

South DeKalb, GA NATTS Network Assessment Review

- Established 2003: Carbonyls, PM₁₀ Metals, and VOCs
 - Chromium VI added in 2005; ended in in 2013
 - PAHs added in 2007
 - Ethylene oxide added in 2020
- For the NATTS Network Assessment (2003-2022):
 - 15 of 17 Method Quality Objective (MQO) Core HAPs were included in the national trends
 - Arsenic (PM₁₀): Completeness less than 75% for 2017 and Bias % Difference was outside of ±35% in 2017.
 - Trichloroethylene: Analytical precision data missing in 2018.
 - 258 of 330 pollutant datasets were suitable for trends analysis
 - Annual Average and 3-Year Rolling Average Concentrations were decreasing for benzene, formaldehyde, naphthalene, and nickel (PM₁₀).
 - 100% Reporting of Datasets
- Method Quality Objectives (MQO): 2003-2022
 - Completeness: Met 85% completeness in 281 of 330 pollutant datasets
 - Method Detection Limits: Met MDL Target Ratio of 1.00 in 249 of 332 pollutant datasets
 - Bias: Met ±25% for 250 of 285 pollutant datasets
 - Overall Method Precision: Met ≤15% CV for 75 of 203 pollutant datasets
 - Analytical Method Precision: Met ≤15% CV for 47 of 171 pollutant datasets
- Analytical Laboratories for 2022

VOC	Carbonyl	PM ₁₀ Metals	PAHs
GADNR	GADNR	GADNR	GADNR

- Equipment Year Deployed

Equipment Type	VOC	Carbonyl	PM ₁₀ Metals	PAHs
Sampler	2010	2010	2022	2016
Analytical	2021	2022	2019	2016
Preconcentrator	2021	NA	NA	NA
Standards Preparation	2019	NA	NA	NA
Canister Cleaning	2019	NA	NA	NA
Extraction	NA	NA	2019	2015

National Summary: NATTS data were collected at 27 locations across the United States, with sites beginning in 2003 or later (Figure 1) for 20 core HAPs. Over 670,000 concentrations (primary, secondary, and replicate) were generated and analyzed for this assessment. Pollutant datasets were scored to assess whether they were suitable for trends analysis. Each pollutant dataset was evaluated against four MQOs: Completeness; Sensitivity; Bias; and Precision. Datasets that were suitable (A- or B-rated) for six consecutive years were used for national trends analysis (Table 1).

National trends were determined by comparing the most recent 3-year blocked averages (e.g., 2017-2019 vs. 2020-2022) to determine if the NATTS Trends DQO was being met:

To be able to detect a 15 percent difference (trend) between the annual mean concentrations of successive 3-year periods within acceptable levels of decision error.

Of the 20 core HAPs, 17 were assessed for the NATTS Trends DQO. Due to sampling and analytical issues, acrolein and ethylene were not considered for trends analysis (Table 2).

Additionally, hexavalent chromium was discontinued as a required pollutant. The assessment showed that across the network, 11 of those 17 pollutants were decreasing between the 3-year blocks, while four of those pollutants were increasing between the 3-year blocks. Two pollutants did not exhibit a noticeable trend.

Table 1. NATTS Network Assessment: Count and Percentage of Suitable Datasets by Pollutant Group

Pollutant Group	A-rated		B-rated		Does Not Meet	
	#	%	#	%	#	%
VOCs	1,968	58%	864	25%	572	17%
Carbonyls	668	68%	231	24%	77	8%
PM ₁₀ Metals	1,906	66%	775	27%	217	7%
PAHs	571	77%	144	19%	29	4%
Total = 8,704	5,113	64%	2,014	25%	895	11%

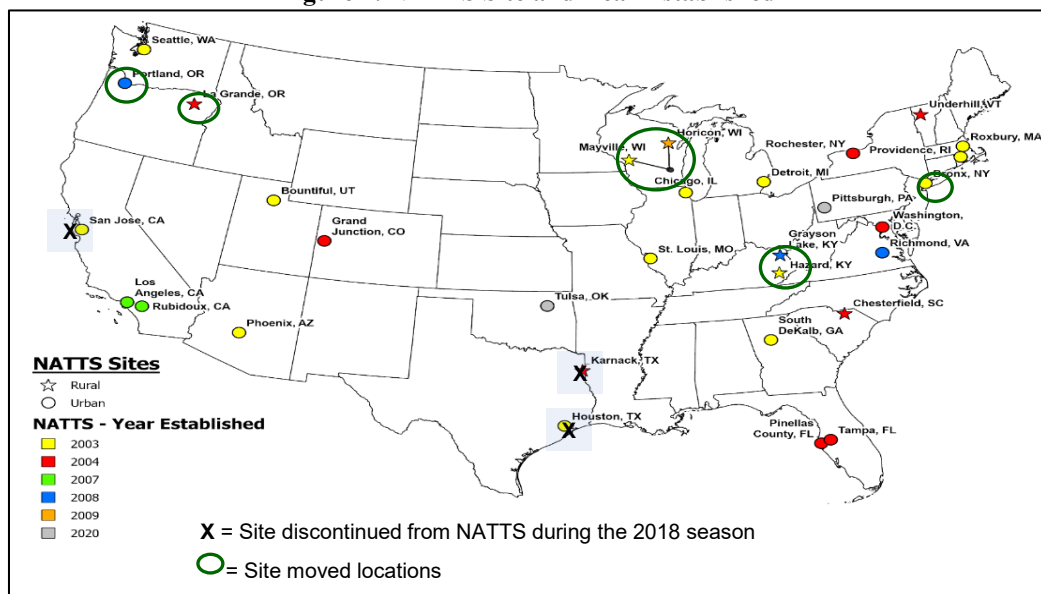
Table 2. Three-Year Block Averages for National Trends

Pollutant ^{a,b}	Units	# Sites	Block 1	Block 2	% Difference
Acetaldehyde	µg/m ³	16	1.48	1.34	-9.2%
Arsenic (PM ₁₀)	ng/m ³	18	0.68	0.64	-6.6%
Benzene	µg/m ³	16	0.529	0.525	-0.8%
Benzo(a)pyrene	ng/m ³	18	0.086	0.072	-16.6%
Beryllium (PM ₁₀)	ng/m ³	18	0.008	0.010	15.0%
Butadiene, 1,3-	µg/m ³	15	0.057	0.054	-5.1%
Cadmium (PM ₁₀)	ng/m ³	20	0.087	0.090	3.7%
Carbon Tetrachloride	µg/m ³	15	0.53	0.50	-5.3%
Chloroform	µg/m ³	16	0.173	0.165	-4.8%
Formaldehyde	µg/m ³	15	2.809	2.482	-11.7%
Lead (PM ₁₀)	ng/m ³	20	2.44	2.43	-0.5%
Manganese (PM ₁₀)	ng/m ³	20	6.69	7.31	9.2%
Naphthalene	ng/m ³	17	42.00	35.10	-16.4%
Nickel (PM ₁₀)	ng/m ³	19	0.87	0.83	-3.7%
Tetrachloroethylene	µg/m ³	15	0.12	0.12	1.5%
Trichloroethylene	µg/m ³	14	0.019	0.022	16.3%
Vinyl Chloride	µg/m ³	16	0.004	0.001	-69.0%

^a Acrolein and ethylene oxide were not assessed due to sampling and analytical issues

^b Hexavalent chromium (not assessed) was discontinued in 2013

Figure 1. NATTS Site and Year Established



NATTS Monitoring Site Report: South DeKalb, GA

Site Information

Region	4
NATTS Site Type	Urban
County	DeKalb
AQS Site Code	13-089-0002
NATTS Operating Agency	GA Dept. of Natural Resources
Latitude	33.688007
Longitude	-84.290325
AQS Land Use	Residential
AQS Location Setting	Suburban
CBSA Population (2023)	762,992

Figure 2. NATTS Site Location



Pollutant Datasets Evaluation: Suitable for Trends (Y=yes; Y(T)=yes, and used for DQO Trends; N=No; "--"=not rated)

Final Pollutant Name	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Acetaldehyde	Y	N(a)	N(a)	N(a)	Y	N(a)	N(a)	N(a)	N(b)	N(c)	N(c)	N(c)	N(c)	N(b)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Arsenic (PM ₁₀)	N(a)	Y	N(d)	Y	Y	Y	Y	Y	Y	Y	N(b)	N(a,d)	Y	Y	N(a,d)	Y	Y	Y	Y	Y
Benzene	Y	Y	Y	Y	Y	Y	Y	Y	N(b)	N(c)	N(c)	Y	Y	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Benzo(a)pyrene	--	--	--	--	--	Y	Y	Y	Y	Y	N	N	Y	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Beryllium (PM ₁₀)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N(b)	Y	Y	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Butadiene, 1,3-	N(a)	N(a)	Y	Y	Y	Y	Y	Y	N(b)	N(c)	N(c)	Y	Y	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Cadmium (PM ₁₀)	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N(b)	Y	Y	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Carbon tetrachloride	N(a)	N(a)	N(a)	Y	Y	Y	Y	Y	N(b)	N(c)	N(c)	Y	N(d)	N(d)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Chloroform	N(a)	N(a)	Y	Y	Y	Y	Y	Y	N(b)	N(c)	N(c)	Y	Y	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Formaldehyde	Y	Y	Y	Y	Y	Y	Y	Y	N(b)	N(c)	N(c)	N(c)	N(c)	N(b)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Lead (PM ₁₀)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N(b)	Y	Y	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Manganese (PM ₁₀)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N(b)	Y	Y	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Naphthalene	--	--	--	--	--	Y	Y	Y	Y	Y	N	N	Y	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Nickel (PM ₁₀)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N(b)	Y	Y	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Tetrachloroethylene	N(a)	N(a)	Y	Y	Y	Y	Y	Y	N(b)	N(c)	N(c)	Y	N(e)	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)
Trichloroethylene	N(a)	N(a)	Y	Y	Y	Y	Y	Y	N(b)	N(c)	N(c)	Y	Y	Y	Y	N(e)	Y	Y	Y	Y
Vinyl chloride	N(a)	N(a)	Y	Y	Y	Y	Y	Y	N(b)	N(c)	N(c)	Y	Y	Y	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)	Y(T)

^a: Completeness was less than 75% based on 1-in-6 day sampling.

^b: Pollutant was expected, but not sampled at this site for this year.

^c: Reported MDL to NATTS Target Ratio greater than 2.0

^d: Bias % Difference was outside ± 35%.

^e: Analytical precision data (required since 2012) was not reported to EPA or AQS for this pollutant.

Table 3. NATTS Network Assessment Data (2003-2022) - National Distribution Statistics By Type^a

Analyte	Units	Site Type	# Data Records	% Detections	Arithmetic Mean ^b	Percentile Value ^c						
						5th	10th	25th	50th	75th	90th	95th
Acetaldehyde	µg/m ³	Urban	22,000	100%	1.73 ± 0.02	0.50	0.65	0.95	1.42	2.15	3.19	3.96
	µg/m ³	Rural	6,392	100%	1.17 ± 0.03	0.36	0.45	0.65	0.92	1.35	1.98	2.67
	µg/m ³	All Sites	28,392	100%	1.61 ± 0.02	0.45	0.58	0.85	1.29	1.97	2.99	3.79
Arsenic (PM ₁₀)	ng/m ³	Urban	21,944	95%	0.87 ± 0.03	0.03	0.16	0.32	0.56	0.96	1.65	2.37
	ng/m ³	Rural	6,385	96%	0.49 ± 0.02	0.03	0.08	0.16	0.35	0.58	0.93	1.30
	ng/m ³	All Sites	28,329	96%	0.78 ± 0.02	0.03	0.13	0.27	0.51	0.87	1.51	2.16
Benzene	µg/m ³	Urban	22,246	99%	0.85 ± 0.01	0.23	0.29	0.42	0.64	1.02	1.62	2.20
	µg/m ³	Rural	5,932	90%	0.52 ± 0.01	ND	0.06	0.20	0.38	0.67	1.08	1.51
	µg/m ³	All Sites	28,178	97%	0.78 ± 0.01	0.16	0.23	0.36	0.58	0.95	1.52	2.07
Benzo(a)pyrene	ng/m ³	Urban	17,810	73%	0.10 ± 0.01	ND	ND	ND	0.04	0.10	0.23	0.35
	ng/m ³	Rural	4,735	37%	0.07 ± 0.01	ND	ND	ND	ND	0.02	0.19	0.38
	ng/m ³	All Sites	22,545	65%	0.09 ± 0.01	ND	ND	ND	0.03	0.09	0.22	0.35
Beryllium (PM ₁₀)	ng/m ³	Urban	21,786	77%	0.042 ± 0.004	ND	ND	0.0005	0.005	0.015	0.043	0.098
	ng/m ³	Rural	6,062	49%	0.018 ± 0.002	ND	ND	ND	ND	0.004	0.012	0.041
	ng/m ³	All Sites	27,848	71%	0.037 ± 0.003	ND	ND	ND	0.003	0.011	0.038	0.083
Butadiene, 1,3-	µg/m ³	Urban	22,220	78%	0.092 ± 0.002	ND	ND	0.018	0.051	0.110	0.215	0.317
	µg/m ³	Rural	5,940	29%	0.017 ± 0.001	ND	ND	ND	ND	0.011	0.054	0.104
	µg/m ³	All Sites	28,160	68%	0.076 ± 0.002	ND	ND	ND	0.039	0.092	0.190	0.283
Cadmium (PM ₁₀)	ng/m ³	Urban	21,954	93%	0.184 ± 0.014	ND	0.019	0.043	0.081	0.160	0.354	0.572
	ng/m ³	Rural	6,067	89%	0.092 ± 0.005	ND	ND	0.026	0.055	0.099	0.179	0.270
	ng/m ³	All Sites	28,021	92%	0.164 ± 0.011	ND	0.012	0.039	0.075	0.143	0.300	0.518
Carbon Tetrachloride	µg/m ³	Urban	22,202	98%	0.556 ± 0.002	0.336	0.423	0.486	0.550	0.638	0.725	0.784
	µg/m ³	Rural	5,909	84%	0.494 ± 0.010	ND	ND	0.342	0.533	0.629	0.728	0.807
	µg/m ³	All Sites	28,111	95%	0.543 ± 0.003	ND	0.363	0.475	0.547	0.636	0.726	0.788
Chloroform	µg/m ³	Urban	22,218	88%	0.243 ± 0.016	ND	ND	0.094	0.129	0.205	0.398	0.630
	µg/m ³	Rural	5,942	56%	0.062 ± 0.002	ND	ND	ND	0.049	0.098	0.134	0.228
	µg/m ³	All Sites	28,160	82%	0.205 ± 0.013	ND	ND	0.076	0.110	0.187	0.342	0.543

Table 3. NATTS Network Assessment Data (2003-2022) - National Distribution Statistics By Type^a

Analyte	Units	Site Type	# Data Records	% Detections	Arithmetic Mean ^b	Percentile Value ^c						
						5th	10th	25th	50th	75th	90th	95th
Formaldehyde	µg/m ³	Urban	22,024	100%	3.03 ± 0.04	0.69	1.00	1.57	2.42	3.72	5.47	6.95
	µg/m ³	Rural	6,432	100%	2.16 ± 0.04	0.49	0.64	1.03	1.67	2.69	4.12	5.34
	µg/m ³	All Sites	28,456	100%	2.83 ± 0.03	0.61	0.86	1.42	2.25	3.50	5.22	6.65
Lead (PM ₁₀)	ng/m ³	Urban	21,955	100%	3.97 ± 0.10	0.70	0.95	1.46	2.49	4.34	7.87	11.16
	ng/m ³	Rural	6,066	99%	1.93 ± 0.14	0.34	0.45	0.75	1.27	2.14	3.59	4.96
	ng/m ³	All Sites	28,021	100%	3.53 ± 0.09	0.53	0.75	1.22	2.17	3.88	6.99	10.10
Manganese (PM ₁₀)	ng/m ³	Urban	21,906	100%	9.76 ± 0.25	1.06	1.49	2.53	4.96	10.43	20.40	30.79
	ng/m ³	Rural	6,067	99%	3.79 ± 0.12	0.48	0.74	1.34	2.48	4.49	8.08	11.64
	ng/m ³	All Sites	27,973	100%	8.47 ± 0.20	0.84	1.22	2.16	4.19	8.99	18.13	27.27
Naphthalene	ng/m ³	Urban	17,811	100%	67.25 ± 0.97	13.42	18.03	28.73	49.00	84.13	136.42	180.00
	ng/m ³	Rural	4,732	98%	21.76 ± 1.02	2.79	4.04	6.84	12.47	23.51	45.68	69.01
	ng/m ³	All Sites	22,543	100%	57.70 ± 0.83	5.92	9.77	20.41	40.15	74.11	124.40	167.26
Nickel (PM ₁₀)	ng/m ³	Urban	21,958	98%	1.76 ± 0.05	0.29	0.40	0.62	1.02	1.86	3.32	5.05
	ng/m ³	Rural	5,989	85%	0.56 ± 0.07	ND	ND	0.10	0.26	0.53	0.96	1.63
	ng/m ³	All Sites	27,947	95%	1.50 ± 0.04	0.00	0.17	0.45	0.84	1.59	2.92	4.47
Tetrachloroethylene	µg/m ³	Urban	22,209	84%	0.24 ± 0.05	ND	ND	0.05	0.12	0.22	0.43	0.68
	µg/m ³	Rural	5,936	38%	0.07 ± 0.02	ND	ND	ND	ND	0.04	0.12	0.31
	µg/m ³	All Sites	28,145	75%	0.21 ± 0.04	ND	ND	ND	0.08	0.20	0.38	0.61
Trichloroethylene	µg/m ³	Urban	22,204	43%	0.040 ± 0.008	ND	ND	ND	ND	0.043	0.096	0.152
	µg/m ³	Rural	5,922	19%	0.019 ± 0.003	ND	ND	ND	ND	ND	0.029	0.124
	µg/m ³	All Sites	28,126	38%	0.036 ± 0.006	ND	ND	ND	ND	0.033	0.085	0.148
Vinyl Chloride	µg/m ³	Urban	22,021	18%	0.0046 ± 0.0003	ND	ND	ND	ND	ND	0.0126	0.0251
	µg/m ³	Rural	5,940	13%	0.0070 ± 0.0008	ND	ND	ND	ND	ND	0.0125	0.0304
	µg/m ³	All Sites	27,961	17%	0.0051 ± 0.0003	ND	ND	ND	ND	ND	0.0126	0.0253

^a Statistics presented are from pollutant datasets which were suitable for trends.

^b The arithmetic mean is the average of all samples results which include actual measured values. If no chemical was registered, then a value of zero is used when calculating the mean.

^c ND: No results of this chemical were registered by the laboratory analytical equipment.

Table 4. Summary Statistics for South DeKalb, GA

Analyte	Units	# Data Records	% Detection	Arithmetic Mean ^a	Percentile Value ^b						
					5th	10th	25th	50th	75th	90th	95th
Acetaldehyde	µg/m ³	862	94%	2.35 ± 0.13	ND	0.26	1.06	1.90	3.16	4.98	5.93
Arsenic (PM ₁₀)	ng/m ³	1,128	76%	0.59 ± 0.04	ND	ND	0.10	0.53	0.84	1.20	1.57
Benzene	µg/m ³	1,037	91%	0.70 ± 0.04	ND	0.18	0.35	0.56	0.86	1.35	1.85
Benzo(a)pyrene	ng/m ³	921	30%	0.04 ± 0.01	ND	ND	ND	ND	0.03	0.12	0.22
Beryllium (PM ₁₀)	ng/m ³	1,129	10%	0.010 ± 0.003	ND	ND	ND	ND	ND	ND	0.100
Butadiene, 1,3-	µg/m ³	1,014	28%	0.07 ± 0.01	ND	ND	ND	ND	0.10	0.25	0.37
Cadmium (PM ₁₀)	ng/m ³	1,126	75%	0.08 ± 0.01	ND	ND	0.00	0.06	0.10	0.19	0.21
Carbon Tetrachloride	µg/m ³	1,009	87%	0.40 ± 0.01	ND	ND	0.36	0.43	0.51	0.57	0.62
Chloroform	µg/m ³	1,010	47%	0.07 ± 0.01	ND	ND	ND	ND	0.11	0.17	0.24
Formaldehyde	µg/m ³	857	100%	5.29 ± 0.32	0.77	1.20	2.11	4.27	6.84	10.04	13.48
Lead (PM ₁₀)	ng/m ³	1,129	98%	1.86 ± 0.14	0.52	0.78	1.01	1.50	2.11	3.05	3.79
Manganese (PM ₁₀)	ng/m ³	1,135	100%	3.53 ± 0.18	0.89	1.24	1.91	2.89	4.34	6.19	7.62
Naphthalene	ng/m ³	923	100%	64.07 ± 3.52	10.29	16.71	28.05	47.42	83.87	128.03	168.63
Nickel (PM ₁₀)	ng/m ³	1,132	92%	1.08 ± 0.13	ND	0.31	0.53	0.73	1.01	1.56	2.19
Tetrachloroethylene	µg/m ³	1,017	47%	0.08 ± 0.01	ND	ND	ND	ND	0.13	0.21	0.30
Trichloroethylene	µg/m ³	1,010	26%	0.010 ± 0.002	ND	ND	ND	ND	0.01	0.03	0.06
Vinyl Chloride	µg/m ³	1,011	11%	0.005 ± 0.001	ND	ND	ND	ND	ND	0.01	0.048

^a :The arithmetic mean is the average of all samples results which included actual measured values. If no chemical was registered, then a value of zero is used.

