC)	mg/L	-	78	-	-	-

TABLE 1

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
TONAWANDA, NEW YORK
SEPTEMBER 2012

	Location:	***MW-1***	***MW-2***	***MW-9***	***MW-101***	***MW-101***
	Sample Name:	***WG-17390-092112-007***	***WG-17390-092012-001***	***WG-17390-092012-002***	***WG-17390-092112-005***	***WG-17390-092112-006***
	Sample Date:	***9/21/2012***	***9/20/2012***	***9/20/2012***	***9/21/2012***	***9/21/2012 (Duplicate)***
	Units					
Gas						
Ethane	µg/L	-	54	-	-	-
Methane	µg/L	-	1200	-	-	-
Metals						
Iron	µg/L	-	2100 J	-	-	-
Iron (dissolved)	µg/L	-	2800 J	-	-	-
Manganese	µg/L	-	250 J	-	-	-
Manganese (dissolved)	µg/L	-	340 J	-	-	-

Notes:

µg/L	Micrograms per Liter
mg/L	Milligrams per Liter
J	Estimated
U	Not present at or above the associated value.

TABLE 1

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
TONAWANDA, NEW YORK
SEPTEMBER 2012

Location:		***MW-102***	***MW-103***	***MW-11***	***MW-12***
Sample Name:		***WG-17390-092112-008***	***WG-17390-092112-009***	***WG-17390-092112-003***	***WG-17390-092112-004***
Sample Date:		***9/21/2012***	***9/21/2012***	***9/21/2012***	***9/21/2012***
	Units				
Volatile Organic Compounds					
1,1,1-Trichloroethane	µg/L	1.5 U	1.0 U	640	3.3 U
1,1,2,2-Tetrachloroethane	µg/L	1.5 U	1.0 U	91 U	3.3 U
1,1,2-Trichloroethane	µg/L	1.5 U	1.0 U	91 U	3.3 U
1,1-Dichloroethane	µg/L	3.2	1.0 U	2500	88
1,1-Dichloroethene	µg/L	1.5 U	1.0 U	2000	3.3 U
1,2,4-Trichlorobenzene	µg/L	1.5 U	1.0 U	91 U	3.3 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	3.1 U	2.0 U	180 U	6.7 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.5 U	1.0 U	91 U	3.3 U
1,2-Dichlorobenzene	µg/L	1.5 U	1.0 U	91 U	3.3 U
1,2-Dichloroethane	µg/L	1.5 U	1.0 U	91 U	3.3 U
1,2-Dichloropropane	µg/L	1.5 U	1.0 U	91 U	3.3 U
1,3-Dichlorobenzene	µg/L	1.5 U	1.0 U	91 U	3.3 U
1,4-Dichlorobenzene	µg/L	1.5 U	1.0 U	91 U	3.3 U
1,4-Dioxane	µg/L	77 U	50 U	4500 U	170 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	15 U	10 U	910 U	33 U
2-Hexanone	µg/L	15 U	10 U	910 U	33 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	15 U	10 U	910 U	33 U
Acetone	µg/L	2.1 J	10 U	910 U	33 U
Benzene	µg/L	1.5 U	1.0 U	91 U	3.3 U
Bromodichloromethane	µg/L	1.5 U	1.0 U	91 U	3.3 U
Bromoform	µg/L	1.5 U	1.0 U	91 U	3.3 U
Bromomethane (Methyl bromide)	µg/L	1.5 U	1.0 U	91 U	3.3 U
Carbon disulfide	µg/L	1.5 U	1.0 U	91 U	3.3 U
Carbon tetrachloride	µg/L	1.5 U	1.0 U	91 U	3.3 U
Chlorobenzene	µg/L	1.5 U	1.0 U	91 U	3.3 U
Chloroethane	µg/L	1.5 U	1.0 U	91 U	3.3 U
Chloroform (Trichloromethane)	µg/L	1.5 U	1.0 U	91 U	3.3 U
Chloromethane (Methyl chloride)	µg/L	1.5 U	1.0 U	91 U	3.3 U
cis-1,2-Dichloroethene	µg/L	1.5 U	1.0 U	100	3.3 U
cis-1,3-Dichloropropene	µg/L	1.5 U	1.0 U	91 U	3.3 U
Cyclohexane	µg/L	1.5 U	1.0 U	91 U	3.3 U
Dibromochloromethane	µg/L	1.5 U	1.0 U	91 U	3.3 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.5 U	1.0 U	91 U	5.2
Ethylbenzene	µg/L	1.5 U	1.0 U	91 U	3.3 U
Isopropyl benzene	µg/L	1.5 U	1.0 U	91 U	3.3 U
Methyl acetate	µg/L	15 U	10 U	910 U	33 U

TABLE 1

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
TONAWANDA, NEW YORK
SEPTEMBER 2012

Location:		***MW-102***	***MW-103***	***MW-11***	***MW-12***
Sample Name:		***WG-17390-092112-008***	***WG-17390-092112-009***	***WG-17390-092112-003***	***WG-17390-092112-004***
Sample Date:		***9/21/2012***	***9/21/2012***	***9/21/2012***	***9/21/2012***
	Units				
Volatile Organic Compounds Cont'd.					
Methyl cyclohexane	µg/L	1.5 U	1.0 U	91 U	3.3 U
Methyl tert butyl ether (MTBE)	µg/L	45	5.0 U	450 U	17 U
Methylene chloride	µg/L	1.5 U	1.0 U	91 U	3.3 U
Styrene	µg/L	1.5 U	1.0 U	91 U	3.3 U
Tetrachloroethene	µg/L	1.5 U	1.0 U	91 U	3.3 U
Toluene	µg/L	1.5 U	1.0 U	91 U	3.3 U
trans-1,2-Dichloroethene	µg/L	1.5 U	1.0 U	91 U	3.3 U
trans-1,3-Dichloropropene	µg/L	1.5 U	1.0 U	91 U	3.3 U
Trichloroethene	µg/L	1.5 U	1.0 U	16 J	3.3 U
Trichlorofluoromethane (CFC-11)	µg/L	1.5 U	1.0 U	91 U	3.3 U
Trifluorotrichloroethane (Freon 113)	µg/L	1.5 U	1.0 U	91 U	3.3 U
Vinyl chloride	µg/L	1.5 U	1.0 U	91 U	3.3 U
Xylenes (total)	µg/L	3.1 U	2.0 U	180 U	6.7 U
Wet Chemistry					
Alkalinity, total (as CaCO3)	mg/L	-	-	450	510
Ammonia	mg/L	-	-	2.0 U	2.0 U
Biochemical oxygen demand (BOD)	mg/L	-	-	2.0 U	2.0 U
Chemical oxygen demand (COD)	mg/L	-	-	160	27
Nitrate (as N)	mg/L	-	-	0.10 U	0.10 U
Nitrite (as N)	mg/L	-	-	0.10 U	0.10 U
Orthophosphate	mg/L	-	-	R	R
Sulfate	mg/L	-	-	3900	1900
Sulfide	mg/L	-	-	1.0 U	1.0 U
Total organic carbon (TOC)	mg/L	-	-	4.0	5.7

