



Environmental Services
Kevin R. Cooke, P.E., Director

December 9, 2020

Department of Ecology
Attn: Sandra Treccani
4601 N. Monroe St., Suite 202
Spokane, WA 99205-1295

RE: Mica Landfill Annual Progress Report 2020

Dear Sandra,

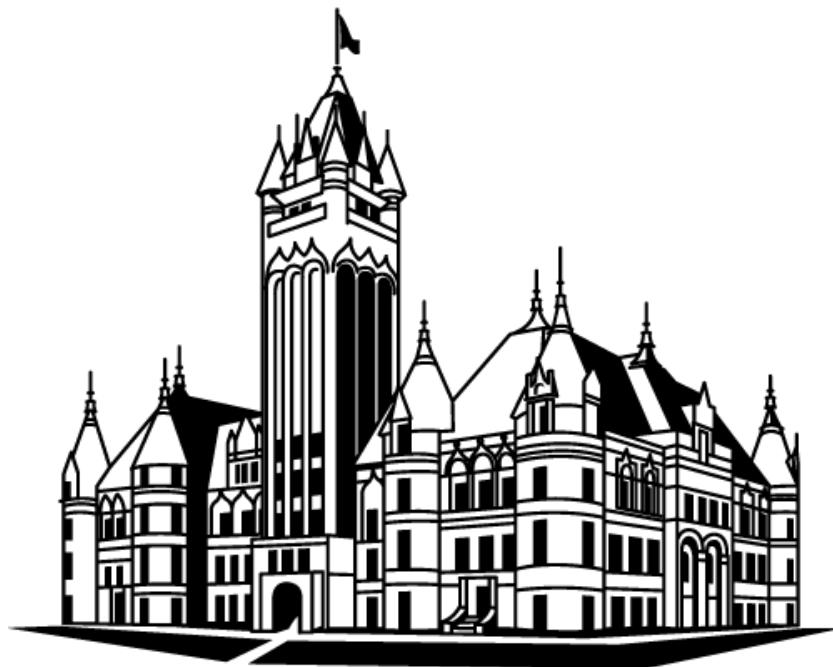
Enclosed you will find one copy of the Mica Landfill September 2020 Annual Progress Report.

If you have comments or questions, please call me at (509) 238-6607.

Sincerely,

Austin Stewart
Water Resources Specialist

Mica Landfill Annual Remedial Action Performance Report
September 2020



Spokane County

W A S H I N G T O N

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1 INTRODUCTION

1.1 MICA LANDFILL INFORMATION SUMMARY

SITE:	Mica Landfill, Spokane County, WA S.11, 14 & 15 T.24 R.44
REPORTING PERIOD:	October 2019 through September 2020
REGULATORY AUTHORITY:	Washington State Department of Ecology, EPA Scope of work for Remedial Action as stated in the Final Cleanup Action Plan (CAP) 2002.
TECHNOLOGY:	Impermeable cover system with passive landfill gas collection and flare stations. Leachate collection system conveying leachate to local sewer for treatment and disposal.
CRITERIA:	Criteria were established as stated in the Consent Decree and outlined in the Remedial Action Plan (2002). See Table 1-1 for the established cleanup criteria.
SAMPLING PROGRAMS:	<u>Compliance Monitoring Program:</u> Groundwater and leachate sampling done in accordance with Final Cleanup Action Plan (CAP). Landfill gas monitoring done in accordance with the Compliance Monitoring Plan SAP (contained within the Remedial Action Plan, 2002). See Figure 1-1 for site locations. See Table 1-2 for well designations and Table 1-3 for the sampling schedule.

Table 1-1: Mica Landfill Summary of Indicator Analytes and Cleanup Levels

GROUNDWATER			
Indicator Analyte	Method B Cleanup Level, ug/L	Indicator Analyte	Method B Cleanup Level, ug/L
Conventionals		Volatile Organic Compounds	
Alkalinity	N	1,2-Dichloroethane	1.2
Ammonia	272,000	1,2-Dichloropropane	0.643
Chloride	N	Acetone	688
N-Nitrate	800	Benzene	0.795
Sulfate	N	cis-1,2-Dichloroethene	33
Total Dissolved Solids	N	Methylene Chloride (MC)	5
Total Organic Carbon	N	Tetrachloroethene (PCE)	0.858
Inorganics		Toluene	100
Arsenic	5	Trichloroethene (TCE)	3.98
Barium	560	Vinyl Chloride (VC)	0.023
Lead	15	Phthalates	
Manganese	1,926	bis(2- ethylhexyl)	6
Mercury	0.4	Phthalate (BEHP)	
Vanadium	112		
Zinc	400		

LEACHATE		
Parameter	Units	Daily Maximum
Benzene	mg/L	Sum total of the four results shall be less than or equal to 1.4*
Toluene*	mg/L	
Ethylbenzene*	mg/L	
Xylene*	mg/L	

* Due to a modified wastewater discharge permit, effective November 1, 2020, Spokane County is only required to sample for the Benzene analyte with a maximum allowable discharge limit of less than 0.5 mg/L. This limit will be reflected in all future reports.

Mica Landfill Site Map

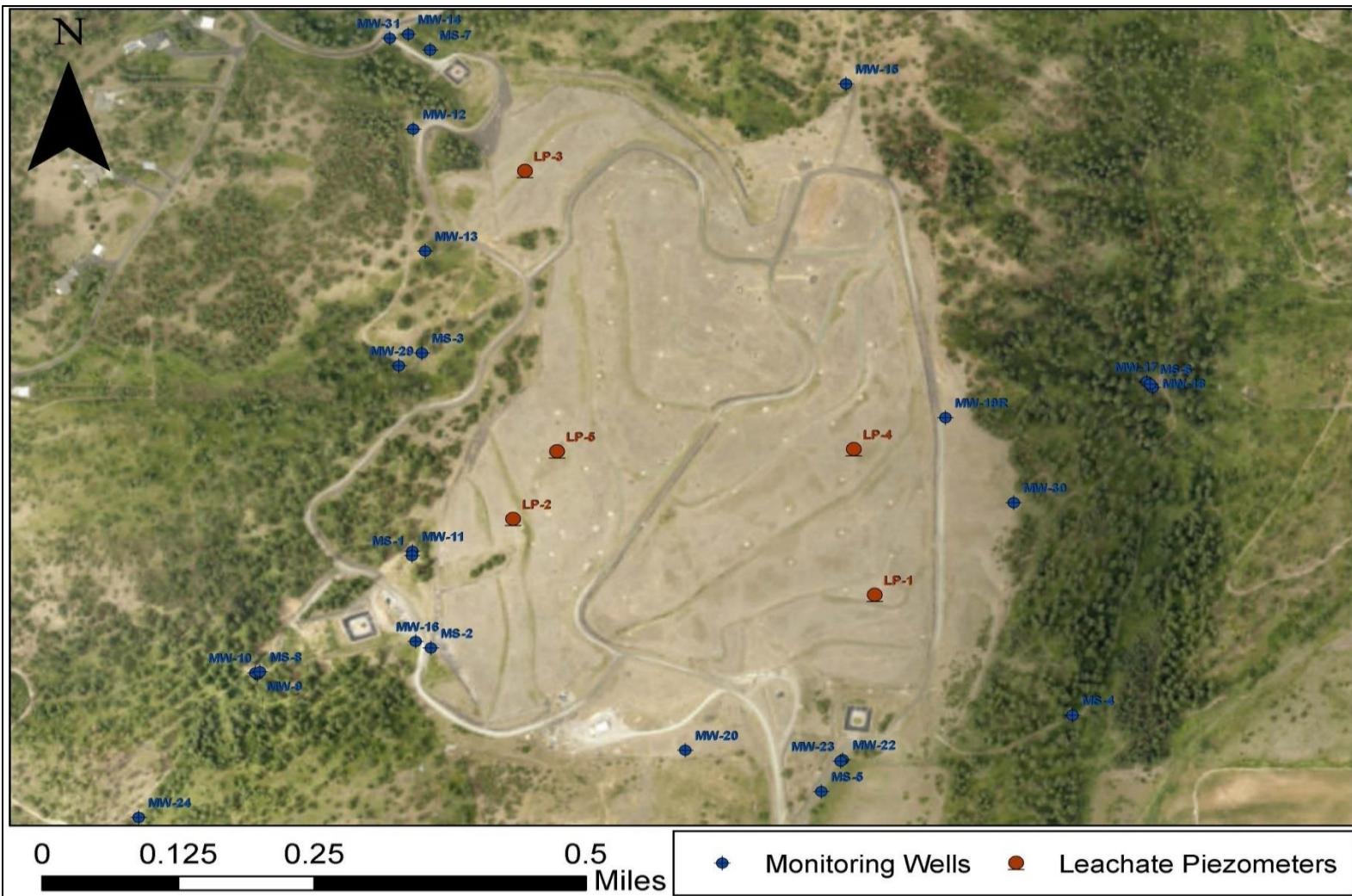


Figure 1-1: Mica Landfill Site Map

Mica Landfill RA Compliance Monitoring Wells

Table 1-2: Mica Landfill Summary of RA Compliance Monitoring Wells

Well ID	Geologic Unit*	Sampling Frequency	Drainage Area
MS-4	WB	Semi-Annual	Southeast
MS-5	WB	Semi-Annual	South
MW-9	WB	Semi-Annual	Southwest
MW-10	FB	Semi-Annual	Southwest
MW-13	FB	Semi-Annual	Northwest
MW-14	FB	Semi-Annual	Northwest
MW-16	FB	Quarterly	Southwest
MW-19R	FB	Semi-Annual	Southeast
MW-20	FB	Semi-Annual	South
MW-23	WB	Semi-Annual	South
MW-29	FB	Semi-Annual	Northwest
MW-31	WB	Semi-Annual	Northwest
DW-001	FB	Semi-Annual	South Pines Estates
DW-002	WB	Semi-Annual	Hidden Hollow
DW-003	FB	Semi-Annual	Miller Well

*WB = weathered (decomposed) bedrock
 *FB = fractured bedrock

Mica Landfill Sampling Schedule

Table 1-3: Mica Landfill Sampling Schedule

LOCATION	VOLATILES				BEHP				TOC/NH3				Cl/Alk/NO3/SO4/TDS				As/Ba/Hg/Mn/Pb/V/Zn						
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec			
Northwest Drainage																							
MW-013	X		X						X		X		X		X		X		X		X		
MW-014	X		X						X		X		X		X		X		X		X		
MW-029	X		X		X				X		X		X		X		X		X		X		
MW-031	X		X						X		X		X		X		X		X		X		
Southwest Drainage																							
MW-009	X		X		X				X		X		X		X		X		X		X		
MW-010	X		X						X		X		X		X		X		X		X		
MW-016	X	X	X	X					X	X	X	X	X		X		X	X	X	X	X		
South Drainage																							
MS-005	X		X		X				X		X		X		X		X		X		X		
MW-020	X		X						X		X		X		X		X		X		X		
MW-023	X		X						X		X		X		X		X		X		X		
Southeast Drainage																							
MS-004	X		X		X		X		X		X		X		X		X		X		X		
MW-019R	X		X						X		X		X		X		X		X		X		
Domestic Wells																							
DW-001	X		X		X				X		X		X		X		X		X		X		
DW-002	X		X		X				X		X		X		X		X		X		X		
DW-003	X		X		X				X		X		X		X		X		X		X		

2 GROUNDWATER

2.1 GROUNDWATER DATA/SUMMARIES

PROBLEMS/ DEVIATIONS

Monitoring wells MS-4, MW-13, MW-19R, and MW-29 are low producing wells that are purged once and allowed to recharge before obtaining samples. The groundwater level in MW-31 was below the pump intakes during September and a sample was unobtainable in that well.

FIELD DATA

Field parameters for this report are shown in Table 2-1. Hydrographs are presented in Figure 2-1 through Figure 2-5. Water level readings are shown in Table 2-1. Sen's slope trend analysis results for individual well groundwater elevations over time are presented in Table 2-2. Groundwater elevation contours/flow directions are presented in Figure 2-6.

CRITERIA EXCEEDANCES

Detected analyte concentrations and clean-up criteria exceedances for this annual report are presented in Table 2-3 through Table 2-7. Clean-up criteria were presented previously in Table 1-1. Cleanup-level exceedance geospatial maps are presented in Figure 2-7 through Figure 2-15.

NORTHWEST DRAINAGE (MW-13, MW-14, MW-29, and MW-31)

Nitrate concentrations in MW-29 exceeded the regulatory criteria during this annual reporting period.

SOUTHWEST DRAINAGE (MW-9, MW-10, and MW-16)

Concentrations in samples collected from monitoring well MW-16 exceeded the criteria for several VOCs, including 1,2-Dichloroethane (1,2-DCA), 1,2-Dichloropropane, benzene, Vinyl chloride, and acetone. MW-16 also exceeded the criteria for arsenic and barium during this annual reporting period.

SOUTH DRAINAGE (MS-5, MW-20, and MW-23)

MW-20 and MS-5 exhibited nitrate concentrations above the cleanup criteria. MW-20 also exhibited exceedances for arsenic, barium, and lead.

SOUTHEAST DRAINAGE (MS-4 and MW-19R)

Nitrate concentrations in both southeast area wells were above the cleanup criteria.

DOMESTIC WELLS (DW-1, DW-2, and DW-3)

Nitrate levels at DW-2 (during the September sampling event) and DW-3 (for both sampling events) exceeded the clean-up criteria during this reporting period. Zinc levels were above clean-up criteria for DW-1 and DW-2 during the March sampling event and persisted in DW-2 during the September sampling event.

CHEMICAL DATA AND STATISTICAL TRENDS

All laboratory data collected during this annual reporting period is shown in APPENDIX A - LABORATORY RESULTS. Volatile organic detections and semi-volatile detections for this reporting period are presented in Table 2-4 and Table 2-5, respectively. Inorganic detections are presented in Table 2-6, and conventional detected concentrations are in Table 2-7. Data summary analyses are presented in APPENDIX B - DATA SUMMARY ANALYSIS. Data validation performed for this reporting period is presented in APPENDIX C - DATA VALIDATION.

STATISTICAL ANALYSIS: Trend analyses were performed on chemical data from 1994 to the present date using Sen's non-parametric trend test. Statistically significant trends are included in Table 2-8. Due to the change in filtered versus non-filtered metals analysis (dissolved versus total) after March 2002, statistical analysis for metals was performed only on the unfiltered data

collected after that date. Because of this, the statistical analysis calculated for metals may produce a trend that does not reflect the overall historic changes for that constituent.

NORTHWEST DRAINAGE (MW-13, MW-14, MW-29, and MW-31)

Time-series plots for northwest area analyte concentrations are presented in Figure 2-16 through Figure 2-22. Statistically significant trends for the northwest area are presented in Table 2-8. The northwest drainage wells show little to no detections of VOCs. Monitoring well MW-29, located in the southern area of the northwest drainage, indicates increasing trends in a majority of the conventionals, along with barium. MW-31 indicates decreasing trends for alkalinity, chloride, sulfate, and TDS. MW-13 indicates an increasing trend for alkalinity, and decreasing trends for nitrate, sulfate, barium, and PCE.

SOUTHWEST DRAINAGE (MW-9, MW-10, and MW-16)

Time-series plots for southwest area monitoring well analyte concentrations are presented in Figure 2-23 through Figure 2-40. Statistically significant trends for the southwest area are shown in Table 2-8. Monitoring wells MW-9 and MW-10 show no detections of VOCs. MW-9 shows decreasing trends for a majority of conventionals, an increasing trend for barium, and a decreasing trend for Manganese. MW-10 indicates a decreasing trend for chloride, and increasing trends for alkalinity, nitrate, and barium. Out of all wells monitored at the Mica Landfill, MW-16 typically has the highest concentrations of analytes and statistical analysis shows increasing concentrations for the majority of these. Monitoring well MW-16 exhibits decreasing trends for MC, TCE, and toluene, and increasing trends for benzene and 1,2-DCP. MW-16 also indicates increasing trends for the majority of conventionals, along with arsenic. Although MW-16 continues to exhibit a high level of constituent detections and cleanup-criteria exceedances, most constituent concentrations have plateaued and even started exhibiting downward concentration trends.

Because of the high volatile organic concentrations found in MW-16, dilutions for laboratory analysis are necessary. This typically increases the method reporting limit for the analytes, and while most detections are well above these elevated reporting limits, there may be some low-level concentrations that will not be represented with these lab results.

SOUTH DRAINAGE (MS-5, MW-20, and MW-23)

Time-series plots for the south area monitoring well analyte concentrations are presented in Figure 2-41 through Figure 2-49. Statistically significant trends for the south area are shown in Table 2-8. Decreasing trends for nitrate, PCE, MC, TCE, 1,2-DCA, 1,2-DCP, cis-1,2-DCE, and barium are indicated in MW-23. Monitoring well MS-5 exhibits increasing trends for most conventionals, with the exception of nitrate. Statistical analysis shows decreasing trends for chloride, nitrate, sulfate, and TOC in MW-20.

SOUTHEAST DRAINAGE (MS-4 and MW-19R)

Time-series plots for the south area monitoring well analyte concentrations are presented in Figure 2-50 through Figure 2-55. Statistically significant trends are shown in Table 2-8. Monitoring well MS-4 shows increasing trends for alkalinity, nitrate, sulfate, TDS, and barium. Monitoring well MW-19R indicates decreasing trends for most conventionals and barium. MW-19R also indicates a decreasing trend for cis-1,2-DCE. There are several examples of inorganic and conventional concentrations decreasing in MW-19R while concentrations increase in MW-4, indicating constituent concentration relationships between the two monitoring wells that are supported by the groundwater flow direction.

DOMESTIC WELLS (DW-1, DW-2, and DW-3)

Time-series plots for the domestic well analyte concentrations are presented in Figure 2-56 through Figure 2-60. Statistically significant trends are shown in Table 2-8. Data from DW-1 shows increasing trends for nitrate, chloride, and barium. DW-3 still indicates an increasing trend for nitrate, sulfate, and barium. DW-2 indicates a decreasing trend for nitrate.

CONTINGENCY RESPONSE ACTIONS

Nitrate levels at domestic well DW-2 were over the clean-up criteria during the September sampling event. The statistical analysis for nitrate at this well indicates a decreasing trend in concentrations. As stated in previous reports, these concentrations of nitrate are historically found in this well and further confirmation of the analyte presence is unnecessary. Nitrate levels at domestic well DW-3 were over the clean-up criteria for each sampling event during this annual reporting period. This well has exhibited an increasing trend for nitrate since 2006.

The zinc concentrations found at DW-1 was above the clean-up criteria during the March sampling event but dropped below the clean-up criteria during the September sampling event. The zinc concentrations in this well continue to exhibit a decreasing trend. The zinc concentration found at DW-2 was above the cleanup criteria for both the March and September sampling events. The increase in zinc concentrations for DW-2 occurred due to a replacement of 160' of 1-1/4" galvanized pipe on 3/29/2019. The replacement of the galvanized pipe was performed by Fogle Pump, and the replacement was due to a pump failure in the well.

Mica Landfill Field Parameters

Table 2-1: Mica Landfill Field Parameters Summary

StationID	SampleDate	Temp	PH	Conductivity	Turbidity	WElev
DW-001	3/11/2020	11	6.89	361	4.9	
DW-001	9/2/2020	11.1	6.96	307	0.29	
DW-002	3/11/2020	11	7.02	331	0.21	
DW-002	9/2/2020	12.5	7.17	320	0.11	
DW-003	3/11/2020	10.8	7.21	353	0.74	2394.80
DW-003	9/2/2020	12.6	7.32	360	0.17	2392.00
MS-004	3/11/2020	9.2	7.14	335	1.69	2515.70
MS-004	9/2/2020	11.8	6.92	290	1.21	2513.94
MS-005	3/12/2020	10.7	6.71	337	0.42	2562.09
MS-005	9/3/2020	11.1	6.81	326	0.84	2559.70
MW-009	3/11/2020	7.8	6.71	448	1.12	2493.21
MW-009	9/2/2020	11.1	7.14	471	7.84	2488.43
MW-010	3/11/2020	9.6	6.96	166	0.31	2493.77
MW-010	9/2/2020	10.9	7.35	135	0.18	2491.26
MW-013	3/11/2020	10	6.81	380	0.95	2672.04
MW-013	9/2/2020	11.6	6.92	377	0.35	2670.69
MW-014	3/11/2020	8.4	7.1	152	1.47	2591.06
MW-014	9/2/2020	9.9	7.25	138	3.71	2585.01
MW-016	12/3/2019	10.3	6.82	2140	1.11	2538.92
MW-016	3/12/2020	11	6.68	2080	1.19	2539.21
MW-016	6/8/2020	10.8	7.01	2320	1.14	2538.62
MW-016	9/3/2020	11.6	6.91	1420	1.19	2538.82
MW-019R	3/11/2020	10.2	6.86	177	1.1	2689.76
MW-019R	9/2/2020	13.7	6.81	242	7.18	2684.12
MW-020	3/11/2020	10.8	7.02	507	60.1	2591.97
MW-020	9/2/2020	12.9	7.3	509	38	2592.95
MW-023	3/12/2020	10.2	6.94	807		2563.67
MW-023	9/3/2020	11.2	7.2	752	220	2561.37
MW-029	3/11/2020	9.7	6.37	619	0.58	2593.94
MW-029	9/2/2020	9.9	6.39	618	0.87	2594.21
MW-031	3/11/2020	6.1	6.65	103	5.47	2589.47

* Temp: Degrees C, Conductivity: umhos/cm, Turbidity: NTU, WElev: ft above MSL

Hydrographs/Groundwater Flow Contours

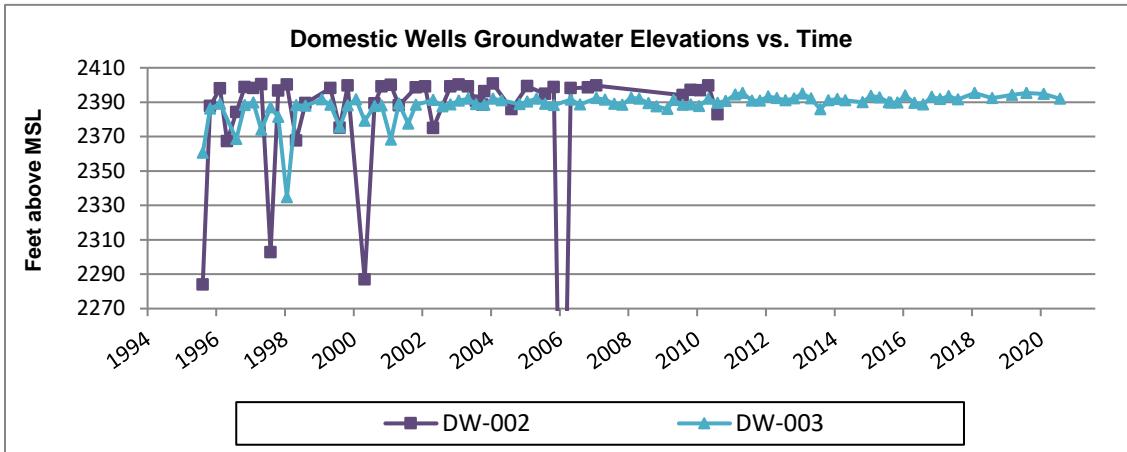


Figure 2-1: Domestic Wells Groundwater Elevation vs. Time

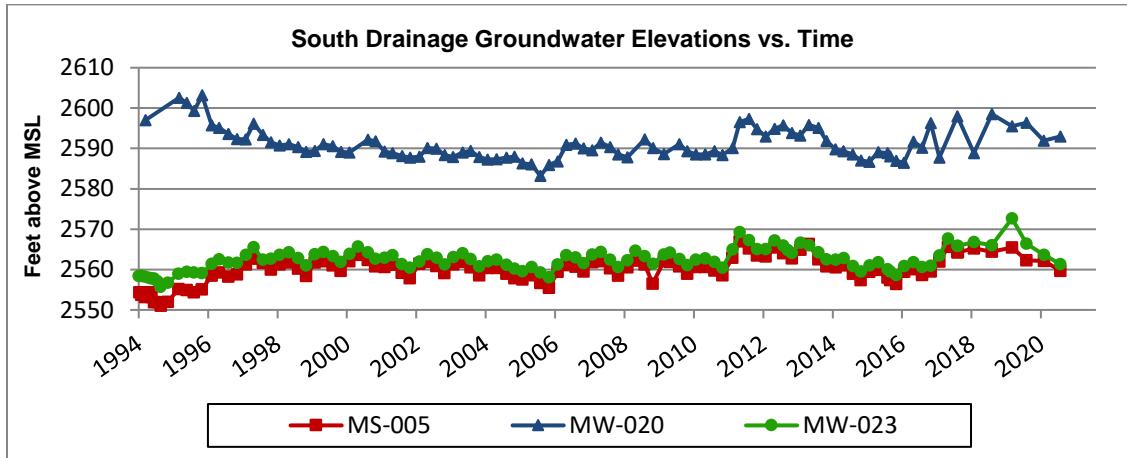


Figure 2-2: South Drainage Groundwater Elevation vs. Time

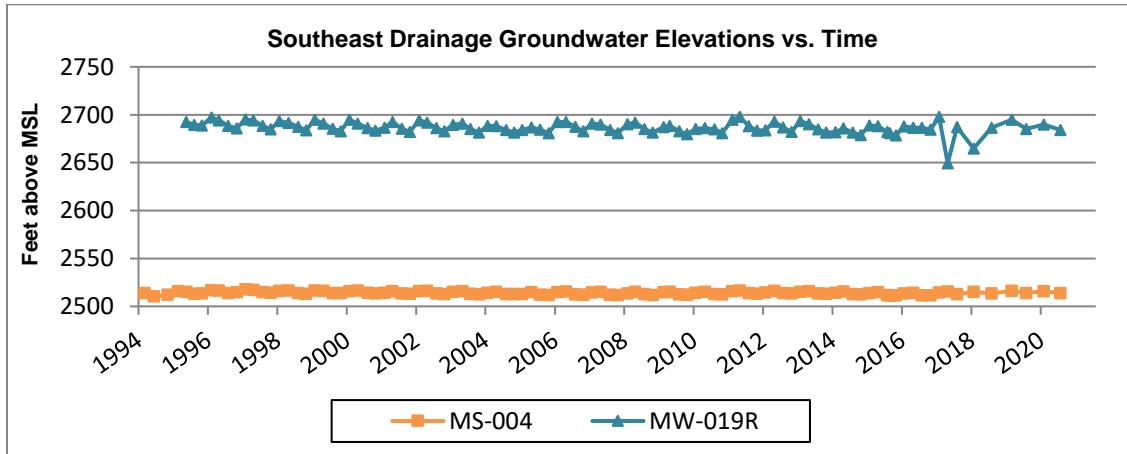


Figure 2-3: Southeast Drainage Groundwater Elevation vs. Time

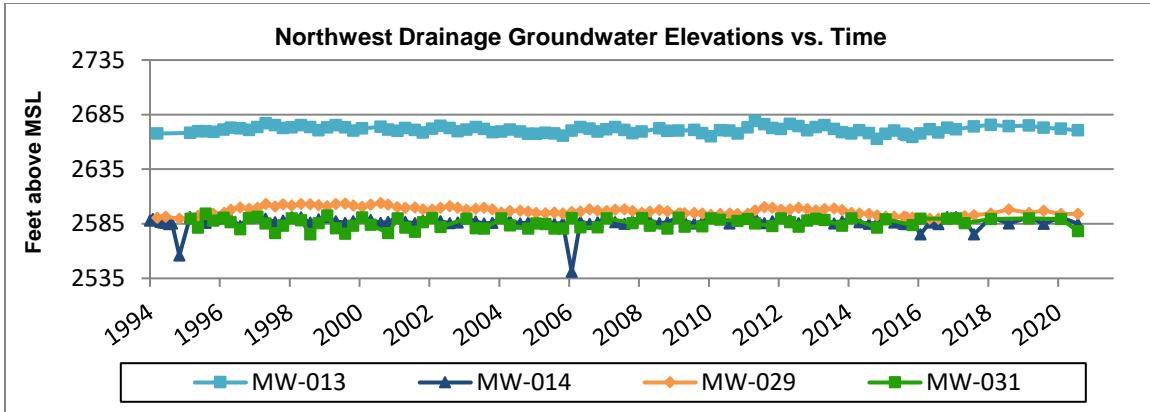


Figure 2-4: Northwest Drainage Groundwater Elevations vs. Time

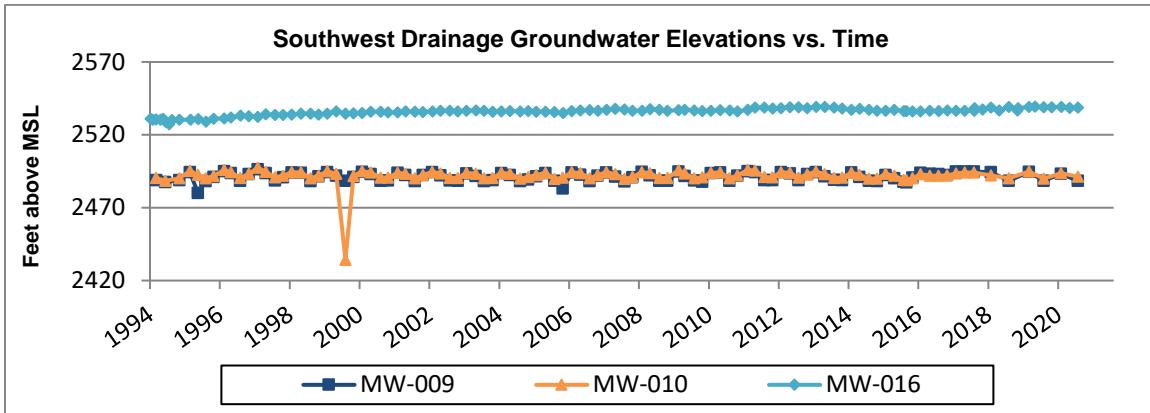


Figure 2-5: Southwest Drainage Groundwater Elevations vs. Time

Table 2-2: Sen's Slope Trend Analysis – Groundwater Elevations (99% Confidence Level)

Station	Parameter	Slope	Y-Intercept	Lower Limit	Upper Limit	Result
Domestic Wells						
DW-002	GW Elevations	0.00047	2380.3	-0.000505	0.00312	no trend
DW-003	GW Elevations	0.000765	2360.4	0.000511	0.001065	increasing
Southeast Drainage						
MS-004	GW Elevations	-0.0001676	2520.8	-0.000313	-0.00001775	decreasing
MW-019R	GW Elevations	-0.000653	2712	-0.001083	-0.0001496	decreasing
South Drainage						
MS-005	GW Elevations	0.000573	2538.5	0.0002896	0.000828	increasing
MW-020	GW Elevations	-0.0000995	2595.3	-0.000566	0.000372	no trend
MW-023	GW Elevations	0.000418	2546.2	0.0001975	0.000626	increasing
Southwest Drainage						
MW-009	GW Elevations	0.00002744	2489.5	-0.0001297	0.0002273	no trend
MW-010	GW Elevations	-0.0000606	2494.5	-0.000224	0.0000942	no trend
MW-016	GW Elevations	0.000665	2510.3	0.000544	0.000787	increasing
Northwest Drainage						
MW-013	GW Elevations	-0.00002486	2672	-0.0003956	0.000319	no trend
MW-014	GW Elevations	0	2591.1	-0.0002213	0.0000721	no trend
MW-029	GW Elevations	-0.000933	2633.9	-0.001268	-0.000595	decreasing
MW-031	GW Elevations	0.00004	2585.8	-0.0001832	0.000543	no trend

Groundwater Elevation Contours

Mica Landfill - September 2020

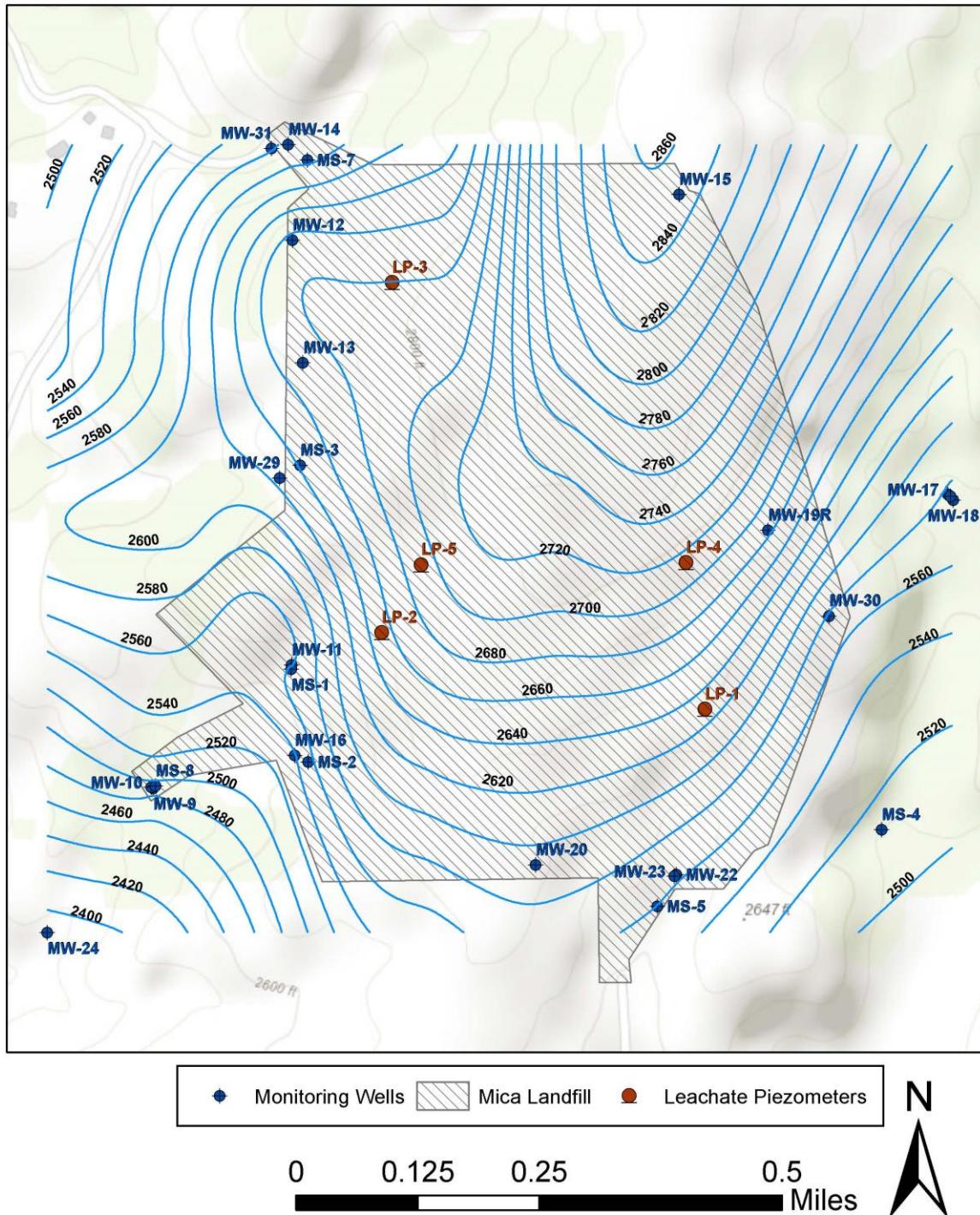


Figure 2-6: Mica Landfill Groundwater Elevation Contours

Criteria Exceedances

Table 2-3: Mica Landfill Analyte Criteria Exceedances

StationID	SampleDate	Analyte	MTCAB	Result	Detect Limit	Qualifier	Units	Type	DrainageArea
DW-001	3/11/2020	Zinc	0.4	0.504	0.01		mg/L	I	Domestic
DW-002	9/2/2020	N-Nitrate	0.8	0.921	0.05		mg/L	C	Domestic
DW-002	3/11/2020	Zinc	0.4	1.2	0.01		mg/L	I	Domestic
DW-002	9/2/2020	Zinc	0.4	0.712	0.01		mg/L	I	Domestic
DW-003	3/11/2020	N-Nitrate	0.8	2.44	0.05		mg/L	C	Domestic
DW-003	9/2/2020	N-Nitrate	0.8	3.44	0.05		mg/L	C	Domestic
MW-029	9/2/2020	N-Nitrate	0.8	0.937	0.05		mg/L	C	Northwest
MS-005	3/12/2020	N-Nitrate	0.8	1.55	0.05		mg/L	C	South
MS-005	9/3/2020	N-Nitrate	0.8	1.51	0.05		mg/L	C	South
MW-020	3/11/2020	N-Nitrate	0.8	2.35	0.5	D	mg/L	C	South
MW-020	9/2/2020	N-Nitrate	0.8	2.48	0.25	D	mg/L	C	South
MW-020	9/2/2020	N-Nitrate	0.8	2.52	1.25	D	mg/L	C	South
MW-020	3/11/2020	Arsenic	0.005	0.00695	0.003		mg/L	I	South
MW-020	3/11/2020	Barium	0.56	0.763	0.004		mg/L	I	South
MW-020	3/11/2020	Lead	0.015	0.066	0.015		mg/L	I	South
MS-004	3/11/2020	N-Nitrate	0.8	5.97	0.05		mg/L	C	Southeast
MS-004	9/2/2020	N-Nitrate	0.8	7.42	0.25	D	mg/L	C	Southeast
MW-019R	3/11/2020	N-Nitrate	0.8	1.2	0.5	D	mg/L	C	Southeast
MW-019R	9/2/2020	N-Nitrate	0.8	1.27	0.05		mg/L	C	Southeast
MW-016	12/3/2019	Arsenic	0.005	0.0505	0.003		mg/L	I	Southwest
MW-016	3/12/2020	Arsenic	0.005	0.0567	0.003		mg/L	I	Southwest
MW-016	6/8/2020	Arsenic	0.005	0.0646	0.003		mg/L	I	Southwest
MW-016	9/3/2020	Arsenic	0.005	0.0538	0.003		mg/L	I	Southwest
MW-016	12/3/2019	Barium	0.56	0.595	0.004		mg/L	I	Southwest
MW-016	3/12/2020	Barium	0.56	0.663	0.004		mg/L	I	Southwest
MW-016	6/8/2020	Barium	0.56	0.771	0.004		mg/L	I	Southwest
MW-016	9/3/2020	Barium	0.56	0.593	0.004		mg/L	I	Southwest
MW-016	12/3/2019	1,2-Dichloroethane	1.2	2.46	2		ug/L	V	Southwest
MW-016	3/12/2020	1,2-Dichloroethane	1.2	2.83	0.5		ug/L	V	Southwest
MW-016	9/3/2020	1,2-Dichloroethane	1.2	2.96	0.5		ug/L	V	Southwest
MW-016	12/3/2019	1,2-Dichloropropane	0.643	11.8	2		ug/L	V	Southwest
MW-016	3/12/2020	1,2-Dichloropropane	0.643	12.8	0.5		ug/L	V	Southwest
MW-016	6/8/2020	1,2-Dichloropropane	0.643	10.7	2.5	D	ug/L	V	Southwest
MW-016	9/3/2020	1,2-Dichloropropane	0.643	12	0.5		ug/L	V	Southwest
MW-016	3/12/2020	Acetone	688	873	2.5		ug/L	V	Southwest
MW-016	6/8/2020	Acetone	688	1020	62.5	D	ug/L	V	Southwest
MW-016	12/3/2019	Benzene	0.795	11.8	2		ug/L	V	Southwest
MW-016	3/12/2020	Benzene	0.795	13.2	0.5		ug/L	V	Southwest
MW-016	6/8/2020	Benzene	0.795	12.2	2.5	D	ug/L	V	Southwest
MW-016	9/3/2020	Benzene	0.795	11.4	0.5		ug/L	V	Southwest
MW-016	3/12/2020	Vinyl Chloride	0.023	1.82	0.5		ug/L	V	Southwest
MW-016	9/3/2020	Vinyl Chloride	0.023	1.44	0.5		ug/L	V	Southwest

Results with reporting limits greater than the Method B cleanup levels are highlighted in **Red**

Mica Landfill Volatile Organic Detections

Table 2-4: Mica Landfill VOC Detections for the Reporting Period (ug/L)

StationID	SampleDate	1,2-DCA	1,2-DCP	Acetone	Benzene	cis-1,2-DCE	Ethylbenzene	m,p-Xylene	o-Xylene	Toluene	VC	TCE
MW-016	12/3/2019	2.46	11.8	671	11.8	6.05	61.4	42.9	19.8	14.2		
MW-016	3/12/2020	2.83	12.8	873	13.2	8.59	59	39.1	20.3	22.7	1.82	1.08
MW-016	6/8/2020		10.7	1020	12.2	6.95	57.9	36.6	16.1	18.8		
MW-016	9/3/2020	2.96	12	286	11.4	3.05	51.8	37.3	16.9	7.06	1.44	0.62

Clean-up level exceedances are in red.

Mica Landfill Semi-Volatile Organic Detections

Table 2-5: Mica Landfill SVOC Detections for the Reporting Period (ug/L)

StationID	SampleDate	bis(2-Ethylhexyl)Phthalate	Units	Qualifier
DW-001	3/11/2020	0.5	ug/L	U
DW-002	3/11/2020	0.5	ug/L	U
DW-003	3/11/2020	0.5	ug/L	U
MS-004	3/11/2020	2.21	ug/L	
MW-009	3/11/2020	0.75	ug/L	
MW-029	3/11/2020	0.5	ug/L	U
MS-005	3/12/2020	0.5	ug/L	U
MS-004	9/2/2020	0.5	ug/L	U

Clean-up level exceedances are in red.

