

National Monitoring Programs Annual Report for 2013

National Air Toxics Monitoring and Data Analysis Workshop

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Eastern Research Group, Inc.
October 27, 2015

2013 NMP Annual Report

- Eastern Research Group, Inc. is EPA's national contract laboratory for the NMP contract.
- We are tasked with writing a report to summarize the data generated under the contract.
- These reports can be found at <http://www3.epa.gov/ttnamti1/uatm.html>

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- VOCs (Method TO-15)
- SNMOCs (often concurrent with TO-15)
- Carbonyl Compounds (Method TO-11A)
- PAHs (Method TO-13A)
- Metals (Pb-FEM)
- Hexavalent Chromium (ASTM D7614)

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- NATTS, UATMP, CSATAM sites
- Samples collected Jan 2013 to Dec 2013
- Up to 12 months of sampling
- 24 hour samples
- 1-in-6 or 1-in-12 day sampling schedules

- **Some 263,000 concentrations were produced from 9,400 valid samples collected during the monitoring 2013 effort!**

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- 66 monitoring sites in/near 40 urban/rural areas across 25 states and the District of Columbia.
- NATTS (25 sites), UATMP (39 sites), CSATAM (2 sites)

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Report Organization:

- Introduction: Programs, Sites, Methods, Pollutants and MDLs, Completeness
- Program – level Data Results
- Site – specific Data Results, grouped by state

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The 2013 NMP report includes the following program-level analyses:

- Pollutant- and Method- Specific Detection Rates
- Pollutant-specific Concentration Ranges & Central Tendency Statistics
- Preliminary Risk Screening/Pollutants of Interest identification
- Variability Analyses: Inter-site Comparison & Quarterly Average Comparison
- Method and Analytical Precision

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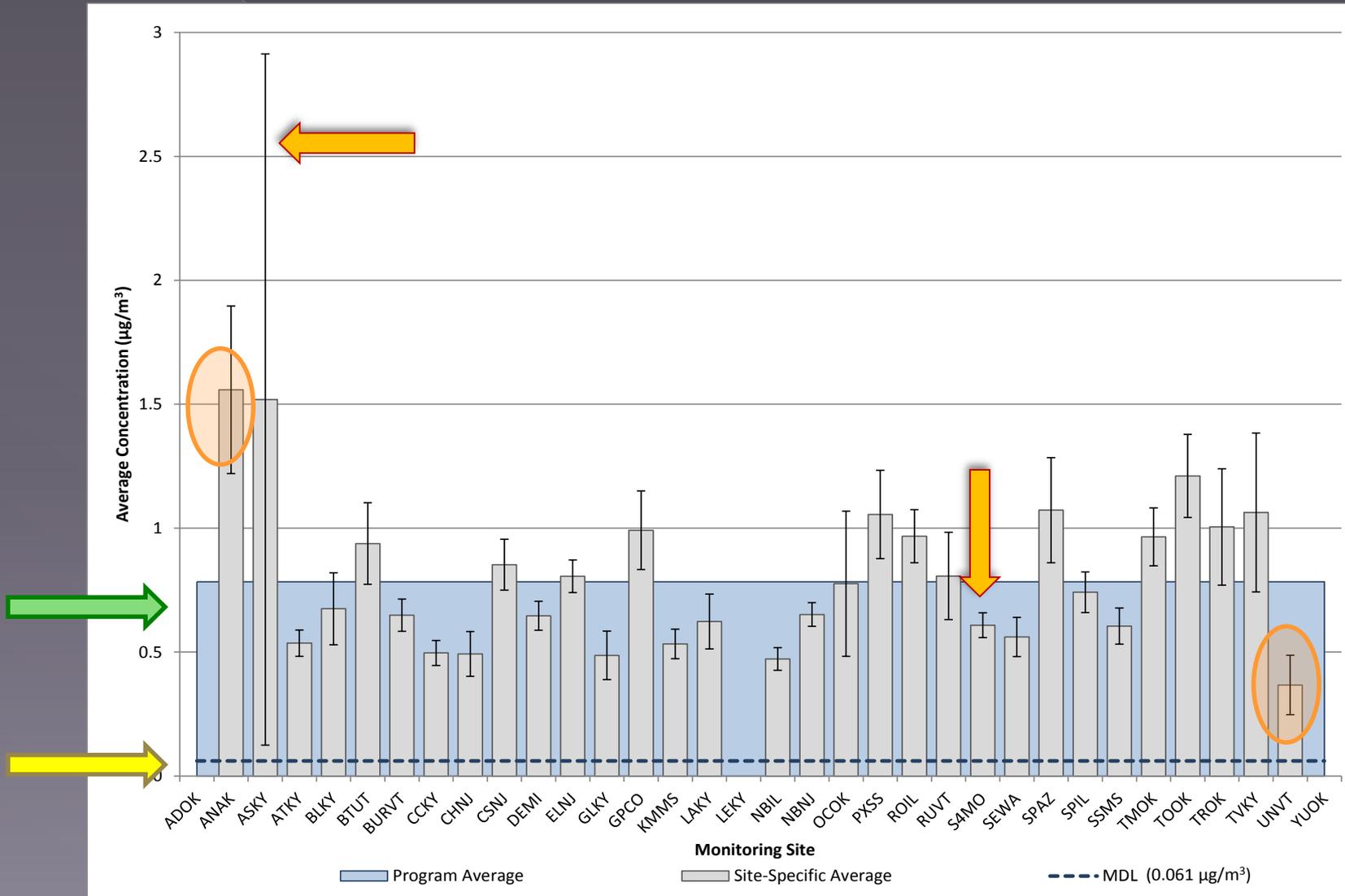
The 2013 NMP report includes the following analyses for each site:

- Site characterizations
- Meteorological information
- Preliminary Risk Screening/Pollutants of Interest
- Quarterly & Annual time-period based average concentrations
- Site-Specific Comparison to Program-level Averages
- Trends graphs, where applicable
- Surrogate Cancer Risk & Noncancer Hazard Approximations
- Emissions Assessment based on Toxicity Potential

