

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: 10/11/24
5:00 PM**

**To: 10/12/24
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	1136	2	0-323 ppb	0.35 ppb	9000 ppb 8hr avg
	H2S	No	1136	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	2271	1198	0-0.50 ppm	0.10 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13771	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	1131	173	0-1445 ppb	173.30 ppb	9000 ppb 8hr avg
	H2S	No	1131	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	2262	1532	0-0.60 ppm	0.11 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13769	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	1135	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	H2S	No	1135	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	2269	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	1136	784	0-88 ppb	40.75 ppb	9000 ppb 8hr avg
	CL2	No	2271	42	0-0.30 ppm	0.00 ppm	0.51 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13589	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	1046	1046	48-421 ppb	89.87 ppb	9000 ppb 8hr avg
	CL2	No	2092	2092	0.10-0.30 ppm	0.18 ppm	0.51 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	2218	0	0-0 ppm	0 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	601	281	0-286 ppb	7.60 ppb	9000 ppb 8hr avg
	H2S	No	601	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	1202	1018	0-0.40 ppm	0.14 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13655	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	1118	23	0-8 ppb	0.07 ppb	9000 ppb 8hr avg
	H2S	No	1118	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	2235	0	0-0 ppm	0 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	1130	262	0-46 ppb	3.28 ppb	9000 ppb 8hr avg
	H2S	No	1130	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	2260	450	0-0.30 ppm	0.02 ppm	0.5 ppm 1hr avg

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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	1134	779	0-78 ppb	3.01 ppb	9000 ppb 8hr avg
	H2S	No	1134	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	2267	1533	0-0.20 ppm	0.08 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13769	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	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	1894	1158	0-0.50 ppm	0.12 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	1128	12	0-2269 ppb	5.94 ppb	9000 ppb 8hr avg
	H2S	No	1128	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	2255	1570	0-0.20 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	1128	12	0-2269 ppb	5.94 ppb	9000 ppb 8hr avg
	H2S	No	1128	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	CL2	No	2259	1024	0-0.40 ppm	0.07 ppm	0.5 ppm 1hr avg

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To: 10/12/24
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/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

CL2 Chlorine

AEGL-1 1hr

H ₂ S	Hydrogen Sulfide
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AEGL-1 1hr

HYDROGEN CHLORIDE (HCL)	Hydrogen Chloride
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AEGL-1 1hr

VOC Volatile Organic

AEGL-1 1hr

Notes: *All CL2 readings 0.5 ppm and over were checked against an SPM flex that gave readings of 0 ppm. Sensors were zero cal'd after.

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 10/11/2024 to 5:00am on 10/12/2024:

- **Station 2:** From 10:30pm to 5:00am there were sustained measurements of Cl₂ with a peak of 0.5ppm; the maximum 1-hour average was 0.1ppm, the maximum 8-hour average was 0.02ppm.
- **Station 8:** From 6:45pm to 5:00am there were sustained measurements of Cl₂ with a peak of 0.6ppm; the maximum 1-hour average was 0.4ppm, the maximum 8-hour average was 0.13ppm.
- **Station 10:** No issues observed.
- **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:** From 5:00pm to 11:30am and 2:30am to 5:00am 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 0.15ppm.
- **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.