Mica Landfill Inorganic Detections

Table 2-6: Inorganics Detections for the Reporting Period (mg/L)

StationID	SampleDate	Arsenic	Barium	Lead	Manganese	Vanadium	Zinc
DW-001	3/11/2020		0.0313		0.011		0.504
DW-001	9/2/2020		0.0149		0.0086		0.0634
DW-002	3/11/2020		0.0259		0.0253		1.2
DW-002	9/2/2020		0.0364		0.0156		0.712
DW-003	3/11/2020		0.0303				0.101
DW-003	9/2/2020		0.0321				0.0602
MS-004	3/11/2020		0.0793				
MS-004	9/2/2020		0.104		0.051		0.0107
MS-005	3/12/2020		0.0557				
MS-005	9/3/2020		0.0505				
MW-009	3/11/2020		0.125		0.223		
MW-009	9/2/2020		0.136		0.405		
MW-010	3/11/2020		0.0474				
MW-010	9/2/2020		0.0489				
MW-013	3/11/2020		0.0524				
MW-013	9/2/2020		0.0537				
MW-014	3/11/2020				0.172		
MW-014	9/2/2020				0.488		
MW-016	12/3/2019	0.0505	0.595		0.446		
MW-016	3/12/2020	0.0567	0.663		0.552		
MW-016	6/8/2020	0.0646	0.771		0.636		
MW-016	9/3/2020	0.0538	0.593		0.432		
MW-019R	3/11/2020		0.0379				
MW-019R	9/2/2020		0.0422				
MW-020	3/11/2020	0.00695	0.763	0.066	0.417	0.0177	0.129
MW-020	9/2/2020		0.174		0.0305		
MW-023	3/12/2020		0.146		0.934		
MW-023	9/3/2020		0.141		0.94		
MW-029	3/11/2020		0.103				
MW-029	9/2/2020		0.108				
MW-031	3/11/2020		0.0392				

Clean-up level exceedances are in **red**

Mica Landfill Conventional Detections

Table 2-7: Conventional Detections for the Reporting Period (mg/L)

StationID	SampleDate	ALK	Cl	N-NH3	N-NO3	SO4	TDS	TOC
DW-001	3/11/2020	137	15.9		0.402	8.59		
DW-001	9/2/2020	140	7.85		0.161	9.78		
DW-002	3/11/2020	154	4.93		0.721	7.16		
DW-002	9/2/2020	154	6.7		0.921	6.21		
DW-003	3/11/2020	167	0.88		2.44	1.5		
DW-003	9/2/2020	183	1.01		3.44	2.38		
MS-004	3/11/2020	131	0.53		5.97	10.4	191	
MS-004	9/2/2020	160	0.62	1.34	7.42	10.7	254	3.14
MS-005	3/12/2020	107	24.2		1.55	18.8	210	2.11
MS-005	9/3/2020	107	23.8		1.51	18.8	259	1.49
MW-009	3/11/2020	197	13.6			3.1	225	2.16
MW-009	9/2/2020	241	13.9			3.2	291	2.21
MW-010	3/11/2020	83.7	0.39		0.204	0.7	99	
MW-010	9/2/2020	85.7	0.4		0.23	0.92	118	
MW-013	3/11/2020	181	8.74		0.515	3.6	238	1.08
MW-013	9/2/2020	190	8.82		0.536	3.73	248	1.17
MW-014	3/11/2020	76.1	0.73			8.88	116	
MW-014	9/2/2020	77.5	0.72			9.17	112	
MW-016	12/3/2019			0.302				42.7
MW-016	3/12/2020	1370	153	0.329			1310	49.4
MW-016	6/8/2020			0.4				55.8
MW-016	9/3/2020	1320	148	0.469	0.149		1360	31.5
MW-019R	3/11/2020	109	6.95		1.2	4.9	168	1.22
MW-019R	9/2/2020	108	6.7		1.27	5.16	143	1.27
MW-020	3/11/2020	233	7.58		2.35	6.23	278	
MW-020	9/2/2020	225	7.1		2.52	5.85	306	1.41
MW-023	3/12/2020	372	51.6			8.39	468	2.56
MW-023	9/3/2020	354	51.1			8.79	484	3.33
MW-029	3/11/2020	77.7	136			6.35	387	
MW-029	9/2/2020	101	134		0.937	6.98	399	
MW-031	3/11/2020	49.7	1.94		0.05	3.54	77	4.61

Clean-up level exceedances are in **red**

VOC detections/exceedance maps – 1,2-Dichloroethane

Mica Landfill - September 2020

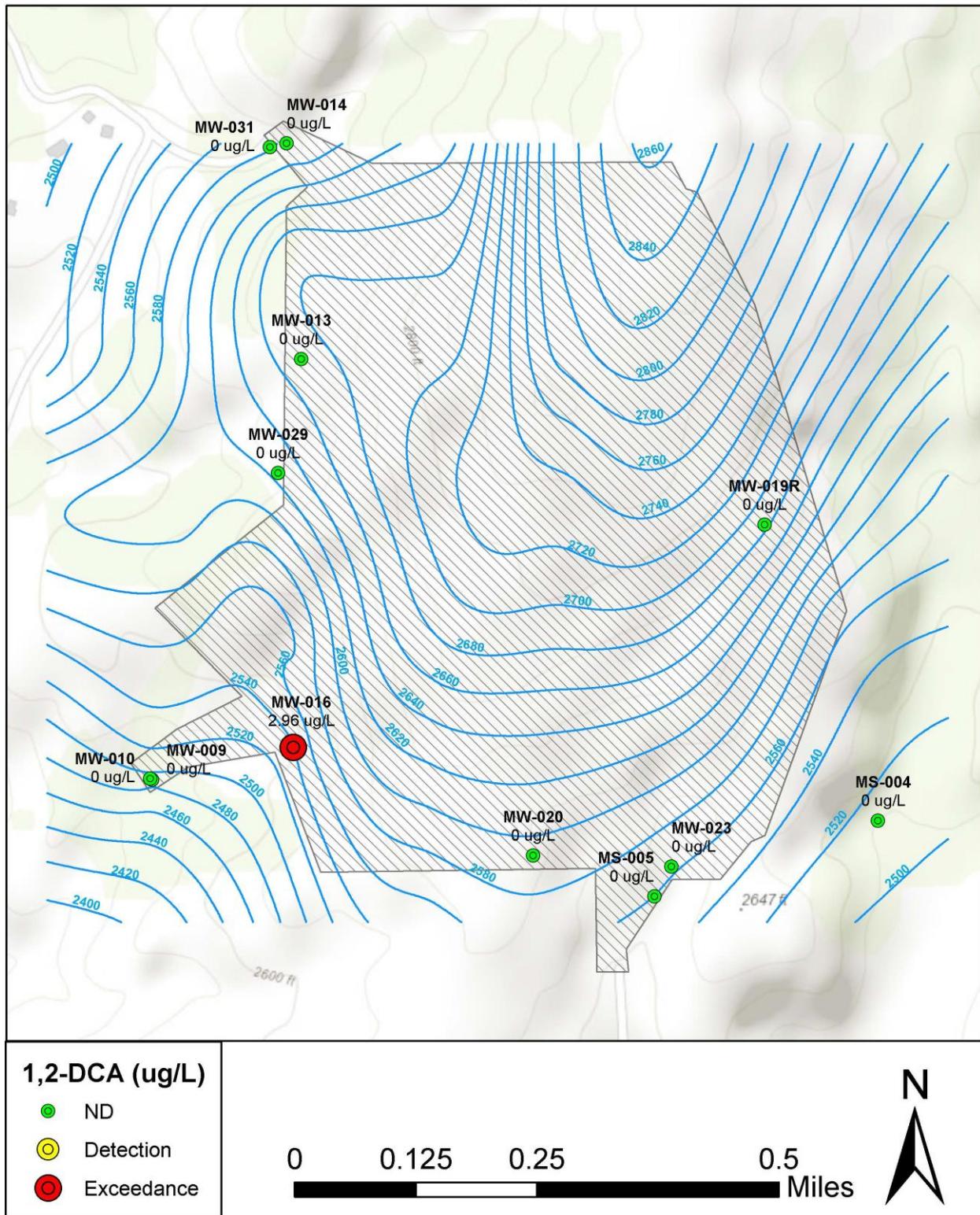


Figure 2-7: 1,2-Dichloroethane detections/exceedance map

VOC detections/exceedance maps – 1,2-Dichloropropane

Mica Landfill - September 2020

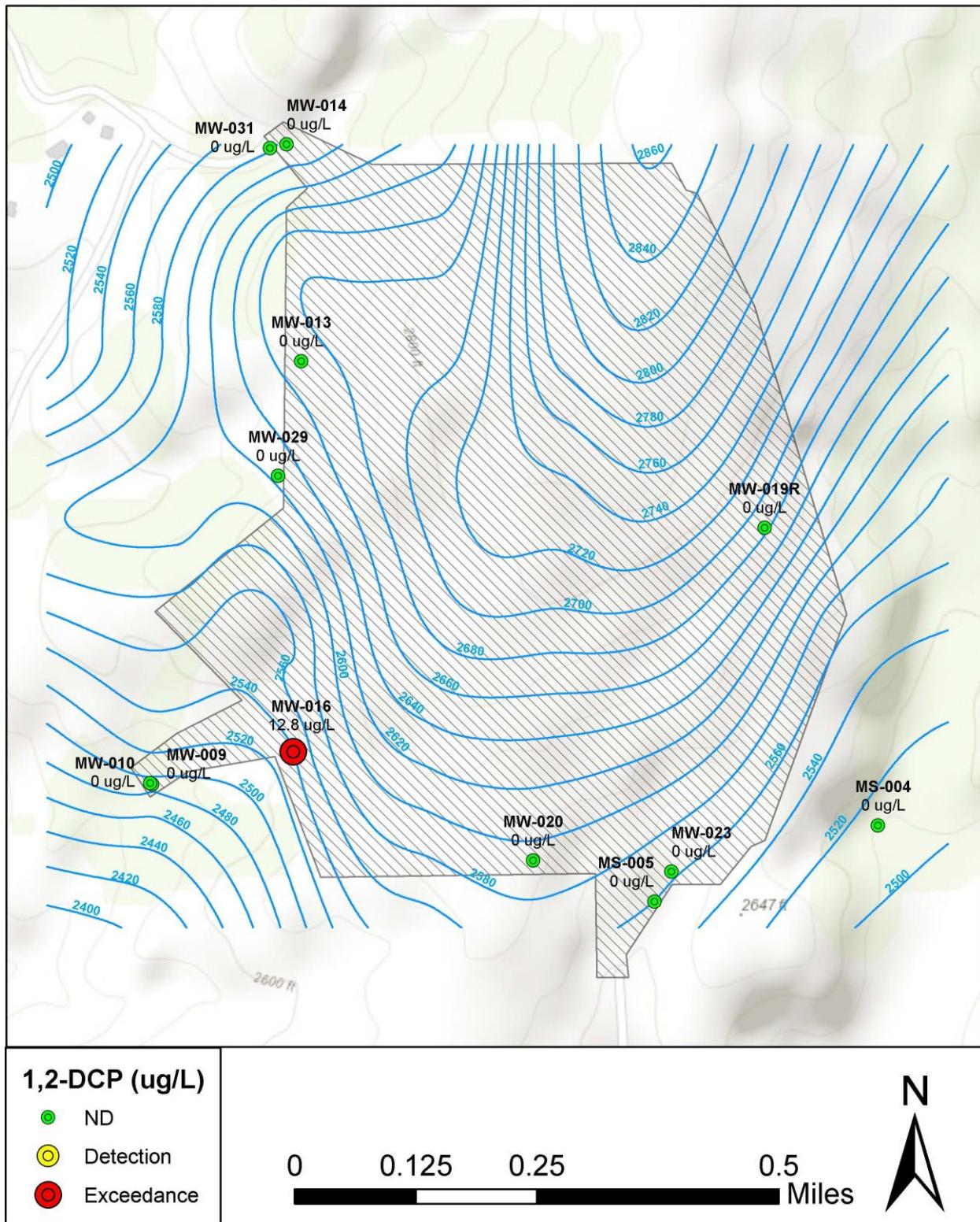
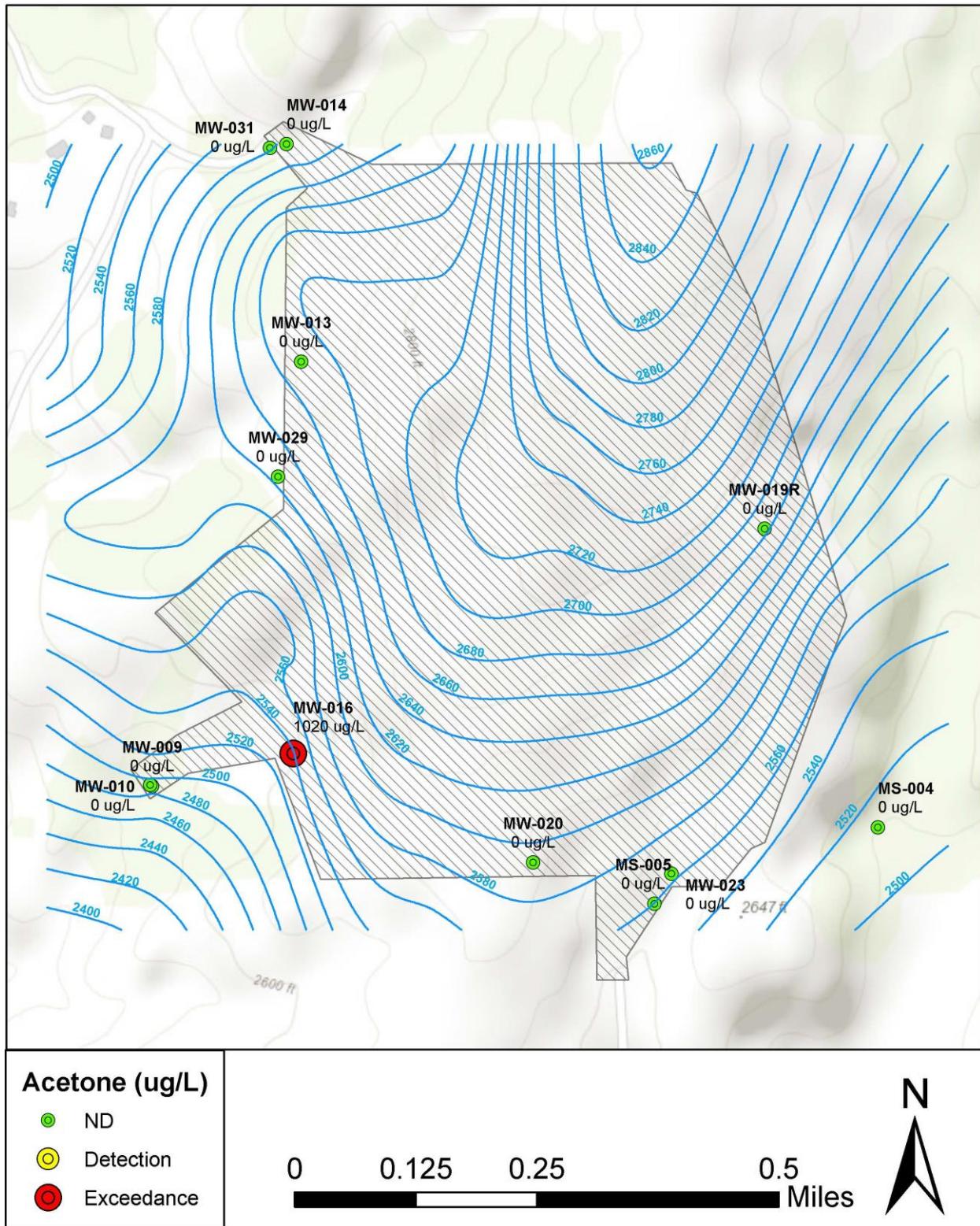


Figure 2-8: 1,2-Dichloropropane detections/exceedance map

VOC detections/exceedance maps - Acetone

Mica Landfill - September 2020



VOC detections/exceedance maps – Benzene

Mica Landfill - September 2020

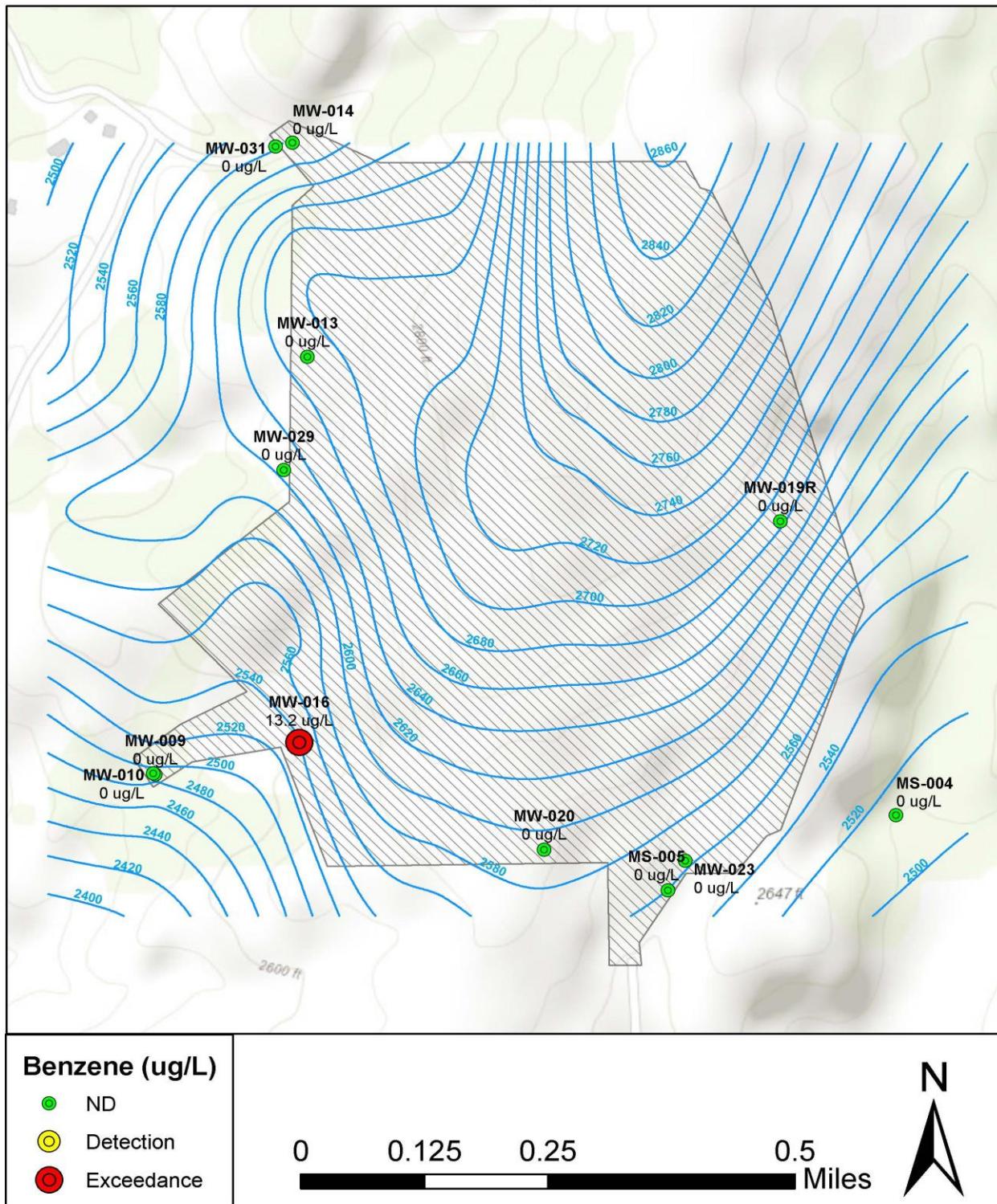


Figure 2-10: Benzene detections/exceedance map

VOC detections/exceedance maps – Vinyl chloride

Mica Landfill - September 2020

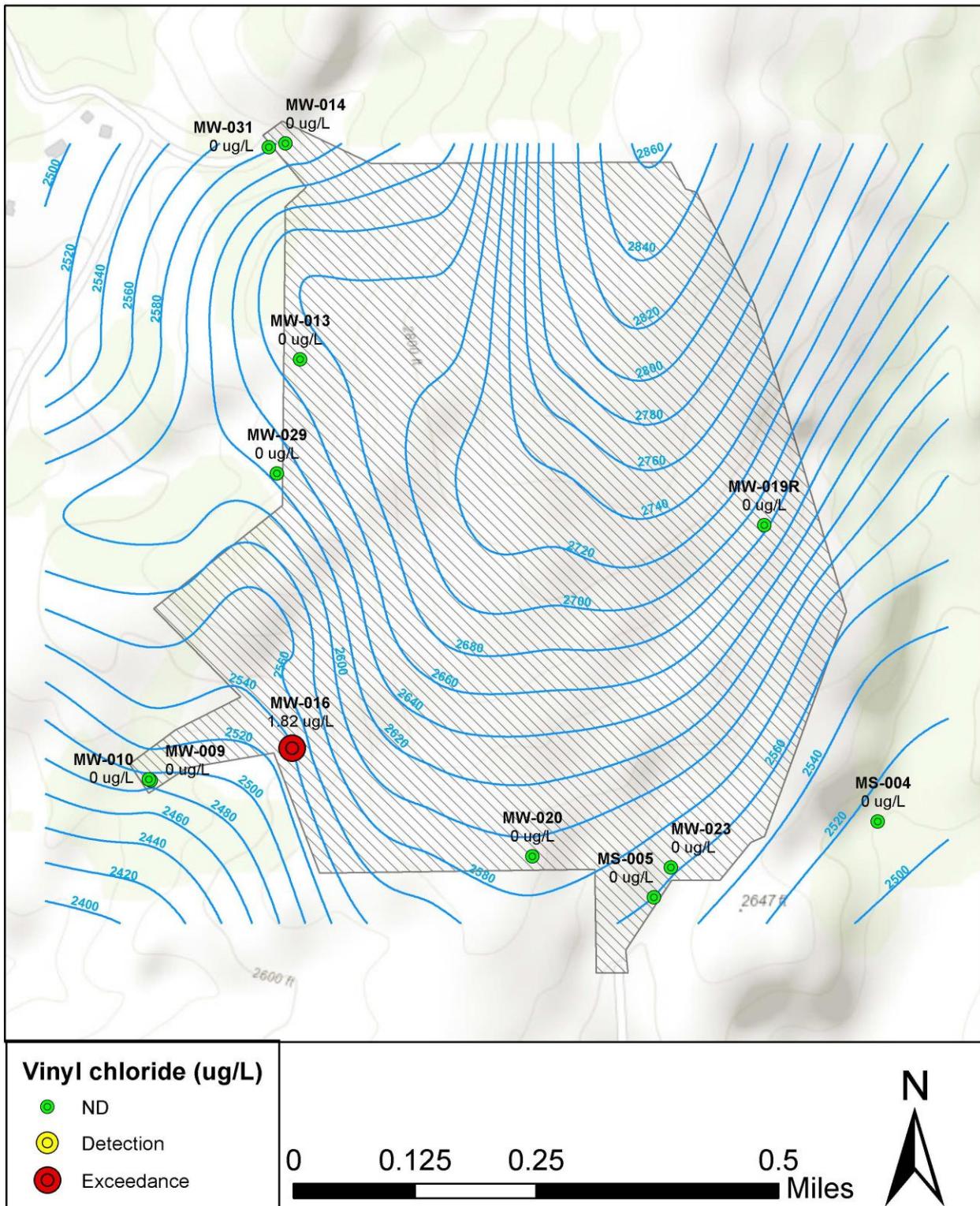


Figure 2-11: Vinyl chloride detections/exceedance map

Inorganics detections/exceedance maps – Arsenic

Mica Landfill - September 2020

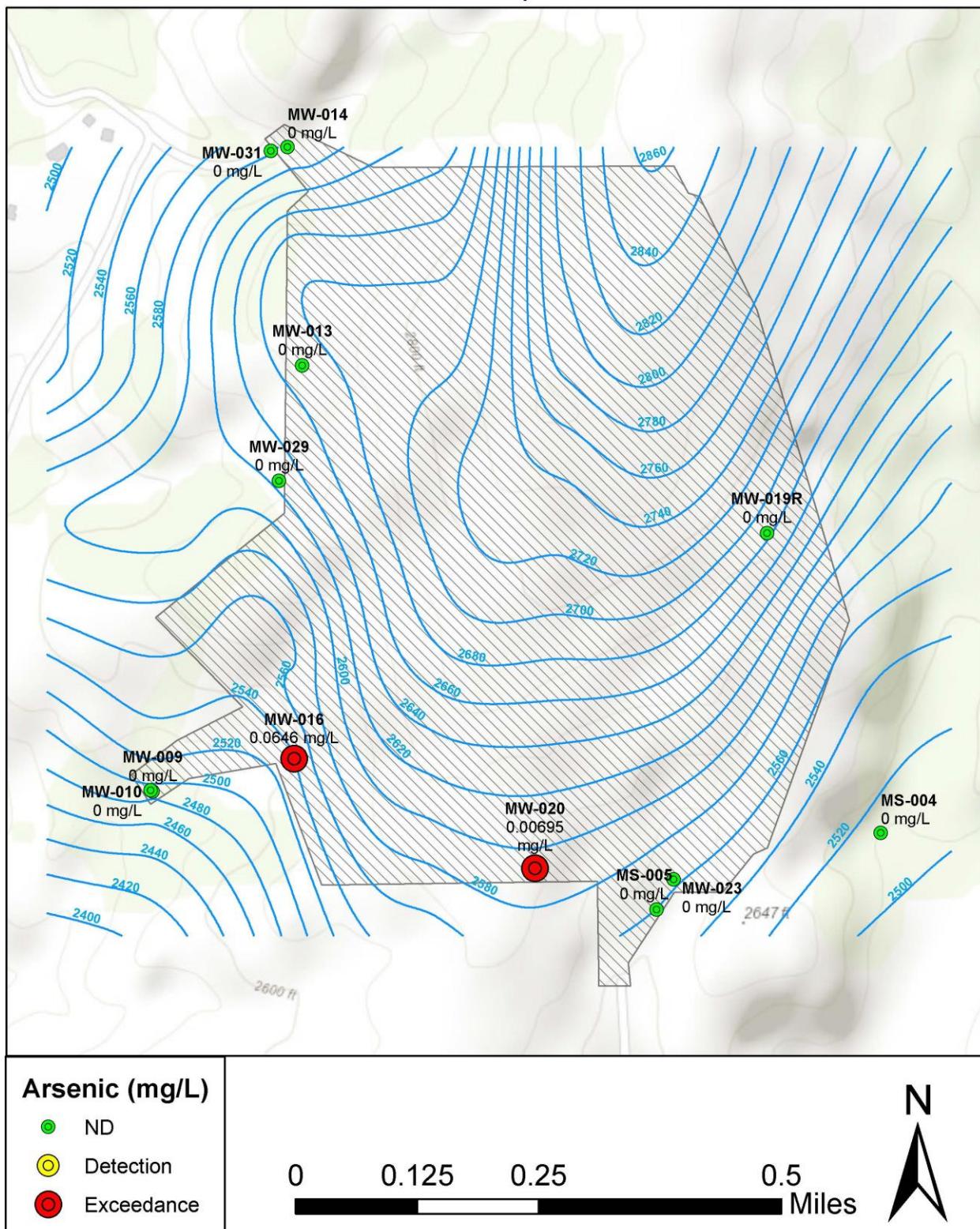


Figure 2-12: Arsenic detections/exceedance map

Inorganics detections/exceedance maps – Barium

Mica Landfill - September 2020

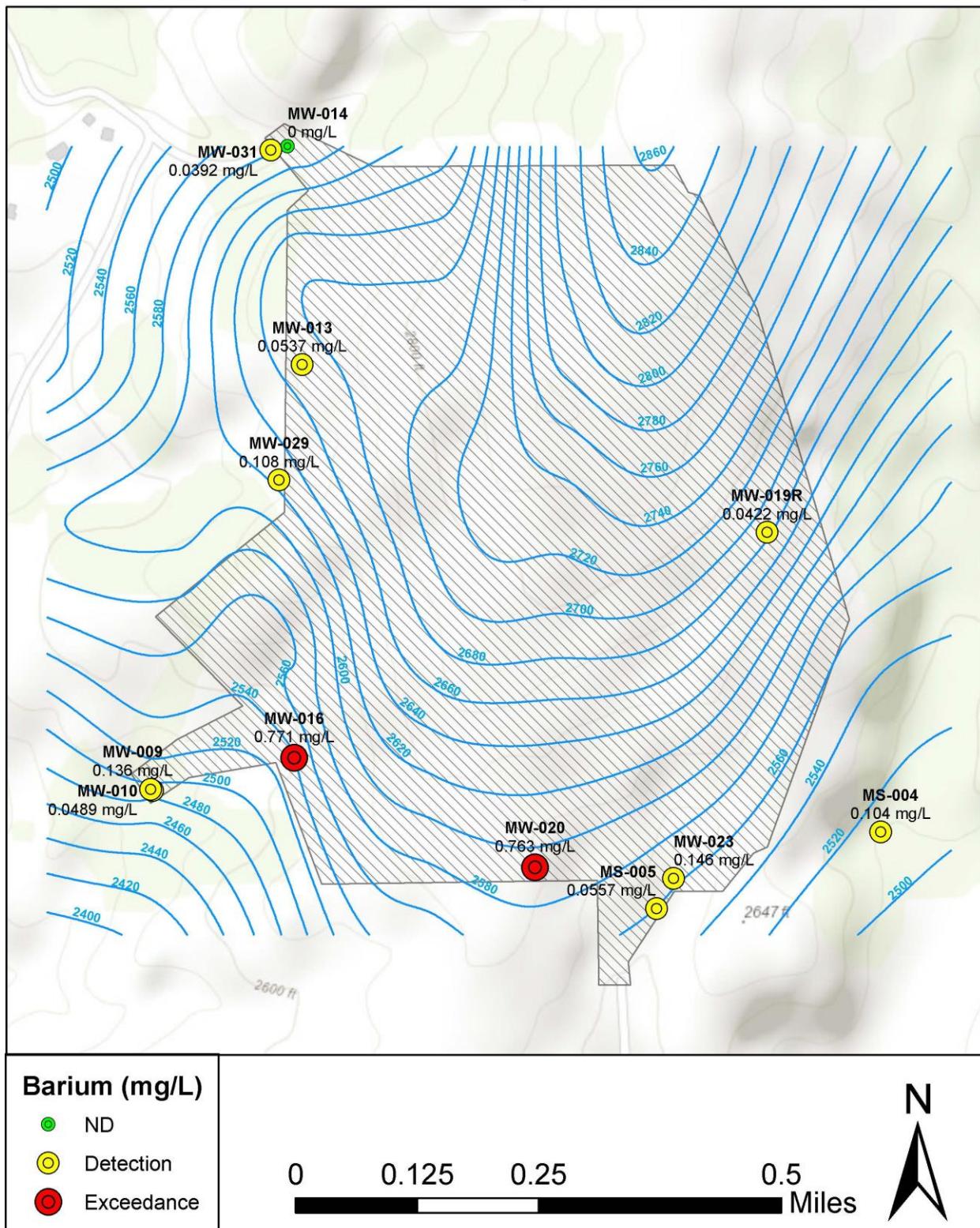


Figure 2-13: Barium detections/exceedance map

Inorganics detections/exceedance maps – Lead

Mica Landfill - September 2020

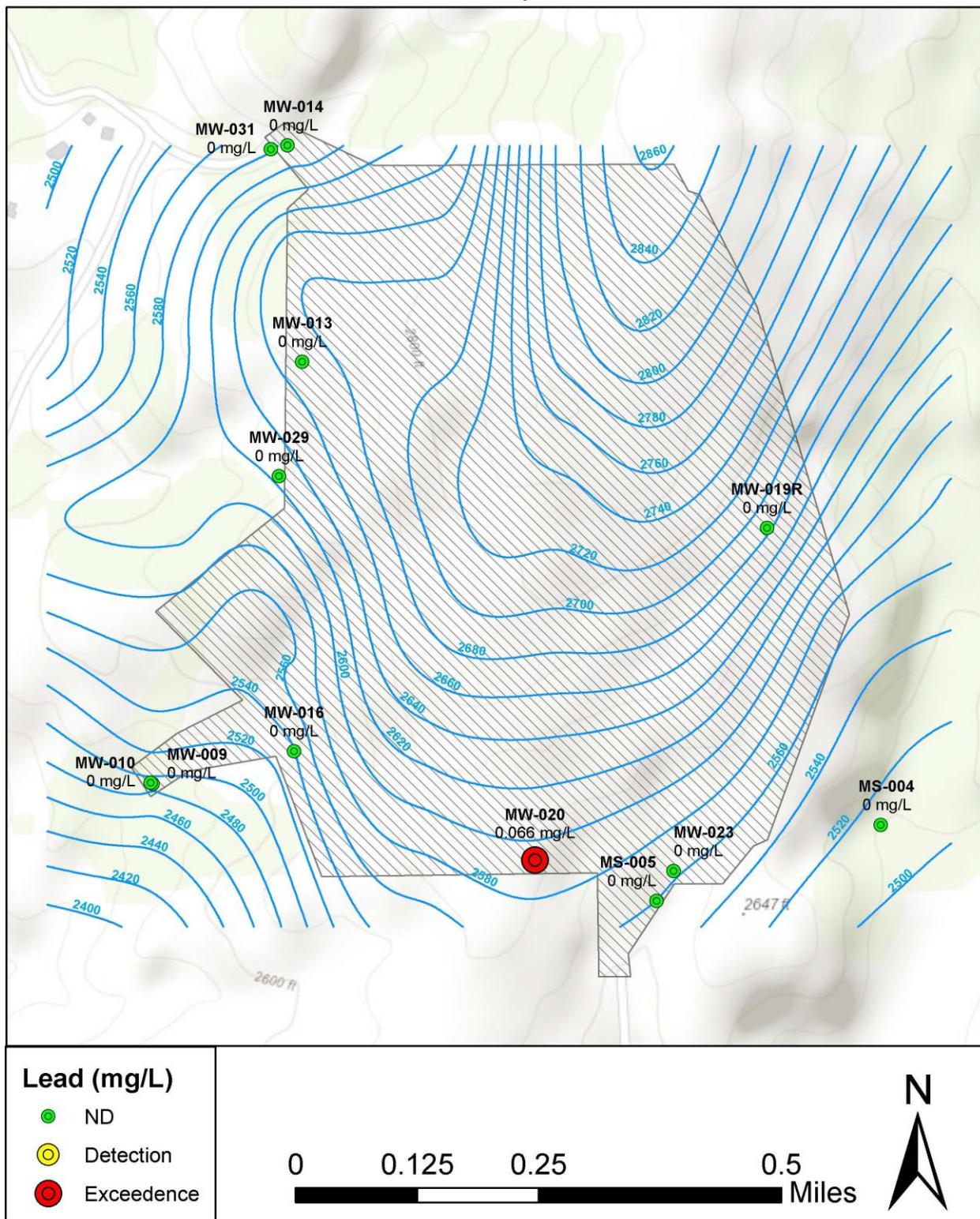


Figure 2-14: Lead detections/exceedance map

Conventional detections/exceedance maps – Nitrate

Mica Landfill - September 2020

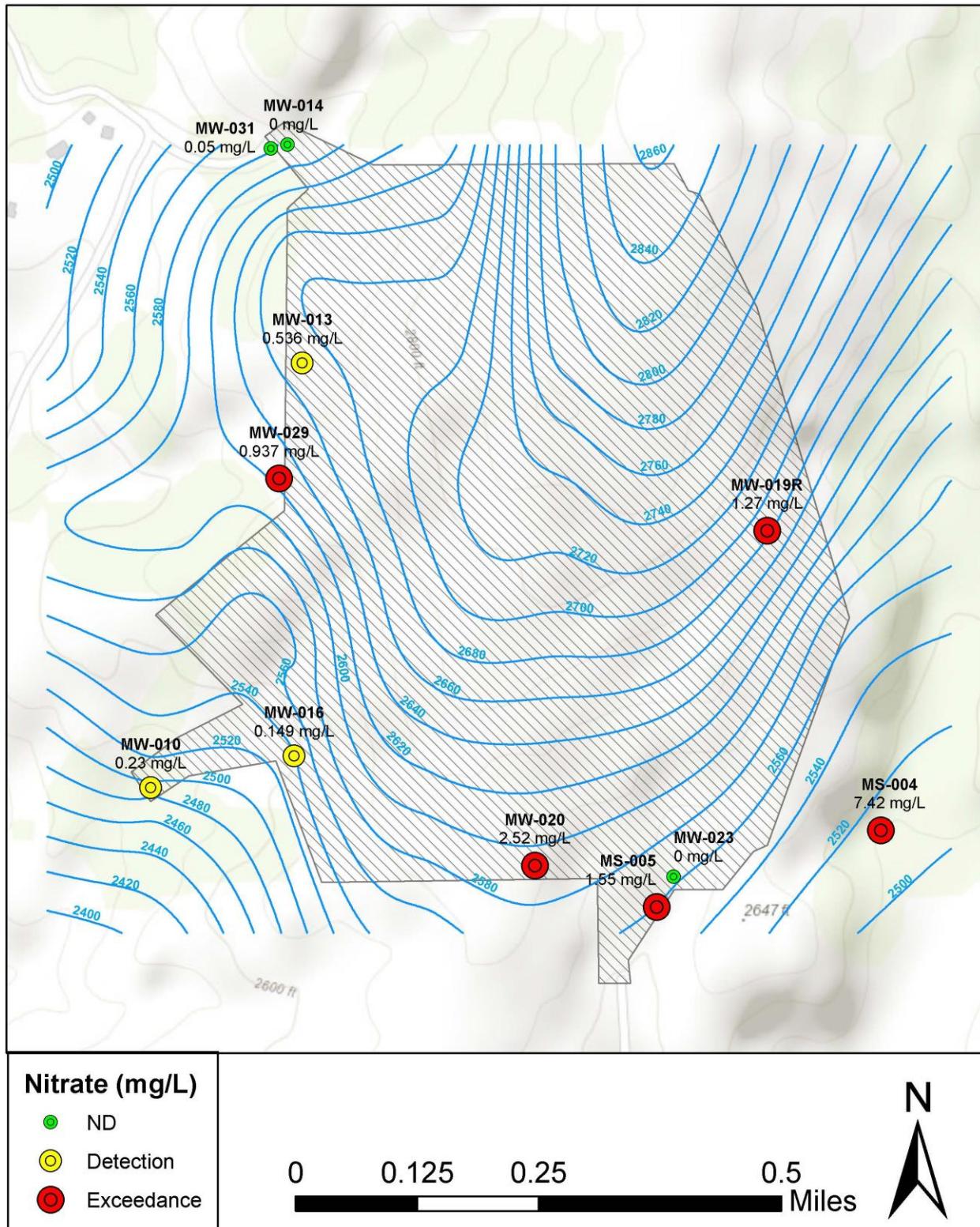


Figure 2-15: Nitrate detections/exceedance map

Mica Landfill Trend Analysis - 2020

Table 2-8: Mica Landfill Trend Analysis

Drainage:	Northwest				Southwest			South			Southeast		Domestic		
Analyte	MW-13	MW-14	MW-29	MW-31	MW-9	MW-10	MW-16	MS-5	MW-20	MW-23	MS-4	MW-19R	DW-1	DW-2	DW-3
Alkalinity	▲		▲	▼	▼	▲	▲	▲		▲	▲	▼	▼		
Ammonia							▲								
Chloride			▲	▼	▼	▼	▲	▲	▼	▲		▼	▲		
Nitrate	▼		▲			▲		▼	▼	▼	▲		▲	▼	▲
Sulfate	▼		▲	▼	▼			▼	▲	▼	▲	▼			▲
TDS			▲	▼	▼						▲	▲	▼		
TOC				▼					▼				▼		
Arsenic							▲*								
Barium	▼*		▲*		▲*	▲*		▼*			▼*	▲*	▼*	▲*	▲*
Manganese					▼*		▼*				▲*				
Zinc															▼*
1,2-DCA											▼				
1,2-DCP							▲				▼				
Acetone															
Benzene							▲								
Cis-1,2-DCE										▼		▼			
MC							▼				▼				
PCE	▼									▼					
TCE							▼			▼					
Toluene							▼								
VC															

- ▲ = Increasing trend
- ▼ = Decreasing trend
- = Criteria exceedances for this reporting period

* Statistical analysis calculated on metals data collected after March 2002. May not reflect overall historical trend. (99% Confidence level)

NW Drainage Monitoring Wells: VOCs/SVOCs Time Series Graphs

Figure 2-16: NW Wells – VOCs / SVOCs Concentration Graphs

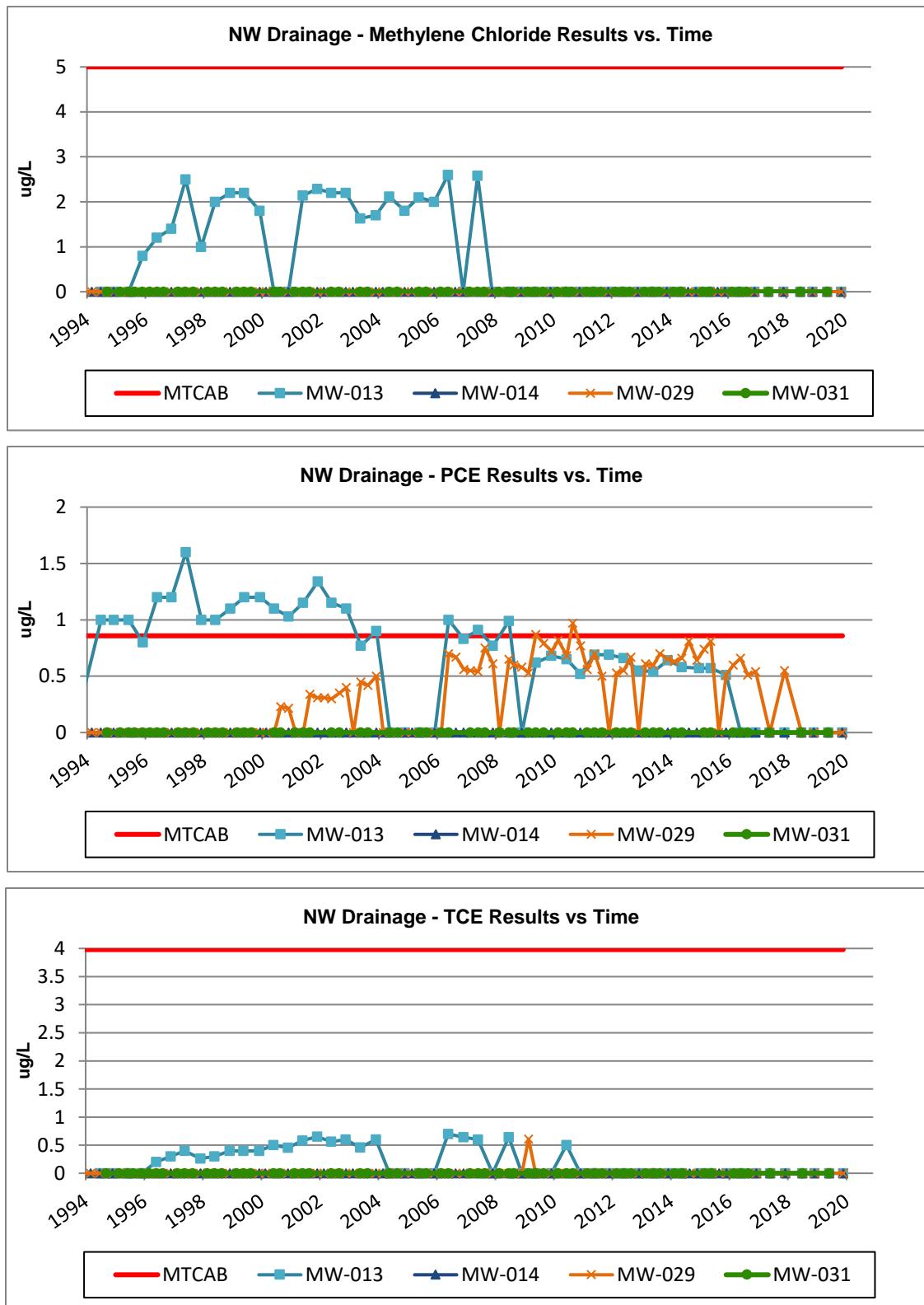
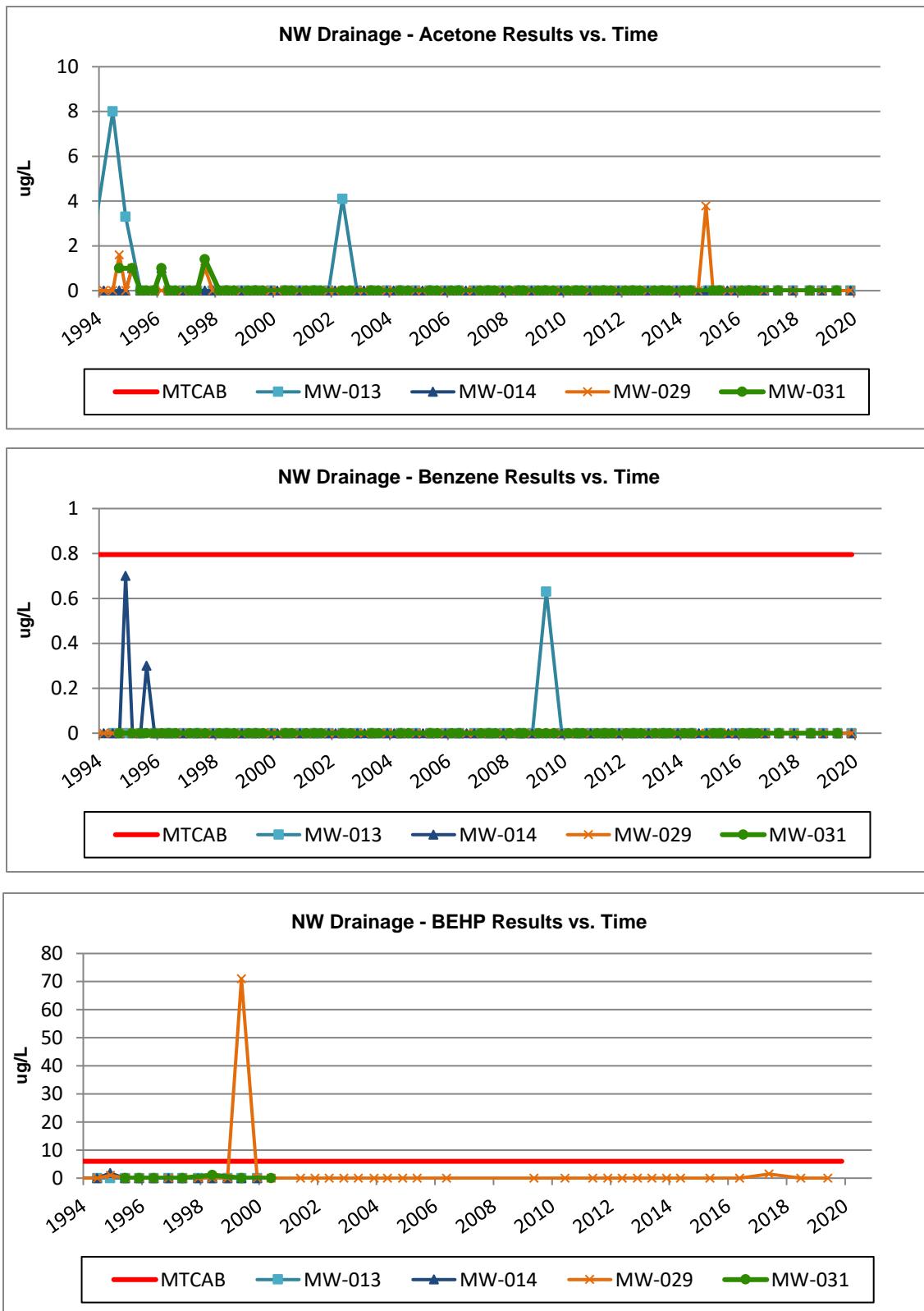


Figure 2-17: NW Wells – VOCs / SVOCs Concentration Graphs (cont.)



NW Drainage Monitoring Wells: Inorganics Time Series Graphs

Figure 2-18: NW Wells – Inorganics Concentration Graphs

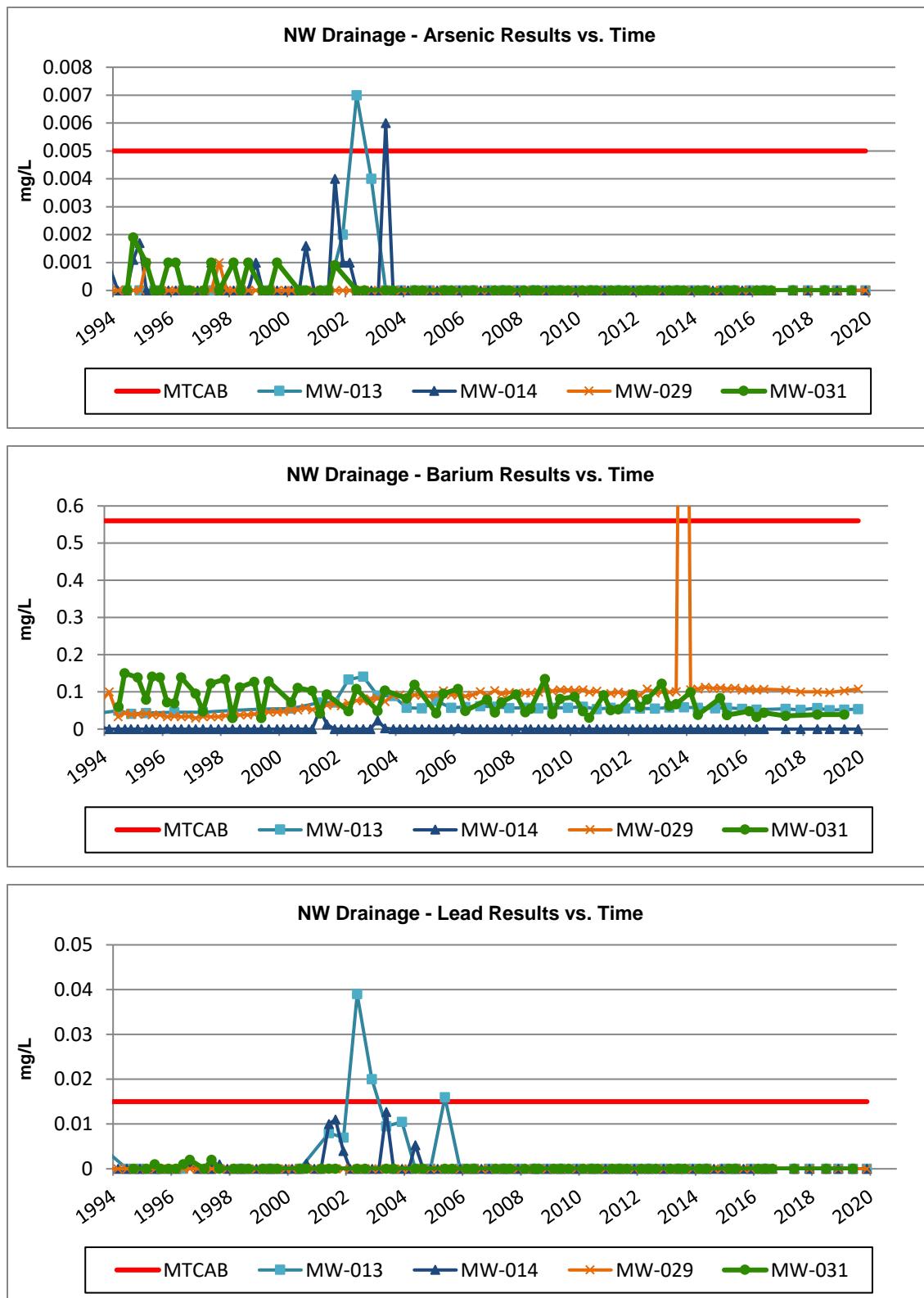
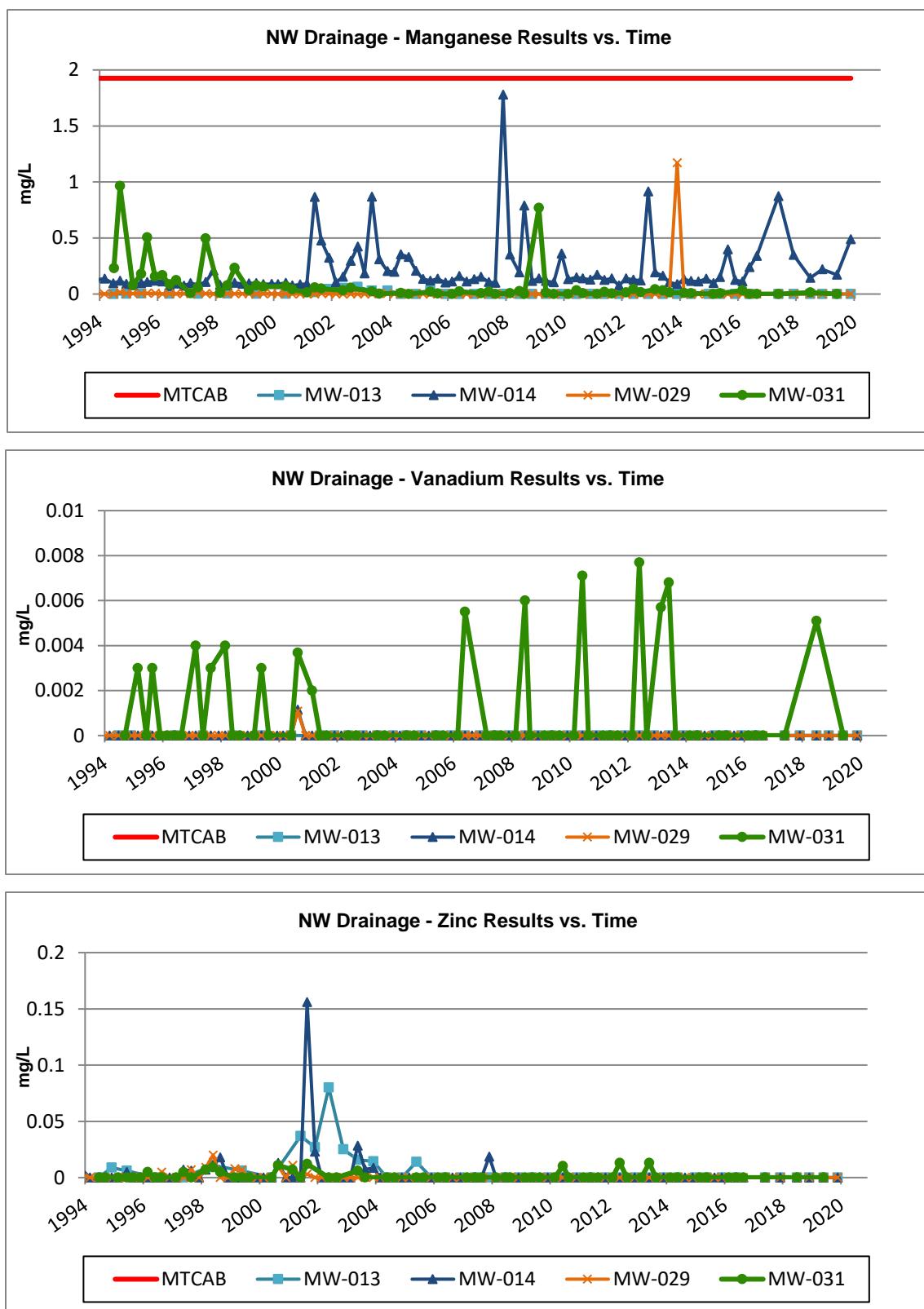


Figure 2-19: NW Wells – Inorganics Concentration Graphs (cont.)



