

# Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.



Project Name: Biolabs Chlorine Fire

From: 10/3/24  
5:00 AM

To: 10/3/24  
4:59 PM

Station 2 - Mammy's							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	851	179	0-242 ppb	9.33 ppb	9000 ppb 8hr avg
	H2S	No	851	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	958	0	0-0 ppm	0 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13790	57	0-0.62 ppm	0.00 ppm	1.8 ppm 1hr avg
SPM Flex	PHOSGENE (COCL2)	No	13816	38	0-9 ppb	0.02 ppb	300 ppb 1hr avg

Station 5 -Park Circle - Lester Rd							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	227	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	227	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	227	227	0.30-0.40 ppm	0.35 ppm	0.5 ppm 1hr avg

Station 8- Iris Drive SW Near Pyro Fireworks							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	861	389	0-1155 ppb	207.54 ppb	9000 ppb 8hr avg
	H2S	No	861	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	957	21	0-0.30 ppm	0.00 ppm	0.5 ppm 1hr avg

Station 10 - Gated Community Near Rockdale Plaza Shopping Center							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	778	11	0-149918 ppb	247.61 ppb	9000 ppb 8hr avg
	H2S	No	778	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	869	0	0-0 ppm	0 ppm	0.5 ppm 1hr avg

Station 11 -Patrick & Associates Inc							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	782	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	782	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	889	0	0-0 ppm	0 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	10577	70	0-0 ppm	0 ppm	1.8 ppm 1hr avg
SPM Flex	PHOSGENE (COCL2)	No	13797	0	0-0 ppb	0 ppb	300 ppb 1hr avg

Station 13- Intersection of Old Covington Highway and 3rd Avenue							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	773	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	773	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	875	260	0-0.50 ppm	0.06 ppm	0.5 ppm 1hr avg

Station 14 - Smyrna Road							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
SPM Flex	CHLORINE II (CL2)	Yes	11177	6590	0-3.68 ppm	0.27 ppm	0.5 ppm 1hr avg

Station 16 - Corner of General Arts and Farmers Rd							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	46	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	48	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	95	4	0-0.10 ppm	0.00 ppm	0.5 ppm 1hr avg



# Air Monitoring Summary Tables – Review

**Project Name:** Bio Lab Chlorine

The EPA uses air monitoring instruments with real-time alerts to track air quality during an emergency response. This air monitoring summary table report is used by EPA and local responders to review the thousands of measurements that can be collected in a single day.

The number of readings per instrument during this period may be reduced due to communications issues with the equipment or because some instruments were moved to a new station in response to changing wind conditions.

The following is a review of station results for the time period from 5:00am on 10/3/2024 to 4:59pm on 10/3/2024:

- **Station 2:** No issues observed.
- **Station 5:** Measurements of Cl<sub>2</sub> were recorded between 0.3ppm to 0.4ppm during the period, the hourly average did not exceed 0.39ppm. The instrument ceased transmitting at 8:31am.
- **Station 8:** No issues observed.
- **Station 10:** A single measurement of VOCs at 149,918ppb was recorded at 11:30am; concentrations then fell below 10,000ppb and returned to 0ppb by 11:38am. No other issues observed.
- **Station 11:** The instrument measuring HCl experienced an electrical fault from 1:27pm to 1:29pm, the readings from this time period have been rejected. No other issues observed.
- **Station 13:** No issues observed.
- **Station 14:** From 5:00am to 11:00am several rises and falls of Cl<sub>2</sub> were measured with peaks of 3.68ppm, 1.87ppm, 2.09ppm, and 2.22ppm. The hourly average concentration from 6:00am to 7:00am was 0.98ppm and the hourly average concentration from 7:00am to 8:00am was 1.07ppm. Remaining hourly average concentrations did not exceed 0.43ppm.
- **Station 16:** This station began operation at 3:00pm. No issues observed.

# Air Monitoring Summary Tables – Explanation of Tables

**Project Name: Bio Lab Chlorine**

The following information is provided in each report:

- **Station** – at the top of each table is a name and location for each air monitoring station. These are mobile stations that may change over time and new station numbers are established. Previously used station numbers will not appear on this report.
- **Instrument** – this is the model of instrument being used to measure the air. Some stations may use multiple instruments, and some instruments may measure multiple things at once
- **Analyte** – these are the chemicals or other compounds that the instrument is measuring:
  - **VOC:** Volatile Organic Compounds; this is not a specific chemical but includes a long list of possible chemicals, many of which have strong odors
  - **CO:** Carbon Monoxide; this compound is commonly associated with combustion (i.e. fires)
  - **H2S:** Hydrogen Sulfide; this is a default sensor for the instrument and is used for industrial safety
  - **LEL:** Lower-Explosive Limit; this is a default sensor for the instrument and is used for industrial safety
  - **O2:** Oxygen; this is a default sensor for the instrument and is used for industrial safety
  - **Cl2:** Chlorine; chlorine gas is an inhalation hazard with a pungent suffocating odor and is a contaminant of concern for the site
  - **HCl:** Hydrogen Chloride; a corrosive gas with a sharp, pungent odor and is a contaminant of concern for the site
  - **COCl2:** Phosgene; a potential combustion product that EPA monitors for at chemical and industrial fires
- **Action Level Exceedance** – is an easy-to-read determination whether one of the Action Levels in the column on the right *may have* been exceeded. The action levels are based on *averages over time* but this column may say “Yes” whenever a single measurement exceeds that number. This helps responders assess whether further protective measures are needed.
- **Number of Readings** – the number of measurements collected by the sensor, usually collected once every second or every minute.
- **Number of Detections** – the number of measurements greater than zero
- **Concentration Range** – the minimum and maximum measurement that was collected
- **Period Average** – the average measurement for the entire collection period
- **Action Levels** – based on the most protective AEGLs (Acute Exposure Guideline Levels) which are used by emergency responders when dealing with chemical spills or other exposures and describe the human health effects from once-in-a-lifetime, or rare, exposure to airborne chemicals. Further information is available at [EPA.gov/AEGL](http://EPA.gov/AEGL).