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Air Monitoring and Sampling

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Air Monitoring vs. Sampling



Air Monitoring

- Real Time Data
- Viewable Remotely
- Alerts
- Mobile or Stationary
- Specific or Generic
- Capable of low-level detection ranges

Sampling

- Laboratory-Grade Data
- Very Specific
- Typically stationary
- Capable of low-level detections
- Takes time to analyze and receive results

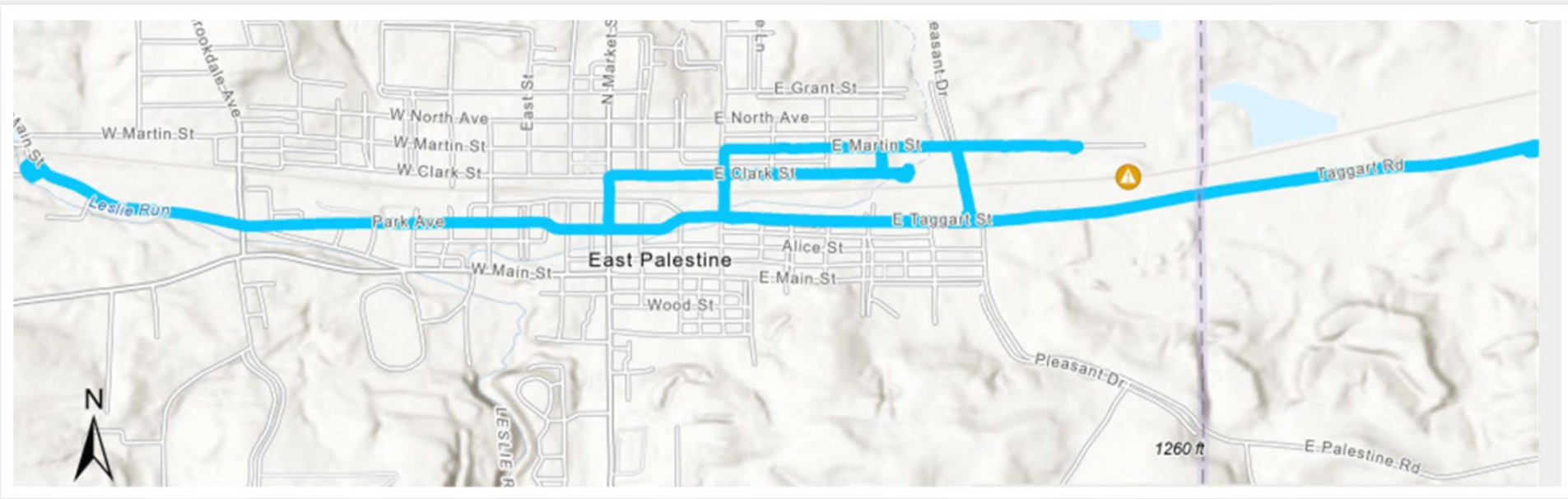
On-Site Equipment

- Ionization Detectors (PID & FID)
- Electrochemical Sensors
- Specific Gas Monitors
- Sorbent Tubes
- Passive Badge Samplers
- SUMMA Canisters
- Particulate Monitors
- Gas Chromatograph/Mass Spectrometer (GC/MS)
- Trace Atmospheric Gas Analyzer (TAGA)
- Proton-Transfer Reaction Mass Spectrometer (PTR-MS)

What is being monitored for?

- Volatile Organic Compounds (VOCs) – monitoring and sampling
- Butyl Acrylate – monitoring and sampling
- Ethylhexyl Acrylate - sampling
- Vinyl Chloride – monitoring and sampling
- Lower Explosive Limit – monitoring
- Oxygen – monitoring
- Particulates – monitoring