NW Drainage Monitoring Wells: Conventionals Time Series Graphs

Figure 2-20: NW Wells – Conventionals Concentration Graphs

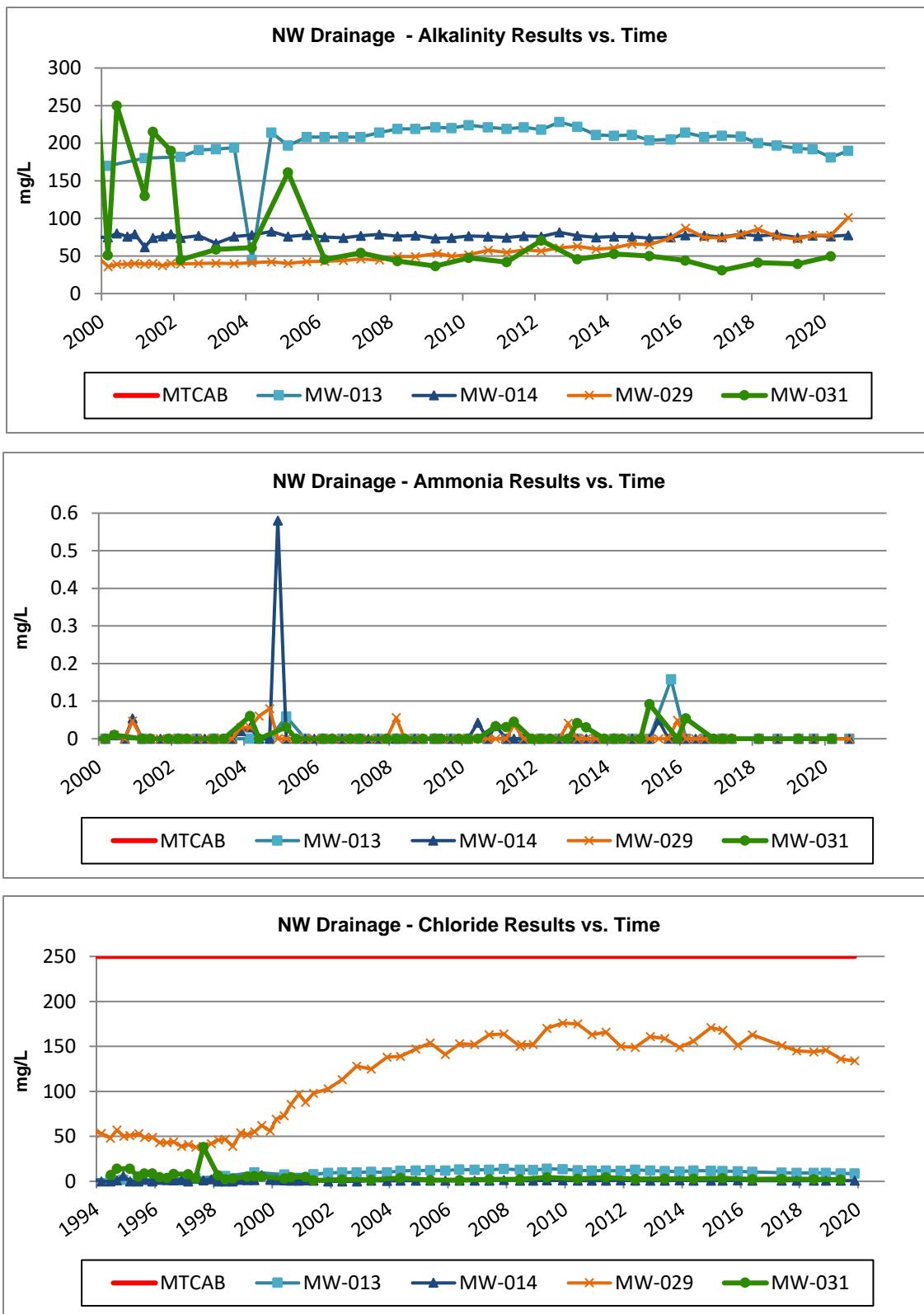


Figure 2-21: NW Wells – Conventionals Concentration Graphs (cont.)

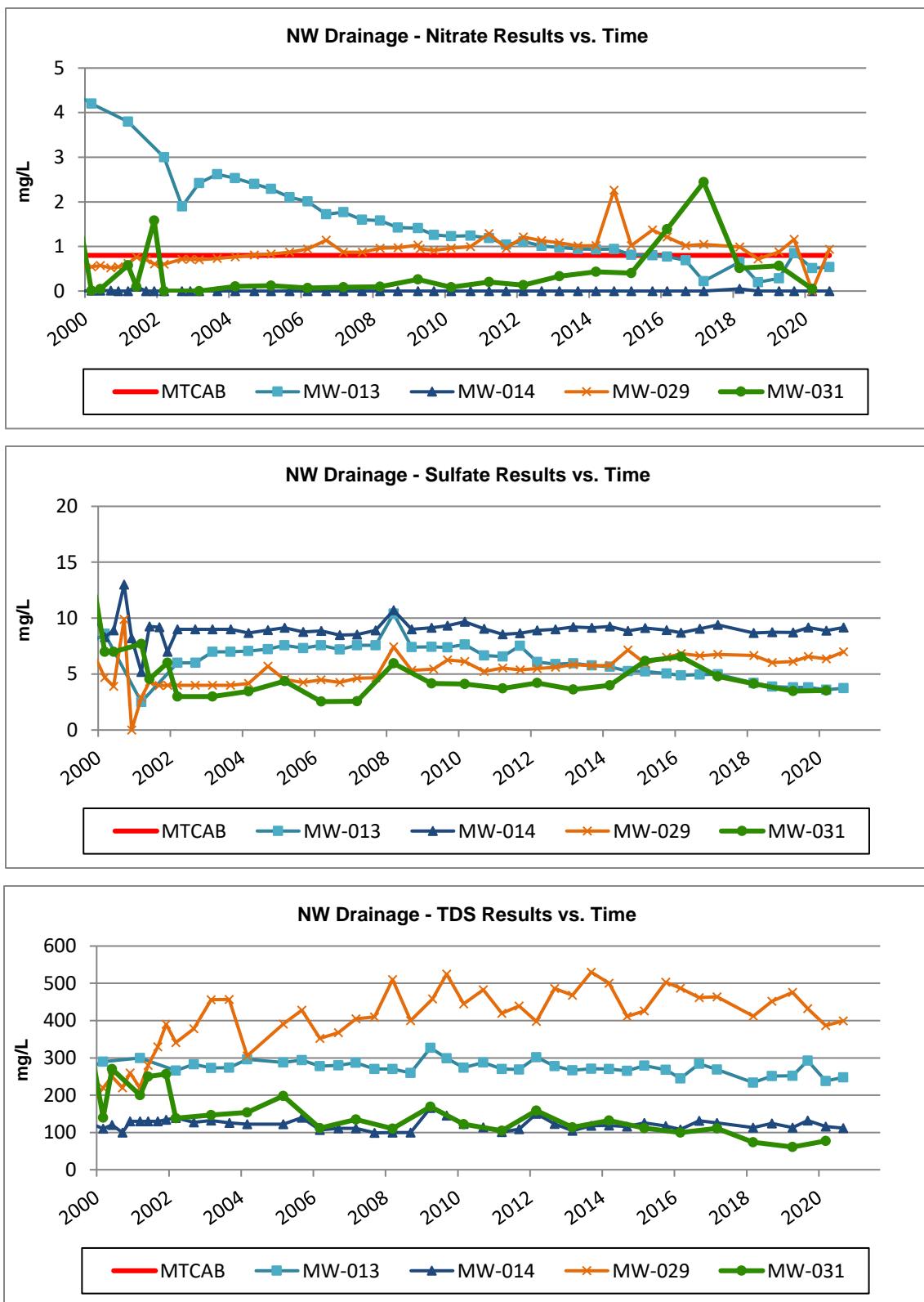
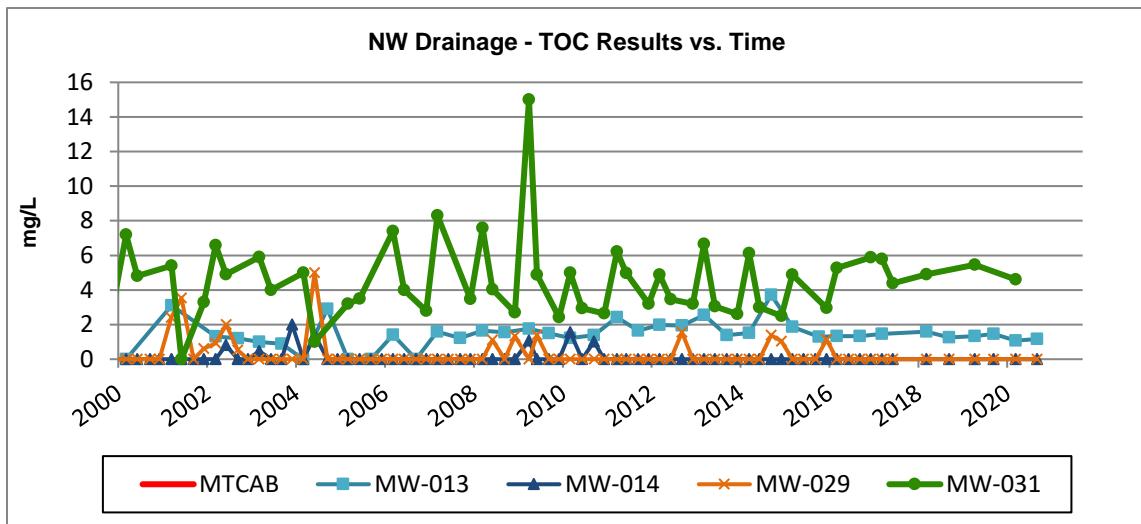


Figure 2-22: NW Wells – Conventionals Concentration Graphs (cont.)



SW Drainage Monitoring Wells: VOCs/SVOCs Time Series Graphs

Figure 2-23: SW Wells – VOCs / SVOCs Concentration Graphs

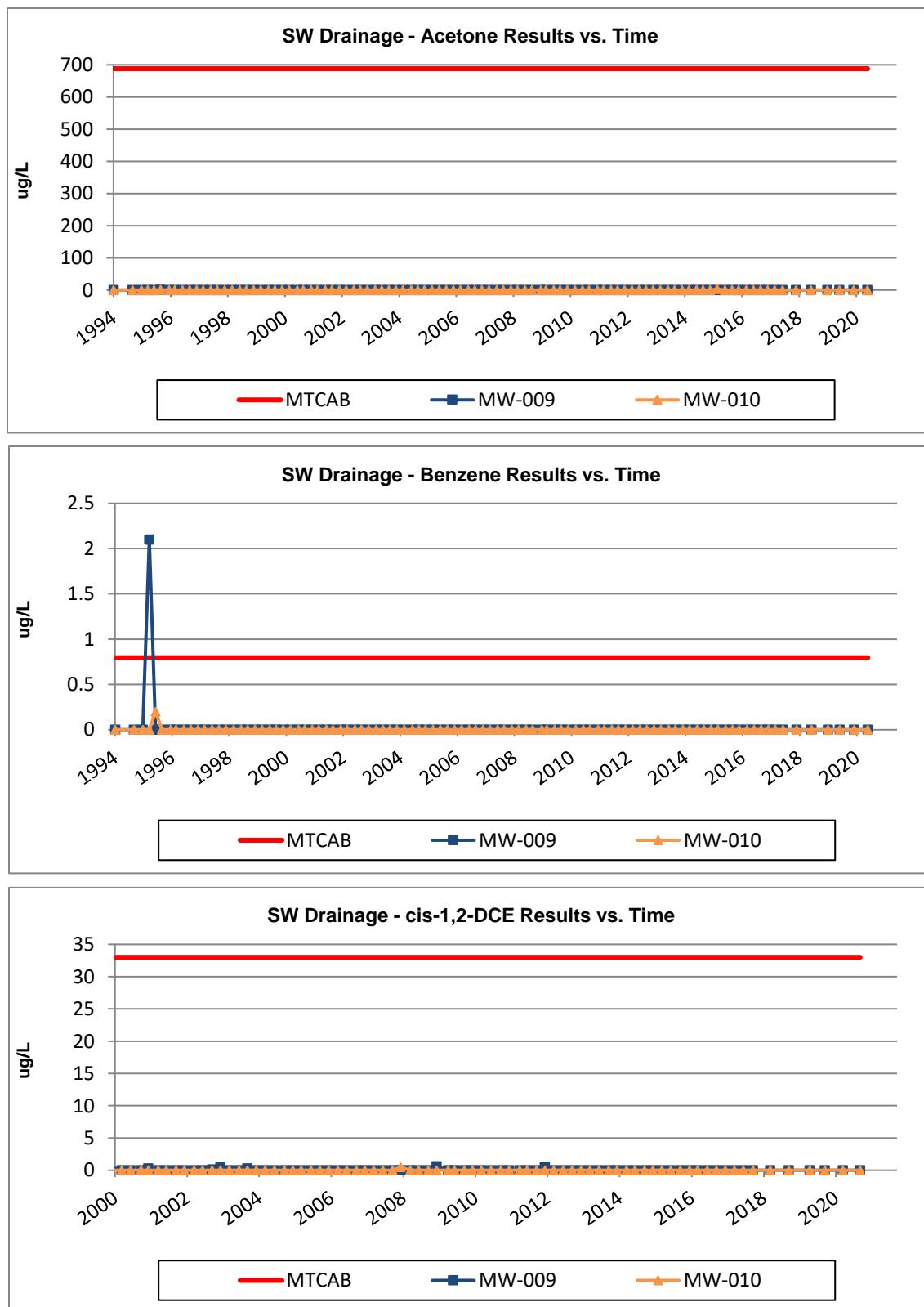


Figure 2-24: SW Wells – VOCs / SVOCs Concentration Graphs (cont.)

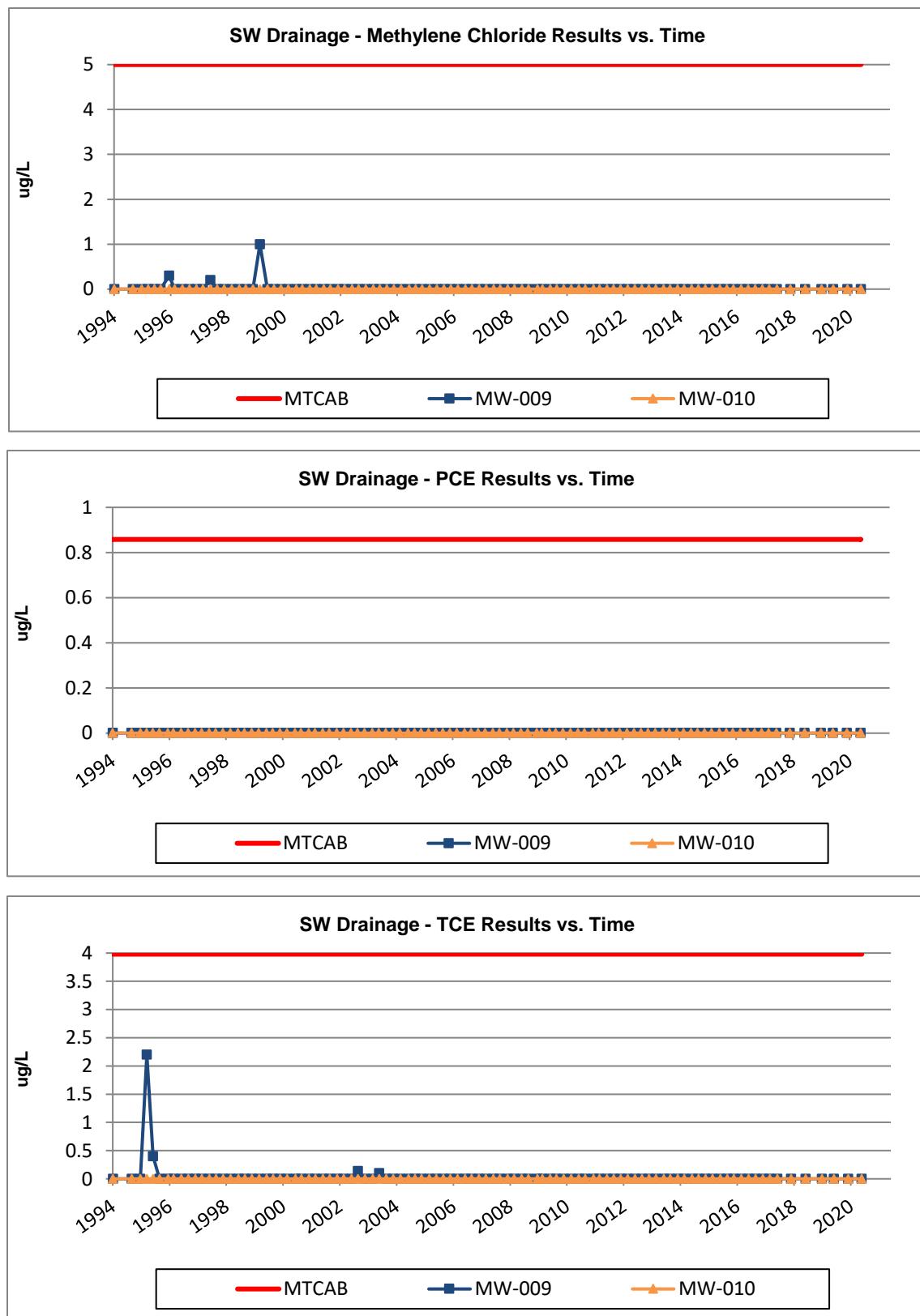


Figure 2-25: SW Wells – VOCs / SVOCs Concentration Graphs (cont.)

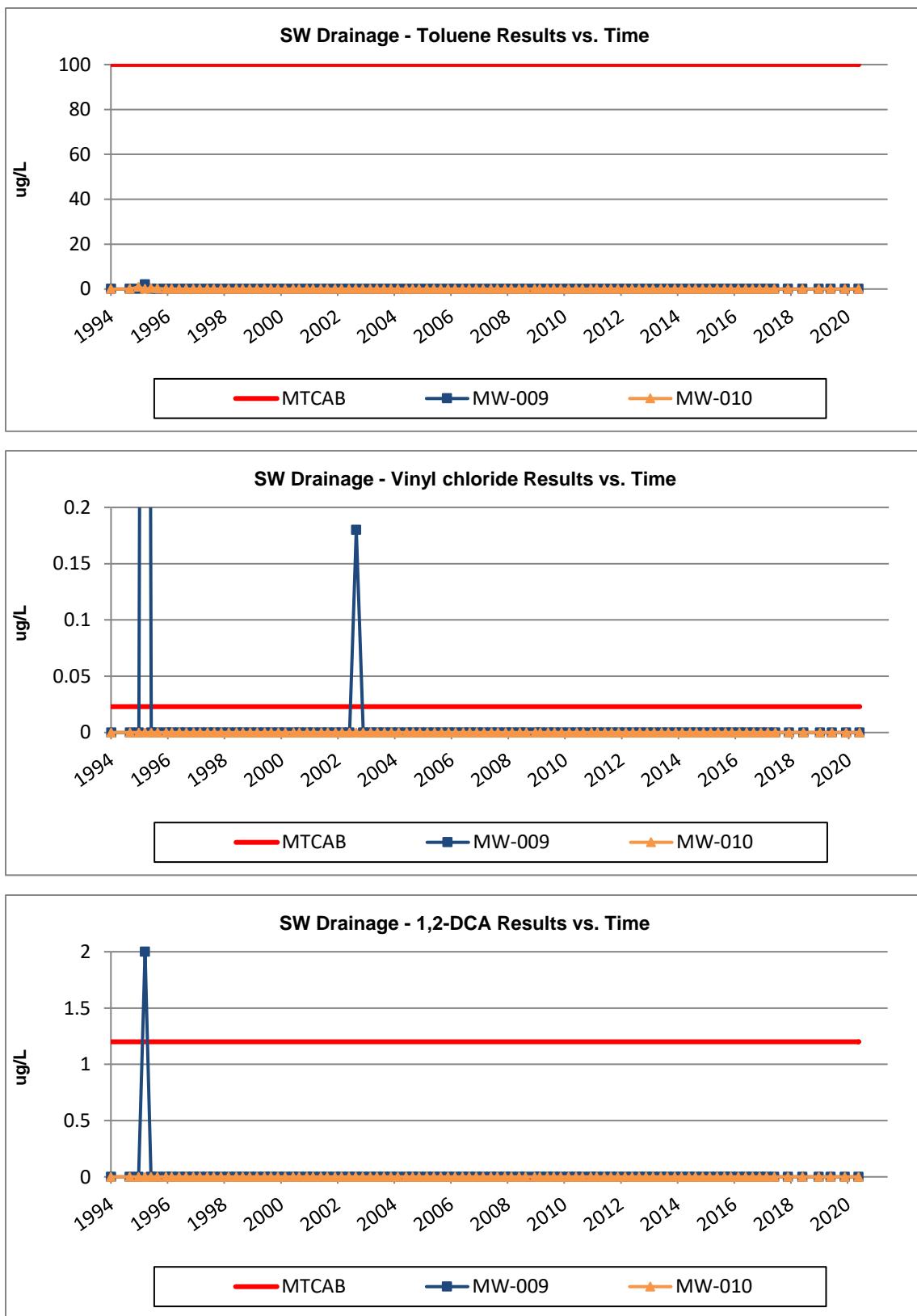
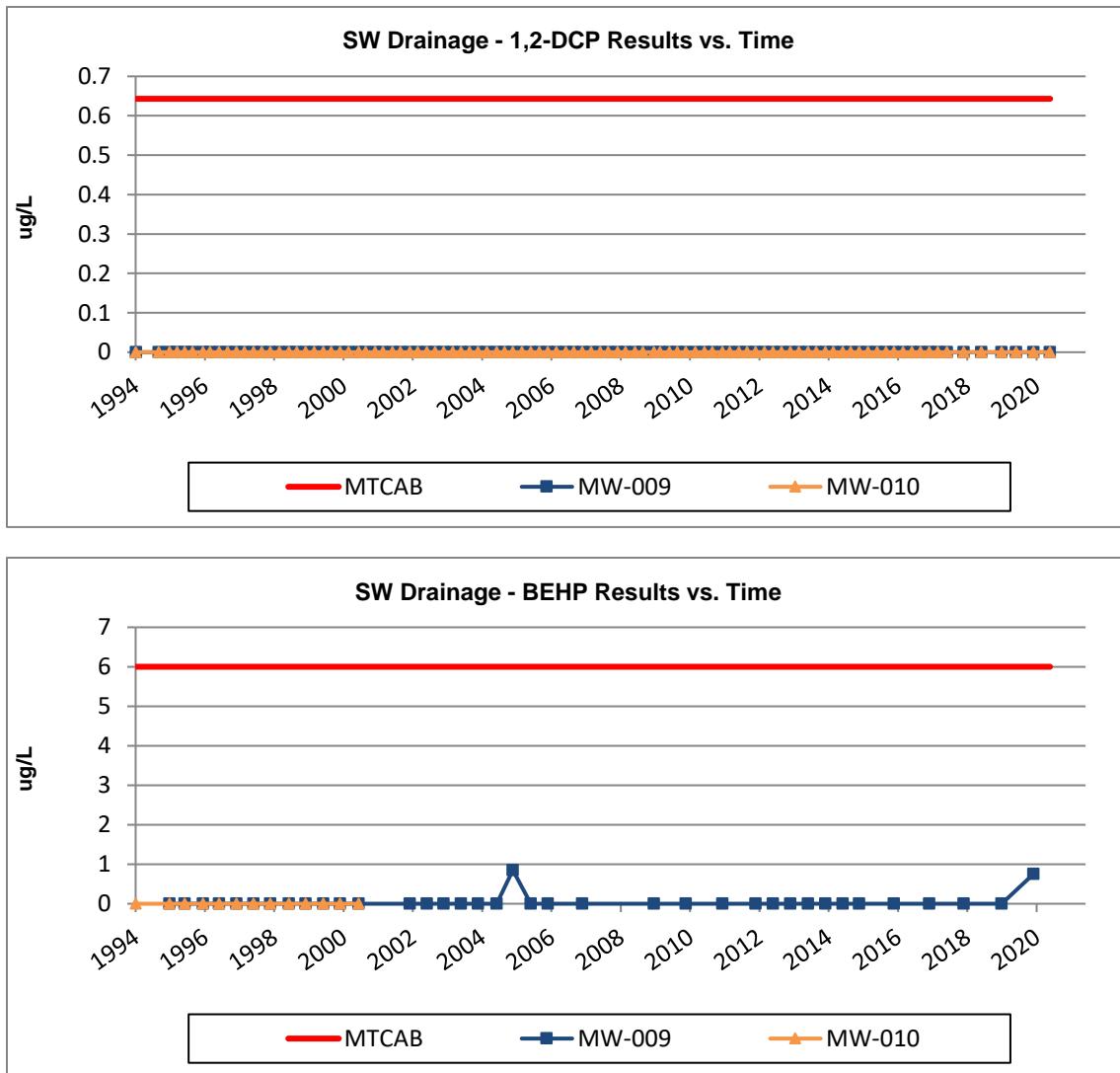


Figure 2-26: SW Wells – VOCs / SVOCs Concentration Graphs (cont.)



SW Drainage Monitoring Wells: Inorganics Time Series Graphs

Figure 2-27: SW Wells – Inorganics Concentration Graphs

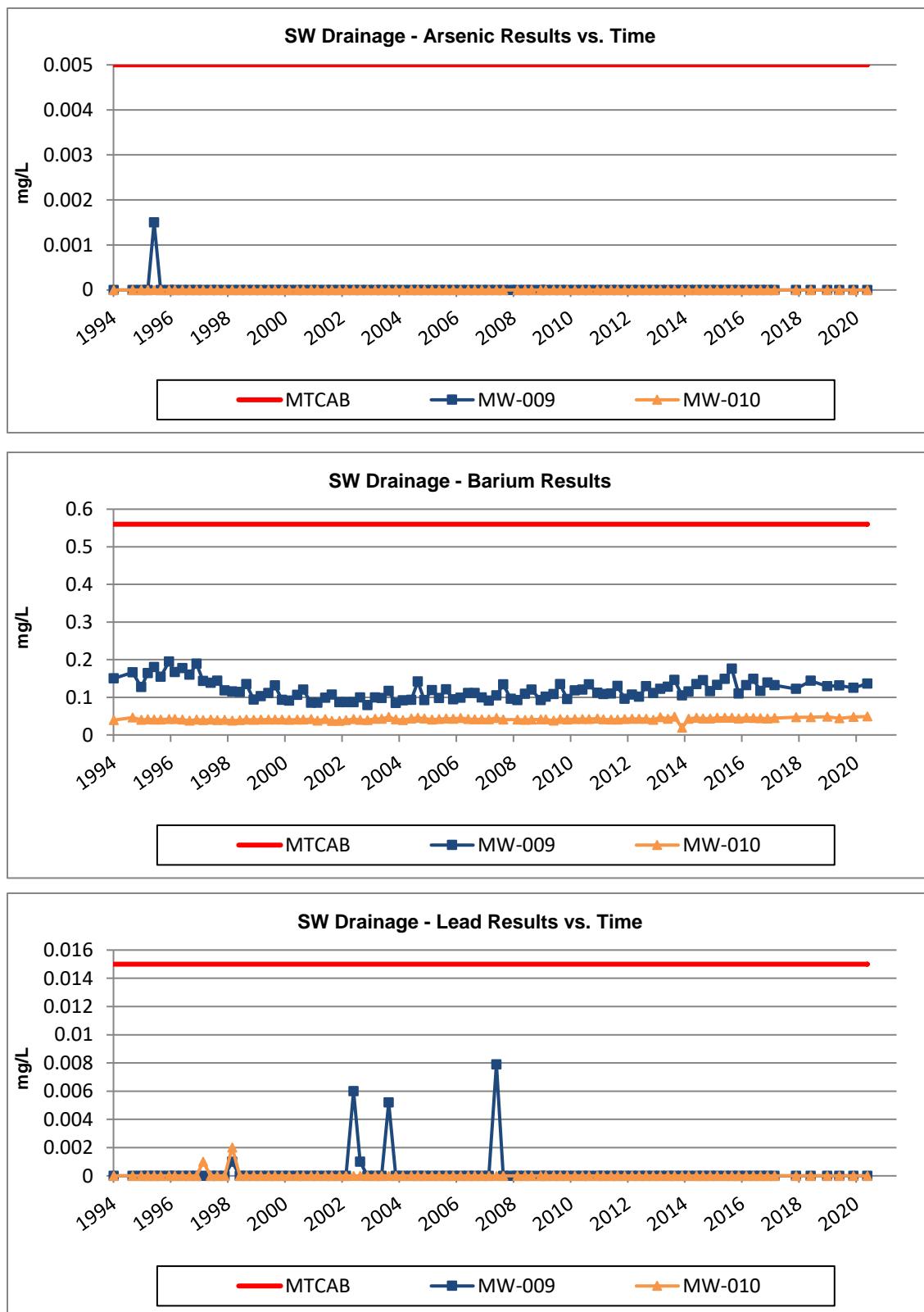
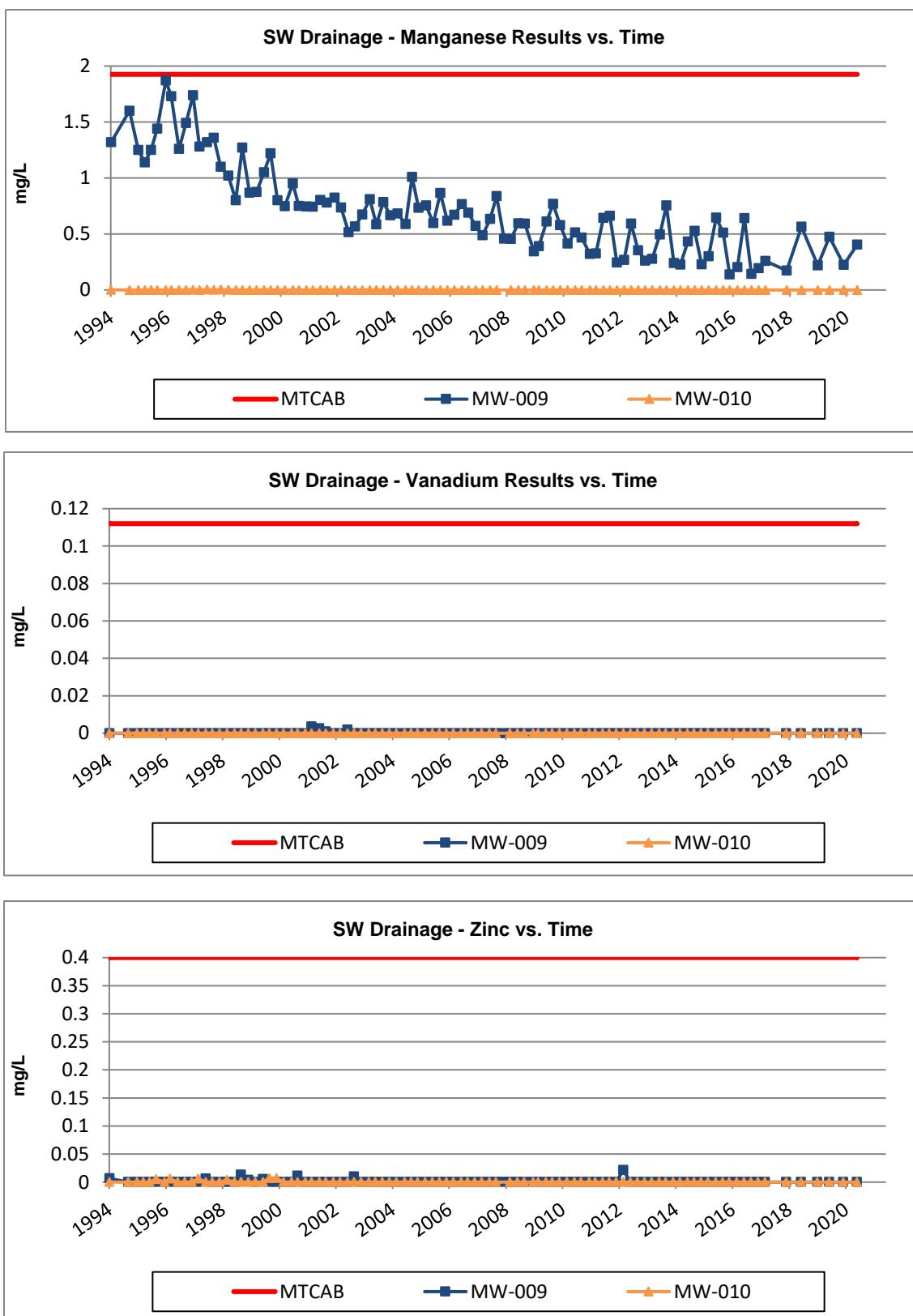


Figure 2-28: SW Wells – Inorganics Concentration Graphs (cont.)



SW Drainage Monitoring Wells: Conventionals Time Series Graphs

Figure 2-29: SW Wells – Conventionals Concentration Graphs

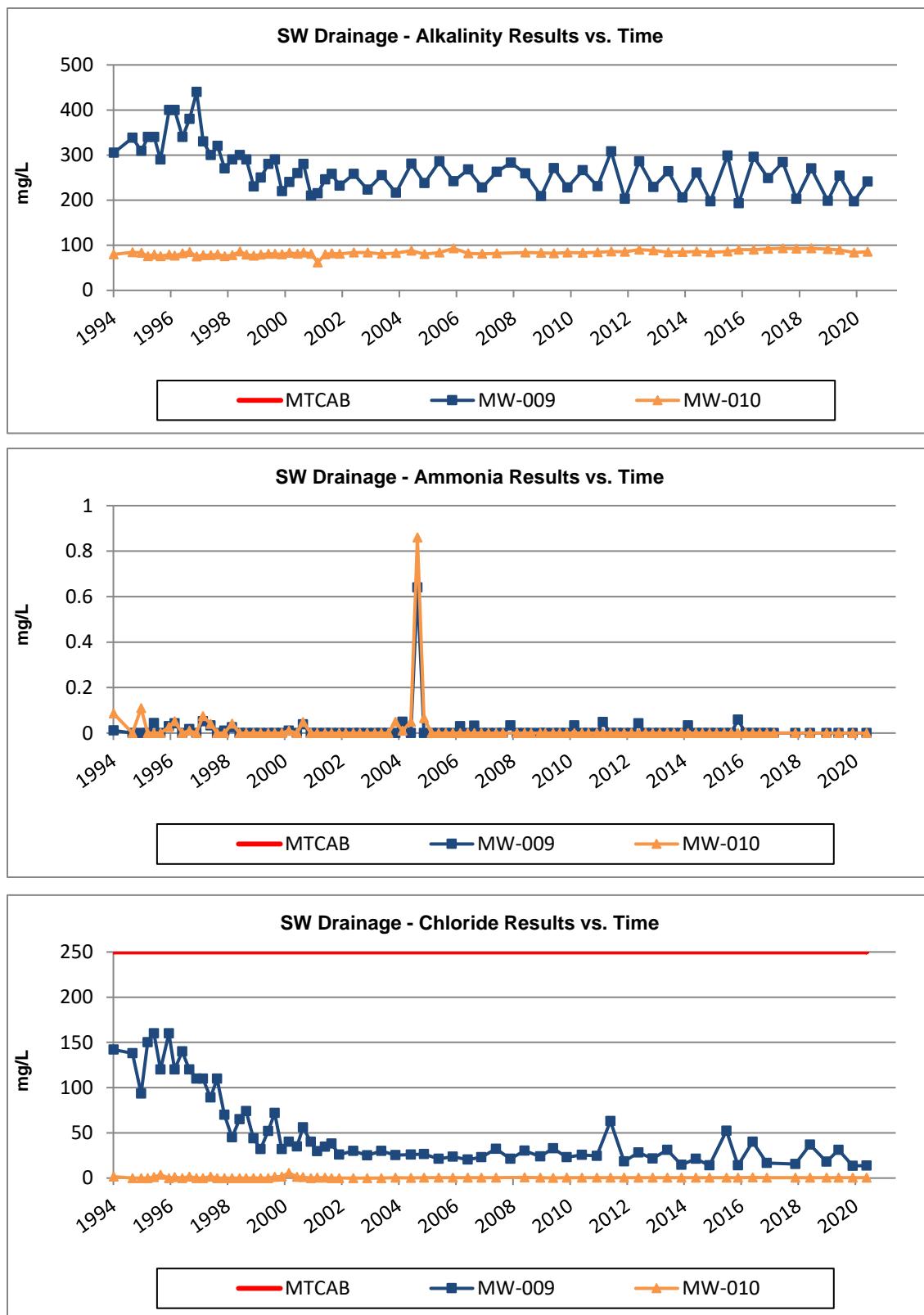


Figure 2-30: SW Wells – Conventionals Concentration Graphs (cont.)

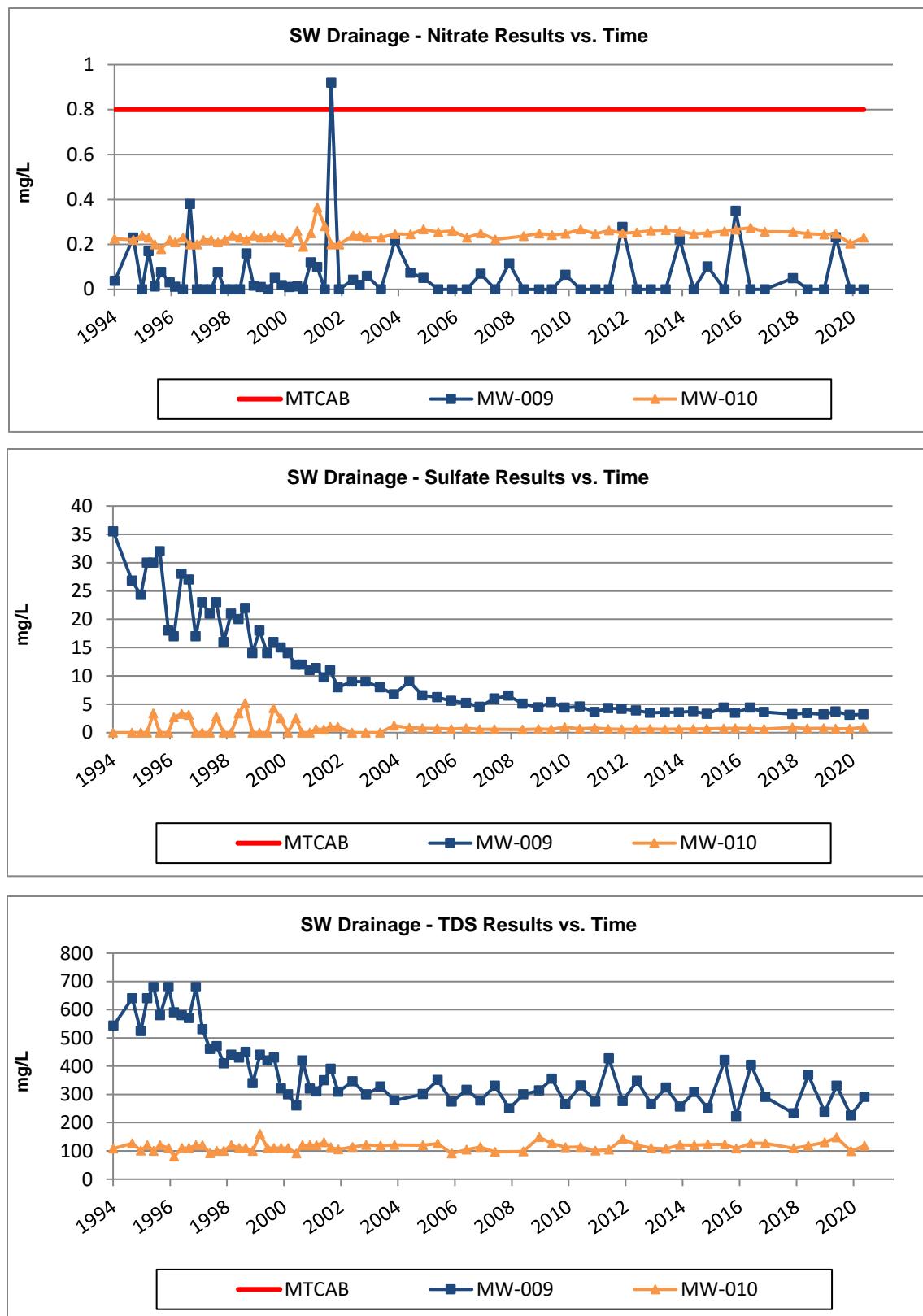
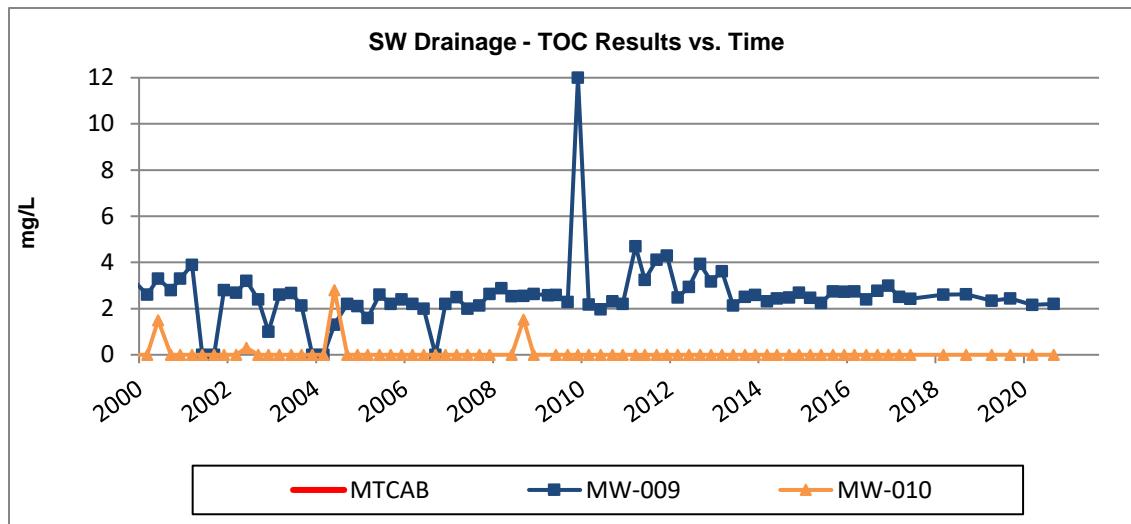


Figure 2-31: SW Wells – Conventionals Concentration Graphs (cont.)



SW MW-16 Monitoring Wells: VOCs/SVOCs Time Series Graphs

Figure 2-32: MW-016 VOCs / SVOCs Concentration Graphs

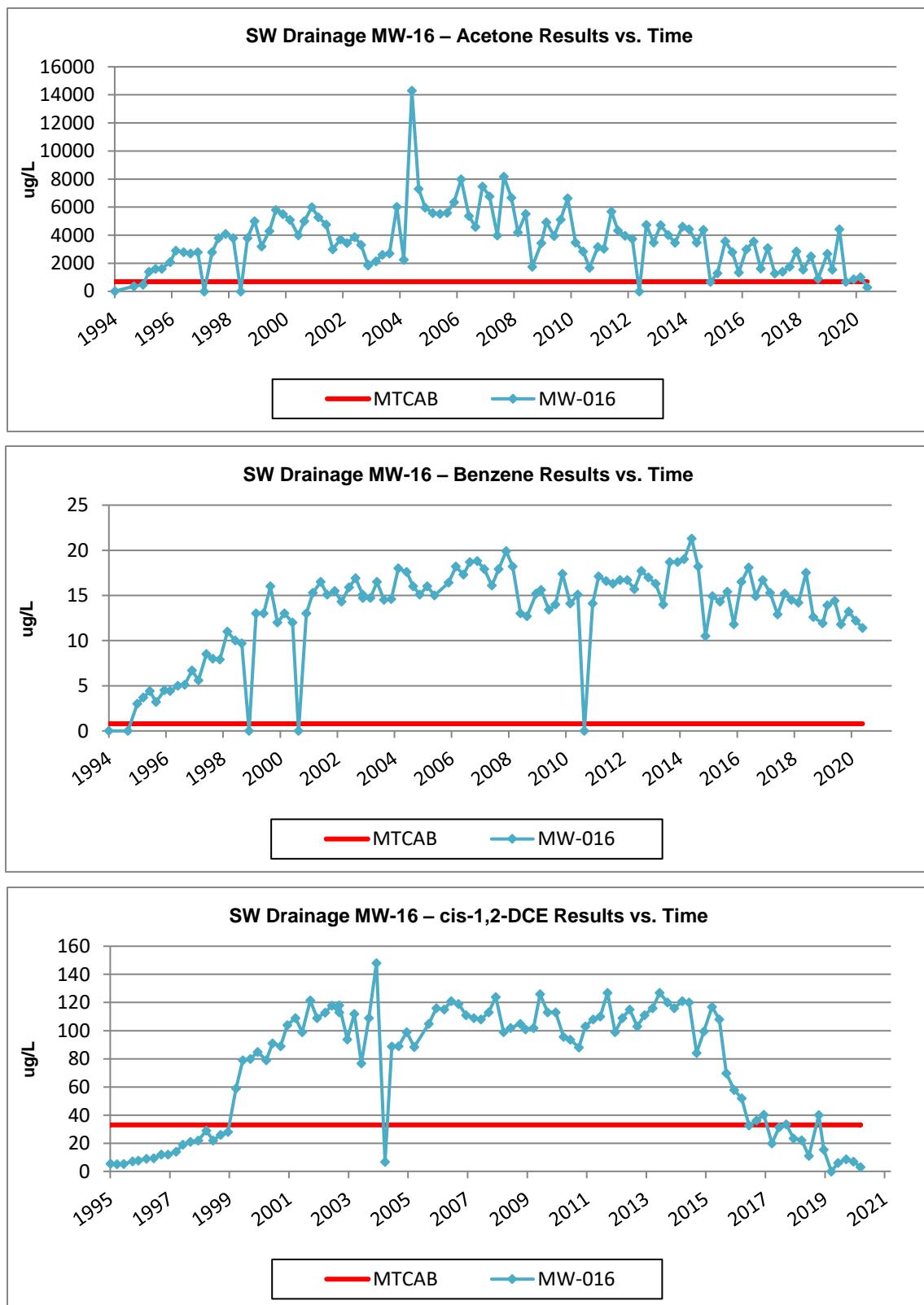


Figure 2-33: MW-016 VOCs / SVOCs Concentration Graphs (cont.)