^b ND: No results of this chemical were registered by the laboratory analytical equipment.

Table 5. Analytical Labs Supporting this Site

Pollutant Group	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
VOCs	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR
Carbonyls	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR
PM ₁₀ Metals	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR
PAHs	--	--	--	ERG	ERG	ERG	ERG	ERG	ERG/GADNR	GADNR	GADNR	GADNR	GADNR	GADNR	GADNR

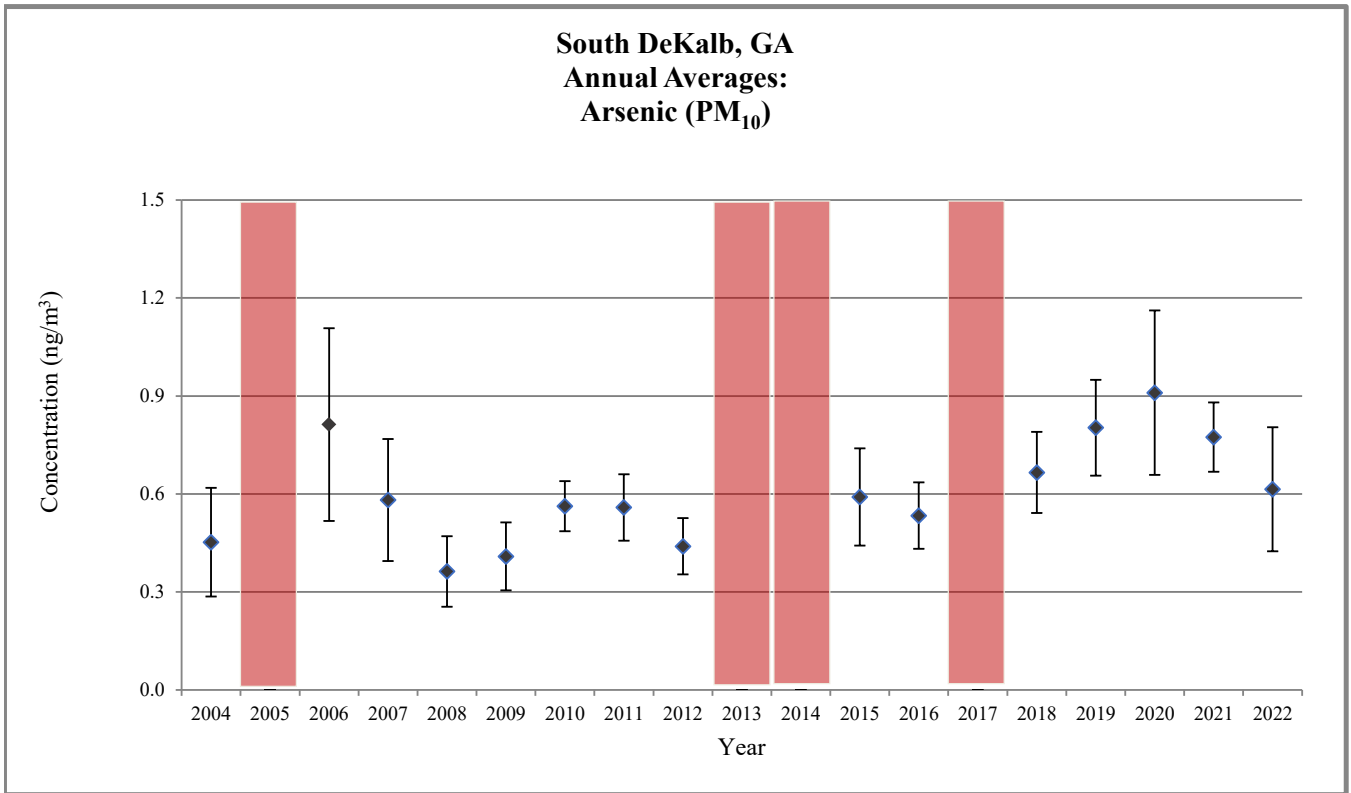
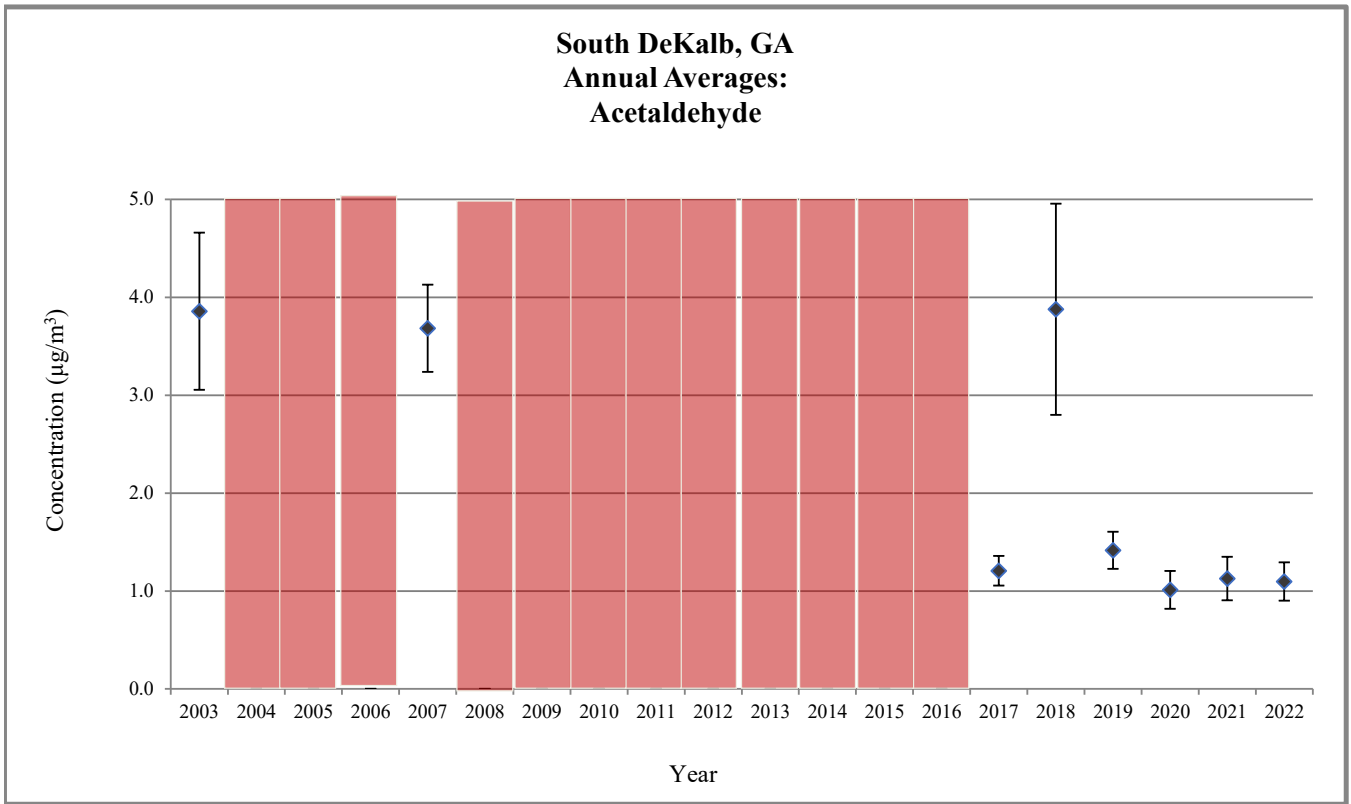
Pollutant Group	2019	2020	2021	2022
VOCs	GADNR	GADNR	GADNR	GADNR
Carbonyls	GADNR	GADNR	GADNR	GADNR
PM ₁₀ Metals	GADNR	GADNR	GADNR	GADNR
PAHs	GADNR	GADNR	GADNR	GADNR

--: Not Applicable

GADNR: Georgia Department of Natural Resources

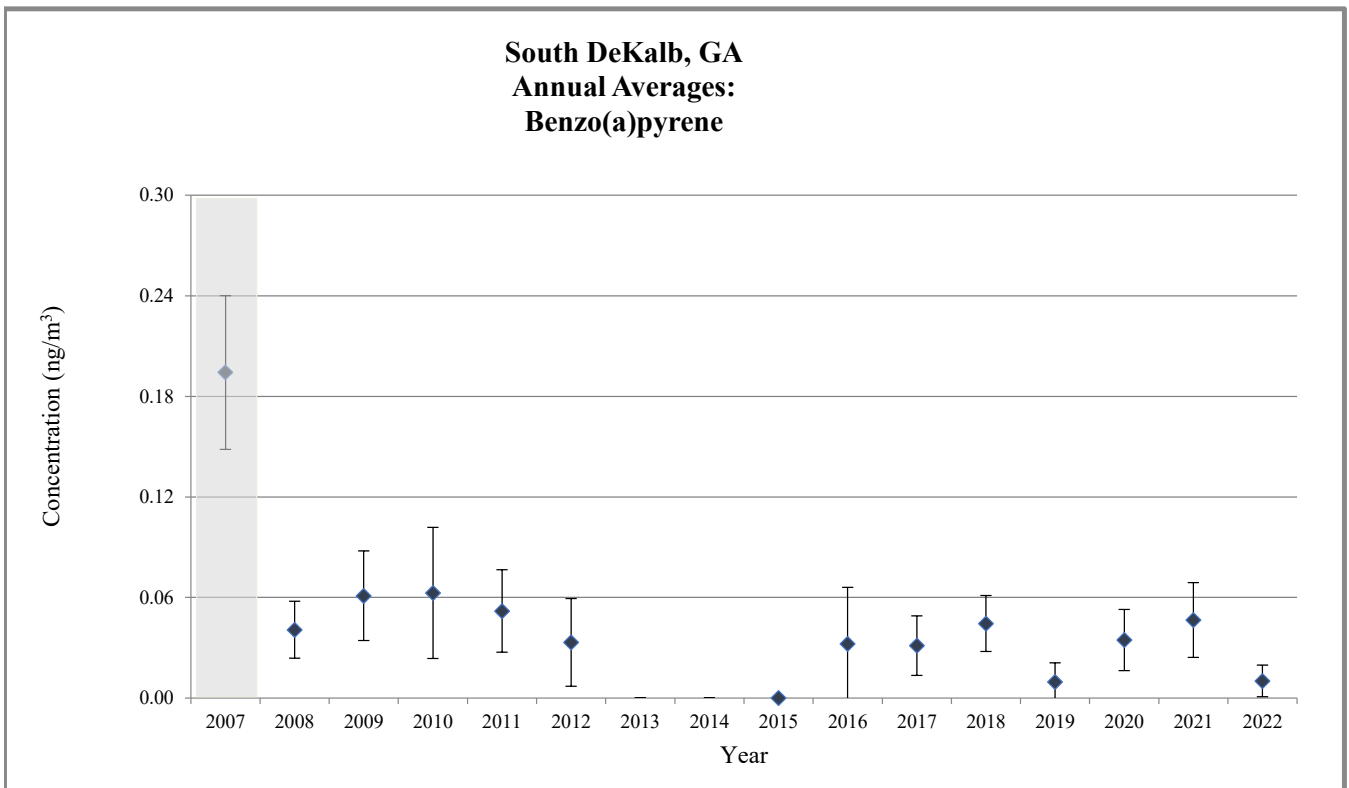
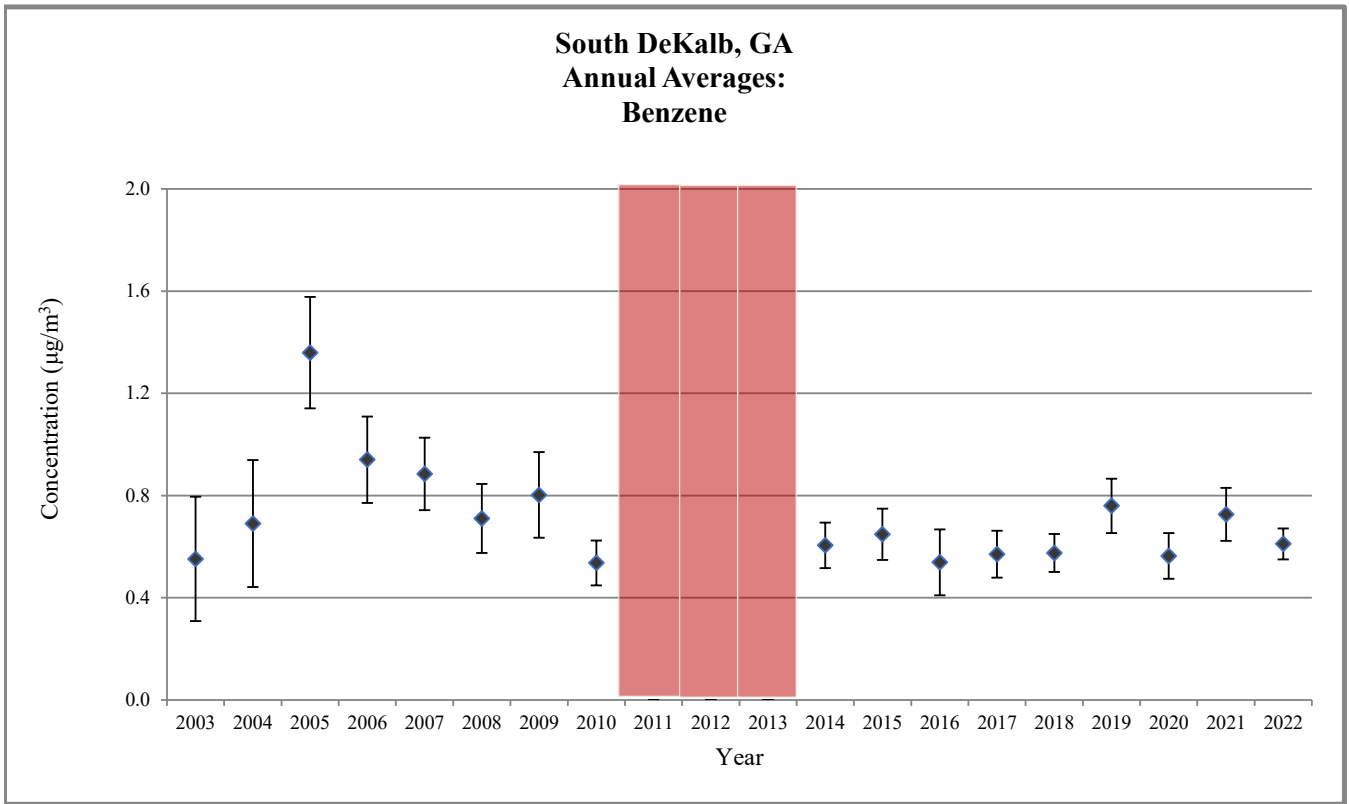
ERG: Eastern Research Group, Inc.

Figure 3. South DeKalb, GA Annual Average Concentrations



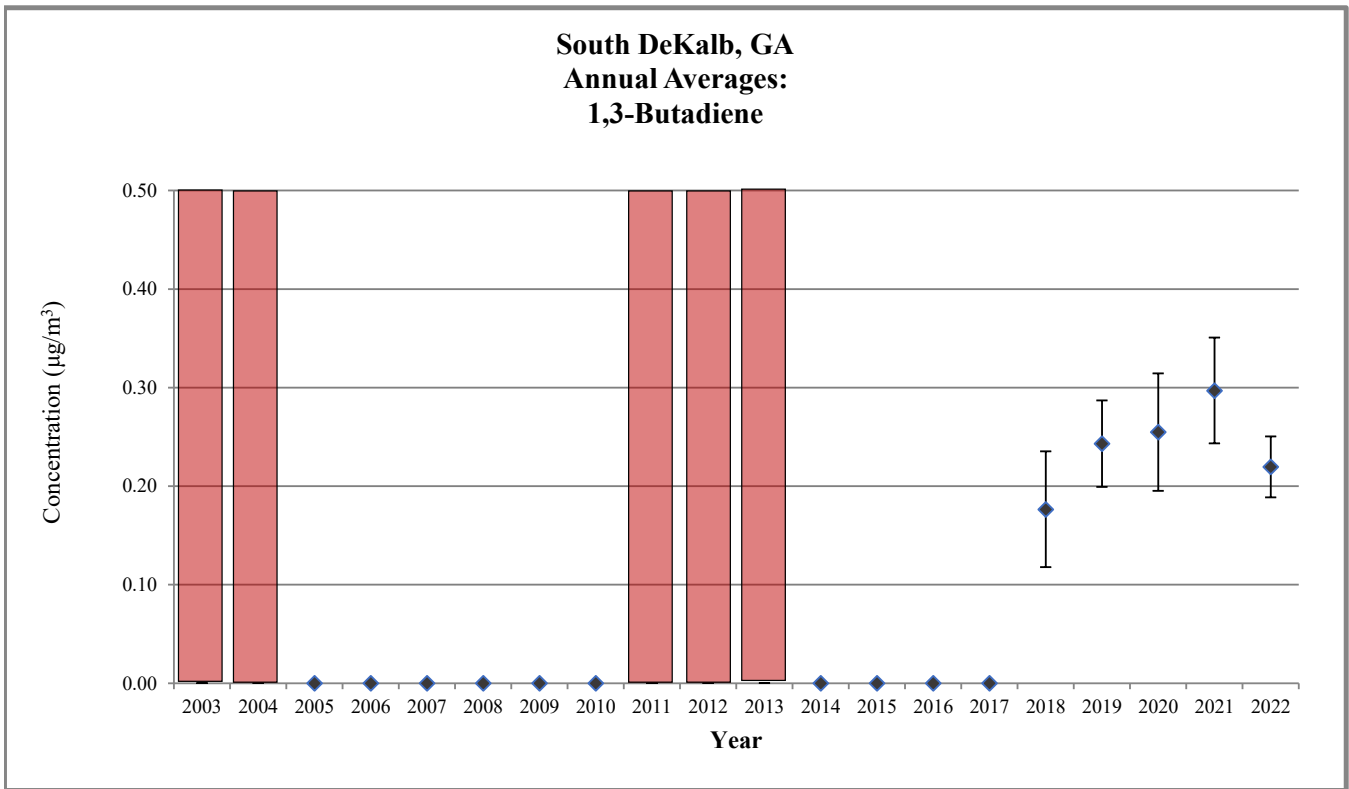
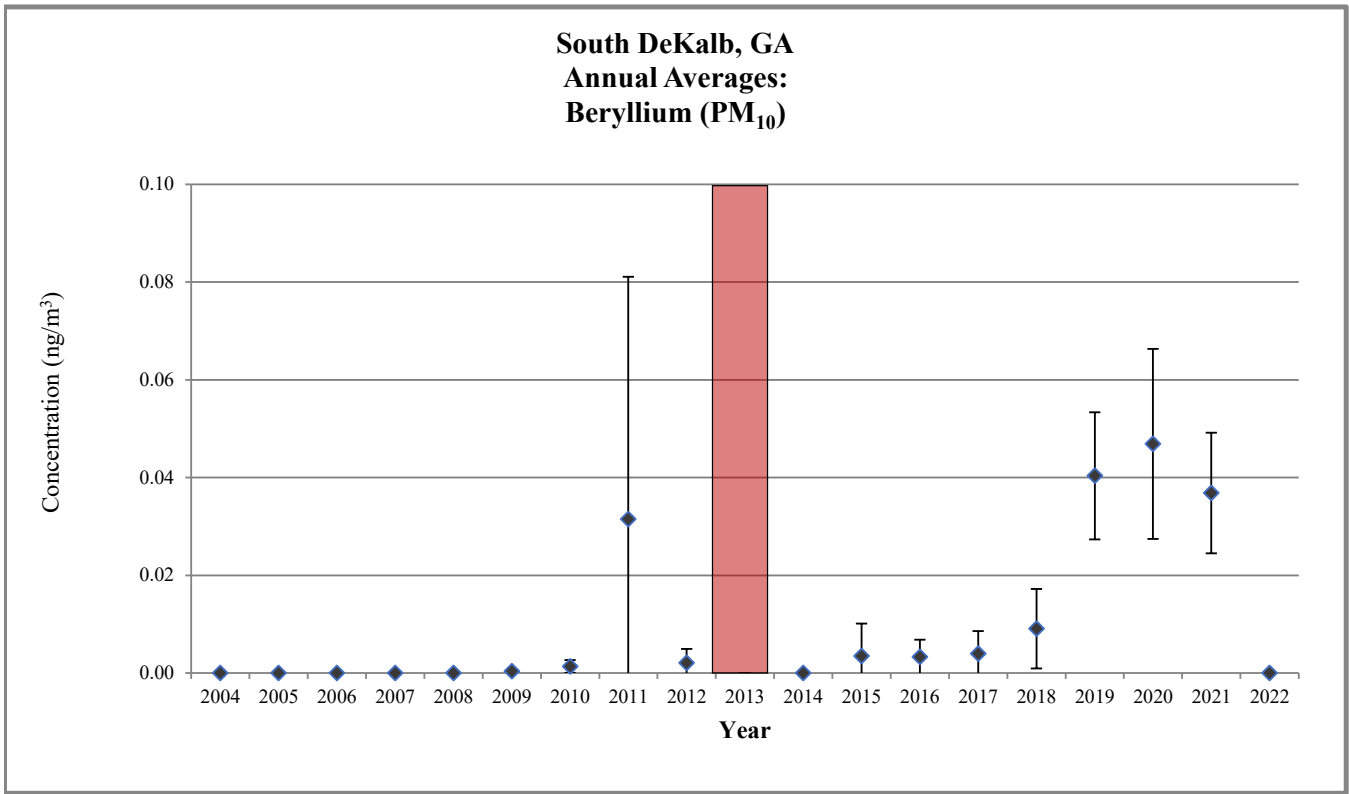
Sampling began midway through the year.
 Does not meet MQO

