

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: 10/10/24
5:00 AM

To: 10/10/24
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	810	4	0-64 ppb	0.17 ppb	9000 ppb 8hr avg
	H2S	No	810	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1620	14	0-0.20 ppm	0.00 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13556	0	0-0 ppm	0 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	851	368	0-1402 ppb	239.18 ppb	9000 ppb 8hr avg
	H2S	No	851	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1702	522	0-0.30 ppm	0.03 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13662	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	788	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	788	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1576	410	0-0.50 ppm	0.11 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	858	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	CL2	No	1716	44	0-0.20 ppm	0.00 ppm	0.51 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13492	0	0-0 ppm	0 ppm	0.5 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	703	531	0-839 ppb	110.16 ppb	9000 ppb 8hr avg
	H2S	No	703	172	0-1.70 ppm	0.21 ppm	0.51 ppm 1hr avg
	CL2	No	1406	606	0-0.20 ppm	0.06 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	2380	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	758	234	0-160 ppb	17.35 ppb	9000 ppb 8hr avg
	H2S	No	758	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1516	470	0-0.30 ppm	0.07 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13136	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	718	107	0-23 ppb	1.52 ppb	9000 ppb 8hr avg
	H2S	No	718	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1436	378	0-0.30 ppm	0.05 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	859	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	859	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1718	10	0-0.10 ppm	0.00 ppm	0.5 ppm 1hr avg

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	884	2	0-41 ppb	0.05 ppb	9000 ppb 8hr avg
	H2S	No	884	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1768	798	0-0.20 ppm	0.05 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13413	0	0-0 ppm	0 ppm	1.8 ppm 1hr avg

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From: 10/10/24
5:00 AM

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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	778	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	778	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1556	642	0-0.10 ppm	0.04 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	780	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	780	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1560	540	0-0.20 ppm	0.04 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	780	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	780	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1320	600	0-0.50 ppm	0.08 ppm	0.5 ppm 1hr avg

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

From: 10/10/24
5:00 AM

The logo is a circular seal for the United States Environmental Protection Agency's Emergency Response. The top half of the seal is dark blue with the words "UNITED STATES" in white at the top and "EPA" in large white letters in the center, accompanied by a small white icon of a person with arms raised. The bottom half is red with the words "EMERGENCY RESPONSE" in white. The outer ring of the seal is white with the words "ENVIRONMENTAL PROTECTION AGENCY" in blue.

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

Analyte	Definition	Action Level Reference
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CL2	Chlorine	AEGL-1 1hr
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H ₂ S	Hydrogen Sulfide	AEGL-1 1hr
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HYDROGEN CHLORIDE	Hydrogen Chloride	AEGL-1 1hr
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VOC	Volatile Organic Compounds	AEGL-1 1hr
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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 10/10/2024 to 5:00pm on 10/10/2024:

- **Station 2:** No issues observed.
- **Station 8:** From 5:00am to 9:30am there were sustained measurements of Cl₂ with a peak of 0.3ppm; the maximum 1-hour average was 0.1ppm, the maximum 8-hour average was 0.06ppm.
- **Station 10:** From 5:00am to 8:30am there were sustained measurements of Cl₂ with a peak of 0.5ppm; the maximum 1-hour average was 0.4ppm, the maximum 8-hour average was 0.38ppm.
- **Station 11:** No issues observed.
- **Station 13:** No issues observed.
- **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:** No issues observed.
- **Station 21:** 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.