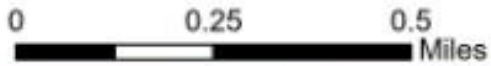
TAGA Route



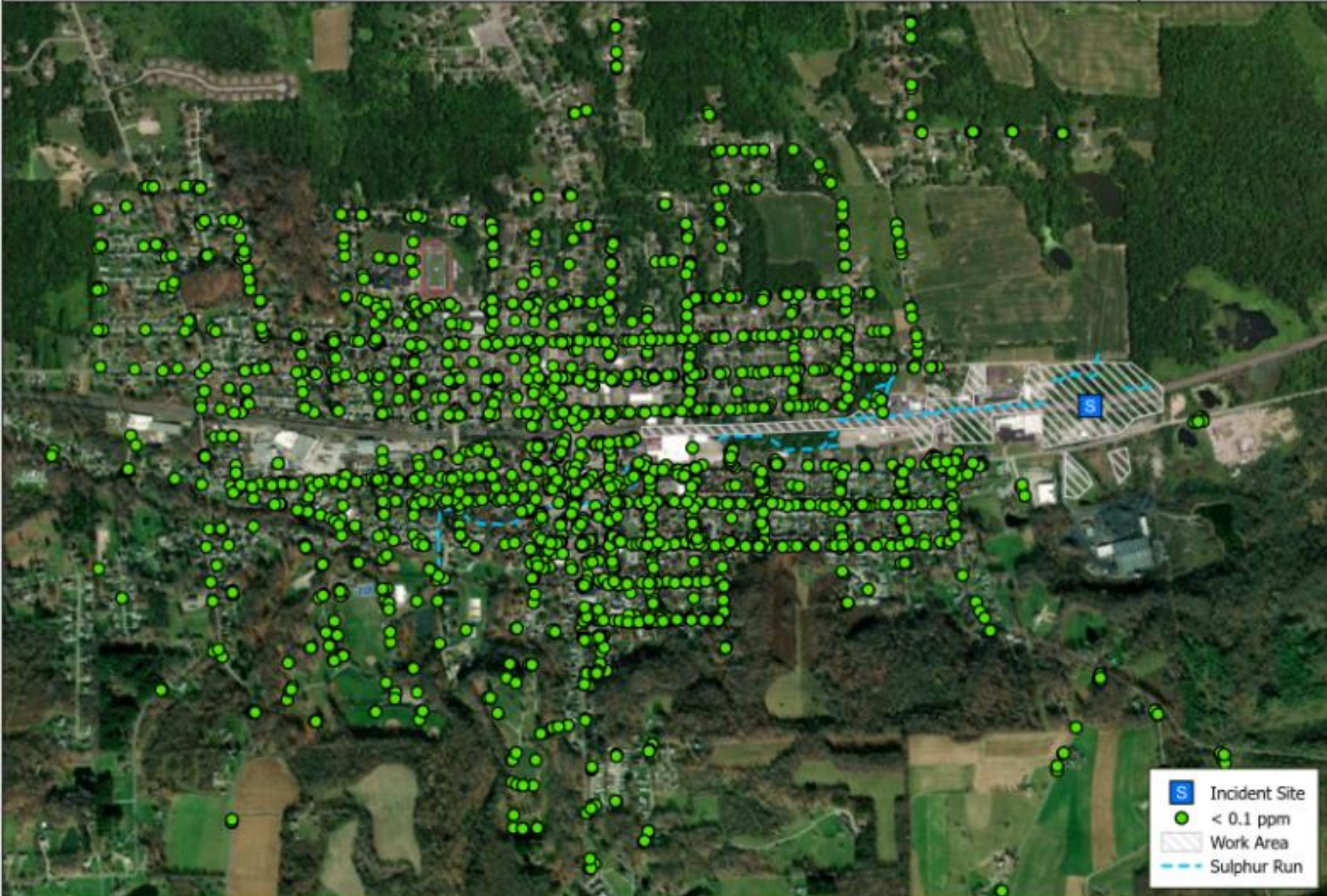


Preliminary Handheld Real-Time Air Monitoring Locations | Community Monitoring | VOCs

Taggart Road Incident 4/21/2023 07:00 - 4/25/2023 07:00 EDT



Project: PROJ-024579
Client: Norfolk Southern
City: East Palestine, OH
County: Columbiana



- Incident Site
- < 0.1 ppm
- Work Area
- Sulphur Run

Who Is Conducting The Work?



