



October 2024 Biolab Fire

Conyers Georgia

The Situation, Operations and EPA Air Monitoring
Regional Response Team 4

May 13, 2026

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On-Scene Coordinator(s)
U.S. EPA R4

Initial Response Sep 29, 2024

- Incident began at approximately 05:00
- NRC report received at 07:30 and mobilized 2 OSC(s)
- Trichloroisocyanuric acid (TCCA) fire/reaction
- Multiple fire units
 - Mutual Aid from surrounding counties
 - Applying water to “fire”
- Rockdale EMA orders
 - 17,000 evacuated
 - 93,500 shelter in place



The Problem



Initial Response



Initial Response



Initial Response



BioLab Facility Conyers, GA

- East of Atlanta adjacent to I-20
- Industrial & Residential neighborhood
- Chlorinated pool chemical product
- Initial fire in 270,000 ft² warehouse
 - Plant 14
 - Bulk chemical storage area
 - Separated by firewall



(Source: Chemical Safety Board Report)

BioLab Facility Plant 14

≈13.9 million pounds of...

- TCCA Trichloroisocyanuric acid
- DCCA Sodium dichloroisocyanurate

Packaged in bulk bags (“super sacks”)
2,750 lbs/ea



Google Earth Image

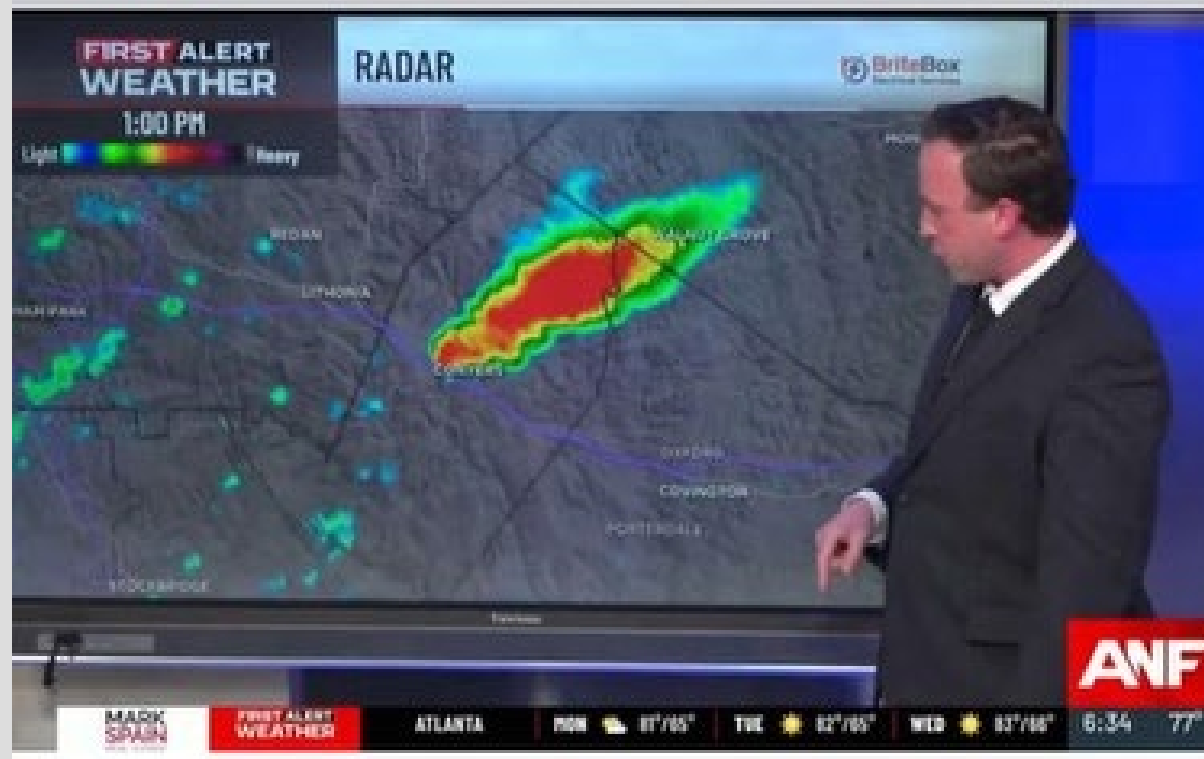




JIC Established – 10/11/24



Plume on Doppler Radar





BioLab Fire Timeline

September 29, 2024

- 0500 Biolab personnel call 911
- 0530 Rockdale County Fire and Rescue arrives on scene
- 0600 RCFR and Rockdale EMA began door-to-door shelter-in-place and evacuations
- 0740 First emergency shelter-in place alert issued (Wireless Emergency Alert via text)
- 0810 The first fire extinguished on Plant 14 roof
- 1200 Second fire erupted, larger and produced thick black smoke
- 1240 Plant 14 exterior wall collapses, roof begins to collapse
- 1600 Second fire extinguished
- 1605 EPA fixed air monitoring initiated, stations in the community and the Site
- 2000 Plant 14 roof and walls have collapsed. RCFR focuses on flare ups in the debris

September 29 - October 17

BioLab response contractor treated impacted TCCA.
EPA conducts community-based air monitoring.

(Timeline Source: CSB, Investigation Update May 2025)



BioLab Fire Formation of Unified Command

- **EPA OSC established Unified Command and immediately requested additional resources.**
 - **Biolab Operations Manager**
 - **Rockdale County Deputy Fire Chief**
 - **GA EPD State On-Scene Coordinator**
 - **EPA Federal On-Scene Coordinator**



EPA Response

- EPA established Unified Command (UC)
- Air monitoring for Cl, HCl and Phosgene – to be discussed later
- Collected and shared real-time data with Public, UC, and BioLab Contractors
- EPA requested and received support from:
 - USCG Gulf Strike Team (Drone)
 - USCG National Strike Force, Public Information Assistance Team (JIC)
 - EPA Toxic Air Gas Analyzer (TAGA)
 - Agency for Toxic Substances and Disease Registry (ATSDR)



The Response Plan

- Suspend/reduce water application
- Confine and contain water runoff
- On-site treatment of impacted/off-gassing TCCA.
- Air monitoring over large area



