

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: 10/5/24
5:00 PM

To: 10/6/24
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	739	723	0-2325 ppb	99.70 ppb	9000 ppb 8hr avg
	H2S	No	739	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1479	617	0-0.5 ppm	0.14 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13834	0	0-0 ppm	0 ppm	1.8 ppm 1hr avg
SPM Flex	PHOSGENE (COCL2)	No	13851	0	0-0 ppb	0 ppb	300 ppb 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	734	25	0-21 ppb	0.29 ppb	9000 ppb 8hr avg
	H2S	No	734	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	Yes	1872	1508	0-4.40 ppm	0.41 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	709	157	0-57 ppb	6.53 ppb	9000 ppb 8hr avg
	H2S	No	709	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1418	20	0-0.10 ppm	0.00 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	751	701	0-379 ppb	90.35 ppb	9000 ppb 8hr avg
	H2S	No	751	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1502	306	0-0.60 ppm	0.03 ppm	0.5 ppm 1hr avg
SPM Flex	PHOSGENE (COCL2)	No	13797	102	0-3 ppb	0.02 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	744	84	0-17 ppb	0.92 ppb	9000 ppb 8hr avg
	H2S	No	744	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1488	368	0-0.30 ppm	0.03 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
AreaRAE Pro	VOC	No	749	576	0-210 ppb	93.87 ppb	9000 ppb 8hr avg
	H2S	No	749	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1498	0	0-0 ppm	0 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	740	604	0-200 ppb	81.21 ppb	9000 ppb 8hr avg
	H2S	No	740	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1480	736	0-0.60 ppm	0.15 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	745	383	0-188 ppb	48.77 ppb	9000 ppb 8hr avg
	H2S	No	745	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	Yes	745	407	0-0.80 ppm	0.20 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 following is a review of station results for the time period from 5:00pm on 10/5/2024 to 5:00am on 10/6/2024:

- **Station 2:** No issues observed
- **Station 8:** Throughout the operational period there were sustained measurements of Cl₂. Between 5:30pm and 7:30pm there were several Cl₂ peaks ranging from 1.5ppm to 4.4ppm with sustained concentrations between 0.1ppm and 0.6ppm. From 7:30pm to 10:45pm sustained Cl₂ concentrations were between 0.6ppm and 0.8ppm. Then from 11:00pm to 4:00am sustained Cl₂ concentrations were between 0.1ppm and 0.5ppm. The maximum 1-hour average was 0.87ppm and the maximum 8-hour average was 0.43ppm.
- **Station 10:** No issues observed.
- **Station 11:** There was a rise and fall of Cl₂ concentrations from 1:15am to 1:30am with a peak concentration of 0.6ppm. Another rise and fall occurred from 4:05am to 4:12am with a peak concentration of 0.5ppm. The maximum 1-hour average was 0.1ppm and the maximum 8-hour average was 0.04ppm.
- **Station 13:** No issues observed
- **Station 14:** No issues observed
- **Station 16:** From 7:00pm to 1:00am there were sustained Cl₂ measurements between 0.1ppm and 0.6ppm; the maximum 1-hour average was 0.45ppm and the maximum 8-hour average was 0.22ppm
- **Station 17:** From 6:30pm to 11:00pm there was a rise and fall of Cl₂ concentrations with a peak of 0.8ppm; the maximum 1-hour average was 0.69ppm and the maximum 8-hour average was 0.3ppm.

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.