

## San Jose, CA NATTS Network Assessment Review

- Established 2003: Carbonyls and VOCs
  - PM<sub>10</sub> metals added in 2007
  - PAHs added in 2008
  - Chromium VI was never sampled
- For the NATTS Network Assessment (2003-2018):
  - 0 of 18 Method Quality Objective (MQO) Core HAPs were included in the 6-year national DQO trends
    - All Pollutants: Sampling ended mid-2018
  - 171 of 252 pollutant datasets were suitable for trends analysis
  - Annual Average and 3-Year Rolling Average Concentrations were generally flat over time.
  - 100% Reporting of Datasets
- Method Quality Objectives (MQO): 2003-2018
  - Completeness: Met 85% completeness in 179 of 254 pollutant datasets
  - Method Detection Limits: Met MDL Target Ratio of 1.00 in 216 of 271 pollutant datasets
  - Bias: Met ±25% for 159 of 178 pollutant datasets
  - Overall Method Precision: Met ≤15% CV for 26 of 106 pollutant datasets
  - Analytical Method Precision: Met ≤15% CV for 88 of 178 pollutant datasets

- Analytical Laboratories for 2018

VOC	Carbonyl	PM <sub>10</sub> Metals	Chromium VI	PAHs
BAAQMD	BAAQMD	ERG	NA	ERG

- Equipment Year Deployed (Through 2014 for BAAQMD-deployed Equipment)<sup>a</sup>

Equipment Type	VOC	Carbonyl	PM <sub>10</sub> Metals	Chromium VI	PAHs
Sampler	2008	2006	2007	NA	2008
Analytical	2012	2014	2015	NA	2015
Preconcentrator	2013	NA	NA	NA	NA
Standards Preparation	2013	NA	NA	NA	NA
Canister Cleaning	2001	NA	NA	NA	NA
Extraction	NA	NA	2011	NA	2004

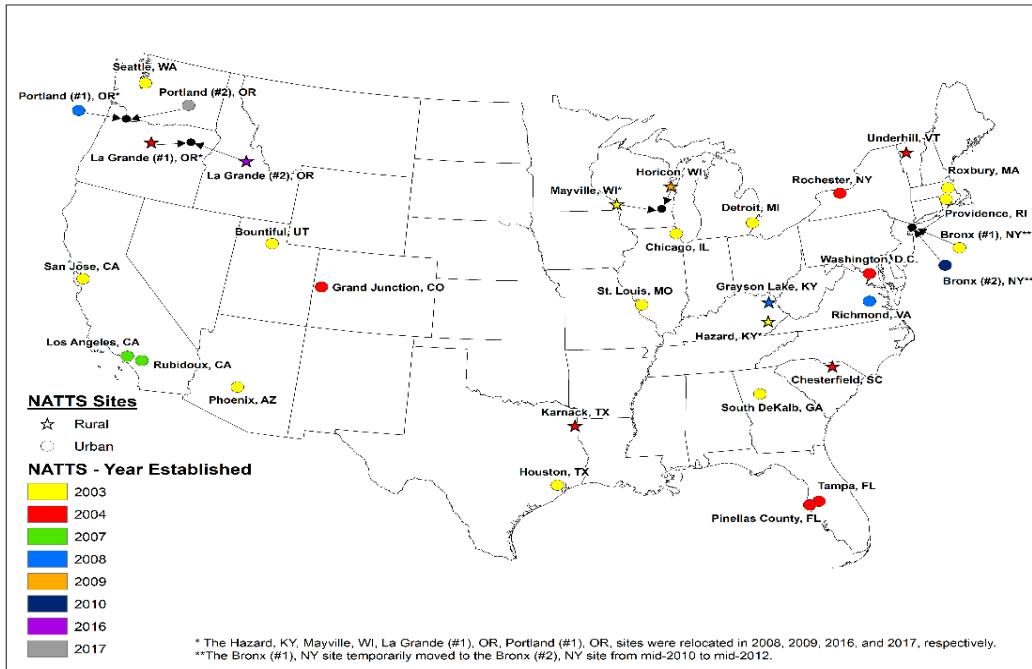
**National Summary:** NATTS data were collected at 27 locations across the United States, with sites beginning in 2003 or later (Figure 1) for 19 core HAPs. Over 528,000 concentrations (primary, secondary, and replicate) were generated and analyzed for this assessment. Pollutant datasets were scored 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., 2013-2015 vs. 2016-2018) 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 19 core HAPs, 18 were assessed for the NATTS Trends DQO. Due to sampling and analytical issues, acrolein was not considered for trends analysis (Table 2). This assessment showed that across the network, 15 of those 18 pollutants were decreasing between the 3-year blocks, while two of those pollutants were increasing between the 3-year blocks. One pollutant did not exhibit a trend.

**Figure 1. NATTS Site and Year Established**



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

Pollutant Group	A-rated		B-rated		Does Not Meet	
	#	%	#	%	#	%
VOCs	1,452	53%	737	27%	555	20%
Carbonyls	523	67%	193	25%	66	8%
PM <sub>10</sub> Metals	1,418	61%	685	30%	213	9%
Chromium VI	159	74%	29	13%	27	13%
PAHs	410	74%	124	22%	18	3%
Total = 6,609	3,962	60%	1,768	27%	879	13%

**Table 2. Three-Year Block Averages for National Trends**

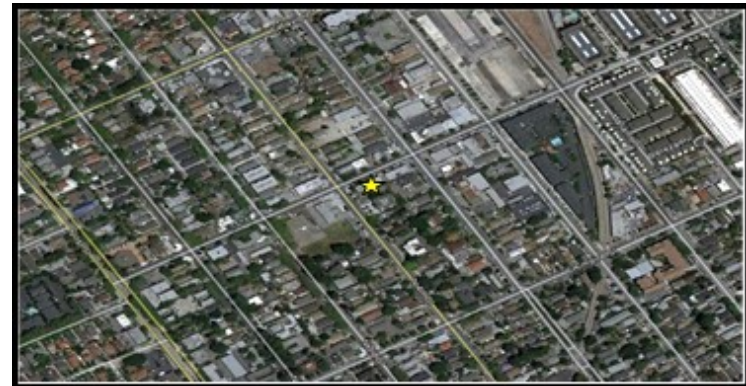
Pollutant	Units	# Sites	Block 1	Block 2	% Difference
Acetaldehyde	µg/m <sup>3</sup>	19	1.51	1.39	-7.7%
Arsenic (PM <sub>10</sub> )	ng/m <sup>3</sup>	21	0.71	0.68	-3.2%
Benzene	µg/m <sup>3</sup>	19	0.65	0.59	-10.2%
Benzo(a)pyrene	ng/m <sup>3</sup>	21	0.113	0.087	-23.2%
Beryllium (PM <sub>10</sub> )	ng/m <sup>3</sup>	20	0.012	0.009	-26.4%
Butadiene, 1,3-	µg/m <sup>3</sup>	19	0.071	0.063	-10.9%
Cadmium (PM <sub>10</sub> )	ng/m <sup>3</sup>	21	0.170	0.097	-43.0%
Carbon Tetrachloride	µg/m <sup>3</sup>	15	0.59	0.56	-4.7%
Chloroform	µg/m <sup>3</sup>	20	0.256	0.255	-0.4%
Chromium VI	ng/m <sup>3</sup>	18	0.029	0.026	-7.7%
Formaldehyde	µg/m <sup>3</sup>	19	2.77	2.68	-3.3%
Lead (PM <sub>10</sub> )	ng/m <sup>3</sup>	21	3.08	2.81	-8.9%
Manganese (PM <sub>10</sub> )	ng/m <sup>3</sup>	20	8.06	7.93	-1.6%
Naphthalene	ng/m <sup>3</sup>	20	66.70	51.08	-23.4%
Nickel (PM <sub>10</sub> )	ng/m <sup>3</sup>	19	1.28	1.05	-18.0%
Tetrachloroethylene	µg/m <sup>3</sup>	19	0.149	0.174	17.2%
Trichloroethylene	µg/m <sup>3</sup>	19	0.020	0.022	10.7%
Vinyl Chloride	µg/m <sup>3</sup>	17	0.0051	0.0048	-5.5%

NATTS Monitoring Site Report: San Jose, CA

Site Information

Region	9
NATTS Site Type	Urban
County	Santa Clara
AQS Site Code	06-085-0005
NATTS Operating Agency	BAAQMD
Latitude	37.3485
Longitude	-121.895
AQS Land Use	Commercial
AQS Location Setting	Urban/City Center
10-Mile Population	1,862,041

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
Acetaldehyde	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Arsenic (PM <sub>10</sub> )	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Benzene	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	N <sup>c</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Benzo(a)pyrene	--	--	--	--	--	--	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Beryllium (PM <sub>10</sub> )	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Butadiene, 1,3-	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Cadmium (PM <sub>10</sub> )	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Carbon tetrachloride	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Chloroform	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Chromium VI	--	--	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	--	--	--	--	--
Formaldehyde	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Lead (PM <sub>10</sub> )	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Manganese (PM <sub>10</sub> )	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Naphthalene	--	--	--	--	--	--	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Nickel (PM <sub>10</sub> )	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	N <sup>b</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Tetrachloroethylene	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Trichloroethylene	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	--
Vinyl chloride	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	N <sup>a</sup>	N <sup>c</sup>	N <sup>c</sup>	N <sup>c</sup>	N <sup>c</sup>	N <sup>c</sup>	Y	Y	Y	Y	Y	Y	--

<sup>a</sup>: Samples were collected only once every 12 days. The Completeness MQO is sampling once every six days

<sup>b</sup>: Pollutant was expected, but not sampled at this site for this year

<sup>c</sup>: Reported MDL to NATTS Target Ratio greater than 2.0

**Table 3. NATTS Network Assessment Data (2003-2018) - National Distribution Statistics By Type<sup>a</sup>**

Analyte	Units	Site Type	# Data Records	% Detections	Arithmetic Mean <sup>b</sup>	Percentile Value <sup>c</sup>						
						5th	10th	25th	50th	75th	90th	95th
Acetaldehyde	µg/m <sup>3</sup>	Urban	15,704	100%	1.77 ± 0.02	0.50	0.66	0.97	1.45	2.19	3.24	4.04
	µg/m <sup>3</sup>	Rural	4,930	100%	1.20 ± 0.04	0.36	0.46	0.65	0.93	1.38	2.02	2.76
	µg/m <sup>3</sup>	All Sites	20,634	100%	1.63 ± 0.02	0.44	0.58	0.86	1.31	2.00	3.02	3.86
Arsenic (PM <sub>10</sub> )	ng/m <sup>3</sup>	Urban	14,968	97%	0.89 ± 0.04	0.10	0.19	0.34	0.58	0.99	1.70	2.41
	ng/m <sup>3</sup>	Rural	4,622	96%	0.49 ± 0.02	0.04	0.08	0.17	0.35	0.59	0.94	1.28
	ng/m <sup>3</sup>	All Sites	19,590	97%	0.79 ± 0.03	0.06	0.14	0.29	0.52	0.89	1.54	2.19
Benzene	µg/m <sup>3</sup>	Urban	15,984	99%	0.86 ± 0.01	0.25	0.30	0.43	0.66	1.05	1.64	2.21
	µg/m <sup>3</sup>	Rural	2,494	95%	0.43 ± 0.02	0.04	0.13	0.21	0.33	0.52	0.78	1.01
	µg/m <sup>3</sup>	All Sites	18,478	99%	0.81 ± 0.01	0.19	0.26	0.39	0.61	0.98	1.55	2.09
Benzo(a)pyrene	ng/m <sup>3</sup>	Urban	12,336	70%	0.096 ± 0.004	ND	ND	ND	0.04	0.11	0.24	0.37
	ng/m <sup>3</sup>	Rural	3,179	36%	0.067 ± 0.009	ND	ND	ND	ND	0.02	0.13	0.37
	ng/m <sup>3</sup>	All Sites	15,515	63%	0.090 ± 0.004	ND	ND	ND	0.03	0.10	0.23	0.37
Beryllium (PM <sub>10</sub> )	ng/m <sup>3</sup>	Urban	15,783	75%	0.051 ± 0.006	ND	ND	0.00003	0.005	0.018	0.050	0.101
	ng/m <sup>3</sup>	Rural	4,687	49%	0.023 ± 0.003	ND	ND	ND	ND	0.005	0.017	0.072
	ng/m <sup>3</sup>	All Sites	20,470	69%	0.045 ± 0.005	ND	ND	ND	0.003	0.012	0.049	0.100
Butadiene, 1,3-	µg/m <sup>3</sup>	Urban	15,388	81%	0.092 ± 0.002	ND	ND	0.025	0.058	0.114	0.215	0.302
	µg/m <sup>3</sup>	Rural	2,185	29%	0.012 ± 0.001	ND	ND	ND	ND	0.017	0.046	0.059
	µg/m <sup>3</sup>	All Sites	17,573	75%	0.082 ± 0.002	ND	ND	ND	0.049	0.104	0.199	0.287
Cadmium (PM <sub>10</sub> )	ng/m <sup>3</sup>	Urban	16,360	92%	0.21 ± 0.02	ND	0.01	0.05	0.09	0.17	0.42	0.63
	ng/m <sup>3</sup>	Rural	4,684	87%	0.10 ± 0.01	ND	ND	0.03	0.06	0.11	0.20	0.29
	ng/m <sup>3</sup>	All Sites	21,044	91%	0.18 ± 0.01	ND	0.01	0.04	0.08	0.16	0.35	0.56
Carbon Tetrachloride	µg/m <sup>3</sup>	Urban	14,713	99%	0.569 ± 0.003	0.361	0.433	0.496	0.562	0.651	0.737	0.798
	µg/m <sup>3</sup>	Rural	2,189	92%	0.534 ± 0.016	ND	0.180	0.402	0.537	0.633	0.727	0.798
	µg/m <sup>3</sup>	All Sites	16,902	98%	0.565 ± 0.003	0.304	0.408	0.490	0.559	0.649	0.736	0.798
Chloroform	µg/m <sup>3</sup>	Urban	16,068	87%	0.265 ± 0.022	ND	ND	0.093	0.132	0.217	0.420	0.668
	µg/m <sup>3</sup>	Rural	3,802	43%	0.052 ± 0.003	ND	ND	ND	ND	0.095	0.144	0.230
	µg/m <sup>3</sup>	All Sites	19,870	79%	0.224 ± 0.018	ND	ND	0.064	0.113	0.196	0.364	0.586
Chromium VI	ng/m <sup>3</sup>	Urban	8,414	74%	0.036 ± 0.002	ND	ND	ND	0.020	0.042	0.081	0.120
	ng/m <sup>3</sup>	Rural	2,586	41%	0.018 ± 0.004	ND	ND	ND	ND	0.017	0.031	0.051
	ng/m <sup>3</sup>	All Sites	11,000	66%	0.032 ± 0.001	ND	ND	ND	0.016	0.036	0.073	0.114

**Table 3. NATTS Network Assessment Data (2003-2018) - National Distribution Statistics By Type<sup>a</sup>**

Analyte	Units	Site Type	# Data Records	% Detections	Arithmetic Mean <sup>b</sup>	Percentile Value <sup>c</sup>						
						5th	10th	25th	50th	75th	90th	95th
Formaldehyde	µg/m <sup>3</sup>	Urban	16,118	100%	3.11 ± 0.04	0.66	0.99	1.60	2.47	3.84	5.63	7.25
	µg/m <sup>3</sup>	Rural	5,002	100%	2.22 ± 0.05	0.53	0.68	1.06	1.69	2.74	4.19	5.45
	µg/m <sup>3</sup>	All Sites	21,120	100%	2.90 ± 0.04	0.61	0.86	1.43	2.29	3.59	5.38	6.96
Lead (PM <sub>10</sub> )	ng/m <sup>3</sup>	Urban	16,366	100%	4.21 ± 0.13	0.72	0.98	1.55	2.64	4.56	8.35	11.90
	ng/m <sup>3</sup>	Rural	4,680	99%	2.10 ± 0.16	0.37	0.50	0.84	1.41	2.37	3.91	5.36
	ng/m <sup>3</sup>	All Sites	21,046	99%	3.74 ± 0.11	0.55	0.80	1.31	2.31	4.04	7.41	10.56
Manganese (PM <sub>10</sub> )	ng/m <sup>3</sup>	Urban	16,141	100%	9.80 ± 0.32	1.09	1.51	2.52	4.92	10.21	20.10	30.08
	ng/m <sup>3</sup>	Rural	4,627	99%	3.96 ± 0.14	0.46	0.73	1.36	2.57	4.75	8.54	12.13
	ng/m <sup>3</sup>	All Sites	20,768	100%	8.50 ± 0.25	0.85	1.23	2.15	4.18	8.89	17.98	26.70
Naphthalene	ng/m <sup>3</sup>	Urban	12,332	100%	74.63 ± 1.14	15.62	21.27	33.55	55.89	94.64	150.05	196.16
	ng/m <sup>3</sup>	Rural	3,301	100%	24.47 ± 1.38	3.74	4.73	7.74	13.86	26.25	50.88	79.17
	ng/m <sup>3</sup>	All Sites	15,633	100%	64.04 ± 1.00	6.58	10.92	23.37	45.59	83.31	137.54	181.75
Nickel (PM <sub>10</sub> )	ng/m <sup>3</sup>	Urban	16,125	97%	1.85 ± 0.05	0.25	0.41	0.67	1.11	2.00	3.52	5.27
	ng/m <sup>3</sup>	Rural	4,623	85%	0.65 ± 0.08	ND	ND	0.10	0.28	0.64	1.15	1.89
	ng/m <sup>3</sup>	All Sites	20,748	94%	1.58 ± 0.04	ND	0.15	0.47	0.92	1.73	3.14	4.74
Tetrachloroethylene	µg/m <sup>3</sup>	Urban	15,612	86%	0.25 ± 0.01	ND	ND	0.06	0.13	0.25	0.48	0.74
	µg/m <sup>3</sup>	Rural	2,272	36%	0.09 ± 0.04	ND	ND	ND	ND	0.04	0.08	0.16
	µg/m <sup>3</sup>	All Sites	17,884	79%	0.23 ± 0.01	ND	ND	0.04	0.11	0.22	0.44	0.70
Trichloroethylene	µg/m <sup>3</sup>	Urban	15,843	41%	0.040 ± 0.002	ND	ND	ND	ND	0.051	0.107	0.164
	µg/m <sup>3</sup>	Rural	3,388	13%	0.021 ± 0.003	ND	ND	ND	ND	ND	0.017	0.250
	µg/m <sup>3</sup>	All Sites	19,231	36%	0.037 ± 0.002	ND	ND	ND	ND	0.041	0.105	0.167
Vinyl Chloride	µg/m <sup>3</sup>	Urban	14,778	19%	0.0044 ± 0.0003	ND	ND	ND	ND	ND	0.0137	0.0257
	µg/m <sup>3</sup>	Rural	2,444	8%	0.0040 ± 0.0009	ND	ND	ND	ND	ND	ND	0.0156
	µg/m <sup>3</sup>	All Sites	17,222	17%	0.0043 ± 0.0003	ND	ND	ND	ND	ND	0.0126	0.0254

<sup>a</sup> Statistics presented are from pollutant datasets which were suitable for trends.