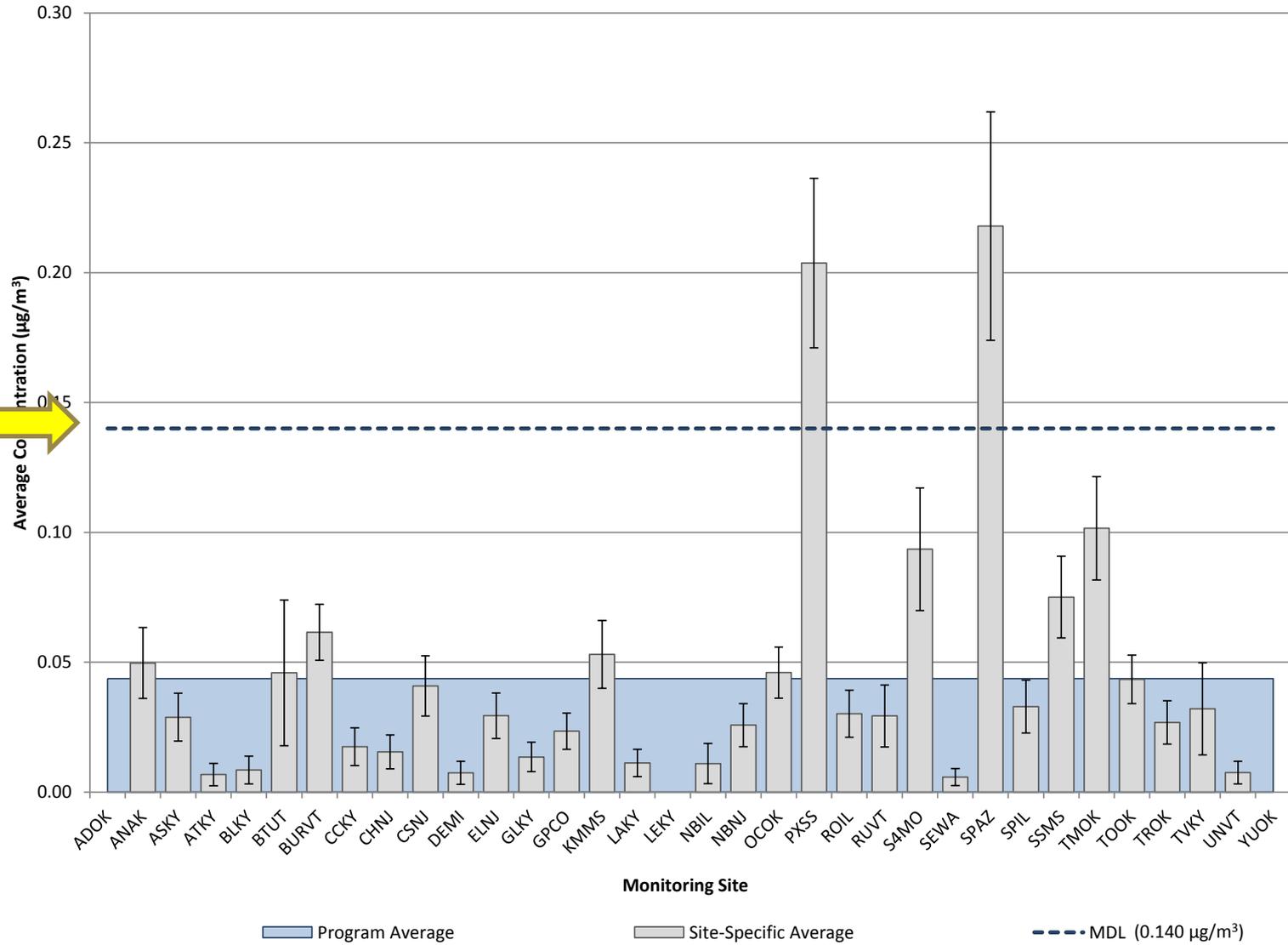
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- Compare across sites
- Site high (or low) for certain compounds
- Site is high (or low) year after year
- All sites in one area high (or low) for a given pollutant
- Confidence interval comparison

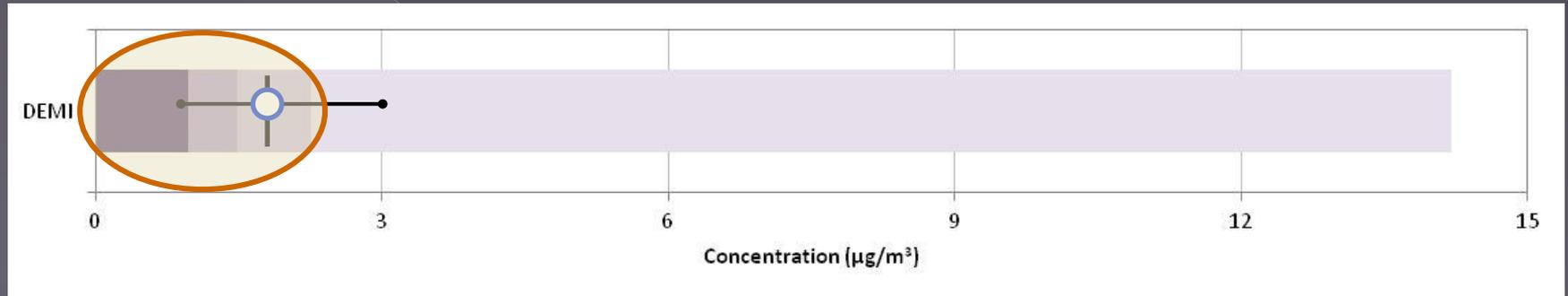
Inter-Site Variability (Benzene)



