

Air Monitoring Summary Tables

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

Project Name: **BioLab Chlorine Fire**

From: **10/2/24**
5:00 AM

To: **10/2/24**
4:59 PM



Station 1 - Intersection of VFW Dr and Dogwood Dr							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	513	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	CO	No	513	65	0-10 ppm	0.55 ppm	83 ppm 1hr avg
	H2S	No	513	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	513	9	0-0.4 ppm	0 ppm	0.5 ppm 1hr avg
SPM Flex	PHOSGENE (COCL2)	No	8253	43	0-2 ppb	0.01 ppb	300 ppb 1hr avg
	HYDROGEN CHLORIDE (HCL)	No	8253	2484	0-0.22 ppm	0.01 ppm	1.8 ppm 1hr avg

Station 2 - Mammy's Kitchen - Intersection of Rockdale Industrial Blvd and Rockbridge Rd							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	823	2	0-10 ppb	0.02 ppb	9000 ppb 8hr avg
	CO	No	823	58	0-13 ppm	0.28 ppm	83 ppm 1hr avg
	H2S	No	823	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	823	163	0-0.40 ppm	0.04 ppm	0.5 ppm 1hr avg
SPM Flex	PHOSGENE (COCL2)	No	13662	0	0-0 ppb	0 ppb	300 ppb 1hr avg
	HYDROGEN CHLORIDE (HCL)	No	13617	0	0-0 ppm	0 ppm	1.8 ppm 1hr avg

Station 3 - ER Trailer - Old Covington Hwy							
	Data quality issues being resolved						

Station 4 - Intersection of Rockbridge Rd and Harvell St							
	Data quality issues being resolved						

Station 5 - Intersection of Lester Rd and Old Covington Hwy							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRae Pro	CO	No	847	3	0-17 ppm	0.04 ppm	83 ppm 1hr avg
	H2S	No	847	1	0-1.90 ppm	0.00 ppm	0.51 ppm 1hr avg
	CL2	No	847	0	0-0 ppm	0 ppm	0.5 ppm 1hr avg

Station 6 - Bio Lab Gate							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	392	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	CO	No	392	0	0-0 ppb	0 ppm	83 ppm 1hr avg
	H2S	No	392	0	0-0 ppb	0 ppm	0.51 ppm 1hr avg

Station 7 - Intersection of North Main St and Irwin Bridge Rd							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	413	134	0-3602 ppb	61.83 ppb	9000 ppb 8hr avg
	CO	No	413	0	0-0 ppm	0 ppm	83 ppm 1hr avg
	H2S	No	413	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	413	24	0-0.1 ppm	0.01 ppm	0.5 ppm 1hr avg

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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	865	417	0-1295 ppb	392.54 ppb	9000 ppb 8hr avg
	CO	No	865	0	0-0 ppm	0 ppm	83 ppm 1hr avg
	H2S	No	865	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	865	0	0-0 ppm	0 ppm	0.5 ppm 1hr avg

Station 9 - 3rd Avenue							
	Data quality issues being resolved						

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	310	310	180-1492 ppb	522.83 ppb	9000 ppb 8hr avg
	CO	No	310	0	0-0 ppm	0 ppm	83 ppm 1hr avg
	H2S	No	310	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	310	0	0-0 ppm	0 ppm	0.5 ppm 1hr avg

Station 11 - Patricks and Associates Inc							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	351	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	CO	No	351	1	0-2 ppm	0-0.01 ppm	83 ppm 1hr avg
	H2S	No	351	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	351	1	0-0.3 ppm	0 ppm	0.5 ppm 1hr avg
SPM Flex	PHOSGENE (COCL2)	No	4689	0	0-0 ppb	0 ppb	300 ppb 1hr avg
	HYDROGEN CHLORIDE (HCL)	No	3583	284	0-0.076 ppm	0 ppm	1.8 ppm 1hr avg

Station 12 - IC Tent Front							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	Station 12 was temporarily positioned at the Site near the work area. This station is NOT representative of community air monitoring. Air monitoring for health and safety on-site is being conducted by dedicated teams. Workers on-site are wearing respiratory protection and other personal protective equipment as-needed according to the site-specific Health and Safety Plan.						

Notes:

Analyte	Definition	Action Level Reference
CL2	Chlorine	AEGL-1 1hr
CO	Carbon Monoxide	AEGL-2 1hr
H2S	Hydrogen Sulfide	AEGL-1 1hr
HYDROGEN CHLORIDE (HCL)	Hydrogen Chloride	AEGL-1 1hr
LEL	Lower Explosive Limit	29 CFR 1910.146, Confined Spaces
O2	Oxygen	29 CFR 1910.146, Confined Spaces
PHOSGENE (COCL2)	Phosgene (COCl ₂)	AEGL-2 1hr
VOC	Volatile Organic Compounds	AEGL-1 8hr

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 10/1/2024 to 4:59pm on 10/1/2024:

- **Station 1:** No issues observed. This instrument was moved at 12:32pm to adjust station positions based on wind conditions.
- **Station 2:** There was a sustained measurement of Cl₂ at and below 0.2ppm from 5:00am to 8:00am. There was a rise and fall of Cl₂ from 8:30am to 9:20am with a peak of 0.4ppm, the hourly average did not exceed 0.23ppm.
- **Station 3:** Data quality issues observed with initial report. Data is being repopulated. Report will be re-issued.
- **Station 4:** Data quality issues observed with initial report. Data is being repopulated. Report will be re-issued.
- **Station 5:** No issues observed. A single measurement of H₂S at 1.9ppm was recorded but was not sustained.
- **Station 6:** No issues observed. This instrument lacks a Cl₂ sensor. The instrument at this station was found to be damaged, then was removed at 1:43pm.
- **Station 7:** No issues observed. The instrument at this station was moved at 11:30am to adjust station positions based on wind conditions.
- **Station 8:** No issues observed.
- **Station 9:** This station was established at 4:05pm so less than 1-hour of data was collected during this reporting period. Data quality issues observed with initial report. Data is being repopulated. Report will be re-issued.
- **Station 10:** No issues observed. An instrument was moved to this station at 11:30am to adjust station positions based on wind conditions.
- **Station 11:** No issue observed. A single measurement of Cl₂ at 0.7ppm was recorded but was not sustained.
- **Station 12:** Station 12 was temporarily positioned at the Site near the work area. This station is NOT representative of community air monitoring. Air monitoring for health and safety on-site is being conducted by dedicated teams. Workers on-site are wearing respiratory protection and other personal protective equipment as-needed according to the site-specific Health and Safety Plan.

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.
- **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.