Figure 3. South DeKalb, GA Annual Average Concentrations



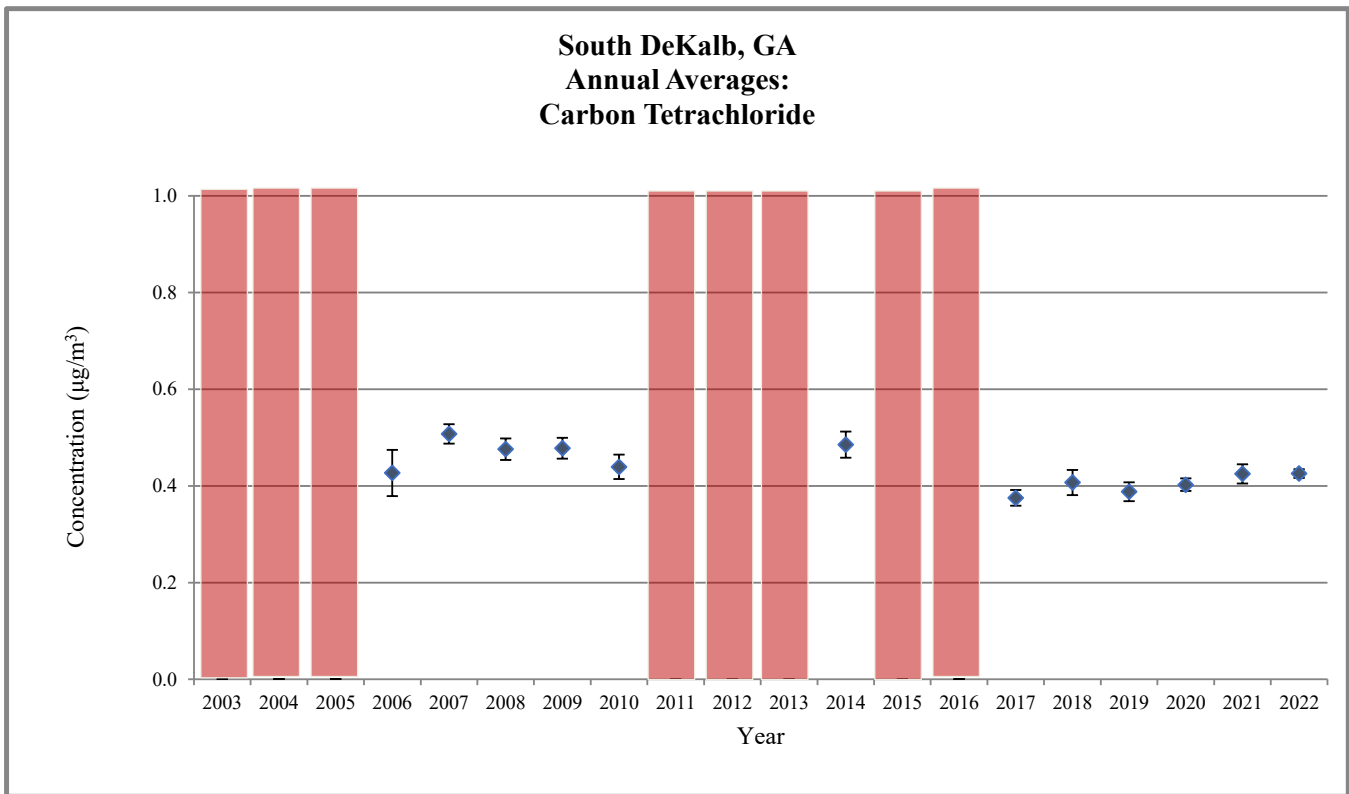
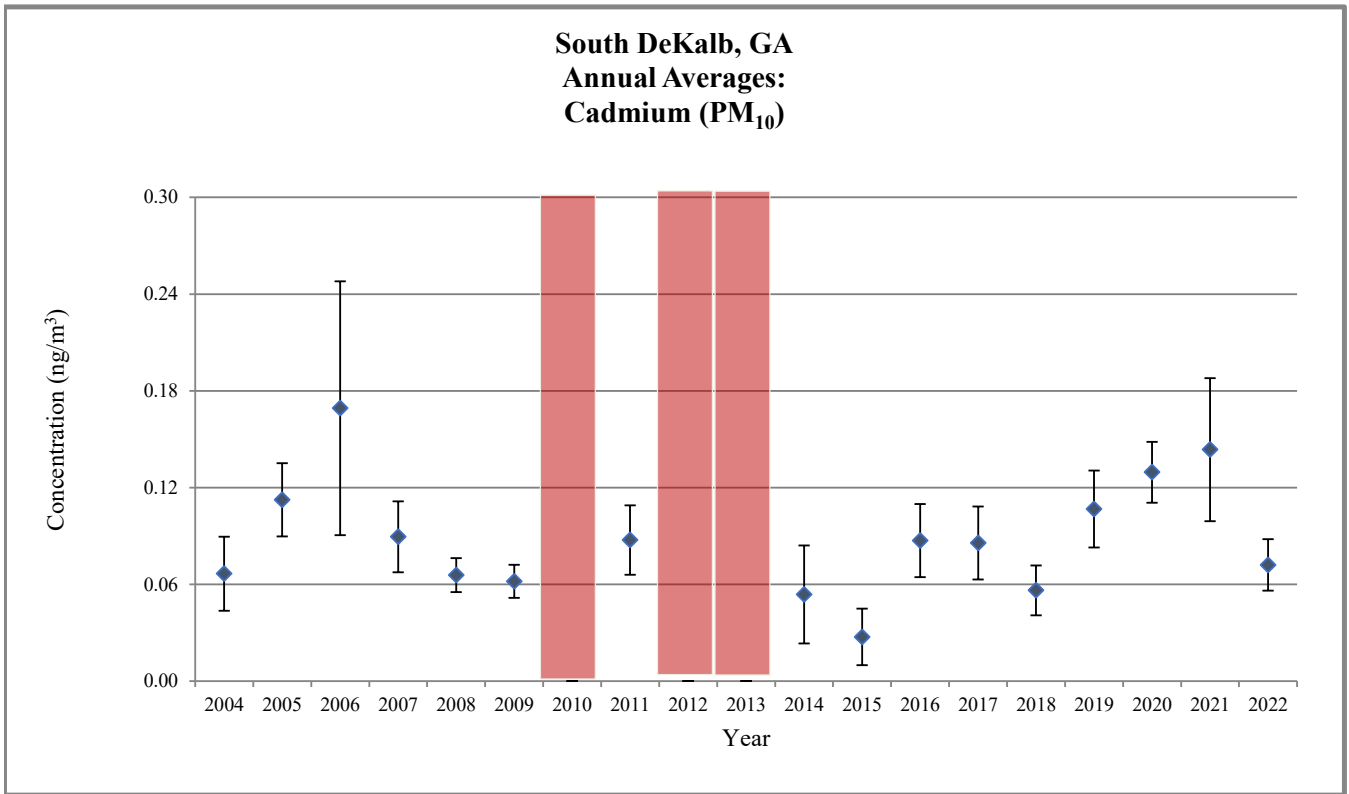
Sampling began midway through the year.
 Does not meet MQO

Figure 3. South DeKalb, GA Annual Average Concentrations



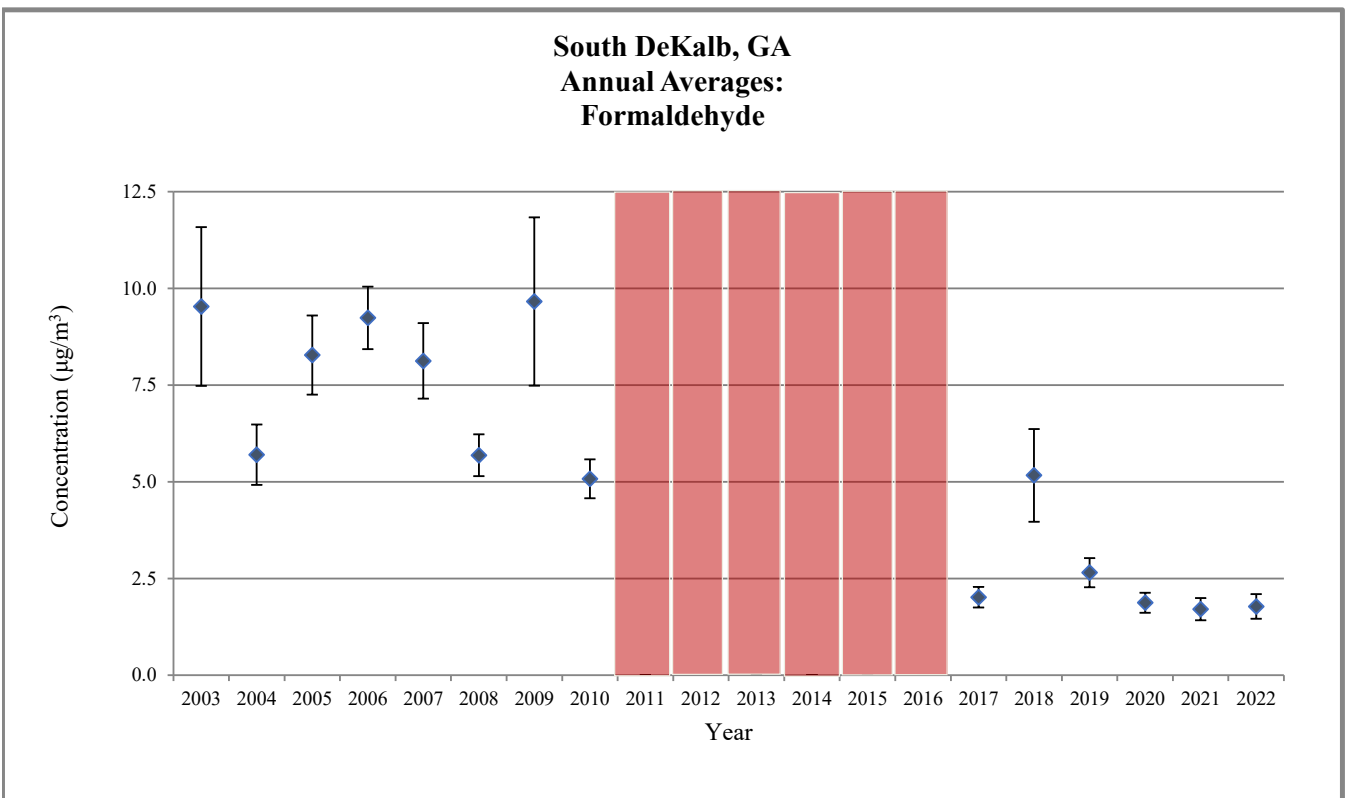
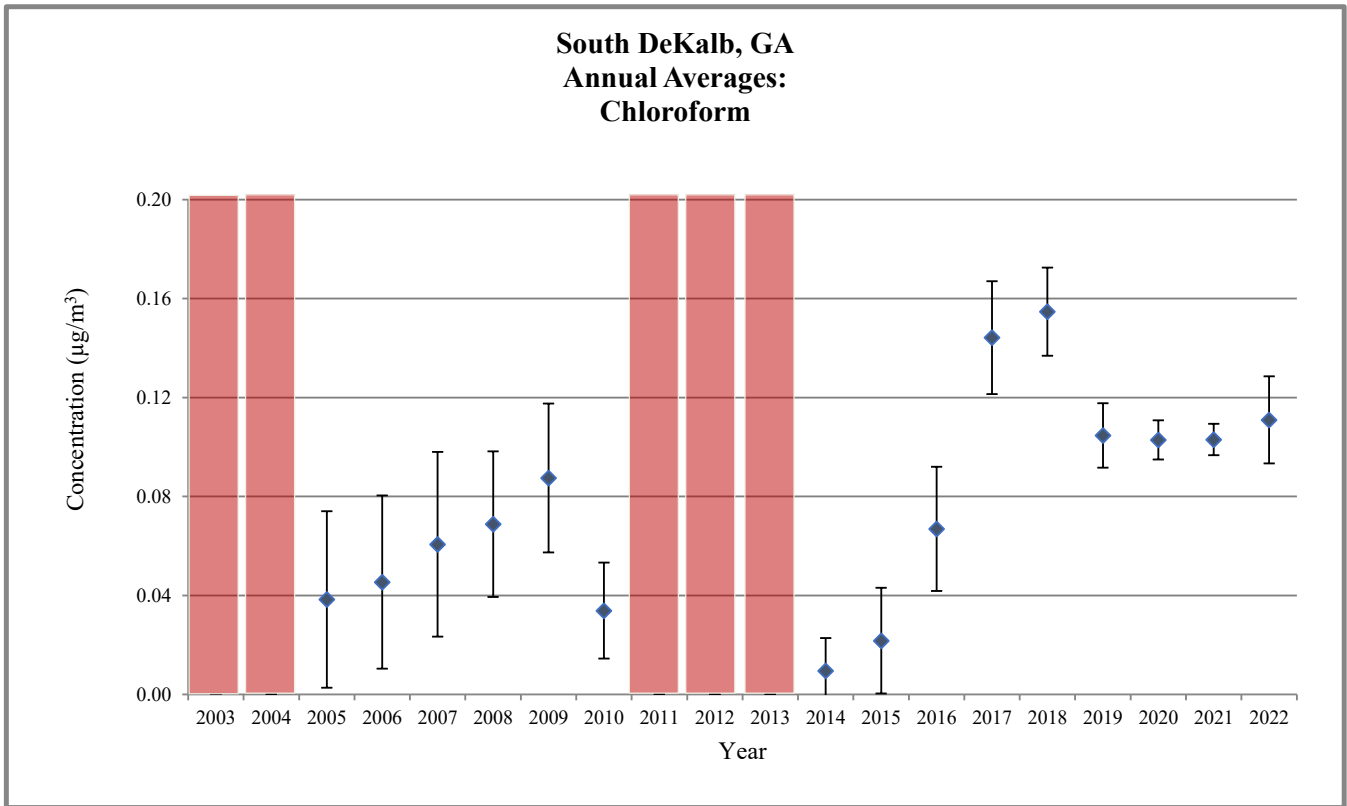
Sampling began midway through the year.
 Does not meet MQO

Figure 3. South DeKalb, GA Annual Average Concentrations



Sampling began midway through the year.
 Does not meet MQO

Figure 3. South DeKalb, GA Annual Average Concentrations



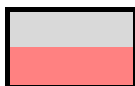
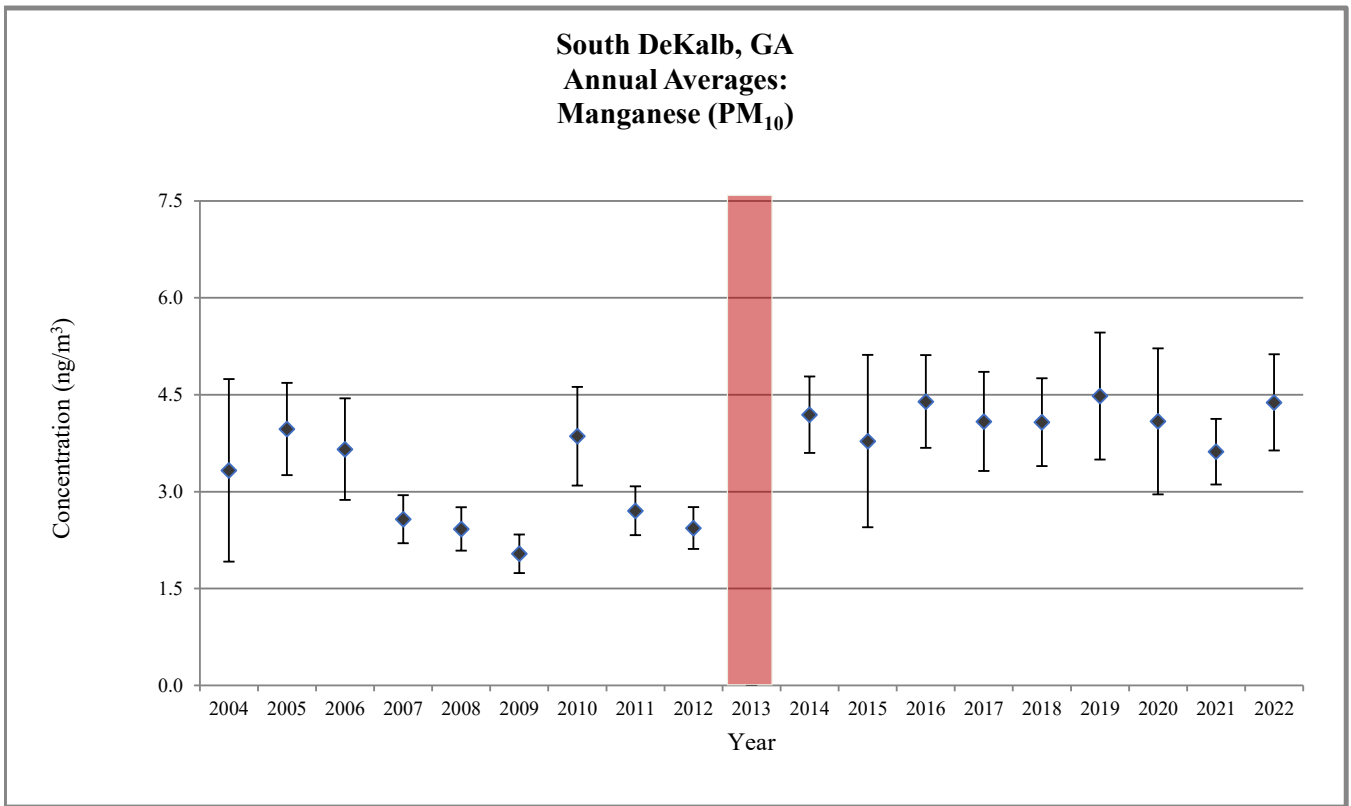
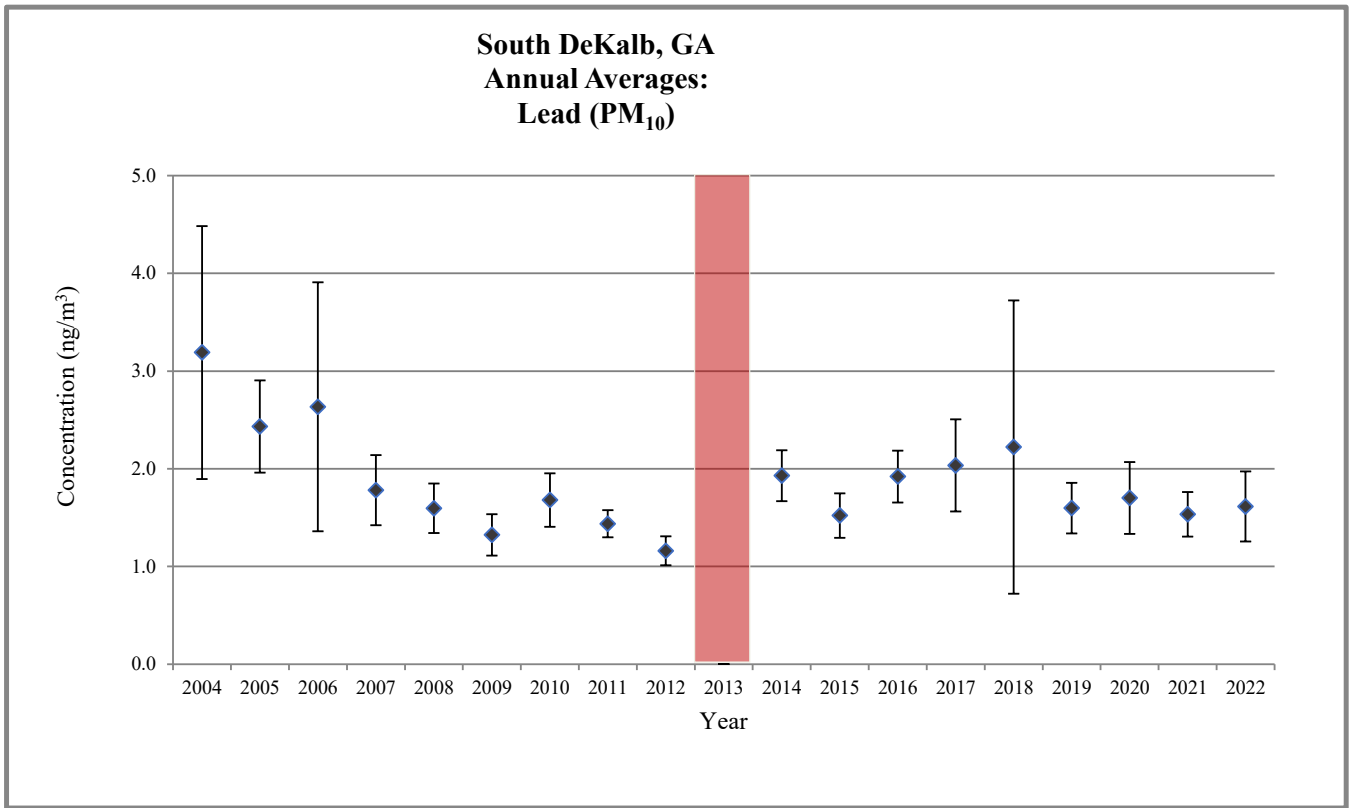