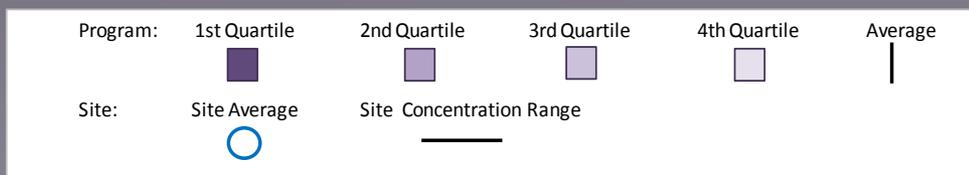
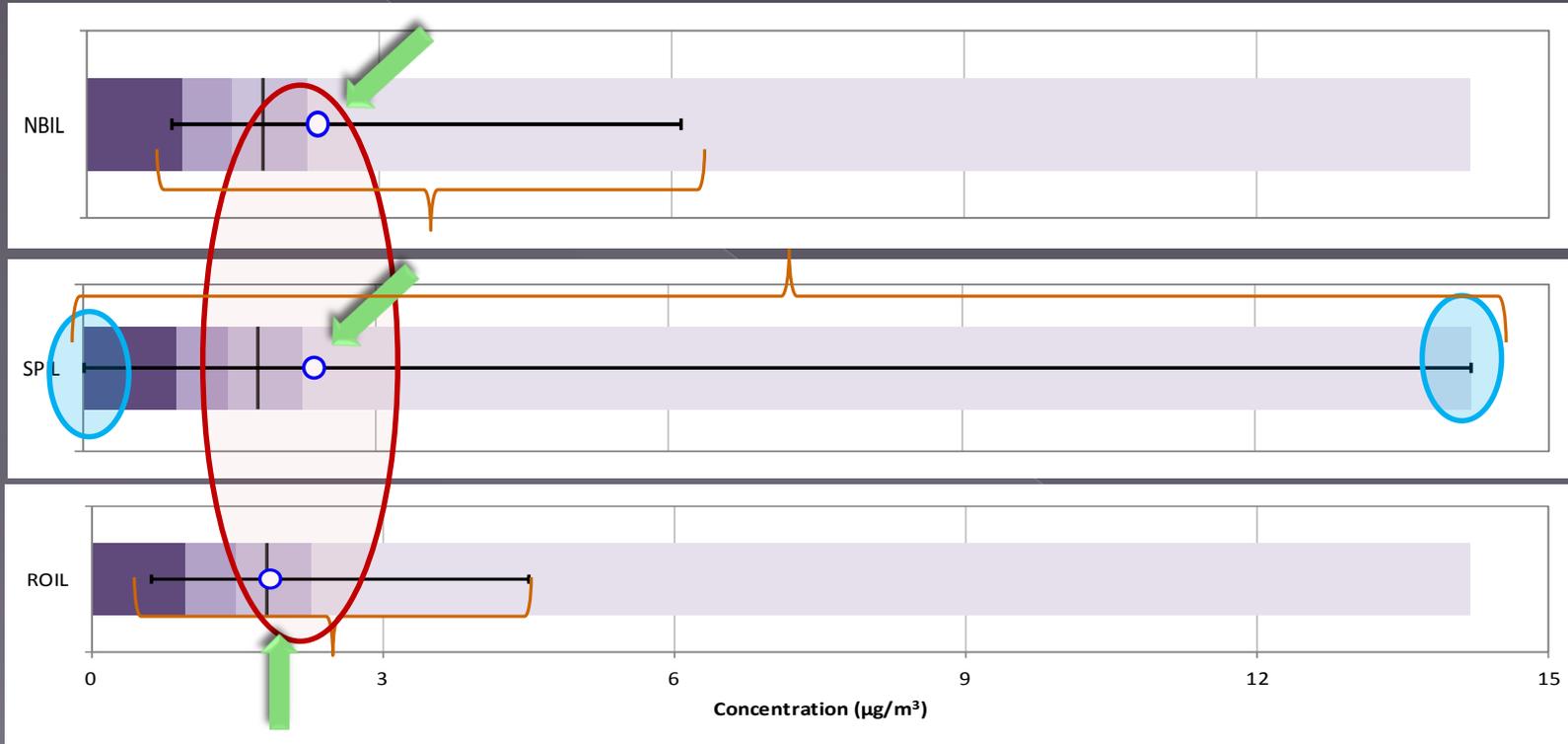
Inter-Site Variability (p-dichlorobenzene)



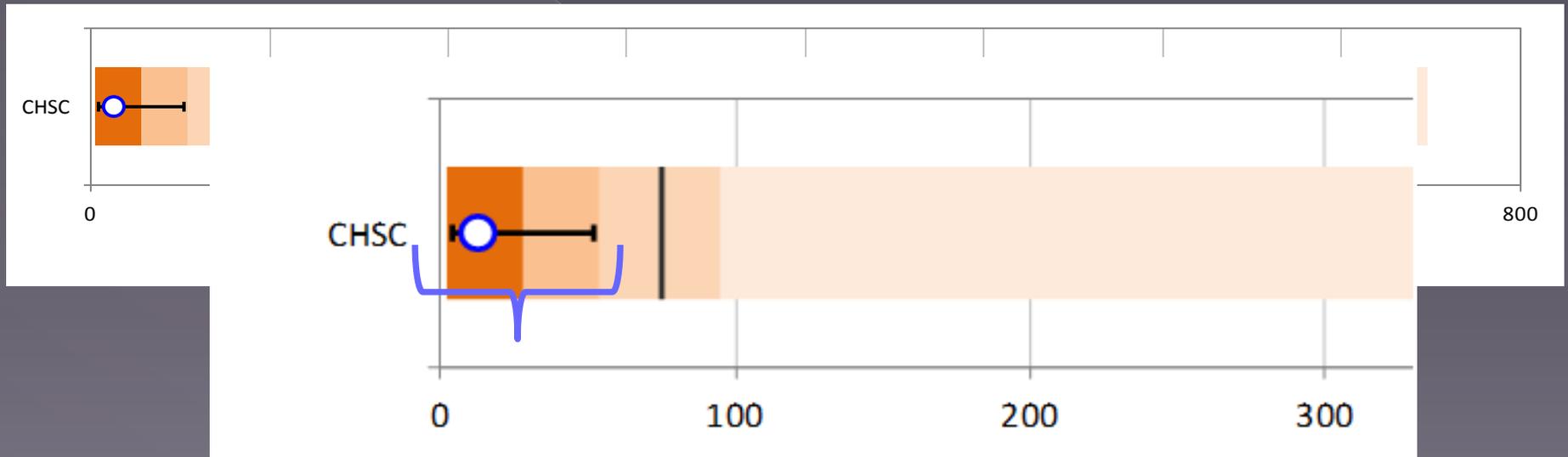
Concentration Comparison (Acetaldehyde)