<sup>b</sup> 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.

<sup>c</sup> ND: No results of this chemical were registered by the laboratory analytical equipment.

**Table 4. Summary Statistics for San Jose, CA**

Analyte	Units	# Data Records	% Detection	Arithmetic Mean <sup>a</sup>	Percentile Value <sup>b</sup>						
					5th	10th	25th	50th	75th	90th	95th
Acetaldehyde	µg/m <sup>3</sup>	830	100%	1.68 ± 0.07	0.56	0.73	0.97	1.35	2.02	3.27	3.97
Arsenic (PM <sub>10</sub> )	ng/m <sup>3</sup>	631	98%	0.44 ± 0.03	0.06	0.11	0.21	0.34	0.56	0.89	1.16
Benzene	µg/m <sup>3</sup>	826	98%	1.05 ± 0.07	0.20	0.27	0.40	0.70	1.33	2.41	3.19
Benzo(a)pyrene	ng/m <sup>3</sup>	605	45%	0.06 ± 0.01	ND	ND	ND	ND	0.04	0.19	0.33
Beryllium (PM <sub>10</sub> )	ng/m <sup>3</sup>	631	85%	0.0053 ± 0.0004	ND	ND	0.0010	0.0040	0.0076	0.0100	0.0200
Butadiene, 1,3-	µg/m <sup>3</sup>	826	47%	0.12 ± 0.01	ND	ND	ND	ND	0.16	0.36	0.50
Cadmium (PM <sub>10</sub> )	ng/m <sup>3</sup>	631	100%	0.06 ± 0.01	0.01	0.01	0.02	0.04	0.07	0.13	0.19
Carbon Tetrachloride	µg/m <sup>3</sup>	818	100%	0.65 ± 0.01	0.51	0.55	0.58	0.65	0.70	0.74	0.78
Chloroform	µg/m <sup>3</sup>	826	80%	0.12 ± 0.01	ND	ND	0.05	0.11	0.18	0.25	0.30
Chromium VI	ng/m <sup>3</sup>	NOT SAMPLED FOR AT THIS SITE									
Formaldehyde	µg/m <sup>3</sup>	834	100%	2.50 ± 0.09	0.94	1.17	1.58	2.20	3.11	4.29	4.95
Lead (PM <sub>10</sub> )	ng/m <sup>3</sup>	631	100%	2.74 ± 0.20	0.66	0.81	1.18	1.77	3.44	5.95	8.13
Manganese (PM <sub>10</sub> )	ng/m <sup>3</sup>	631	100%	6.43 ± 0.37	1.58	1.99	3.23	5.10	8.57	12.50	16.05
Naphthalene	ng/m <sup>3</sup>	605	100%	70.48 ± 5.16	18.59	21.12	28.65	45.53	87.58	148.33	209.98
Nickel (PM <sub>10</sub> )	ng/m <sup>3</sup>	631	100%	1.25 ± 0.06	0.42	0.53	0.75	1.07	1.53	2.09	2.62
Tetrachloroethylene	µg/m <sup>3</sup>	826	86%	0.31 ± 0.04	ND	ND	0.07	0.16	0.36	0.69	1.10
Trichloroethylene	µg/m <sup>3</sup>	826	25%	0.022 ± 0.003	ND	ND	ND	ND	ND	0.058	0.112
Vinyl Chloride	µg/m <sup>3</sup>	804	0%	0.00003 ± 0.00005	ND	ND	ND	ND	ND	ND	ND

<sup>a</sup>: 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.

<sup>b</sup> ND: No results of this chemical were registered by the laboratory analytical equipment.

**Table 5. Analytical Labs Supporting this Site**

Pollutant Group	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
VOCs	CARB	CARB	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD
Carbonyls	CARB	CARB	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD	BAAQMD
PM <sub>10</sub> Metals	--	--	--	--	--	ERG	ERG	ERG	ERG	ERG	ERG	ERG	ERG	ERG	ERG	ERG
Chromium VI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PAHs	--	--	--	--	--	ERG	ERG	ERG	ERG	ERG	ERG	ERG	ERG	ERG	ERG	ERG

--: Not Applicable

BAAQMD: Bay Area Air Quality Management District

ERG: Eastern Research Group, Inc.

CARB: California Air Resources Board

**Figure 3. San Jose, CA Annual Average Concentrations**

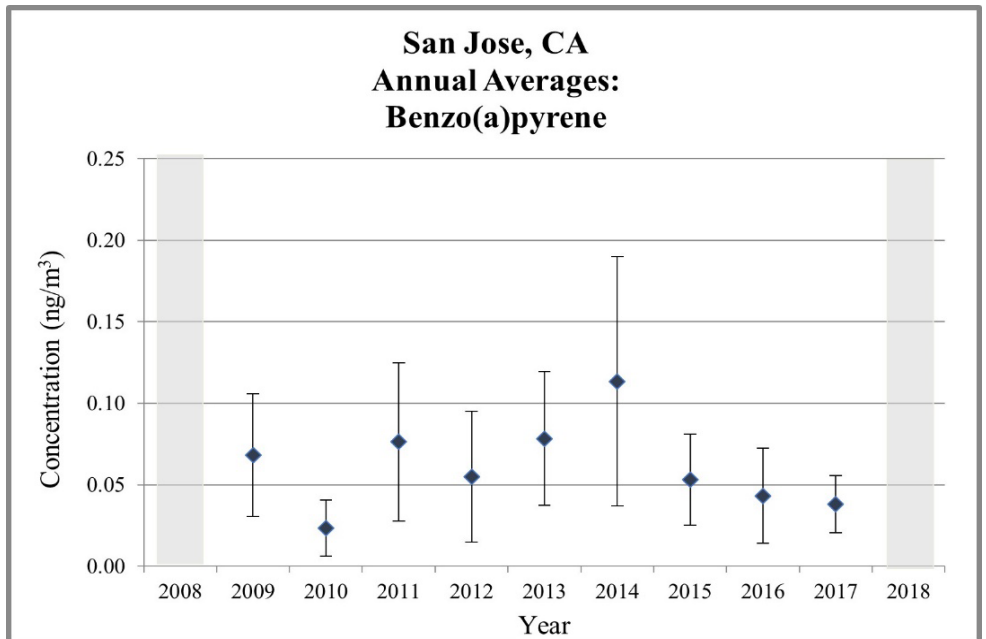
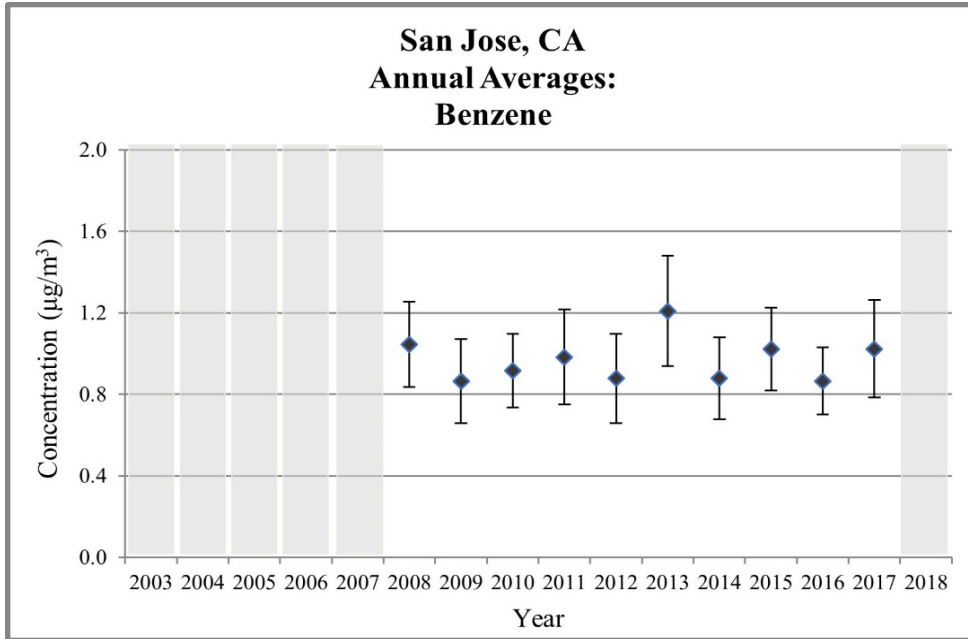
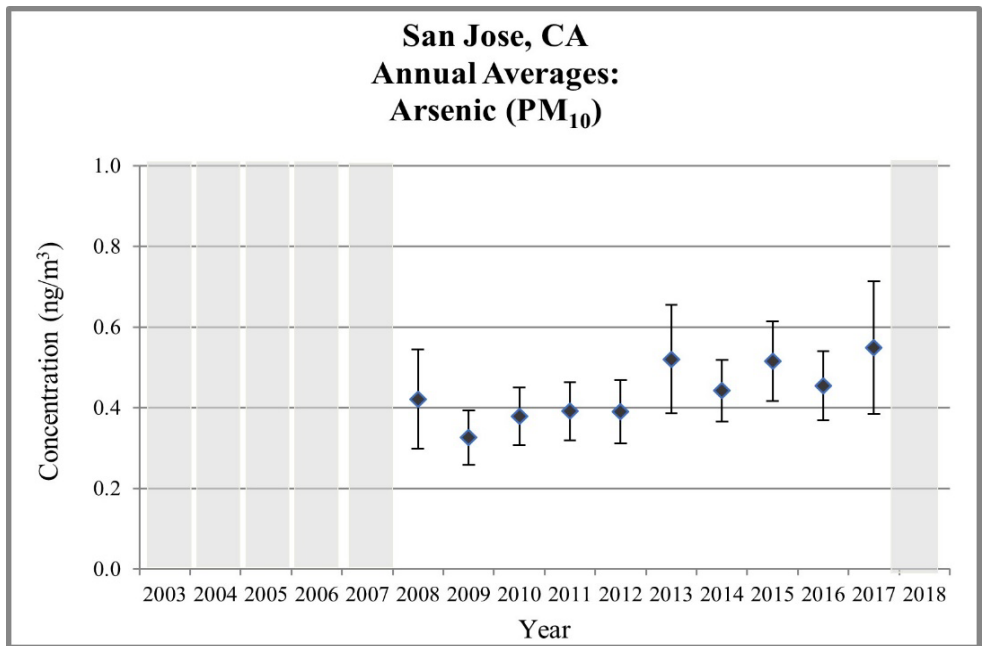
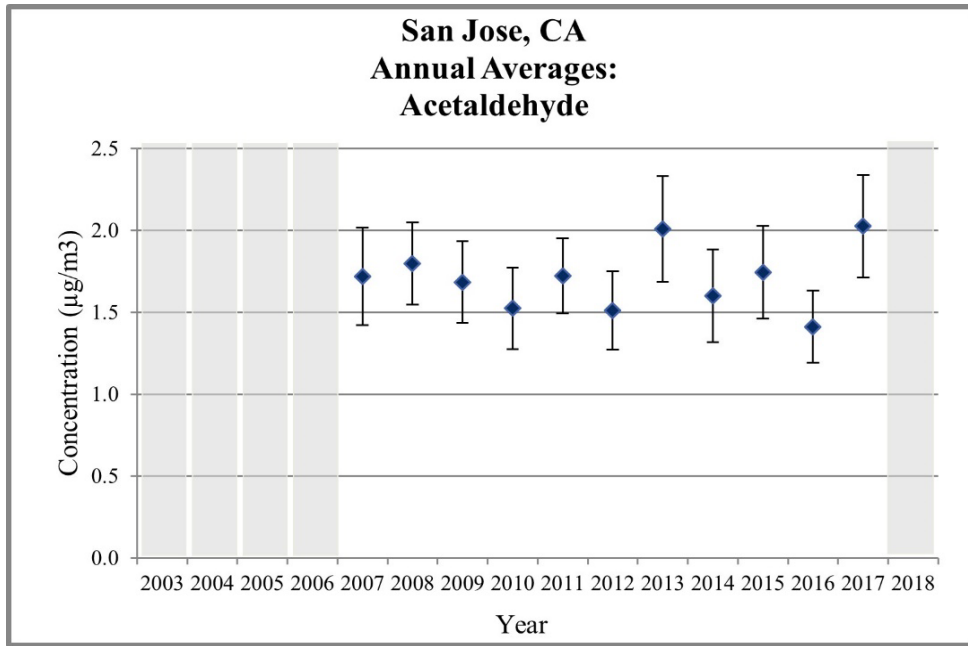
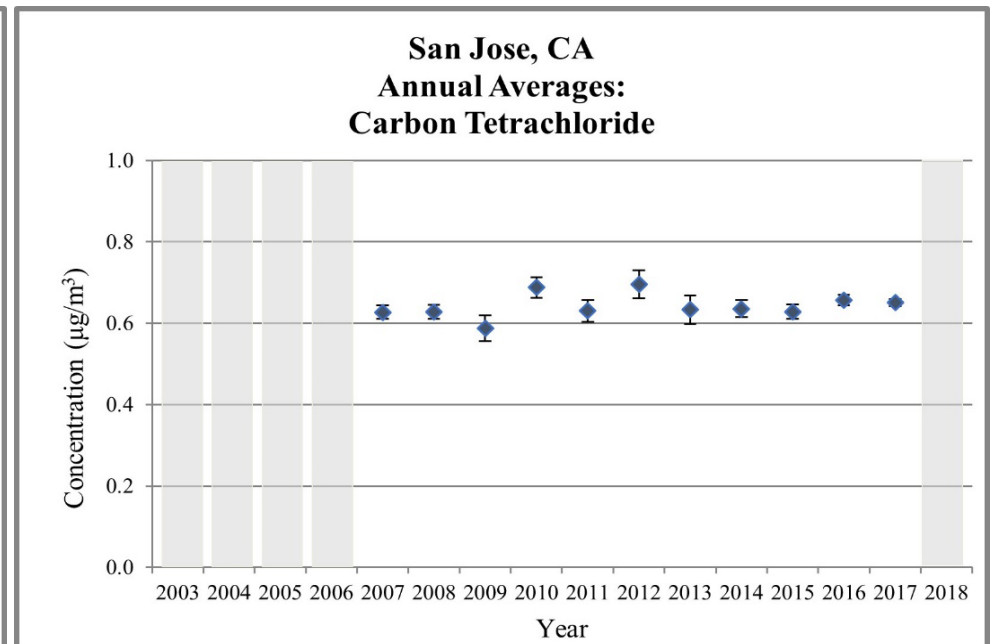
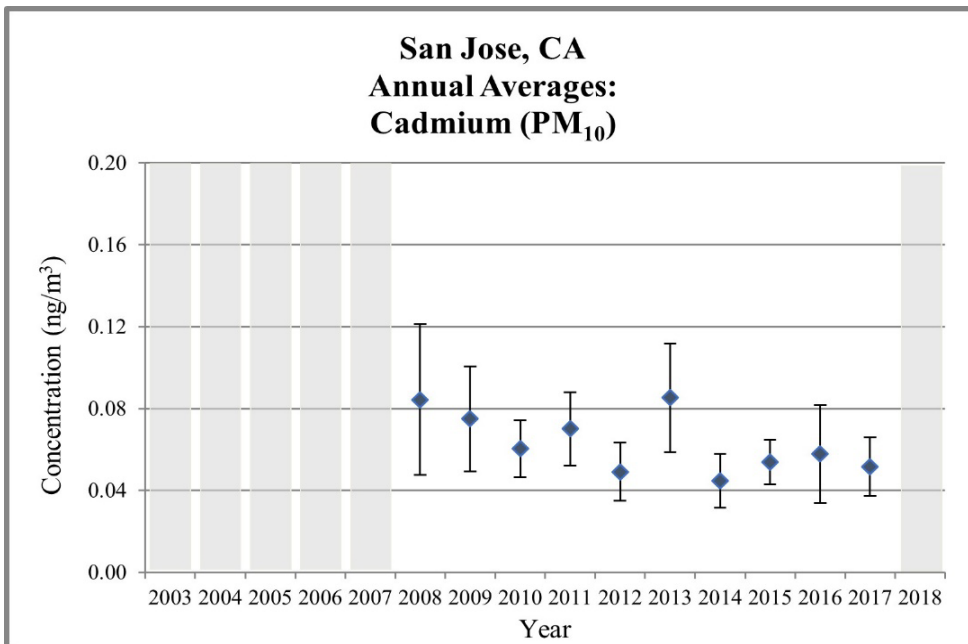
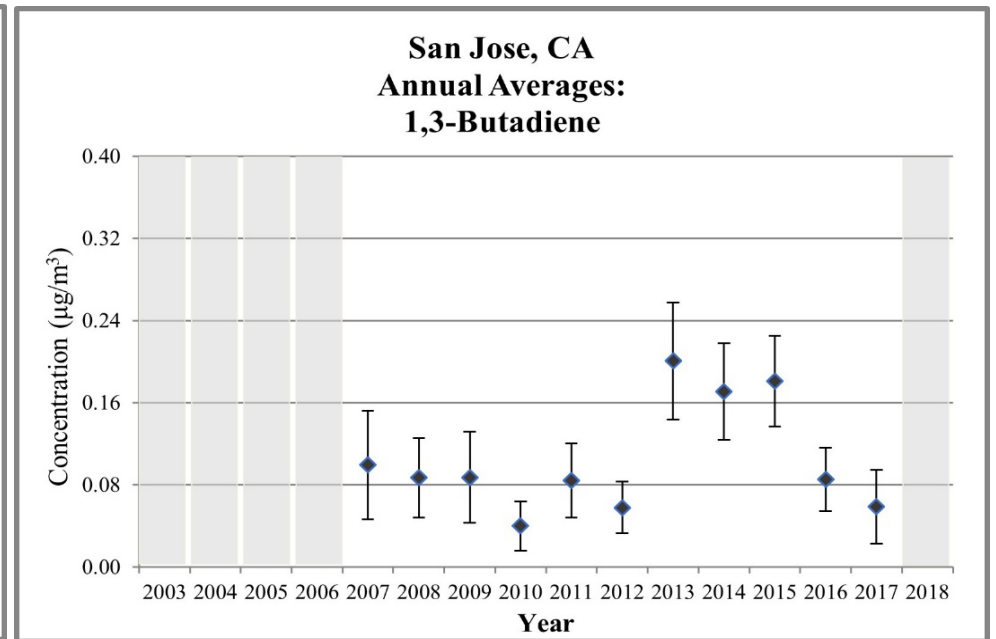
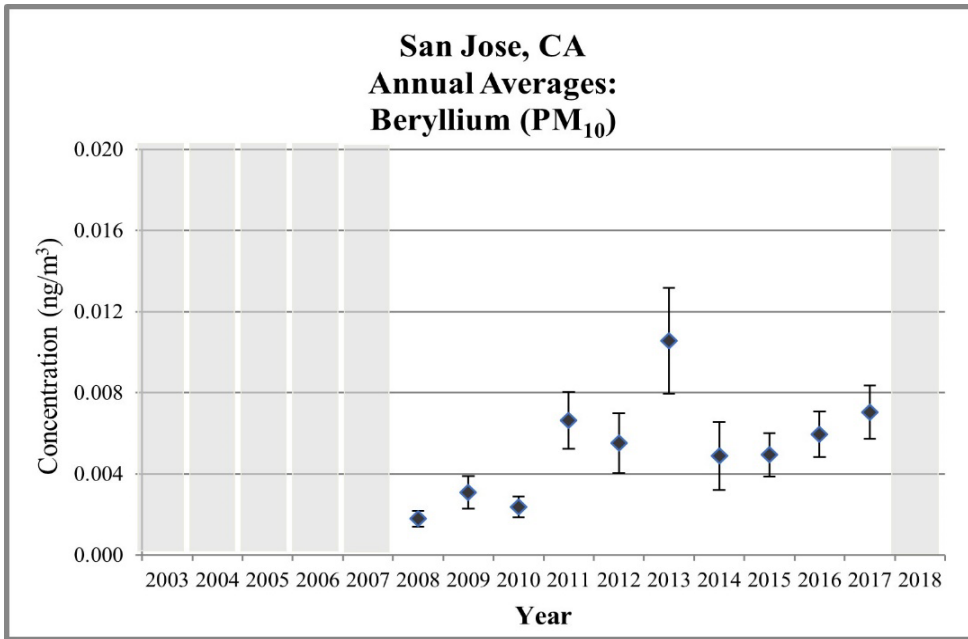