 Sampling began midway through the year.
 Does not meet MQO

Figure 3. South DeKalb, GA Annual Average Concentrations




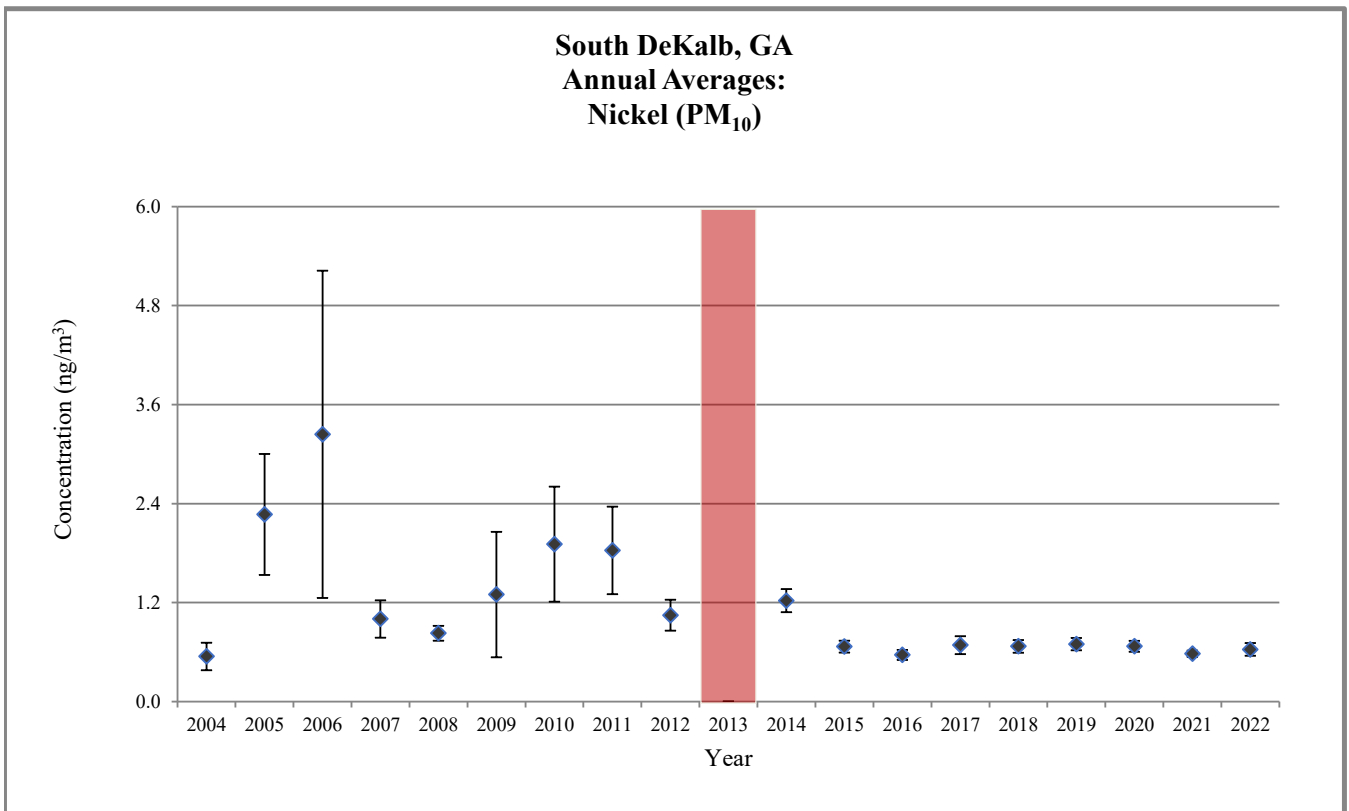
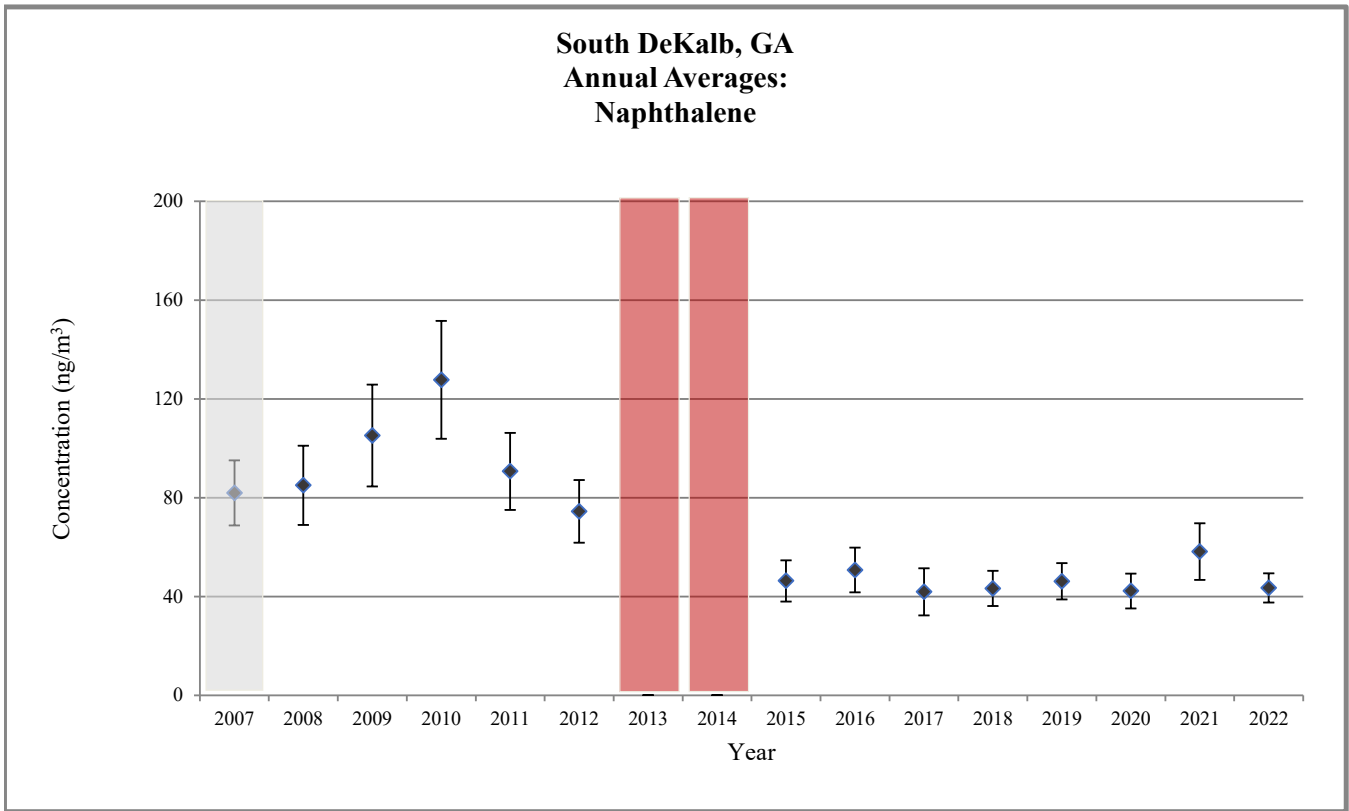
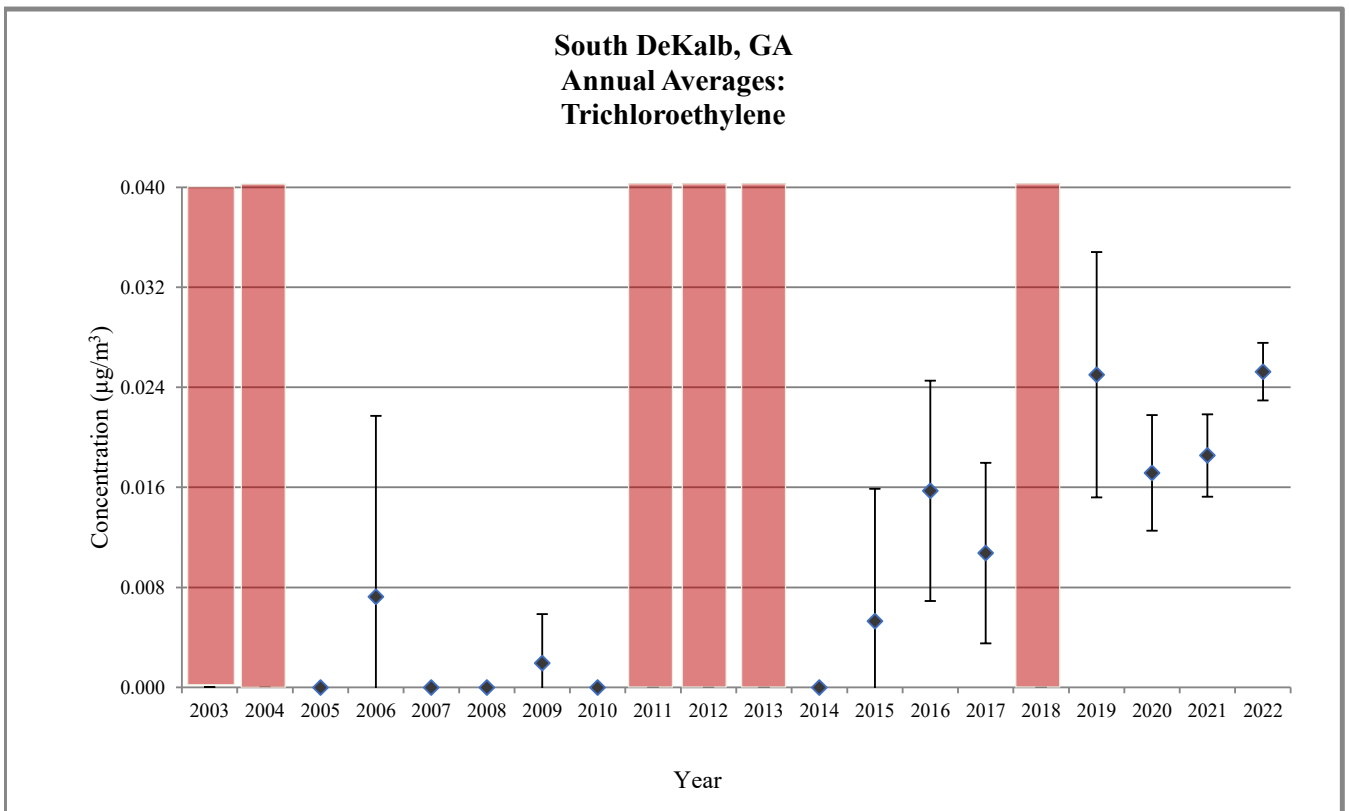
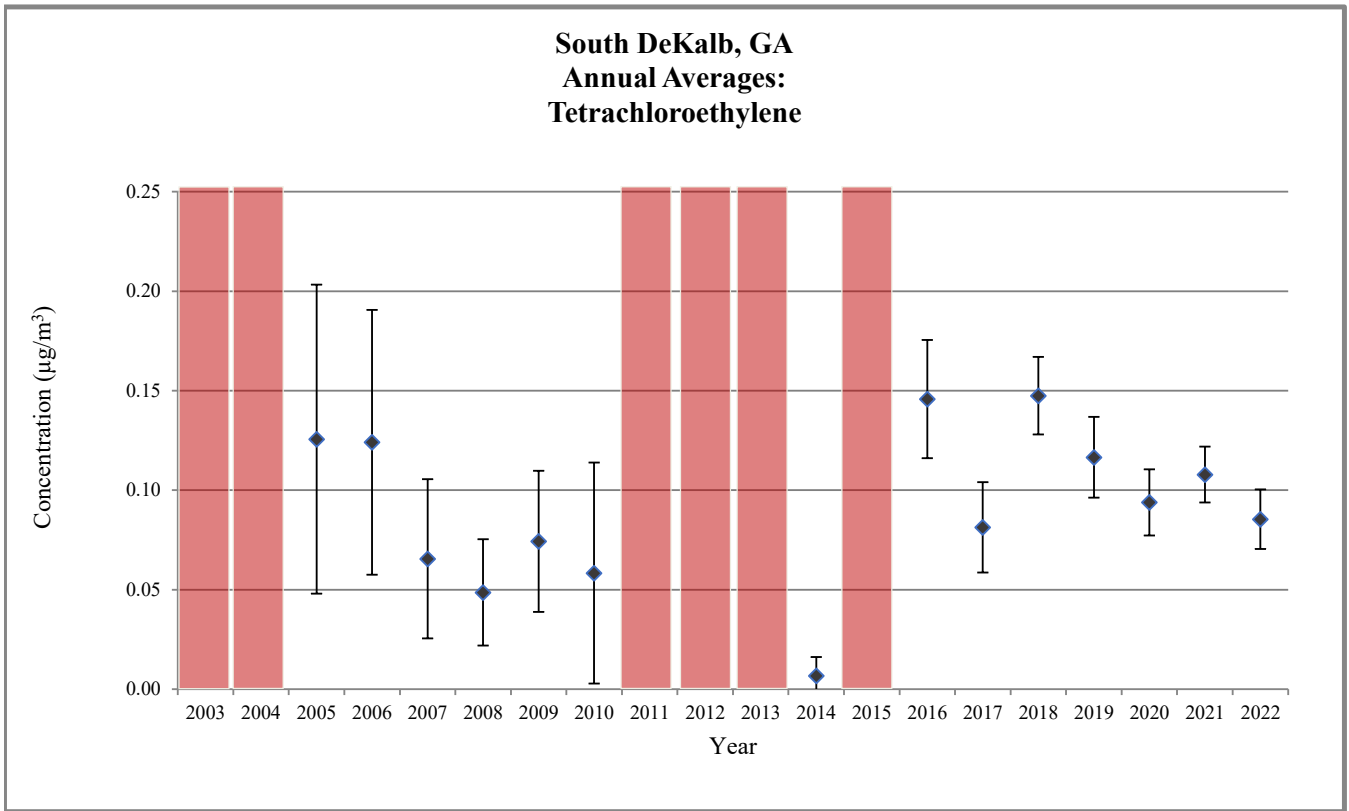
 Sampling began midway through the year.
Does not meet MQO