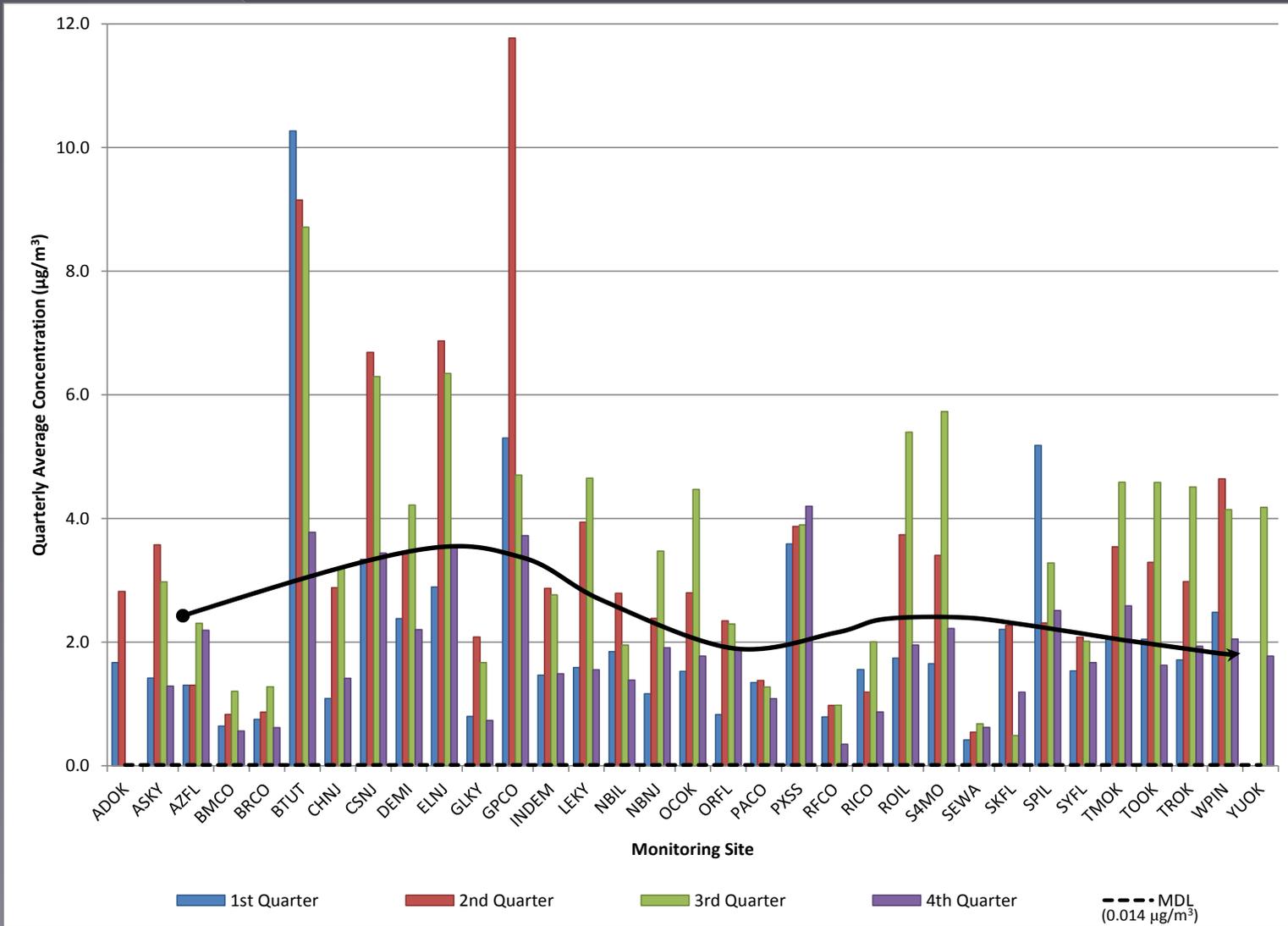
Concentration Comparison (Acetaldehyde)



Concentration Comparison (Naphthalene)



Quarterly Average Concentration Comparison (Formaldehyde)