Figure 3. San Jose, CA Annual Average Concentrations





**Figure 3. San Jose, CA Annual Average Concentrations**

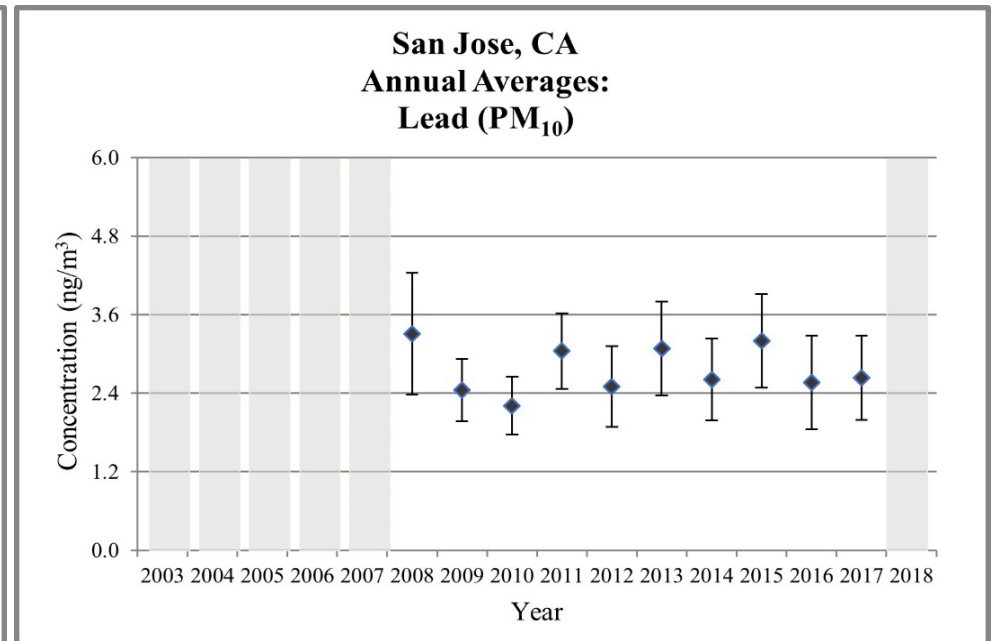
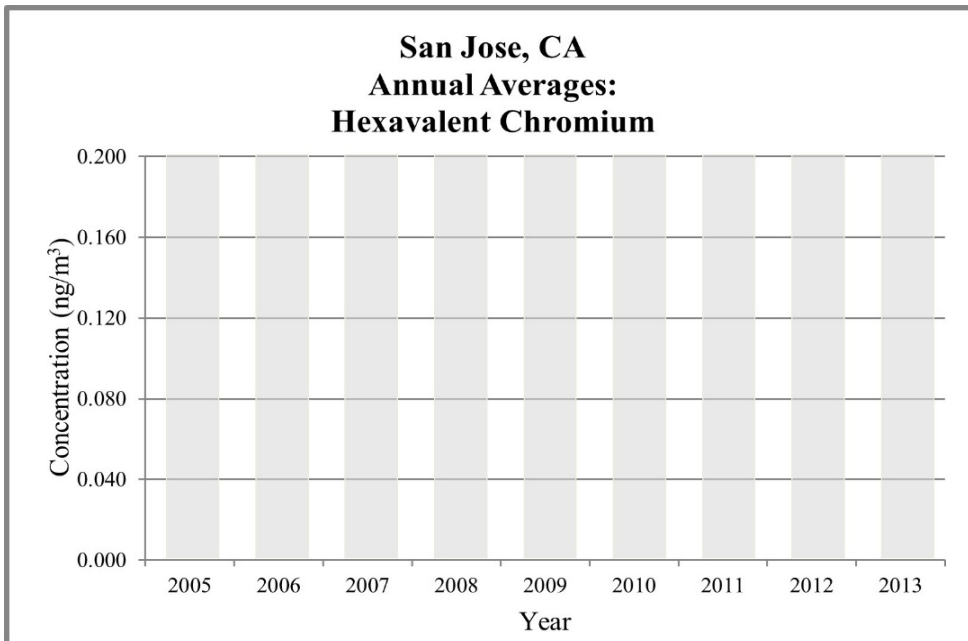
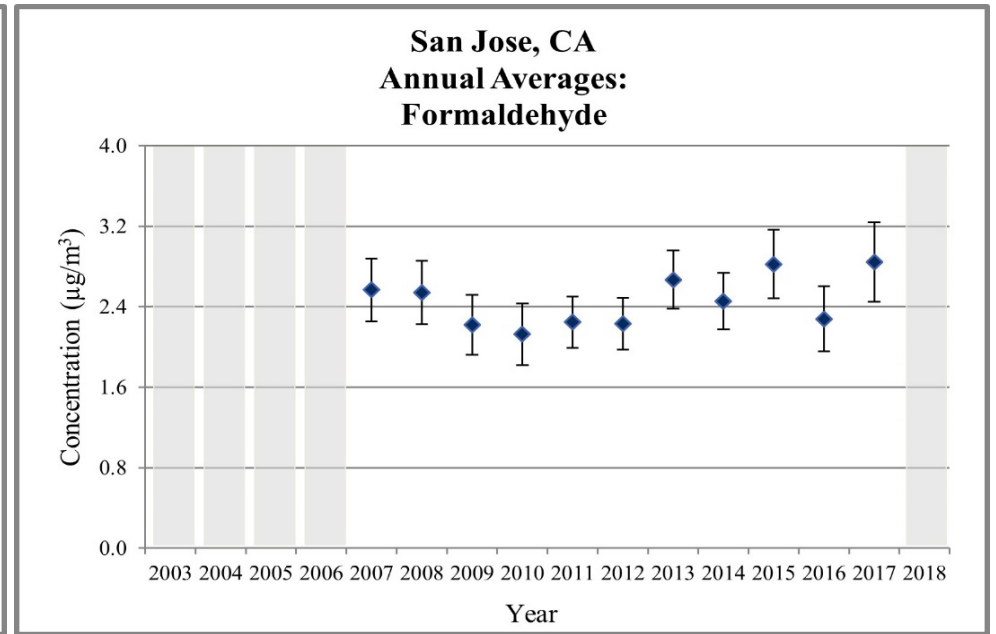
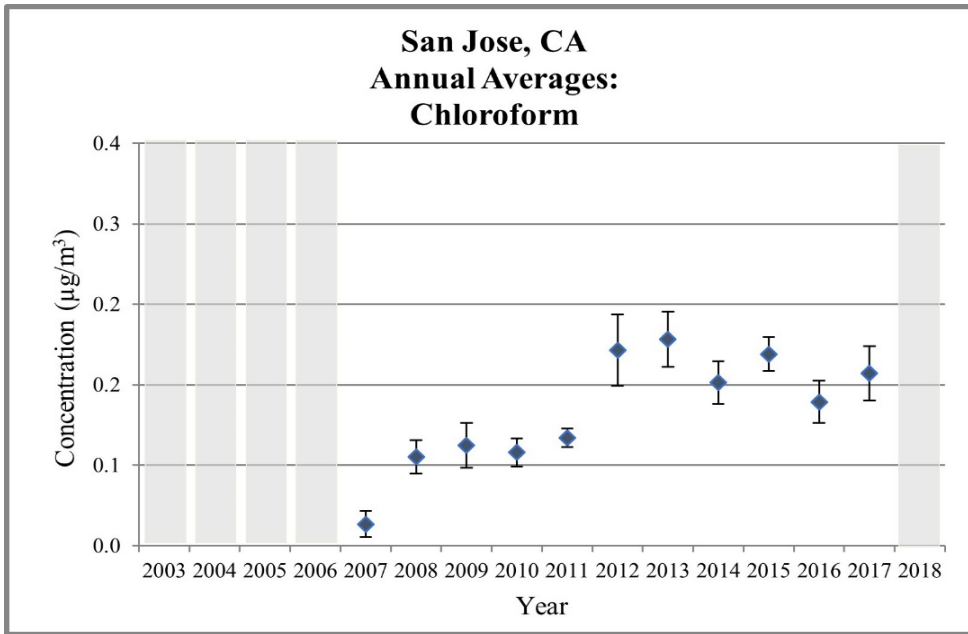


Figure 3. San Jose, CA Annual Average Concentrations

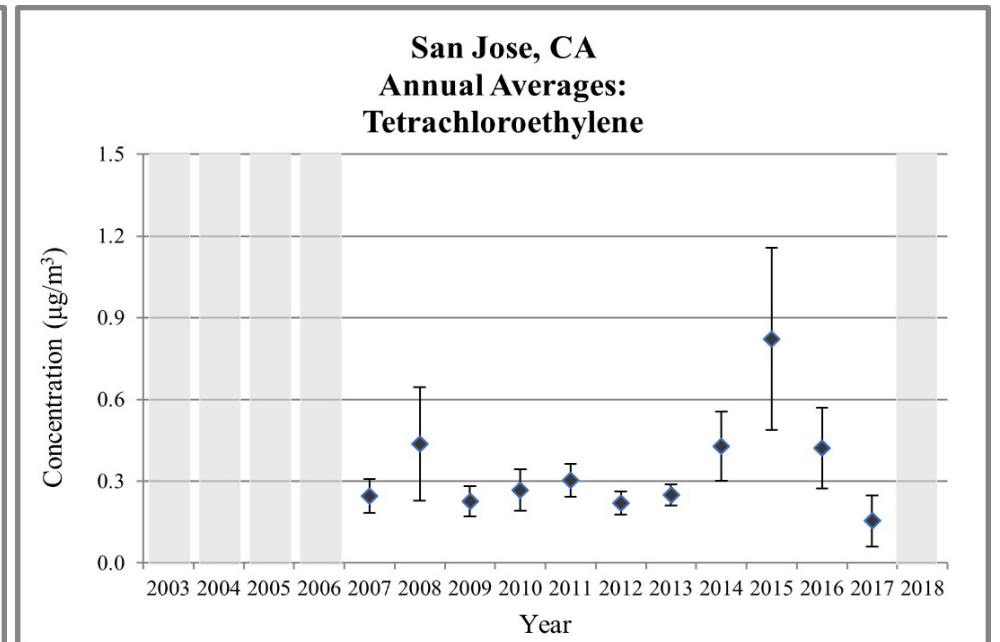
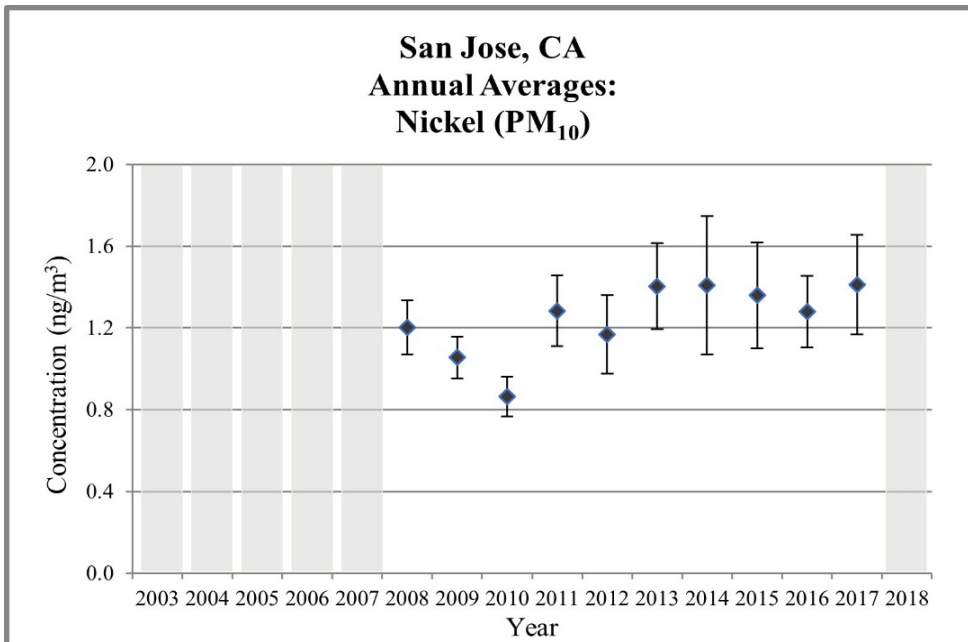
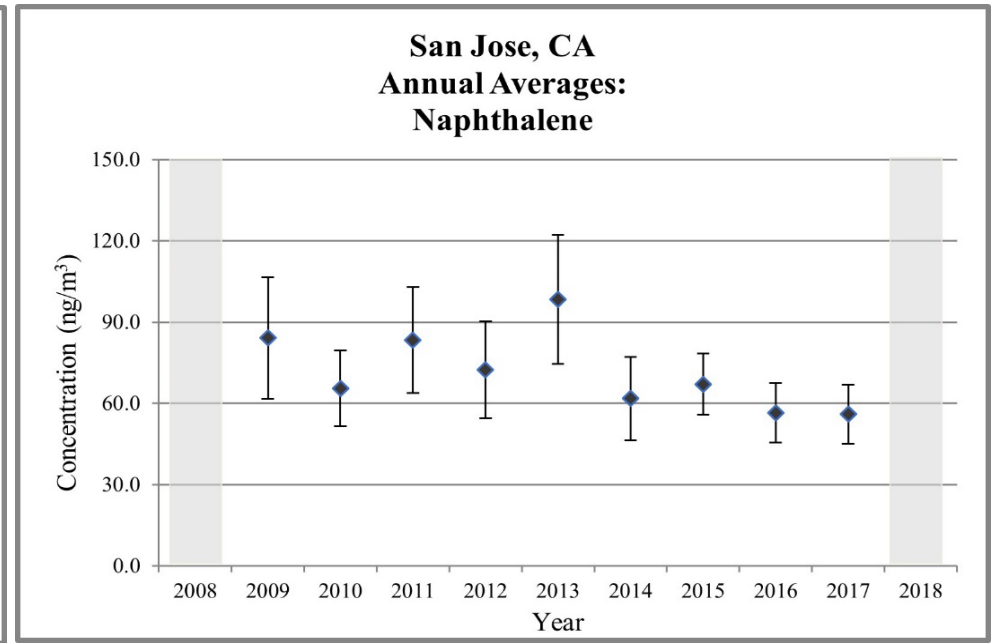
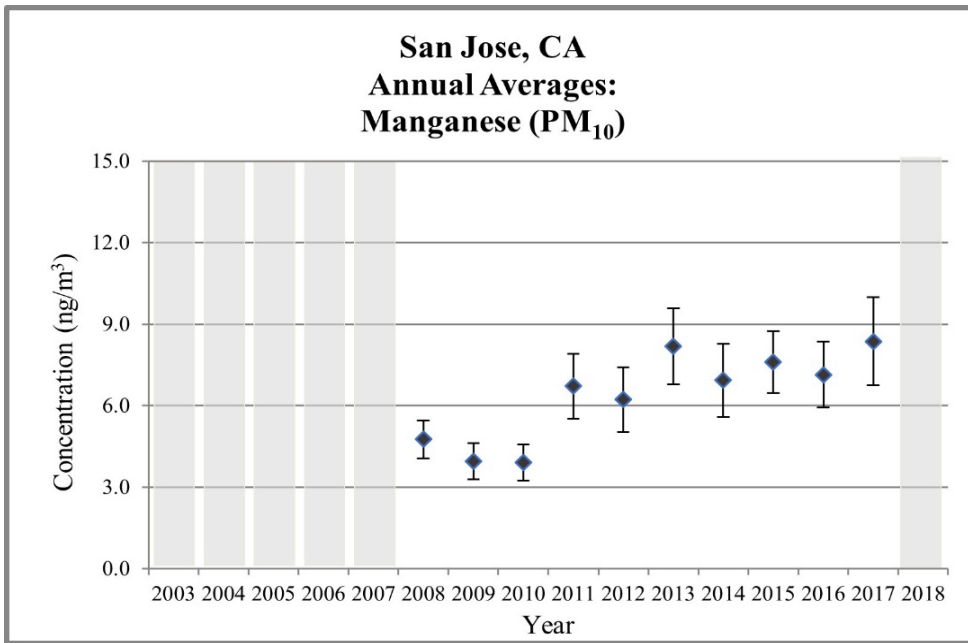
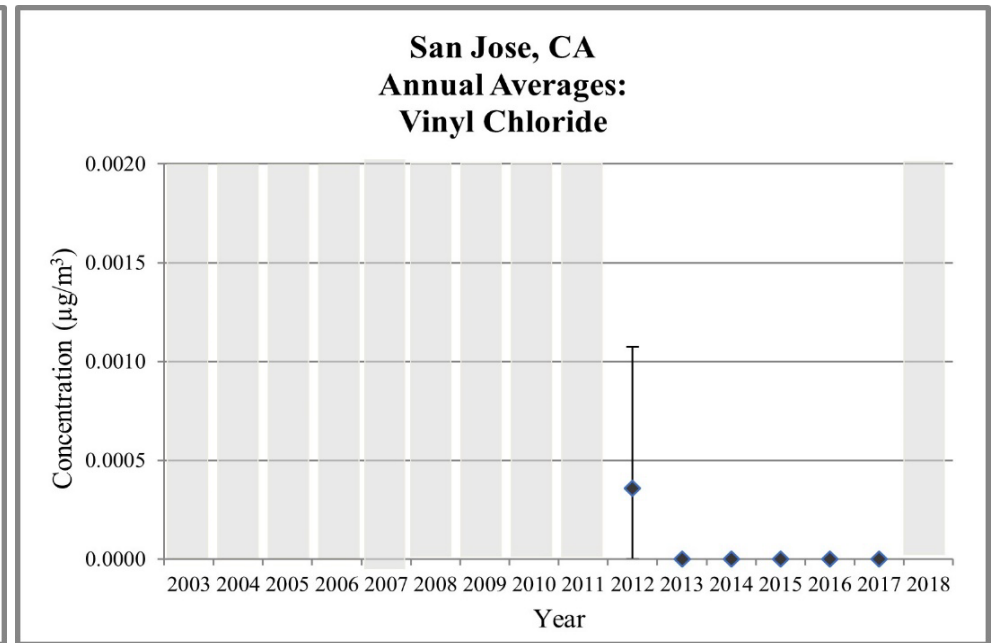
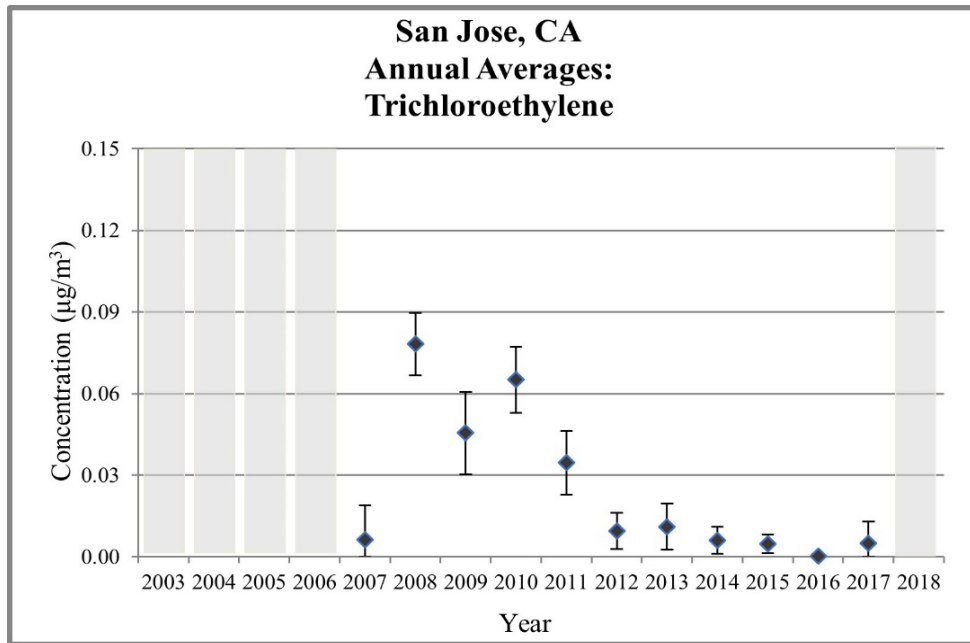


