

# Air Monitoring Summary Tables

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

Project Name: **BioLab Chlorine**

From: **10/10/24**  
5:00 PM

To: **10/11/24**  
5:00 AM



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	964	1	0-1705 ppb	0.17 ppb	9000 ppb 8hr avg
	H2S	No	964	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1367	544	0-0.20 ppm	0.00 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13797	0	0-0.4 ppm	0.07 ppm	1.8 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	979	302	0-1442 ppb	196.83 ppb	9000 ppb 8hr avg
	H2S	No	979	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1388	962	0-0.6 ppm	0.22 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13743	0	0-0 ppm	0 ppm	1.8 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	963	484	0-52 ppb	9.59 ppb	9000 ppb 8hr avg
	H2S	No	963	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1359	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	971	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	CL2	Yes	1375	679	0-1.7 ppm	0.27 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13684	1827	0-0.5 ppm	0 ppm	1.8 ppm 1hr avg

Station 13 - 3rd Ave Chekpoint							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	891	888	0-3583 ppb	131.73 ppb	9000 ppb 8hr avg
	H2S	No	688	118	0-0.8 ppm	0.10 ppm	0.51 ppm 1hr avg
	CL2	No	1275	1177	0-0.40 ppm	0.13 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	2346	0	0-0 ppm	0 ppm	1.8 ppm 1hr avg

Station 14 - Smyrna Road							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	961	0	0-160 ppb	17.35 ppb	9000 ppb 8hr avg
	H2S	No	961	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1363	398	0-0.10 ppm	0.03 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13649	0	0-0 ppm	0 ppm	1.8 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	797	0	0-0 ppb	1.52 ppb	9000 ppb 8hr avg
	H2S	No	797	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1098	149	0-0.30 ppm	0.01 ppm	0.5 ppm 1hr avg

Station 17 - Lester Biolab							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	768	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	768	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	985	6	0-0.10 ppm	0.00 ppm	0.5 ppm 1hr avg

# Air Monitoring Summary Tables

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

Project Name: **BioLab Chlorine**

From: **10/10/24**  
**5:00 PM**

To: **10/11/24**  
**5:00 AM**



Station 18 - Dogwood and VSW Checkpoint							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	972	0	0-0 ppb	0.05 ppb	9000 ppb 8hr avg
	H2S	No	972	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1381	309	0-0.10 ppm	0.02 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13791	0	0-0 ppm	0 ppm	1.8 ppm 1hr avg

Station 19 - Rockdale & Old Cov Hwy Checkpoint							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	126	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	126	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	252	6	0-0.20 ppm	0.00 ppm	0.5 ppm 1hr avg

Station 20 - West Old Cov Hwy Checkpoint							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	961	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	961	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1368	901	0-0.50 ppm	0.08 ppm	0.5 ppm 1hr avg

Station 21 - Railroad Crossing Checkpoint							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	961	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	961	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	Yes	1418	873	0-2.70 ppm	0.24 ppm	0.5 ppm 1hr avg

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

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

The logo of the United States Environmental Protection Agency (EPA) Emergency Response. It is a circular emblem with a blue upper half and a red lower half. The words "UNITED STATES" are arched across the top, and "ENVIRONMENTAL PROTECTION AGENCY" is arched across the bottom. In the center, the EPA logo (a stylized flower/leaf) is to the left of the letters "EPA". Below "EPA", the words "EMERGENCY RESPONSE" are written in white capital letters on the red background.

**To: 10/11/24  
5:00 AM**

Notes:

% Percent

< Less than

- > Greater than

AEGL Acute Exposure Guideline Levels for Airborne Chemicals

C/m Counts (ionization events) per minute

µg/m<sup>3</sup> Micrograms per cubic meter

min Minute

PAC Protective Action Criteria

PEL Permissible exposure limit

ppb Parts per billion

ppm Parts per million

PM Particulate matter

SOG Standard Operating Guidelines

SPM Single Point Monitor

TEEL Temporary Emergency Exposure Limit

TLV Threshold limit value

Analyte

### Definition

### Action Level Reference

CL2

Chlorine

AEGL-1 1hr

H2S

## Hydrogen Sulfide

AEGL-1 1hr

HYDROGEN  
CHLORIDE (HCL)

Hydrogen Chloride

AEGL-1 1hr

VOC

Volatile Organic Compounds

AEGL-1 1hr

# 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 following is a review of station results for the time period from 5:00pm on 10/10/2024 to 5:00am on 10/11/2024:

- **Station 2:** No issues observed.
- **Station 8:** From 5:00pm to 5:00am there were sustained measurements of Cl<sub>2</sub> with a peak of 0.3ppm; the maximum 1-hour average was 0.1ppm, the maximum 8-hour average was 0.06ppm.
- **Station 10:** No issues observed.
- **Station 11:** From 9:30pm to 5:00am there were sustained measurements of Cl<sub>2</sub> with a peak of 1.7ppm; the maximum 1-hour average was 1.2ppm, the maximum 8-hour average was 0.30ppm.
- **Station 13:** From 5:00pm to 5:00am there were sustained measurements of Cl<sub>2</sub> with a peak of 0.4ppm; the maximum 1-hour average was 0.2ppm, the maximum 8-hour average was 0.18ppm.
- **Station 14:** No issues observed.
- **Station 16:** No issues observed.
- **Station 17:** No issues observed.
- **Station 18:** No issues observed.
- **Station 19:** No issues observed.
- **Station 20:** Due to telemetry issues, there was a gap in data between 5:00pm and 10:30pm. From 10:30pm to 5:00am there were sustained measurements of Cl<sub>2</sub> with a peak of 0.5ppm; the maximum 1-hour average was 0.1ppm, the maximum 8-hour average was 0.07ppm.
- **Station 21:** From 6:30pm to 12:15am there were sustained measurements of Cl<sub>2</sub> with a peak of 2.7ppm; the maximum 1-hour average was 0.6ppm, the maximum 8-hour average was 0.26ppm.

# 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)
  - **H<sub>2</sub>S:** 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
  - **O<sub>2</sub>:** Oxygen; this is a default sensor for the instrument and is used for industrial safety
  - **Cl<sub>2</sub>:** 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
  - **COCl<sub>2</sub>:** 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).