TABLE 1

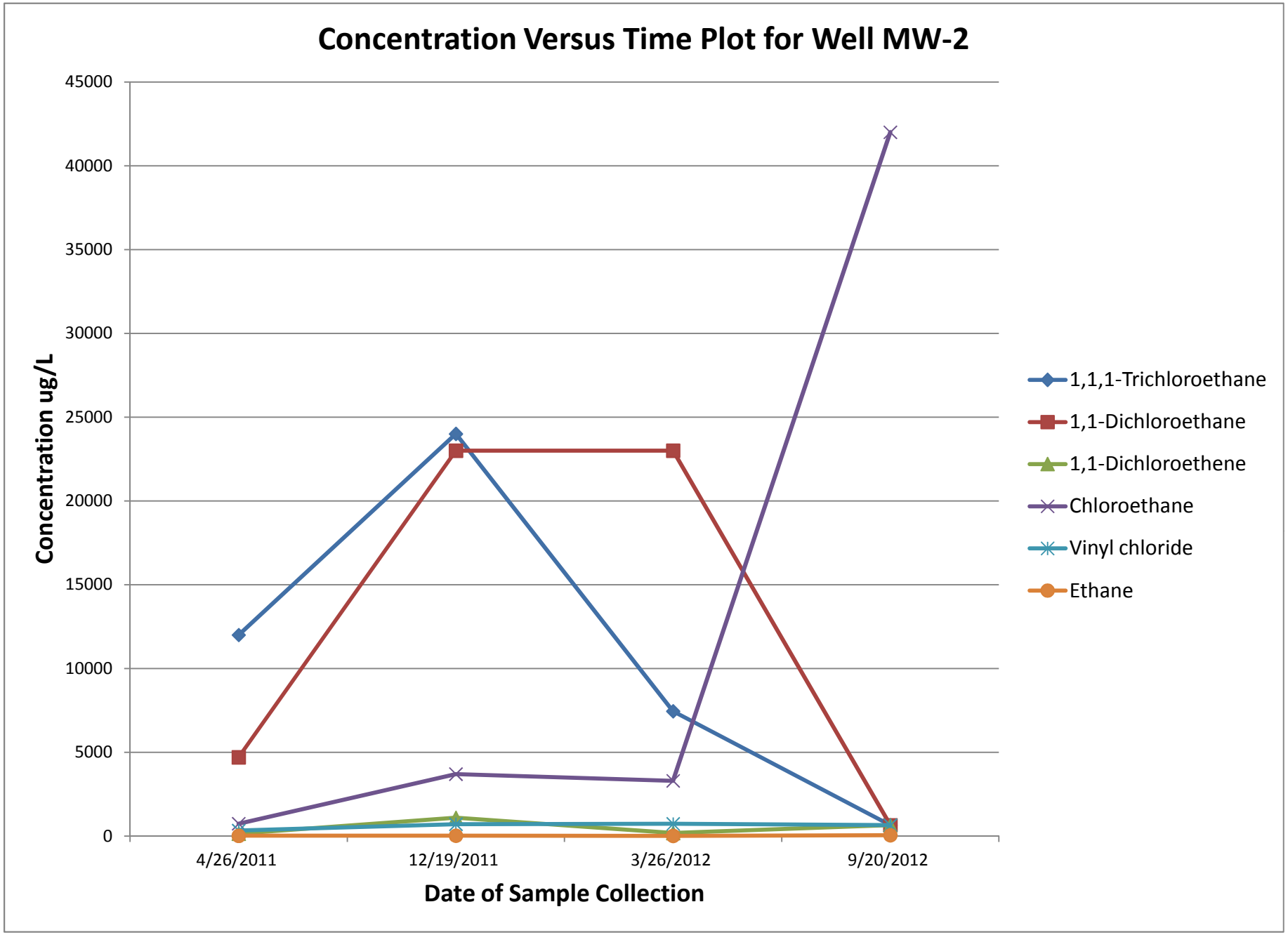
ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
TONAWANDA, NEW YORK
SEPTEMBER 2012

Location:		***MW-102***	***MW-103***	***MW-11***	***MW-12***
Sample Name:		***WG-17390-092112-008***	***WG-17390-092112-009***	***WG-17390-092112-003***	***WG-17390-092112-004***
Sample Date:		***9/21/2012***	***9/21/2012***	***9/21/2012***	***9/21/2012***
	Units				
Gas					
Ethane	µg/L	-	-	1.5	0.50 U
Methane	µg/L	-	-	280	5.1
Metals					
Iron	µg/L	-	-	1000 J	100 U
Iron (dissolved)	µg/L	-	-	1600 J	100 U
Manganese	µg/L	-	-	290	50
Manganese (dissolved)	µg/L	-	-	310	20

Notes:

µg/L	Micrograms per Liter
mg/L	Milligrams per Liter
J	Estimated
U	Not present at or above the associated value.