Figure 3. South DeKalb, GA Annual Average Concentrations



Sampling began midway through the year.
 Does not meet MQO

Figure 3. South DeKalb, GA Annual Average Concentrations




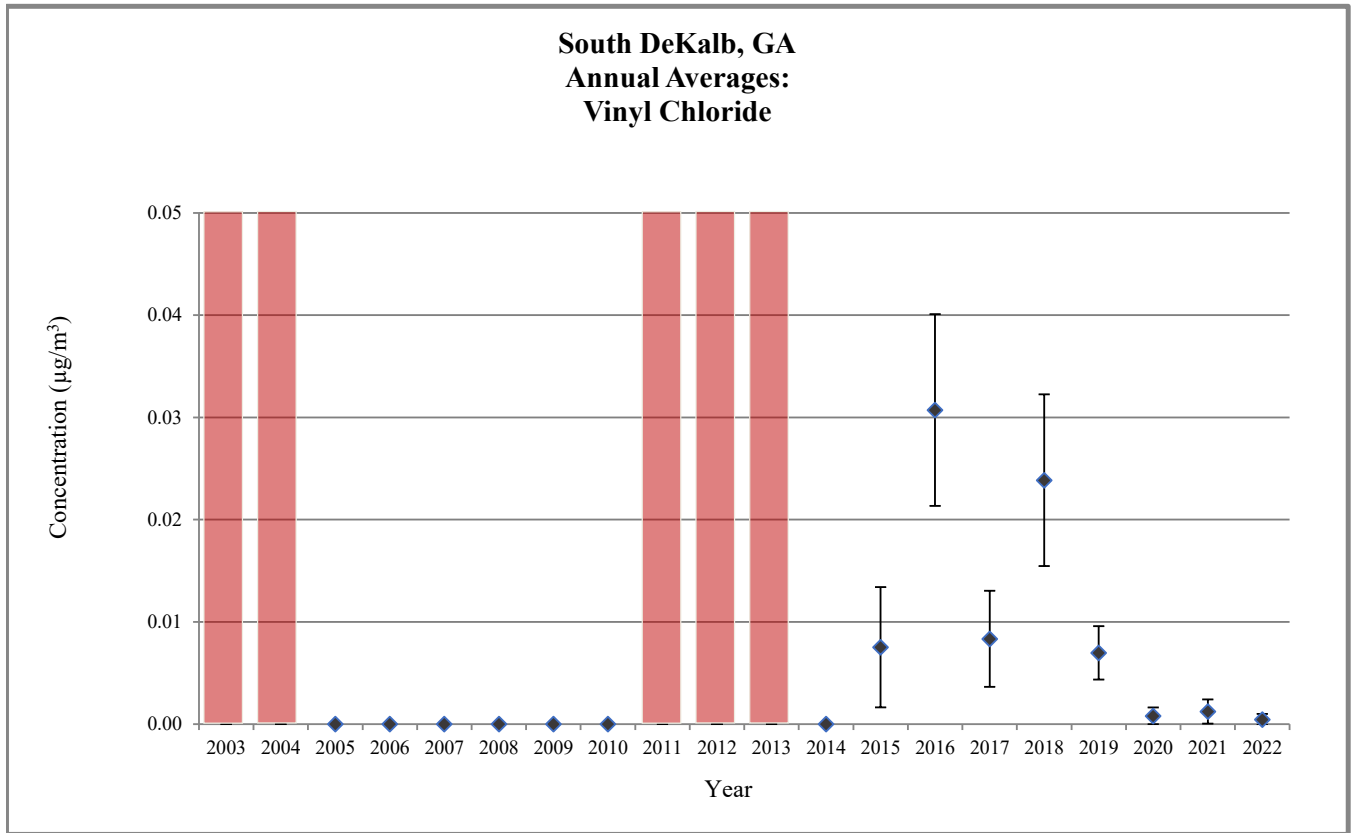

 Sampling began midway through the year.
 Does not meet MQO

Figure 3. South DeKalb, GA Annual Average Concentrations



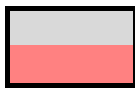
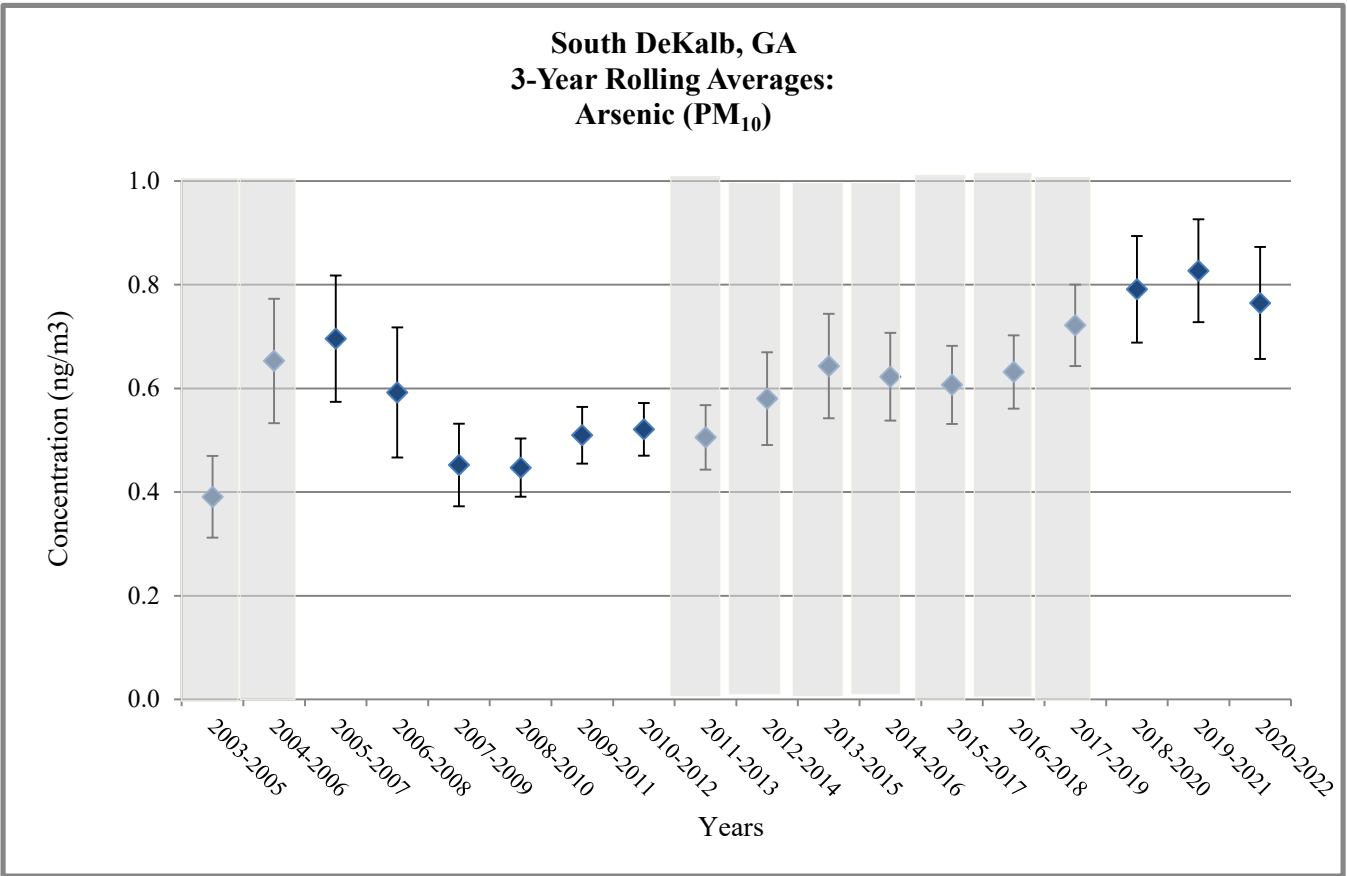
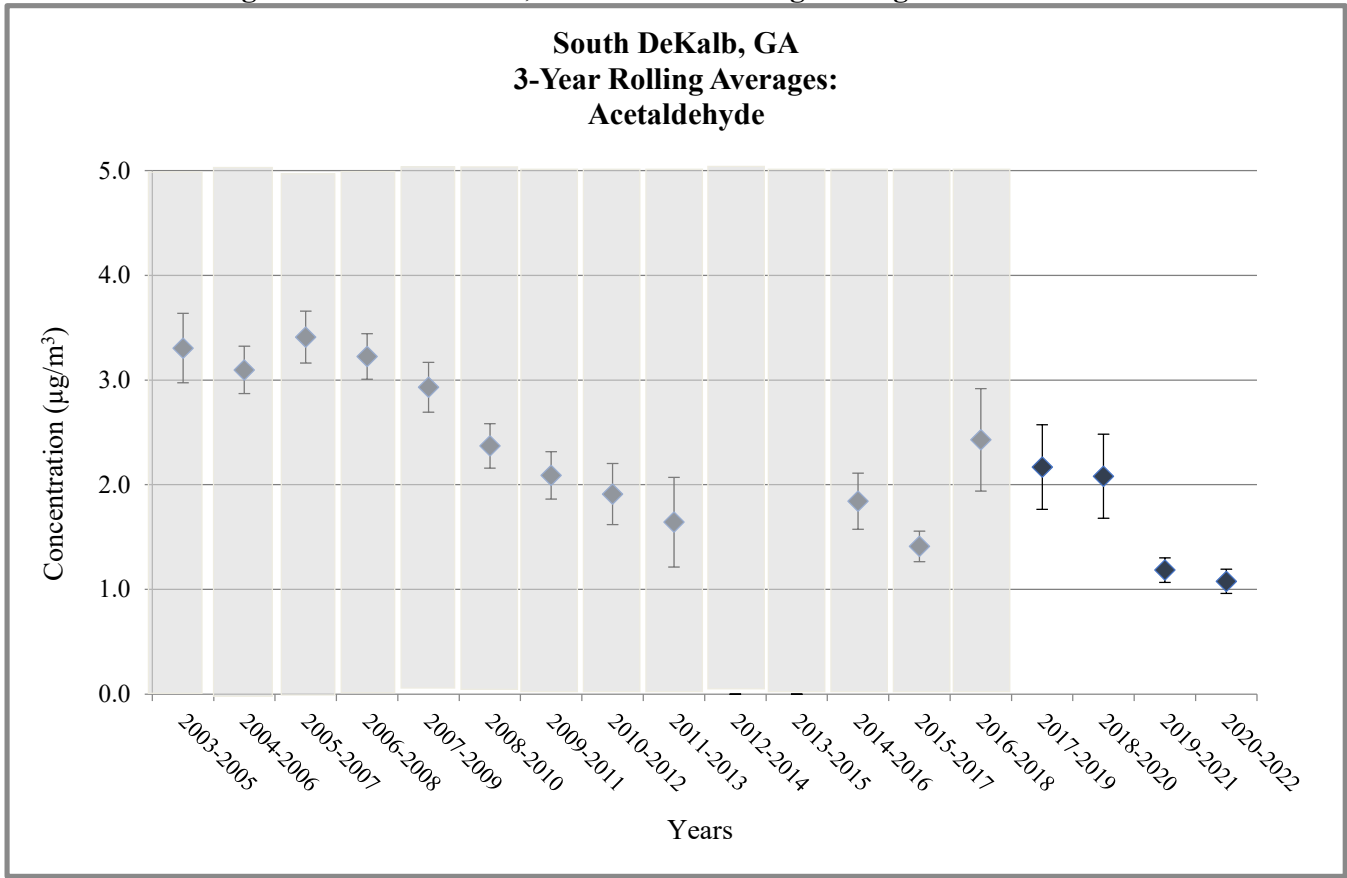
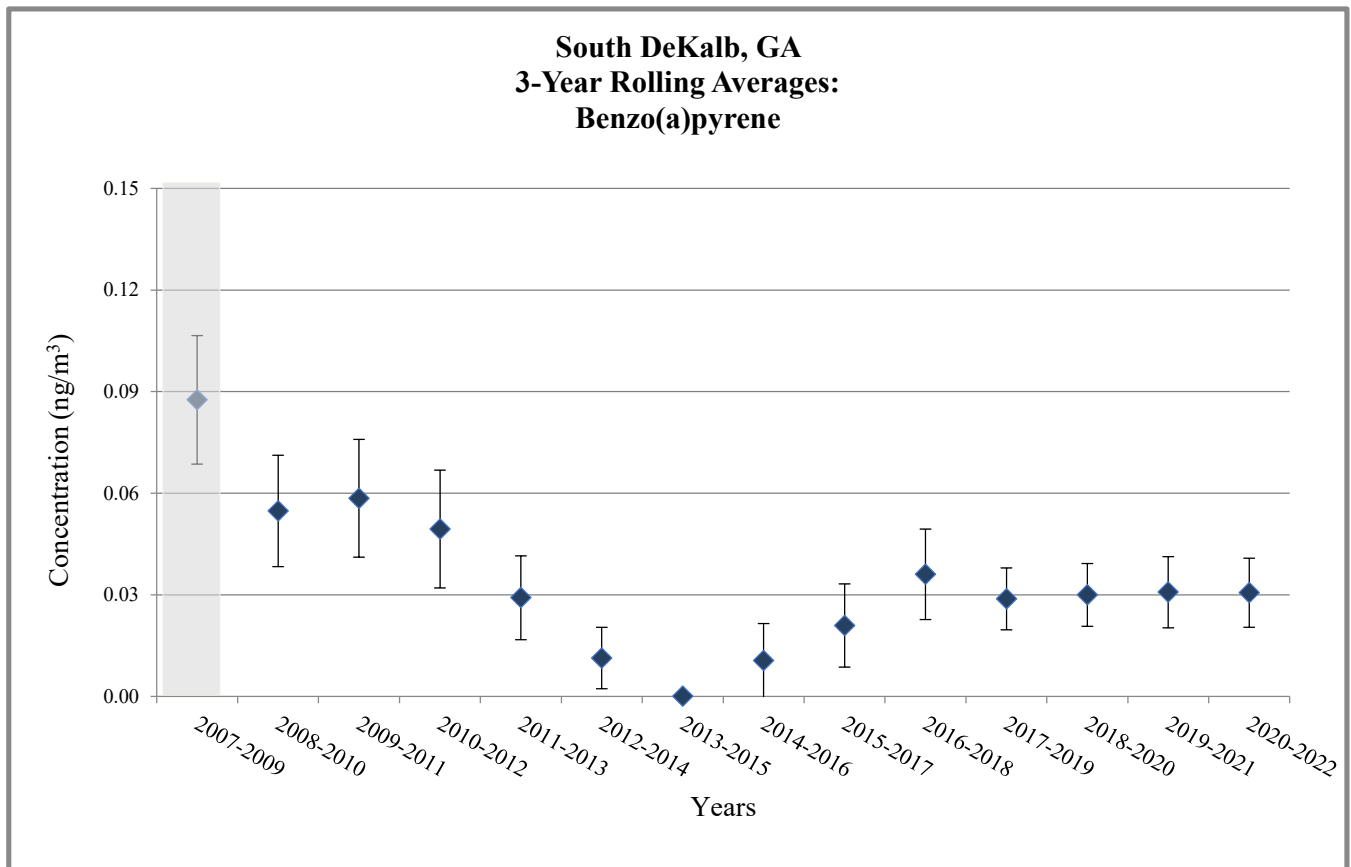
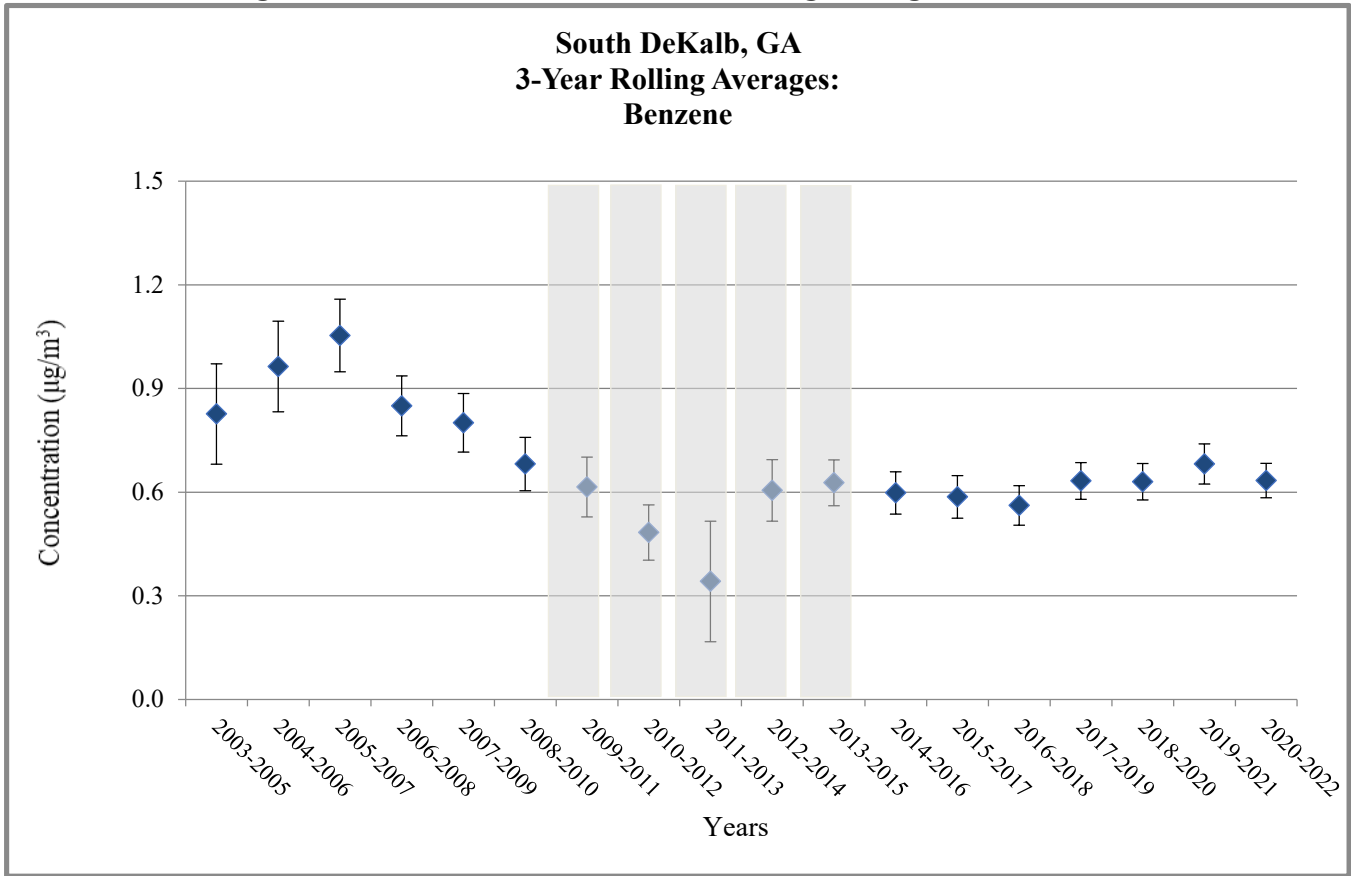
 Sampling began midway through the year.
Does not meet MQO

Figure 4. South DeKalb, GA - 3-Year Rolling Average Concentrations



Does not meet MQO or wasn't able to collect enough samples

Figure 4. South DeKalb, GA - 3-Year Rolling Average Concentrations




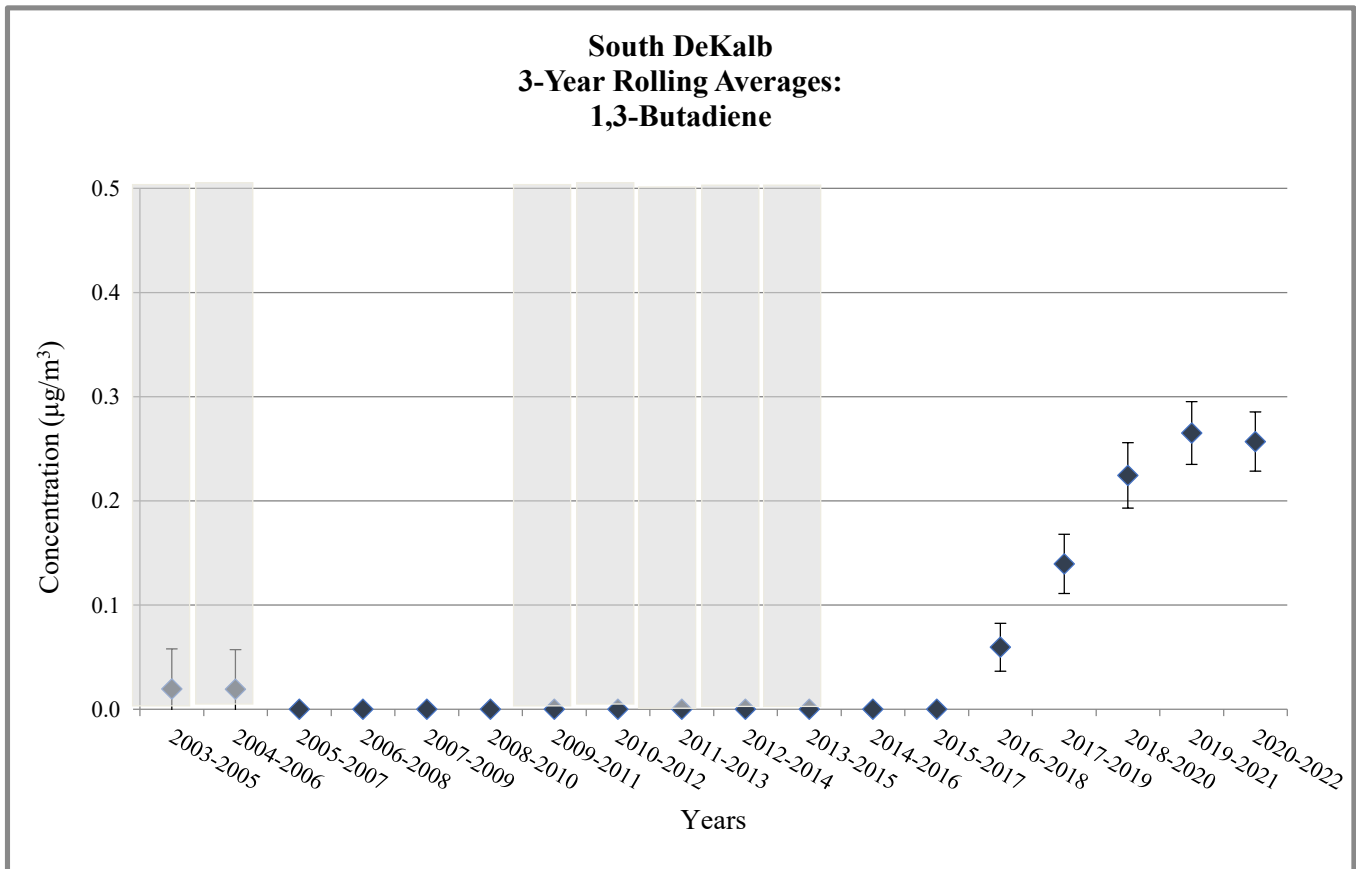
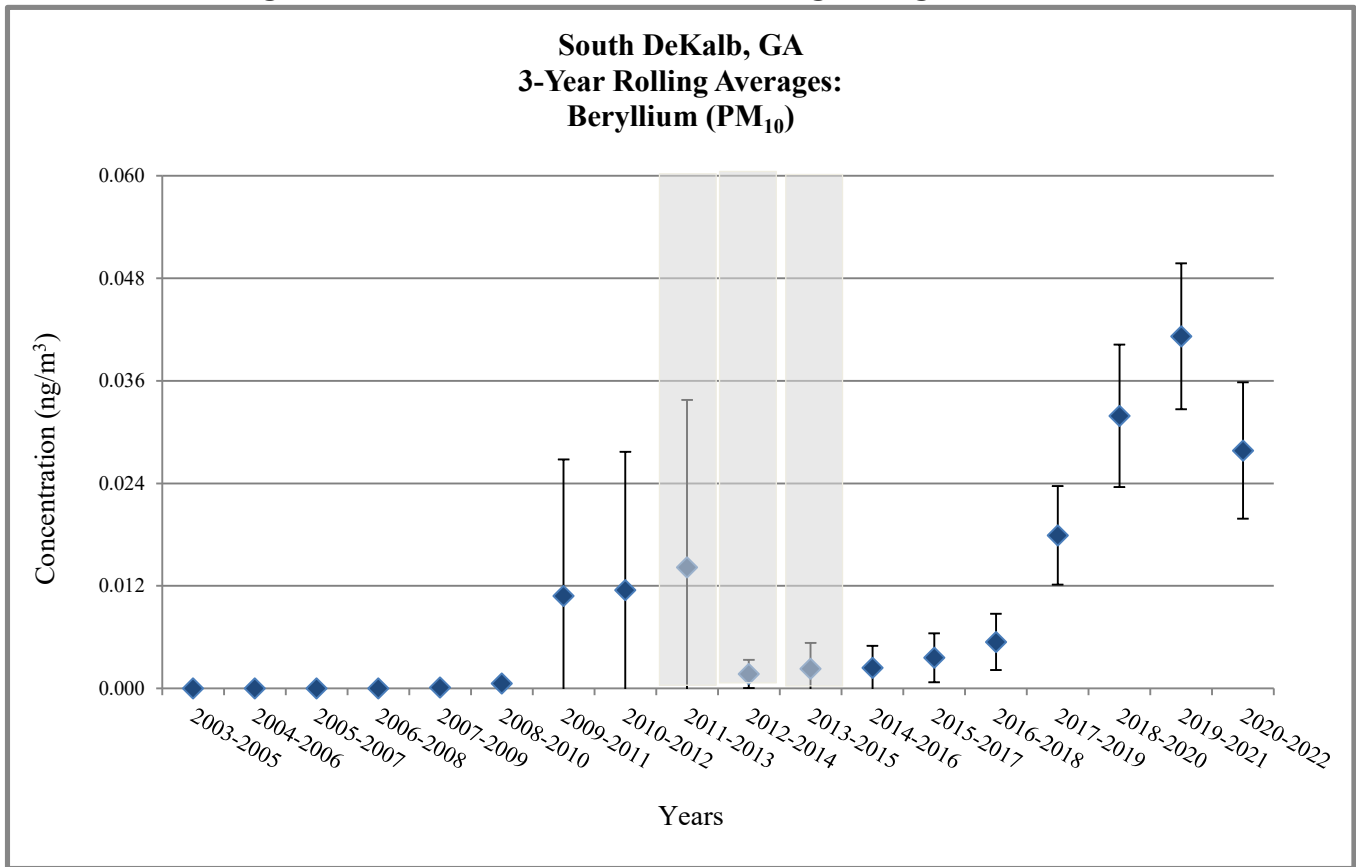
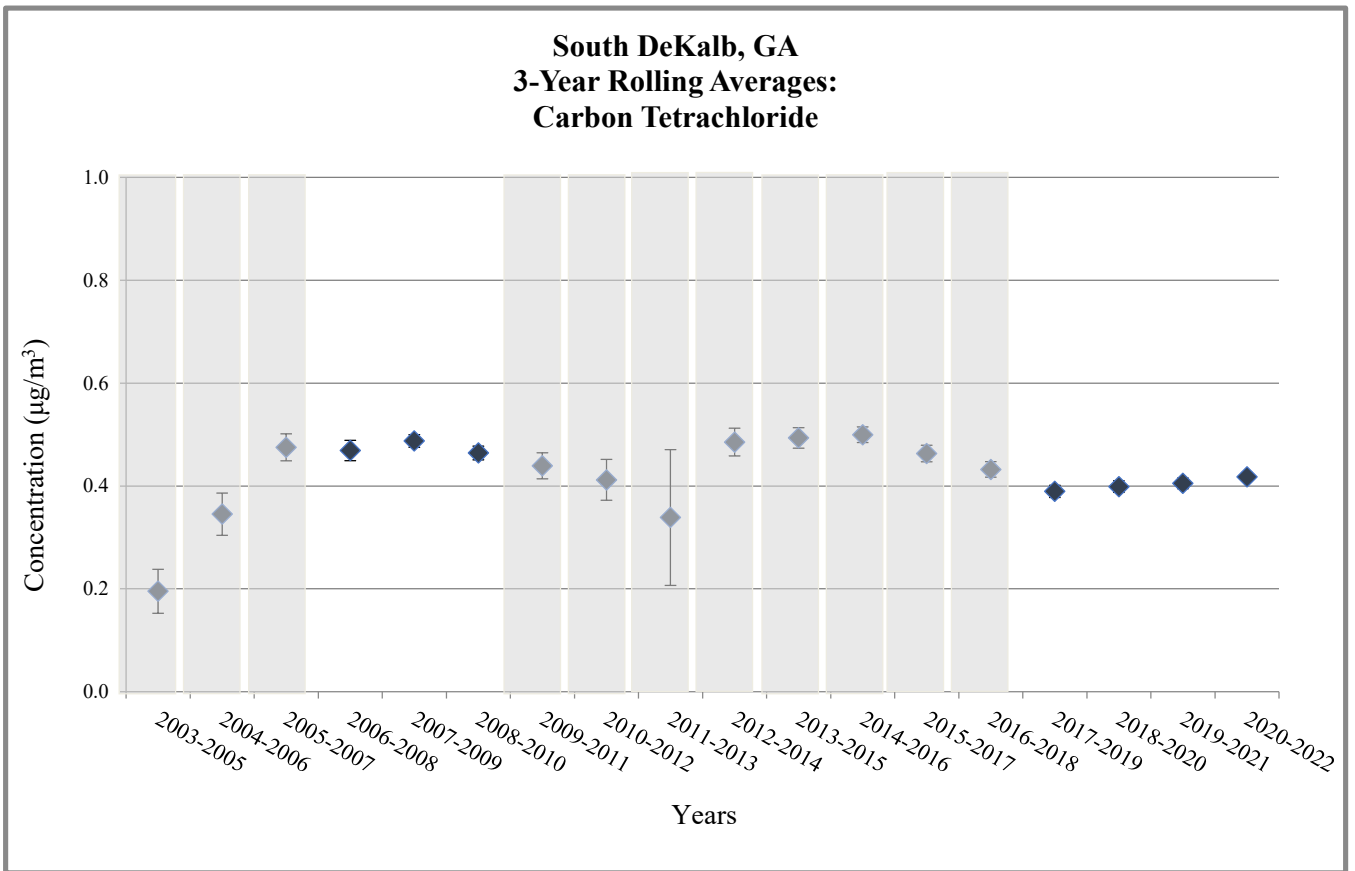
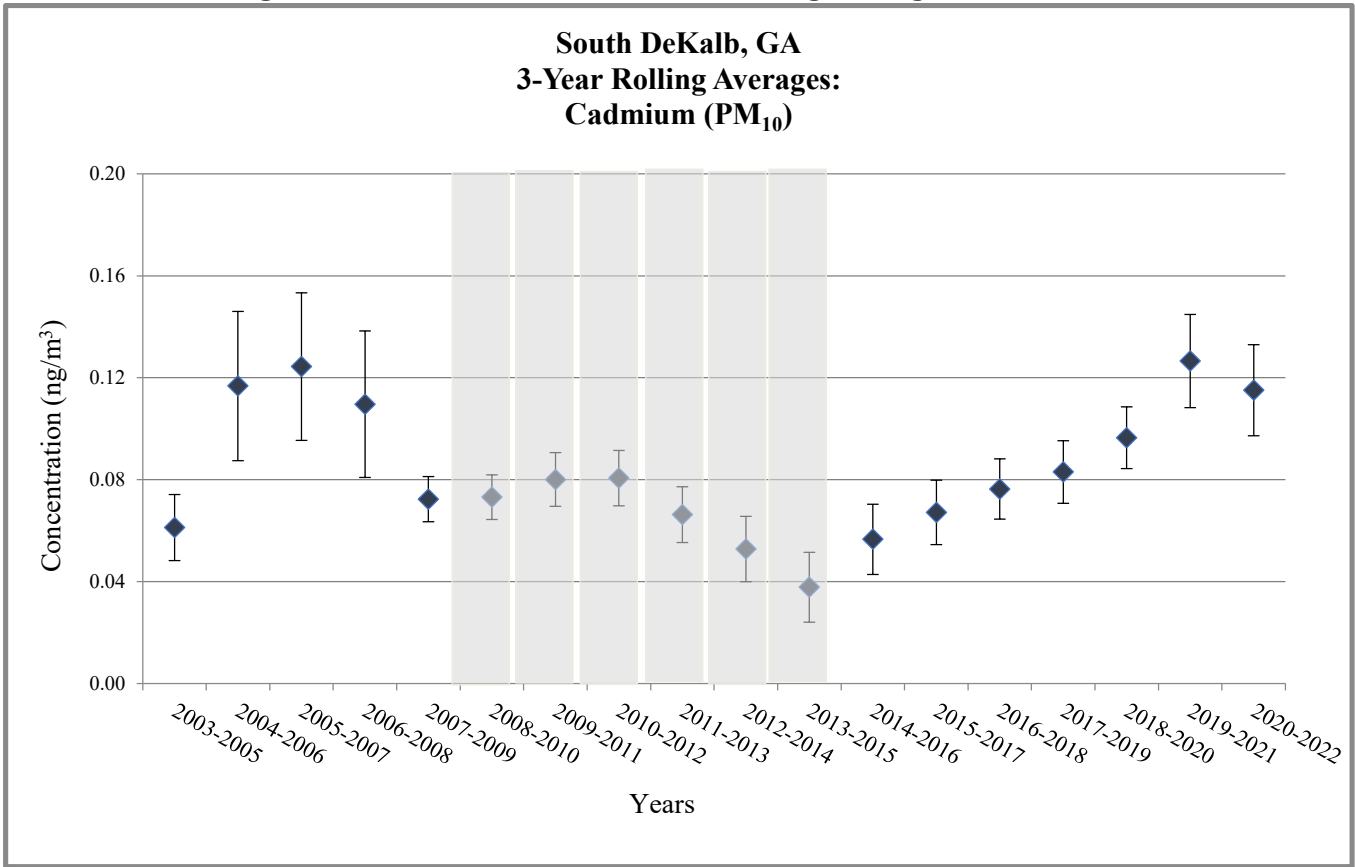
 Does not meet MQO or wasn't able to collect enough samples