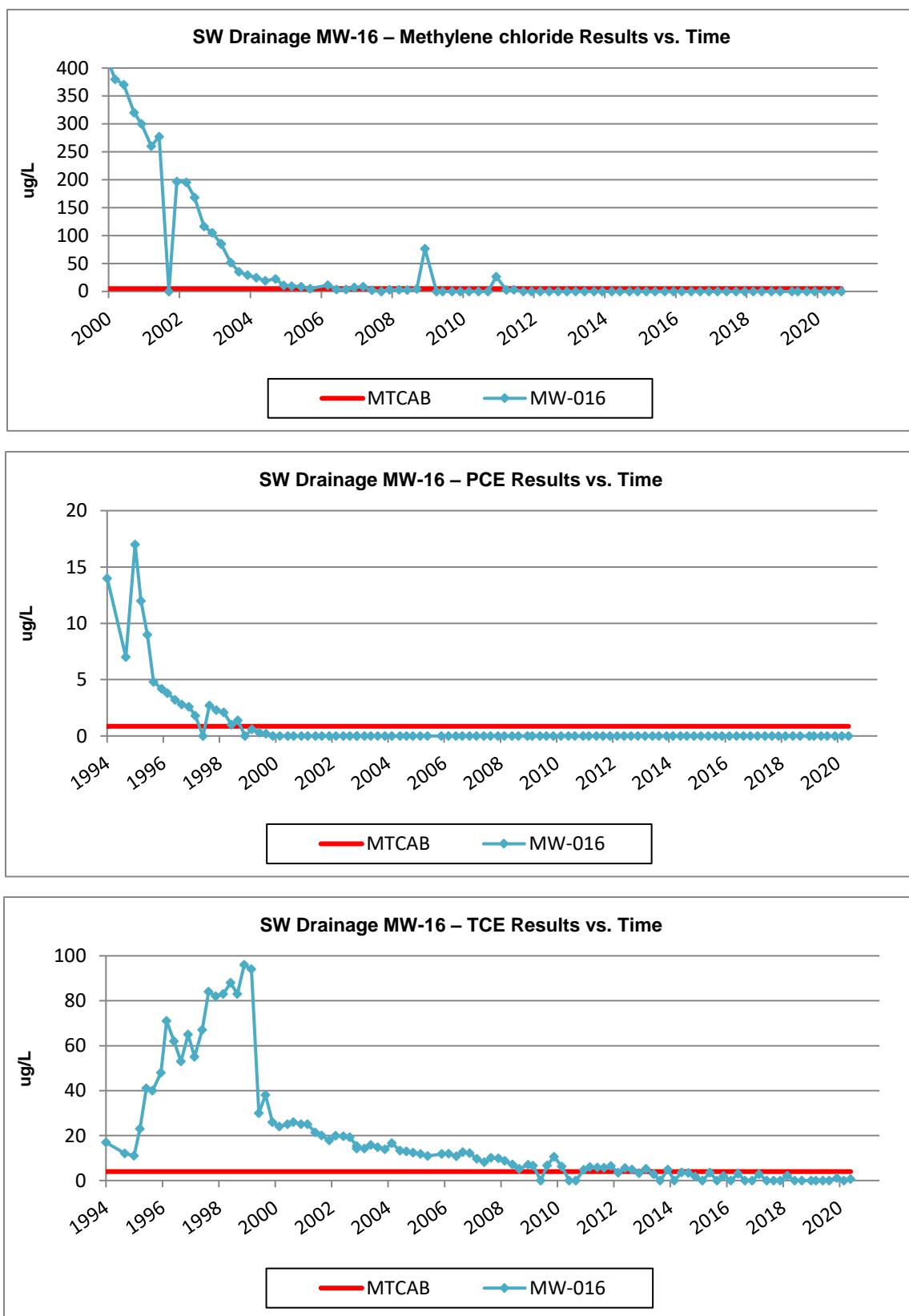


Figure 2-34: MW-016 VOCs / SVOCs Concentration Graphs (cont.)

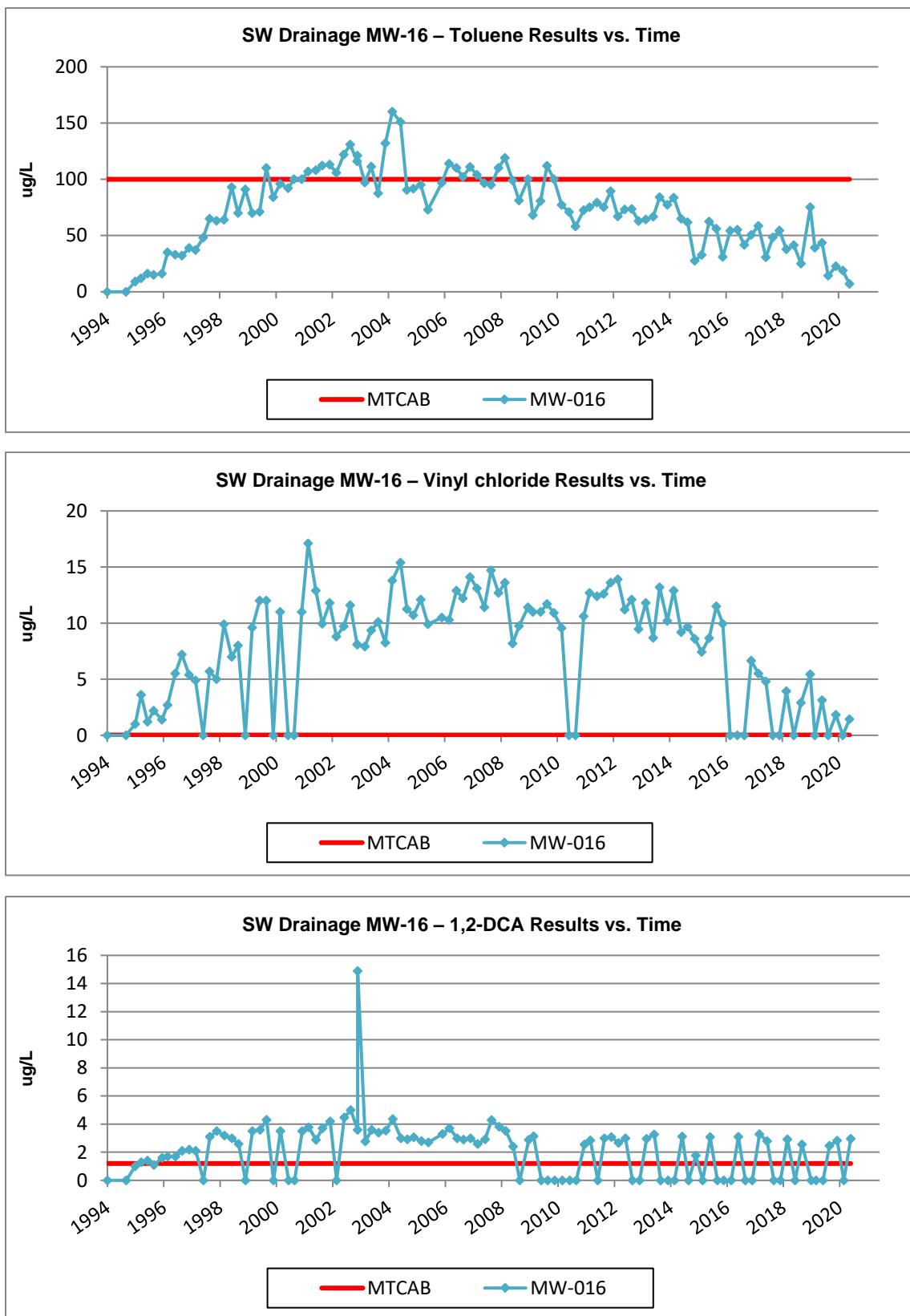
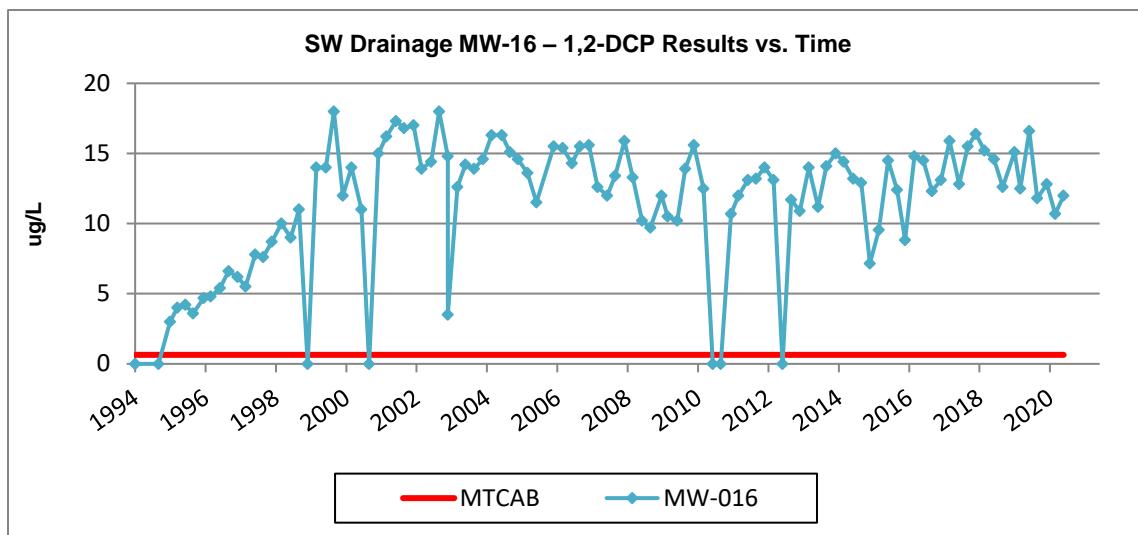


Figure 2-35: MW-016 VOCs / SVOCs Concentration Graphs (cont.)



SW MW-16 Monitoring Wells: Inorganics Time Series Graphs

Figure 2-36: MW-016 Inorganics Concentration Graphs

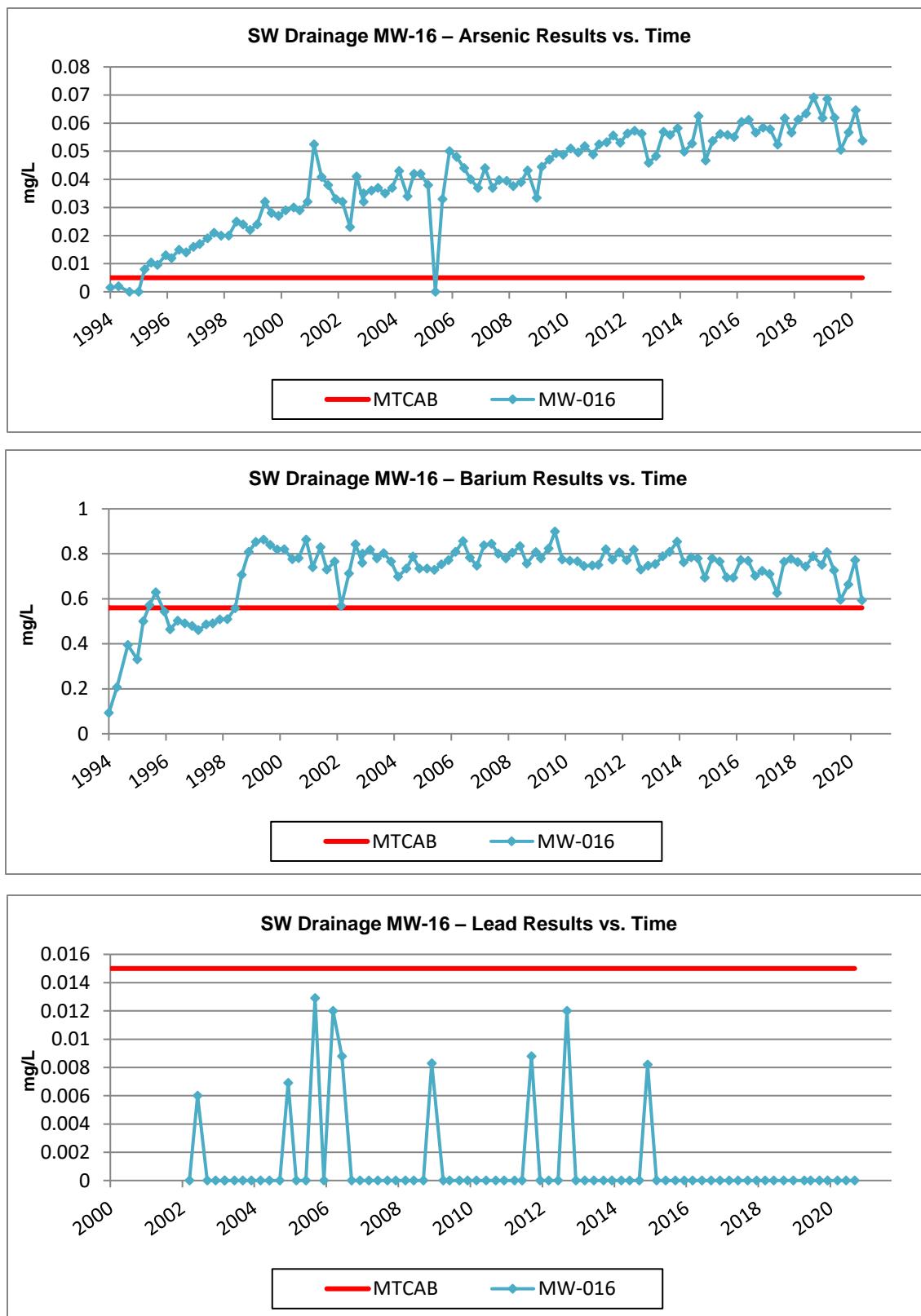
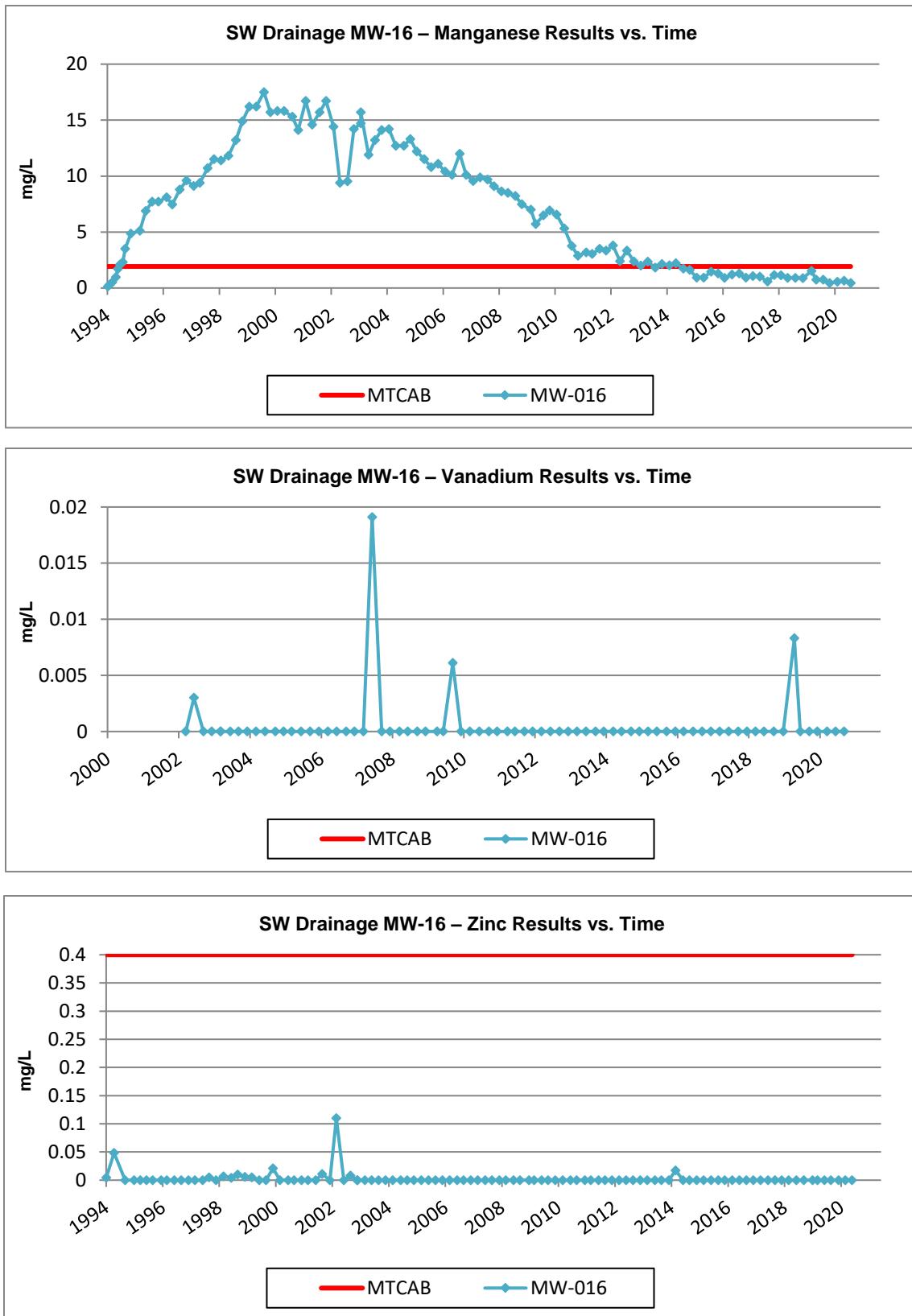


Figure 2-37: MW-016 Inorganics Concentration Graphs (cont.)



SW MW-16 Monitoring Wells: Conventionsals Time Series Graphs

Figure 2-38: MW-016 Conventionsals Concentration Graphs

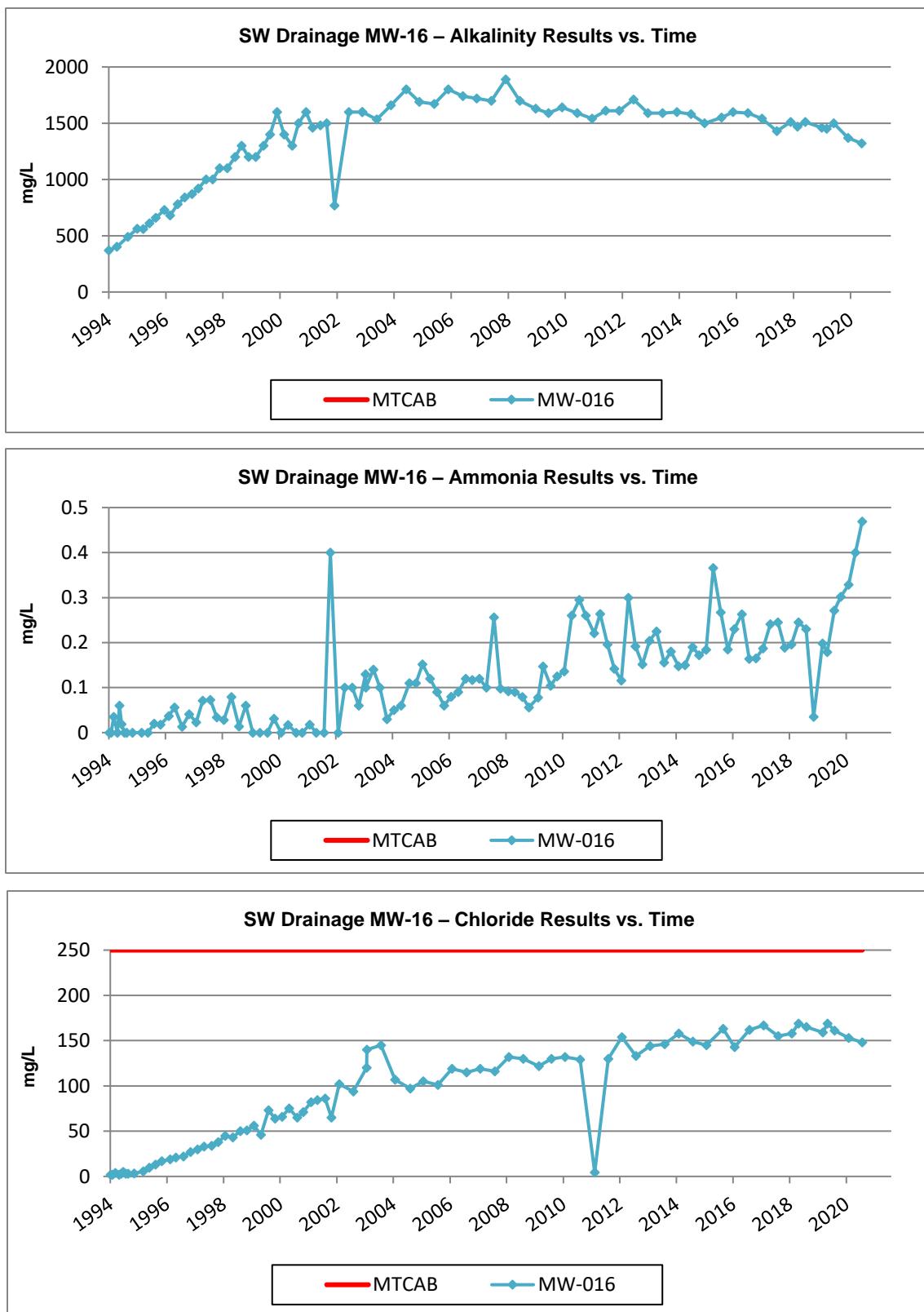


Figure 2-39: MW-016 Conventionals Concentration Graphs (cont.)

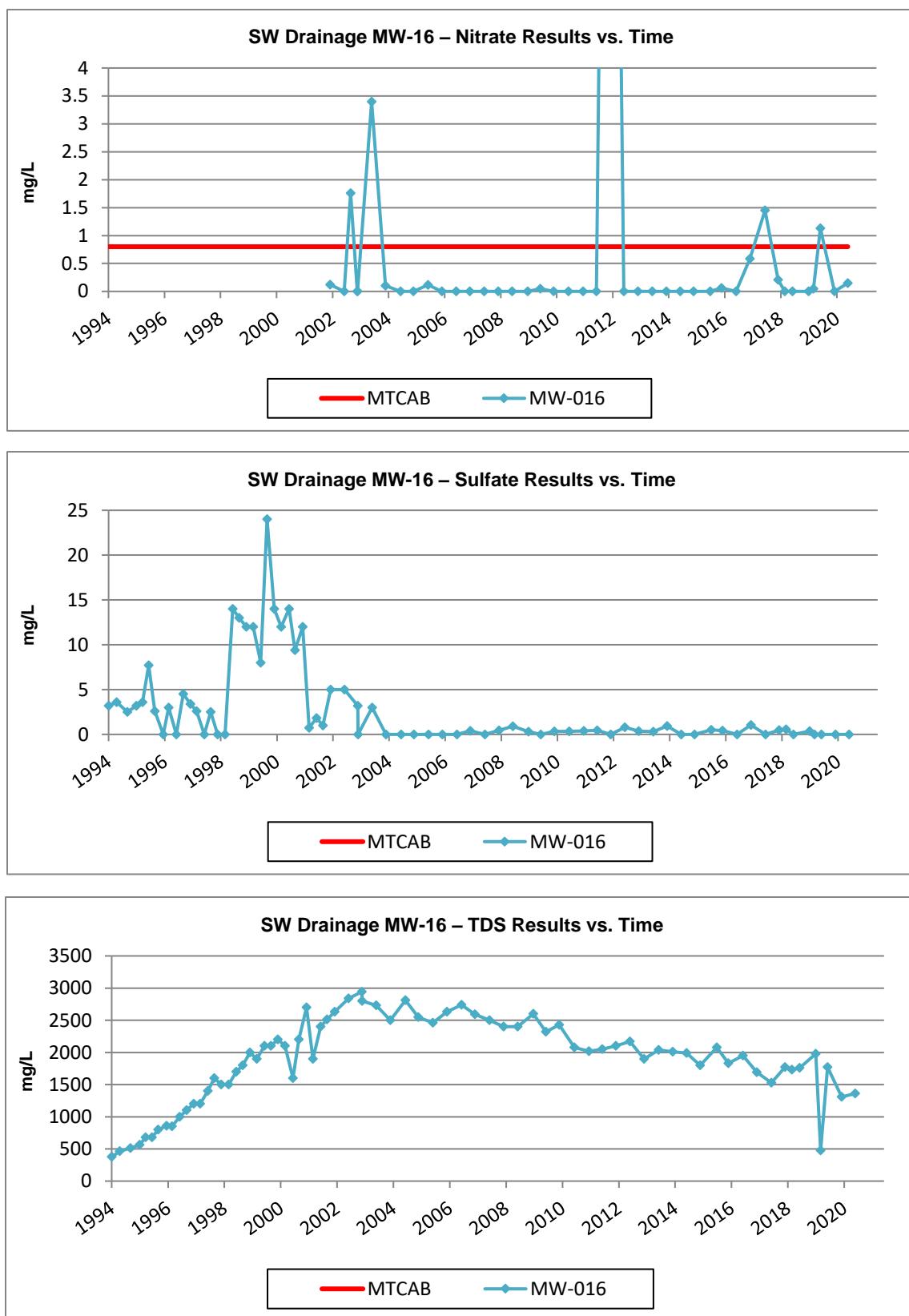
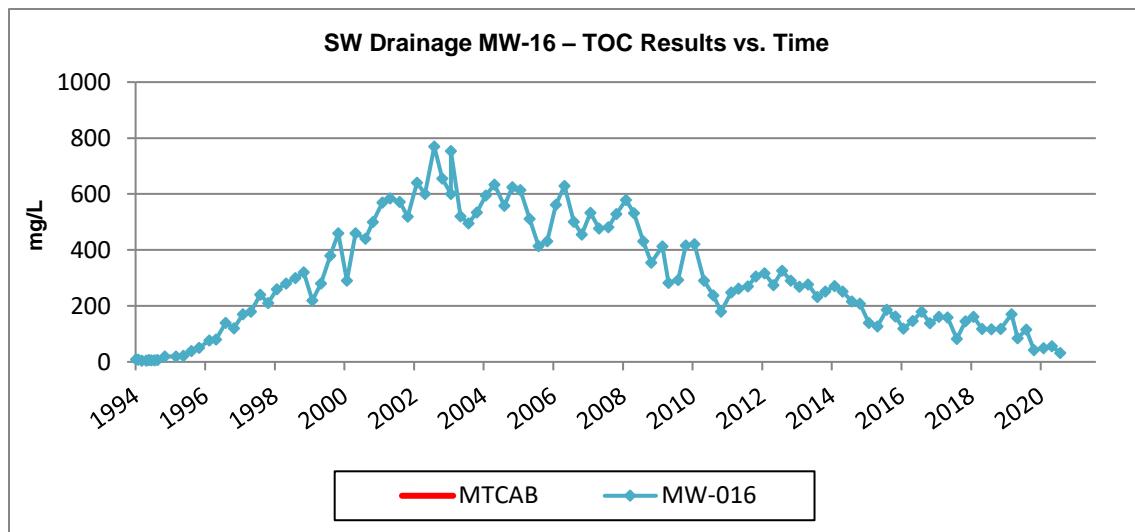


Figure 2-40: MW-016 Conventionals Concentration Graphs



South Drainage Monitoring Wells: VOCs/SVOCs Time Series Graphs

Figure 2-41: South Wells VOCs / SVOCs Concentration Graphs

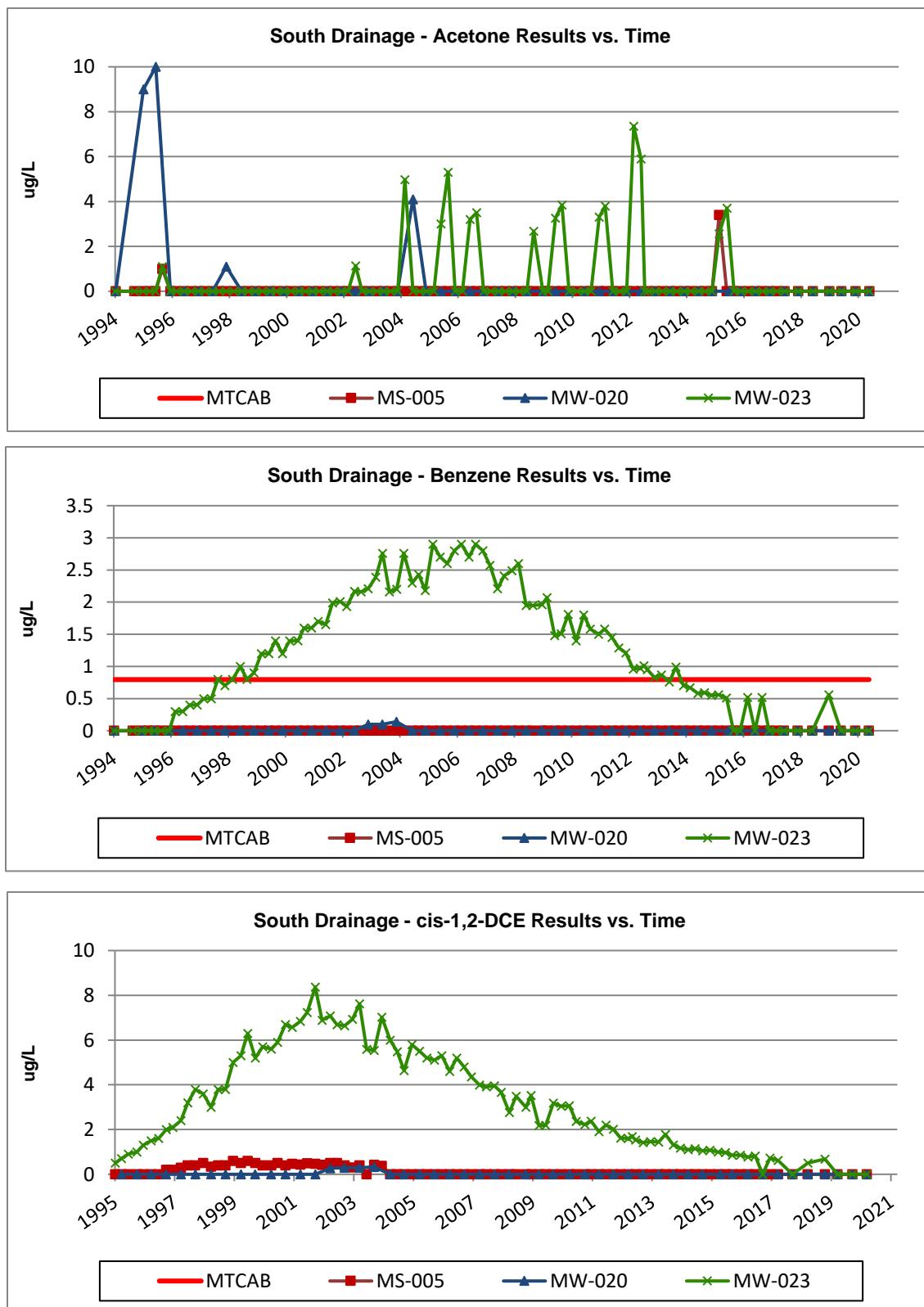


Figure 2-42: South Wells VOCs / SVOCs Concentration Graphs

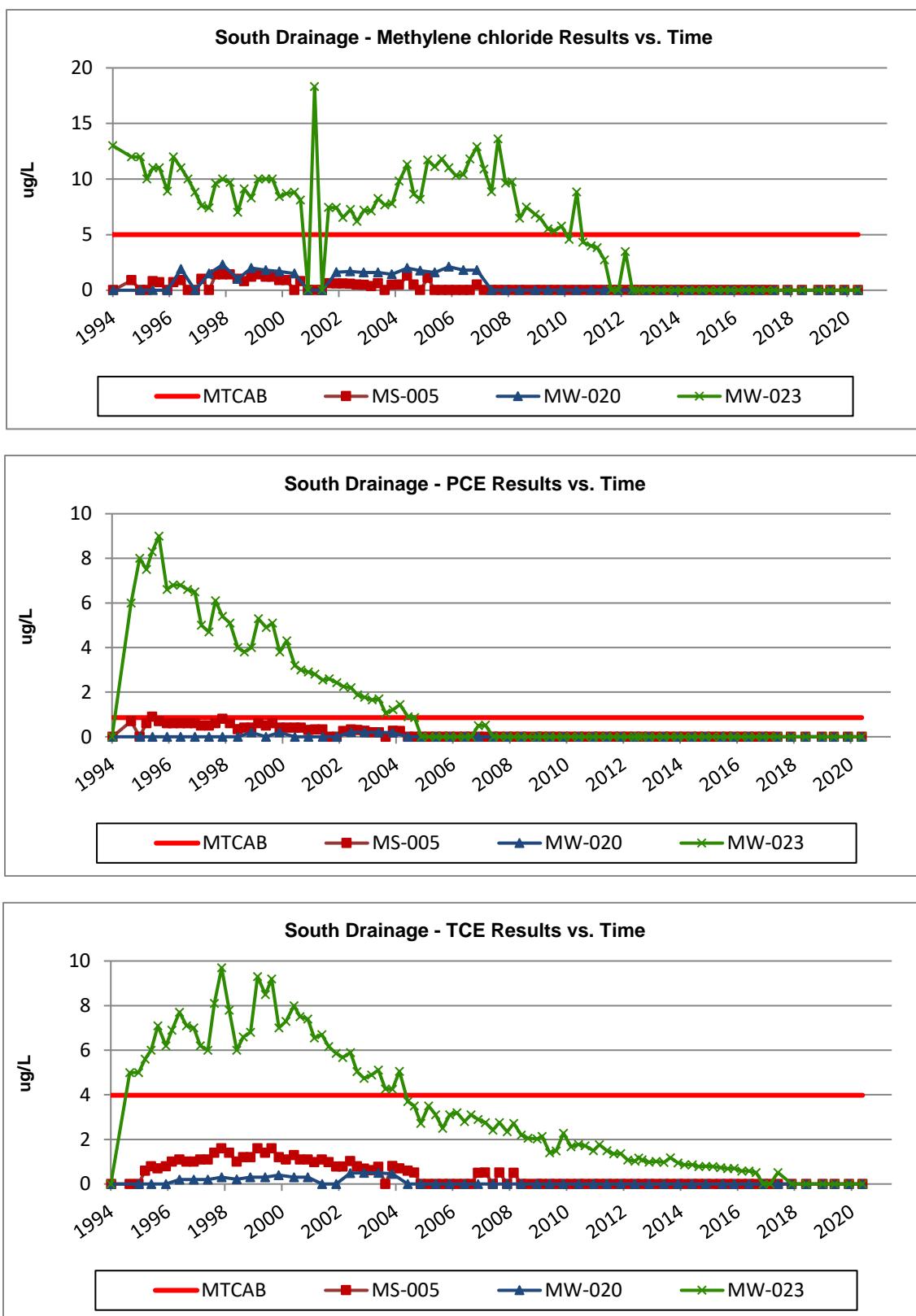


Figure 2-43: South Wells VOCs / SVOCs Concentration Graphs (cont.)

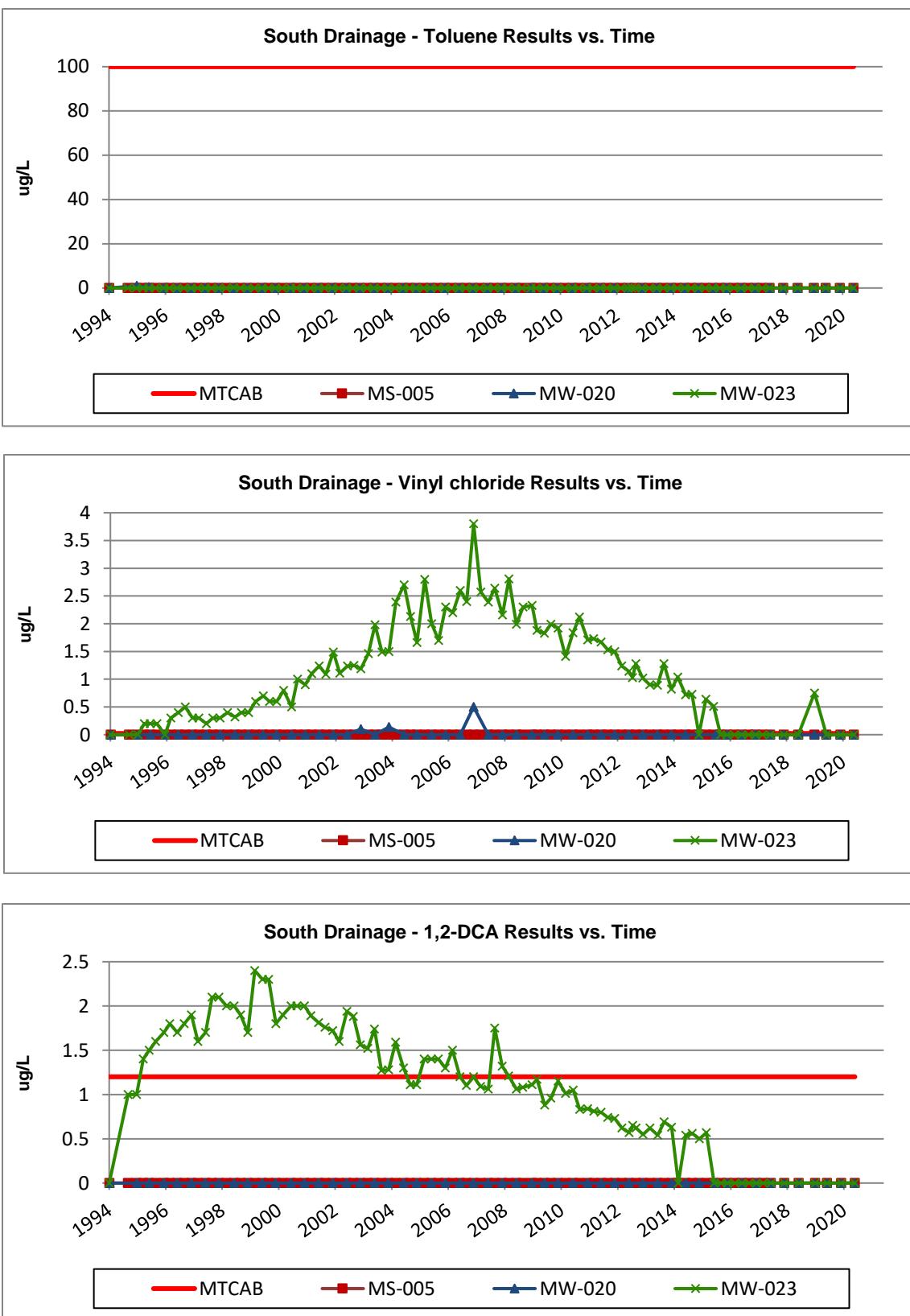
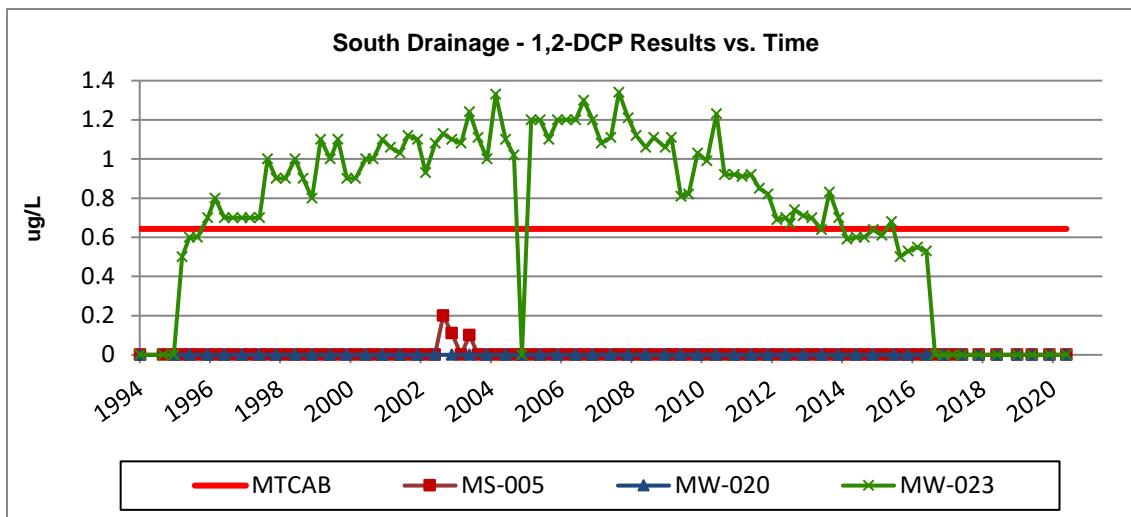


Figure 2-44: South Wells VOCs / SVOCs Concentration Graphs (cont.)



South Drainage Monitoring Wells: Inorganics Time Series Graphs

Figure 2-45: South Wells Inorganics Concentration Graphs

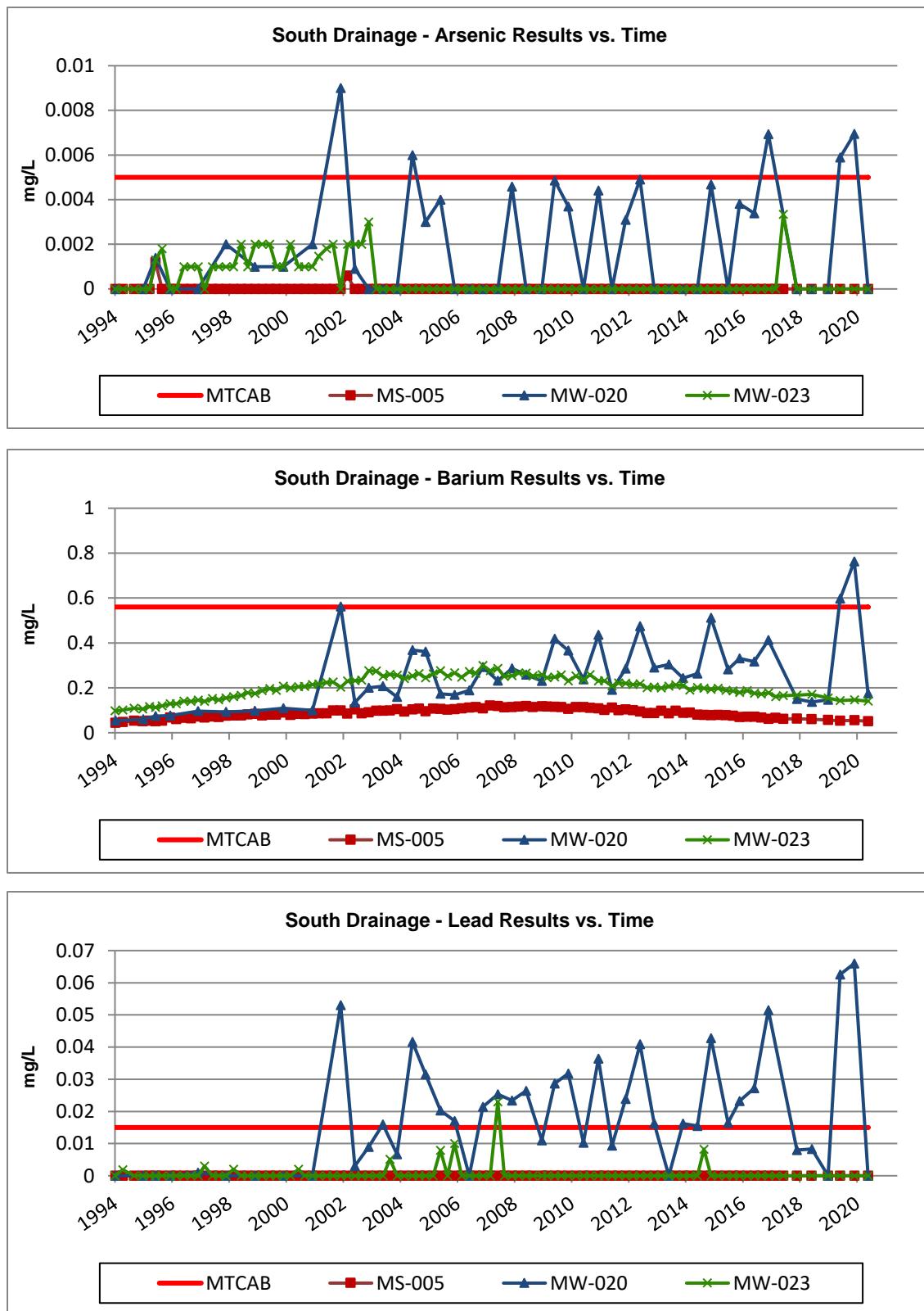
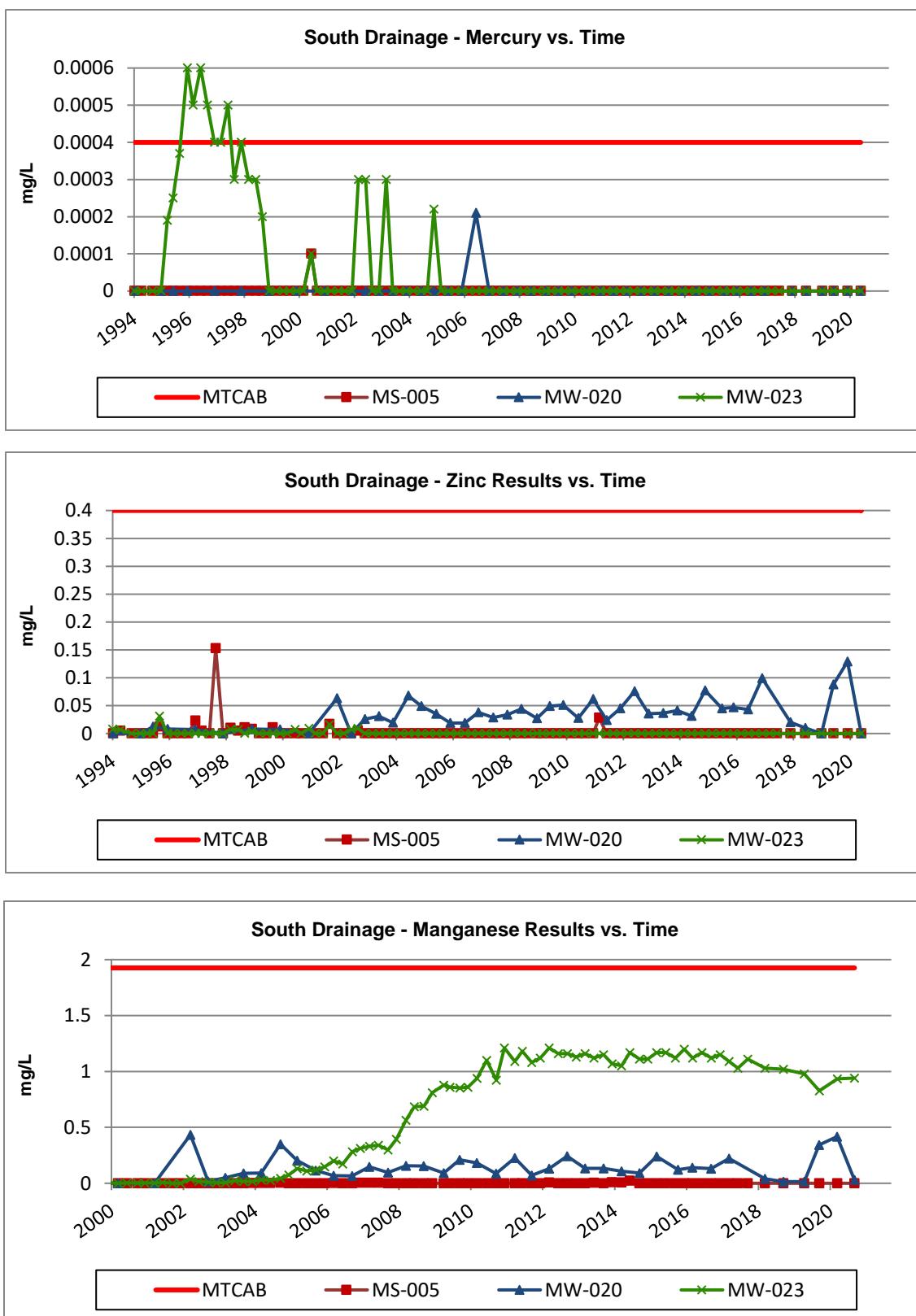


Figure 2-46: South Wells Inorganics Concentration Graphs (cont.)