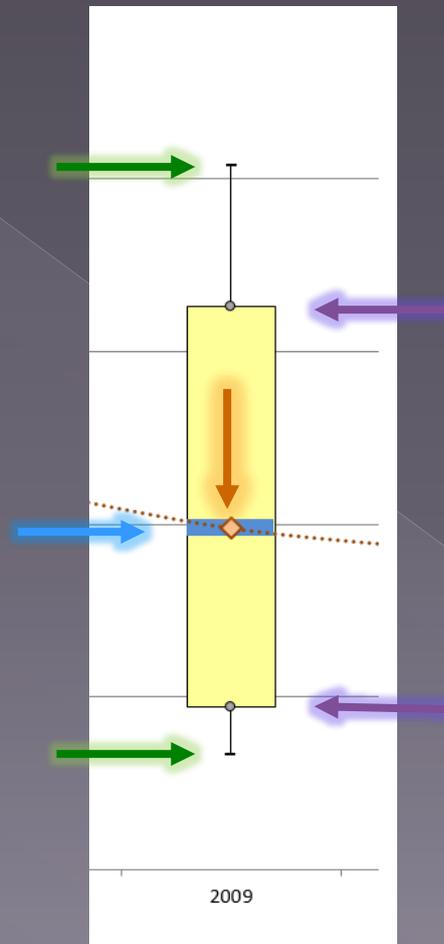
Trends Analysis

- Minimum & Maximum Concentrations

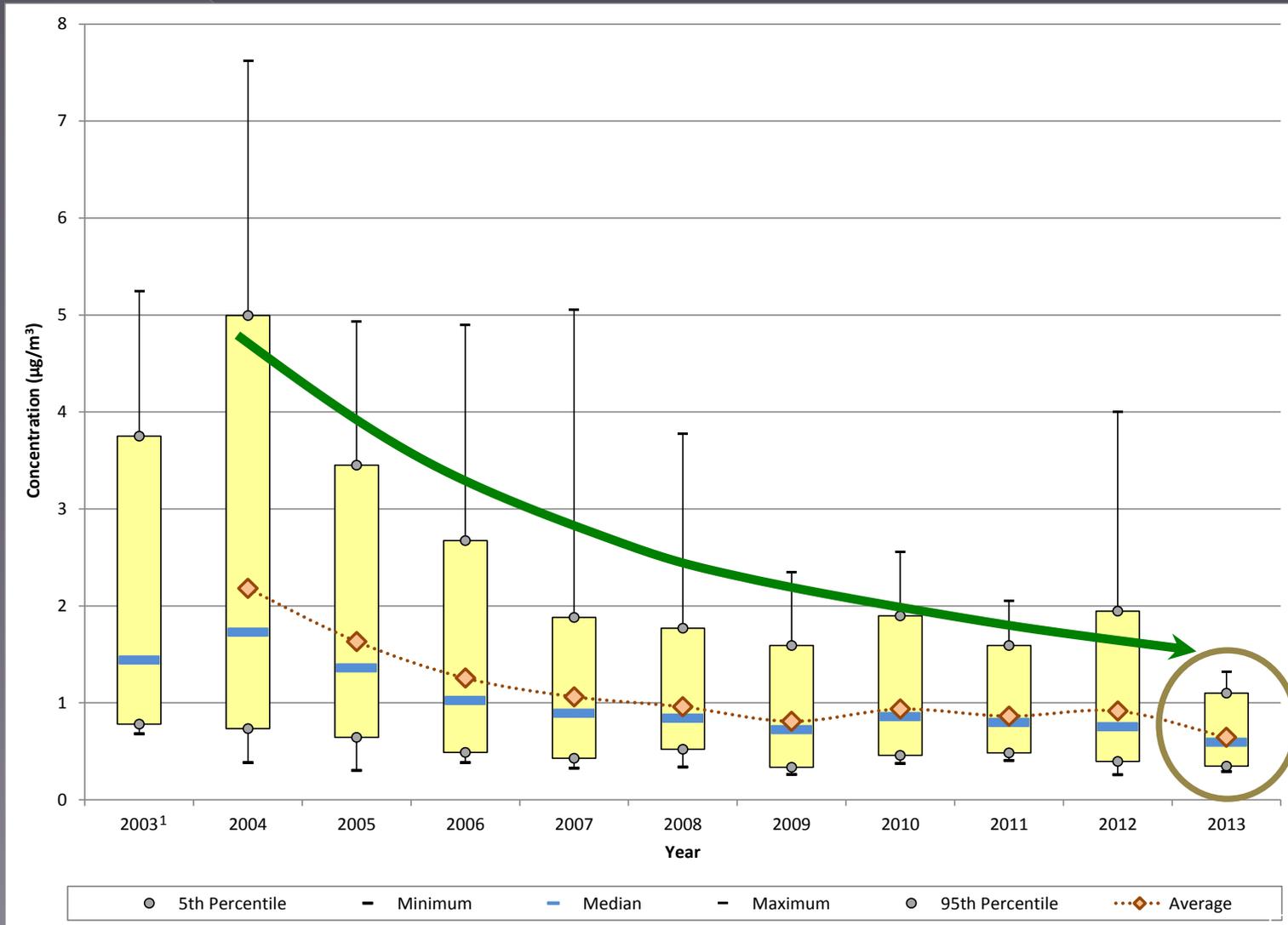
- Median Concentration