Figure 3. San Jose, CA Annual Average Concentrations



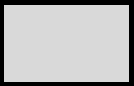
 Does not meet MQO

Figure 4. San Jose, CA - 3-Year Rolling Average Concentrations

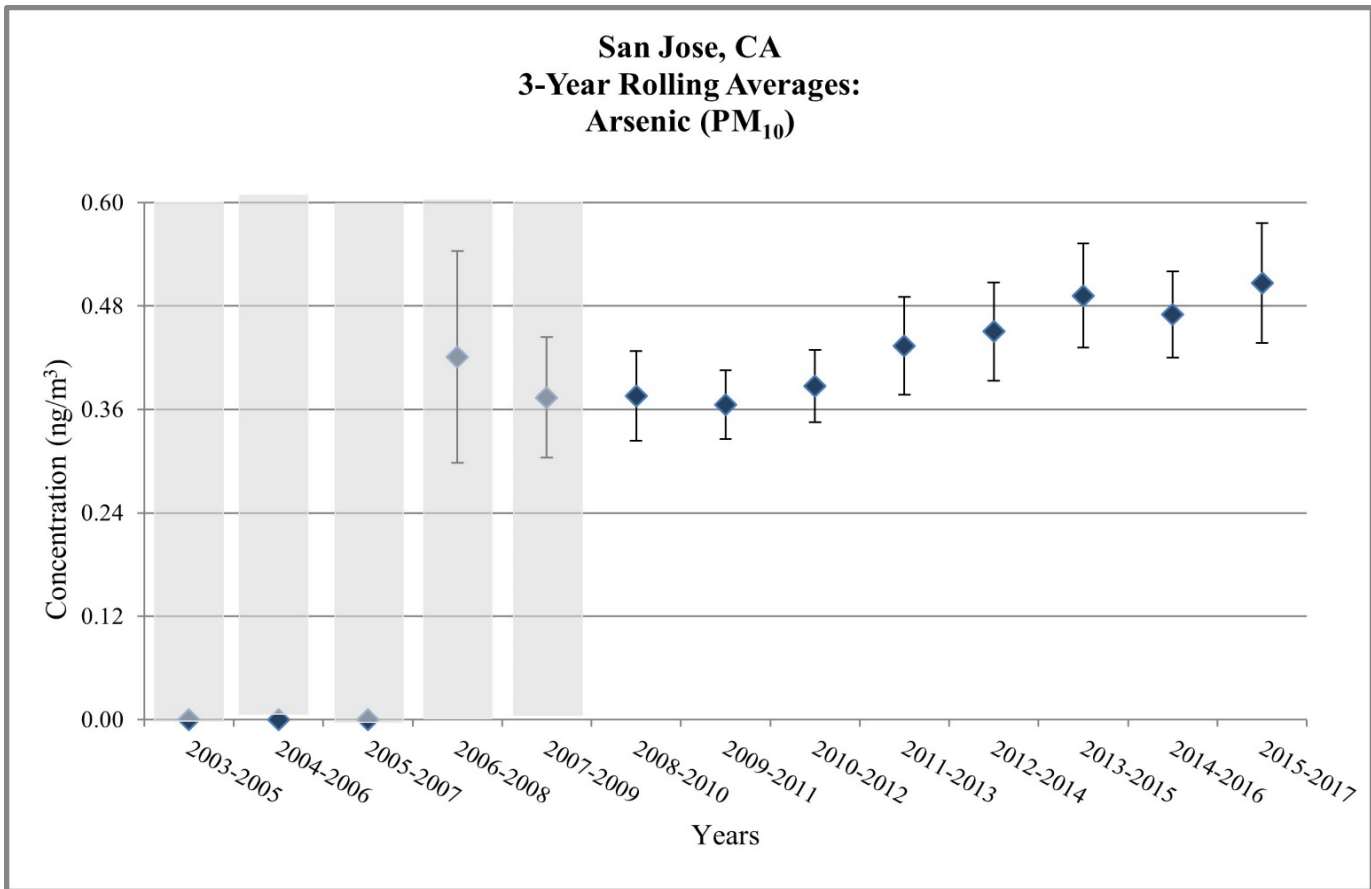
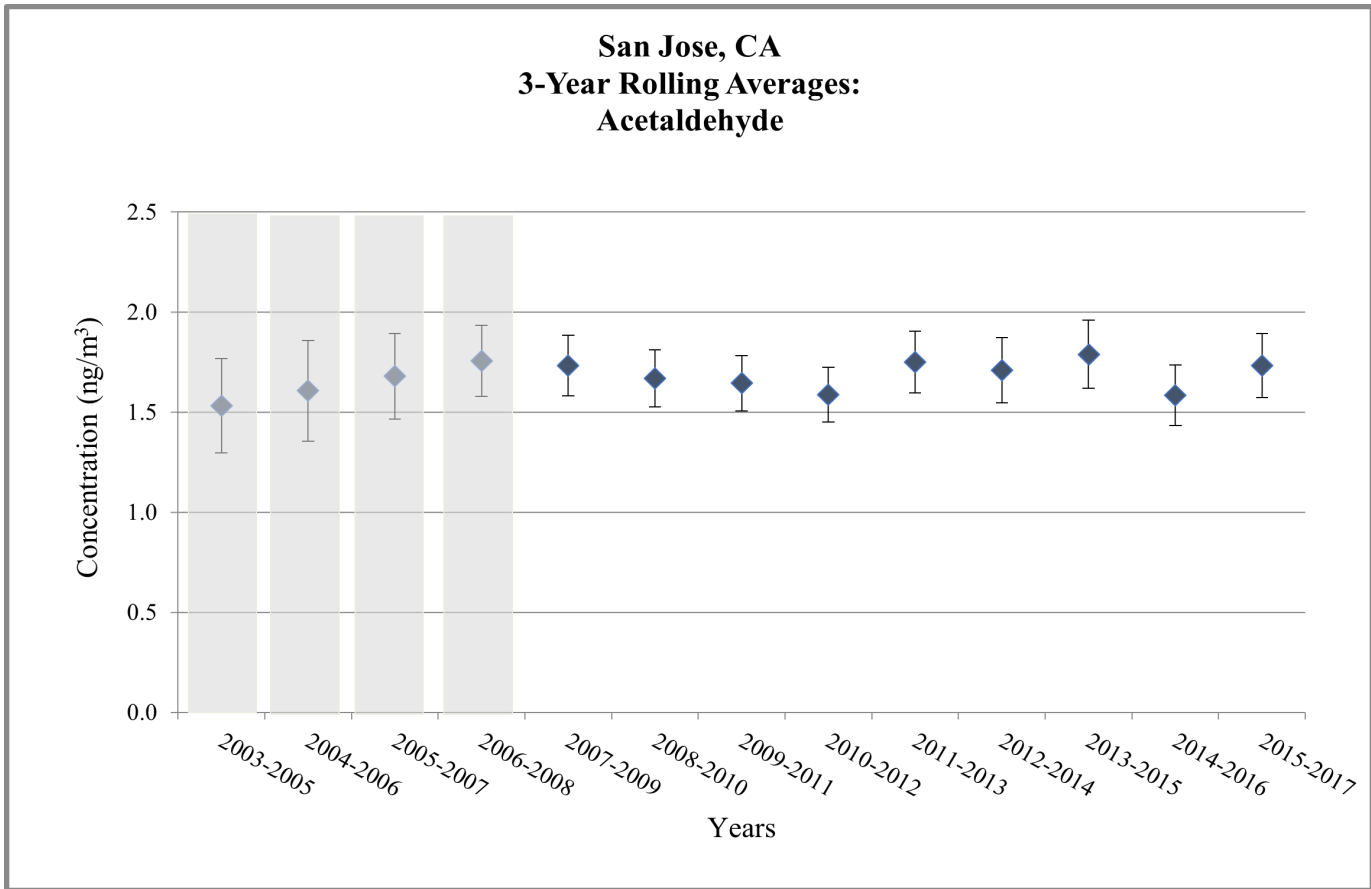


Figure 4. San Jose, CA - 3-Year Rolling Average Concentrations

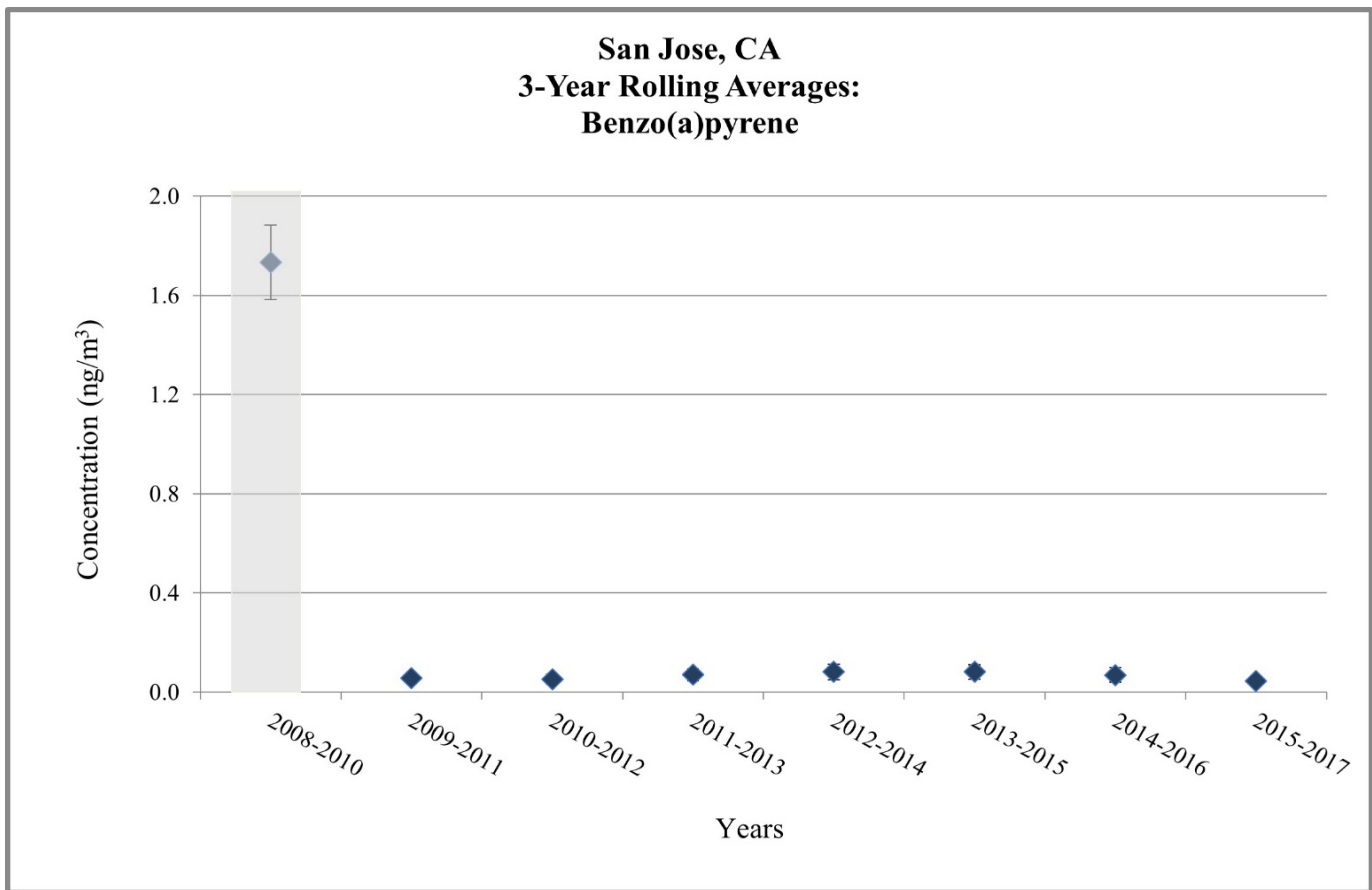
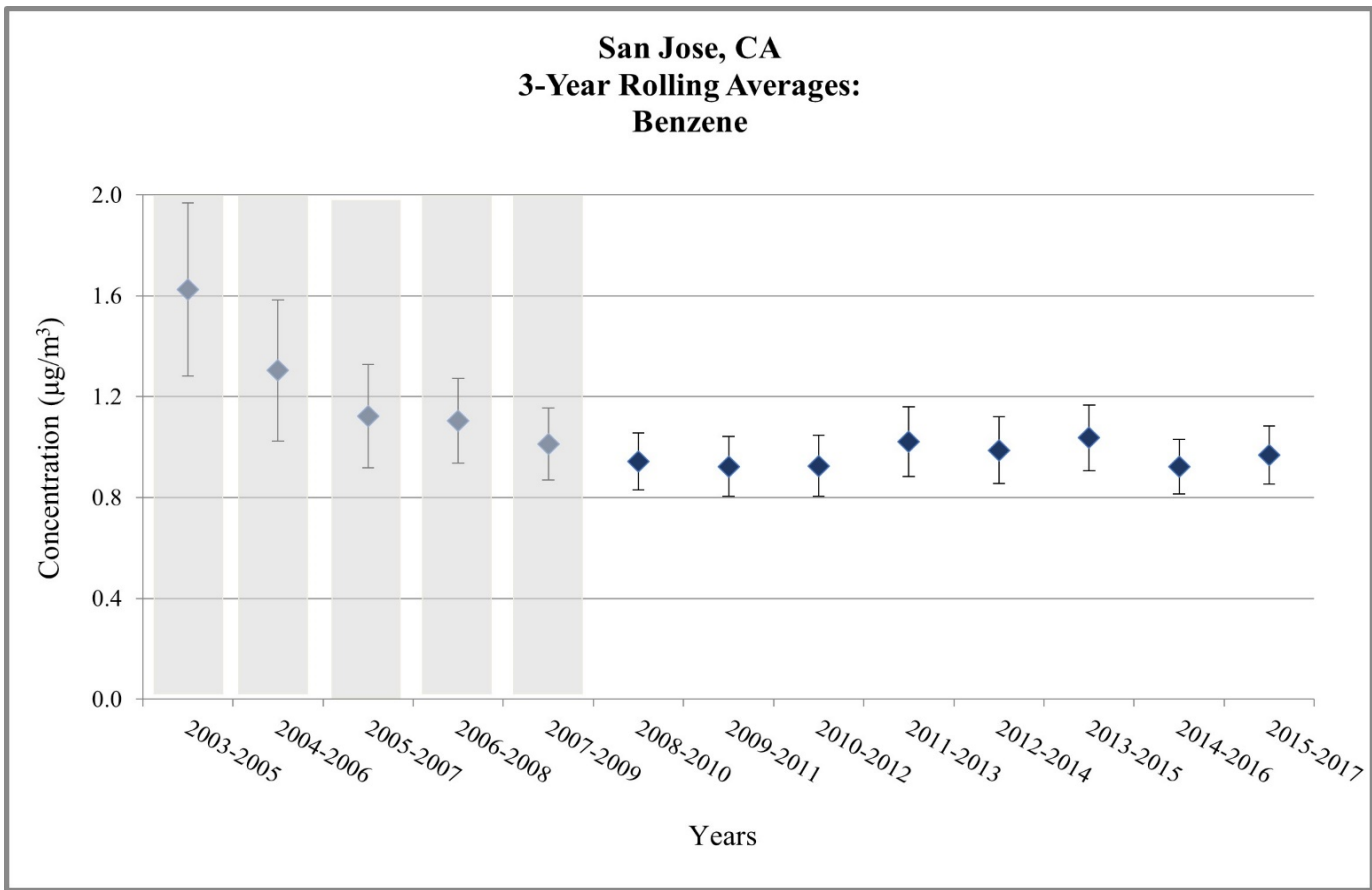