Figure 4. South DeKalb, GA - 3-Year Rolling Average Concentrations



Does not meet MQO or wasn't able to collect enough samples

Figure 4. South DeKalb, GA - 3-Year Rolling Average Concentrations




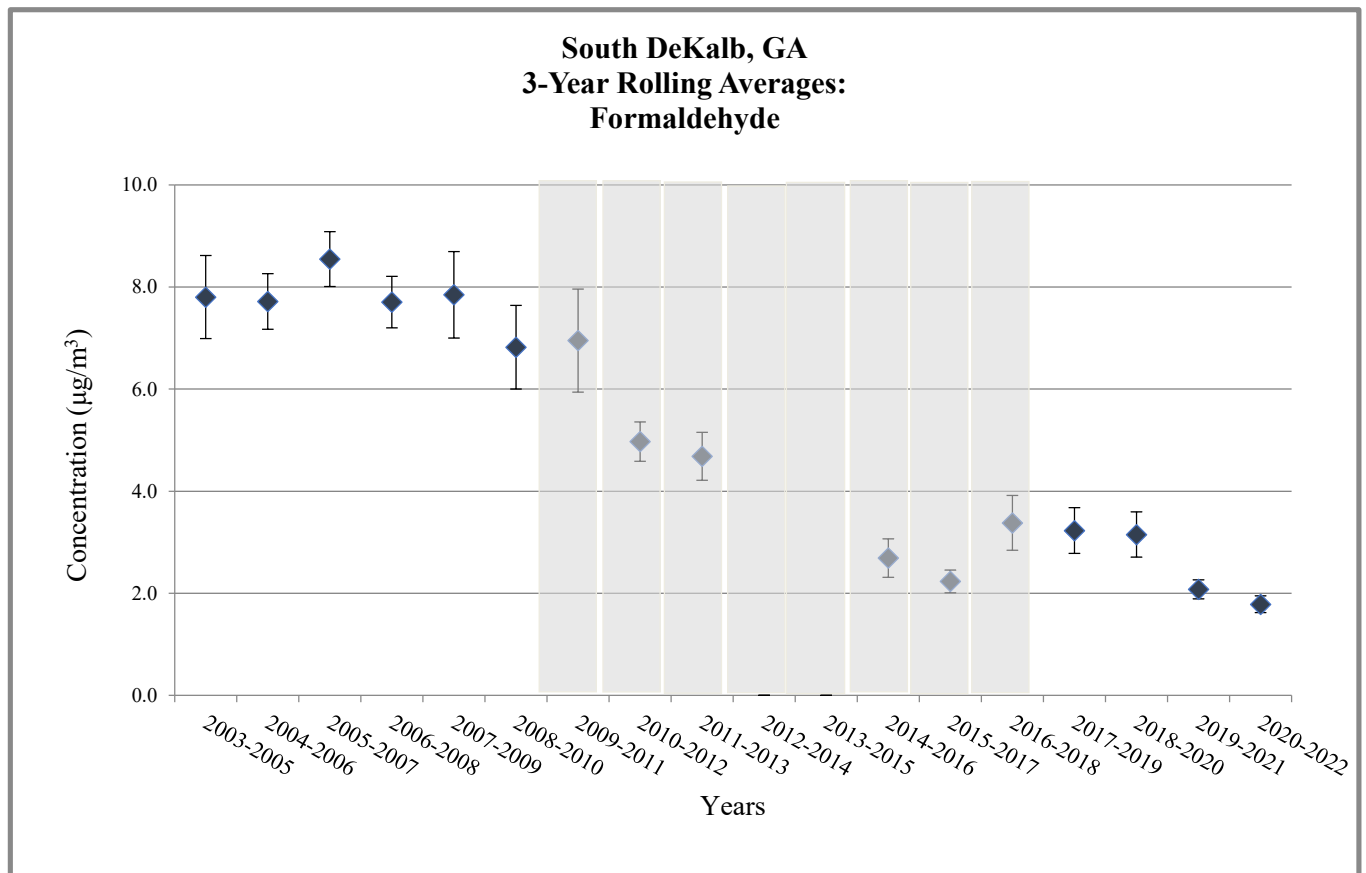
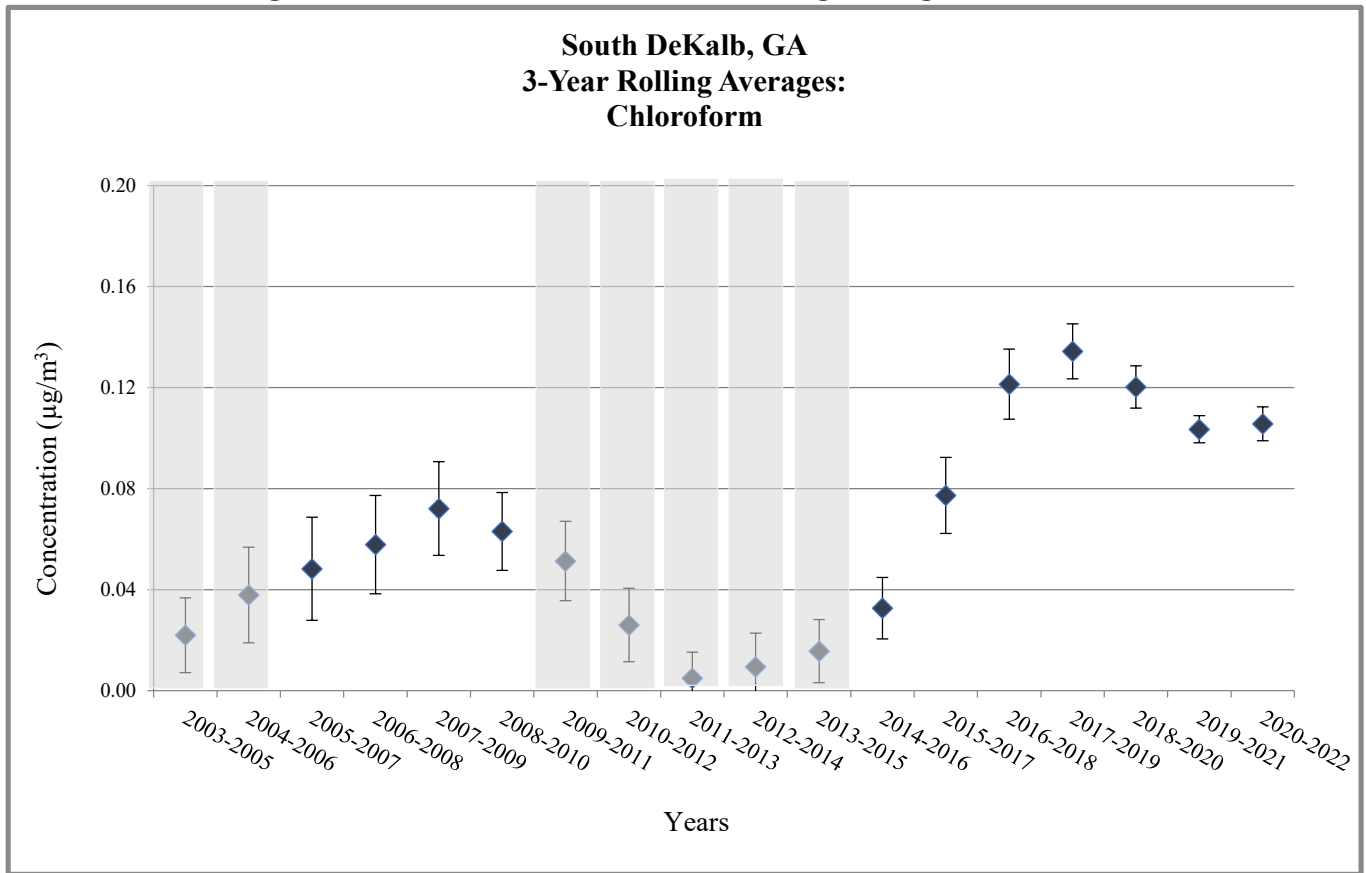
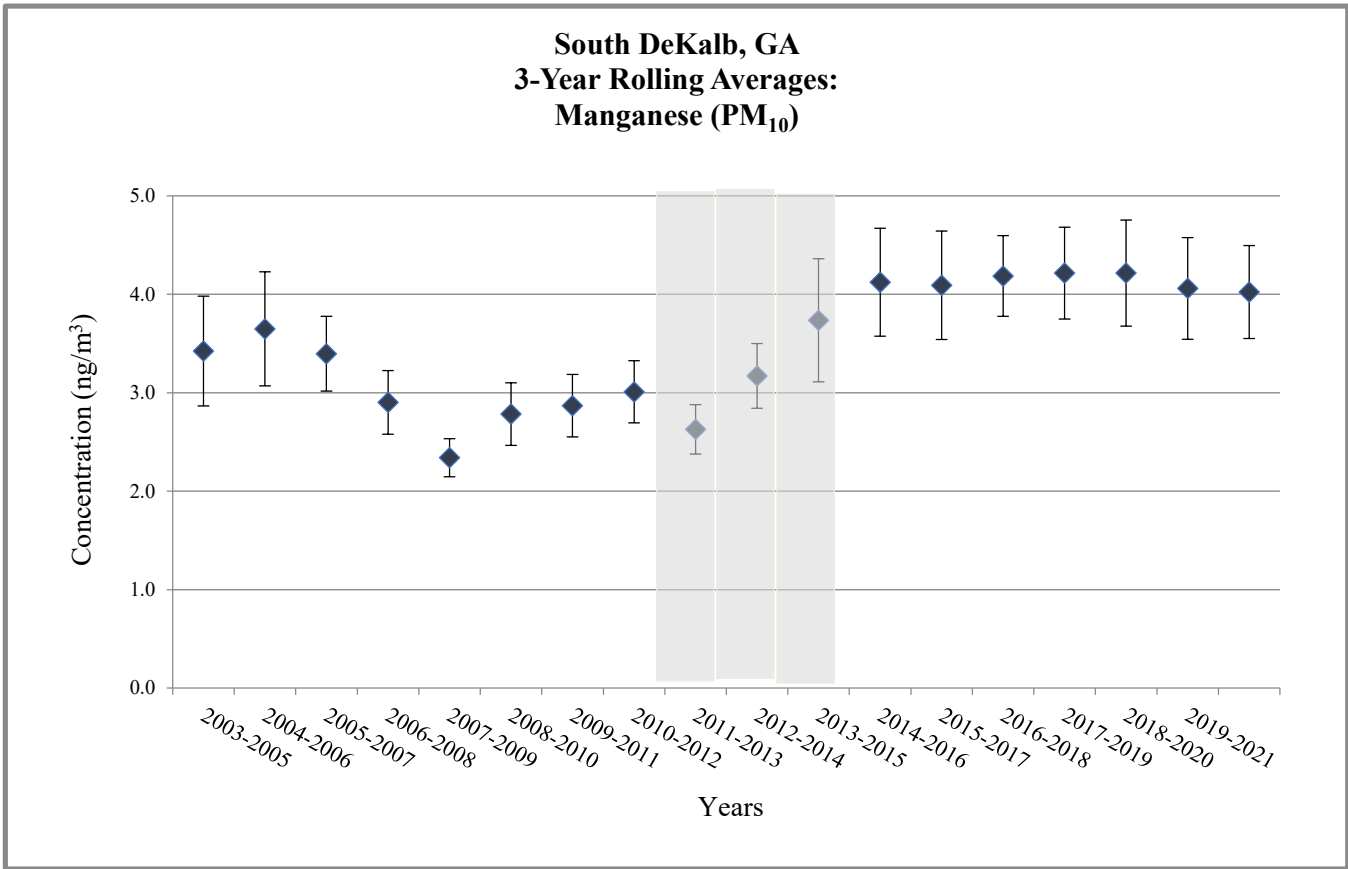
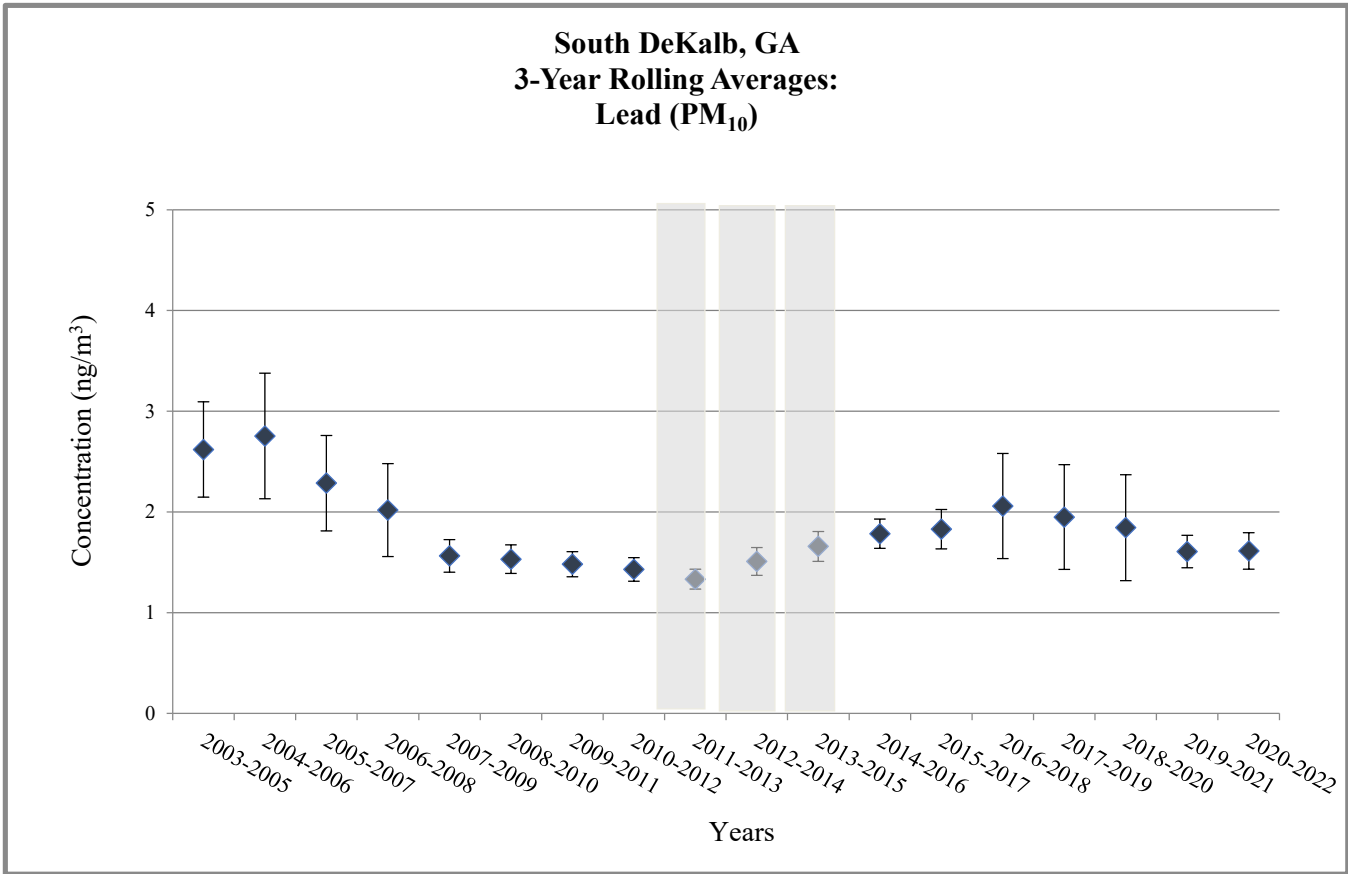
 Does not meet MQO or wasn't able to collect enough samples