South Drainage Monitoring Wells: Conventionals Time Series Graphs

Figure 2-47: South Wells Conventionals Concentration Graphs

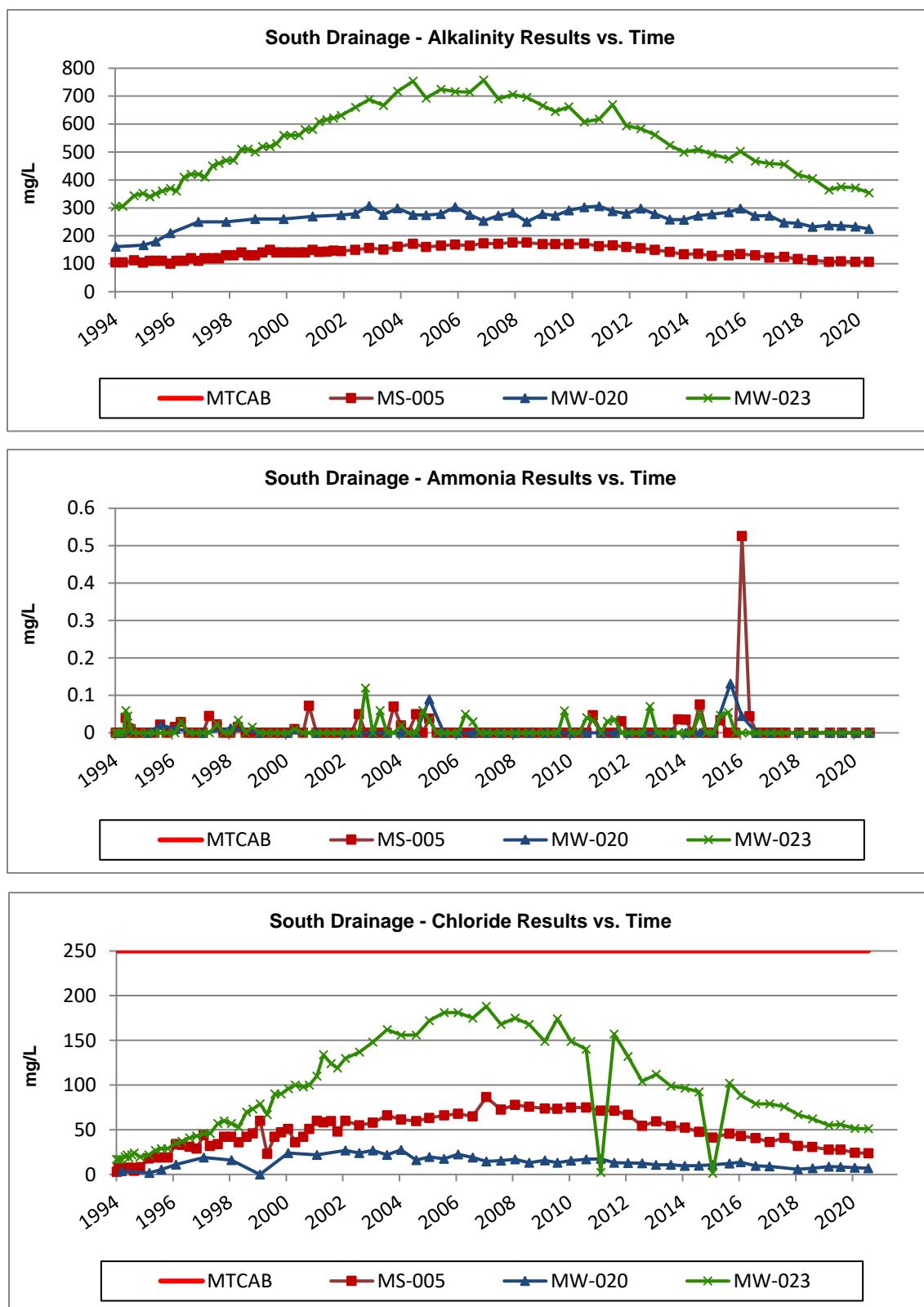


Figure 2-48: South Wells Conventionals Concentration Graphs (cont.)

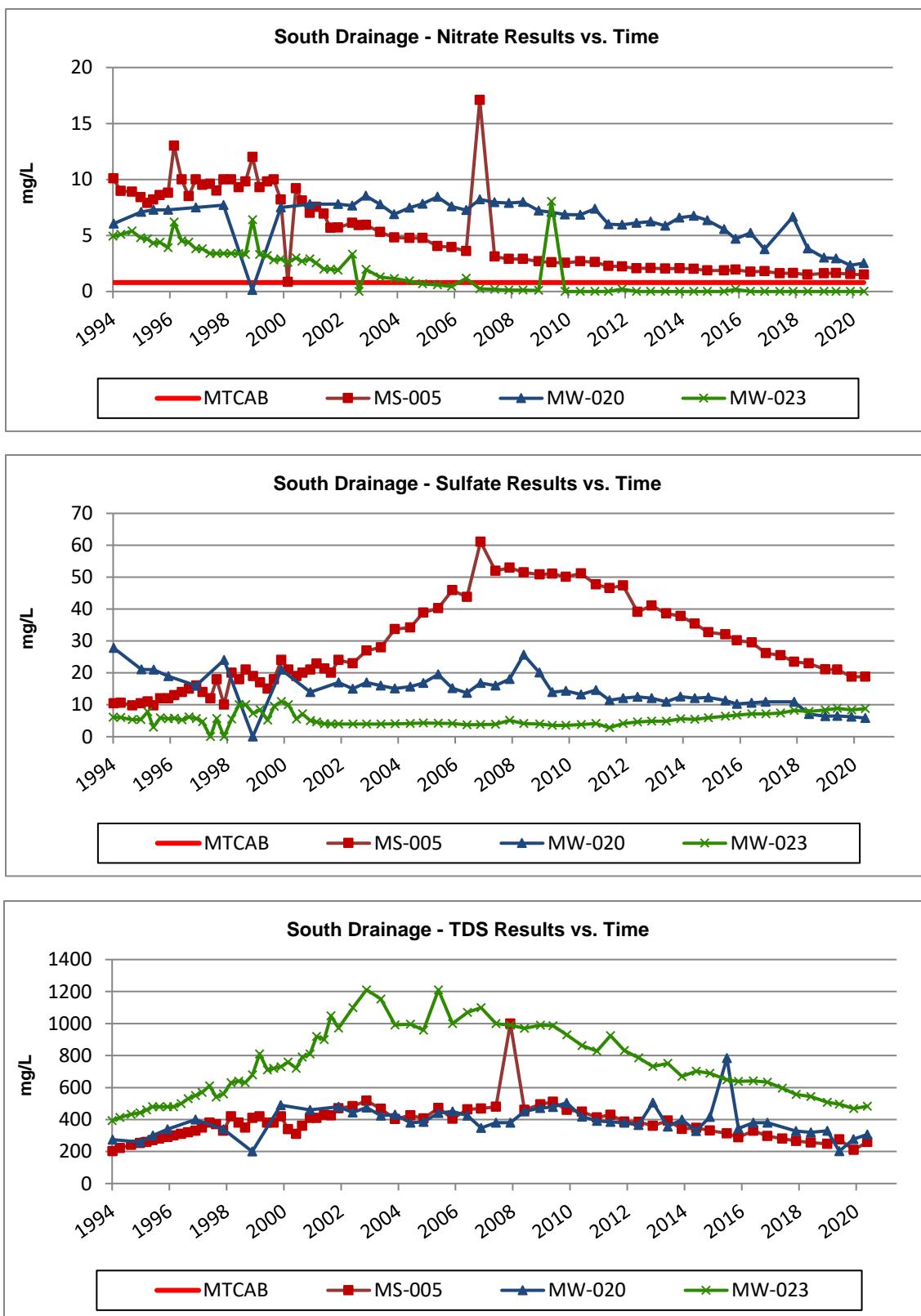
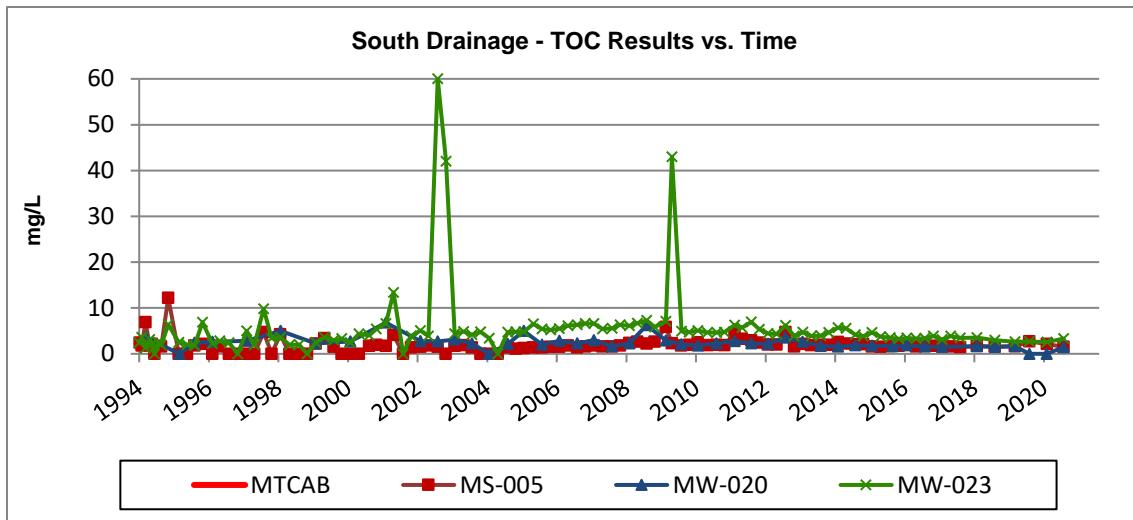


Figure 2-49: South Wells – Conventionals Concentration Graphs (cont.)



SE Drainage Monitoring Wells: VOCs/SVOCs Time Series Graphs

Figure 2-50: Southeast Wells VOCs / SVOCs Concentration Graphs

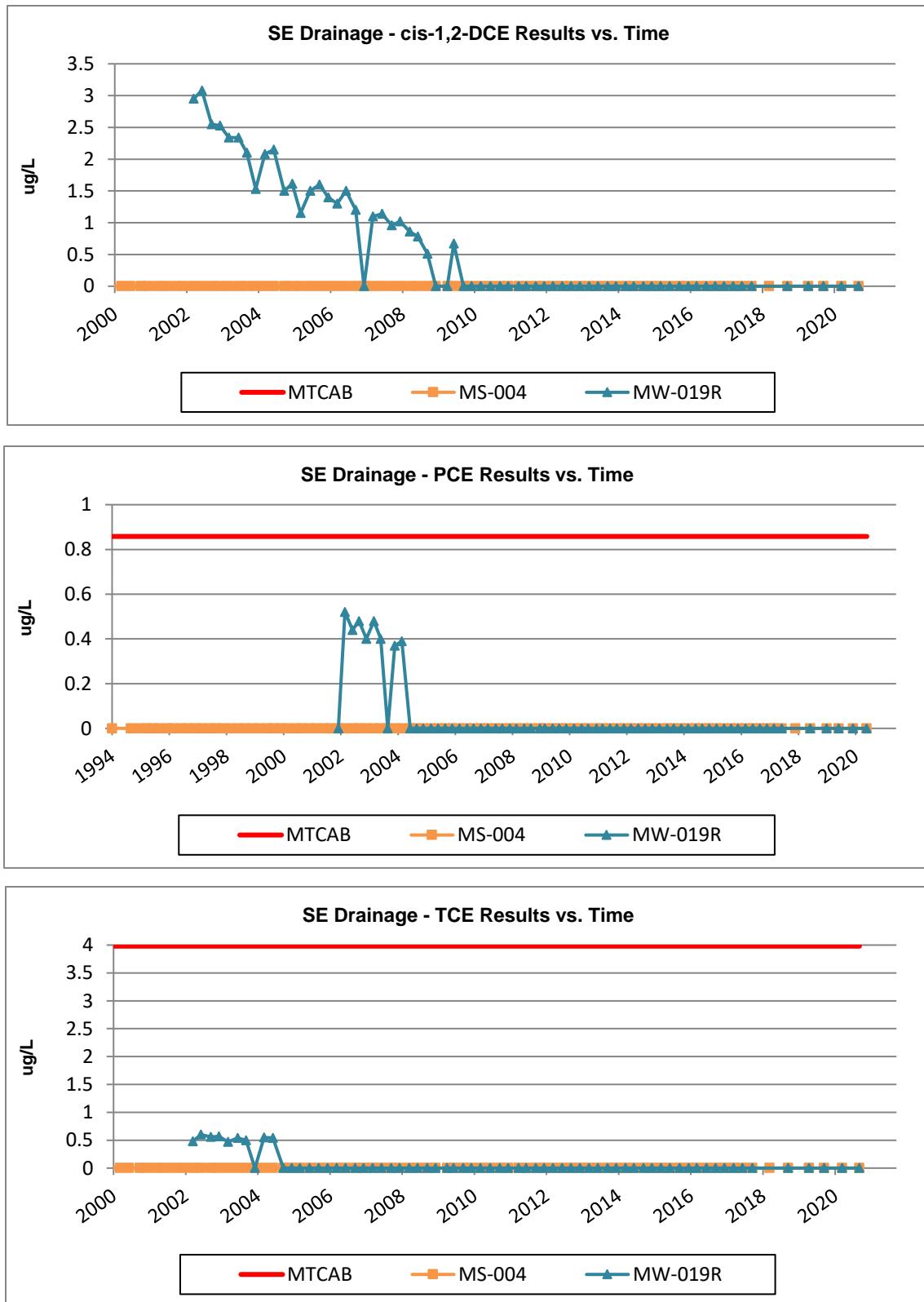
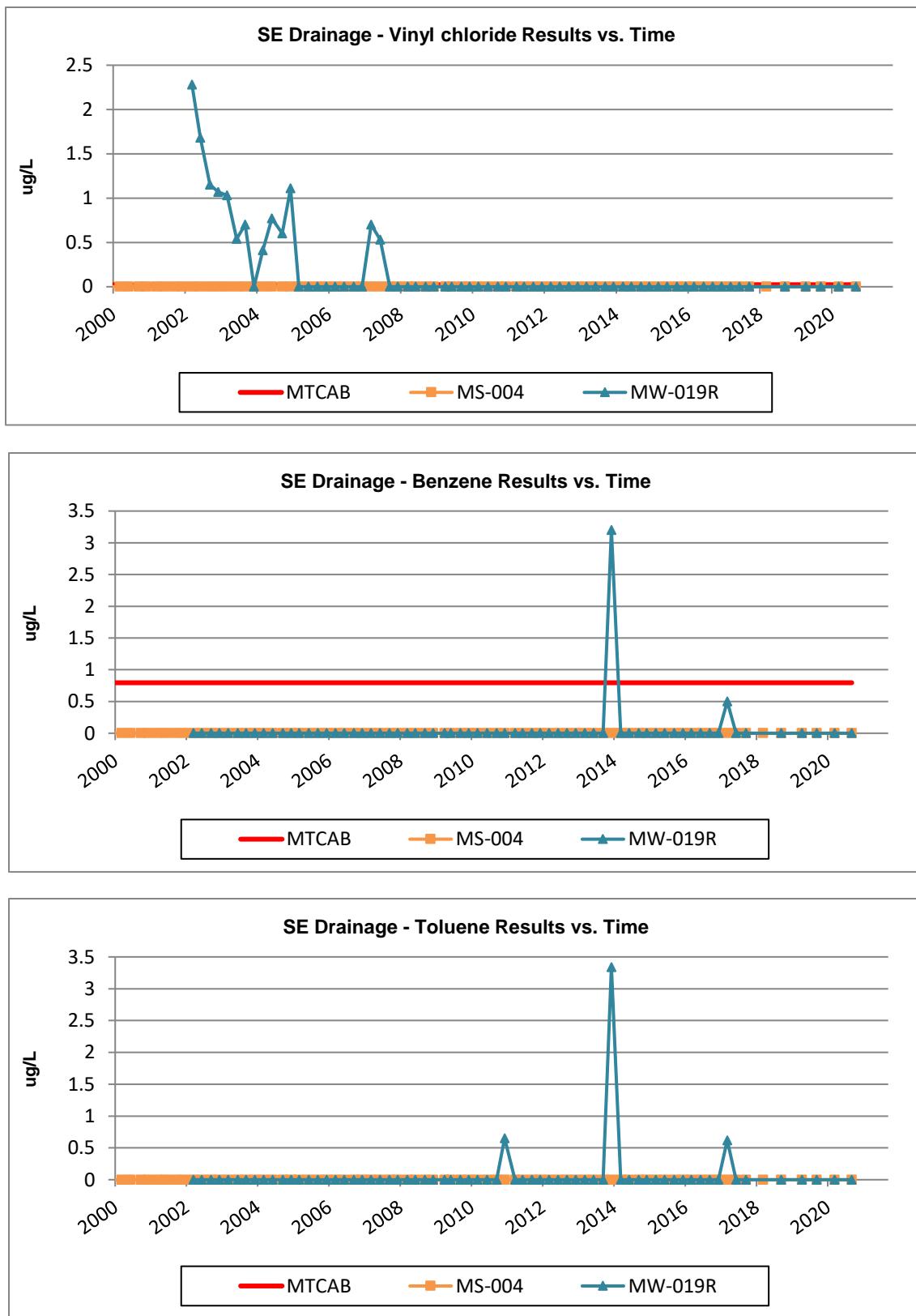


Figure 2-51: Southeast Wells VOCs / SVOCs Concentration Graphs



SE Drainage Monitoring Wells: Inorganics Time Series Graphs

Figure 2-52: SE Wells Inorganics Concentration Graphs

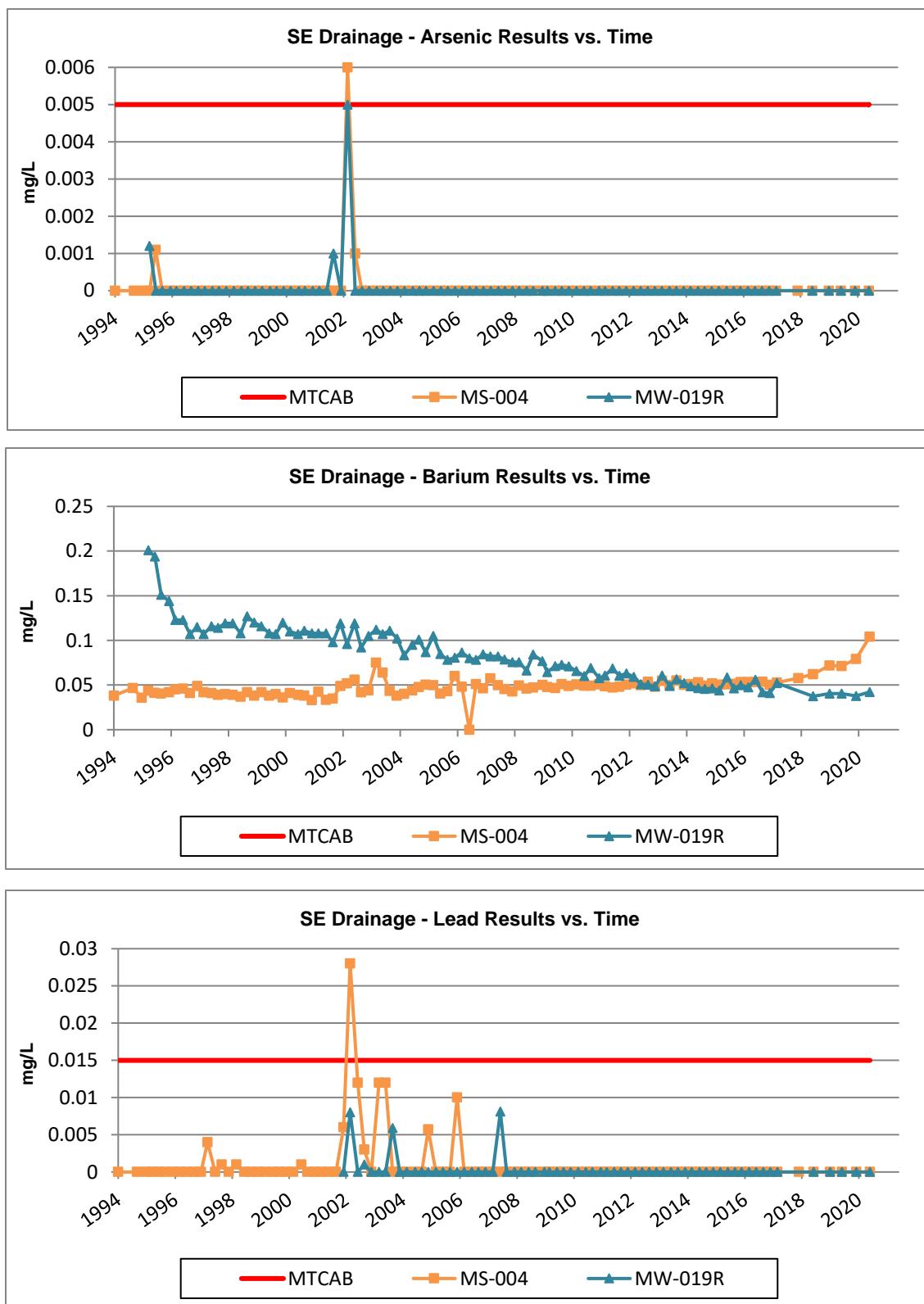
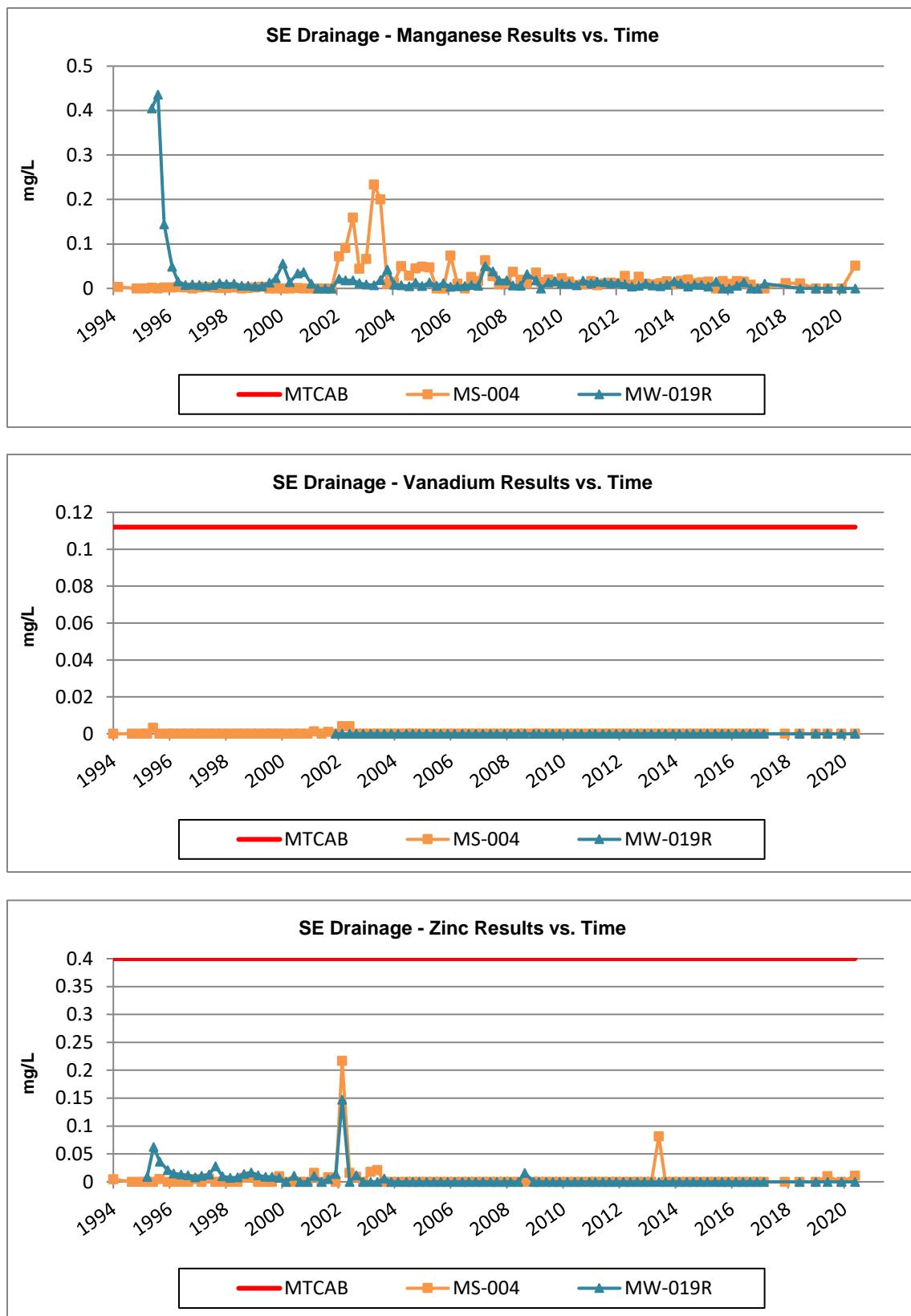


Figure 2-53: SE Wells Inorganics Concentration Graphs (cont.)



SE Drainage Monitoring Wells: Conventionals Time Series Graphs

Figure 2-54: SE Wells Conventions Concentration Graphs

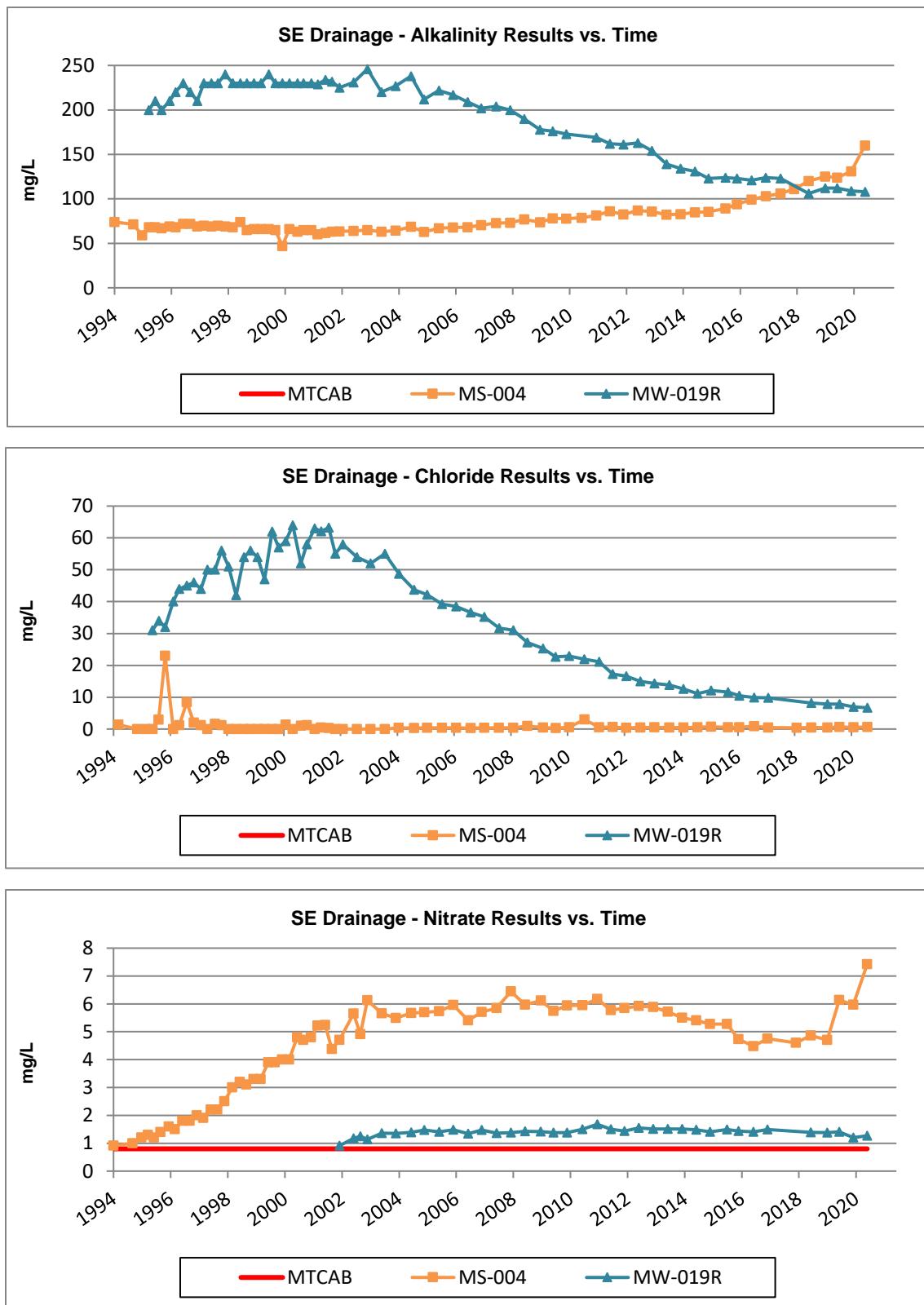
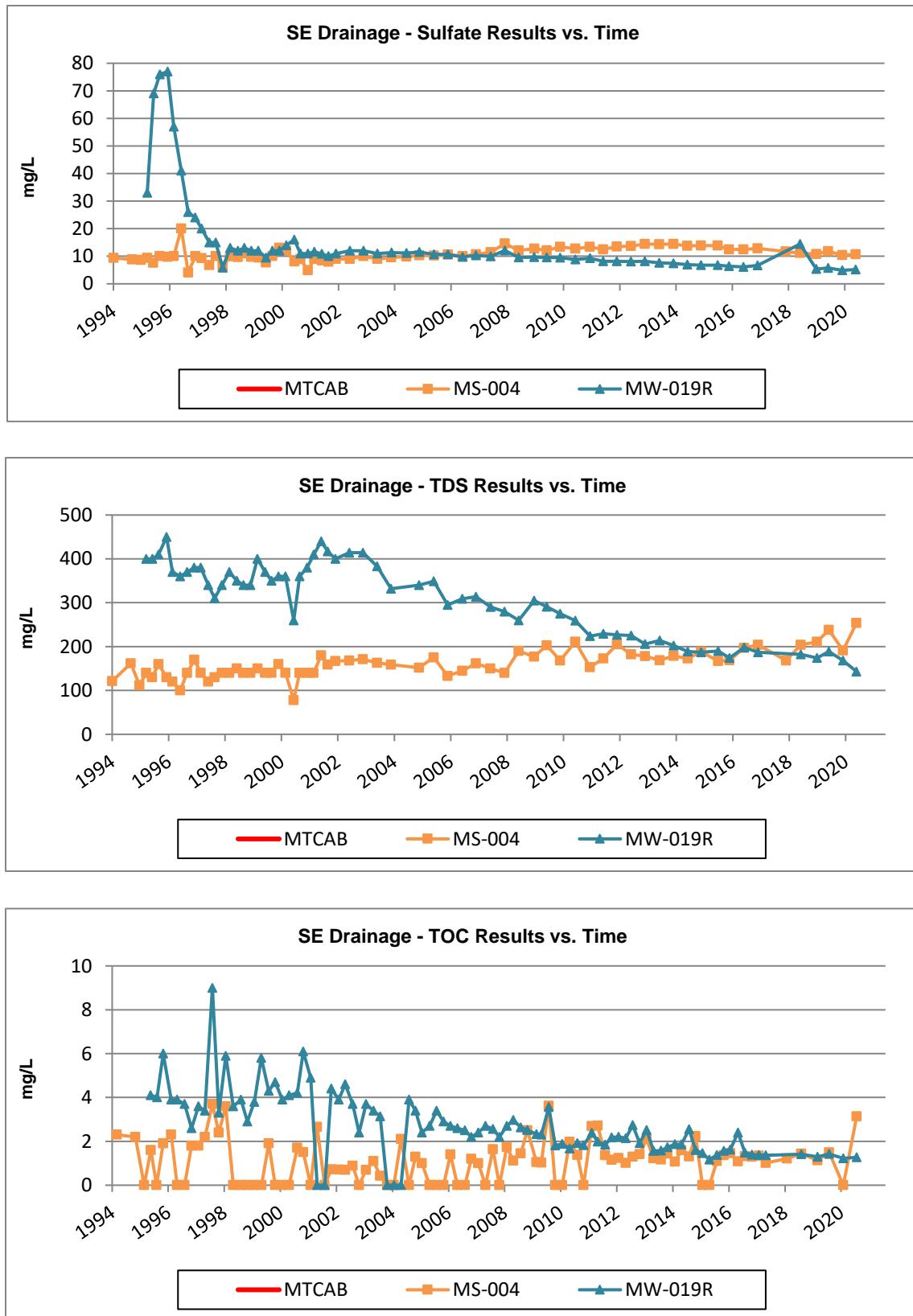
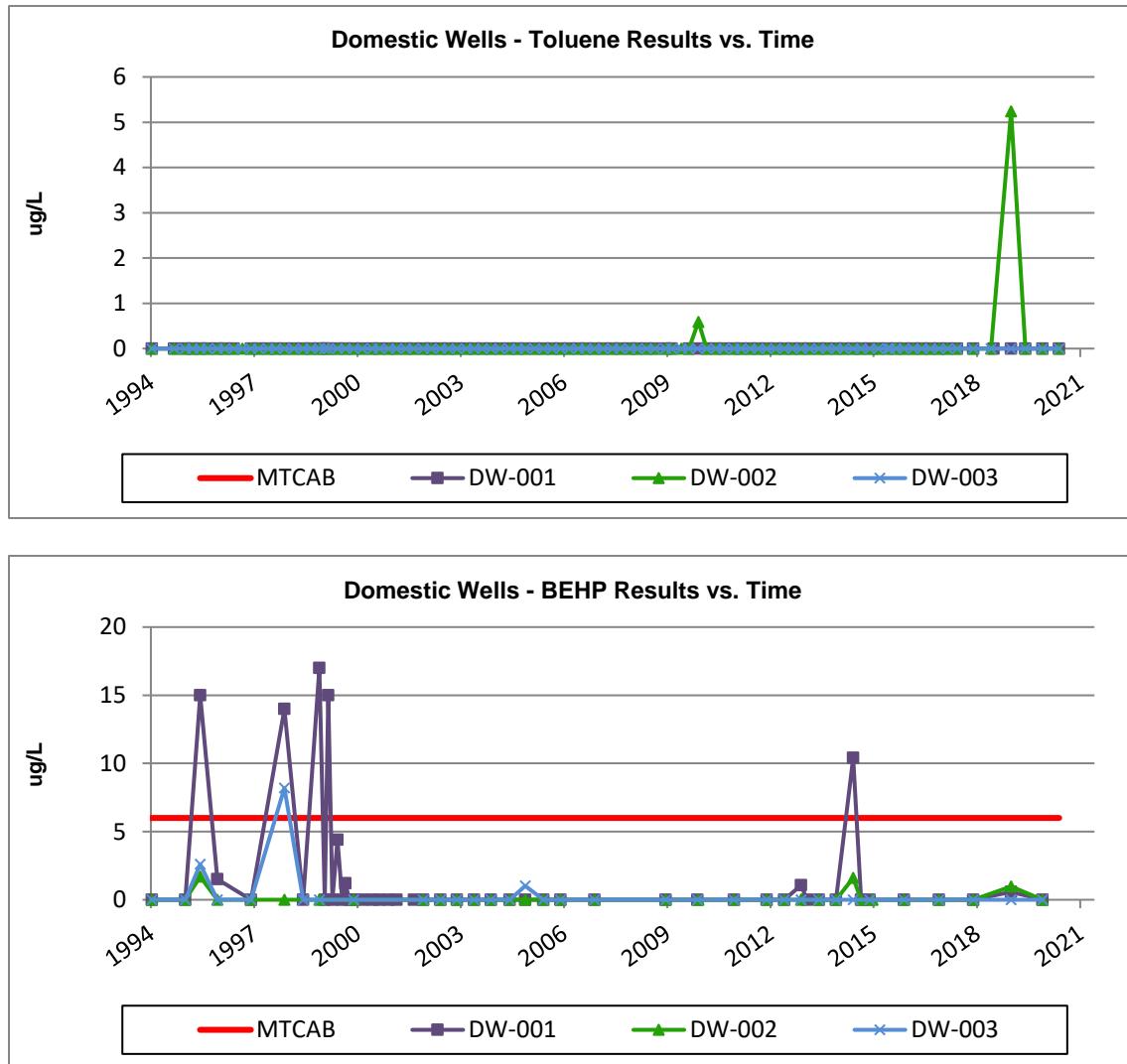


Figure 2-55: SE Wells Conventionals Concentration Graphs (cont.)



Domestic Wells: VOCs/SVOCs Time Series Graphs

Figure 2-56: Domestic Wells VOCs / SVOCs Concentration Graphs



Domestic Wells: Inorganics Time Series Graphs

Figure 2-57: Domestic Wells Inorganics Concentration Graphs (cont.)

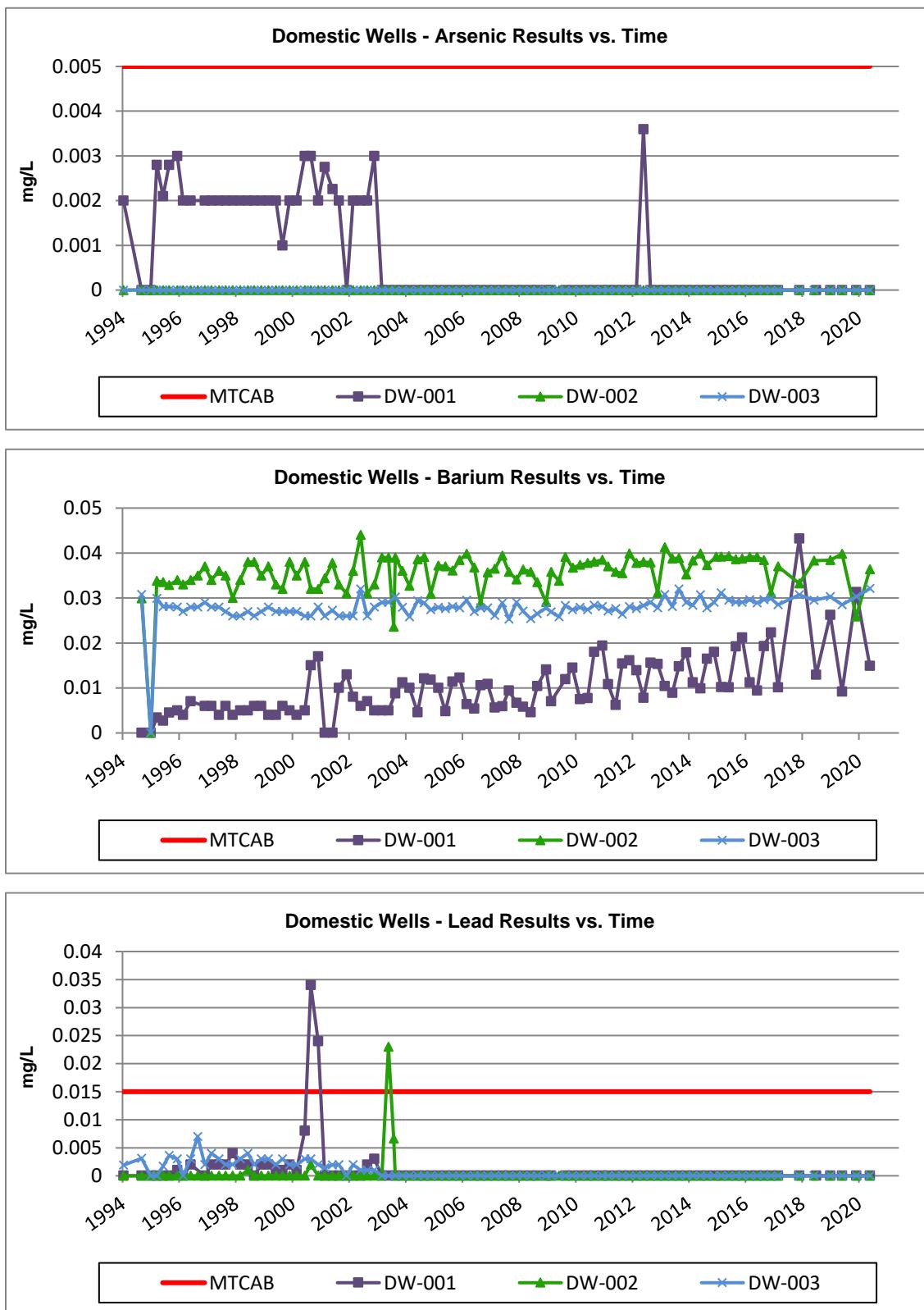
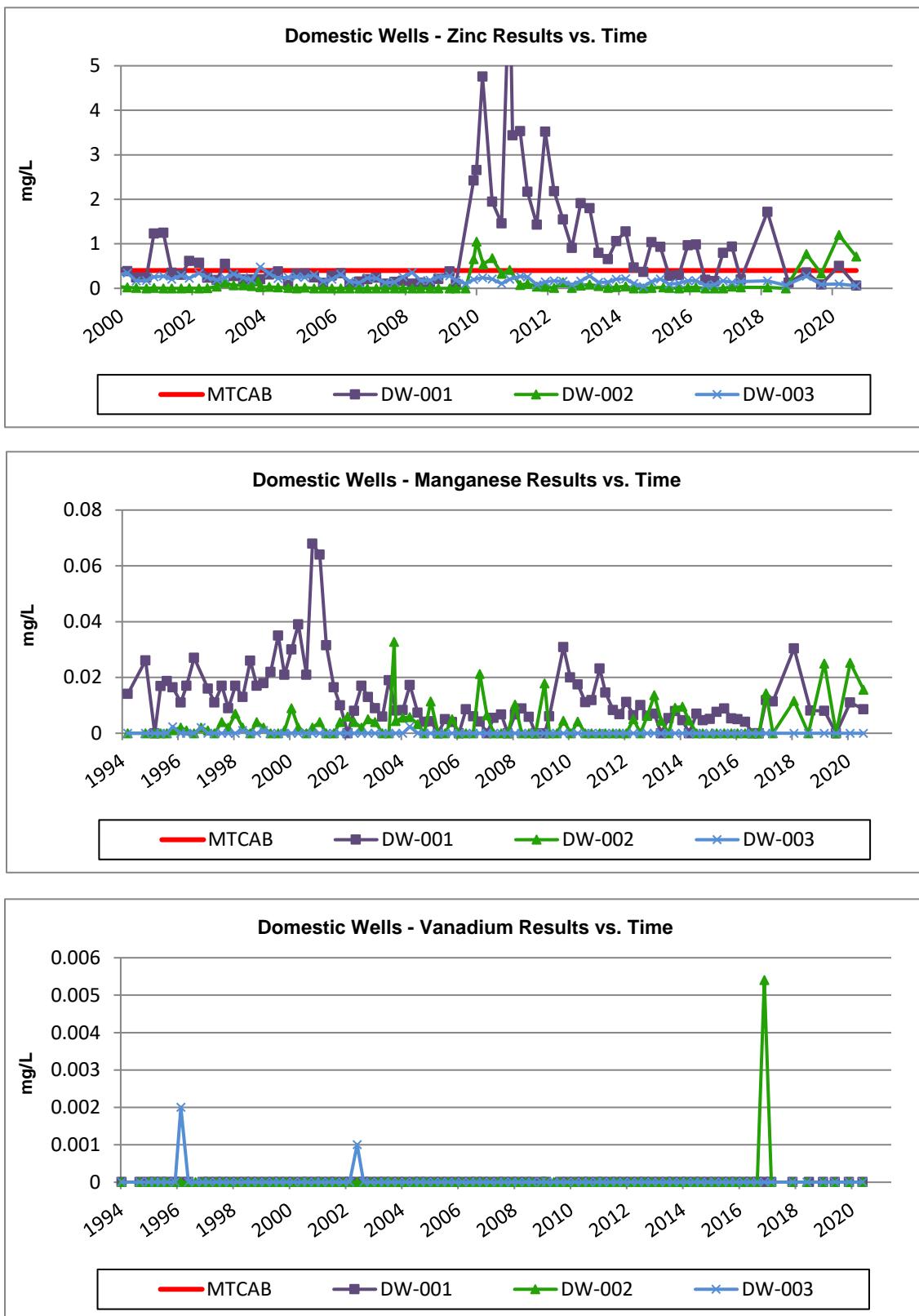


Figure 2-58: Domestic Wells Inorganics Concentration Graphs (cont.)