Figure 4. San Jose, CA - 3-Year Rolling Average Concentrations

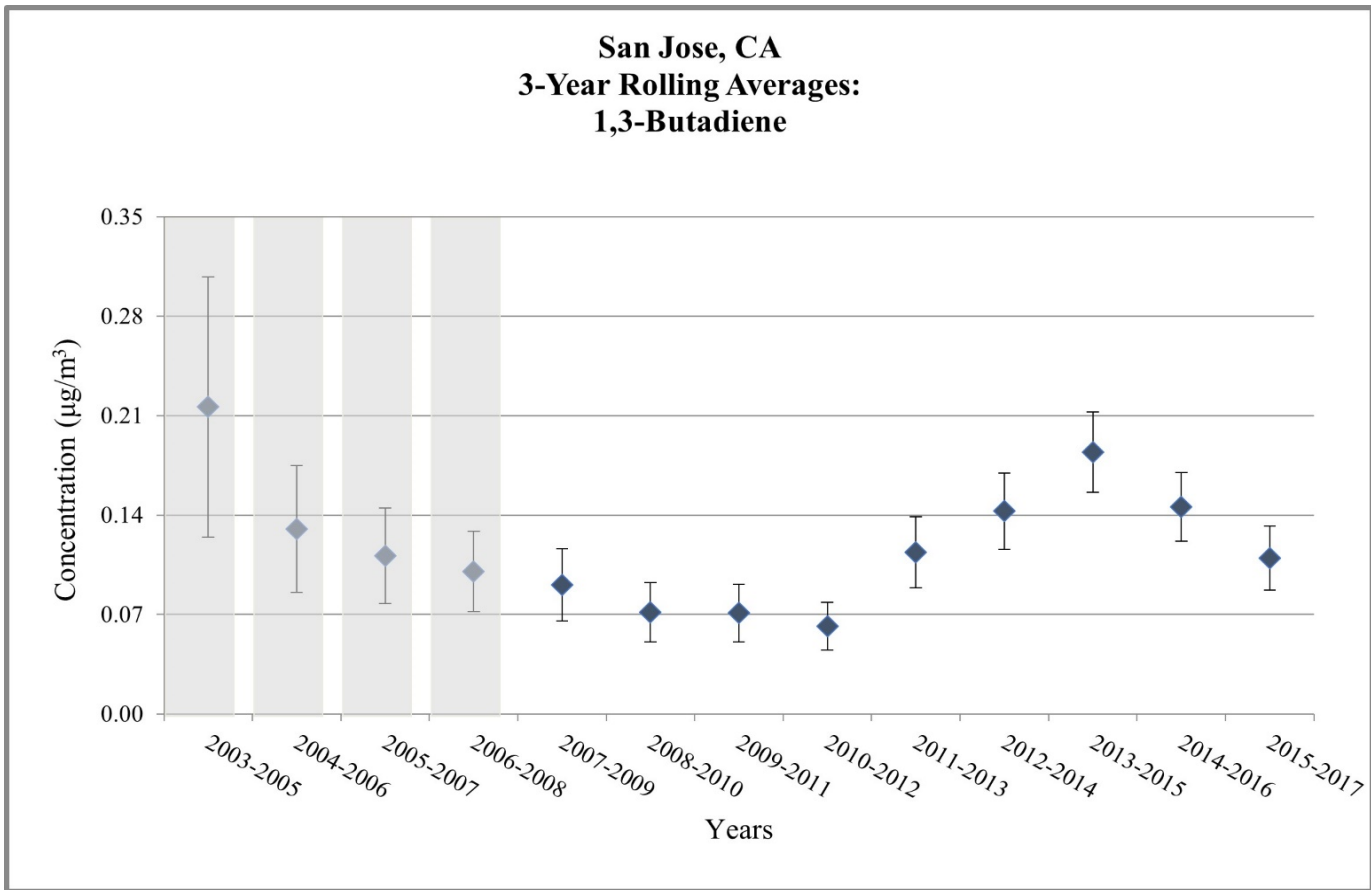
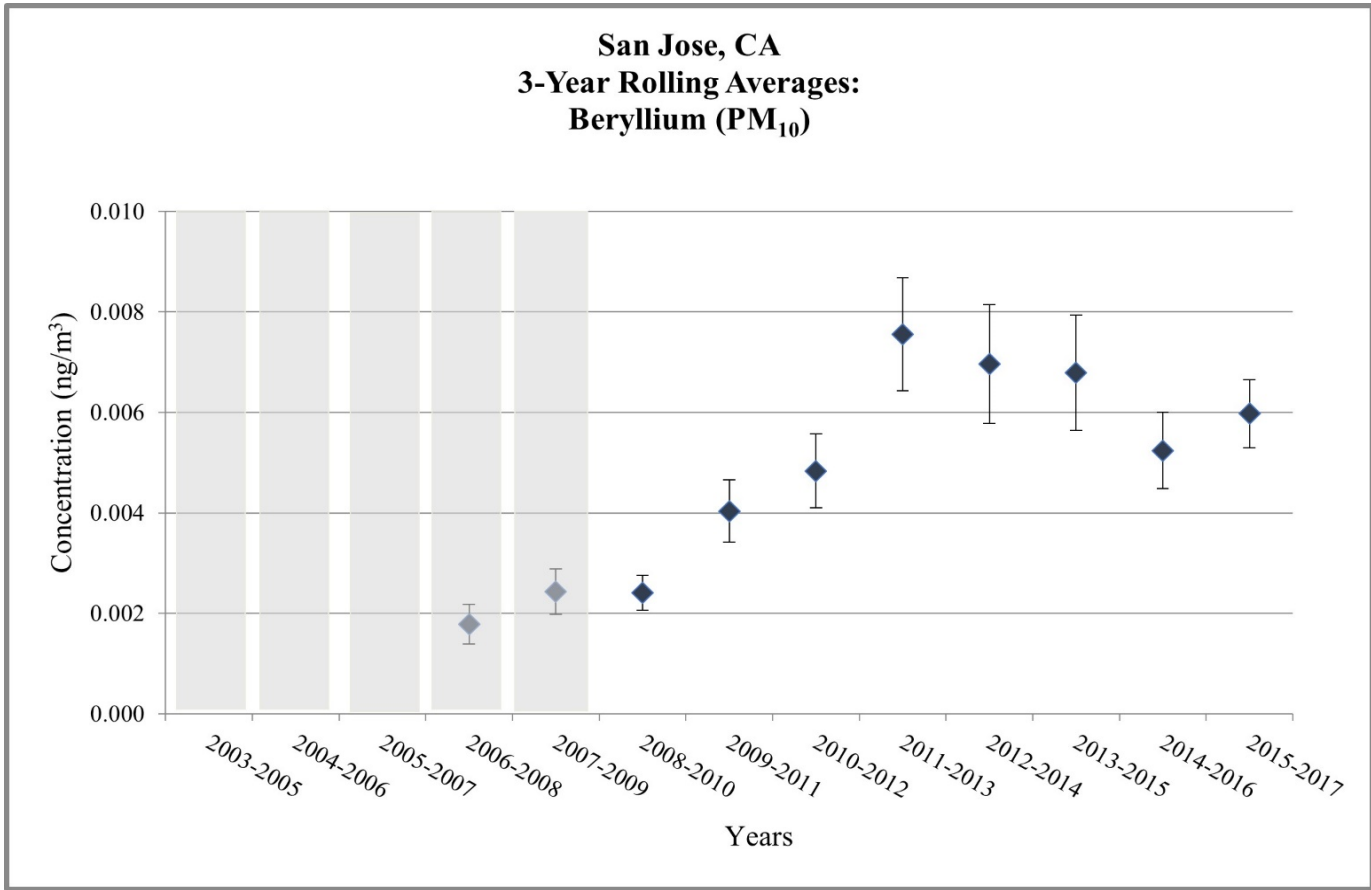


Figure 4. San Jose, CA - 3-Year Rolling Average Concentrations

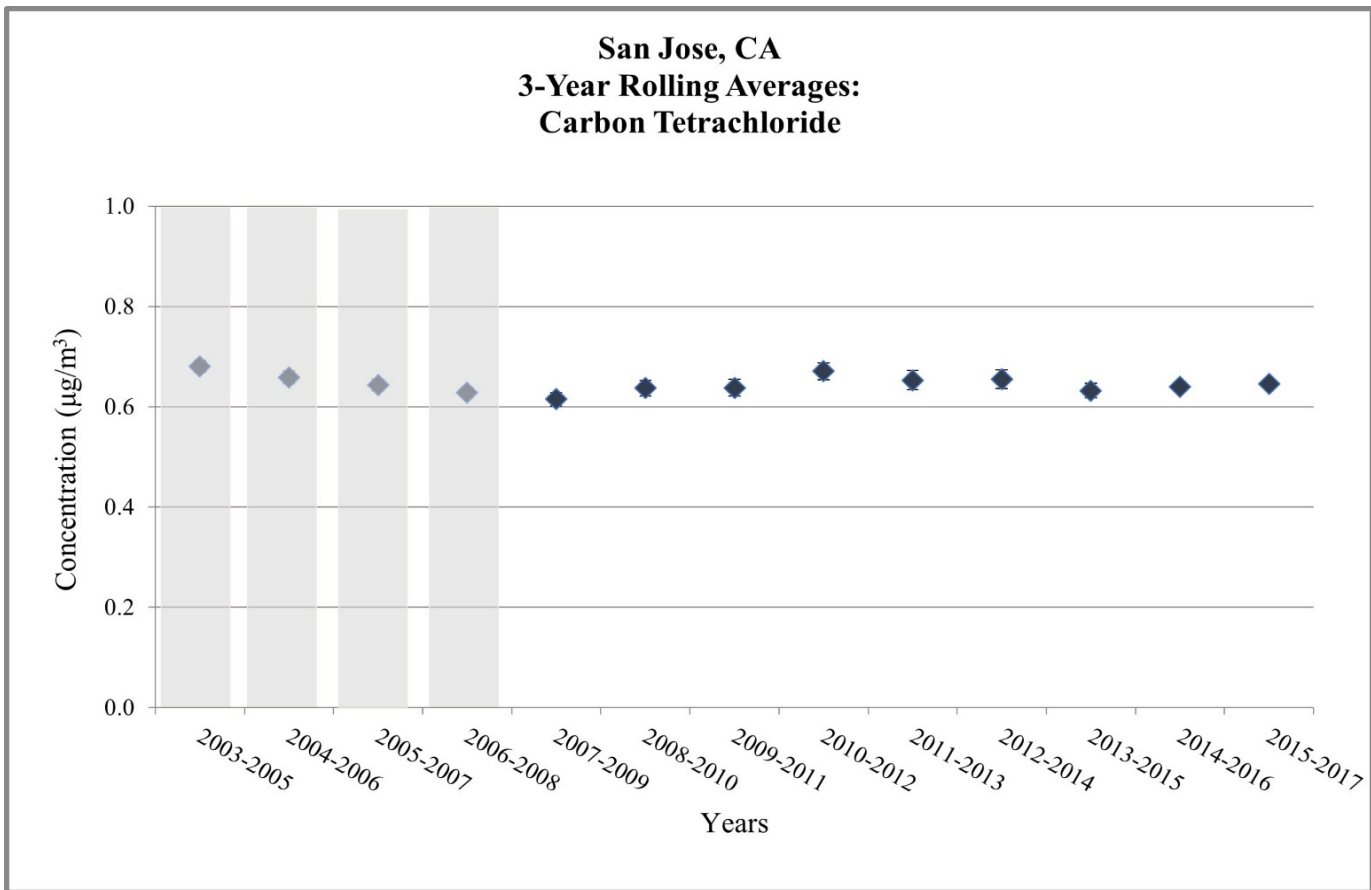
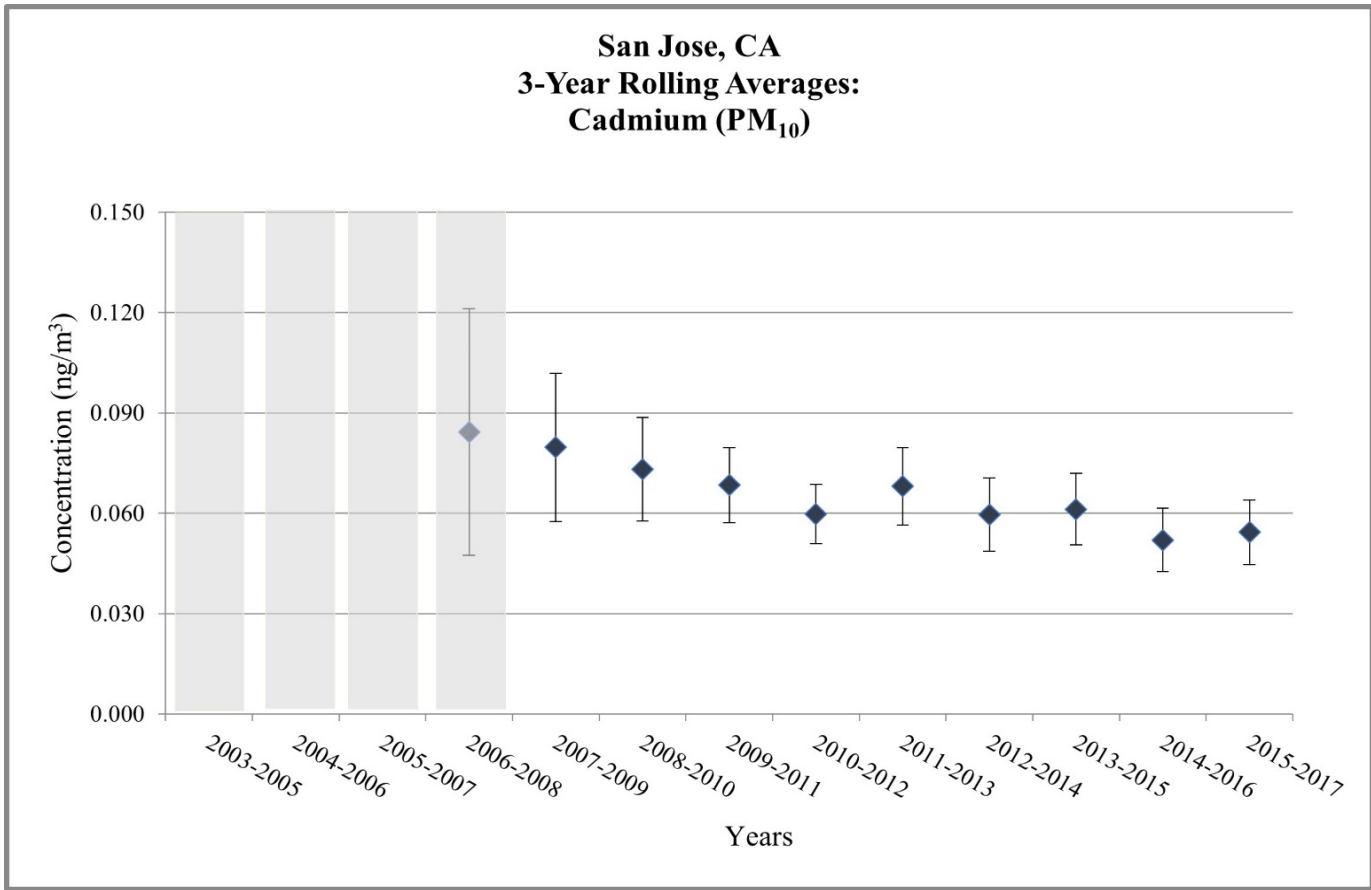