Figure 4. South DeKalb, GA - 3-Year Rolling Average Concentrations



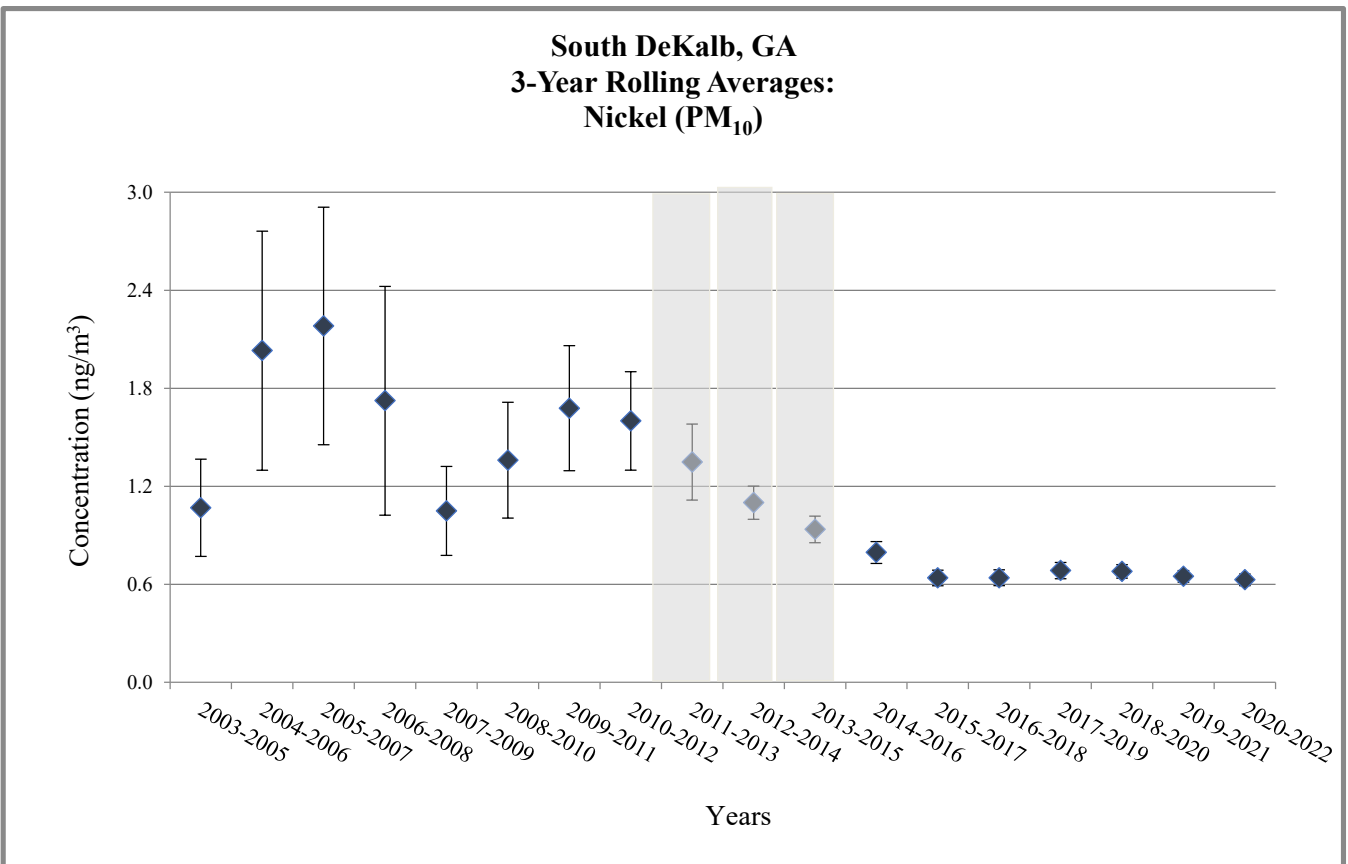
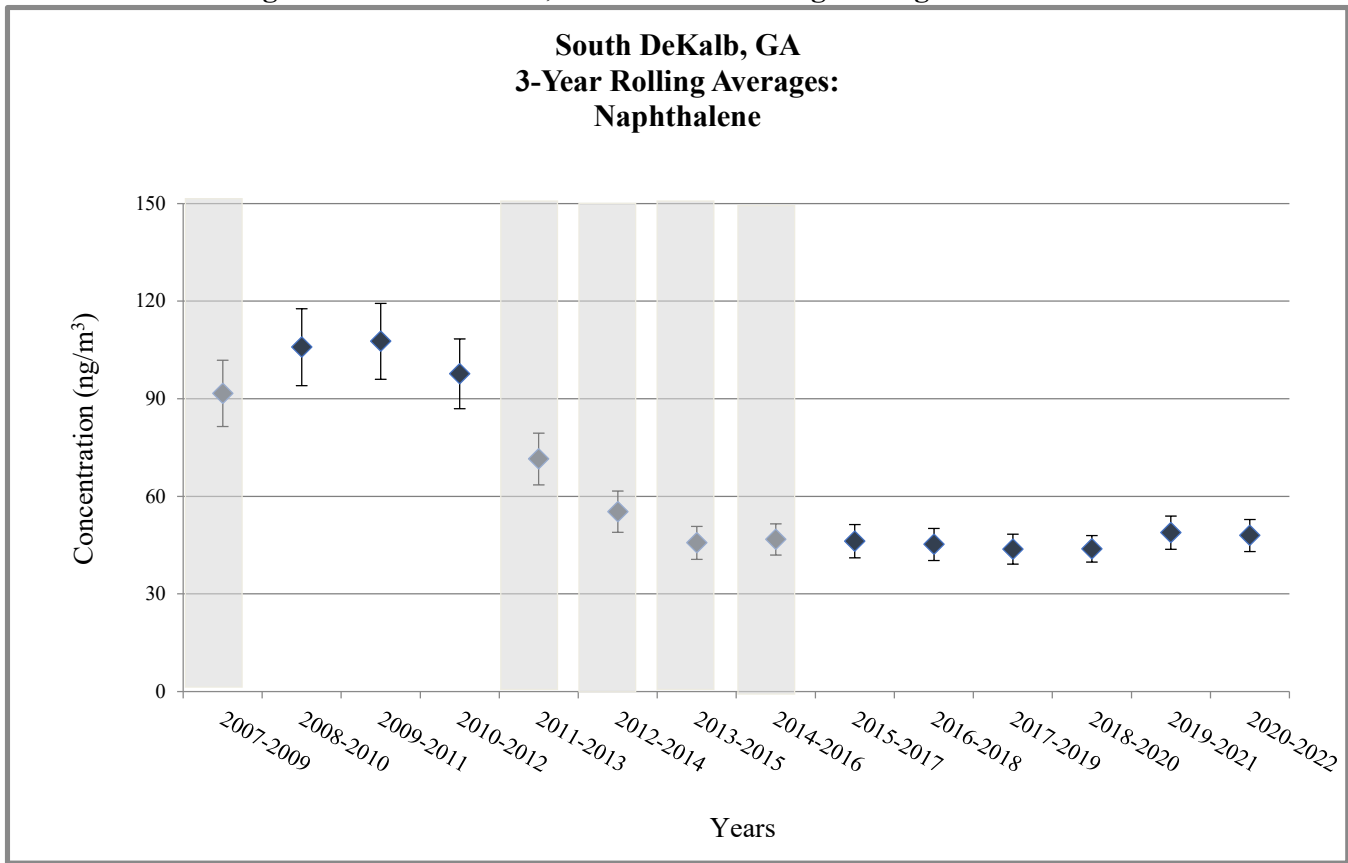
Does not meet MQO or wasn't able to collect enough samples

Figure 4. South DeKalb, GA - 3-Year Rolling Average Concentrations



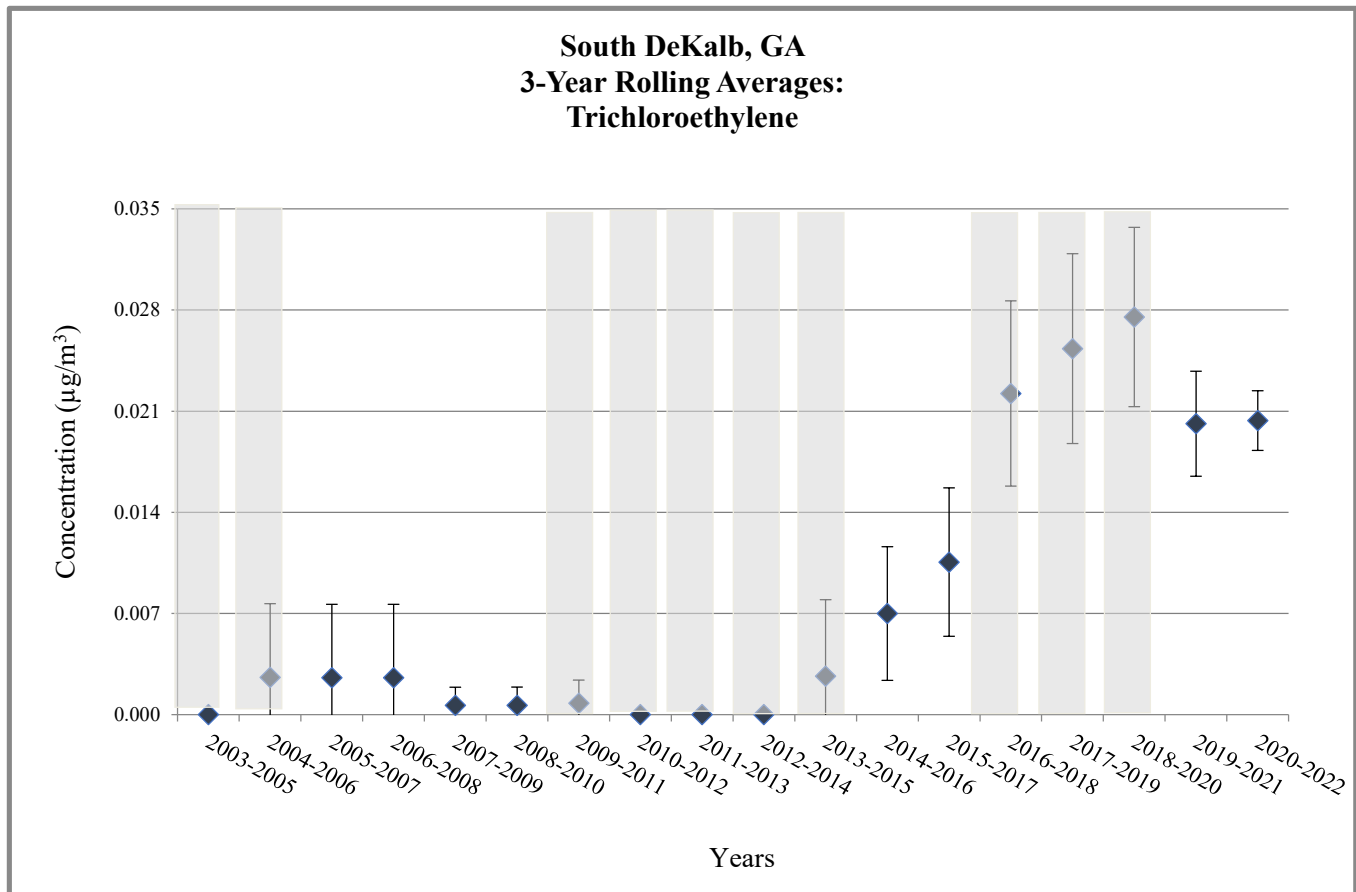
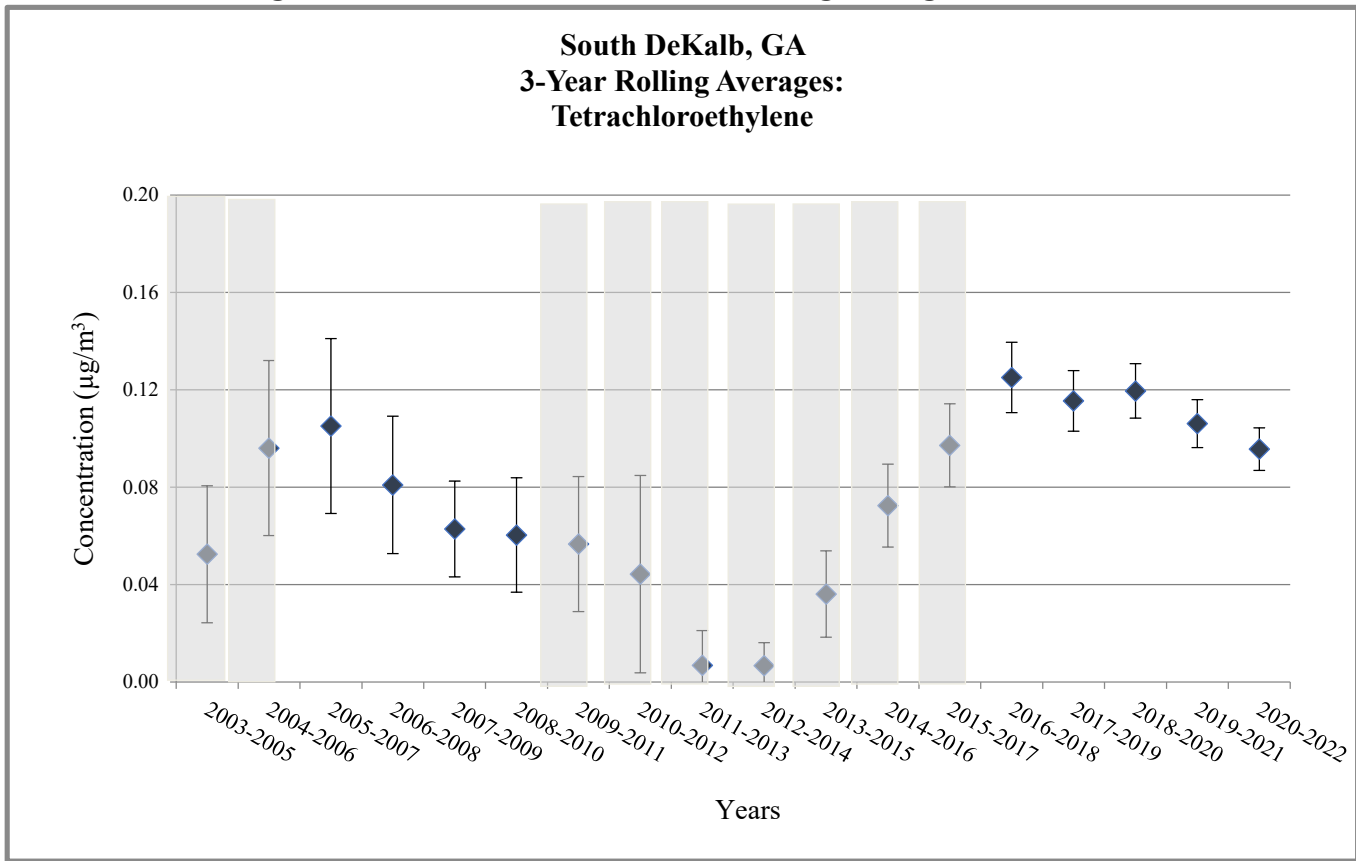
Does not meet MQO or wasn't able to collect enough samples

Figure 4. South DeKalb, GA - 3-Year Rolling Average Concentrations



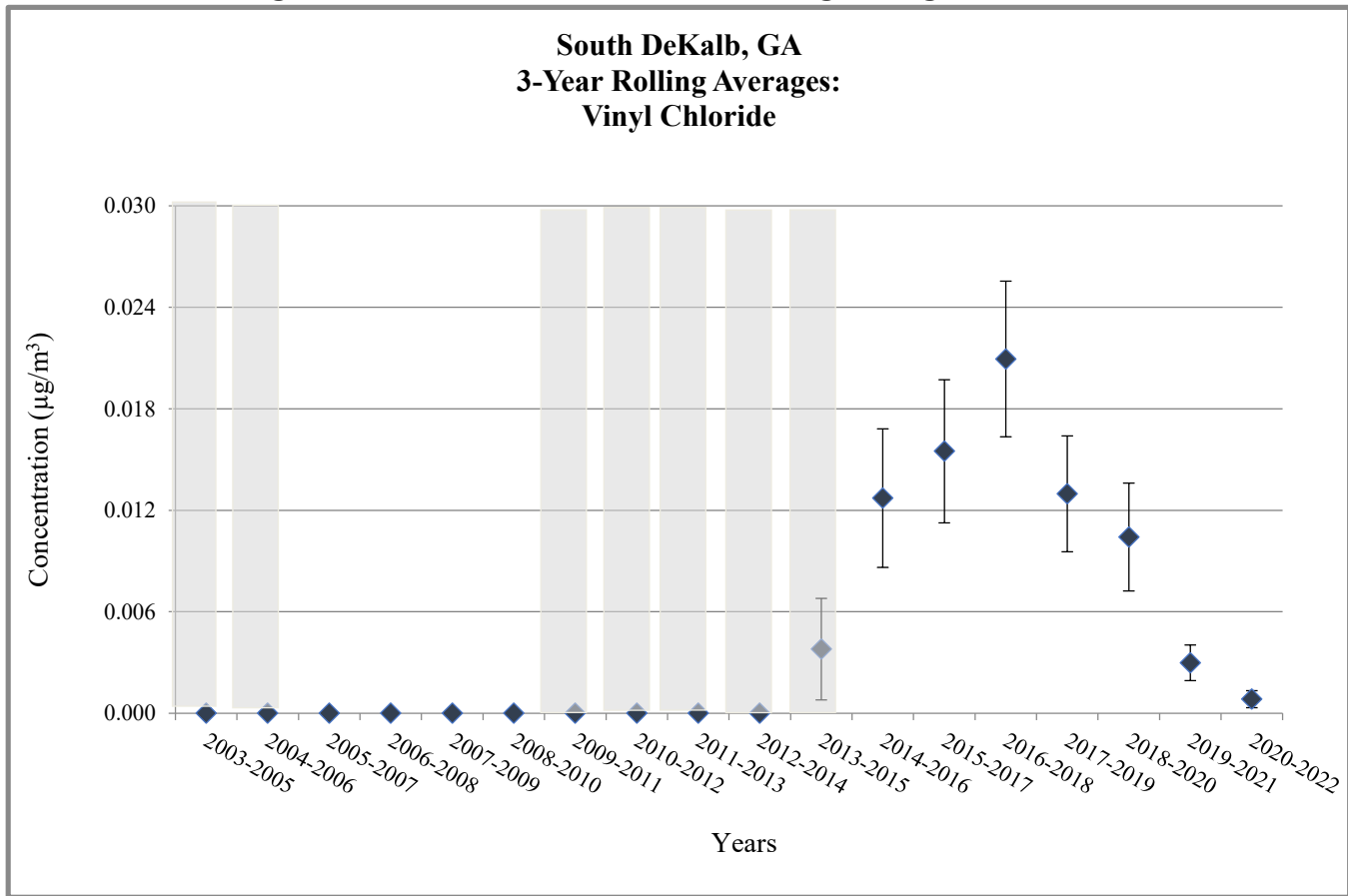
Does not meet MQO or wasn't able to collect enough samples

Figure 4. South DeKalb, GA - 3-Year Rolling Average Concentrations



Does not meet MQO or wasn't able to collect enough samples

Figure 4. South DeKalb, GA - 3-Year Rolling Average Concentrations




 Does not meet MQO or wasn't able to collect enough samples

Table 6. NATTS Network Assessment: MQO#1 - Completeness Percentage at South DeKalb, GA

Year	Benzene	Butadiene, 1,3-	Carbon tetrachloride	Chloroform	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	Acetaldehyde	Formaldehyde	Arsenic (PM10)	Beryllium (PM10)	Cadmium (PM10)	Lead (PM10)	Manganese (PM10)	Nickel (PM10)	Benzo(a)pyrene	Naphthalene
	VOCs							Carbonyls		PM10 Metals					PAHs		
<i>South DeKalb, GA (AQS Site Code: 13-089-0002)</i>																	
2003	113	97	97	97	97	97	97	90	92	84	84	84	89	89	84	--	--
2004	120	92	92	92	92	92	92	97	97	93	93	93	93	93	93	--	--
2005	89	89	89	89	89	89	89	95	95	90	90	90	90	90	90	--	--
2006	100	100	100	100	100	100	100	95	93	97	97	97	97	97	97	--	--
2007	95	95	95	95	95	95	95	93	93	95	95	95	95	95	95	--a	--a
2008	89	89	89	89	89	89	89	90	90	89	89	89	89	89	89	98	98
2009	89	89	89	89	89	89	89	93	93	97	97	97	97	97	97	97	97
2010	92	92	92	92	92	92	92	93	93	97	97	97	97	97	97	97	97
2011	34	34	34	34	34	34	34	34	34	93	93	93	93	93	93	100	100
2012	--b	--b	--b	--b	--b	--b	--b	--b	--b	93	93	93	93	93	93	95	95
2013	--b	--b	--b	--b	--b	--b	--b	--b	--b	46	48	48	48	48	48	92	92
2014	98	98	98	98	98	98	98	--b	--b	82	82	82	82	82	82	92	92
2015	102	102	102	102	102	102	102	--b	--b	98	98	98	98	98	98	100	100
2016	98	98	98	98	98	98	98	44	44	100	100	100	100	100	100	92	92
2017	98	98	98	98	98	98	98	93	93	100	100	100	100	100	100	98	98
2018	98	100	89	93	102	98	95	97	89	100	100	100	100	100	100	97	95
2019	92	97	100	97	100	92	97	100	100	102	102	102	102	102	102	92	97
2020	98	98	98	98	98	98	98	100	100	95	95	90	90	100	100	100	100
2021	98	98	98	98	98	98	98	100	100	103	103	103	103	103	103	98	98
2022	100	100	100	100	100	100	100	98	98	98	98	98	98	98	98	97	97

	A-rated: ≥85%
	B-rated: Between 75% to 85%
	Does not meet: ≤75%
	No data available

^a: Scheduled sampling began midway through the year, thus, the site did not have the opportunity to collect enough samples to meet the 85% MQO.

^b: Pollutant was expected, but invalidated at this site for this year.