Domestic Wells: Conventional Time Series Graphs

Figure 2-59: Domestic Wells Conventional Concentration Graphs

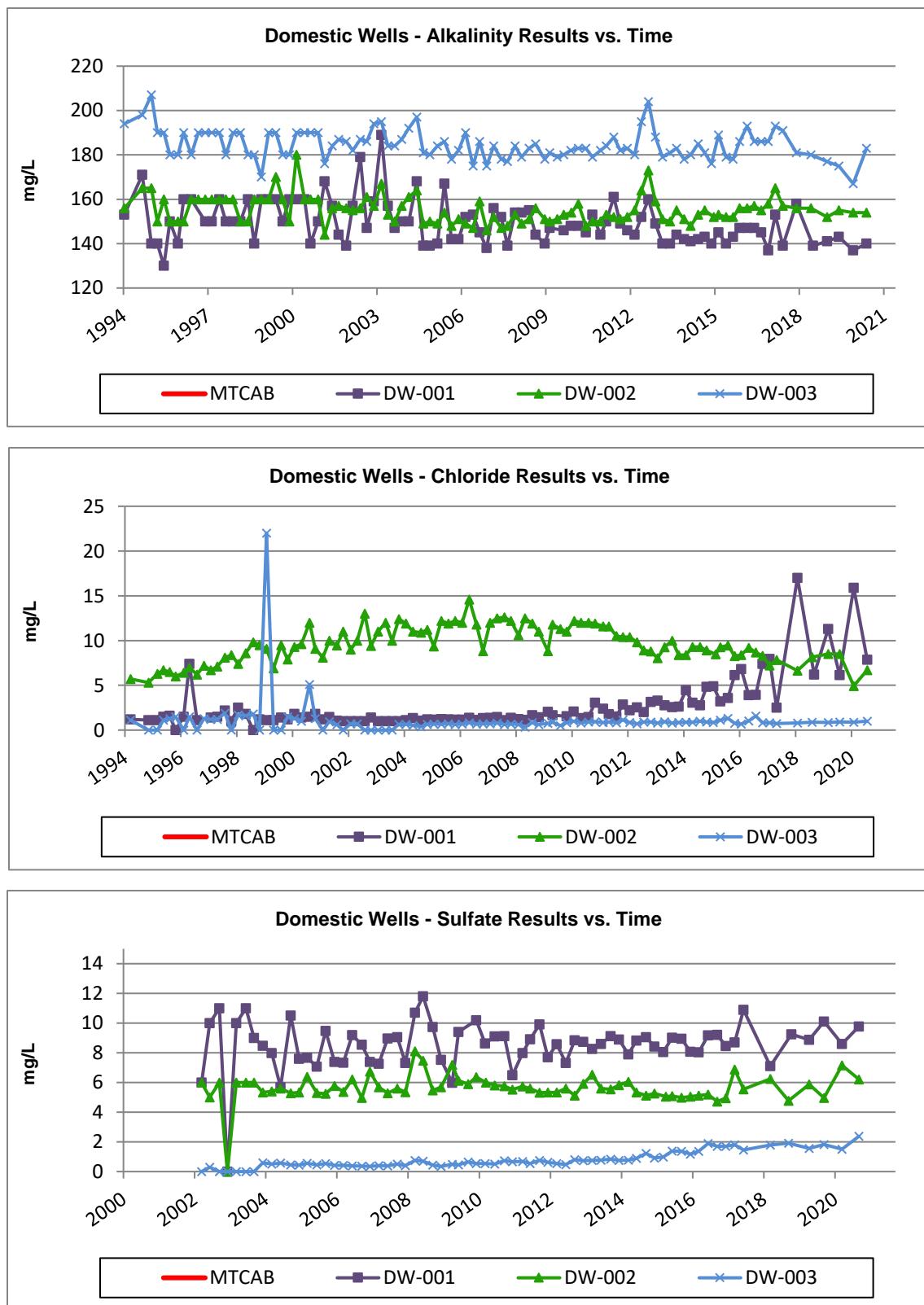
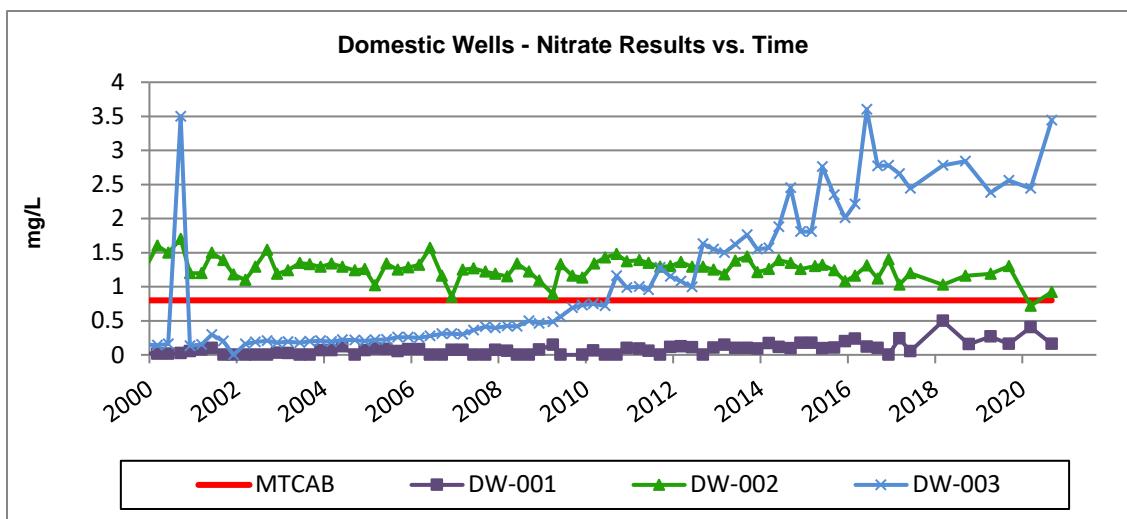


Figure 2-60: Domestic Wells Conventionals Concentration Graphs (cont.)



3 LEACHATE

3.1 LEACHATE DATA

As required by the wastewater discharge permit (issued by Spokane County), a grab sample is collected twice a year at the gravity line conveying leachate to the local sewer system. Grab samples were collected in October 2019 and May 2020.

FIELD DATA

Field parameters were collected at the gravity line during the above sampling rounds. Results are shown in Table 3-1. Hydrographs created using levels taken at landfill leachate piezometers are presented in Figure 3-1 through Figure 3-5.

CRITERIA EXCEEDANCES

There were no exceedances of daily maximum criteria set forth for the leachate gravity line samples during this annual reporting period.

CHEMICAL DATA

Results from the analyses of the October and May leachate samples are presented in Table 3-2.

LEACHATE PRODUCTION

Monthly and quarterly leachate production rates are presented in Table 3-3 along with local precipitation amounts. Total annual production rates and precipitation totals versus time are shown in Figure 3-6. The total amount of leachate generated at the Mica Landfill from October 2019 through September 2020 was approximately 3,666,566 gallons.

Leachate Field Parameters

Table 3-1: Leachate Field Parameters for the Reporting Period

StationID	SampleID	SampleDate	FieldTemp	FieldPH	FieldConductivity	FieldTurbidity
LS-GL	LS-GL-191023-B	10/23/2019	7.1	8.14	429	5.66
LS-GL	LS-GL-191023-D	10/23/2019	7.2	8.16	428	5.83
LS-GL	LS-GL-191023-C	10/23/2019	7	8.13	432	5.71
LS-GL	LS-GL-191023-A	10/23/2019	7.8	8.11	418	5.79
LS-GL	LS-GL-200507-D	5/7/2020	9.1	7.67	462	9.29
LS-GL	LS-GL-200507-C	5/7/2020	8.9	7.64	460	9.25
LS-GL	LS-GL-200507-B	5/7/2020	9	7.59	457	9.17
LS-GL	LS-GL-200507-A	5/7/2020	8.6	7.63	458	9.18

Temp: Degrees C, Conductivity: umhos/cm, Turbitiy: NTU

Leachate Hydrographs

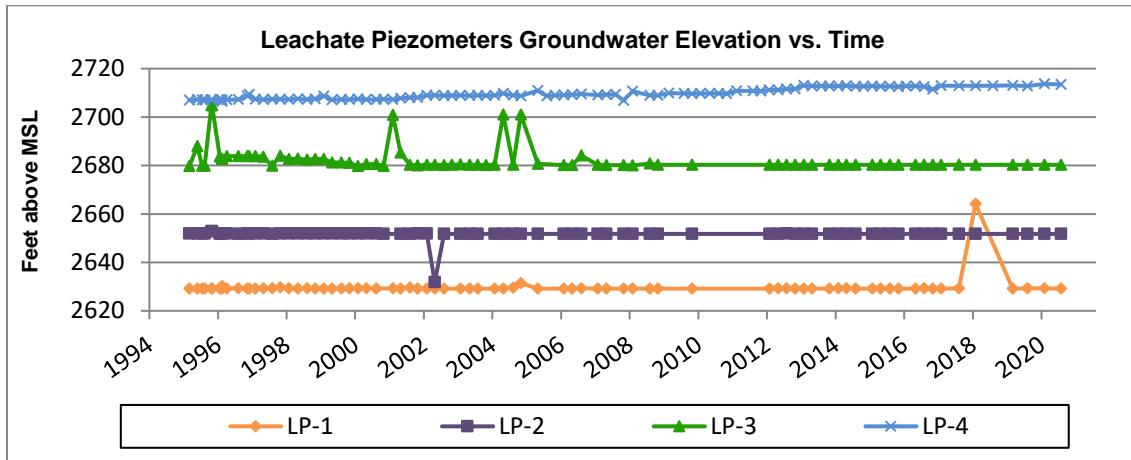


Figure 3-1: Leachate Piezometers Groundwater Elevations vs. Time

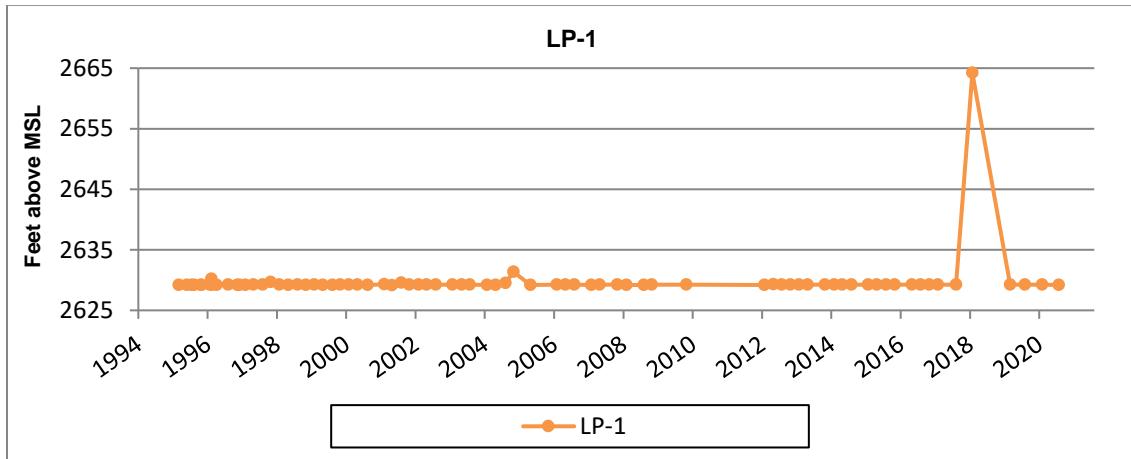


Figure 3-2: LP-1 Groundwater Elevations vs. Time

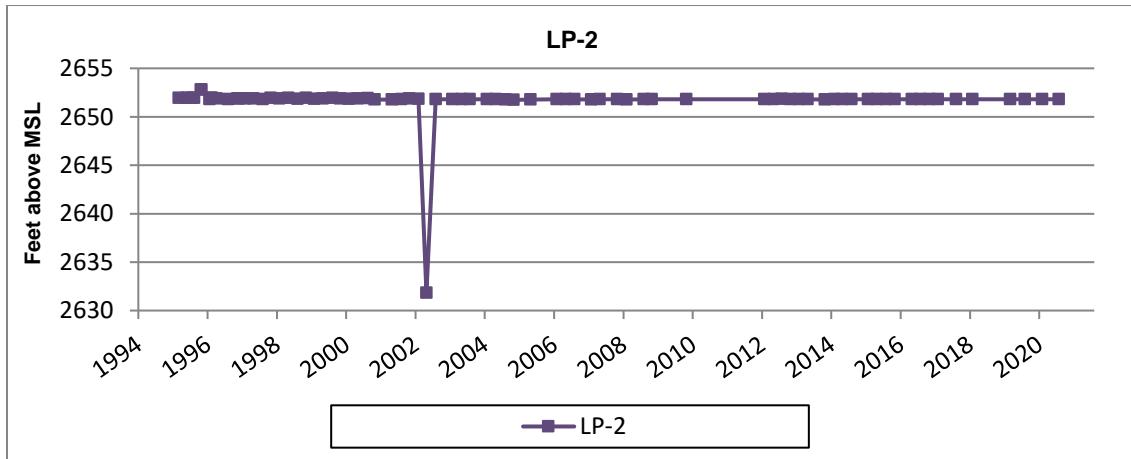


Figure 3-3: LP-2 Groundwater Elevations vs. Time

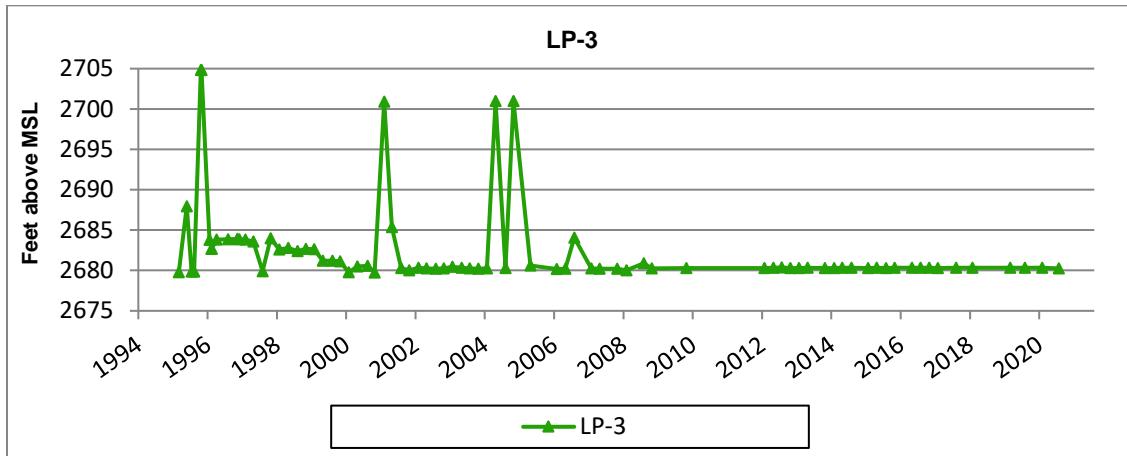


Figure 3-4: LP-3 Groundwater Elevations vs. Time

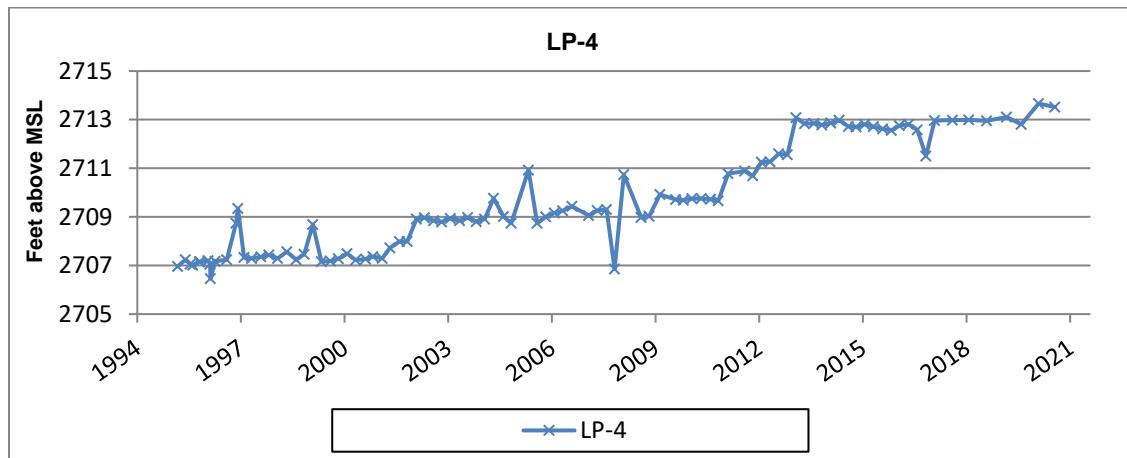


Figure 3-5: LP-4 Groundwater Elevations vs. Time

Leachate Analytical Results

Table 3-2: Leachate Analytical Results for the Reporting Period

StationID	Analyte	10/23/2019	5/7/2020
LS-GL	Benzene	0.5U	0.5U
LS-GL	Ethylbenzene	0.5U	0.5U
LS-GL	m,p-Xylene	0.5U	0.5U
LS-GL	o-Xylene	0.5U	0.5U
LS-GL	Toluene	0.5U	0.5U

Laboratory detections are highlighted in **Orange**.

Leachate Production Summary

Table 3-3: Leachate Production Summary for the Reporting Period

Month	Leachate Volume (gal)	Precipitation (inches)
Oct-19	32,045	1.63
Nov-19	57,054	0.83
Dec-19	267,365	2.95
Jan-20	1,211,188	3.34
Feb-20	794,634	1.4
Mar-20	300,893	1.12
Apr-20	339,759	0.74
May-20	288,822	3.55
Jun-20	238,353	1.86
Jul-20	56,748	0.51
Aug-20	37,852	0.11
Sep-20	41,853	0.45
Total - Annual	3,666,566	18.49

Annual Leachate Production Rates and Precipitation Data vs. Time

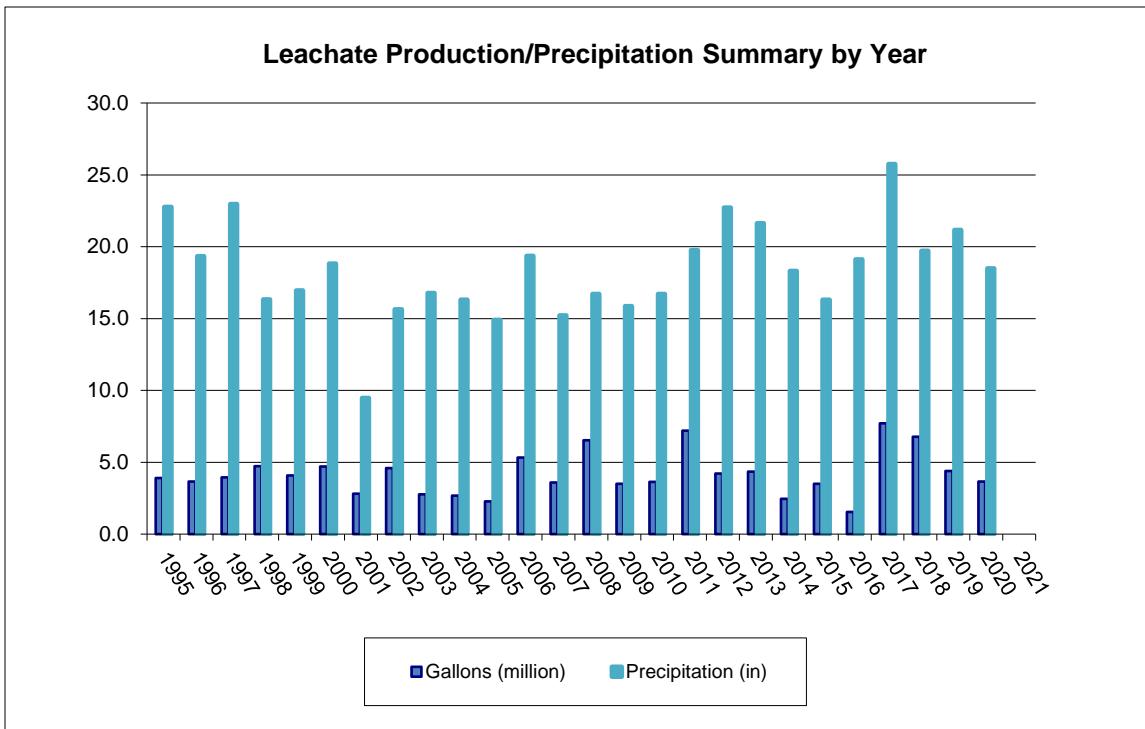


Figure 3-6: Leachate Production/Precip Summary by Year

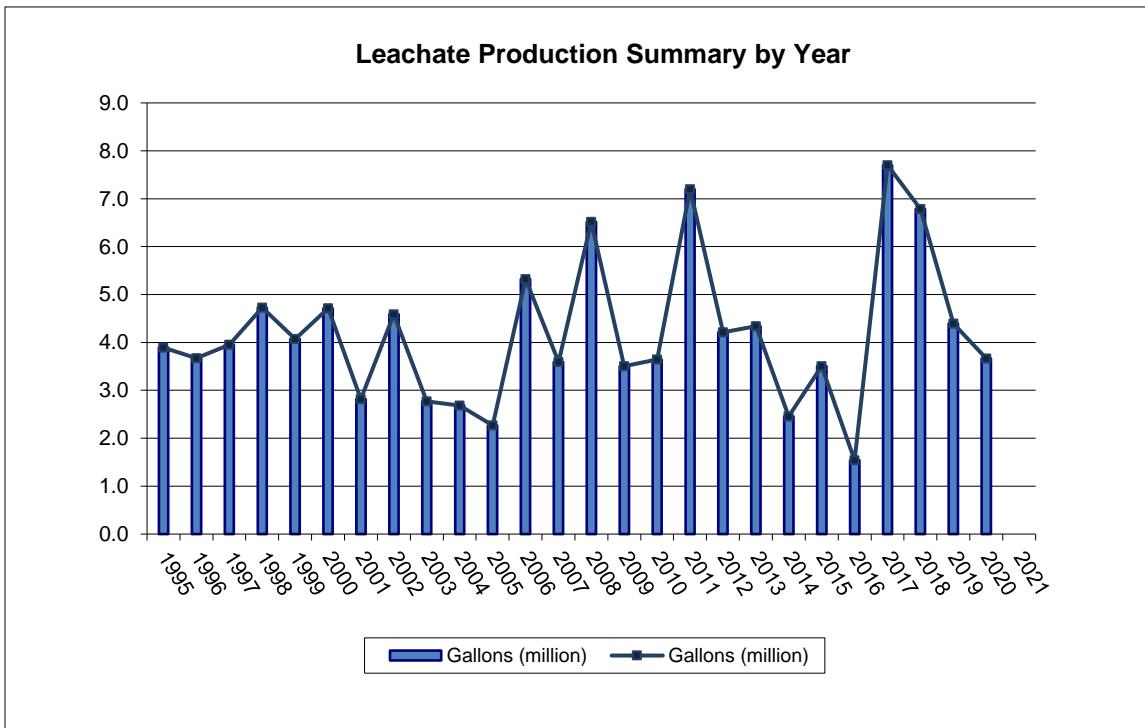


Figure 3-7: Leachate Production Summary by Year

4 LANDFILL GAS

Mica Landfill Flare and Gas Probe Locations

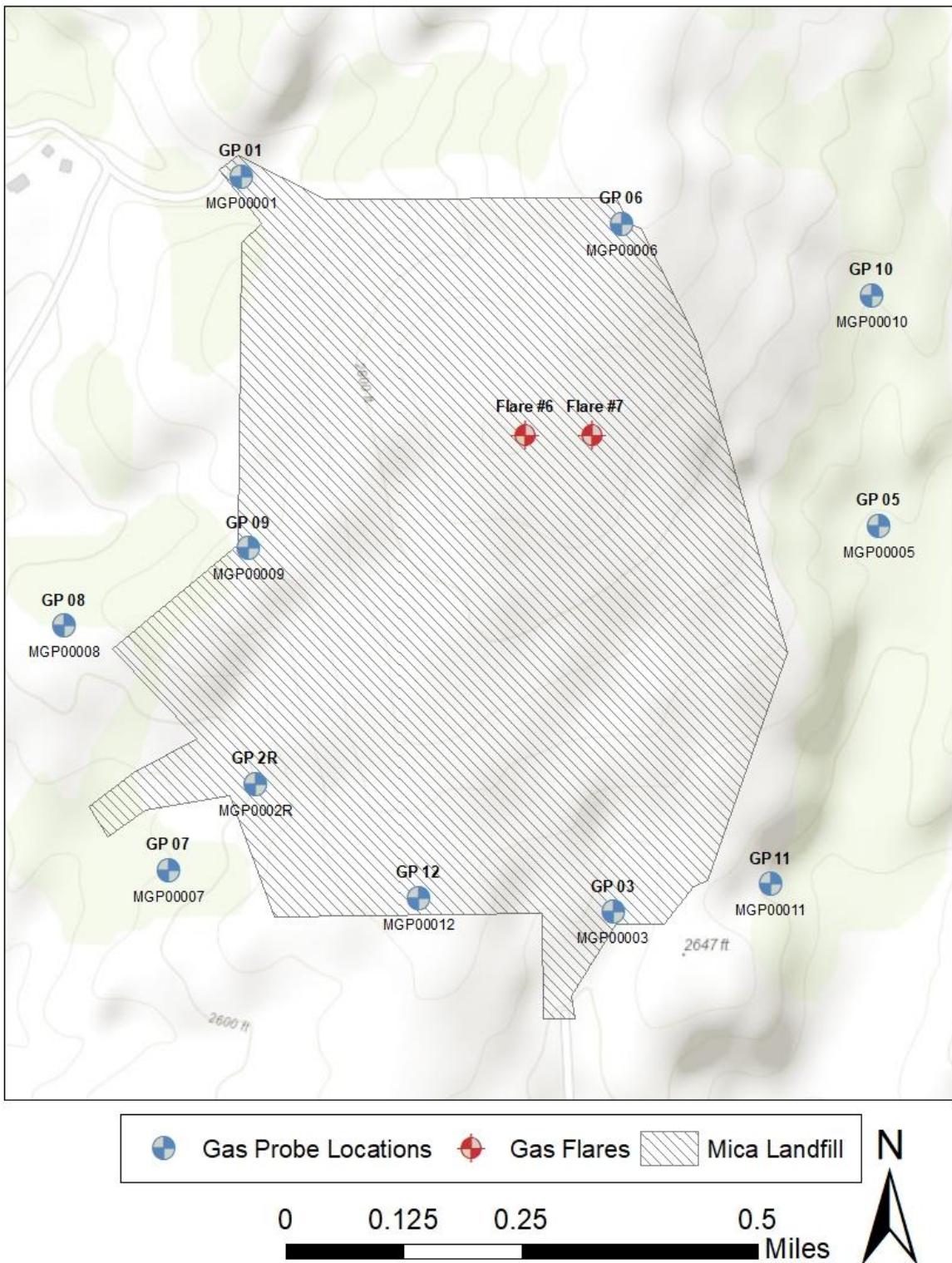


Figure 4-1: Flare and perimeter gas probe locations

FLARE STATIONS

A summary of monitoring results from the operational flare stations is presented in Table 4-1. The Mica Landfill produced an estimated 27.33 million cubic feet of landfill gas in 2020. The average methane concentration was approximately 38.9%.

GAS PROBES

Monthly gas probe monitoring results are presented in APPENDIX D - LANDFILL GAS PROBE MEASUREMENTS. There were no methane detections near or above the regulatory criteria of 5% during this annual reporting period.

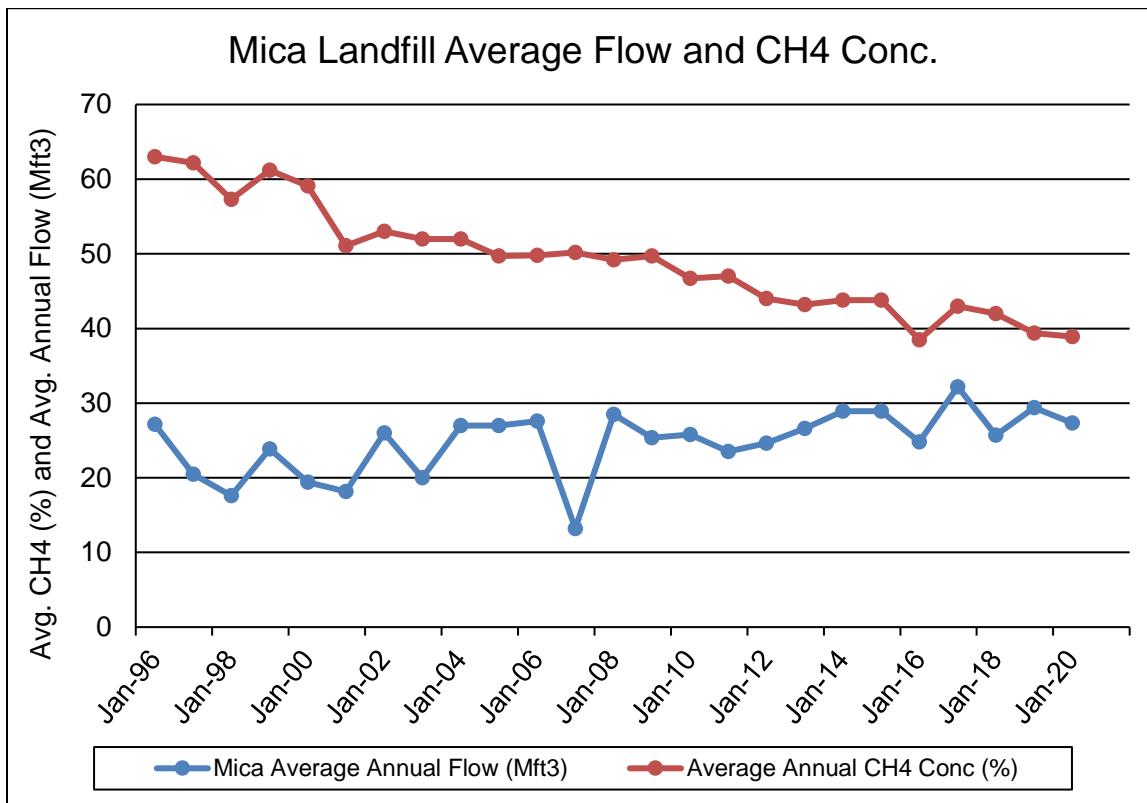


Figure 4-2: Avg. Annual Flow (Mft3) and Avg. Annual CH₄ Conc. (%)

MICA FLARE STATION SUMMARY

Table 4-1: Annual Summary of Mica Landfill Flare Stations

Mica Landfill Emission Point Summary for 2020				
	Flare 6		Flare 7	
DATE	flow	%CH4	flow	%CH4
Jan-20	400	31.6	390	28.4
Feb-20	800	46.4	790	41.2
Mar-20	375	35.3	330	33
Apr-20	255	25.4	260	24.8
May-20	440	45.2	430	44.4
Jun-20	403	45.6	340	41
Jul-20	600	48.1	605	46.9
Aug-20	330	46.3	275	45.3
Sep-20	450	46.1	390	42.8
Oct-20	600	37.1	550	33.9
Nov-20	550	35.6	530	32.2
Dec-20	400	39.7	350	37.3
Total	5603	482.4	5240	451.2
Average	466.9	40.2	436.7	37.6

Flare 6:	466.9 * 0.66 * 0.0872	= 26.871988 *	525,600/10 ⁶ =	14.12
Flare 7:	436.7 * 0.66 * 0.0872	= 25.13104 *	525,600/10 ⁶ =	13.21
Total=				27.33 Mft3

APPENDIX A - LABORATORY RESULTS

Analyte	Date	Type	Units	DW-001	DW-002	DW-003	MS-004	MS-005	MW-009	MW-010	MW-013	MW-014	MW-016	MW-019R	MW-020	MW-023	MW-029	MW-031	
ALK	3-2020	C	mg/L as Ca	137	154	167	131	107	197	83.7	181	76.1	1370	109	233	372	77.7	49.7	
ALK	9-2020	C	mg/L as Ca	140	154	183	160	107	241	85.7	190	77.5	1320	108	225	354	101		
Cl	3-2020	C	mg/L	15.9	4.93	0.88	0.53	24.2	13.6	0.39	8.74	0.73	153	6.95	7.58	51.6	136	1.94	
Cl	9-2020	C	mg/L	7.85	6.7	1.01	0.62	23.8	13.9	0.4	8.82	0.72	148	6.7	7.1	51.1	134		
N-NH3	12-2019	C	mg/L										0.302						
N-NH3	3-2020	C	mg/L	0.03U	0.329	0.03U	0.03U	0.03U	0.03U										
N-NH3	6-2020	C	mg/L										0.4						
N-NH3	9-2020	C	mg/L	0.03U	0.03U	0.03U	1.34	0.03U	0.03U	0.03U	0.03U	0.03U	0.469	0.03U	0.03U	0.03U	0.03U		
N-NO3	3-2020	C	mg/L	0.402	0.721	2.44	5.97	1.55	0.5UD	0.204	0.515	0.05U	0.05U	1.2	2.35	0.05U	1.25UD	0.05	
N-NO3	9-2020	C	mg/L	0.161	0.921	3.44	7.42	1.51	0.05U	0.23	0.536	0.05U	0.149	1.27	2.52	0.05U	0.937		
SO4	3-2020	C	mg/L	8.59	7.16	1.5	10.4	18.8	3.1	0.7	3.6	8.88	0.3U	4.9	6.23	8.39	6.35	3.54	
SO4	9-2020	C	mg/L	9.78	6.21	2.38	10.7	18.8	3.2	0.92	3.73	9.17	0.3U	5.16	5.85	8.79	6.98		
TDS	3-2020	C	mg/L				191	210	225	99	238	116	1310	168	278	468	387	77	
TDS	9-2020	C	mg/L				254	259	291	118	248	112	1360	143	306	484	399		
TOC	12-2019	C	mg/L										42.7						
TOC	3-2020	C	mg/L	1U	1U	1U	2.11	2.16	1U	1.08	1U	49.4	1.22	3UD	2.56	1U	4.61		
TOC	6-2020	C	mg/L										55.8						
TOC	9-2020	C	mg/L	1U	1U	1U	3.14	1.49	2.21	1U	1.17	1U	31.5	1.27	1.41	3.33	1U		
As	12-2019	I	mg/L										0.0505						
As	3-2020	I	mg/L	0.003U	0.0567	0.003U	0.00695	0.003U	0.003U	0.003U	0.003U								
As	6-2020	I	mg/L										0.0646						
As	9-2020	I	mg/L	0.003U	0.0538	0.003U	0.003U	0.003U	0.003U	0.003U									
Ba	12-2019	I	mg/L										0.595						
Ba	3-2020	I	mg/L	0.0313	0.0259	0.0303	0.0793	0.0557	0.125	0.0474	0.0524	0.004U	0.663	0.0379	0.763	0.146	0.103	0.0392	
Ba	6-2020	I	mg/L										0.771						
Ba	9-2020	I	mg/L	0.0149	0.0364	0.0321	0.104	0.0505	0.136	0.0489	0.0537	0.004U	0.593	0.0422	0.174	0.141	0.108		
Hg	12-2019	I	mg/L										0.0002U						
Hg	3-2020	I	mg/L	0.0002U															
Hg	6-2020	I	mg/L										0.0002U						
Hg	9-2020	I	mg/L	0.0002U															
Mn	12-2019	I	mg/L										0.446						
Mn	3-2020	I	mg/L	0.011	0.0253	0.008U	0.008U	0.008U	0.223	0.008U	0.008U	0.172	0.552	0.008U	0.417	0.934	0.008U	0.008U	
Mn	6-2020	I	mg/L										0.636						
Mn	9-2020	I	mg/L	0.0086	0.0156	0.008U	0.051	0.008U	0.405	0.008U	0.008U	0.488	0.432	0.008U	0.0305	0.94	0.008U		
Pb	12-2019	I	mg/L										0.015U						

Analyte	Date	Type	Units	DW-001	DW-002	DW-003	MS-004	MS-005	MW-009	MW-010	MW-013	MW-014	MW-016	MW-019R	MW-020	MW-023	MW-029	MW-031
Pb	3-2020	I	mg/L	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.066	0.015U	0.015U	0.015U
Pb	6-2020	I	mg/L										0.015U					
Pb	9-2020	I	mg/L	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	
Va	12-2019	I	mg/L										0.005U					
Va	3-2020	I	mg/L	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.0177	0.005U	0.005U	0.005U
Va	6-2020	I	mg/L										0.005U					
Va	9-2020	I	mg/L	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	
Zn	12-2019	I	mg/L										0.01U					
Zn	3-2020	I	mg/L	0.504	1.2	0.101	0.01U	0.01U	0.01U	0.01U	0.01U	0.01U	0.01U	0.129	0.01U	0.01U	0.01U	
Zn	6-2020	I	mg/L										0.01U					
Zn	9-2020	I	mg/L	0.0634	0.712	0.0602	0.0107	0.01U	0.01U	0.01U	0.01U	0.01U	0.01U	0.01U	0.01U	0.01U	0.01U	
BEHP	3-2020	S	ug/L	0.5U	0.5U	0.5U	2.21	0.5U	0.75								0.5U	
BEHP	9-2020	S	ug/L				0.5U											
1,2-DCA	12-2019	V	ug/L											2.46				
1,2-DCA	3-2020	V	ug/L	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	2.83	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-DCA	6-2020	V	ug/L										2.5UD					
1,2-DCA	9-2020	V	ug/L	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	2.96	0.5U	0.5U	0.5U	0.5U	
1,2-DCP	12-2019	V	ug/L											11.8				
1,2-DCP	3-2020	V	ug/L	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	12.8	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-DCP	6-2020	V	ug/L										10.7					
1,2-DCP	9-2020	V	ug/L	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	12	0.5U	0.5U	0.5U	0.5U	
Acetone	12-2019	V	ug/L											671				
Acetone	3-2020	V	ug/L	2.5U	2.5U	2.5U	2.5U	2.5U	2.5U	2.5U	2.5U	2.5U	873	2.5U	2.5U	2.5U	2.5U	2.5U
Acetone	6-2020	V	ug/L											1020				
Acetone	9-2020	V	ug/L	2.5U	2.5U	2.5U	2.5U	2.5U	2.5U	2.5U	2.5U	2.5U	286	2.5U	2.5U	2.5U	2.5U	
Benzene	12-2019	V	ug/L											11.8				
Benzene	3-2020	V	ug/L	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	13.2	0.5U	0.5U	0.5U	0.5U	0.5U
Benzene	6-2020	V	ug/L											12.2				
Benzene	9-2020	V	ug/L	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	11.4	0.5U	0.5U	0.5U	0.5U	
cis-1,2-DCE	12-2019	V	ug/L											6.05				
cis-1,2-DCE	3-2020	V	ug/L	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	8.59	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,2-DCE	6-2020	V	ug/L											6.95				
cis-1,2-DCE	9-2020	V	ug/L	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3.05	0.5U	0.5U	0.5U	0.5U	
Ethylbenzene	12-2019	V	ug/L											61.4				
Ethylbenzene	3-2020	V	ug/L	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	59	0.5U	0.5U	0.5U	0.5U	0.5U

Analyte	Date	Type	Units	DW-001	DW-002	DW-003	MS-004	MS-005	MW-009	MW-010	MW-013	MW-014	MW-016	MW-019R	MW-020	MW-023	MW-029	MW-031
Ethylbenzene	6-2020	V	ug/L										57.9					
Ethylbenzene	9-2020	V	ug/L	0.5U	51.8	0.5U	0.5U	0.5U	0.5U									
m,p-Xylene	12-2019	V	ug/L										42.9					
m,p-Xylene	3-2020	V	ug/L	0.5U	39.1	0.5U	0.5U	0.5U	0.5U	0.5U								
m,p-Xylene	6-2020	V	ug/L										36.6					
m,p-Xylene	9-2020	V	ug/L	0.5U	37.3	0.5U	0.5U	0.5U	0.5U									
MC	12-2019	V	ug/L										10UD					
MC	3-2020	V	ug/L	2.5U	2.5U	2.5U	2.5U	2.5U	2.5U									
MC	6-2020	V	ug/L										12.5UD					
MC	9-2020	V	ug/L	2.5U	2.5U	2.5U	2.5U	2.5U										
O-Xylene	12-2019	V	ug/L										19.8					
O-Xylene	3-2020	V	ug/L	0.5U	20.3	0.5U	0.5U	0.5U	0.5U	0.5U								
O-Xylene	6-2020	V	ug/L										16.1					
O-Xylene	9-2020	V	ug/L	0.5U	16.9	0.5U	0.5U	0.5U	0.5U									
PCE	12-2019	V	ug/L										2UD					
PCE	3-2020	V	ug/L	0.5U	0.5U	0.5U	0.5U	0.5U										
PCE	6-2020	V	ug/L										2.5UD					
PCE	9-2020	V	ug/L	0.5U	0.5U	0.5U	0.5U	0.5U										
TCE	12-2019	V	ug/L										2UD					
TCE	3-2020	V	ug/L	0.5U	1.08	0.5U	0.5U	0.5U	0.5U	0.5U								
TCE	6-2020	V	ug/L										2.5UD					
TCE	9-2020	V	ug/L	0.5U	0.62	0.5U	0.5U	0.5U	0.5U									
Toluene	12-2019	V	ug/L										14.2					
Toluene	3-2020	V	ug/L	0.5U	22.7	0.5U	0.5U	0.5U	0.5U	0.5U								
Toluene	6-2020	V	ug/L										18.8					
Toluene	9-2020	V	ug/L	0.5U	7.06	0.5U	0.5U	0.5U	0.5U									
VC	12-2019	V	ug/L										2UD					
VC	3-2020	V	ug/L	0.5U	1.82	0.5U	0.5U	0.5U	0.5U	0.5U								
VC	6-2020	V	ug/L										2.5UD					
VC	9-2020	V	ug/L	0.5U	1.44	0.5U	0.5U	0.5U	0.5U									

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: <u>9/2/20</u>	WELL ID: <u>DW-1</u>	FIELD TEAM: <u>MT</u> GF, KM, BU		
SAMPLE ID: <u>GWDW-001-200902</u>	QA / QC SAMPLE ID: <u>- NA -</u>			
FIELD CONDITIONS: <u>SLI-CLOUDY MID-70's</u>				
START TIME: <u>0950</u>	DEDICATED BLADDER: _____			
SAMPLE TIME: <u>1015</u>	DISPOSABLE BAILER: _____			
QA / QC SAMPLE TIME: <u> </u>	PRIVATE DOMESTIC WELL: <u>X</u>			
END TIME: <u>1022</u>				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.		
pH	EXTECH 100	<u>#445991</u>		
CONDUCTIVITY	ECTESTR 11+	<u>#24B</u>		
TURBIDITY	Hach 2100P	<u>#020100024957</u>		
SWL INDICATOR				
TOTAL DEPTH OF WELL: <u>-NA-</u>	CALCULATIONS:			
PACKER DEPTH: _____				
STATIC WATER LEVEL: _____				
COLUMN OF WATER: _____				
COLUMN OF WATER ABOVE PACKER: _____	PACKER INFORMATION:			
COLUMN OF WATER BELOW PACKER: _____	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)			
PARAMETERS:	(+/- 10%)	(+/- .1)	(+/- 10%)	
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
<u>0957</u>	<u>11.5</u>	<u>6.98</u>	<u>311</u>	<u>CLEAR</u>
<u>1005</u>	<u>11.4</u>	<u>6.95</u>	<u>305</u>	<u>CLEAR</u>
<u>1013</u>	<u>11.1</u>	<u>6.96</u>	<u>307</u>	<u>CLEAR</u>
			TURBIDITY: <u>0.29</u>	NTU (meas. In field lab)

PURGED WELL FOR 25 MIN BEFORE
SAMPLING. TO CLEAR LINES

COMMENTS:

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: 9/2/2020	WELL ID: DW-Q	FIELD TEAM: MT GF, KM, BU	
SAMPLE ID: GW DW-002-200903	QA / QC SAMPLE ID: - NA		
FIELD CONDITIONS: SU CLOUDY Low 70's			
START TIME: 0910	DEDICATED BLADDER: _____		
SAMPLE TIME: 0930	DISPOSABLE BAILER: _____		
QA / QC SAMPLE TIME: _____	PRIVATE DOMESTIC WELL: *		
END TIME: 0937			
METER AND PURGING INFORMATION:			
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS
pH	EXTECH 100	#445991	Calibrated to 4, 7 & 10 buffer
CONDUCTIVITY	ECTESTR 11+	#24B	Std. to 700 umhos/cm
TURBIDITY	Hach 2100P	#020100024957	Std to 4.02, 39.4, and 331 NTU
SWL INDICATOR			
TOTAL DEPTH OF WELL: NA	CALCULATIONS:		
PACKER DEPTH: _____			
STATIC WATER LEVEL: _____			
COLUMN OF WATER: _____			
COLUMN OF WATER ABOVE PACKER: _____	PACKER INFORMATION:		
COLUMN OF WATER BELOW PACKER: _____	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)		
PARAMETERS: (+/- 10%)		(+/- .1)	
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY
0916	12.8	7.21	320
0924	12.6	7.16	321
0929	12.5	7.17	320
			TURBIDITY: 0.11 NTU (meas. In field lab)

COMMENTS: 20 MIN Purge

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: <u>9/12/2020</u>	WELL ID: <u>DW-3</u>	FIELD TEAM: <u>MT, GF, KM, BU</u>		
SAMPLE ID: <u>GNDW-003-200903</u>	QA / QC SAMPLE ID: <u>- NA -</u>			
FIELD CONDITIONS: <u>SLI CLOUDY 70°</u>				
START TIME: <u>0840</u>	DEDICATED BLADDER: _____			
SAMPLE TIME: <u>0900</u>	DISPOSABLE BAILER: _____			
QA / QC SAMPLE TIME: <u>NA</u>	PRIVATE DOMESTIC WELL: <u>*</u>			
END TIME: <u>0905</u>				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100	<u>#445991</u>	Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+	<u>#24B</u>	Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	<u>#020100024957</u>	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR				
TOTAL DEPTH OF WELL: <u>200.0'</u>	CALCULATIONS:			
PACKER DEPTH: _____				
STATIC WATER LEVEL: <u>8.00'</u>				
COLUMN OF WATER: _____				
COLUMN OF WATER ABOVE PACKER: _____	PACKER INFORMATION:			
COLUMN OF WATER BELOW PACKER: _____	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)			
PARAMETERS: (+/- 10%)	(+/- .1)	(+/- 10%)		
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
<u>0846</u>	<u>12.9</u>	<u>7.35</u>	<u>361</u>	<u>CLEAN</u>
<u>0852</u>	<u>12.7</u>	<u>7.31</u>	<u>362</u>	<u>CLEAN</u>
<u>0859</u>	<u>12.6</u>	<u>7.32</u>	<u>360</u>	<u>CLEAN</u>
			TURBIDITY: <u>0.17</u>	NTU (meas. In field lab)

PURGED WELL 20 MIN BEFORE SAMPLING

COMMENTS:

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: 9-2-2020	WELL ID: MS-4	FIELD TEAM: MT, GF, KM, BU		
SAMPLE ID: GWMS-004-200902	QA / QC SAMPLE ID:			
FIELD CONDITIONS: SU CLOUDY MID-70's				
START TIME: 1115	DEDICATED BLADDER: _____			
SAMPLE TIME: 1300	DISPOSABLE BAILER: *			
QA / QC SAMPLE TIME: NA	PRIVATE DOMESTIC WELL: _____			
END TIME: 1320				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100	#445991	Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+	#24B	Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	#020100024957	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR				
TOTAL DEPTH OF WELL: 32.00'	CALCULATIONS: $23.39 \times .17 = 3.97 = 4 \text{ GAL}$			
PACKER DEPTH: _____				
STATIC WATER LEVEL: 8.61				
COLUMN OF WATER: 23.39				
COLUMN OF WATER ABOVE PACKER: _____	PACKER INFORMATION:			
COLUMN OF WATER BELOW PACKER: _____	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)			
PARAMETERS: (+/- 10%)	(+/- .1)	(+/- 10%)		
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
2 GAL 1122	11.9	6.91	291	CLOUDY
4 GAL 1131	11.6	6.89	286	CLEAR
PURGE DRY / LET RECHARGE				
4.5 GAL 1257	11.8	6.92	290	CLEAR
			TURBIDITY: 1.21	NTU (meas. In field lab) IN FIELD

MW-21 WL= 8.99'
 MW-18 WL= 17.33'
 MW-17 WL= 17.56'
 MS-6 WL= 19.01'

COMMENTS:

* FROGS - PULLED 6 FROGS
 OUT OF WELL WHILE
 PURGING.