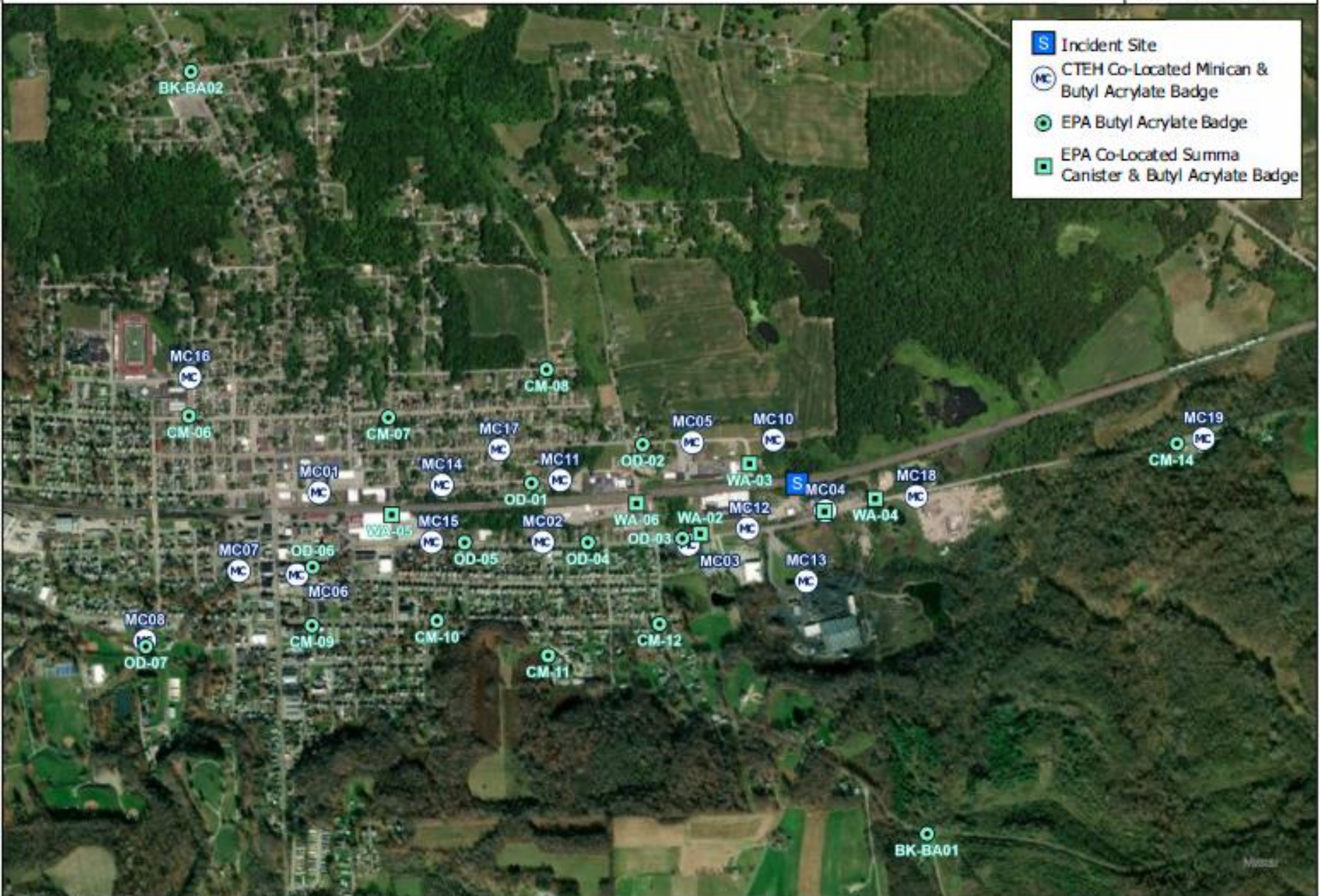
CTEH[®]

How Can We Tell the Difference?

- Very precise equipment looking for specific, target chemicals (i.e. TAGA, HAPSITE, PTR-MS)
- Detections and exceedances are verified to ensure public safety.
- Sampling



- Incident Site
- CTEH Co-Located Minican & Butyl Acrylate Badge
- EPA Butyl Acrylate Badge
- EPA Co-Located Summa Canister & Butyl Acrylate Badge