- 5th & 95th Percentiles

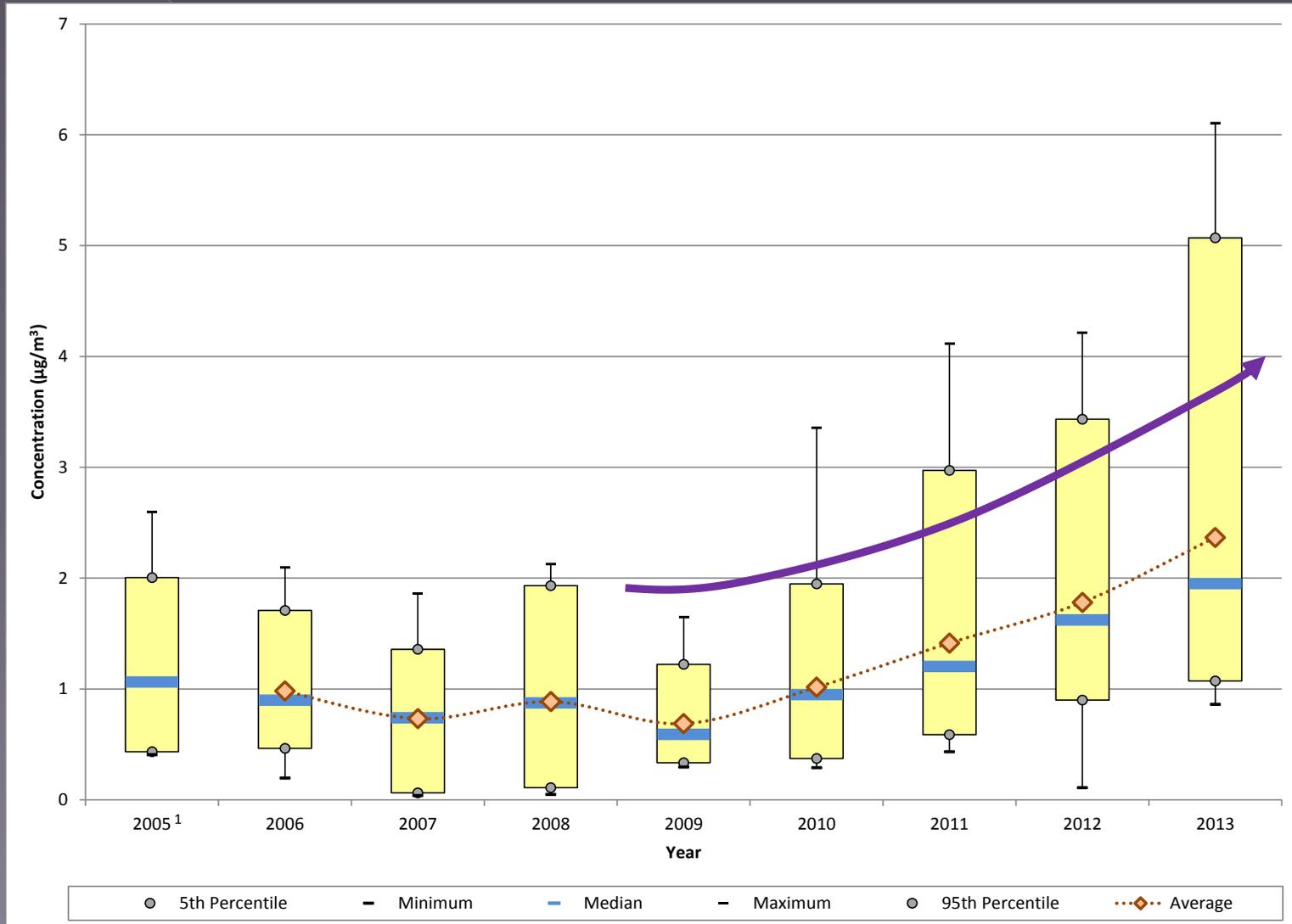
- Average Concentration



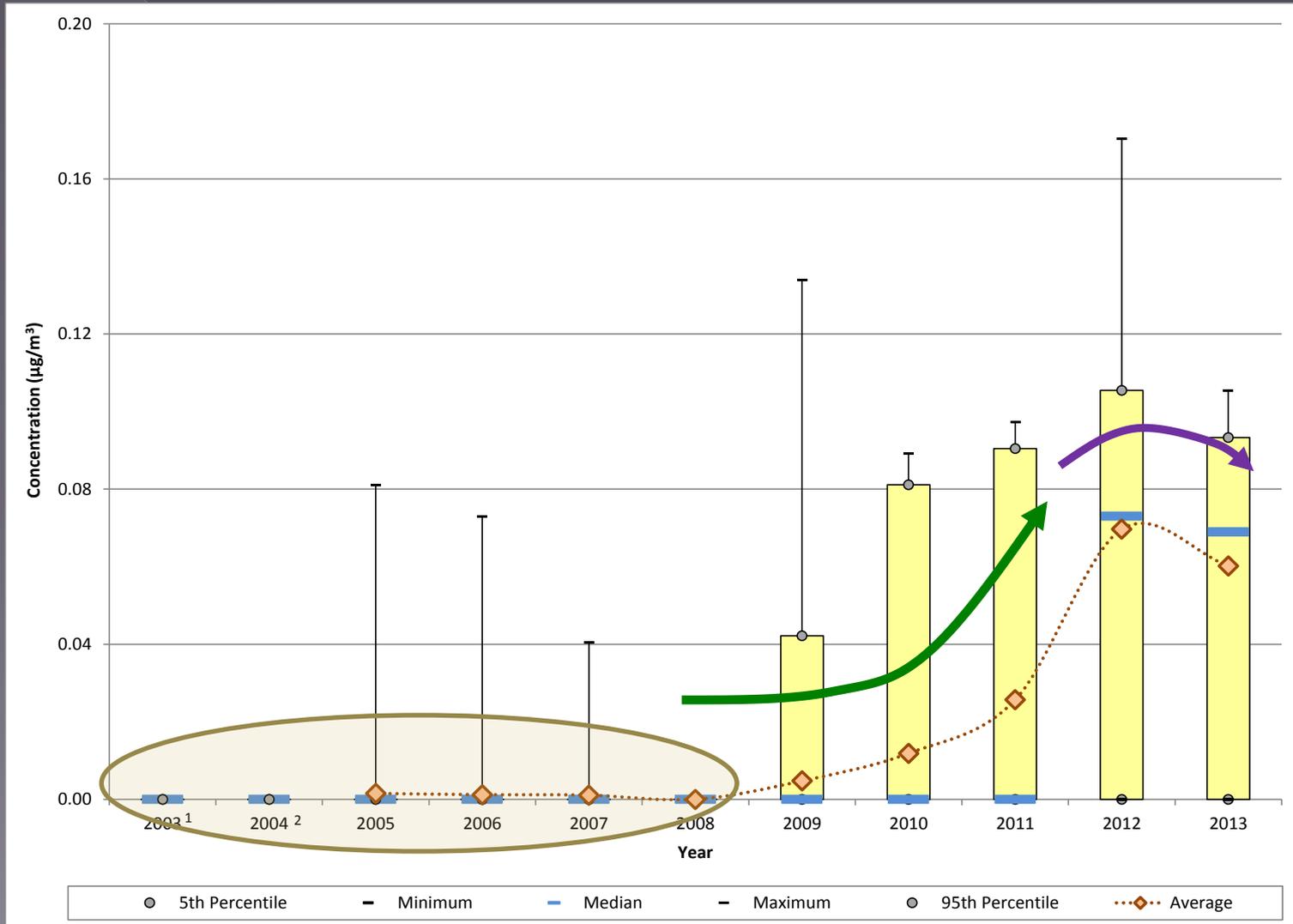
Trends Analysis (Benzene)