ATTACHMENT 1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30000
25000
20000
15000
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Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
9/20/2012
Date of Sample Collection
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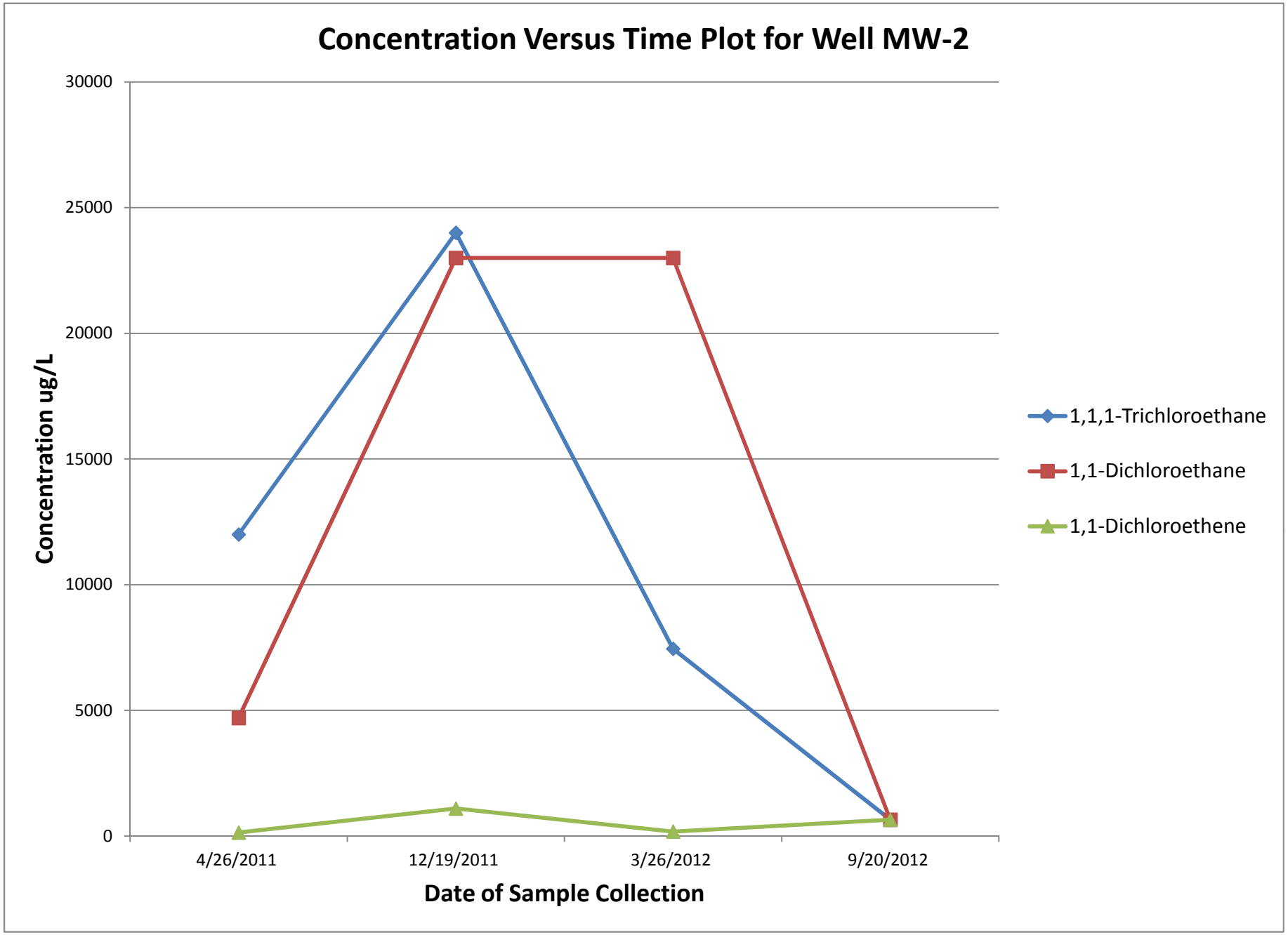
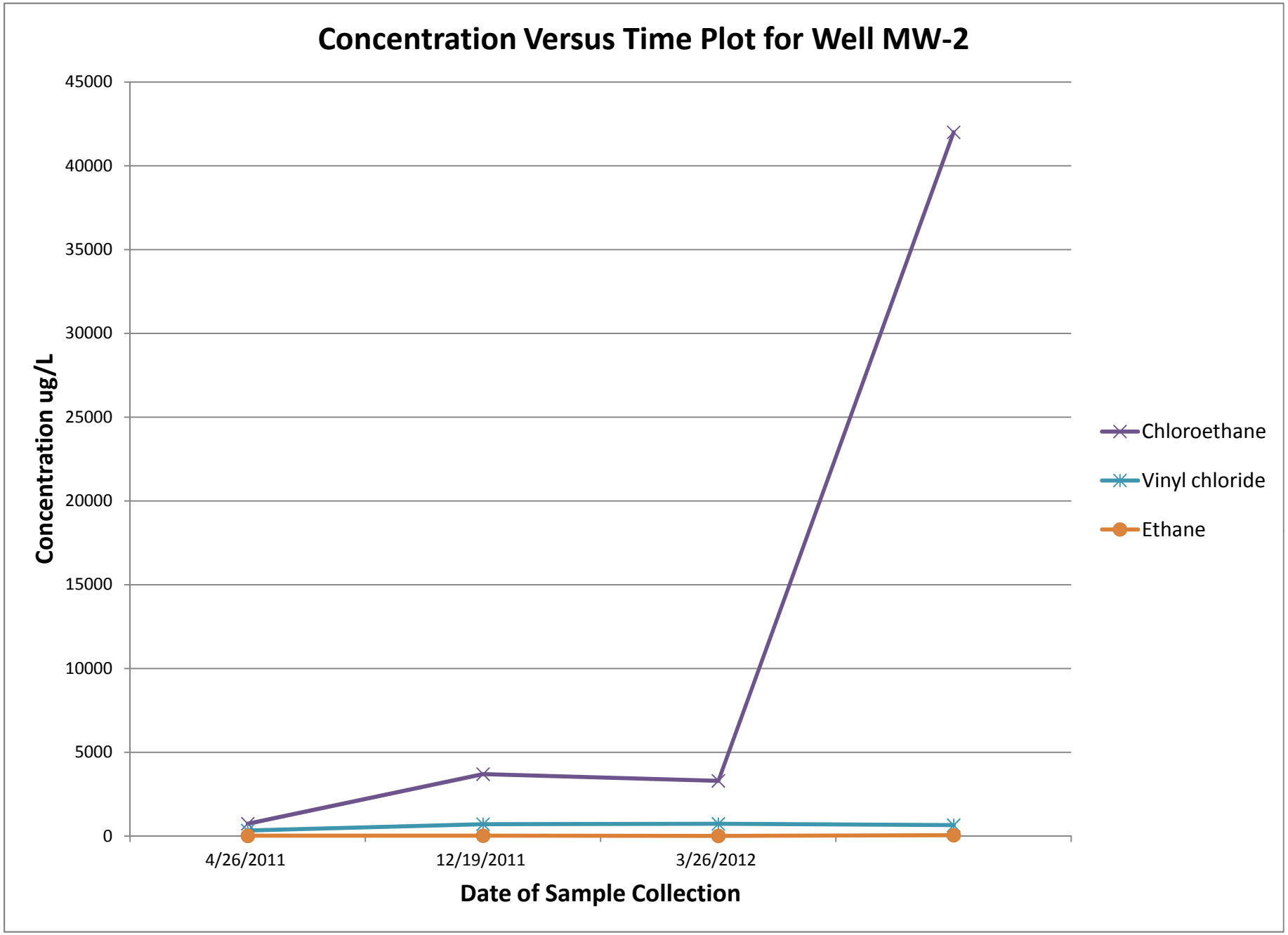
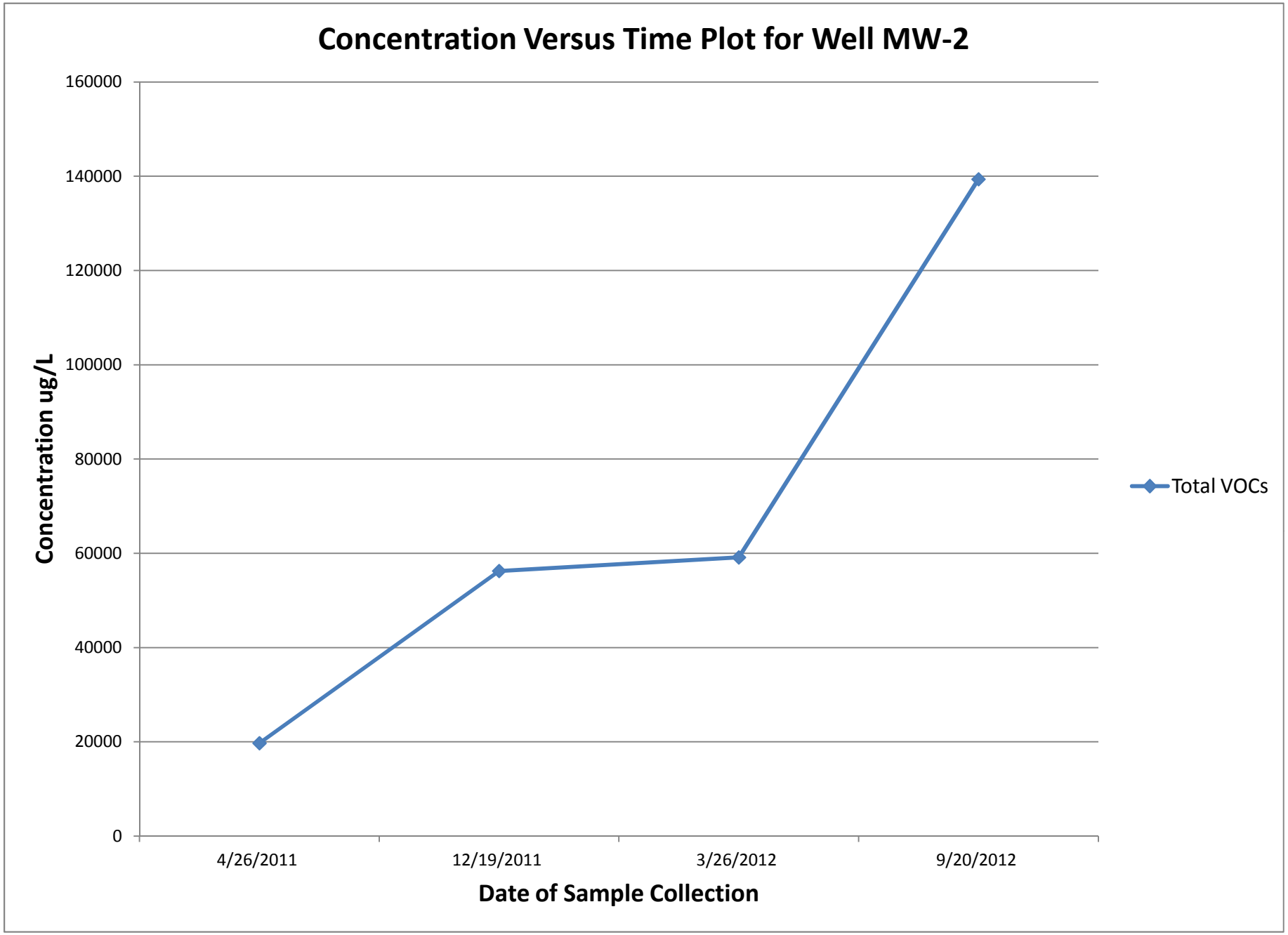
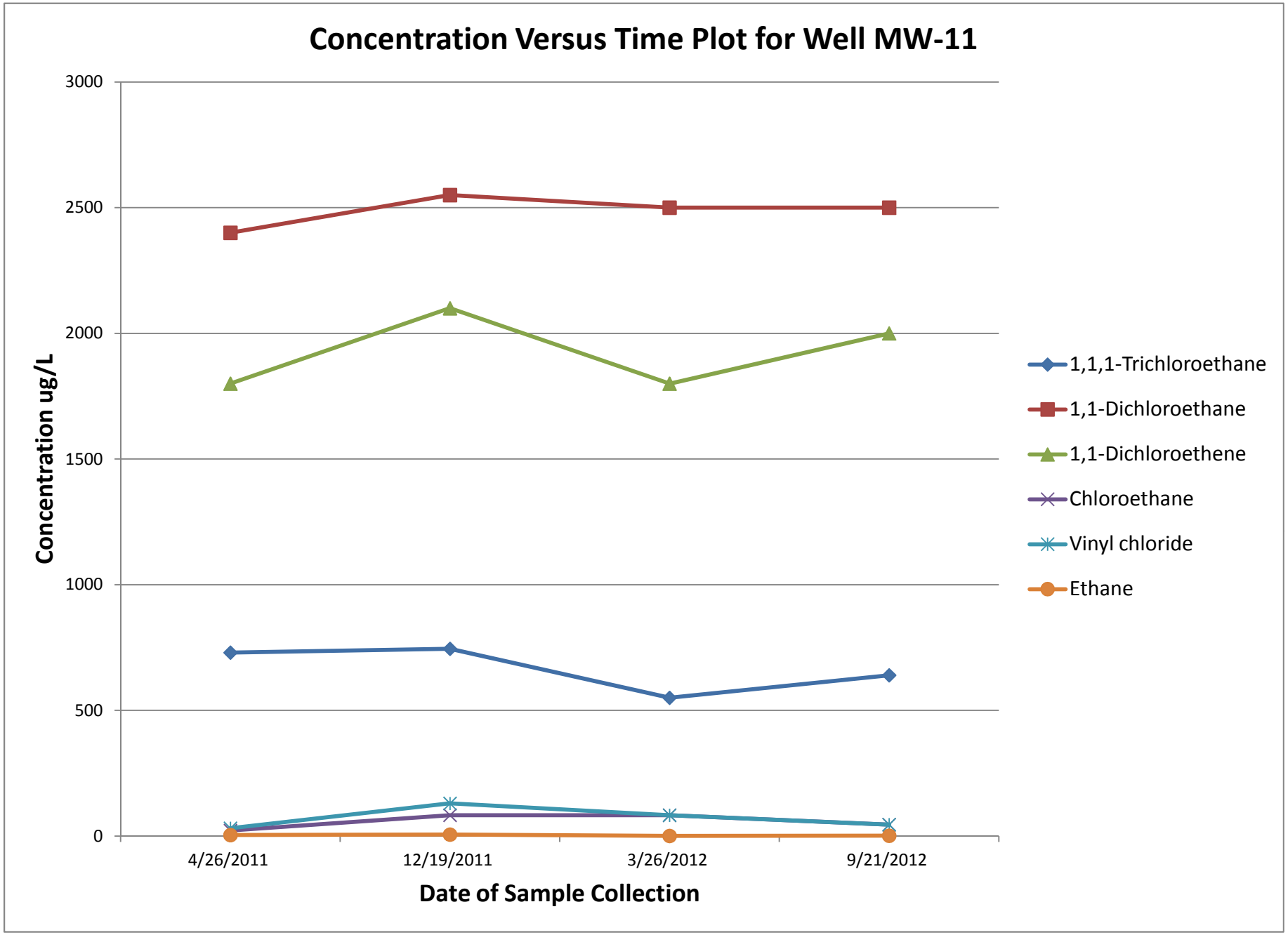
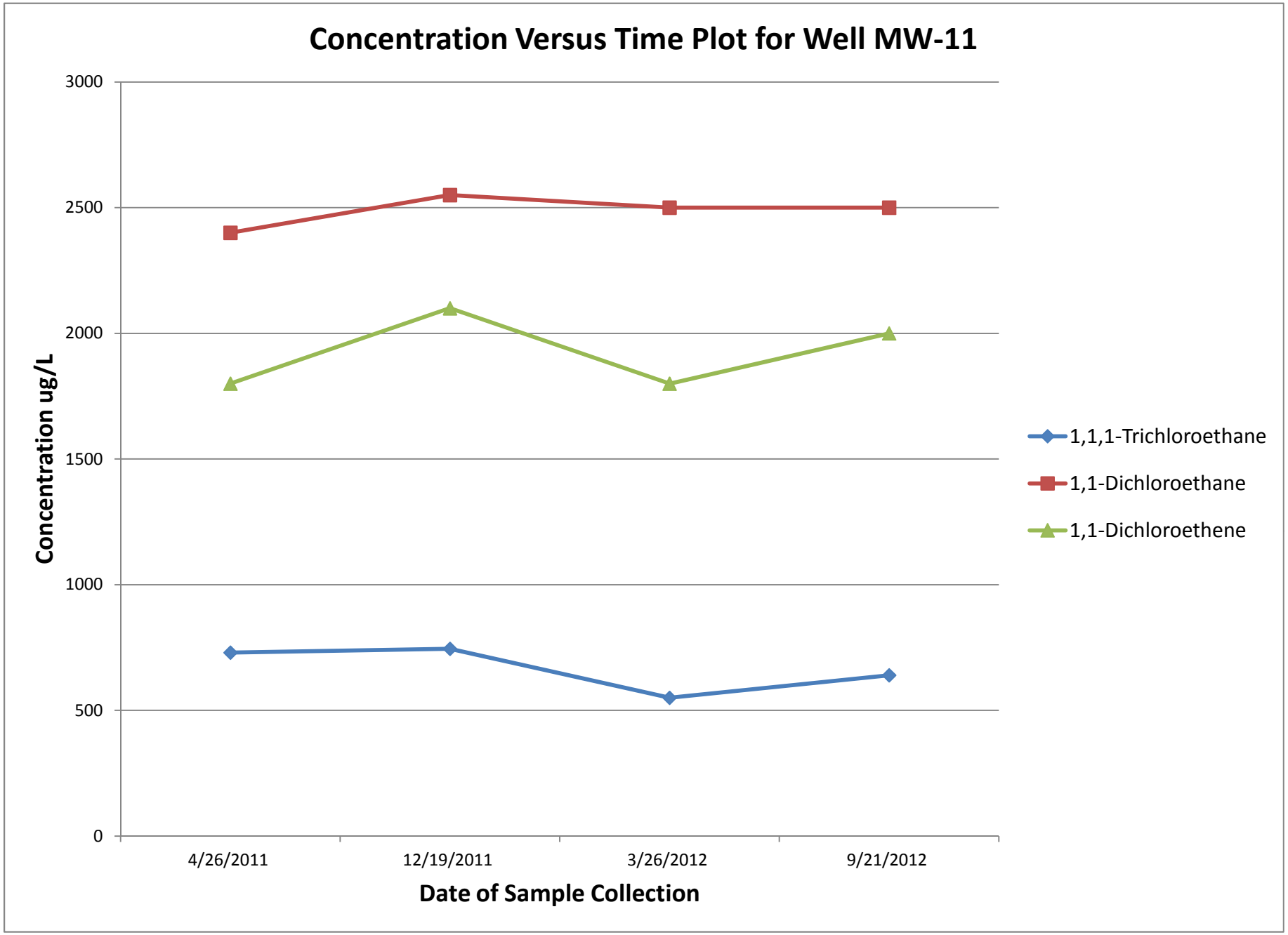
1,1-Dichloroethane
1,1-Dichloroethene
Chloroethane
Vinyl chloride
Ethane