Using the Dashboard

EPA U.S. EPA East Palestine, Ohio Train Derailment Air Sampling Dashboard

Show User Guide

Filter By

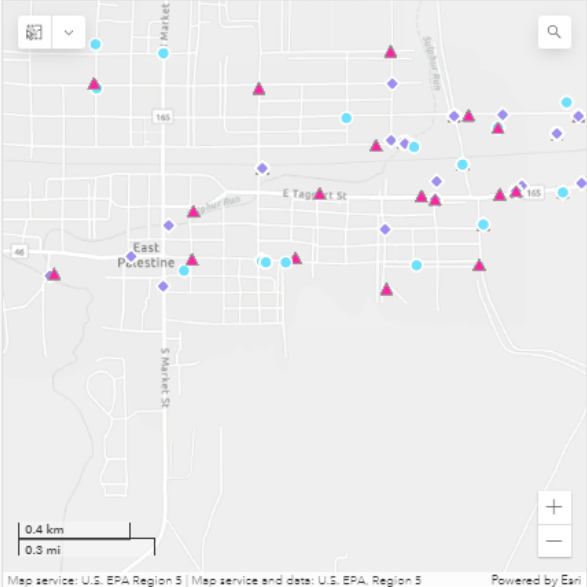
- Sample Method
[Show all methods](#)
- Chemical Name
[Show all chemicals](#)
- Location ID
[Show all locations](#)
- Result > Reporting Limit
[Show all results](#)
- Lab Validation Status
[Show all results](#)
- Sample Date
[Show all dates](#)

East Palestine Derailment Location

Air Sample Locations

Sample Method

- Badge
- Bag
- Sorbent Tube
- Steel Canister



Map service: U.S. EPA Region 5 | Map service and data: U.S. EPA, Region 5 | Powered by Esri

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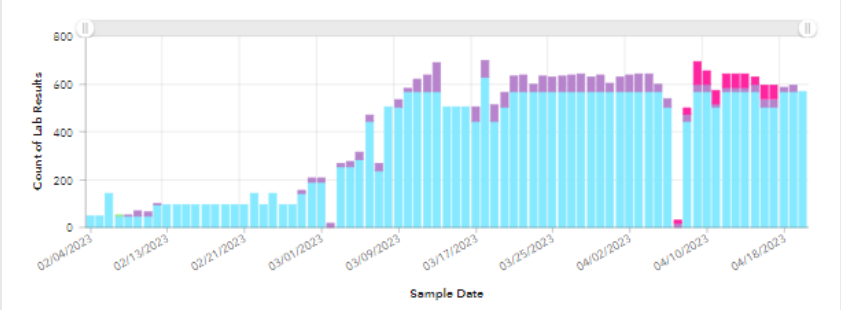
Samples

Samples
EPD-A-01-021523
EPD-A-01-021623
EPD-A-01-021723
EPD-A-01-021823
EPD-A-01-021923
EPD-A-01-022023
EPD-A-01-022123
EPD-A-01-022223
EPD-A-01-022323
EPD-A-01-022423
EPD-A-01-022523
EPD-A-01-022623
EPD-A-01-022723
EPD-A-02-022423
EPD-DW-01-022823
EPD-DW-01-030323
EPD-DW-01-030423
EPD-DW-01-030523
EPD-DW-01-030823
EPD-DW-01-030923
EPD-DW-01-031023
EPD-DW-01-031123
EPD-DW-01-031223
EPD-DW-01-031323
EPD-DW-01-031423

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Lab Results

Lab Results
<p>1,1,1-Trichloroethane (71-55-6) Sample ID: EPD-DW-C-042023 Location: DW-C Sample Method: Steel Canister Sample Date: 04/20/2023 12:05 Result: <0.15 ug/m3 Result Qualifier: J Reporting Limit: 0.150 ug/m3 Validation Status: Prelim</p>
<p>1,1,2,2-Tetrachloroethane (79-34-5) Sample ID: EPD-DW-C-042023 Location: DW-C Sample Method: Steel Canister Sample Date: 04/20/2023 12:05 Result: <0.18 ug/m3 Result Qualifier: U Reporting Limit: 0.180 ug/m3 Validation Status: Prelim</p>
<p>1,1,2-Trichloroethane (79-00-5) Sample ID: EPD-DW-C-042023 Location: DW-C Sample Method: Steel Canister Sample Date: 04/20/2023 12:05 Result: <0.15 ug/m3 Result Qualifier: U Reporting Limit: 0.150 ug/m3 Validation Status: Prelim</p>
<p>1,1,2-Trichlorotrifluoroethane (76-13-1) Sample ID: EPD-DW-C-042023 Location: DW-C Sample Method: Steel Canister Sample Date: 04/20/2023 12:05 Result: <1 ug/m3 Result Qualifier: J Reporting Limit: 1.000 ug/m3 Validation Status: Prelim</p>
<p>1,1-Dichloroethane (75-34-3) Sample ID: EPD-DW-C-042023</p>



Count of Lab Results

Sample Date

Questions?