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: <u>9-2-2020</u>	WELL ID: <u>MW-9</u>	FIELD TEAM: <u>MT, GF, KM, BU</u>		
SAMPLE ID: <u>GWMW-009-200902</u>	QA / QC SAMPLE ID: <u>—</u>			
FIELD CONDITIONS: <u>Sunny 64°F</u>				
START TIME: <u>0838</u>	DEDICATED BLADDER: <u>*</u>			
SAMPLE TIME: <u>0903</u>	DISPOSABLE BAILER: <u>—</u>			
QA / QC SAMPLE TIME: <u>—</u>	PRIVATE DOMESTIC WELL: <u>—</u>			
END TIME: <u>0905</u>				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100	<u>346697</u>	Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+	<u>461A</u>	Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	<u>#020100024957</u>	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR				
TOTAL DEPTH OF WELL: <u>25.18'</u>	CALCULATIONS:			
PACKER DEPTH: _____	$15.08 \times .17 = 2.56$			
STATIC WATER LEVEL: <u>10.10</u>	$= 3 \text{ gallon}$			
COLUMN OF WATER: <u>15.08</u>	PACKER INFORMATION:			
COLUMN OF WATER ABOVE PACKER: _____				
COLUMN OF WATER BELOW PACKER: _____	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)			
PARAMETERS:	(+/- 10%)	(+/- .1)	(+/- 10%)	
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
<u>3 gal. -0845</u>	<u>11.1</u>	<u>7.13</u>	<u>473</u>	<u>Clear</u>
<u>6 gal. -0852</u>	<u>11.0</u>	<u>7.10</u>	<u>470</u>	<u>Clear</u>
<u>9 gal. -0900</u>	<u>11.1</u>	<u>7.14</u>	<u>471</u>	<u>Clear</u>
			TURBIDITY: <u>7.84</u>	NTU (meas. In field lab)

COMMENTS:

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: 9-2-2020	WELL ID: MW-10	FIELD TEAM: MT, GF, KM, BU		
SAMPLE ID: C16MW-C10-200902	QA / QC SAMPLE ID: —			
FIELD CONDITIONS: Sunny 64° F				
START TIME: 0912	DEDICATED BLADDER: *			
SAMPLE TIME: 1007	DISPOSABLE BAILER: —			
QA / QC SAMPLE TIME: —	PRIVATE DOMESTIC WELL: —			
END TIME: 1010				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100	3466097	Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+	4GIA	Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	#020100024957	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR				
TOTAL DEPTH OF WELL: 63.18'	CALCULATIONS: $16.18 \times .17 = 2.75$ 3 gallons			
PACKER DEPTH: 47.00'				
STATIC WATER LEVEL: 6.12				
COLUMN OF WATER: 16.18				
COLUMN OF WATER ABOVE PACKER: 40.9	PACKER INFORMATION: $COW \times .433 \times 1.25 + 30 = \text{PACKER INFLATION (PSI)}$ (50 psi)			
COLUMN OF WATER BELOW PACKER: —				
PARAMETERS: (+/- 10%)	(+/- .1)	(+/- 10%)		
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
3 - 0931	10.8	7.34	133.8	Clear
6 - 0948	10.8	7.34	134.6	Clear
9 - 1004	10.9	7.35	134.8	Clear
			TURBIDITY: 0.18	NTU (meas. In field lab)

COMMENTS: SWL
MW-8 500'

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: <u>9-2-2020</u>	WELL ID: <u>MW13</u>	FIELD TEAM: <u>MT, GF, KM, BU</u>			
SAMPLE ID: <u>GwMW-013-200902</u>	QA / QC SAMPLE ID: <u>NA</u>				
FIELD CONDITIONS: <u>ptly clay, 70°</u>					
START TIME: <u>1048</u>	DEDICATED BLADDER: <u>✓</u>				
SAMPLE TIME: <u>1147</u>	DISPOSABLE BAILER: _____				
QA / QC SAMPLE TIME: <u>NA</u>	PRIVATE DOMESTIC WELL: _____				
END TIME: <u>1156</u>					
METER AND PURGING INFORMATION:					
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS		
pH	EXTECH 100	<u>370573</u>	Calibrated to 4, 7 & 10 buffer		
CONDUCTIVITY	ECTESTR 11+	<u>7810</u>	Std. to 700 umhos/cm		
TURBIDITY	Hach 2100P	<u>#020100024957</u>	Std to 4.02, 39.4, and 331 NTU		
SWL INDICATOR	<u>Slope Ind</u>	<u>23474</u>			
TOTAL DEPTH OF WELL: <u>84.44'</u>	CALCULATIONS: <u>51 psi</u>				
PACKER DEPTH: <u>59.0'</u>					
STATIC WATER LEVEL: <u>19.75'</u>					
COLUMN OF WATER: _____					
COLUMN OF WATER ABOVE PACKER: <u>39.25</u>	PACKER INFORMATION:				
COLUMN OF WATER BELOW PACKER: <u>25.44</u>	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)				
PARAMETERS: (+/- 10%)		(+/- .1%)			
GAL PURGED / TIME		TEMP	pH	CONDUCTIVITY	APPEARANCE
4.5	<u>1102</u>	<u>11.5</u>	<u>6.86</u>	<u>374</u>	<u>Clear</u>
9.0	<u>1122</u>	<u>11.6</u>	<u>6.90</u>	<u>376</u>	<u>Clear</u>
13.5	<u>1144</u>	<u>11.6</u>	<u>6.92</u>	<u>377</u>	<u>Clear</u>
				<u>0.35</u>	NTU (meas. In field lab)

COMMENTS:

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: <u>9-2-2020</u>	WELL ID: <u>MW 14</u>	FIELD TEAM: <u>MT GF, KM, BU</u>		
SAMPLE ID: <u>GWMW - 014-200902</u>	QA / QC SAMPLE ID: <u>WA</u>			
FIELD CONDITIONS: <u>mostly clear, 68°</u>				
START TIME: <u>0834</u>	DEDICATED BLADDER: <u>✓</u>			
SAMPLE TIME: <u>0908</u>	DISPOSABLE BAILER: _____			
QA / QC SAMPLE TIME: <u>WA</u>	PRIVATE DOMESTIC WELL: _____			
END TIME: <u>0910</u>				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100	<u>370573</u>	Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+	<u>7810</u>	Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	<u>#020100024957</u>	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR	<u>Slope Ind</u>	<u>23474</u>		
TOTAL DEPTH OF WELL: <u>55.36</u>	CALCULATIONS: <u>48 psi</u>			
PACKER DEPTH: <u>39.50</u>				
STATIC WATER LEVEL: <u>6.05</u>				
COLUMN OF WATER: _____				
COLUMN OF WATER ABOVE PACKER: <u>33.45</u>	PACKER INFORMATION:			
COLUMN OF WATER BELOW PACKER: <u>15.86</u>	<u>COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)</u>			
PARAMETERS: (+/- 10%)		(+/- .1)	(+/- 10%)	
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
3 0840	9.8	7.25	139	<u>slightly color</u>
6 0849	9.9	7.26	138	<u>clear</u>
9 0858	9.9	7.25	138	<u>clear</u>
			TURBIDITY: <u>3.71</u>	NTU (meas. In field lab)

COMMENTS:

SWL @ MS 7 = 7.21'

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: <u>9-2-2020</u>	WELL ID: <u>MW - 19R</u>	FIELD TEAM: <u>MT, GF, KM, BU</u>		
SAMPLE ID: <u>GWMW-19R-200902</u>	QA / QC SAMPLE ID: <u>—</u>			
FIELD CONDITIONS: <u>Sunny 63° → Fair 81°F Windy</u>				
START TIME: <u>0807</u>	DEDICATED BLADDER: <u>*</u>			
SAMPLE TIME: <u>1303</u>	DISPOSABLE BAILER: <u>—</u>			
QA / QC SAMPLE TIME: <u>—</u>	PRIVATE DOMESTIC WELL: <u>—</u>			
END TIME: <u>1320</u>				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100	<u>346697</u>	Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+	<u>4 ChA</u>	Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	<u>#020100024957</u>	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR				
TOTAL DEPTH OF WELL: <u>85.35'</u>	CALCULATIONS:			
PACKER DEPTH: <u>—</u>				
STATIC WATER LEVEL: <u>50.65</u>				
COLUMN OF WATER: <u>34.70</u>	<u>2 - Gallon</u>			
COLUMN OF WATER ABOVE PACKER: <u>—</u>	PACKER INFORMATION:			
COLUMN OF WATER BELOW PACKER: <u>—</u>	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)			
PARAMETERS:	(+/- 10%)	(+/- .1)	(+/- 10%)	
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
2 Gallon - 0814	<u>12.9</u>	<u>6.71</u>	<u>234</u>	<u>Clear</u>
4 Gallon - 0817	<u>12.2</u>	<u>6.76</u>	<u>240</u>	<u>Clear</u>
6 Gallon - 1300	<u>13.7</u>	<u>6.81</u>	<u>242</u>	<u>Clear</u>
			TURBIDITY: <u>7.18</u>	NTU (meas. In field lab)

Purged 2 Volumes at 2 gallon each, then allowed well
 COMMENTS: to recharge for a couple hours. Then took the 3rd parameter
 after Purging another 2 gallon → then Sampled

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: <u>9-2-2020</u>	WELL ID: <u>MW-20</u>	FIELD TEAM: <u>MT, GF, KM, BU</u>		
SAMPLE ID: <u>GW MW-020-200902</u>	QA / QC SAMPLE ID: <u>MWS-1-1-200902</u>			
FIELD CONDITIONS: <u>Fair 73°F</u>				
START TIME: <u>1100</u>	DEDICATED BLADDER: <u>*</u>			
SAMPLE TIME: <u>1221</u>	DISPOSABLE BAILER: _____			
QA / QC SAMPLE TIME: <u>1347</u>	PRIVATE DOMESTIC WELL: _____			
END TIME: <u>1226</u>				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100	<u>346697</u>	Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+	<u>46A</u>	Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	<u>#020100024957</u>	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR				
TOTAL DEPTH OF WELL: <u>141.55</u>	CALCULATIONS:			
PACKER DEPTH: <u>116.00</u>	$25.55 \times .17 = 4.35$			
STATIC WATER LEVEL: <u>59.10</u>	<u>5 gallon</u>			
COLUMN OF WATER: <u>85.55</u>				
COLUMN OF WATER ABOVE PACKER: <u>56.90</u>	PACKER INFORMATION:			
COLUMN OF WATER BELOW PACKER: _____	$COW \times .433 \times 1.25 + 30 = \text{PACKER INFLATION (PSI)}$ <u>(58 psi)</u>			
PARAMETERS: (+/- 10%)	(+/- .1)	(+/- 10%)		
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
<u>5 gal / 1124</u>	<u>13.7</u>	<u>7.33</u>	<u>510</u>	<u>Cloudy</u>
<u>10 gal / 1150</u>	<u>13.6</u>	<u>7.36</u>	<u>518</u>	<u>Cloudy</u>
<u>15 gal / 1219</u>	<u>12.9</u>	<u>7.30</u>	<u>509</u>	<u>Cloudy</u>
			TURBIDITY: <u>38.00</u>	NTU (meas. In field lab)

Dupe taken here !!

COMMENTS:

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: 9-2-2020	WELL ID: MW 29	FIELD TEAM: MT, GF, KM, BU		
SAMPLE ID: GWMW-029-200902	QA / QC SAMPLE ID: NA			
FIELD CONDITIONS: mostly clear, 60°				
START TIME: 0744	DEDICATED BLADDER: <input checked="" type="checkbox"/>			
SAMPLE TIME: 1241	DISPOSABLE BAILER: _____			
QA / QC SAMPLE TIME: NA	PRIVATE DOMESTIC WELL: _____			
END TIME: 1250				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100	370573	Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+	2810	Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	#020100024957	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR	Slope Ind	23474		
TOTAL DEPTH OF WELL: 61.50	CALCULATIONS: $29.19 \times 0.17 = 5 \text{ gal/vol}$			
PACKER DEPTH: NA				
STATIC WATER LEVEL: 32.31				
COLUMN OF WATER: 29.19				
COLUMN OF WATER ABOVE PACKER: NA	PACKER INFORMATION:			
COLUMN OF WATER BELOW PACKER:	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)			
PARAMETERS: (+/- 10%)	(+/- .1)	(+/- 10%)		
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
2.5 0748	9.8	6.47	613	Clear
5.0 0752	9.6	6.45	618	clear
7.5 0759	9.7	6.42	621	clear
8.0 0804	9.7	6.46	623	Clear
Final 1240	9.9	6.39	TURBIDITY: 618 0.87	NTU (meas. In field lab) Clear

COMMENTS: This is a low recovery monitoring well. Water pumped down to intake & allowed to recover prior to sampling

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: 9-2-2020	WELL ID: MW31	FIELD TEAM: MT, GF, KM, BU		
SAMPLE ID: X	QA / QC SAMPLE ID: NA			
FIELD CONDITIONS: pH 7, cloudy, 68°				
START TIME: _____	DEDICATED BLADDER: _____			
SAMPLE TIME: _____	DISPOSABLE BAILER: _____			
QA / QC SAMPLE TIME: _____	PRIVATE DOMESTIC WELL: _____			
END TIME: _____				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100		Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+		Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	#020100024957	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR				
TOTAL DEPTH OF WELL: _____	CALCULATIONS:			
PACKER DEPTH: _____				
STATIC WATER LEVEL: 16.18'				
COLUMN OF WATER: _____				
COLUMN OF WATER ABOVE PACKER: _____	PACKER INFORMATION:			
COLUMN OF WATER BELOW PACKER: _____	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)			
PARAMETERS:	(+/- 10%)	(+/- .1)	(+/- 10%)	
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
			TURBIDITY:	NTU (meas. In field lab)

XNot enough water to sample well

COMMENTS:

MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: 9-3-2020	WELL ID: MS5	FIELD TEAM: MT, GF, KM, BU		
SAMPLE ID: GWMS-005-200903	QA / QC SAMPLE ID: NA MS/MSD ON BOTTEES			
FIELD CONDITIONS: clear, 75°				
START TIME: 0806	DEDICATED BLADDER: <input checked="" type="checkbox"/>			
SAMPLE TIME: 0843	DISPOSABLE BAILER: _____			
QA / QC SAMPLE TIME: 0A	PRIVATE DOMESTIC WELL: _____			
END TIME: 0903				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100	370573	Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+	7810	Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	#020100024957	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR	Slope Ind	23474		
TOTAL DEPTH OF WELL: 53.0	CALCULATIONS: 36.35 * 0.17 = 6.2 USE 6.25 gal/vol			
PACKER DEPTH: NA				
STATIC WATER LEVEL: 16.65				
COLUMN OF WATER: 36.35				
COLUMN OF WATER ABOVE PACKER: NA	PACKER INFORMATION:			
COLUMN OF WATER BELOW PACKER: NA	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)			
PARAMETERS: (+/- 10%)	(+/- .1)	(+/- 10%)		
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
6.25 08/4	11.1	6.77	329	clear
12.5 08/27	11.0	6.78	327	clear
18.75 08/41	11.1	6.81	326	clear
			TURBIDITY: 0.84	NTU (meas. In field lab)

COMMENTS:

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MICA GROUNDWATER SAMPLING FIELD SHEET

DATE: 9-3-2020	WELL ID: MW-16	FIELD TEAM: MT, GF, KM, BU		
SAMPLE ID: GWMW-016-200903	QA / QC SAMPLE ID: —			
FIELD CONDITIONS: Sunny 59°F				
START TIME: 0820	DEDICATED BLADDER: *			
SAMPLE TIME: 0851	DISPOSABLE BAILER: _____			
QA / QC SAMPLE TIME: —	PRIVATE DOMESTIC WELL: _____			
END TIME: 0900				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100	346697	Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+	461A	Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	#020100024957	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR				
TOTAL DEPTH OF WELL: 93.42'	CALCULATIONS:			
PACKER DEPTH: 73.00'				
STATIC WATER LEVEL: 17.60				
COLUMN OF WATER: 20.42	3.5 gallon			
COLUMN OF WATER ABOVE PACKER: _____	PACKER INFORMATION:			
COLUMN OF WATER BELOW PACKER: _____	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI) (60 psi)			
PARAMETERS:	(+/- 10%)	(+/- .1)	(+/- 10%)	
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
3.5 gal / 0838	12.16	6.81	1412	SLI Cloudy
7 gal / 0838	12.4	6.81	1417	SLI Cloudy
10.5 gal / 0849	11.16	6.91	1420	SLI Cloudy
			TURBIDITY: 1.19	in Field NTU (meas. in field lab)

COMMENTS:

SWL-MS-2 - 12.40'

MICA GROUNDWATER SAMPLING FIELD SHEET

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DATE: 9-3-2020	WELL ID: MW23	FIELD TEAM: MT, GF, KM, BU		
SAMPLE ID: GWMW-023-200903	QA / QC SAMPLE ID: MWS-1-2-200903			
FIELD CONDITIONS: mostly clear, 77°				
START TIME: 0955	DEDICATED BLADDER: <input checked="" type="checkbox"/>			
SAMPLE TIME: 1039	DISPOSABLE BAILER: _____			
QA / QC SAMPLE TIME: 1013	PRIVATE DOMESTIC WELL: _____			
END TIME: 1050				
METER AND PURGING INFORMATION:				
METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS	
pH	EXTECH 100	370573	Calibrated to 4, 7 & 10 buffer	
CONDUCTIVITY	ECTESTR 11+	7810	Std. to 700 umhos/cm	
TURBIDITY	Hach 2100P	#020100024957	Std to 4.02, 39.4, and 331 NTU	
SWL INDICATOR	Slope Ind			
TOTAL DEPTH OF WELL: 58.09	CALCULATIONS: $38.17 \times 0.17 = 6.5 \text{ gal/vol}$			
PACKER DEPTH: 41				
STATIC WATER LEVEL: 19.92				
COLUMN OF WATER: 38.17				
COLUMN OF WATER ABOVE PACKER: 41	PACKER INFORMATION:			
COLUMN OF WATER BELOW PACKER: 19	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)			
PARAMETERS: (+/- 10%)	(+/- .1)	(+/- 10%)		
GAL PURGED / TIME	TEMP	pH	CONDUCTIVITY	APPEARANCE
6.5 1003	11.1	7.14	744	Clear
13.0 1014	11.2	7.17	746	Clear
19.5 1037	11.2	7.20	752	Clear
			TURBIDITY: 220	NTU (meas. In field lab)

COMMENTS:

APPENDIX B - DATA SUMMARY ANALYSIS

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
DW-001	1,2-Dichloroethane	98	0.00	0	0	0.00	0	98	0
DW-001	1,2-Dichloropropane	98	0.00	0	0	0.00	0	98	0
DW-001	Acetone	98	0.00	0	0	0.00	0	98	0
DW-001	Alkalinity	98	149.19	130	189	9.89	98	0	0
DW-001	Ammonia	97	0.01	0	0.27	0.04	18	79	0
DW-001	Arsenic	98	0.00	0	0.0036	0.00	34	64	0
DW-001	Barium	98	0.01	0	0.0432	0.01	94	4	0
DW-001	Benzene	98	0.00	0	0	0.00	0	98	0
DW-001	bis(2-Ethylhexyl)Phthalate	52	1.76	0	17	4.41	13	39	6
DW-001	Chloride	98	2.59	0	17	2.80	96	2	0
DW-001	cis-1,2-dichloroethene	95	0.00	0	0	0.00	0	95	0
DW-001	Ethylbenzene	89	0.00	0	0	0.00	0	89	0
DW-001	Lead	98	0.00	0	0.034	0.00	20	78	0
DW-001	m,p-Xylene	59	0.00	0	0	0.00	0	59	0
DW-001	Manganese	98	0.01	0	0.068	0.01	85	13	0
DW-001	Mercury	96	0.00	0	0	0.00	0	96	0
DW-001	Methylene Chloride	98	0.00	0	0	0.00	0	98	0
DW-001	N-Nitrate	98	0.07	0	0.496	0.08	70	28	0
DW-001	o-Xylene	86	0.00	0	0	0.00	0	86	0
DW-001	Sulfate	67	8.54	0	11.8	1.62	66	1	0
DW-001	Tetrachloroethene	98	0.00	0	0	0.00	0	98	0
DW-001	Toluene	98	0.00	0	0	0.00	0	98	0
DW-001	Total Dissolved Solids	2	189.00	188	190	1.41	2	0	0
DW-001	Total Organic Carbon	96	0.54	0	6.1	1.10	28	68	0
DW-001	Trichloroethene	98	0.00	0	0	0.00	0	98	0
DW-001	Vanadium	96	0.00	0	0	0.00	0	96	0
DW-001	Vinyl Chloride	98	0.00	0	0	0.00	0	98	0
DW-001	Xylene	30	0.00	0	0	0.00	0	30	0
DW-001	Zinc	101	0.82	0.0634	7.18	1.08	101	0	0
DW-002	1,2-Dichloroethane	99	0.00	0	0	0.00	0	99	0
DW-002	1,2-Dichloropropane	99	0.00	0	0	0.00	0	99	0
DW-002	Acetone	99	0.00	0	0	0.00	0	99	0
DW-002	Alkalinity	114	154.82	144	180	5.78	114	0	0
DW-002	Ammonia	103	0.01	0	0.28	0.03	19	84	0
DW-002	Arsenic	99	0.00	0	0	0.00	0	99	0
DW-002	Barium	126	0.04	0	0.044	0.00	125	1	0
DW-002	Benzene	99	0.00	0	0	0.00	0	99	0
DW-002	bis(2-Ethylhexyl)Phthalate	34	0.13	0	1.7	0.42	3	31	0
DW-002	Chloride	116	9.65	4.93	14.6	1.98	116	0	0
DW-002	cis-1,2-dichloroethene	96	0.00	0	0	0.00	0	96	0
DW-002	Ethylbenzene	90	0.00	0	0	0.00	0	90	0
DW-002	Lead	100	0.00	0	0.023	0.00	4	96	0
DW-002	m,p-Xylene	61	0.00	0	0.15	0.02	1	60	0
DW-002	Manganese	106	0.00	0	0.0328	0.01	52	54	0
DW-002	Mercury	99	0.00	0	0	0.00	0	99	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
DW-002	Methylene Chloride	100	0.00	0	0.12	0.01	1	99	0
DW-002	N-Nitrate	116	1.35	0.721	2.32	0.25	116	0	0
DW-002	o-Xylene	87	0.00	0	0	0.00	0	87	0
DW-002	Sulfate	91	5.60	0	8.1	0.86	90	1	0
DW-002	Tetrachloroethene	99	0.00	0	0	0.00	0	99	0
DW-002	Toluene	99	0.06	0	5.24	0.53	2	97	0
DW-002	Total Dissolved Solids	4	211.00	200	220	8.41	4	0	0
DW-002	Total Organic Carbon	109	0.59	0	13.1	1.43	39	70	0
DW-002	Trichloroethene	99	0.00	0	0	0.00	0	99	0
DW-002	Vanadium	99	0.00	0	0.0054	0.00	1	98	0
DW-002	Vinyl Chloride	99	0.00	0	0	0.00	0	99	0
DW-002	Xylene	30	0.00	0	0	0.00	0	30	0
DW-002	Zinc	115	0.10	0	1.2	0.22	76	39	0
DW-003	1,2-Dichloroethane	101	0.00	0	0	0.00	0	101	0
DW-003	1,2-Dichloropropane	101	0.00	0	0	0.00	0	101	0
DW-003	Acetone	101	0.00	0	0	0.00	0	101	0
DW-003	Alkalinity	106	184.43	167	207	6.54	106	0	0
DW-003	Ammonia	101	0.03	0	1.94	0.19	21	80	0
DW-003	Arsenic	98	0.00	0	0	0.00	0	98	0
DW-003	Barium	107	0.03	0	0.0321	0.00	106	1	0
DW-003	Benzene	101	0.00	0	0	0.00	0	101	0
DW-003	bis(2-Ethylhexyl)Phthalate	34	0.35	0	8.2	1.47	3	31	1
DW-003	Chloride	105	1.01	0	22	2.15	90	15	0
DW-003	cis-1,2-dichloroethene	98	0.00	0	0	0.00	0	98	0
DW-003	Ethylbenzene	92	0.00	0	0	0.00	0	92	0
DW-003	Lead	99	0.00	0	0.007	0.00	32	67	0
DW-003	m,p-Xylene	61	0.00	0	0	0.00	0	61	0
DW-003	Manganese	100	0.00	0	0.0024	0.00	6	94	0
DW-003	Mercury	98	0.00	0	0	0.00	0	98	0
DW-003	Methylene Chloride	101	0.00	0	0.3	0.03	1	100	0
DW-003	N-Nitrate	106	0.98	0	7.4	1.16	105	1	0
DW-003	o-Xylene	89	0.00	0	0	0.00	0	89	0
DW-003	Sulfate	76	0.79	0	2.38	0.55	70	6	0
DW-003	Tetrachloroethene	101	0.00	0	0	0.00	0	101	0
DW-003	Toluene	101	0.00	0	0	0.00	0	101	0
DW-003	Total Dissolved Solids	4	220.25	200	251	22.07	4	0	0
DW-003	Total Organic Carbon	99	0.23	0	3.3	0.63	15	84	0
DW-003	Trichloroethene	101	0.00	0	0	0.00	0	101	0
DW-003	Vanadium	98	0.00	0	0.002	0.00	2	96	0
DW-003	Vinyl Chloride	101	0.00	0	0	0.00	0	101	0
DW-003	Xylene	31	0.00	0	0	0.00	0	31	0
DW-003	Zinc	109	0.24	0.0426	0.774	0.13	109	0	0
LS-AB	Arsenic	4	0.00	0	0	0.00	0	4	0
LS-AB	Benzene	4	0.00	0	0	0.00	0	4	0
LS-AB	Cadmium	4	0.00	0	0	0.00	0	4	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
LS-AB	Copper	4	0.00	0	0	0.00	0	4	0
LS-AB	Ethylbenzene	4	0.00	0	0	0.00	0	4	0
LS-AB	Lead	4	0.00	0	0	0.00	0	4	0
LS-AB	m,p-Xylene	4	0.00	0	0	0.00	0	4	0
LS-AB	Mercury	4	0.00	0	0	0.00	0	4	0
LS-AB	Nickel	4	0.00	0	0	0.00	0	4	0
LS-AB	o-Xylene	4	0.00	0	0	0.00	0	4	0
LS-AB	Silver	4	0.00	0	0	0.00	0	4	0
LS-AB	Toluene	4	0.28	0	1.12	0.56	1	3	0
LS-AB	total cyanide	3	0.00	0	0	0.00	0	3	0
LS-AB	Zinc	4	0.00	0	0	0.00	0	4	0
LS-GL	1,2-Dichloroethane	20	0.85	0	2.3	0.75	13	7	8
LS-GL	1,2-Dichloropropane	19	0.27	0	0.6	0.23	12	7	0
LS-GL	Acetone	27	13.87	0	53	15.06	23	4	0
LS-GL	Arsenic	37	0.00	0	0.005	0.00	15	22	0
LS-GL	Benzene	46	0.29	0	10.7	1.57	10	36	1
LS-GL	bis(2-Ethylhexyl)Phthalate	14	0.51	0	4.5	1.25	3	11	0
LS-GL	Cadmium	33	0.03	0	0.931	0.16	1	32	0
LS-GL	cis-1,2-dichloroethene	23	1.27	0	3.6	1.10	16	7	0
LS-GL	Copper	33	0.03	0	0.948	0.17	1	32	0
LS-GL	Ethylbenzene	48	0.40	0	3	0.71	16	32	0
LS-GL	Lead	35	0.03	0	0.924	0.16	5	30	0
LS-GL	m,p-Xylene	29	0.27	0	4.52	1.04	2	27	0
LS-GL	Manganese	2	0.82	0.819	0.824	0.00	2	0	0
LS-GL	Mercury	32	0.00	0	0	0.00	0	32	0
LS-GL	Methylene Chloride	23	5.60	0	17	5.32	16	7	13
LS-GL	Nickel	33	0.03	0	0.9	0.16	2	31	2
LS-GL	o-Xylene	46	0.70	0	4.2	1.12	17	29	0
LS-GL	Silver	35	0.00	0	0.0504	0.01	4	31	0
LS-GL	Tetrachloroethene	20	0.97	0	2.7	0.83	13	7	13
LS-GL	Toluene	62	1.87	0	14	2.83	38	24	0
LS-GL	total cyanide	27	0.00	0	0	0.00	0	27	0
LS-GL	total oil & grease	20	0.80	0	3.6	1.19	7	13	0
LS-GL	Trichloroethene	19	0.47	0	1.2	0.42	12	7	0
LS-GL	Vinyl Chloride	20	1.00	0	3.8	1.11	13	7	13
LS-GL	Xylene	21	2.83	0	9.7	2.74	16	5	0
LS-GL	Zinc	38	0.03	0	0.915	0.15	14	24	0
LS-LSW	Ammonia	11	0.18	0	0.64	0.19	8	3	0
LS-LSW	Chloride	11	109.00	18	500	141.59	11	0	0
LS-LSW	Manganese	11	0.60	0.043	1.69	0.58	11	0	0
LS-LSW	Total Dissolved Solids	11	420.91	64	1300	369.54	11	0	0
LS-LSW	Total Organic Carbon	11	11.31	0	66	18.44	10	1	0
LS-NW	Ammonia	15	0.58	0.023	4.2	1.09	15	0	0
LS-NW	Chloride	15	24.25	3.5	120	29.59	15	0	0
LS-NW	Manganese	15	1.62	0.491	3.85	0.97	15	0	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
LS-NW	Total Dissolved Solids	15	329.00	280	450	43.10	15	0	0
LS-NW	Total Organic Carbon	15	7.28	0	12	3.18	14	1	0
LS-SE	Ammonia	24	8.40	0.044	60	15.60	24	0	0
LS-SE	Chloride	24	69.08	2.7	590	116.57	24	0	0
LS-SE	Manganese	26	2.15	0.068	6.69	1.85	26	0	0
LS-SE	Total Dissolved Solids	23	631.43	0	4000	795.22	22	1	0
LS-SE	Total Organic Carbon	24	98.28	3.1	1200	240.96	24	0	0
LS-SET	1,2-Dichloroethane	4	0.05	0	0.2	0.10	1	3	0
LS-SET	1,2-Dichloropropane	4	0.15	0	0.6	0.30	1	3	0
LS-SET	Acetone	4	363.50	14	800	324.89	4	0	1
LS-SET	Arsenic	4	0.00	0.002	0.004	0.00	4	0	0
LS-SET	Benzene	4	0.18	0	0.7	0.35	1	3	0
LS-SET	bis(2-Ethylhexyl)Phthalate	4	0.00	0	0	0.00	0	4	0
LS-SET	Cadmium	4	0.00	0	0	0.00	0	4	0
LS-SET	cis-1,2-dichloroethene	4	1.63	0	3.2	1.61	3	1	0
LS-SET	Copper	4	0.00	0.002	0.006	0.00	4	0	0
LS-SET	Ethylbenzene	4	2.45	0	5.2	2.59	3	1	0
LS-SET	Lead	4	0.00	0	0	0.00	0	4	0
LS-SET	Mercury	4	0.00	0	0	0.00	0	4	0
LS-SET	Methylene Chloride	4	15.18	0	36	16.99	3	1	2
LS-SET	Nickel	4	0.00	0	0.01	0.01	1	3	1
LS-SET	o-Xylene	4	2.48	0	4.8	2.53	3	1	0
LS-SET	Silver	4	0.00	0	0	0.00	0	4	0
LS-SET	Tetrachloroethene	4	0.35	0	1.4	0.70	1	3	1
LS-SET	Toluene	4	8.60	0	16	8.10	3	1	0
LS-SET	total cyanide	4	0.00	0	0	0.00	0	4	0
LS-SET	total oil & grease	4	3.43	1.9	5.1	1.31	4	0	0
LS-SET	Trichloroethene	4	0.45	0	1.6	0.77	2	2	0
LS-SET	Vinyl Chloride	4	0.13	0	0.5	0.25	1	3	1
LS-SET	Xylene	4	6.38	0	13	6.57	3	1	0
LS-SET	Zinc	4	0.02	0	0.027	0.01	3	1	0
LS-TT	1,2-Dichloroethane	7	1.59	0	4.2	1.97	4	3	3
LS-TT	1,2-Dichloropropane	6	0.18	0	0.7	0.30	2	4	1
LS-TT	Acetone	10	26.93	0	120	44.39	9	1	0
LS-TT	Ammonia	2	2.10	0	4.2	2.97	1	1	0
LS-TT	Arsenic	8	0.01	0	0.0397	0.02	7	1	0
LS-TT	Benzene	8	0.08	0	0.4	0.15	2	6	0
LS-TT	bis(2-Ethylhexyl)Phthalate	6	0.20	0	1.2	0.49	1	5	0
LS-TT	Cadmium	6	0.00	0	0	0.00	0	6	0
LS-TT	Chloride	2	38.10	1.6	74.6	51.62	2	0	0
LS-TT	cis-1,2-dichloroethene	7	0.80	0	2.3	1.02	3	4	0
LS-TT	Copper	8	0.01	0.003	0.026	0.01	8	0	0
LS-TT	Ethylbenzene	8	0.31	0	1	0.44	3	5	0
LS-TT	Lead	9	0.00	0	0.002	0.00	4	5	0
LS-TT	Manganese	2	0.68	0.013	1.35	0.95	2	0	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
LS-TT	Mercury	7	0.00	0	0	0.00	0	7	0
LS-TT	Methylene Chloride	6	9.22	0	44	17.59	3	3	2
LS-TT	Nickel	7	0.00	0	0.011	0.01	2	5	2
LS-TT	o-Xylene	8	0.48	0	1.3	0.61	4	4	0
LS-TT	Silver	6	0.00	0	0	0.00	0	6	0
LS-TT	Tetrachloroethene	7	0.54	0	1.6	0.70	3	4	3
LS-TT	Toluene	10	2.17	0	4.6	1.98	6	4	0
LS-TT	total cyanide	7	0.00	0	0.009	0.00	2	5	2
LS-TT	total oil & grease	9	2.53	0	6.9	2.22	8	1	0
LS-TT	Total Organic Carbon	2	6.05	0	12.1	8.56	1	1	0
LS-TT	Trichloroethene	7	0.41	0	1.4	0.56	3	4	0
LS-TT	Vinyl Chloride	7	0.46	0	1.3	0.60	3	4	3
LS-TT	Xylene	8	1.01	0	2.8	1.18	5	3	0
LS-TT	Zinc	11	0.14	0	1.03	0.30	10	1	0
LS-USW	Ammonia	15	12.56	0.014	130	32.61	15	0	0
LS-USW	Chloride	15	282.41	6.8	2600	650.00	15	0	0
LS-USW	Manganese	15	0.66	0.022	2.18	0.62	15	0	0
LS-USW	Total Dissolved Solids	15	747.20	210	4700	1107.25	15	0	0
LS-USW	Total Organic Carbon	15	14.67	4.9	64	14.37	15	0	0
MS-004	1,2-Dichloroethane	99	0.00	0	0	0.00	0	99	0
MS-004	1,2-Dichloropropane	99	0.00	0	0	0.00	0	99	0
MS-004	Acetone	99	0.00	0	0	0.00	0	99	0
MS-004	Alkalinity	68	77.52	47	160	19.63	68	0	0
MS-004	Ammonia	98	0.04	0	1.34	0.18	20	78	0
MS-004	Arsenic	98	0.00	0	0.006	0.00	3	95	0
MS-004	Barium	98	0.05	0	0.104	0.01	97	1	0
MS-004	Benzene	99	0.00	0	0	0.00	0	99	0
MS-004	bis(2-Ethylhexyl)Phthalate	48	1.15	0	11.1	2.18	17	31	2
MS-004	Chloride	67	0.99	0	23	2.96	47	20	0
MS-004	cis-1,2-dichloroethene	96	0.00	0	0	0.00	0	96	0
MS-004	Ethylbenzene	90	0.00	0	0	0.00	0	90	0
MS-004	Lead	98	0.00	0	0.028	0.00	12	86	0
MS-004	m,p-Xylene	60	0.00	0	0	0.00	0	60	0
MS-004	Manganese	98	0.02	0	0.234	0.04	75	23	0
MS-004	Mercury	98	0.00	0	0.00115	0.00	1	97	0
MS-004	Methylene Chloride	99	0.00	0	0	0.00	0	99	0
MS-004	N-Nitrate	68	4.39	0.911	7.42	1.71	68	0	0
MS-004	o-Xylene	87	0.00	0	0	0.00	0	87	0
MS-004	Sulfate	67	10.74	4.1	20	2.55	67	0	0
MS-004	Tetrachloroethene	99	0.00	0	0	0.00	0	99	0
MS-004	Toluene	99	0.00	0	0	0.00	0	99	0
MS-004	Total Dissolved Solids	66	160.44	78	254	30.88	66	0	0
MS-004	Total Organic Carbon	98	1.10	0	3.7	0.95	67	31	0
MS-004	Trichloroethene	99	0.00	0	0	0.00	0	99	0
MS-004	Vanadium	98	0.00	0	0.004	0.00	5	93	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
MS-004	Vinyl Chloride	99	0.00	0	0	0.00	0	99	0
MS-004	Xylene	30	0.00	0	0	0.00	0	30	0
MS-004	Zinc	98	0.00	0	0.217	0.02	17	81	0
MS-005	1,2-Dichloroethane	99	0.00	0	0	0.00	0	99	0
MS-005	1,2-Dichloropropane	100	0.00	0	0.2	0.02	3	97	0
MS-005	Acetone	99	0.03	0	3.4	0.34	1	98	0
MS-005	Alkalinity	83	140.05	100	176	22.18	83	0	0
MS-005	Ammonia	113	0.01	0	0.526	0.05	23	90	0
MS-005	Arsenic	100	0.00	0	0.0012	0.00	2	98	0
MS-005	Barium	122	0.09	0.0442	0.121	0.02	122	0	0
MS-005	Benzene	99	0.00	0	0	0.00	0	99	0
MS-005	bis(2-Ethylhexyl)Phthalate	40	0.41	0	7.3	1.42	5	35	1
MS-005	Chloride	89	45.94	3	86.5	21.06	89	0	0
MS-005	cis-1,2-dichloroethene	98	0.13	0	0.6	0.20	31	67	0
MS-005	Ethylbenzene	90	0.00	0	0	0.00	0	90	0
MS-005	Lead	100	0.00	0	0	0.00	0	100	0
MS-005	m,p-Xylene	60	0.00	0	0	0.00	0	60	0
MS-005	Manganese	110	0.00	0	0.0229	0.00	25	85	0
MS-005	Mercury	100	0.00	0	0	0.00	0	100	0
MS-005	Methylene Chloride	104	0.27	0	1.4	0.43	34	70	0
MS-005	N-Nitrate	83	5.40	0.85	17.1	3.52	83	0	0
MS-005	o-Xylene	87	0.00	0	0	0.00	0	87	0
MS-005	Sulfate	80	28.77	9.8	61.1	13.74	80	0	0
MS-005	Tetrachloroethene	103	0.17	0	0.9	0.25	39	64	1
MS-005	Toluene	99	0.00	0	0	0.00	0	99	0
MS-005	Total Dissolved Solids	86	379.60	202	1000	103.99	86	0	0
MS-005	Total Organic Carbon	128	1.83	0	12.2	1.49	107	21	0
MS-005	Trichloroethene	103	0.43	0	1.6	0.53	46	57	0
MS-005	Vanadium	102	0.00	0	0.0052	0.00	17	85	0
MS-005	Vinyl Chloride	99	0.00	0	0	0.00	0	99	0
MS-005	Xylene	30	0.00	0	0	0.00	0	30	0
MS-005	Zinc	100	0.00	0	0.153	0.02	13	87	0
MS-007	Alkalinity	31	379.77	265	1200	164.79	31	0	0
MS-007	Ammonia	37	1.23	0.5	1.8	0.37	37	0	0
MS-007	Arsenic	31	0.02	0	0.0385	0.01	30	1	0
MS-007	Barium	31	0.14	0.111	0.208	0.02	31	0	0
MS-007	Chloride	37	10.43	3.2	21	5.27	37	0	0
MS-007	Manganese	37	7.73	6.2	10.7	1.04	37	0	0
MS-007	Sulfate	31	2.19	0	7.5	2.54	17	14	0
MS-007	Total Dissolved Solids	31	388.55	280	616	71.27	31	0	0
MS-007	Total Organic Carbon	37	8.50	0	24.3	3.97	35	2	0
MS-007	Vanadium	2	0.00	0	0	0.00	0	2	0
MS-007	Zinc	31	0.00	0	0.018	0.01	9	22	0
MW-009	1,2-Dichloroethane	99	0.02	0	2	0.20	1	98	1
MW-009	1,2-Dichloropropane	99	0.00	0	0	0.00	0	99	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
MW-009	Acetone	99	0.00	0	0	0.00	0	99	0
MW-009	Alkalinity	80	268.08	191	440	50.91	80	0	0
MW-009	Ammonia	104	0.01	0	0.64	0.06	25	79	0
MW-009	Arsenic	99	0.00	0	0.0015	0.00	2	97	0
MW-009	Barium	122	0.12	0.079	0.195	0.03	122	0	0
MW-009	Benzene	99	0.02	0	2.1	0.21	1	98	1
MW-009	bis(2-Ethylhexyl)Phthalate	38	0.04	0	0.85	0.18	2	36	0
MW-009	Chloride	88	53.38	13.4	160	41.01	88	0	0
MW-009	cis-1,2-dichloroethene	96	0.08	0	2.6	0.29	17	79	0
MW-009	Ethylbenzene	90	0.02	0	1.9	0.20	1	89	0
MW-009	Lead	98	0.00	0	0.0079	0.00	5	93	0
MW-009	m,p-Xylene	60	0.00	0	0	0.00	0	60	0
MW-009	Manganese	123	0.74	0.139	1.87	0.39	123	0	0
MW-009	Mercury	99	0.00	0	0.00014	0.00	4	95	0
MW-009	Methylene Chloride	101	0.01	0	1	0.11	3	98	0
MW-009	N-Nitrate	79	0.07	0	0.92	0.16	41	38	0
MW-009	o-Xylene	87	0.02	0	2	0.21	1	86	0
MW-009	Sulfate	82	11.18	2	35.5	8.39	82	0	0
MW-009	Tetrachloroethene	99	0.00	0	0	0.00	0	99	0
MW-009	Toluene	99	0.02	0	2	0.20	1	98	0
MW-009	Total Dissolved Solids	89	389.42	215	680	127.01	89	0	0
MW-009	Total Organic Carbon	124	4.20	0	153	13.55	119	5	0
MW-009	Trichloroethene	99	0.03	0	2.2	0.22	4	95	0
MW-009	Vanadium	100	0.00	0	0.00357	0.00	6	94	0
MW-009	Vinyl Chloride	99	0.02	0	1.8	0.18	2	97	2
MW-009	Xylene	30	0.00	0	0	0.00	0	30	0
MW-009	Zinc	103	0.00	0	0.0214	0.00	9	94	0
MW-010	1,2-Dichloroethane	99	0.00	0	0	0.00	0	99	0
MW-010	1,2-Dichloropropane	99	0.00	0	0	0.00	0	99	0
MW-010	Acetone	99	0.03	0	2.8	0.28	1	98	0
MW-010	Alkalinity	72	82.83	62	93.4	5.21	72	0	0
MW-010	Ammonia	100	0.02	0	0.86	0.09	16	84	0
MW-010	Arsenic	97	0.00	0	0	0.00	0	97	0
MW-010	Barium	103	0.04	0.0188	0.0489	0.00	103	0	0
MW-010	Benzene	99	0.00	0	0.2	0.02	1	98	0
MW-010	bis(2-Ethylhexyl)Phthalate	13	0.00	0	0	0.00	0	13	0
MW-010	Chloride	69	0.58	0	5.8	0.89	48	21	0
MW-010	cis-1,2-dichloroethene	96	0.01	0	0.5	0.05	1	95	0
MW-010	Ethylbenzene	90	0.00	0	0	0.00	0	90	0
MW-010	Lead	99	0.00	0	0.002	0.00	2	97	0
MW-010	m,p-Xylene	60	0.00	0	0	0.00	0	60	0
MW-010	Manganese	97	0.00	0	0.003	0.00	6	91	0
MW-010	Mercury	97	0.00	0	0	0.00	0	97	0
MW-010	Methylene Chloride	99	0.00	0	0	0.00	0	99	0
MW-010	N-Nitrate	69	0.24	0.028	0.365	0.04	69	0	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
MW-010	o-Xylene	88	0.01	0	0.4	0.05	2	86	0
MW-010	Sulfate	68	0.88	0	5.2	1.12	47	21	0
MW-010	Tetrachloroethene	99	0.00	0	0	0.00	0	99	0
MW-010	Toluene	100	0.02	0	0.9	0.10	3	97	0
MW-010	Total Dissolved Solids	73	113.25	69	160	14.50	73	0	0
MW-010	Total Organic Carbon	97	0.14	0	2.8	0.51	8	89	0
MW-010	Trichloroethene	99	0.00	0	0	0.00	0	99	0
MW-010	Vanadium	97	0.00	0	0	0.00	0	97	0
MW-010	Vinyl Chloride	99	0.00	0	0	0.00	0	99	0
MW-010	Xylene	31	0.06	0	1	0.23	2	29	0
MW-010	Zinc	100	0.00	0	0.007	0.00	8	92	0
MW-011	Alkalinity	28	2184.29	1100	4400	792.26	28	0	0
MW-011	Ammonia	34	192.08	51	480	104.94	34	0	0
MW-011	Arsenic	27	0.02	0	0.046	0.01	26	1	0
MW-011	Barium	28	2.66	1.14	4.8	1.04	28	0	0
MW-011	Chloride	34	6209.12	620	12300	2779.12	34	0	0
MW-011	Manganese	34	17.96	1.09	68	17.18	34	0	0
MW-011	Sulfate	27	34.60	0	300	66.19	22	5	0
MW-011	Total Dissolved Solids	28	14513.93	2500	26000	5852.09	28	0	0
MW-011	Total Organic Carbon	34	1284.18	110	6900	1499.33	34	0	0
MW-011	Zinc	28	0.27	0	6.7	1.26	17	11	0
MW-012	Alkalinity	9	140.89	110	170	25.93	9	0	0
MW-012	Ammonia	9	0.02	0	0.084	0.03	3	6	0
MW-012	Arsenic	9	0.00	0	0	0.00	0	9	0
MW-012	Barium	9	0.04	0.0292	0.05	0.01	9	0	0
MW-012	Chloride	9	5.32	4	6.8	0.87	9	0	0
MW-012	Lead	9	0.00	0	0.001	0.00	1	8	0
MW-012	Manganese	9	0.00	0	0.025	0.01	5	4	0
MW-012	Mercury	9	0.00	0	0	0.00	0	9	0
MW-012	N-Nitrate	9	0.71	0.247	1.1	0.24	9	0	0
MW-012	Sulfate	9	10.63	6.3	17	3.53	9	0	0
MW-012	Total Dissolved Solids	9	256.33	167	370	58.66	9	0	0
MW-012	Total Organic Carbon	9	3.35	0	6.4	1.87	8	1	0
MW-012	Vanadium	9	0.00	0	0.003	0.00	1	8	0
MW-012	Zinc	9	0.00	0	0.016	0.01	4	5	0
MW-013	1,2-Dichloroethane	53	0.00	0	0	0.00	0	53	0
MW-013	1,2-Dichloropropane	53	0.00	0	0	0.00	0	53	0
MW-013	Acetone	54	0.38	0	8	1.43	4	50	0
MW-013	Alkalinity	49	192.32	44.6	228	35.55	49	0	0
MW-013	Ammonia	46	0.01	0	0.158	0.03	6	40	0
MW-013	Arsenic	46	0.00	0	0.007	0.00	3	43	0
MW-013	Barium	48	0.06	0.04	0.141	0.02	48	0	0
MW-013	Benzene	53	0.01	0	0.63	0.09	1	52	0
MW-013	bis(2-Ethylhexyl)Phthalate	13	0.00	0	0	0.00	0	13	0
MW-013	Chloride	47	9.91	1.3	14	3.45	47	0	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
MW-013	cis-1,2-dichloroethene	51	0.01	0	0.2	0.04	3	48	0
MW-013	Ethylbenzene	48	0.00	0	0	0.00	0	48	0
MW-013	Lead	46	0.00	0	0.039	0.01	8	38	0
MW-013	m,p-Xylene	33	0.00	0	0	0.00	0	33	0
MW-013	Manganese	46	0.01	0	0.061	0.01	15	31	0
MW-013	Mercury	46	0.00	0	0	0.00	0	46	0
MW-013	Methylene Chloride	53	0.76	0	2.6	1.00	21	32	0
MW-013	N-Nitrate	47	2.08	0.197	6.58	1.76	47	0	0
MW-013	o-Xylene	46	0.00	0	0	0.00	0	46	0
MW-013	Sulfate	47	5.97	0	10.4	1.76	46	1	0
MW-013	Tetrachloroethene	54	0.66	0	1.6	0.45	40	14	21
MW-013	Toluene	54	0.02	0	0.7	0.11	3	51	0
MW-013	Total Dissolved Solids	47	261.55	121	327	37.43	47	0	0
MW-013	Total Organic Carbon	47	1.34	0	4.7	1.02	36	11	0
MW-013	Trichloroethene	53	0.19	0	0.7	0.25	21	32	0
MW-013	Vanadium	46	0.00	0	0	0.00	0	46	0
MW-013	Vinyl Chloride	53	0.00	0	0	0.00	0	53	0
MW-013	Xylene	15	0.00	0	0	0.00	0	15	0
MW-013	Zinc	46	0.01	0	0.08	0.01	11	35	0
MW-014	1,2-Dichloroethane	99	0.00	0	0	0.00	0	99	0
MW-014	1,2-Dichloropropane	99	0.00	0	0	0.00	0	99	0
MW-014	Acetone	99	0.00	0	0	0.00	0	99	0
MW-014	Alkalinity	70	75.78	62	82.6	3.06	70	0	0
MW-014	Ammonia	106	0.01	0	0.58	0.06	22	84	0
MW-014	Arsenic	100	0.00	0	0.006	0.00	10	90	0
MW-014	Barium	99	0.00	0	0.052	0.01	7	92	0
MW-014	Benzene	99	0.01	0	0.7	0.08	2	97	0
MW-014	bis(2-Ethylhexyl)Phthalate	13	0.14	0	1.8	0.50	1	12	0
MW-014	Chloride	75	1.06	0	7.1	1.12	62	13	0
MW-014	cis-1,2-dichloroethene	96	0.00	0	0	0.00	0	96	0
MW-014	Ethylbenzene	90	0.01	0	0.5	0.05	1	89	0
MW-014	Lead	99	0.00	0	0.0127	0.00	9	90	0
MW-014	m,p-Xylene	60	0.00	0	0	0.00	0	60	0
MW-014	Manganese	106	0.20	0.0505	1.78	0.24	106	0	0
MW-014	Mercury	99	0.00	0	0.0002	0.00	1	98	0
MW-014	Methylene Chloride	99	0.00	0	0	0.00	0	99	0
MW-014	N-Nitrate	68	0.00	0	0.059	0.01	12	56	0
MW-014	o-Xylene	87	0.02	0	1.5	0.17	2	85	0
MW-014	Sulfate	69	9.26	5.2	13	1.26	69	0	0
MW-014	Tetrachloroethene	99	0.00	0	0	0.00	0	99	0
MW-014	Toluene	99	0.04	0	1.6	0.21	3	96	0
MW-014	Total Dissolved Solids	68	123.09	99	166	15.08	68	0	0
MW-014	Total Organic Carbon	106	0.22	0	3.5	0.62	15	91	0
MW-014	Trichloroethene	99	0.00	0	0	0.00	0	99	0
MW-014	Vanadium	99	0.00	0	0.00115	0.00	1	98	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
MW-014	Vinyl Chloride	99	0.00	0	0	0.00	0	99	0
MW-014	Xylene	30	0.12	0	2.9	0.54	2	28	0
MW-014	Zinc	100	0.00	0	0.156	0.02	14	86	0
MW-015	1,2-Dichloroethane	27	0.00	0	0	0.00	0	27	0
MW-015	1,2-Dichloropropane	27	0.00	0	0	0.00	0	27	0
MW-015	Acetone	27	0.07	0	1.8	0.35	1	26	0
MW-015	Alkalinity	27	16.83	6.6	39	6.35	27	0	0
MW-015	Ammonia	27	0.03	0	0.56	0.11	9	18	0
MW-015	Arsenic	27	0.00	0	0	0.00	0	27	0
MW-015	Barium	27	0.01	0	0.015	0.00	24	3	0
MW-015	Benzene	27	0.05	0	0.7	0.16	3	24	0
MW-015	bis(2-Ethylhexyl)Phthalate	12	0.00	0	0	0.00	0	12	0
MW-015	Chloride	27	1.88	1	2.9	0.53	27	0	0
MW-015	cis-1,2-dichloroethene	26	0.00	0	0	0.00	0	26	0
MW-015	Ethylbenzene	26	0.02	0	0.5	0.10	1	25	0
MW-015	Lead	27	0.00	0	0.001	0.00	5	22	0
MW-015	Manganese	27	0.00	0	0.012	0.00	21	6	0
MW-015	Mercury	27	0.00	0	0	0.00	0	27	0
MW-015	Methylene Chloride	27	0.00	0	0	0.00	0	27	0
MW-015	N-Nitrate	27	1.37	0.41	2.2	0.43	27	0	0
MW-015	o-Xylene	25	0.04	0	0.7	0.14	2	23	0
MW-015	Sulfate	27	4.60	0	8.7	2.27	24	3	0
MW-015	Tetrachloroethene	27	0.00	0	0	0.00	0	27	0
MW-015	Toluene	27	0.24	0	3.5	0.69	7	20	0
MW-015	Total Dissolved Solids	27	75.89	35	100	15.61	27	0	0
MW-015	Total Organic Carbon	27	2.53	0	8.3	1.70	23	4	0
MW-015	Trichloroethene	27	0.00	0	0	0.00	0	27	0
MW-015	Vanadium	27	0.00	0	0	0.00	0	27	0
MW-015	Vinyl Chloride	27	0.00	0	0	0.00	0	27	0
MW-015	Xylene	26	0.10	0	2	0.40	2	24	0
MW-015	Zinc	27	0.00	0	0.01	0.00	7	20	0
MW-016	1,2-Dichloroethane	119	2.20	0	14.9	1.91	84	35	82
MW-016	1,2-Dichloropropane	120	11.57	0	18	4.51	113	7	113
MW-016	Acetone	123	3730.22	0	14300	2138.88	120	3	114
MW-016	Alkalinity	81	1334.40	369	1890	388.39	81	0	0
MW-016	Ammonia	128	0.12	0	0.469	0.10	107	21	0
MW-016	Arsenic	124	0.04	0	0.0692	0.02	121	3	0
MW-016	Barium	124	0.72	0.0928	0.899	0.14	124	0	0
MW-016	Benzene	121	13.24	0	21.3	5.01	115	6	115
MW-016	Chloride	85	87.67	2	169	55.47	85	0	0
MW-016	cis-1,2-dichloroethene	119	76.73	0	148	43.26	118	1	86
MW-016	Ethylbenzene	111	54.83	0	86.4	18.85	109	2	0
MW-016	Lead	77	0.00	0	0.0129	0.00	9	68	0
MW-016	m,p-Xylene	75	45.31	31	61.6	6.53	75	0	0
MW-016	Manganese	131	7.54	0.15	17.5	5.30	131	0	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
MW-016	Mercury	76	0.00	0	0.0034	0.00	3	73	0
MW-016	Methylene Chloride	117	101.27	0	560	152.25	70	47	56
MW-016	N-Nitrate	44	0.78	0	22.1	3.38	13	31	0
MW-016	o-Xylene	108	19.98	0	31.6	6.44	106	2	0
MW-016	Sulfate	78	3.16	0	24	5.06	54	24	0
MW-016	Tetrachloroethene	107	0.97	0	17	2.81	22	85	19
MW-016	Toluene	122	74.65	0	160	34.59	120	2	28
MW-016	Total Dissolved Solids	80	1900.35	375	2943	676.98	80	0	0
MW-016	Total Organic Carbon	129	311.72	4.44	770	199.88	129	0	0
MW-016	Trichloroethene	121	18.56	0	96	23.61	101	20	88
MW-016	Vanadium	78	0.00	0	0.0191	0.00	6	72	0
MW-016	Vinyl Chloride	122	7.97	0	17.1	4.69	104	18	104
MW-016	Xylene	36	32.38	0	55.9	15.57	35	1	0
MW-016	Zinc	107	0.00	0	0.11	0.01	13	94	0
MW-018	1,2-Dichloroethane	30	0.00	0	0	0.00	0	30	0
MW-018	1,2-Dichloropropane	30	0.00	0	0	0.00	0	30	0
MW-018	Acetone	30	0.55	0	9	1.86	3	27	0
MW-018	Alkalinity	30	82.66	45	98	8.78	30	0	0
MW-018	Ammonia	30	0.01	0	0.18	0.03	10	20	0
MW-018	Arsenic	30	0.00	0	0.0026	0.00	26	4	0
MW-018	Barium	30	0.01	0	0.016	0.00	26	4	0
MW-018	Benzene	30	0.12	0	1	0.29	6	24	3
MW-018	bis(2-Ethylhexyl)Phthalate	14	0.16	0	1.2	0.42	2	12	0
MW-018	Chloride	30	7.21	3.06	26	5.56	30	0	0
MW-018	cis-1,2-dichloroethene	27	0.00	0	0	0.00	0	27	0
MW-018	Ethylbenzene	28	0.00	0	0	0.00	0	28	0
MW-018	Lead	30	0.00	0	0.001	0.00	1	29	0
MW-018	Manganese	30	0.01	0	0.0257	0.01	26	4	0
MW-018	Mercury	30	0.00	0	0	0.00	0	30	0
MW-018	Methylene Chloride	30	0.00	0	0	0.00	0	30	0
MW-018	N-Nitrate	29	0.02	0	0.064	0.02	15	14	0
MW-018	o-Xylene	25	0.03	0	0.3	0.09	3	22	0
MW-018	Sulfate	30	7.42	3.4	11	1.59	30	0	0
MW-018	Tetrachloroethene	30	0.00	0	0	0.00	0	30	0
MW-018	Toluene	30	0.40	0	5	1.07	7	23	0
MW-018	Total Dissolved Solids	30	125.37	88	176	18.75	30	0	0
MW-018	Total Organic Carbon	30	0.32	0	3	0.86	4	26	0
MW-018	Trichloroethene	30	0.00	0	0	0.00	0	30	0
MW-018	Vanadium	30	0.00	0	0	0.00	0	30	0
MW-018	Vinyl Chloride	30	0.00	0	0	0.00	0	30	0
MW-018	Xylene	28	0.35	0	6	1.18	5	23	0
MW-018	Zinc	30	0.00	0	0.012	0.00	6	24	0
MW-019R	1,2-Dichloroethane	68	0.01	0	0.2	0.03	2	66	0
MW-019R	1,2-Dichloropropane	68	0.00	0	0.1	0.01	1	67	0
MW-019R	Acetone	68	0.00	0	0	0.00	0	68	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
MW-019R	Alkalinity	63	193.06	106	246	44.70	63	0	0
MW-019R	Ammonia	94	0.02	0	1.21	0.13	19	75	0
MW-019R	Arsenic	94	0.00	0	0.005	0.00	3	91	0
MW-019R	Barium	94	0.08	0.0374	0.201	0.03	94	0	0
MW-019R	Benzene	68	0.05	0	3.2	0.39	2	66	1
MW-019R	Chloride	63	36.04	6.7	64	18.63	63	0	0
MW-019R	cis-1,2-dichloroethene	68	0.64	0	3.08	0.90	27	41	0
MW-019R	Ethylbenzene	61	0.00	0	0	0.00	0	61	0
MW-019R	Lead	67	0.00	0	0.0081	0.00	4	63	0
MW-019R	m,p-Xylene	59	0.01	0	0.69	0.09	1	58	0
MW-019R	Manganese	94	0.02	0	0.436	0.06	81	13	0
MW-019R	Mercury	67	0.00	0	0	0.00	0	67	0
MW-019R	Methylene Chloride	68	0.00	0	0.2	0.02	1	67	0
MW-019R	N-Nitrate	37	1.40	0.91	1.68	0.13	37	0	0
MW-019R	o-Xylene	61	0.00	0	0	0.00	0	61	0
MW-019R	Sulfate	63	15.26	4.9	77	15.67	63	0	0
MW-019R	Tetrachloroethene	68	0.05	0	0.52	0.14	8	60	0
MW-019R	Toluene	68	0.07	0	3.34	0.42	3	65	0
MW-019R	Total Dissolved Solids	62	307.02	143	450	84.35	62	0	0
MW-019R	Total Organic Carbon	94	2.72	0	9	1.47	89	5	0
MW-019R	Trichloroethene	68	0.07	0	0.6	0.18	9	59	0
MW-019R	Vanadium	67	0.00	0	0	0.00	0	67	0
MW-019R	Vinyl Chloride	68	0.18	0	2.28	0.44	13	55	13
MW-019R	Xylene	2	0.00	0	0	0.00	0	2	0
MW-019R	Zinc	94	0.01	0	0.147	0.02	28	66	0
MW-020	1,2-Dichloroethane	53	0.00	0	0	0.00	0	53	0
MW-020	1,2-Dichloropropane	53	0.00	0	0	0.00	0	53	0
MW-020	Acetone	53	0.46	0	10	1.90	4	49	0
MW-020	Alkalinity	47	262.64	161	307	33.18	47	0	0
MW-020	Ammonia	46	0.01	0	0.132	0.02	6	40	0
MW-020	Arsenic	46	0.00	0	0.009	0.00	22	24	0
MW-020	Barium	47	0.26	0.0542	0.763	0.15	47	0	0
MW-020	Benzene	53	0.01	0	0.14	0.03	3	50	0
MW-020	Chloride	47	13.86	0	27.5	6.62	46	1	0
MW-020	cis-1,2-dichloroethene	51	0.02	0	0.33	0.08	4	47	0
MW-020	Ethylbenzene	48	0.00	0	0	0.00	0	48	0
MW-020	Lead	46	0.02	0	0.066	0.02	34	12	0
MW-020	m,p-Xylene	33	0.00	0	0	0.00	0	33	0
MW-020	Manganese	47	0.12	0	0.434	0.11	41	6	0
MW-020	Mercury	46	0.00	0	0.00021	0.00	1	45	0
MW-020	Methylene Chloride	53	0.62	0	2.3	0.85	19	34	0
MW-020	N-Nitrate	47	6.30	0.13	8.54	1.92	47	0	0
MW-020	o-Xylene	46	0.01	0	0.34	0.07	2	44	0
MW-020	Sulfate	46	14.34	0	27.8	5.38	45	1	0
MW-020	Tetrachloroethene	53	0.02	0	0.21	0.06	6	47	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
MW-020	Toluene	53	0.03	0	1	0.15	2	51	0
MW-020	Total Dissolved Solids	47	389.09	200	784	95.06	47	0	0
MW-020	Total Organic Carbon	47	2.34	0	6.8	1.36	43	4	0
MW-020	Trichloroethene	53	0.09	0	0.5	0.16	14	39	0
MW-020	Vanadium	46	0.00	0	0.0177	0.00	9	37	0
MW-020	Vinyl Chloride	53	0.01	0	0.5	0.07	3	50	3
MW-020	Xylene	15	0.09	0	1	0.27	2	13	0
MW-020	Zinc	46	0.03	0	0.129	0.03	39	7	0
MW-023	1,2-Dichloroethane	140	1.13	0	2.4	0.66	120	20	65
MW-023	1,2-Dichloropropane	136	0.79	0	1.34	0.36	120	16	97
MW-023	Acetone	109	0.62	0	7.36	1.49	19	90	0
MW-023	Alkalinity	108	523.44	0	757	140.67	107	1	0
MW-023	Ammonia	120	0.01	0	0.12	0.02	27	93	0
MW-023	Arsenic	109	0.00	0	0.00334	0.00	30	79	0
MW-023	Barium	152	0.20	0.0091	0.299	0.05	152	0	0
MW-023	Benzene	140	1.32	0	2.9	0.89	121	19	92
MW-023	bis(2-Ethylhexyl)Phthalate	16	0.51	0	3.7	1.21	3	13	0
MW-023	Chloride	113	90.59	1.38	188	52.39	113	0	0
MW-023	cis-1,2-dichloroethene	148	3.14	0	8.37	2.19	141	7	0
MW-023	Ethylbenzene	91	0.00	0	0	0.00	0	91	0
MW-023	Lead	106	0.00	0	0.023	0.00	12	94	0
MW-023	m,p-Xylene	61	0.02	0	0.68	0.11	2	59	0
MW-023	Manganese	152	0.49	0	1.21	0.50	139	13	0
MW-023	Mercury	103	0.00	0	0.0006	0.00	22	81	0
MW-023	Methylene Chloride	133	6.53	0	18.3	4.42	100	33	92
MW-023	N-Nitrate	94	1.93	0	8.04	1.94	71	23	0
MW-023	o-Xylene	120	3.93	0	13.9	3.99	87	33	0
MW-023	Sulfate	114	5.64	0	11	2.05	112	2	0
MW-023	Tetrachloroethene	122	2.08	0	9	2.55	65	57	62
MW-023	Toluene	101	0.00	0	0.22	0.02	1	100	0
MW-023	Total Dissolved Solids	111	729.43	394	1211	213.14	111	0	0
MW-023	Total Organic Carbon	165	5.18	0	60	6.82	159	6	0
MW-023	Trichloroethene	154	3.50	0	9.7	2.67	144	10	62
MW-023	Vanadium	114	0.00	0	0.00935	0.00	33	81	0
MW-023	Vinyl Chloride	142	1.13	0	3.8	0.87	120	22	120
MW-023	Xylene	35	0.31	0	1	0.36	16	19	0
MW-023	Zinc	106	0.00	0	0.0309	0.00	12	94	0
MW-024	Arsenic	15	0.00	0	0	0.00	0	15	0
MW-024	Barium	15	0.03	0	0.0497	0.01	14	1	0
MW-024	Lead	15	0.00	0	0	0.00	0	15	0
MW-024	Manganese	15	0.00	0	0.0082	0.00	10	5	0
MW-024	Mercury	15	0.00	0	0	0.00	0	15	0
MW-024	Vanadium	15	0.00	0	0.00151	0.00	1	14	0
MW-024	Zinc	15	0.01	0	0.017	0.01	13	2	0
MW-025	Arsenic	15	0.00	0	0.0017	0.00	2	13	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
MW-025	Barium	15	0.06	0.052	0.061	0.00	15	0	0
MW-025	Lead	15	0.00	0	0.0022	0.00	3	12	0
MW-025	Manganese	15	0.00	0	0.005	0.00	4	11	0
MW-025	Mercury	15	0.00	0	0	0.00	0	15	0
MW-025	Vanadium	15	0.00	0	0.004	0.00	8	7	0
MW-025	Zinc	15	0.00	0	0	0.00	0	15	0
MW-026	Arsenic	15	0.00	0	0.001	0.00	1	14	0
MW-026	Barium	17	0.06	0.0513	0.065	0.00	17	0	0
MW-026	Lead	15	0.00	0	0.001	0.00	1	14	0
MW-026	Manganese	15	0.00	0	0.003	0.00	1	14	0
MW-026	Mercury	15	0.00	0	0	0.00	0	15	0
MW-026	Vanadium	16	0.00	0	0.00225	0.00	2	14	0
MW-026	Zinc	15	0.00	0	0.01	0.00	1	14	0
MW-027	Alkalinity	9	157.78	130	210	24.27	9	0	0
MW-027	Ammonia	9	0.00	0	0.029	0.01	1	8	0
MW-027	Arsenic	15	0.00	0	0.0016	0.00	2	13	0
MW-027	Barium	17	0.15	0.128	0.176	0.01	17	0	0
MW-027	Chloride	10	51.83	12	77	20.00	10	0	0
MW-027	Lead	15	0.00	0	0.001	0.00	1	14	0
MW-027	Manganese	15	0.00	0	0.0231	0.01	8	7	0
MW-027	Mercury	15	0.00	0	0	0.00	0	15	0
MW-027	N-Nitrate	10	0.90	0.59	1.9	0.39	10	0	0
MW-027	Sulfate	10	15.34	12	18	1.84	10	0	0
MW-027	Total Dissolved Solids	9	340.56	300	367	23.05	9	0	0
MW-027	Total Organic Carbon	10	1.73	0	3.9	1.45	7	3	0
MW-027	Vanadium	17	0.00	0	0.0045	0.00	8	9	0
MW-027	Zinc	17	0.00	0	0.011	0.00	4	13	0
MW-028	1,2-Dichloroethane	9	0.00	0	0	0.00	0	9	0
MW-028	1,2-Dichloropropane	9	0.00	0	0	0.00	0	9	0
MW-028	Acetone	9	0.00	0	0	0.00	0	9	0
MW-028	Alkalinity	9	181.67	140	240	33.54	9	0	0
MW-028	Ammonia	9	0.01	0	0.035	0.01	2	7	0
MW-028	Arsenic	15	0.00	0	0.0011	0.00	1	14	0
MW-028	Barium	15	0.09	0.0551	0.19	0.04	15	0	0
MW-028	Benzene	9	0.00	0	0	0.00	0	9	0
MW-028	bis(2-Ethylhexyl)Phthalate	8	0.00	0	0	0.00	0	8	0
MW-028	Chloride	9	36.01	1.1	160	55.99	9	0	0
MW-028	cis-1,2-dichloroethylene	7	0.00	0	0	0.00	0	7	0
MW-028	Ethylbenzene	9	0.00	0	0	0.00	0	9	0
MW-028	Lead	15	0.00	0	0	0.00	0	15	0
MW-028	Manganese	15	0.00	0	0.003	0.00	2	13	0
MW-028	Mercury	15	0.00	0	0	0.00	0	15	0
MW-028	Methylene Chloride	9	0.00	0	0	0.00	0	9	0
MW-028	N-Nitrate	9	12.22	8.4	14.7	2.48	9	0	0
MW-028	o-Xylene	7	0.00	0	0	0.00	0	7	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
MW-028	Sulfate	9	17.31	14	21	2.52	9	0	0
MW-028	Tetrachloroethene	9	0.00	0	0	0.00	0	9	0
MW-028	Toluene	9	0.00	0	0	0.00	0	9	0
MW-028	Total Dissolved Solids	9	374.33	294	620	121.62	9	0	0
MW-028	Total Organic Carbon	9	1.11	0	3.9	1.46	4	5	0
MW-028	Trichloroethene	9	0.00	0	0	0.00	0	9	0
MW-028	Vanadium	15	0.00	0	0.004	0.00	4	11	0
MW-028	Vinyl Chloride	9	0.00	0	0	0.00	0	9	0
MW-028	Xylene	9	0.00	0	0	0.00	0	9	0
MW-028	Zinc	15	0.00	0	0.007	0.00	2	13	0
MW-029	1,2-Dichloroethane	99	0.00	0	0	0.00	0	99	0
MW-029	1,2-Dichloropropane	99	0.00	0	0	0.00	0	99	0
MW-029	Acetone	99	0.05	0	3.78	0.41	2	97	0
MW-029	Alkalinity	68	53.04	26	311	35.77	68	0	0
MW-029	Ammonia	98	0.01	0	0.08	0.02	18	80	0
MW-029	Arsenic	98	0.00	0	0.001	0.00	1	97	0
MW-029	Barium	98	0.10	0.03	2.51	0.25	98	0	0
MW-029	Benzene	99	0.00	0	0	0.00	0	99	0
MW-029	bis(2-Ethylhexyl)Phthalate	38	1.93	0	71	11.51	3	35	1
MW-029	Chloride	68	107.00	38	176	50.23	68	0	0
MW-029	cis-1,2-dichloroethene	96	0.00	0	0	0.00	0	96	0
MW-029	Ethylbenzene	90	0.00	0	0.3	0.03	1	89	0
MW-029	Lead	98	0.00	0	0	0.00	0	98	0
MW-029	m,p-Xylene	60	0.00	0	0	0.00	0	60	0
MW-029	Manganese	98	0.01	0	1.17	0.12	29	69	0
MW-029	Mercury	98	0.00	0	0	0.00	0	98	0
MW-029	Methylene Chloride	99	0.00	0	0	0.00	0	99	0
MW-029	N-Nitrate	68	0.80	0	2.26	0.31	67	1	0
MW-029	o-Xylene	87	0.01	0	0.5	0.05	1	86	0
MW-029	Sulfate	67	5.03	0	9.9	1.67	64	3	0
MW-029	Tetrachloroethene	99	0.30	0	0.97	0.32	51	48	2
MW-029	Toluene	99	0.04	0	2	0.24	5	94	0
MW-029	Total Dissolved Solids	66	334.74	150	530	122.18	66	0	0
MW-029	Total Organic Carbon	98	0.31	0	5	0.83	17	81	0
MW-029	Trichloroethene	99	0.01	0	0.61	0.06	1	98	0
MW-029	Vanadium	98	0.00	0	0.00108	0.00	1	97	0
MW-029	Vinyl Chloride	99	0.00	0	0	0.00	0	99	0
MW-029	Xylene	30	0.14	0	3	0.59	2	28	0
MW-029	Zinc	98	0.00	0	0.02	0.00	10	88	0
MW-031	1,2-Dichloroethane	63	0.00	0	0	0.00	0	63	0
MW-031	1,2-Dichloropropane	63	0.00	0	0	0.00	0	63	0
MW-031	Acetone	64	0.04	0	1.4	0.21	2	62	0
MW-031	Alkalinity	42	129.20	31	280	91.39	42	0	0
MW-031	Ammonia	66	0.01	0	0.092	0.03	19	47	0
MW-031	Arsenic	64	0.00	0	0.0019	0.00	9	55	0