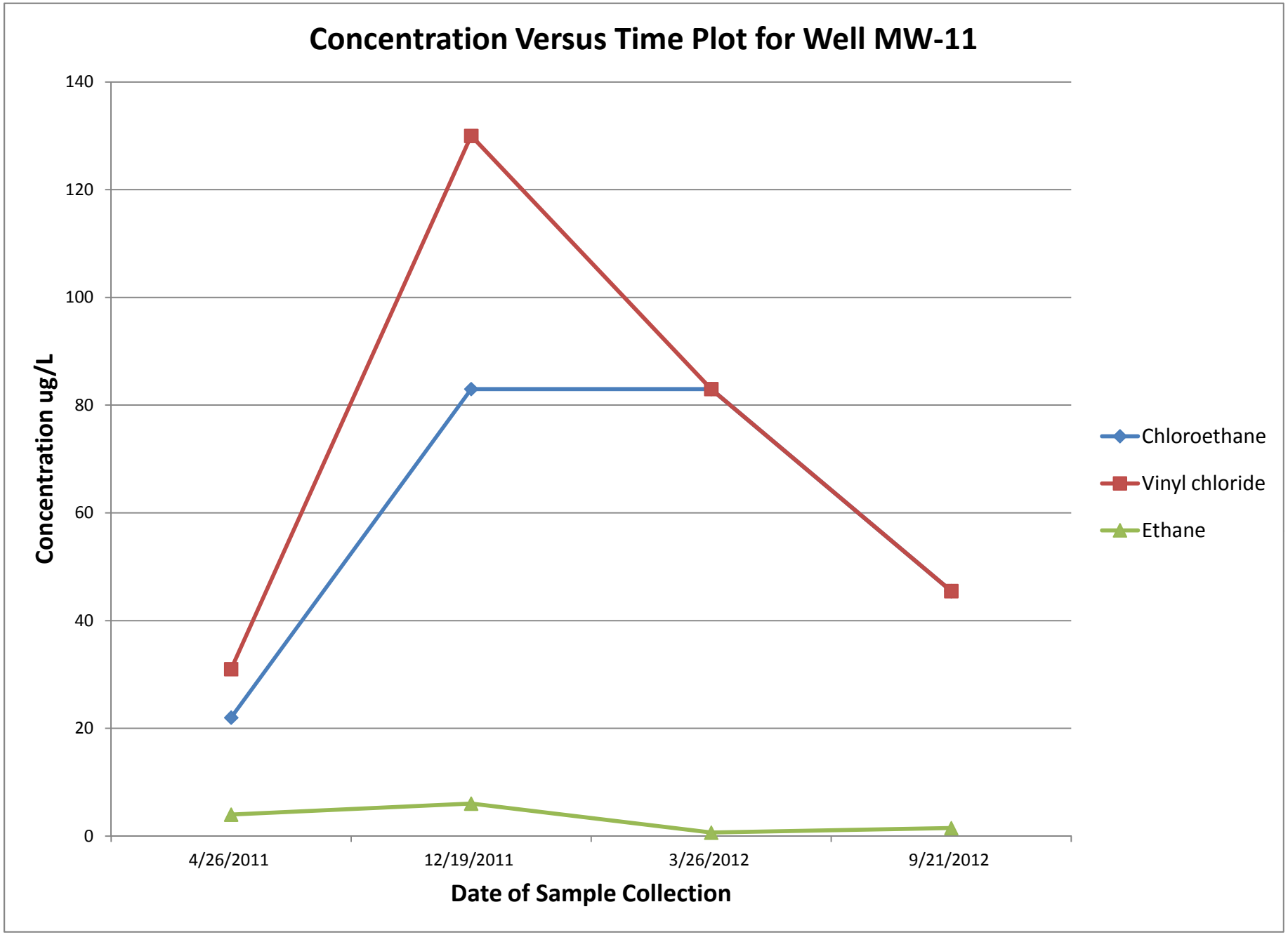

Concentration Versus Time Plot for Well MW-2
30000
25000
20000
15000
10000
5000
0
Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
9/20/2012
Date of Sample Collection
1,1,1-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene

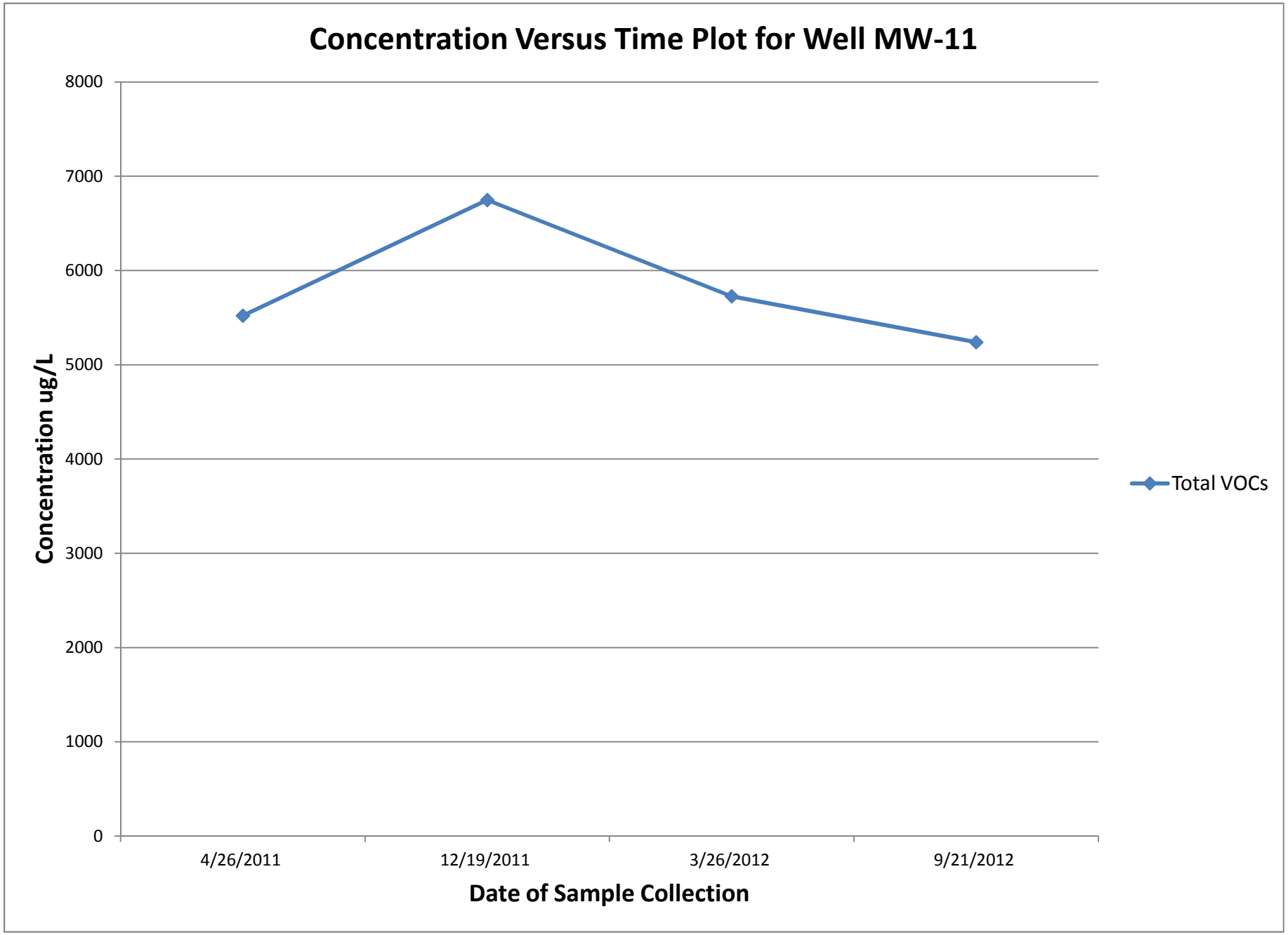

Concentration Versus Time Plot for Well MW-2
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
Date of Sample Collection
Chloroethane
Vinyl chloride
Ethane