Figure 4. San Jose, CA - 3-Year Rolling Average Concentrations

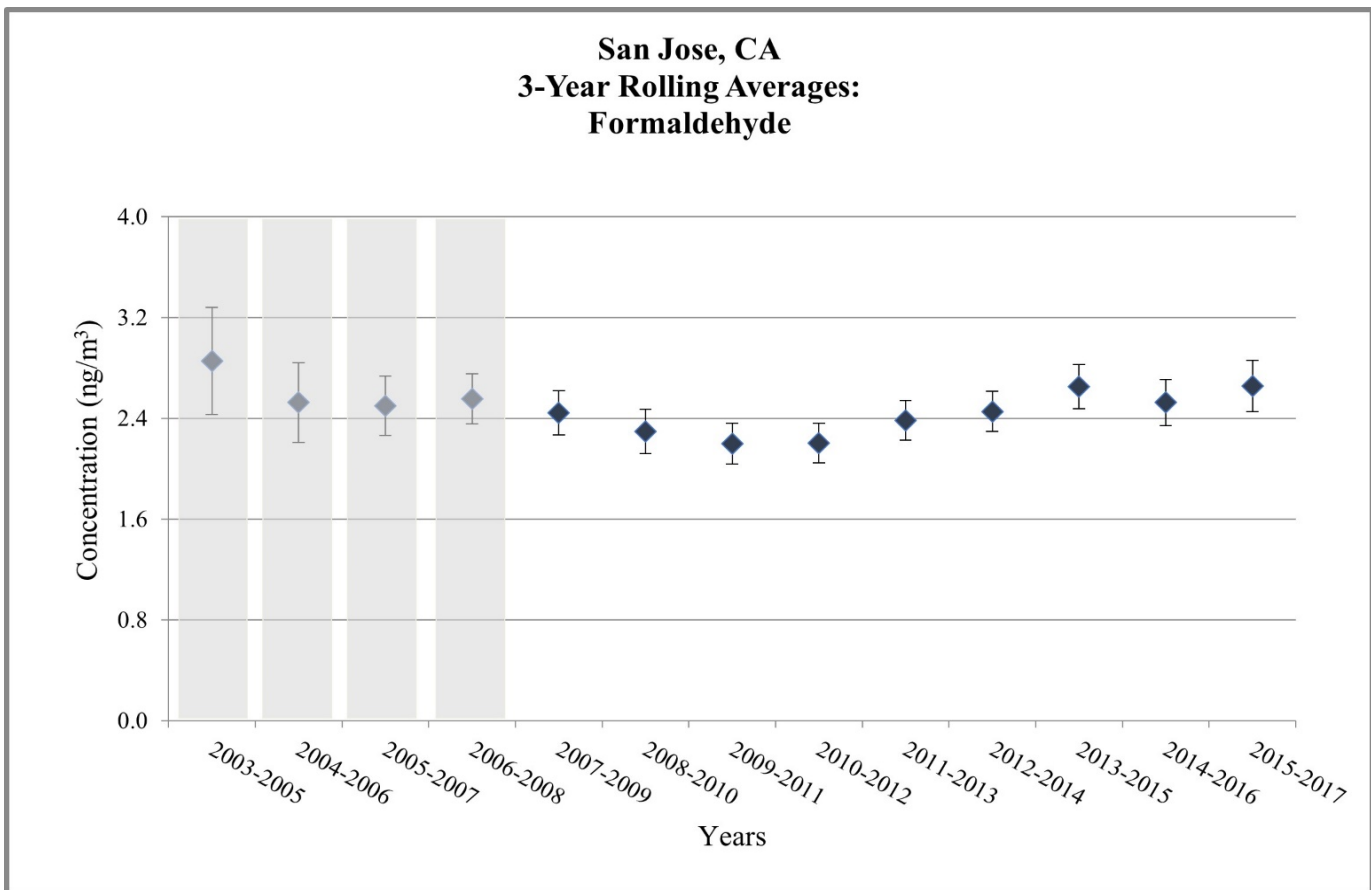
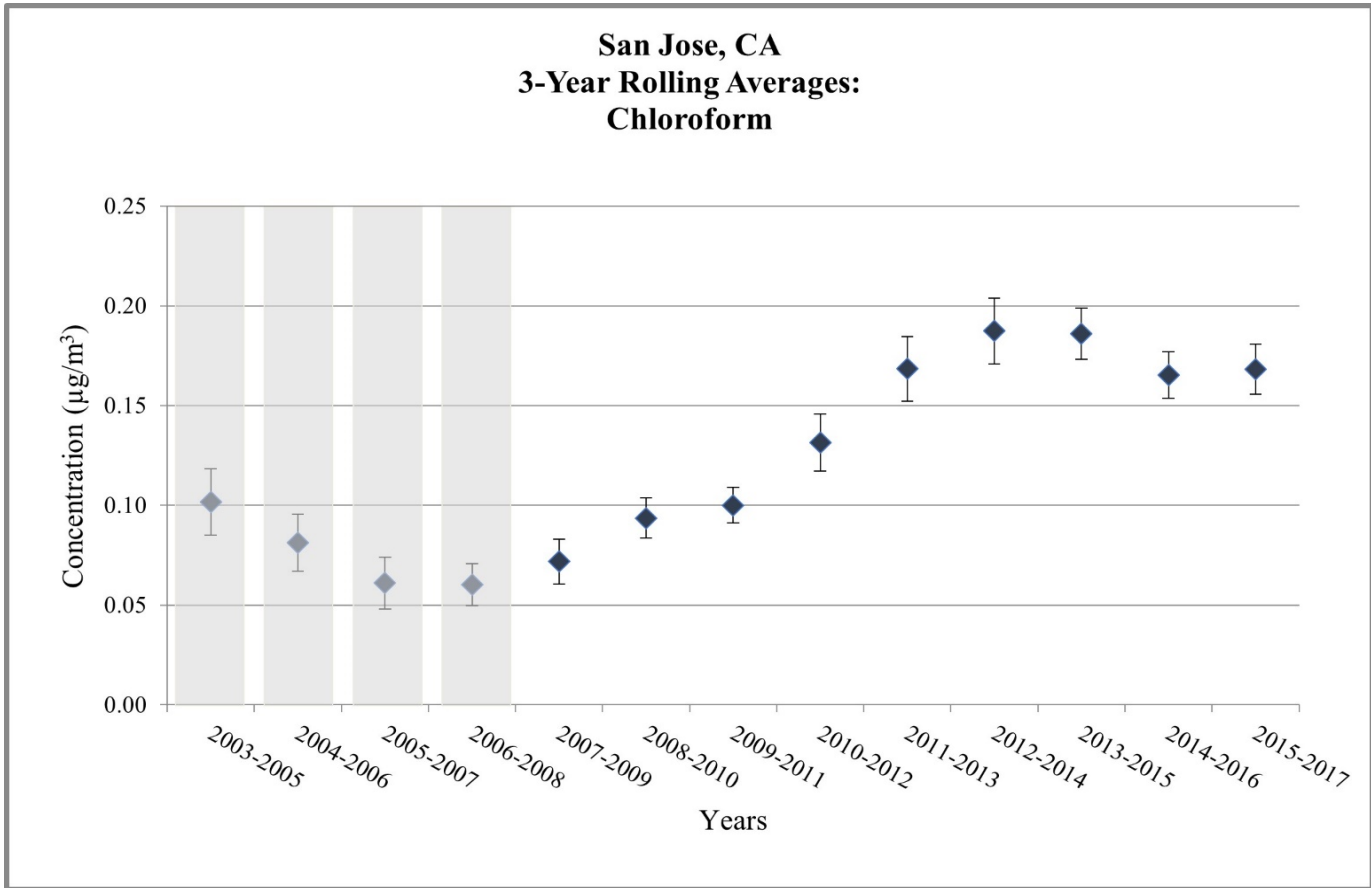




Figure 4. San Jose, CA - 3-Year Rolling Average Concentrations

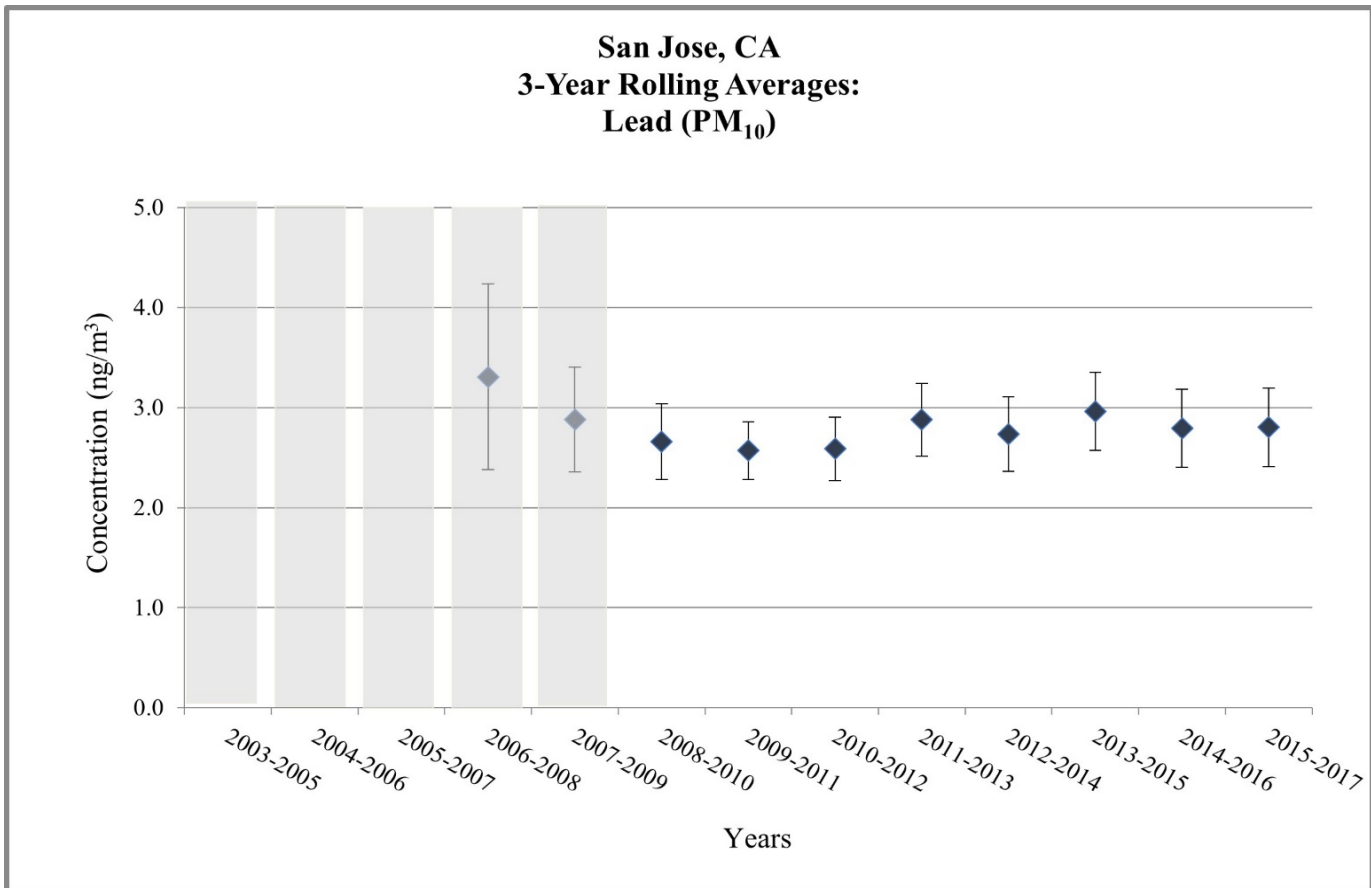
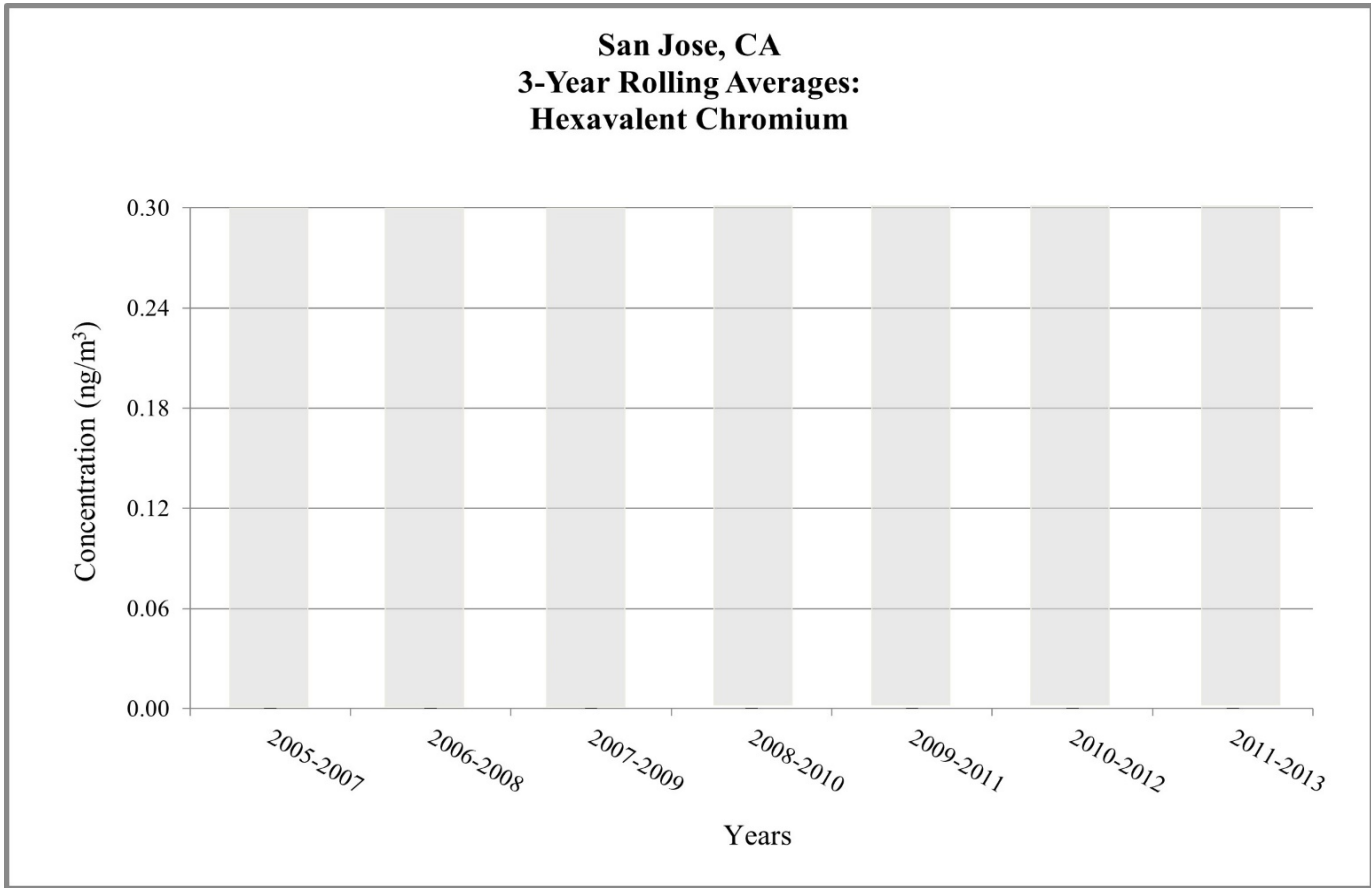


Figure 4. San Jose, CA - 3-Year Rolling Average Concentrations

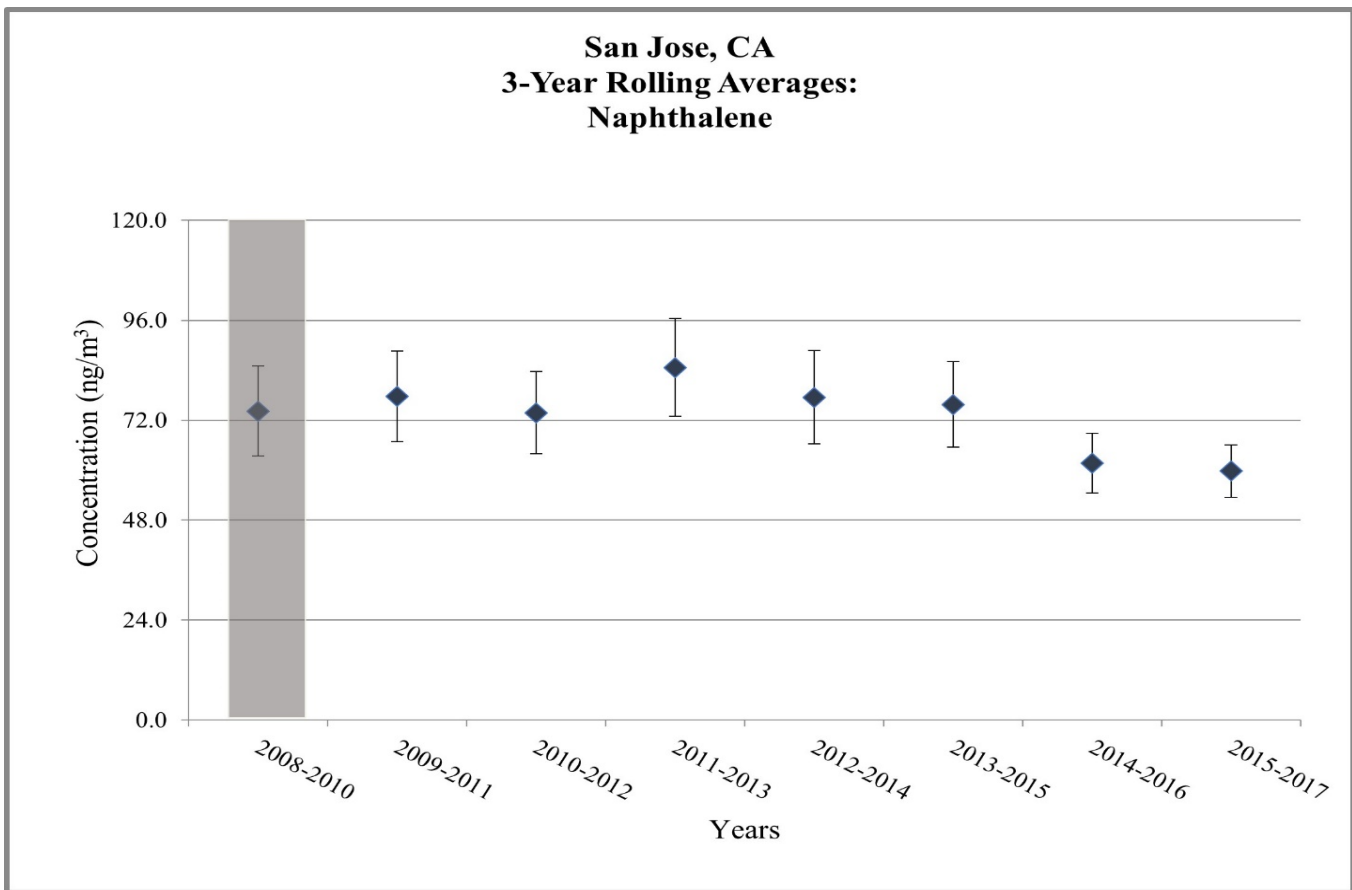
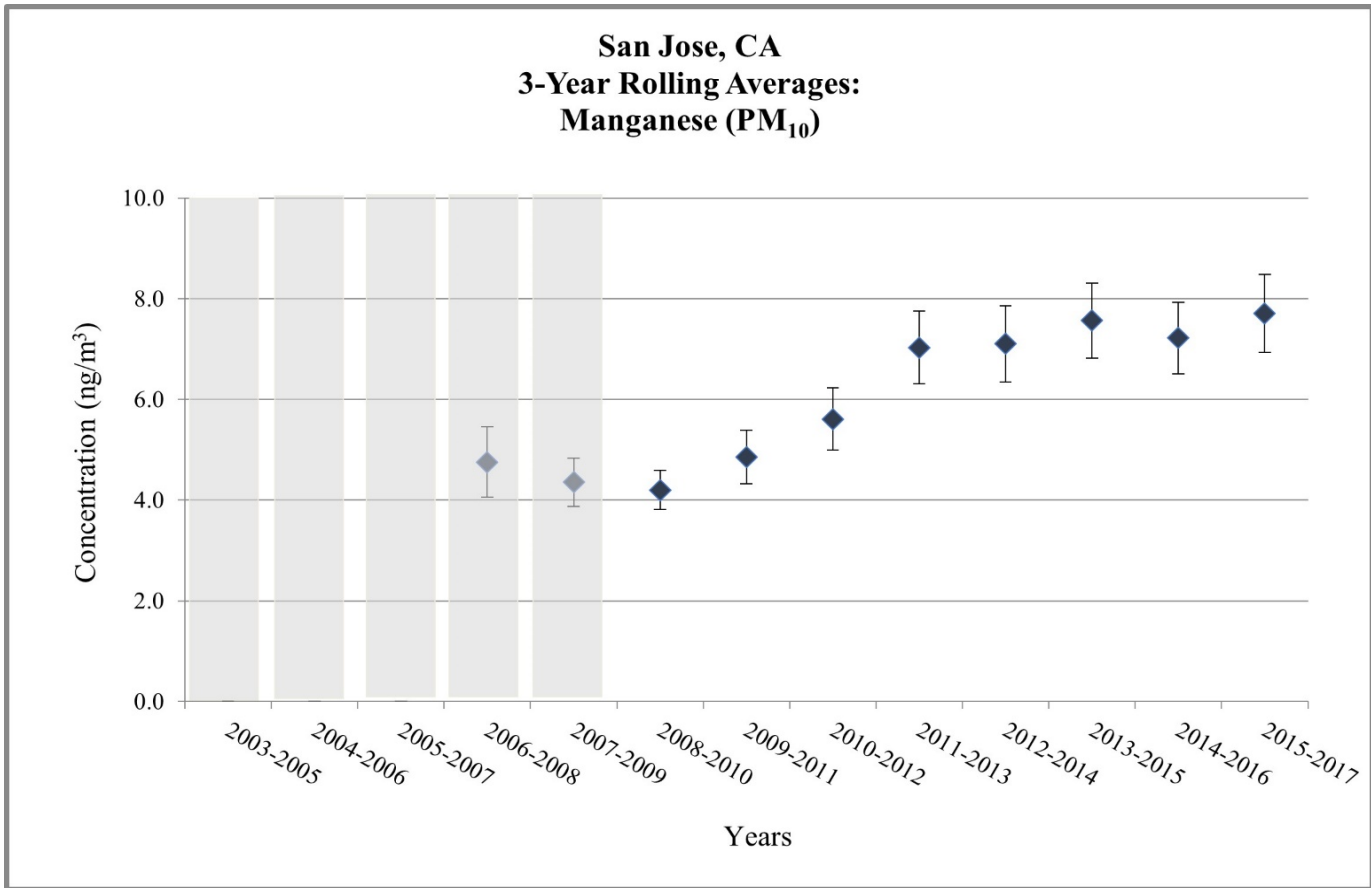