Table 7. NATTS Network Assessment: MQO#2 - Reported Method Detection Limits (MDLs) at South DeKalb, GA

Year	Benzene	Butadiene, 1,3-	Carbon tetrachlorid	Chloroform	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	Acetaldehyde	Formaldehyde	Arsenic (PM10)	Beryllium (PM10)	Cadmium (PM10)	Lead (PM10)	Manganese (PM10)	Nickel (PM10)	Benzo(a)pyrene	Naphthalene
	VOCs							Carbonyls		PM10 Metals						PAHs	
<i>South DeKalb, GA (AQS Site Code: 13-089-0002)</i>																	
2003	0.82	11.06	18.50	4.88	19.95	5.37	11.62	0.002	0.001	9.39	1.02	0.77	0.03	0.09	1.03	--	--
2004	0.82	5.53	9.25	2.44	9.97	2.69	5.81	2.85	1.31	1.39	0.10	0.04	0.00	0.02	0.07	--	--
2005	1.18	1.26	3.11	0.72	1.99	0.64	1.30	2.70	1.24	1.35	0.07	0.04	0.00	0.02	0.07	--	--
2006	0.88	0.66	1.15	0.39	1.12	0.41	0.56	2.85	1.31	1.30	0.07	0.04	0.00	0.02	0.06	--	--
2007	0.71	0.42	0.37	0.17	0.84	0.38	0.56	0.34	0.15	1.39	0.10	0.04	0.005	0.02	0.07	0.09	0.003
2008	0.54	0.42	0.37	0.16	0.72	0.26	0.44	2.70	1.24	1.43	0.10	0.04	0.005	0.02	0.07	0.09	0.02
2009	0.54	0.53	0.26	0.16	0.72	0.26	0.44	2.70	1.24	0.65	0.02	0.02	0.001	0.00	0.01	0.08	0.01
2010	0.66	0.42	0.22	0.22	0.80	0.42	0.49	2.85	1.31	0.61	0.02	0.30	0.001	0.00	0.01	0.05	0.01
2011	0.66	0.42	0.22	0.22	0.68	0.42	0.58	2.85	1.31	0.65	0.02	0.54	0.001	0.00	0.01	0.06	0.004
2012	--a	--a	--a	--a	--a	--a	--a	--a	--a	1.22	0.02	--a	0.001	0.00	0.01	0.07	0.001
2013	--a	--a	--a	--a	--a	--a	--a	--a	--a	1.00	0.07	0.05	0.002	0.01	0.01	--a	--a
2014	0.96	0.53	1.22	0.57	1.00	1.10	0.65	--a	--a	2.09	0.12	0.29	0.003	0.01	0.02	--a	--a
2015	0.96	0.53	1.22	0.57	1.00	1.10	0.65	--a	--a	1.35	0.02	0.02	0.001	0.00	0.01	0.07	0.002
2016	0.96	0.53	1.22	0.57	1.00	1.10	0.65	0.12	0.14	1.61	0.02	0.02	0.004	0.06	0.36	0.02	0.001
2017	0.32	0.42	0.74	0.25	0.64	0.46	0.51	0.00	0.00	3.30	0.05	0.04	0.03	0.10	0.19	0.07	0.01
2018	0.32	0.27	0.74	0.22	0.64	0.46	0.51	0.17	0.49	1.91	0.05	0.04	0.01	0.05	0.23	0.03	0.004
2019	0.29	0.27	0.24	0.08	0.26	0.17	0.25	0.14	0.49	0.91	0.17	0.36	0.01	0.08	0.26	0.02	0.01
2020	0.29	0.42	0.24	0.08	0.26	0.17	0.25	0.14	0.42	1.00	0.19	0.36	0.01	0.09	0.34	0.02	0.01
2021	0.40	0.28	0.14	0.02	0.18	0.23	0.13	0.20	0.42	1.13	0.33	0.29	0.01	0.06	0.31	0.02	0.01
2022	0.40	0.28	0.14	0.02	0.18	0.23	0.13	0.26	0.92	1.13	0.33	0.30	0.02	0.07	0.31	0.07	0.01

- A-rated: MDL to Target MDL ratio ≤ 1
- B-rated" MDL to Target MDL ratio between 1 and 2
- Does Not Meet MDL to Target MDL ratio > 2
- No data available

^a: For the 2012 sampling year, the Target MDL for this pollutant was reduced.

^b: Pollutant was expected, but invalidated at this site for this year.

Table 8. NATTS Network Assessment: MQO#3 - Bias Percent Difference at South DeKalb, GA

Year	Benzene	Butadiene, 1,3-	Carbon tetrachlorid	Chloroform	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	Acetaldehyde	Formaldehyde	Arsenic (PM10)	Beryllium (PM10)	Cadmium (PM10)	Lead (PM10)	Manganese (PM10)	Nickel (PM10)	Benzo(a)pyrene	Naphthalene
	VOCs							Carbonyls		PM10 Metals						PAHs	
<i>South DeKalb, GA (AQS Site Code: 13-089-0002)</i>																	
2004	-12.4	-4.2	0.4	-8.0	-14.9	-5.0	-19.1	-9.7	4.4	6.3	41.0	5.9	-9.3	-4.2	14.9	--	--
2005	-2.6	-2.0	2.9	-1.2	-6.9	-5.5	-12.4	2.6	16.7	134.0	525.5	146.8	160.5	122.5	143.7	--	--
2006	-4.3	0.5	2.3	-3.4	-8.1	4.1	-4.3	-13.8	-8.5	-0.5	-2.3	-10.5	-5.9	-14.2	-14.7	--	--
2007	-9.9	-14.0	1.6	-4.0	-9.5	-2.3	-1.3	-26.6	-16.6	8.2	19.9	7.2	6.1	-10.1	-2.8	--a	--a
2008	-15.4	1.0	5.5	-13.0	-4.5	-6.3	-15.5	-14.3	-3.2	13.3	-1.7	7.3	14.0	-19.5	8.4	--a	--a
2009	-15.3	-17.8	-12.3	-17.5	-15.9	-12.1	-8.5	-22.1	-7.8	-0.3	2.9	-6.9	32.4	-27.8	-13.9	-1.7	-7.7
2010	-13.2	25.6	2.0	-16.5	-10.8	-10.1	-2.4	-2.7	-4.3	5.9	4.8	0.0	-1.1	1.0	8.6	-2.3	-17.1
2011	-11.3	-13.7	-20.0	-25.8	-20.8	-19.7	-14.4	-16.5	-21.7	-5.5	-2.5	-9.2	-6.6	-4.3	-8.1	-2.1	-13.9
2012	--a	--a	--a	--a	--a	--a	--a	--a	--a	4.9	7.2	4.2	10.9	11.0	2.1	25.2	21.4
2013	4.5	1.7	-9.4	5.7	-7.6	-2.0	-7.7	0.1	0.5	-22.8	-4.2	-8.6	-6.5	3.6	-6.2	-23.6	-2.8
2014	-1.5	-8.2	2.1	3.4	3.1	-8.3	-0.7	-4.3	-2.2	22.5	--b	--b	5.6	21.1	--c	-33.4	-35.3
2015	-16.5	-6.4	116.9	-5.4	-40.6	-19.5	1.3	--a	--a	--a	--a	--a	--a	--a	--a	-24.6	-35.1
2016	-30.6	-16.9	51.2	-16.3	-18.0	-29.2	-16.9	-7.1	-8.6	-25.1	-11.0	-8.6	-9.4	-7.1	12.3	-23.3	-34.0
2017	-6.9	-32.0	2.3	4.5	-3.9	-3.0	-8.8	0.9	-8.8	-40.8	-1.8	2.7	8.0	0.6	17.8	-16.2	-30.4
2018	-32.1	-3.1	-21.5	-25.0	-34.3	-37.0	-24.9	-11.2	-5.2	-6.3	-6.9	-9.4	-5.6	-1.5	-0.6	-10.2	-34.9
2019	3.4	-62.0	-1.6	-3.7	-2.7	1.6	-18.2	-2.0	-2.2	-3.7	11.9	-1.8	11.5	0.2	-3.0	12.0	-11.3
2020	-19.4	-39.4	-22.6	-19.1	-30.8	-29.7	-24.0	0.5	-1.4	7.0	12.0	7.6	7.3	5.2	2.0	21.1	3.7
2021	-5.5	0.7	-8.3	-13.4	-5.2	-1.7	-12.5	12.3	4.3	-5.9	0.6	6.5	2.9	0.6	1.1	-4.8	-14.3
2022	-4.0	14.1	-7.7	-4.7	-2.6	-4.3	-8.0	-4.4	-7.8	--a	--a	--a	--a	--a	--a	--a	--a

	A-rated:±25%
	B-rated: Between 25% to 35% or between -25% to -35%
	Does not meet:>35% or <35%
	No data available

^a: No Proficiency Test samples were sent for this pollutant and year.

^b: The Proficiency Test sample for this pollutant was 0; the site reported a concentration as "< MDL", rather than 0. EPA accepted this result.

^c: Although a Proficiency Test sample was sent to the lab supporting this site and year, the results were nullified by EPA due to QA issues.

Table 9. NATTS Network Assessment: MQO#4 - Overall Method Precision %CV at South DeKalb, GA

Year	Benzene	Butadiene, 1,3-	Carbon tetrachlorid	Chloroform	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	Acetaldehyde	Formaldehyde	Arsenic (PM10)	Beryllium (PM10)	Cadmium (PM10)	Lead (PM10)	Manganese (PM10)	Nickel (PM10)	Benzo(a)pyrene	Naphthalene
	VOCs							Carbonyls		PM10 Metals						PAHs	
<i>South DeKalb, GA (AQS Site Code: 13-089-0002)</i>																	
2003	58.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2004	57.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2005	13.3	--a	--a	--a	23.6	--a	--a	--	--	--	--	--	--	--	--	--	--
2006	15.5	--a	19.1	7.7	18.8	--a	--a	22.0	45.4	17.4	--a	44.0	25.2	33.1	47.0	--	--
2007	21.1	--a	14.9	22.1	20.0	--a	--a	31.5	42.9	28.4	--a	33.0	26.5	27.5	33.7	11.0	9.1
2008	23.1	--a	12.0	10.8	23.5	--a	--a	17.1	23.2	16.4	--a	31.0	21.6	23.7	23.3	1.9	7.0
2009	28.5	--a	9.5	15.0	21.9	--a	--a	14.9	41.5	18.3	84.9	22.0	27.2	24.6	15.2	--a	11.8
2010	23.7	--a	12.6	0.0	47.3	--a	--a	27.9	51.3	27.7	0.0	21.2	17.3	25.5	41.0	10.9	9.1
2011	22.3	--a	16.5	--a	--a	--a	--a	23.3	41.6	19.5	53.3	--a	15.5	15.5	23.8	5.2	6.4
2012	--	--	--	--	--	--	--	--	--	15.9	--a	17.9	14.2	22.8	16.7	--a	31.1
2013	--	--	--	--	--	--	--	--	--	41.8	--a	66.5	34.9	45.2	37.3	--a	38.0
2014	23.9	--a	13.9	28.3	--a	--a	--a	--	--	39.0	--a	56.0	29.6	31.5	31.7	--a	22.1
2015	27.9	--a	16.9	--a	26.3	--a	--a	--	--	39.9	--a	10.3	30.9	33.3	40.6	--a	11.0
2016	25.6	--a	11.8	--a	14.1	--a	85.4	52.1	10.8	--a	--a	--a	--a	--a	--a	81.6	115.5
2017	44.5	--a	10.2	8.8	11.7	3.8	--a	33.3	25.6	17.1	--a	35.2	6.5	13.8	5.1	141.2	81.1
2018	21.8	19.5	12.6	13.8	16.0	39.4	24.1	56.9	55.8	18.0	--a	24.4	14.8	10.8	15.1	11.7	16.4
2019	64.6	18.3	6.4	7.0	15.2	0.0	--a	37.0	13.2	7.8	0.0	0.0	11.8	4.9	22.6	0.0	4.1
2020	27.4	15.8	8.3	11.6	11.2	27.6	--a	70.3	37.7	8.6	0.0	--a	20.1	11.4	0.0	33.3	8.5
2021	13.4	12.9	7.1	6.0	3.9	--a	--a	32.7	41.5	8.5	--a	20.3	19.6	6.9	10.0	0.0	12.6
2022	9.5	7.9	6.9	3.6	4.0	--a	--a	45.3	48.7	33.8	--a	--a	9.5	9.7	--a	--a	18.4

- Green = precision ≤ 15%
- Yellow = precision > 15% to ≤ 25%
- Red = precision > 25%
- Gray = dataset was not rated

^a: The primary and/or replicate value were less than the MDL, so no calculation could be made.

Table 10. NATTS Network Assessment: MQO#4 - Analytical Method Precision %CV at South DeKalb, GA

Year	Benzene	Butadiene, 1,3-	Carbon tetrachlorid	Chloroform	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	Acetaldehyde	Formaldehyde	Arsenic (PM10)	Beryllium (PM10)	Cadmium (PM10)	Lead (PM10)	Manganese (PM10)	Nickel (PM10)	Benzo(a)pyrene	Naphthalene
	VOCs							Carbonyls		PM10 Metals						PAHs	
<i>South DeKalb, GA (AQS Site Code: 13-089-0002)</i>																	
2003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.2	1.4
2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.5	1.4
2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--a	2.9
2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.4	1.3
2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1	2.8
2012	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	3.1	3.3
2013	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b
2014	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b
2015	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b
2016	--b	--b	--b	--b	--b	--b	--b	--b	0.4	--b	--b	--b	--b	--b	--b	--b	--b
2017	--b	--b	--b	--b	--b	--b	--b	--b	1.7	--a	--a	--a	0.0	0.0	--a	--b	--b
2018	--b	--b	--b	--b	--b	--b	--b	--b	0.5	--a	--a	--a	--a	--a	--a	--b	--b
2019	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b
2020	7.3	13.9	4.3	13.6	16.1	27.3	--a	5.3	1.9	4.3	--a	--a	1.4	6.8	--a	9.1	1.1
2021	4.9	7.5	3.5	2.7	1.4	--a	--a	13.3	20.9	0.0	--a	0.0	0.0	15.9	--a	0.0	0.8
2022	1.3	5.2	0.8	0.0	2.3	--a	--a	24.1	41.8	--a	--a	--a	0.0	0.0	--a	--a	1.5

A-rated: ≤ 15% CV
B-rated: Between 15%CV to 25% CV
Does Not Meet: >25% CV or did not report Precision (required in the NATTS Workplan Template since 2012)
-- No data available

^a: The primary and/or replicate value were less than the MDL, so no calculation could be made.
^b: Per the NATTS Workplan template, analytical replicates were required to be reported to AQS for this sampling year.

Appendix A. Equipment Inventory

Method	Year(s)	Manufacturer/Model, Extraction Type, and Year
<i>Sampling Equipment</i>		
Carbonyls	2003-2004	ATEC 800 Sequential Sampler (Year Deployed: 2003)
	2005-2009	ATEC 8000 Cartridge Sampler (Year Deployed: 2005)
	2010-2022	ATEC 8000 Cartridge Sampler (Year Deployed: 2010)
PAHs	2007-2010	Anderson Hi-Vol Sampler (Year Deployed: unknown)
	2011-2011	Tisch Environmental TE-1000 PUF Sampler (2 units) (Year Deployed: 2006)
	2012-2012	Tisch Environmental TE-1000 PUF Sampler (2 units) (Year Deployed: 2006/<2000)
	2013-2015	Tisch 1000 sampler (Year Deployed: <2000)
	2016-2022	Tisch Puf Hi-Vol (2) (Year Deployed: 2016)
PM ₁₀ Metals	2003-2010	Anderson A-1200 Hi-Volume Sampler (Year Deployed: <1980)
	2011-2015	Anderson A-1200 Hi-Volume Sampler (2 units) (Year Deployed: 2000)
	2016-2021	Graseby-Andersen Hi-Vol (2) (Year Deployed: 2016)
	2022	MetOne E-SEQ-FRM Particulate Sampler (2) (Year Deployed: 2022)
VOCs	2003-2004	Anderson A-1200 Hi-Volume Sampler (Year Deployed: 2003)
	2005-2009	ATEC 2200 Toxic Air Sampler (Year Deployed: 2005)
	2010-2022	ATEC model 2200 Toxic Air Sampler (Year Deployed: 2010)
<i>Analytical Equipment</i>		
Carbonyls	2003	HPLC with PE LC-95 UV/Vis detection (Year Deployed: unknown)
	2004-2010	Waters HPLC/ PDA detection (Year Deployed: 2004)
	2011-2015	PC 200 HPLC/ variable wavelength detection (Year Deployed: 2004)
	2016-2021	PE Series 200 HPLC/UV-VIS (1); PE Flexar HPLC/UV-VIS (2) (Year Deployed: 2016)
	2022	PE Series 200 HPLC/UV-VIS (1); PE Flexar HPLC/UV-VIS (2) (Year Deployed: 2016); Waters Acquity H Plus TUV LC-8 (Year Deployed: 2022)
PAHs	2007-2007	HP/Agilent 5890/5971 GC/MS (Year Deployed: 1990)
	2008-2011	HP/Agilent 5890/5971 GC/MS (Year Deployed: 2008)
	2012-2012	HP/Agilent 5890/5971 GC/MS; Agilent 5973/6890 (Year Deployed: 2008/2000)
	2013-2015	Agilent 5973/6890 (Year Deployed: 2000)
	2016-2022	Agilent 6890/5973N GC/MS (Year Deployed: 2016)
PM ₁₀ Metals	2003-2005	PE ELAN 9000 ICP-MS (Year Deployed: 2002)
	2006-2019	PE ELAN 9000 ICP-MS (Year Deployed: 2006)
	2020-2022	NexION 1000 (Year Deployed: 2019)
VOCs	2003-2004	HP/Agilent 5890/5972 GC/MS (Year Deployed: 1993)
	2005-2006	HP/Agilent 6890/5973 GC/MS (Year Deployed: 2005)
	2007-2019	HP/Agilent 6890N/5973 GC/MS (Year Deployed: 2007)
	2020	Agilent 6890/5975 GC/MSD (Year Deployed: 2020) Agilent 6890N/5973 GC/MS (Year Deployed: 2007)
	2021-2022	Agilent 8890/5977B GC/MSD (Year Deployed: 2021) HP/Agilent 6890/5975 GC/MSD (Year Deployed: 2020)
<i>Preconcentrator Equipment</i>		
VOCs	2003-2005	Entech 7100 (1), Entech 7016CA (2) (Year Deployed: 1998)
	2006-2010	Entech 7100 (1), Entech 7016CA (2); Entech 7100 (3), Entech 7016CA (4) (Year Deployed: 1998 (1,2), 2006 (3,4))
	2011-2015	Entech 7100A (1), Entech 7016CA (2) (Year Deployed: 1998 (1), 2006 (2))
	2016-2020	Entech 7100 (Year Deployed: 2016)
	2021-2022	Entech 7200 Preconcentrator/Entech 7016D Canister Autosampler (Year Deployed: 2021) Entech 7200 Preconcentrator/Entech 7016D Canister Autosampler (Year Deployed: 2019)

Method	Year(s)	Manufacturer/Model, Extraction Type, and Year
<i>Sampling Equipment</i>		
<i>Standards Preparation Equipment</i>		
VOCs	2003-2010	Entech 4560SL (dynamic dilution) (Year Deployed: 1995)
	2011	Entech model 4560L (1),Entech model 4560A (2) (hot) (Year Deployed: 1995 (1), 2010 (2))
	2012-2015	Entech 4560A (dynamic dilution) (Year Deployed: 2010)
	2016-2018	Entech 4600 (dynamic dilution) (Year Deployed: 2016)
	2019-2022	Entech 4700 Precision Diluter (Year Deployed: 2019)
<i>Canister Cleaning Equipment</i>		
VOCs	2003-2013	Entech 3100SL (Hot) (Year Deployed: 2000)
	2011-2015	Entech model 3100SL (hot) (Year Deployed: 2000)
	2016-2018	Entech 3100 (3)(Hot) (Year Deployed: 2016)
	2019-2022	Entech 3100SL (Year Deployed: 2000); Entech 3100D (3 oven) (Year Deployed: 2016); Entech 3100D (2 oven)) (Year Deployed: 2019)
<i>PM₁₀ Extraction Equipment</i>		
PM ₁₀ Metals	2003-2011	Environmental Express (Hotblock) (Year Deployed: 2000)
	2012-2018	Environmental Express (Hotblock) (Year Deployed: 2012)
	2019-2022	Environmental Express (Hotblock) (Year Deployed: 2019)
<i>PAHs Extraction Equipment</i>		
PAHs	2007-2011	Dionex -300 (ASE) (Year Deployed: 2004)
	2012	Dionex -300 (ASE); Electrothermal 6 position heating mantle (Year Deployed: 2004/1996)
	2013-2015	Electrothermal 6 position heating mantle (Soxhlet) (Year Deployed: 1996)
	2016-2018	Electrothermal 6 position heating mantle (Soxhlet) (Year Deployed: 2015)
	2019-2022	Electrothermal 6 position heating mantle (Soxhlet) (Year Deployed: 2015)
		PolyScience Durachill Recirculating Chillers (Year Deployed 2023) Labconco RapidVap N2 Evaporation System (Year Deployed 2015) Biotage TurboVap II Automated Solvent Evaporation System (Year Deployed 2023) ThermoScientific Multi-Extraction Heating Mantle (Year Deployed 2011) Kontes Soxhlet Extraction Apparatus (Year Deployed 2011)