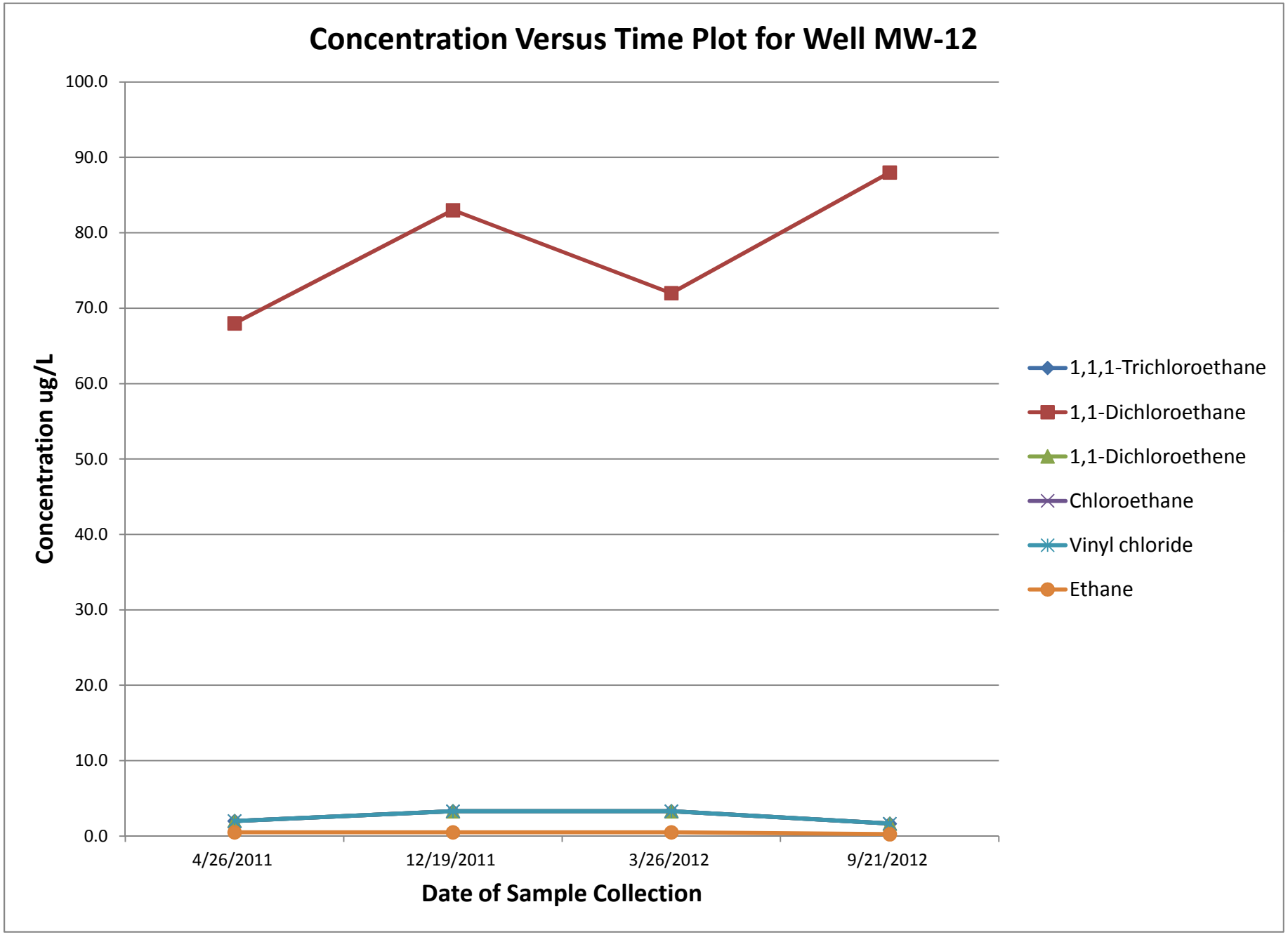

Concentration Versus Time Plot for Well MW-2
160000
140000
120000
100000
80000
60000
40000
20000
0
Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
9/20/2012
Date of Sample Collection
Total VOCs

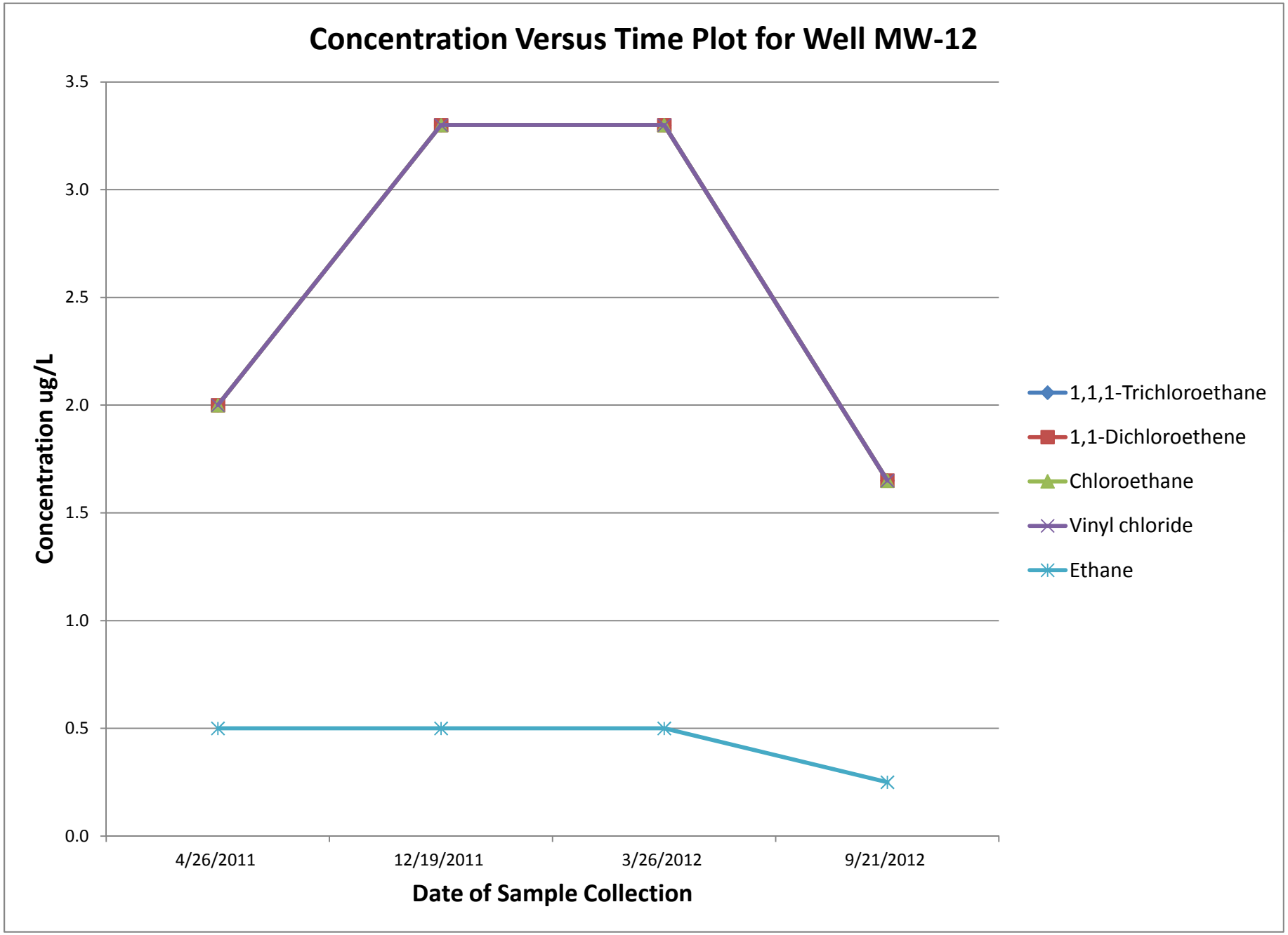

Concentration Versus Time Plot for Well MW-11
3000
2500
2000
1500
1000
500
0
Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
9/21/2012
Date of Sample Collection
1,1,1-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
Chloroethane
Vinyl chloride
Ethane

