

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: 10/7/24
5:00 AM

To: 10/7/24
5:00 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	581	1	0-276 ppb	0.48 ppb	9000 ppb 8hr avg
	H2S	No	581	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1162	458	0-0.40 ppm	0.12 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	11897	0	0-0 ppm	0 ppm	1.8 ppm 1hr avg
SPM Flex	PHOSGENE (COCL2)	No	13831	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	677	63	0-343 ppb	15.42 ppb	9000 ppb 8hr avg
	H2S	No	686	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	Yes	1378	450	0-0.5 ppm	0.03 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	679	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	679	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1358	832	0-0.40 ppm	0.12 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	612	288	0-142 ppb	45.96 ppb	9000 ppb 8hr avg
	H2S	No	612	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1232	384	0-6 ppm	0.10 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13715	2423	0-1.58 ppm	0.02 ppm	1.8 ppm 1hr avg
SPM Flex	PHOSGENE (COCL2)	No	6578	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	521	150	0-160 ppb	26.58 ppb	9000 ppb 8hr avg
	H2S	No	521	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1042	416	0-0.40 ppm	0.09 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	634	62	0-20 ppb	0.77 ppb	9000 ppb 8hr avg
	H2S	No	634	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1268	612	0-0.30 ppm	0.08 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	444	2	0-1509 ppb	3.99 ppb	9000 ppb 8hr avg
	H2S	No	444	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	886	886	0-0.6 ppm	0.06 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	672	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	672	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1344	526	0-0.50 ppm	0.12 ppm	0.5 ppm 1hr avg

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From: 10/7/24
5:00 AM

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Notes:

% Percent
< Less than
> Greater than
AEGL Acute Exposure Guideline Levels for Airborne Chemicals
C/m Counts (ionization events) per minute
µg/m³ 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

Notes:	Analyte	Definition	Action Level Reference
% Percent	CL2	Chlorine	AEGL-1 1hr
< Less than	H2S	Hydrogen Sulfide	AEGL-1 1hr
> Greater than	HYDROGEN CHLORIDE	Hydrogen Chloride	AEGL-1 1hr
AEGL Acute Exposure Guideline Levels for Airborne Chemicals	PHOSGENE (COCl₂)	Phosgene (COCl₂)	AEGL-2 1hr
C/m Counts (ionization events) per minute	VOC	Volatile Organic Compounds	AEGL-1 1hr
µg/m³ 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			

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 5:00am on 10/7/2024 to 5:00pm on 10/7/2024:

- **Station 2:** From 5:00am to 10:00am there were sustained measurements of Cl2 with a peak of 0.4ppm; the maximum 1-hour average was 0.3ppm, the maximum 8-hour average was 0.31ppm.
- **Station 8:** No issues observed.
- **Station 10:** From 10:00am to 5:00pm there were sustained measurements of Cl2 with a peak of 0.4ppm; the maximum 1-hour average was 0.3ppm, the maximum 8-hour average was 0.20ppm.
- **Station 11:** There were multiple rises and fall events of Cl2 concentrations.
 - 10:30am to 12:00am, peak of 2.9ppm with hourly average up to 0.3ppm (action level is 0.5ppm over 1 hour)
 - 2:00pm to 2:30pm, peak of 6ppm with hourly average up to 0.5ppm
 - 3:00pm to 3:30pm, peak of 1.3ppm with hourly average up to 0.6ppm
 - 3:50pm to 4:05pm, peak of 1.4ppm with hourly average up to 0.13ppm
- **Station 13:** From 5:00am to 10:00am there were sustained measurements of Cl2 with a peak of 0.4ppm; the maximum 1-hour average was 0.2ppm, the maximum 8-hour average was 0.22ppm.
- **Station 14:** From 5:00am to 9:00am there were sustained measurements of Cl2 with a peak of 0.3ppm; the maximum 1-hour average was 0.2ppm, the maximum 8-hour average was 0.18ppm.
- **Station 16:** No issues observed.
- **Station 17:** From 5:00am to 10:00am there were sustained measurements of Cl2 with a peak of 0.5ppm; the maximum 1-hour average was 0.3ppm, the maximum 8-hour average was 0.28ppm.

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.