Figure 4. San Jose, CA - 3-Year Rolling Average Concentrations

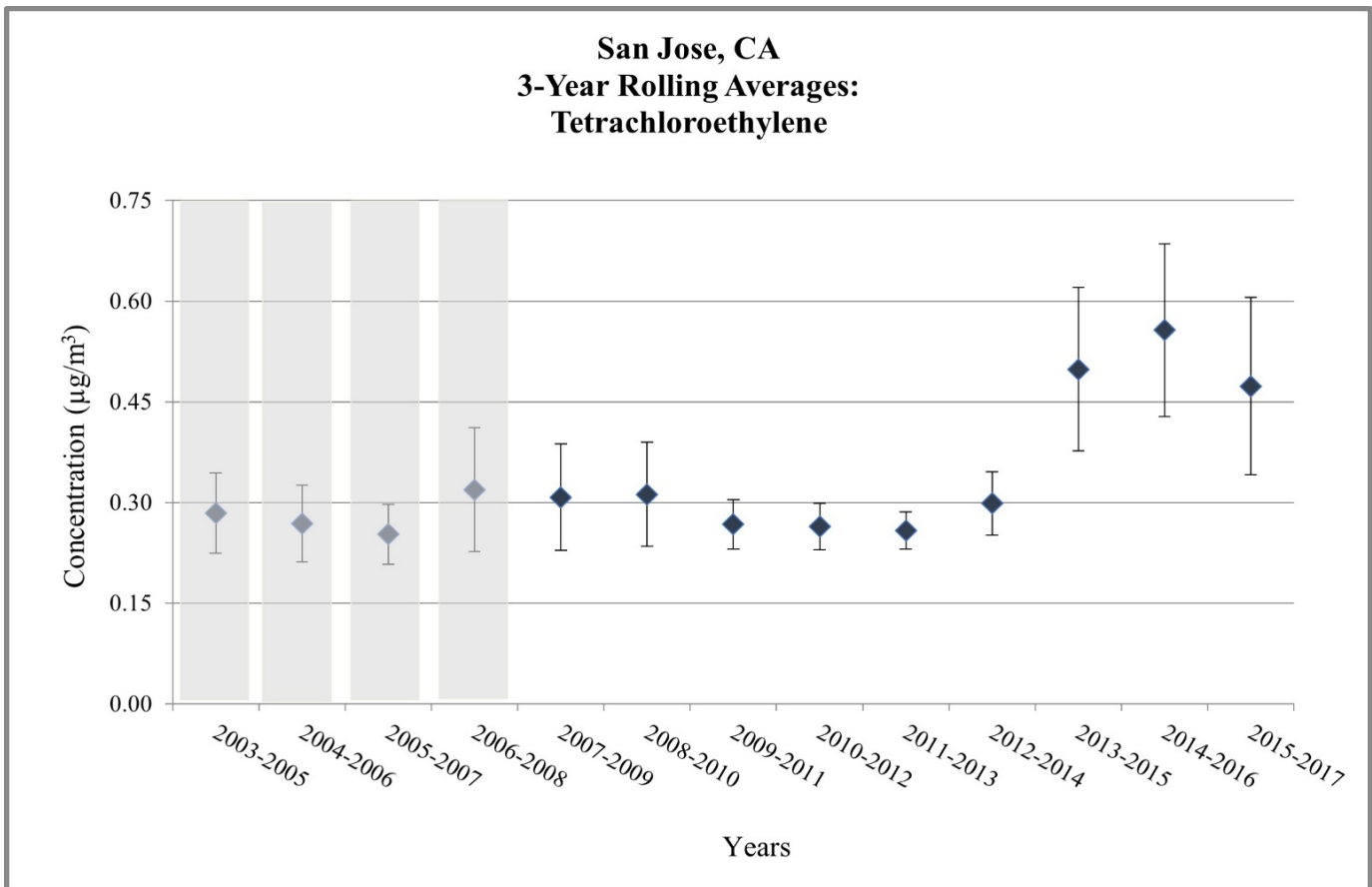
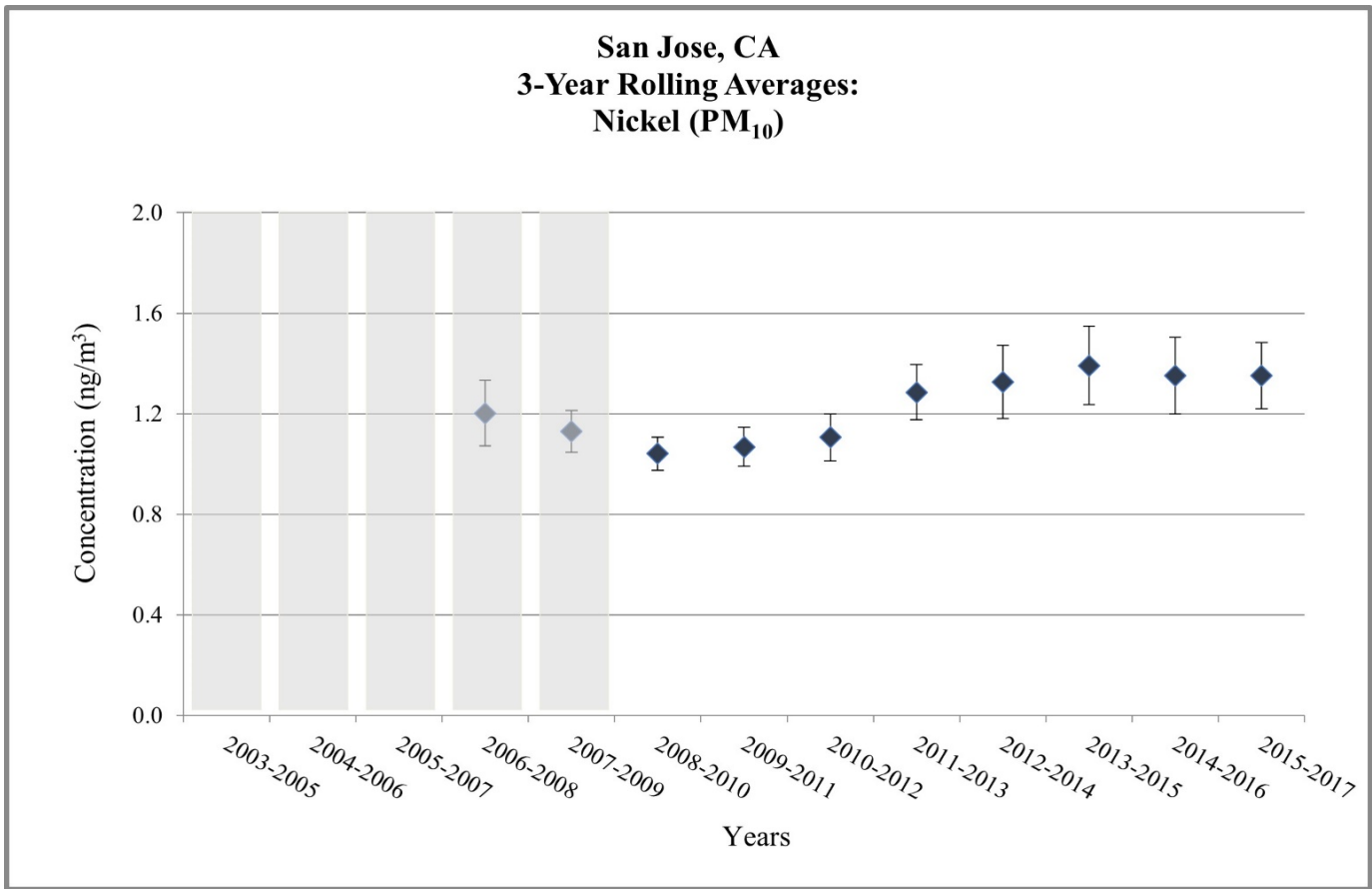
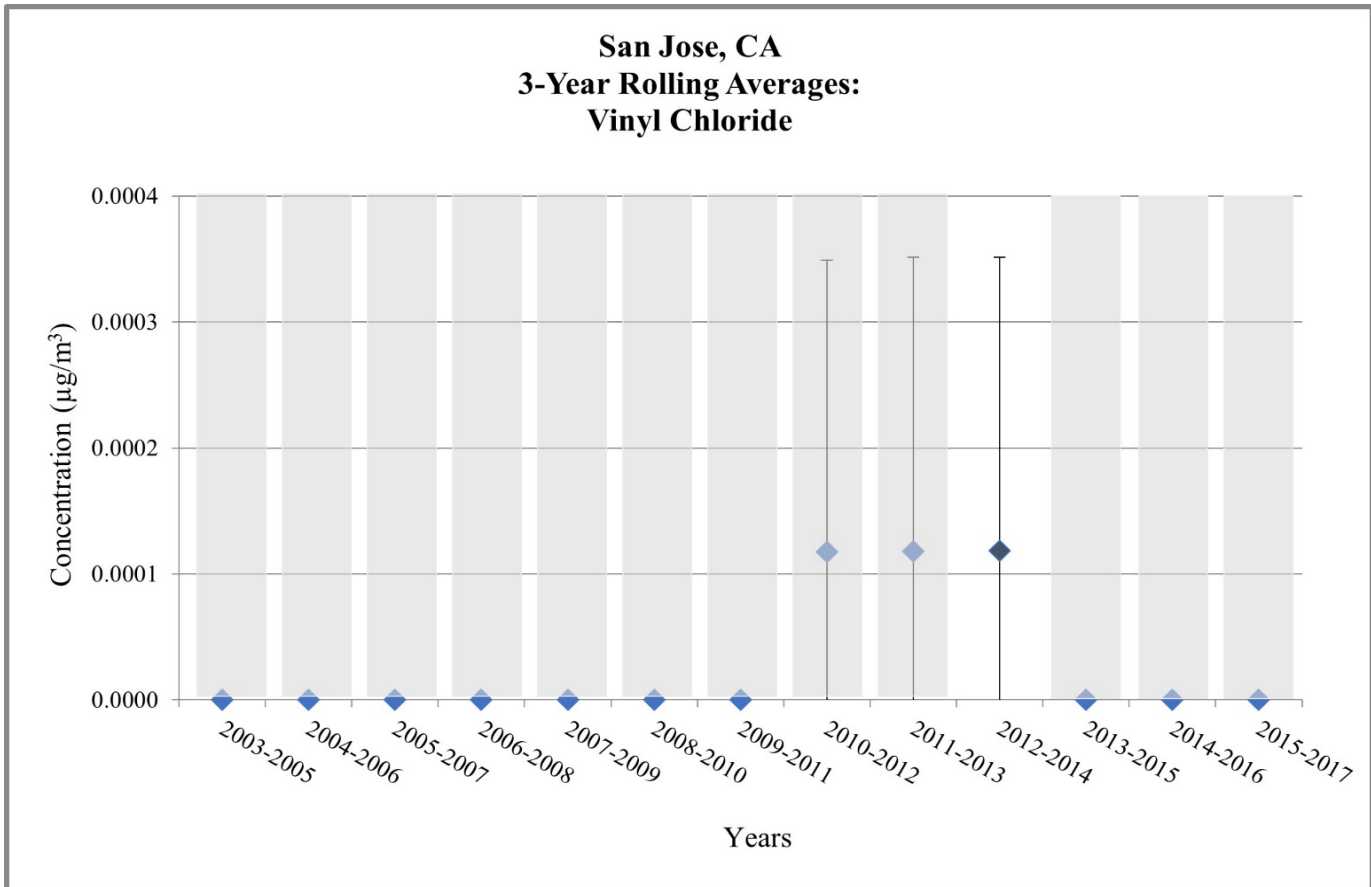
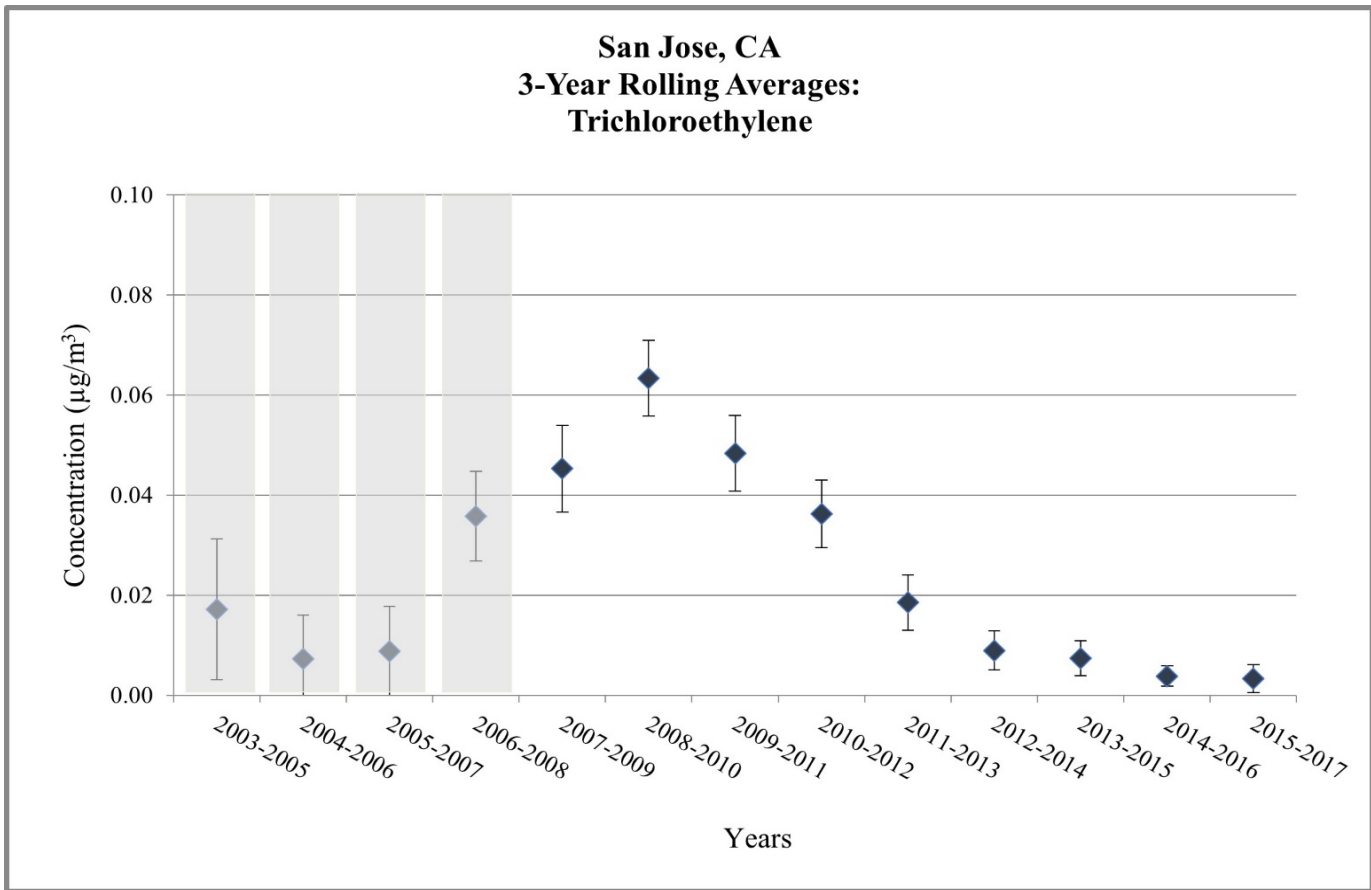


Figure 4. San Jose, CA - 3-Year Rolling Average Concentrations



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

**Table 6. NATTS Network Assessment: MQO#1 - Completeness Percentage at San Jose, CA**

Pollutant Group	Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Carbonyl	Acetaldehyde	a	a	a	a	98	102	100	100	102	100	102	97	93	93	98	--
Carbonyl	Formaldehyde	a	a	a	a	98	102	100	100	102	100	102	97	100	93	98	--
Chromium VI	Chromium VI	--	--	b	b	b	b	b	b	b	b	b	--	--	--	--	--
PAH	Benzo(a)pyrene	--	--	--	--	--	100	100	97	100	97	97	97	97	100	95	--
PAH	Naphthalene	--	--	--	--	--	100	100	97	100	97	97	97	97	100	95	--
PM <sub>10</sub> Metals	Arsenic (PM <sub>10</sub> )	b	b	b	b	b	100	98	100	100	100	98	100	98	93	98	--
PM <sub>10</sub> Metals	Beryllium (PM <sub>10</sub> )	b	b	b	b	b	100	98	100	100	100	98	100	98	93	98	--
PM <sub>10</sub> Metals	Cadmium (PM <sub>10</sub> )	b	b	b	b	b	100	98	100	100	100	98	100	98	93	98	--
PM <sub>10</sub> Metals	Lead (PM <sub>10</sub> )	b	b	b	b	b	100	98	100	100	100	98	100	98	93	98	--
PM <sub>10</sub> Metals	Manganese (PM <sub>10</sub> )	b	b	b	b	b	100	98	100	100	100	98	100	98	93	98	--
PM <sub>10</sub> Metals	Nickel (PM <sub>10</sub> )	b	b	b	b	b	100	98	100	100	100	98	100	98	93	98	--
VOC	Benzene	a	a	a	a	87	100	93	100	103	102	100	100	100	98	92	--
VOC	Butadiene, 1,3-	a	a	a	a	87	100	93	100	103	102	100	100	100	98	92	--
VOC	Carbon tetrachloride	a	a	a	a	87	98	85	100	103	102	100	100	100	98	92	--
VOC	Chloroform	a	a	a	a	87	100	93	100	103	102	100	100	100	98	92	--
VOC	Tetrachloroethylene	a	a	a	a	87	100	93	100	103	102	100	100	100	98	92	--
VOC	Trichloroethylene	a	a	a	a	87	100	93	100	103	102	100	100	100	98	92	--
VOC	Vinyl chloride	a	a	a	a	87	98	85	100	98	97	98	98	100	98	89	--

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

<sup>a</sup>: Although completeness was between 97%-100%, samples were collected every 12 days (as approved in their work plan) instead of the required every 6 days.