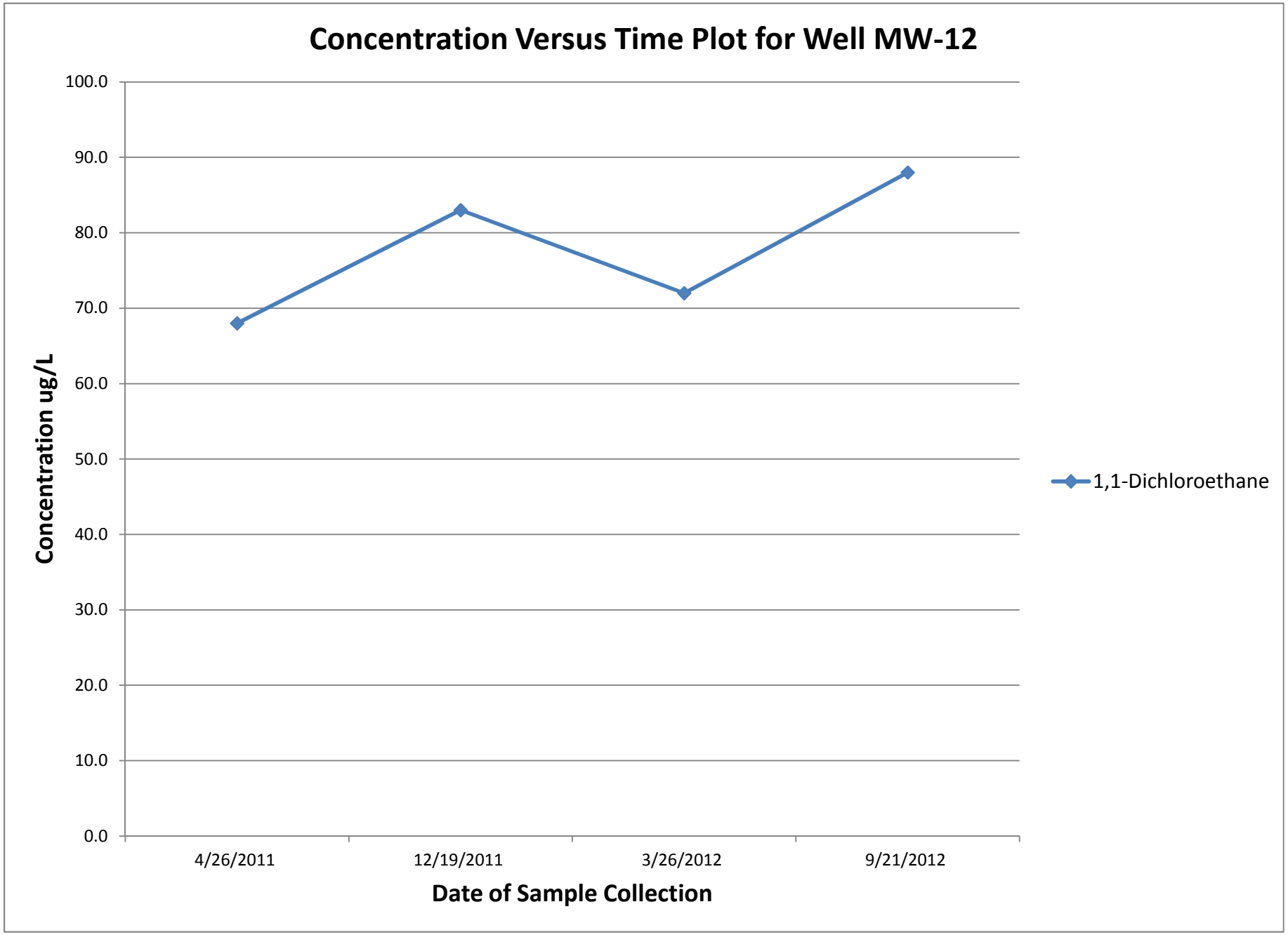

Concentration Versus Time Plot for Well MW-11
3000
2500
2000
1500
1000
500
0
Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
9/21/2012
Date of Sample Collection
1,1,1-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene

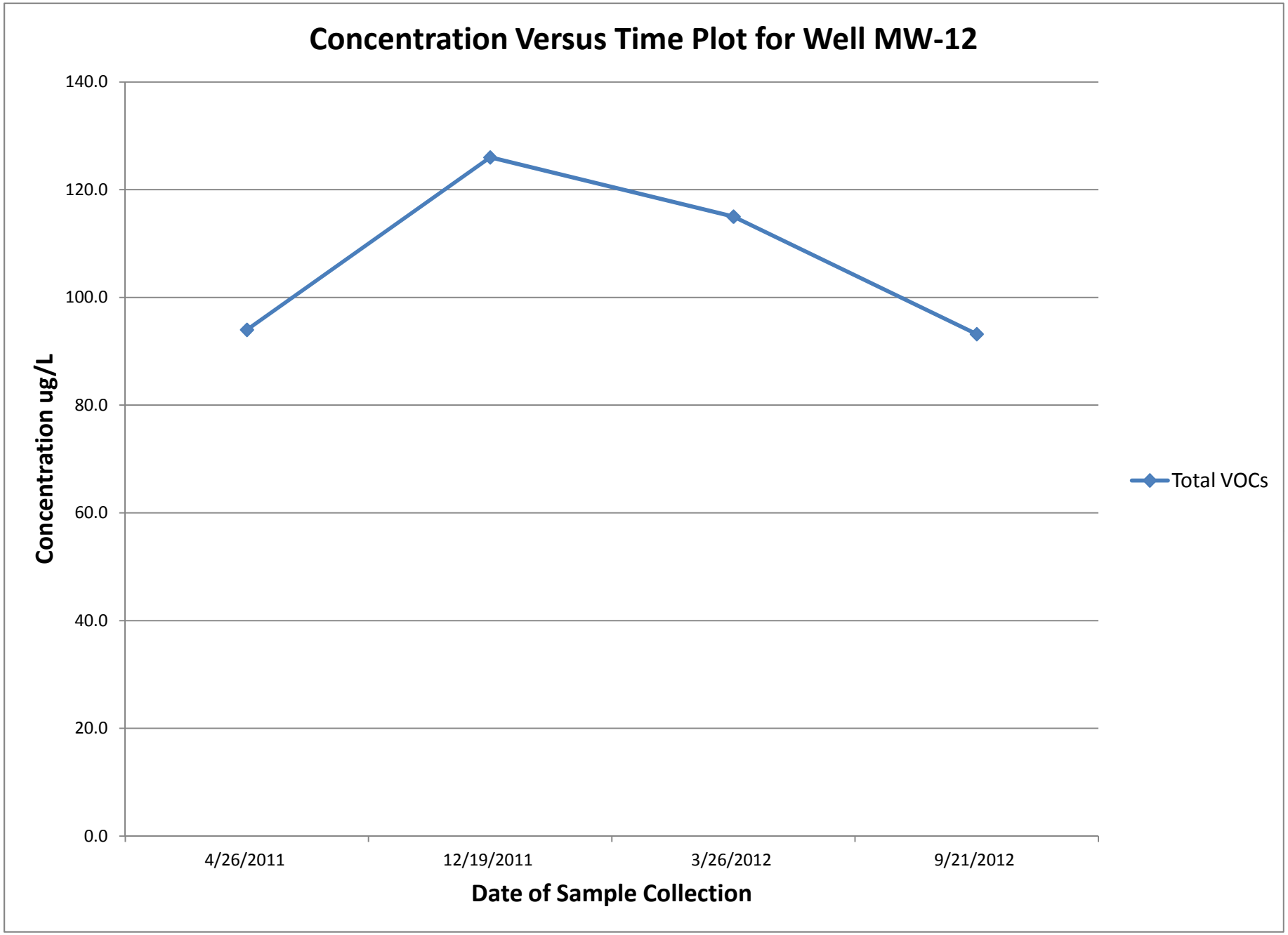

Concentration Versus Time Plot for Well MW-11
140
120
100
80
60
40
20
0
Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
9/21/2012
Date of Sample Collection
Chloroethane
Vinyl chloride
Ethane


Concentration Versus Time Plot for Well MW-11
8000
7000
6000
5000
4000
3000
2000
1000
0
Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
9/21/2012
Date of Sample Collection
Total VOCs


Concentration Versus Time Plot for Well MW-12
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
9/21/2012
Date of Sample Collection
1,1,1-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
Chloroethane
Vinyl chloride
Ethane


Concentration Versus Time Plot for Well MW-12
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
9/21/2012
Date of Sample Collection
1,1,1-Trichloroethane
1,1-Dichloroethene
Chloroethane
Vinyl chloride
Ethane


Concentration Versus Time Plot for Well MW-12
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
9/21/2012
Date of Sample Collection
1,1-Dichloroethane


Concentration Versus Time Plot for Well MW-12
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
Concentration ug/L
4/26/2011
12/19/2011
3/26/2012
9/21/2012
Date of Sample Collection
Total VOCs