StationID	Analyte	Count	Average	Min	Max	StDev	# Detects	# NonDetects	# Exceedances
MW-031	Barium	66	0.08	0.03	0.15	0.04	66	0	0
MW-031	Benzene	63	0.00	0	0	0.00	0	63	0
MW-031	bis(2-Ethylhexyl)Phthalate	8	0.14	0	1.1	0.39	1	7	0
MW-031	Chloride	43	5.32	1	38	5.91	43	0	0
MW-031	cis-1,2-dichloroethene	63	0.00	0	0	0.00	0	63	0
MW-031	Ethylbenzene	58	0.00	0	0	0.00	0	58	0
MW-031	Lead	64	0.00	0	0.002	0.00	5	59	0
MW-031	m,p-Xylene	38	0.00	0	0	0.00	0	38	0
MW-031	Manganese	67	0.09	0	0.963	0.18	55	12	0
MW-031	Mercury	63	0.00	0	0	0.00	0	63	0
MW-031	Methylene Chloride	63	0.00	0	0	0.00	0	63	0
MW-031	N-Nitrate	41	0.33	0	2.44	0.54	34	7	0
MW-031	o-Xylene	58	0.00	0	0	0.00	0	58	0
MW-031	Sulfate	43	6.03	0	17	3.23	42	1	0
MW-031	Tetrachloroethene	63	0.00	0	0	0.00	0	63	0
MW-031	Toluene	63	0.00	0	0.3	0.04	1	62	0
MW-031	Total Dissolved Solids	42	191.43	61	340	82.45	42	0	0
MW-031	Total Organic Carbon	67	4.99	0	15	2.20	66	1	0
MW-031	Trichloroethene	63	0.00	0	0	0.00	0	63	0
MW-031	Vanadium	64	0.00	0	0.0077	0.00	15	49	0
MW-031	Vinyl Chloride	63	0.00	0	0	0.00	0	63	0
MW-031	Xylene	20	0.00	0	0	0.00	0	20	0
MW-031	Zinc	65	0.00	0	0.013	0.00	13	52	0

APPENDIX C - DATA VALIDATION

Analytical data for the September 2020 sample round was reviewed using quality control (QC) criteria documented in the analytical method, *National Functional Guidelines for Organic Data Review and Inorganic Data Review* (1994), and the *Work Plan for Interim Action Compliance Monitoring Mica Landfill Spokane County, Washington* (October 1994) as amended by the County and Ecology in February, 2001.

Data Qualifier Summary for September 2020 Sampling Results

APPENDIX D - LANDFILL GAS PROBE MEASUREMENTS

Mica Landfill Gas Measurements

Tech: GF

Date: 1/15/2020

Temp: 17-27 deg F

Weather: cldy to clear

Baro. Pres: 29.97 @

Qualifier: Falling

Gas Extraction Monitoring Data

Filename: MP200115.XLS

Inst. Used: Landtec Gem 500 # 760

Time Gem Calib: 902

Time Gem Checked:

830

Baro. Pres: 29.88 @

1230

Gas Extraction Monitoring Data

Mica Landfill Gas Measurements

Tech: GF
 Date: 2/10/2020
 Temp: 32-40 deg F
 Weather: clr to mstly clr
 Baro. Pres: 30.26 @ 815
 Qualifier: R

Filename: MP200210.XLS

Inst. Used: Landtec Gem 500 # 760
 Time Gem Calib: 1000
 Time Gem Checked:

Gas Extraction Monitoring Data

Code	Time	Date	CH4	CO2	O2	Bal	Static	Pre	Differenti	Temp	Refere	Adjus	Valve	Pos:	Comments
MGP00012	10:10	2/10/2020	0	0.6	20.3	79.1	0	-1.55	>>>	>>>	>>>	>>>	>>>		
MGP0002R	10:31	2/10/2020	0	5.3	17.4	77.3	0	0	>>>	>>>	>>>	>>>	>>>		
MGP00007	10:42	2/10/2020	0	1.9	19.3	78.8	0	0	>>>	>>>	>>>	>>>	>>>		
MGP00008	10:52	2/10/2020	0	1.3	19.7	79	0	-0.17	>>>	>>>	>>>	>>>	>>>		
MGP00009	12:55	2/10/2020	0	2.1	19	78.9	0	-0.42	>>>	>>>	>>>	>>>	>>>		
MGP00001	13:07	2/10/2020							>>>	>>>	>>>	>>>	>>>	gw in screen, ns	
MGP00006	13:13	2/10/2020							>>>	>>>	>>>	>>>	>>>	gw in screen, ns	
MGP00011	13:20	2/10/2020	0	2.2	19.1	78.7	0	0	>>>	>>>	>>>	>>>	>>>		
MGP00005	13:23	2/10/2020							>>>	>>>	>>>	>>>	>>>	gw in screen, ns	
MGP00010	13:29	2/10/2020	0	3.4	17.6	79	0	-0.01	>>>	>>>	>>>	>>>	>>>		
MGP00003	13:37	2/10/2020							>>>	>>>	>>>	>>>	>>>	gw in screen, ns	

Mica Landfill Gas Measurements

Tech: GF

Date: 3/3/2020

Temp: 38-47 deg F

Weather: ptly cldy

Baro. Pres: 30.05 @

845

Filename: MP200303.XLS

Inst. Used: Landtec Gem 500 # 760

Time Gem Calib: 900

Time Gem Checked:

Qualifer: Falling

Gas Extraction Monitoring Data

Code	Time	Date	CH4	CO2	O2	Bal	Static Pre	Differenti	Temp	Refere	Adjus	Valve Pos:	Comments
MGP00012	9:14	3/3/2020	0	1	19.9	79.1	0	-0.66	>>	>>	>>	>>	
MGP0002R	9:19	3/3/2020	0	12.7	12.6	74.7	0	0	>>	>>	>>	>>	
MGP00007	9:28	3/3/2020	0	4	17.5	78.5	0	0	>>	>>	>>	>>	
MGP00008	9:36	3/3/2020	0	3.4	18.1	78.5	0	-0.07	>>	>>	>>	>>	
MGP00009	10:10	3/3/2020	0	3.7	17.3	79	0	-0.41	>>	>>	>>	>>	
MGP00001	10:17	3/3/2020							>>	>>	>>	>>	gw in screen, no sample
MGP00006	10:27	3/3/2020							>>	>>	>>	>>	gw in screen, no sample
MGP00011	10:37	3/3/2020	0	1.9	18.9	79.2	0	0	>>	>>	>>	>>	
MGP00005	10:41	3/3/2020							>>	>>	>>	>>	gw in screen, no sample
MGP00010	10:47	3/3/2020	0	5.9	15	79.1	0	0	>>	>>	>>	>>	
MGP00003	10:57	3/3/2020	0	3.7	7	89.3	0	0	>>	>>	>>	>>	

Mica Landfill Gas Measurements

Tech: GF

Date: 4/2/2020

Temp: 32-39 deg F

Weather: cldy

Baro. Pres: 30.04 @

900

Filename: MP200402.XLS

Inst. Used: Landtec Gem 500 # 760

Time Gem Calib: 855

Time Gem Checked:

Baro. Pres: 30.04 @

Baro. Pres: 30.04 @

1155

Qualifier: steady

Gas Extraction Monitoring Data

Code	Time	Date	CH4	CO2	O2	Bal	Static Pre	Differenti	Temp	Refere	Adjus	Valve Pos:	Comments
MGP00012	9:04	4/2/2020	0	0.1	20.8	79.1	0	-0.82	>>	>>	>>	>>	
MGP0002R	9:09	4/2/2020	0	9.7	14.8	75.5	0	0	>>	>>	>>	>>	
MGP0007	9:15	4/2/2020	0	3.8	17.7	78.5	0	0	>>	>>	>>	>>	
MGP0008	9:22	4/2/2020	0	1.7	19.4	78.9	0	-0.18	>>	>>	>>	>>	
MGP0009	9:29	4/2/2020	0	3.6	17.2	79.2	0	-0.41	>>	>>	>>	>>	
MGP0001	9:35	4/2/2020							>>	>>	>>	>>	gw in screen, no sample
MGP0006	9:43	4/2/2020							>>	>>	>>	>>	gw in screen, no sample
MGP0011	9:55	4/2/2020	0	1.8	18.8	79.4	0	-0.09	>>	>>	>>	>>	
MGP0005	10:00	4/2/2020							>>	>>	>>	>>	gw in screen, no sample
MGP0010	10:05	4/2/2020	0	6.8	14.1	79.1	0	-0.02	>>	>>	>>	>>	
MGP0003	10:15	4/2/2020	0	4.5	7.5	88	0	0	>>	>>	>>	>>	

Mica Landfill Gas Measurements

Tech: GF

Date: 5/8/2020

Temp: 48-62 deg F

Weather: ptly cldy

Baro. Pres: 30.27 @

730

Filename: MP200508.xls

Inst. Used: Landtec Gem 500 # 760

Time Gem Calib: 1000

Time Gem Checked:

Qualifer: falling

Gas Extraction Monitoring Data

Code	Time	Date	CH4	CO2	O2	Bal	Static Pre	Differenti	Temp	Refere	Adjus	Valve Pos:	Comments
MGP00012	10:07	5/8/2020	0	1	19.7	79.3	0	0.03	>>	>>	>>	>>	
MGP0002R	10:19	5/8/2020	0	8.6	16	75.4	0	0	>>	>>	>>	>>	
MGP00007	10:27	5/8/2020	0	3.8	17.2	79	0	0	>>	>>	>>	>>	
MGP00008	10:35	5/8/2020	0	3.4	17.7	78.9	0	0	>>	>>	>>	>>	
MGP00009	10:46	5/8/2020	0	3.4	17.2	79.4	0	0.05	>>	>>	>>	>>	
MGP00001	11:19	5/8/2020							>>	>>	>>	>>	gw in screens, no sample
MGP00006	12:26	5/8/2020	0	3.8	17.3	78.9	0	0	>>	>>	>>	>>	
MGP00011	12:41	5/8/2020	0	1.6	18.5	79.9	0	0.06	>>	>>	>>	>>	
MGP00005	12:46	5/8/2020							>>	>>	>>	>>	gw in screens, no sample
MGP00010	12:51	5/8/2020	0	7.4	13.4	79.2	0	0	>>	>>	>>	>>	
MGP00003	1:00	5/8/2020	0	5.6	6.7	87.7	0	0	>>	>>	>>	>>	

Mica Landfill Gas Measurements

Tech: GF

Date: 6/10/2020

Temp: 53-68 deg F

Weather: mostly cldy

Baro. Pres: 30-14 @

Qualifier: Falling

Gas Extraction Monitoring Data

Filename: MP200610.XLS

Inst. Used: Landtec Gem 500 # 760

Time Gem Calib: 820

Time Gem Checked:

745

Baro. Pres: 30.11 @

760

Gas Extraction Monitoring Data

Mica Landfill Gas Measurements

Tech: GF

Date: 7/15/2020

Temp: 72-79 deg F

Weather: clear

Baro. Pres: 29.98 @

Qualifier: Falling

Gas Extraction Monitoring Data

Filename: MP200715.XLS

Inst. Used: Landtec Gem 500 # 760

Time Gem Calib: 1010

Time Gem Checked:

Baro. Pres: 29.98 @

Qualifier: Falling

Gas Extraction Monitor

Code	Time	Date	CH4	CO2	O2	Bal	Static Pre Differenti Temp Refere Adjus Valve Pos: Comments						
							Temp	Refere	Adjus	Valve	Pos:	Comments	
MGP00012	10:17	7/15/2020	0	0.5	20.4	79.1	0	-0.1	>>	>>	>>	>>	
MGP0002R	10:23	7/15/2020	0.1	9.1	16.2	74.6	0	0	>>	>>	>>	>>	
MGP00007	10:33	7/15/2020	0	3.5	17	79.5	0	0	>>	>>	>>	>>	
MGP00008	10:41	7/15/2020	0	3.1	17.4	79.5	0	-0.03	>>	>>	>>	>>	
MGP00009	10:49	7/15/2020	0	4.6	15.5	79.9	0	0	>>	>>	>>	>>	
MGP00001	10:58	7/15/2020	0.1	5.8	0	94.1	0	0	>>	>>	>>	>>	
MGP00006	11:07	7/15/2020	0	5.5	16.3	78.2	0	0	>>	>>	>>	>>	
MGP00003	11:34	7/15/2020	0	9	0.8	90.2	0	0	>>	>>	>>	>>	
MGP00011	11:45	7/15/2020	0	4.5	16.5	79	0	0	>>	>>	>>	>>	
MGP00005	11:52	7/15/2020	0	4.8	15.9	79.3	0	-0.01	>>	>>	>>	>>	
MGP00010	12:00	7/15/2020	0	8.1	13.3	78.6	0	0	>>	>>	>>	>>	

Mica Landfill Gas Measurements

Tech: GF

Date: 8/4/2020

Temp: 75-85 deg F

Weather: clear

Baro. Pres: 29.98 @

1000

Filename: MP200804.XLS

Inst. Used: Landtec Gem 500 # 760

Time Gem Calib: 1016

Time Gem Checked:

Baro. Pres: 29.93 @

1550

Qualifier: Falling

Gas Extraction Monitoring Data

Code	Time	Date	CH4	CO2	O2	Bal	Static Pre	Differenti	Temp	Refere	Adjus	Valve Pos:	Comments
MGP00012	10:27	8/4/2020	0	1.1	19.4	79.5	0	-0.26	>>	>>	>>	>>	
MGP00001	11:49	8/4/2020	0.2	6.2	0.2	93.4	0	0	>>	>>	>>	>>	
MGP00009	11:56	8/4/2020	0	4.9	15.2	79.9	0	0	>>	>>	>>	>>	
MGP0002R	12:00	8/4/2020	0.2	17	12.6	70.2	0	0	>>	>>	>>	>>	
MGP00007	12:09	8/4/2020	0	0.8	19.5	79.7	0	0	>>	>>	>>	>>	
MGP00008	12:35	8/4/2020	0	3.2	16.9	79.9	0	-0.08	>>	>>	>>	>>	
MGP00006	13:53	8/4/2020	0	1.7	18.7	79.6	0	0	>>	>>	>>	>>	
MGP00011	14:05	8/4/2020	0	1.6	19.2	79.2	0	-0.01	>>	>>	>>	>>	
MGP00005	14:16	8/4/2020	0	3.8	17	79.2	0	0	>>	>>	>>	>>	
MGP00010	14:22	8/4/2020	0	6.1	15.4	78.5	0	0	>>	>>	>>	>>	
MGP00003	14:32	8/4/2020	0	10.6	1.6	87.8	0	0	>>	>>	>>	>>	

Mica Landfill Gas Measurements

Filename: MP200925.XLS

Tech: GF

Inst. Used: Landtec Gem 500 # 760

Date: 9/25/2020

Time Gem Calib: 815

Temp: 49 deg F

Time Gem Checked:

Weather: Cldy & rain

730 Baro Pres: 29.76 @ 1000

Qualifier: Falling

Gas Extraction Monitoring Data

Code	Time	Date	CH4	CO2	O2	Bal	Static Pre:	Different Temp:	Refere:	Adjus:	Valve Pos:	Comments
MGP00012	8:25	9/25/2020	0	0.4	20.5	79.1	0	0.64	>>>	>>>	>>>	>>>
MGP0002R	8:32	9/25/2020	0	8.4	17.2	74.4	0	0	>>>	>>>	>>>	>>>
MGP00007	8:41	9/25/2020	0	4	16.4	79.6	0	0	>>>	>>>	>>>	>>>
MGP00008	8:47	9/25/2020	0	3.8	17.1	79.1	0	0.23	>>>	>>>	>>>	>>>
MGP00009	8:56	9/25/2020	0	5.5	15.8	78.7	0	0.05	>>>	>>>	>>>	>>>
MGP00001	9:05	9/25/2020	0	7.5	0.1	92.4	0	0	>>>	>>>	>>>	>>>
MGP00006	9:12	9/25/2020	0	0.8	20	79.2	0	0	>>>	>>>	>>>	>>>
MGP00003	9:17	9/25/2020	0	12.7	6.3	81	0	0	>>>	>>>	>>>	>>>
MGP00011	9:33	9/25/2020	0	2	18.5	79.5	0	0.16	>>>	>>>	>>>	>>>
MGP00005	9:39	9/25/2020	0	2.2	18.8	79	0	0	>>>	>>>	>>>	>>>
MGP00010	9:44	9/25/2020	0	5.6	16.4	78	0	0	>>>	>>>	>>>	>>>

Mica Landfill Gas Measurements

Tech: GF
 Date: 10/14/2020
 Temp: 45-52 deg F
 Weather: ptly cldy
 Baro. Pres: 30.13 @ 900
 Qualifier: rising

Filename: MP201014.XLSX

Inst. Used: Landtec Gem 500 # 760
 Time Gem Calib: 1000
 Time Gem Checked:

Gas Extraction Monitoring Data

Code	Time	Date	CH4	CO2	O2	Bal	Static Pre	Different	Temp	Refere	Adjus	Valve Pos:	Comments
MGP00012	10:11	10/14/2020	0	1.1	19.6	79.3	0	-2.17	>>	>>	>>	>>	>>
MGP0002R	10:17	10/14/2020	0	0	20.7	79.3	0	0	>>	>>	>>	>>	>>
MGP00007	10:23	10/14/2020	0	4	16.6	79.4	0	0	>>	>>	>>	>>	>>
MGP00008	10:30	10/14/2020	0	4	17	79	0	-0.46	>>	>>	>>	>>	>>
MGP00009	10:37	10/14/2020	0	3.2	18.3	78.5	0	-0.1	>>	>>	>>	>>	>>
MGP00001	10:45	10/14/2020	0.1	6.5	0	93.4	0	0	>>	>>	>>	>>	>>
MGP00006	10:53	10/14/2020	0	0.6	20.1	79.3	0	0	>>	>>	>>	>>	>>
MGP00011	11:05	10/14/2020	0	1.8	18.7	79.5	0	-0.2	>>	>>	>>	>>	>>
MGP00005	11:11	10/14/2020	0	1.9	18.8	79.3	0	0	>>	>>	>>	>>	>>
MGP00010	11:17	10/14/2020	0	5.2	16.7	78.1	0	0	>>	>>	>>	>>	>>
MGP00003	11:25	10/14/2020	0	11.1	9.5	79.4	0	0	>>	>>	>>	>>	>>

Mica Landfill Gas Measurements

Tech: GF
 Date: 11/18/2020
 Temp: 37 to 46 deg F
 Weather: cldy
 Baro. Pres: 29.62 @ 745 Baro. Pres: 29.57 @ 1045
 Qualifier: Falling

Filename: MP200118.XLSX

Inst. Used: Landtec Gem 500 # 760

Time Gem Calib: 900

Time Gem Checked:

Gas Extraction Monitoring Data

Code	Time	Date	CH4	CO2	O2	Bal	Static Pres	Different	Temp	Refere	Adjus	Valve Pos:	Comments
MGP00012	9:10	11/18/2020	0	1	19.9	79.1	0	0.19	>>	>>	>>	>>	
MGP0002R	9:19	11/18/2020	0	9.1	16	74.9	0	0	>>	>>	>>	>>	
MGP00007	9:28	11/18/2020	0	4.2	16.8	79	0	0.02	>>	>>	>>	>>	
MGP00008	9:34	11/18/2020	0	2.8	18.6	78.6	0	0.14	>>	>>	>>	>>	
MGP00009	9:43	11/18/2020	0	4.1	17.7	78.2	0	0.06	>>	>>	>>	>>	
MGP00001	9:47	11/18/2020							>>	>>	>>	>>	gw in screen, no sample
MGP00006	9:56	11/18/2020	0	0.7	20.4	78.9	0	0	>>	>>	>>	>>	
MGP00011	10:07	11/18/2020	0	1.3	19.8	78.9	0	0.1	0	>>	>>	>>	
MGP00005	10:13	11/18/2020	0	1.6	19.5	78.9	0	0	0	>>	>>	>>	
MGP00010	10:18	11/18/2020	0	4.4	17.5	78.1	0	0.01	0	>>	>>	>>	
MGP00003	10:28	11/18/2020							>>	>>	>>	>>	gw in screen, no sample

Mica Landfill Gas Measurements

Tech: GF
 Date: 12/4/2020
 Temp: 26-30 deg F
 Weather: clear
 Baro. Pres: 30.39 @ 730 Baro. Pres: 30.43 @ 1102
 Qualifier: Rising

Filename: MP201204.XLXS

Inst. Used: Landtec Gem 500 # 760
 Time Gem Calib: 820
 Time Gem Checked:

Gas Extraction Monitoring Data

Code	Time	Date	CH4	CO2	O2	Bal	Static Pres	Different Temp	Refere	Adjus	Valve Pos:	Comments
MGP00012	8:37	12/4/2020	0	1.1	19.7	79.2	0	-0.85	>>	>>	>>	>>
MGP0002R	9:28	12/4/2020	0	7.5	16.6	75.9	0	0	>>	>>	>>	>>
MGP00007	9:36	12/4/2020	0	3.8	17.9	78.3	0	-0.03	>>	>>	>>	>>
MGP00008	9:53	12/4/2020	0	0.6	20.3	79.1	0	-0.31	>>	>>	>>	>>
MGP00009	10:00	12/4/2020	0	3	18.7	78.3	0	-0.11	>>	>>	>>	>>
MGP00001	10:05	12/4/2020							>>	>>	>>	>>
MGP00006	10:15	12/4/2020	0	1.1	19.8	79.1	0	0	>>	>>	>>	>>
MGP00011	10:23	12/4/2020	0	0.6	20.7	78.7	0	-0.22	>>	>>	>>	>>
MGP00005	10:29	12/4/2020	0	1.7	19.5	78.8	0	-0.01	>>	>>	>>	>>
MGP00010	10:34	12/4/2020	0	4.2	17.8	78	0	0	>>	>>	>>	>>
MGP00003	10:42	12/4/2020							>>	>>	>>	>>

gw in screen, no sample

gw in screen, no sample