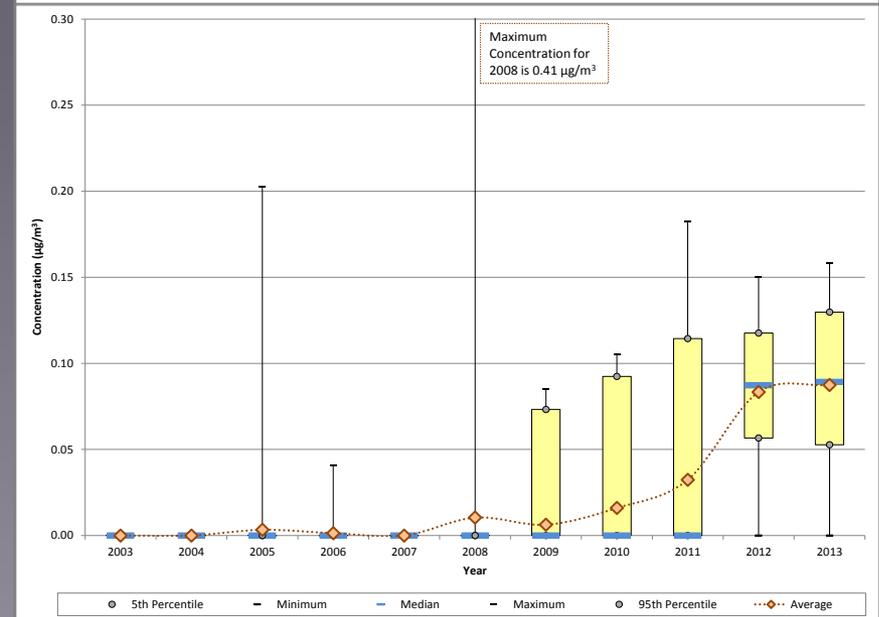
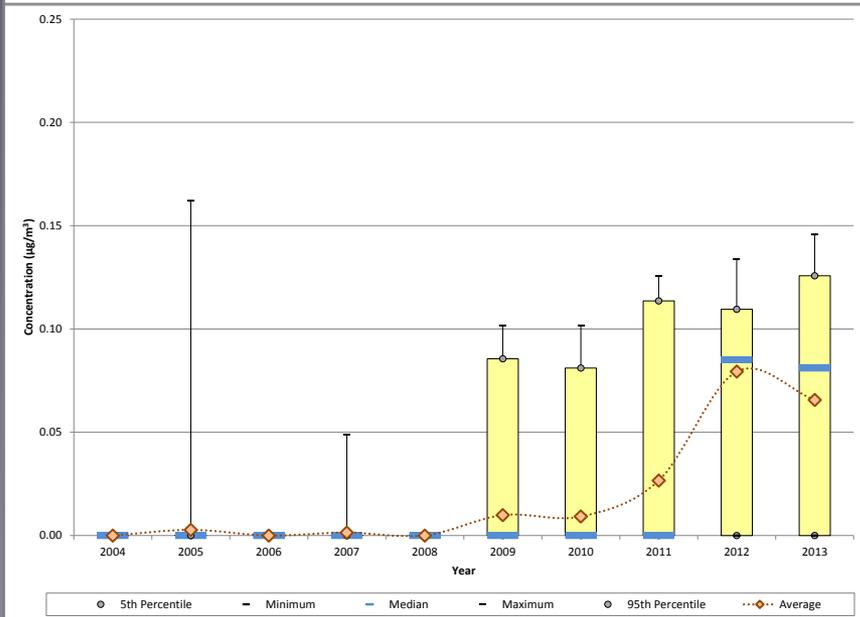
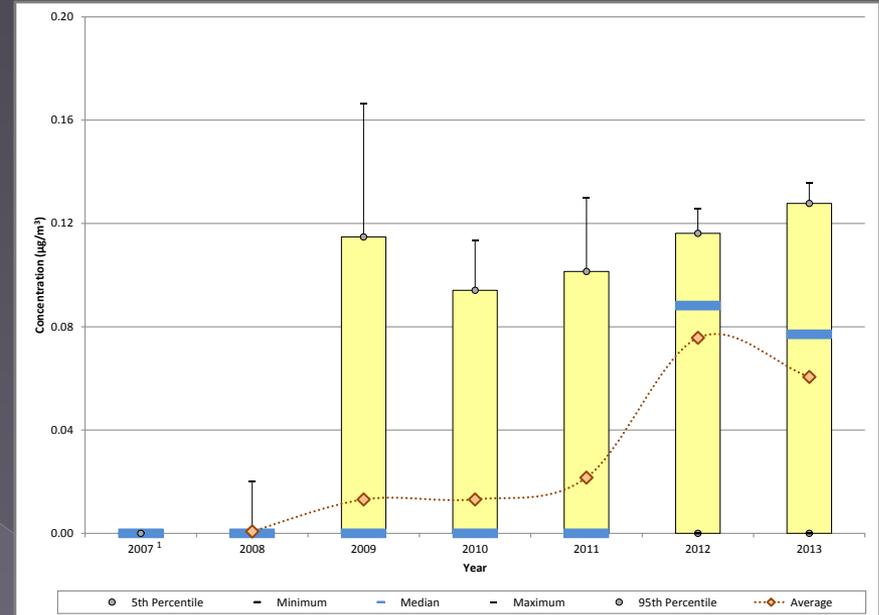
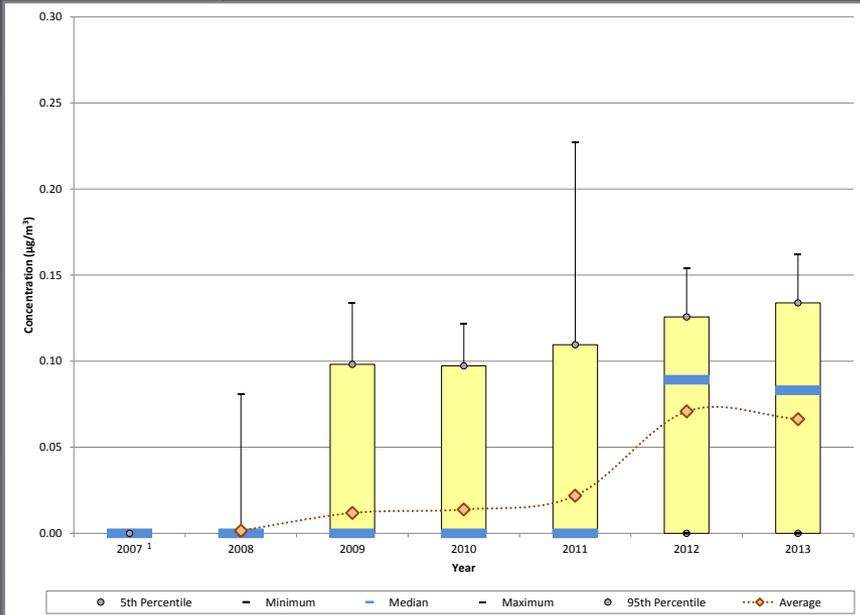
Trends Analysis (Acetaldehyde)