<sup>b</sup>: Pollutant was expected, but not sampled at this site for this year.

**Table 7. NATTS Network Assessment: MQO#2 - Reported Method Detection Limits (MDLs) at San Jose, CA**

Pollutant Group	Pollutant Name	Target MDL	Units	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Carbonyl	Acetaldehyde	0.45	µg/m <sup>3</sup>	0.40	0.40	0.40	0.07	0.07	0.07	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.09
Carbonyl	Formaldehyde	0.98/0.08 <sup>a</sup>	µg/m <sup>3</sup>	0.13	0.13	0.13	0.10	0.10	0.10	0.04	0.04	0.04	0.04	0.50	0.13	0.10	0.10	0.14	0.46
Chromium VI	Chromium VI	0.08	ng/m <sup>3</sup>	--	--	b	b	b	b	b	b	b	b	b	--	--	--	--	--
PAH	Benzo(a)pyrene	0.91	ng/m <sup>3</sup>	--	--	--	--	--	0.09	0.08	0.05	0.05	0.07	0.07	0.04	0.18	0.09	0.03	0.02
PAH	Naphthalene	29.00	ng/m <sup>3</sup>	--	--	--	--	--	0.02	0.01	0.01	0.004	0.01	0.01	0.02	0.01	0.03	0.08	0.08
PM <sub>10</sub> Metals	Arsenic (PM <sub>10</sub> )	0.23	ng/m <sup>3</sup>	b	b	b	b	b	0.04	0.04	0.23	0.64	0.69	0.81	0.90	0.06	0.16	0.15	0.15
PM <sub>10</sub> Metals	Beryllium (PM <sub>10</sub> )	0.42	ng/m <sup>3</sup>	b	b	b	b	b	0.005	0.002	0.002	0.022	0.044	0.044	0.045	0.002	0.002	0.002	0.003
PM <sub>10</sub> Metals	Cadmium (PM <sub>10</sub> )	0.56	ng/m <sup>3</sup>	b	b	b	b	b	0.01	0.05	0.02	0.02	0.02	0.02	0.02	0.01	0.00	0.00	0.01
PM <sub>10</sub> Metals	Lead (PM <sub>10</sub> )	15.0	ng/m <sup>3</sup>	b	b	b	b	b	0.004	0.004	0.001	0.001	0.004	0.006	0.003	0.002	0.002	0.002	0.004
PM <sub>10</sub> Metals	Manganese (PM <sub>10</sub> )	5.0	ng/m <sup>3</sup>	b	b	b	b	b	0.004	0.01	0.04	0.04	0.06	0.03	0.03	0.02	0.02	0.02	0.04
PM <sub>10</sub> Metals	Nickel (PM <sub>10</sub> )	2.1	ng/m <sup>3</sup>	b	b	b	b	b	0.05	0.06	0.51	0.50	0.18	0.11	0.08	0.11	0.09	0.10	0.54
VOC	Benzene	0.13	µg/m <sup>3</sup>	1.23	2.46	1.23	1.23	2.46	0.49	0.49	0.49	0.49	0.34	0.34	0.32	0.17	0.17	0.22	0.22
VOC	Butadiene, 1,3-	0.10	µg/m <sup>3</sup>	0.88	3.32	0.88	0.88	1.77	0.88	0.88	0.88	0.88	0.20	0.20	0.18	0.15	0.15	0.24	0.24
VOC	Carbon tetrachloride	0.17	µg/m <sup>3</sup>	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.04	0.04	0.04	0.15	0.07	0.07	0.07
VOC	Chloroform	0.50	µg/m <sup>3</sup>	0.20	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.12	0.12	0.03	0.03	0.03	0.03	0.03
VOC	Tetrachloroethylene	0.17	µg/m <sup>3</sup>	0.40	0.40	0.40	0.40	0.40	0.20	0.20	0.20	0.20	0.08	0.08	0.08	0.12	0.08	0.08	0.08
VOC	Trichloroethylene	0.5/0.2 <sup>a</sup>	µg/m <sup>3</sup>	0.21	0.54	0.21	0.21	0.54	0.11	0.11	0.11	0.11	0.12	0.30	0.21	0.08	0.08	0.11	0.11
VOC	Vinyl chloride	0.11	µg/m <sup>3</sup>	6.97	6.97	6.97	6.97	6.97	2.32	2.32	2.32	2.32	0.14	0.14	0.14	0.16	0.16	0.46	0.46

	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

<sup>a</sup>: For the 2012 sampling year, the Target MDL for this pollutant was reduced.

<sup>b</sup>: Pollutant was expected, but not sampled at this site for this year.

**Table 8. NATTS Network Assessment: MQO#3 - Bias Percent Difference at San Jose, CA**

Pollutant Group	Pollutant Name	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Carbonyls	Acetaldehyde	9.2	a	-0.8	-6.9	-6.3	0.1	-4.3	-6.8	b	0.1	1.4	b	-12.4	a	-18.7
Carbonyls	Formaldehyde	0.5	a	-9.6	-12.6	16.0	-7.8	-3.1	-6.3	b	3.7	-7.5	b	-9.1	a	-15.3
Chromium VI	Chromium VI	--	c	c	c	c	c	c	c	c	c	--	--	--	--	--
PAH	Benzo(a)pyrene	--	--	--	--	b	-1.7	-2.3	-2.1	25.2	-5.7	-16.3	-14.2	-10.5	-22.4	-14.8
PAH	Naphthalene	--	--	--	--	b	-7.7	-17.1	-13.9	21.4	25.5	0.7	-11.4	-9.5	-11.6	-20.7
PM <sub>10</sub> Metals	Arsenic (PM <sub>10</sub> )	c	c	c	c	8.4	-14.8	7.3	1.4	15.7	-3.0	1.9	b	-2.3	-1.4	-3.4
PM <sub>10</sub> Metals	Beryllium (PM <sub>10</sub> )	c	c	c	c	4.8	-5.5	11.2	-8.2	17.5	-2.0	d	b	-0.4	3.7	0.5
PM <sub>10</sub> Metals	Cadmium (PM <sub>10</sub> )	c	c	c	c	5.1	-16.2	4.9	-5.7	16.6	1.4	d	b	3.9	2.8	3.0
PM <sub>10</sub> Metals	Lead (PM <sub>10</sub> )	c	c	c	c	4.7	-30.6	-3.5	-6.3	19.9	0.1	2.2	b	-1.6	-0.4	-1.9
PM <sub>10</sub> Metals	Manganese (PM <sub>10</sub> )	c	c	c	c	-25.3	-37.7	0.6	-3.8	21.5	-6.2	13.2	b	3.9	1.3	2.6
PM <sub>10</sub> Metals	Nickel (PM <sub>10</sub> )	c	c	c	c	8.6	-28.9	4.7	-6.8	11.4	-1.2	e	b	26.5	21.2	10.6
VOC	Benzene	f	a	31.3	-12.6	-15.4	-10.2	-6.6	24.5	b	5.9	6.0	-8.3	-6.9	1.5	-4.3
VOC	Butadiene, 1,3-	20.2	a	-20.4	-4.3	-14.1	-23.1	-8.5	12.3	b	21.5	-9.4	-26.4	-8.8	-13.5	-0.7
VOC	Carbon tetrachloride	51.7	a	a	a	a	0.6	20.4	32.2	b	45.8	2.9	19.6	48.8	17.7	28.1
VOC	Chloroform	f	a	-28.6	a	-20.3	-9.7	-9.3	3.0	b	8.4	8.2	3.9	-3.1	-3.7	0.4
VOC	Tetrachloroethylene	f	a	-37.5	a	a	-9.6	-8.6	84.9	b	23.5	-16.4	-28.0	-15.9	-20.1	-16.9
VOC	Trichloroethylene	10.3	a	17.6	13.4	a	4.1	5.5	6.7	b	8.9	1.0	-16.4	-7.0	-1.4	1.9
VOC	Vinyl chloride	f	a	-14.3	a	-1.4	-5.3	18.8	6.6	b	15.7	8.2	-14.7	-8.0	-8.3	g

A-rated:±25%

B-rated: Between 25% to 35% or between -25% to -35%

Does not meet:>35% or <35%

-- No data available

<sup>a</sup>: Pollutant was sampled at this site and year, but no bias data were reported.

<sup>b</sup>: No Proficiency Test samples were sent for this pollutant and year.

<sup>c</sup>: Pollutant was expected, but not sampled at this site for this year

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

<sup>e</sup>: 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.

<sup>f</sup>: Pollutant not included in the PT sample sent to the lab supporting this site.

<sup>g</sup>: The Proficiency Test value for this pollutant was not recorded, but EPA deemed the result as acceptable.

**Table 9. NATTS Network Assessment: MQO#4 - Overall Method Precision %CV at San Jose, CA**

Pollutant Group	Pollutant Name	Overall Method precision % CV															
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Carbonyls	Acetaldehyde	--	--	--	8.8	16.7	25.3	22.8	11.1	24.7	15.7	11.7	15.9	16.4	44.7	22.3	9.7
Carbonyls	Formaldehyde	--	--	--	7.6	16.4	19.0	20.9	11.9	19.5	18.9	15.4	11.3	9.4	38.8	17.9	22.2
Chromium VI	Chromium VI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PAH	Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PAH	Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PM <sub>10</sub> Metals	Arsenic (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PM <sub>10</sub> Metals	Beryllium (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PM <sub>10</sub> Metals	Cadmium (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PM <sub>10</sub> Metals	Lead (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PM <sub>10</sub> Metals	Manganese (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PM <sub>10</sub> Metals	Nickel (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOC	Benzene	17.5	10.4	16.3	13.7	17.4	15.3	13.0	11.9	14.7	19.8	16.8	11.9	13.2	15.2	20.6	10.9
VOC	Butadiene, 1,3-	56.3	43.4	54.3	41.2	41.0	29.6	34.9	52.9	46.9	15.8	18.2	17.9	17.7	11.6	20.7	15.5
VOC	Carbon tetrachloride	11.3	24.0	--	--	--	--	--	19.8	15.0	11.7	18.3	9.3	12.3	15.1	13.1	25.1
VOC	Chloroform	31.5	37.0	29.0	28.3	33.0	53.3	42.3	42.5	33.2	33.9	28.2	12.5	19.3	13.1	22.6	13.4
VOC	Tetrachloroethylene	22.1	24.7	24.5	24.2	32.4	42.6	42.0	35.2	42.8	19.5	39.8	61.4	79.5	79.5	54.5	31.0
VOC	Trichloroethylene	15.7	a	49.6	a	a	a	15.7	a	53.0	31.5	a	a	a	a	a	a
VOC	Vinyl chloride	--	--	--	--	--	--	--	--	--	a	a	--	--	--	--	--

	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

<sup>a</sup>: Although both primary and secondary data were reported, both sets of values were less than the MDL. Thus no %CV was calculated.



Table 10. NATTS Network Assessment: MQO#4 - Analytical Precision %CV at San Jose, CA

Pollutant Group	Pollutant Name	Analytical Method precision % CV															
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Carbonyls	Acetaldehyde	--	--	--	0.0	3.7	1.4	0.6	0.6	1.0	42.7	0.8	a	a	a	a	a
Carbonyls	Formaldehyde	--	--	--	2.7	1.0	1.2	1.3	0.4	0.9	0.3	0.6	a	a	a	a	a
Chromium VI	Chromium VI	--	--	--	--	--	--	--	--	--	a	a	--	--	--	--	--
PAH	Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	b	4.0	3.5	2.6	b	2.2	2.3
PAH	Naphthalene	--	--	--	--	--	--	--	--	--	1.2	4.7	5.2	2.6	1.1	1.4	1.6
PM <sub>10</sub> Metals	Arsenic (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	4.6	13.1	26.9	7.0	1.5	3.5	1.8
PM <sub>10</sub> Metals	Beryllium (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	b	0.0	b	3.1	27.6	3.6	4.1
PM <sub>10</sub> Metals	Cadmium (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	7.7	13.2	16.4	4.0	4.3	4.2	4.7
PM <sub>10</sub> Metals	Lead (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	0.7	0.3	0.9	0.6	0.4	0.9	0.7
PM <sub>10</sub> Metals	Manganese (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	0.7	0.6	1.1	0.5	0.7	0.3	0.6
PM <sub>10</sub> Metals	Nickel (PM <sub>10</sub> )	--	--	--	--	--	--	--	--	--	1.4	1.6	8.9	1.4	1.0	1.0	1.1
VOC	Benzene	--	--	--	--	4.1	8.2	7.2	4.8	3.1	a	a	a	a	a	a	a
VOC	Butadiene, 1,3-	--	--	--	--	b	6.7	0.0	4.1	11.6	a	a	a	a	a	a	a
VOC	Carbon tetrachloride	--	--	--	--	3.8	5.0	6.2	5.7	7.1	a	a	a	a	a	a	a
VOC	Chloroform	--	--	--	--	b	6.9	8.5	16.7	17.1	a	a	a	a	a	a	a
VOC	Tetrachloroethylene	--	--	--	--	2.5	3.8	2.8	4.9	2.4	a	a	a	a	a	a	a
VOC	Trichloroethylene	--	--	--	--	b	11.1	0.0	18.5	0.0	a	a	a	a	a	a	a
VOC	Vinyl chloride	--	--	--	--	b	b	b	b	b	a	a	a	a	a	a	a

	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

<sup>a</sup>: Per the NATTS Workplan template, analytical replicates were required to be reported to AQS for this sampling year

<sup>b</sup>: The primary and/or replicate value were less than the MDL, so no calculation could be made.

**Appendix A. Equipment Inventory**

<b>Pollutant Type</b>	<b>Year(s)</b>	<b>Manufacturer/Model, Extraction Type, and Year</b>
<b><i>Sampling Equipment</i></b>		
Carbonyls	2003-2005	RM Environmental Systems 920 Toxic Air Sampler (Year Deployed: unknown)
	2006-2014	RM Environmental Systems 924 Toxic Air Sampler (Year Deployed: 2006)
	2015-2018	Not Reported
Chromium VI	2005-2012	None
PAHs	2008-2014	Tisch Environmental TE-1000 PUF Sampler (Year Deployed: 2008)
	2015-2018	Not Reported
PM10 Metals	2003-2007	None
	2008-2010	Graseby-Anderson Hi-Volume PM10 Sampler (Year Deployed: <1993)
	2011-2014	Thermo R&P Parisol-Plus 2025 PM10 Air Sampler (Year Deployed: 2007)
	2015-2018	Not Reported
VOCs	2003-2007	Xontech 910A Canister Sampler (Year Deployed: 2002)
	2008-2010	Xontech 910A Canister Sampler (Year Deployed: 2008)
	2011-2014	Xontech 910PC Canister Sampler (Year Deployed: 2008)
	2015-2018	Not Reported
<b><i>Analytical Equipment</i></b>		
Carbonyls	2003-2005	Unknown (Year Deployed: unknown)
	2006	Varian (Hotblock) (Year Deployed: 2006)
	2007-2013	Varian HPLC with UV/Vis (Year Deployed: 2006)
	2014	Thermo Scientific Dionex UltiMate 3000 (Year Deployed: 2014)
	2015-2018	Not Reported
Chromium VI	2005-2012	None
PAHs	2008-2014	HP/Agilent 5890/5971 GC/MS (Year Deployed: 2008)
	2015-2018	HP/Agilent 7890B/5975C GC/MS (Year Deployed: 2015)
PM10 Metals	2003-2007	None
	2008-2014	PE ELAN 9000 ICP-MS (Year Deployed: 2003)
	2015-2018	Thermo iCAP Q ICP-MS (Year Deployed: 2015)
VOCs	2003-2011	Varian CP-3800-GC (Year Deployed: 2001)
	2012-2014	Agilent 7890A/5975 GC/MS (Year Deployed: 2012)
	2015-2018	Not Reported
<b><i>Preconcentrator Equipment</i></b>		
VOCs	2003-2011	Teledyne TekMar, AUTOCAN (Year Deployed: 2001)
	2012	Markes AirServer Series 2 (Year Deployed: 2012)
	2013-2014	CIA8 preconcentrator (Year Deployed: 2013)
	2015-2018	Not Reported
<b><i>Standards Preparation Equipment</i></b>		
VOCs	2003-2008	Syringe (Pressure dilution) (Year Deployed: unknown)
	2009-2012	Purchase from Vendor (Year Deployed: na)
	2013-2014	Markes AirServer Series 2 (Year Deployed: 2013)
	2015-2018	Not Reported
<b><i>Canister Cleaning Equipment</i></b>		
VOCs	2003-2014	Xontech (hot) (Year Deployed: 2001)
	2015-2018	Not Reported
<b><i>PM<sub>10</sub> Extraction Equipment</i></b>		
PM10 Metals	2003-2007	None
	2008-2013	Branson 8510 (Sonicator) (Year Deployed: 2004)
	2014-2018	Environment Express (Hotblock) (Year Deployed: 2011)
<b><i>Chromium VI Extraction Equipment</i></b>		
Chromium VI	2005-2013	None
<b><i>PAHs Extraction Equipment</i></b>		
PAHs	2008-2018	Dionex -300 (ASE) (Year Deployed: 2004)