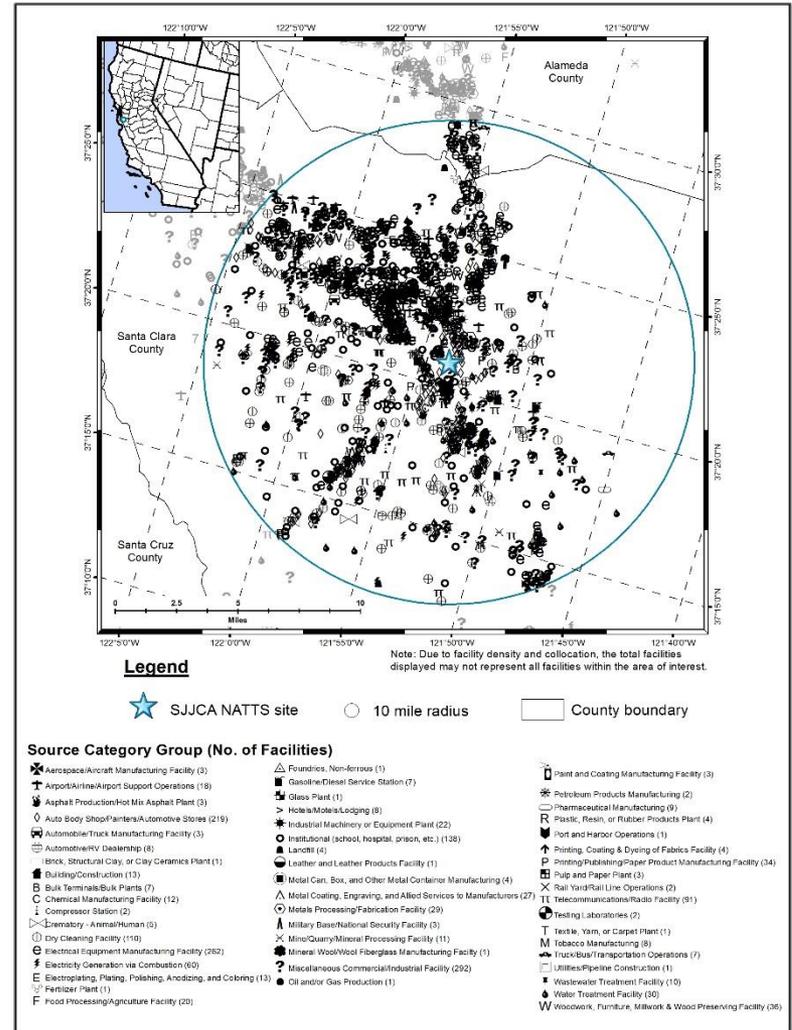
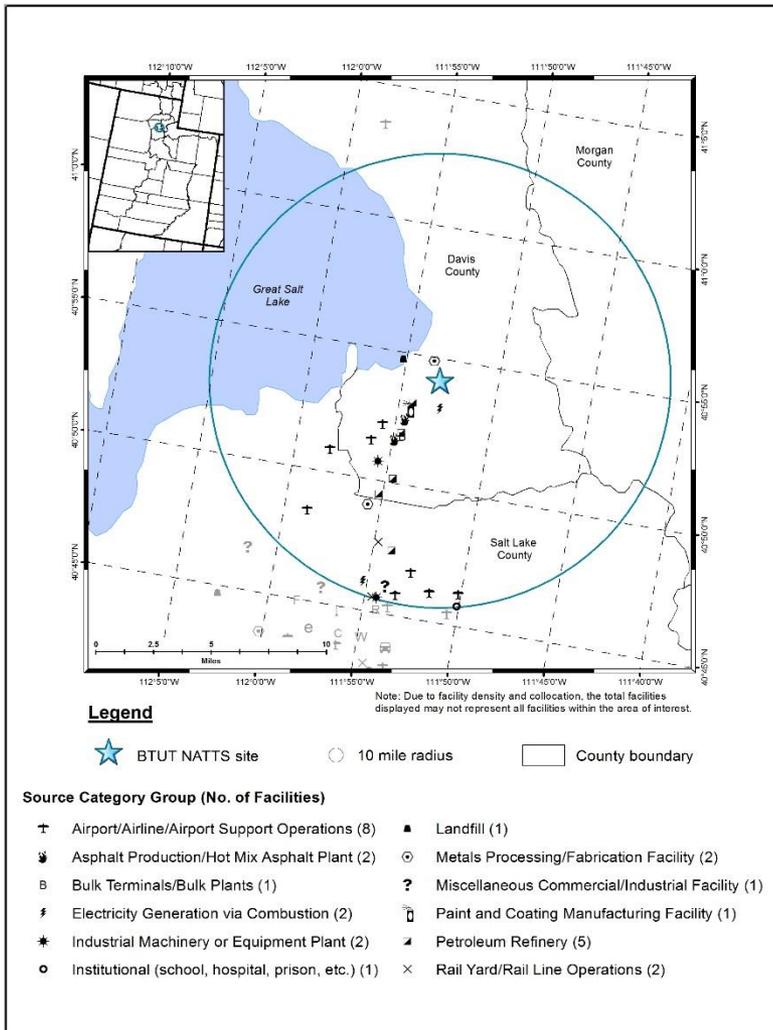
Trends Analysis (1,2-Dichloroethane)



Trends Analysis (1,2-Dichloroethane)



Point Source Emissions Locations



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We look forward to your comments and thank you for your time.

These reports can be found at
<http://www3.epa.gov/ttnamti1/uatm.html>

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