Site Overview



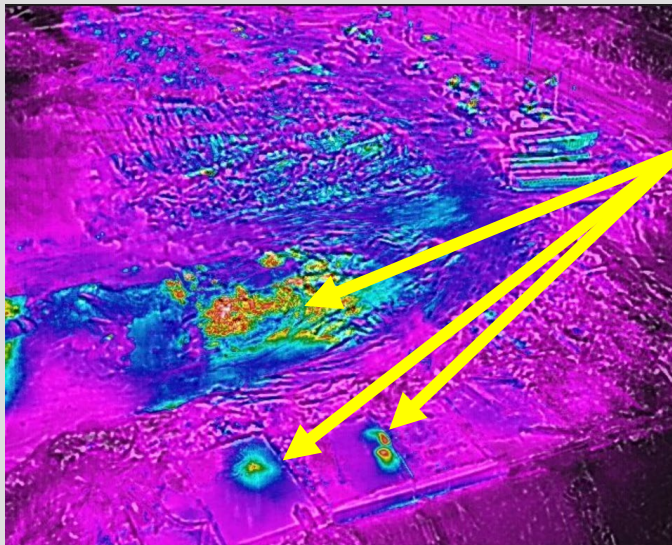
Run-off Control and Containment



TCCA Continued to React



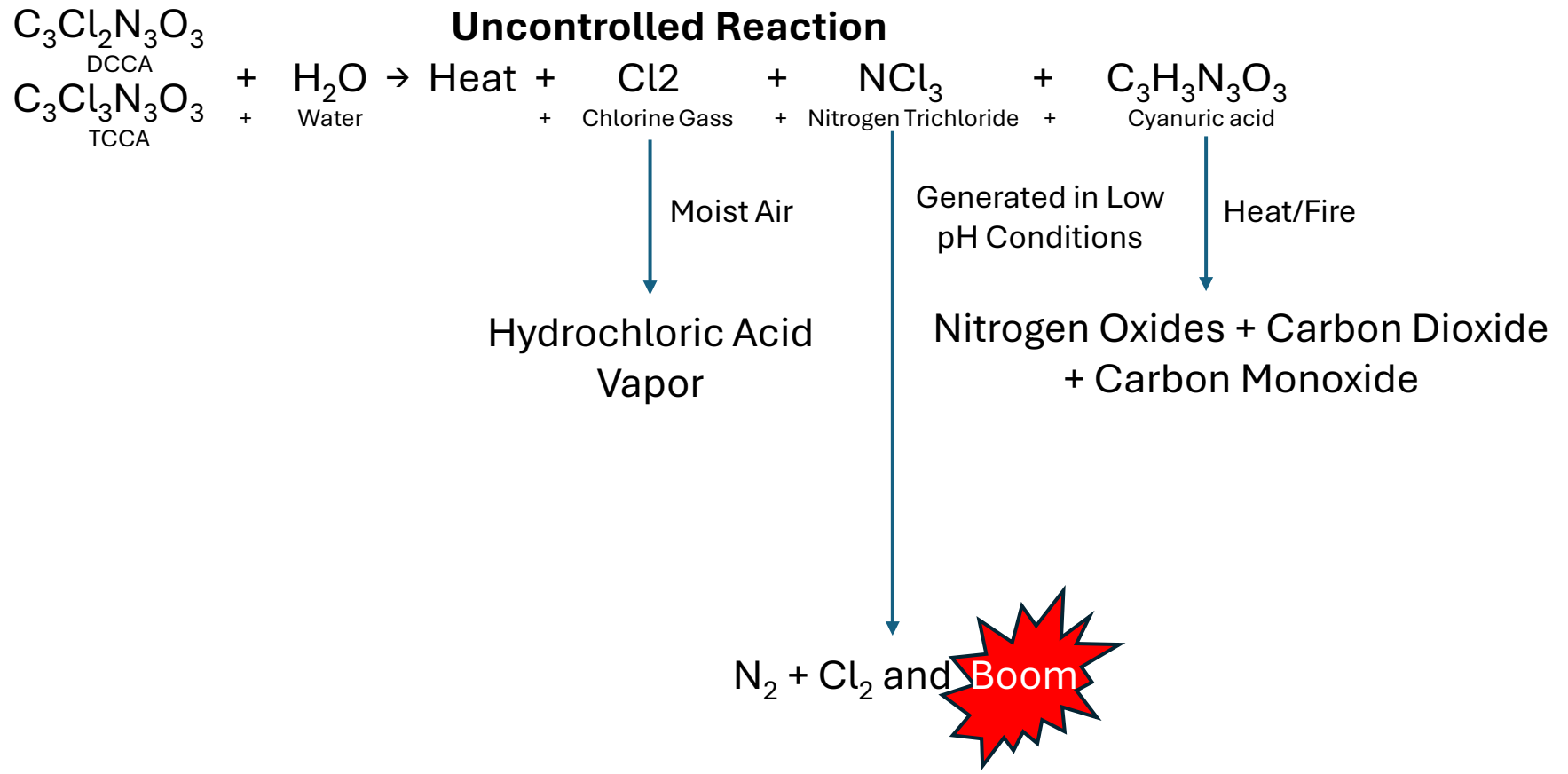
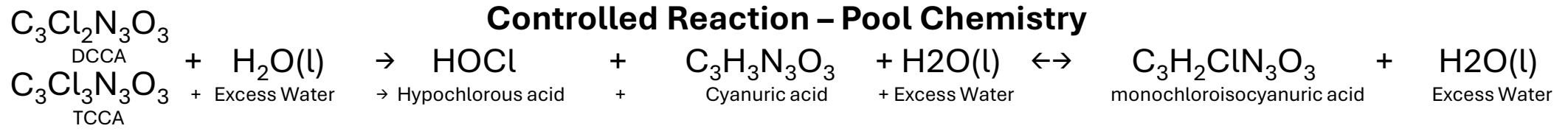
The TCCA reacted when disturbed during clean up activities.



Hot spots were located under fallen walls, and TCCA piles.

Required a batch process to allow for the TCCA to slowly react in solution.





Primary Treatment



Primary Treatment



Primary Treatment



Primary Treatment



Primary Treatment



On-Site Detention Pond Used for 2° Treatment



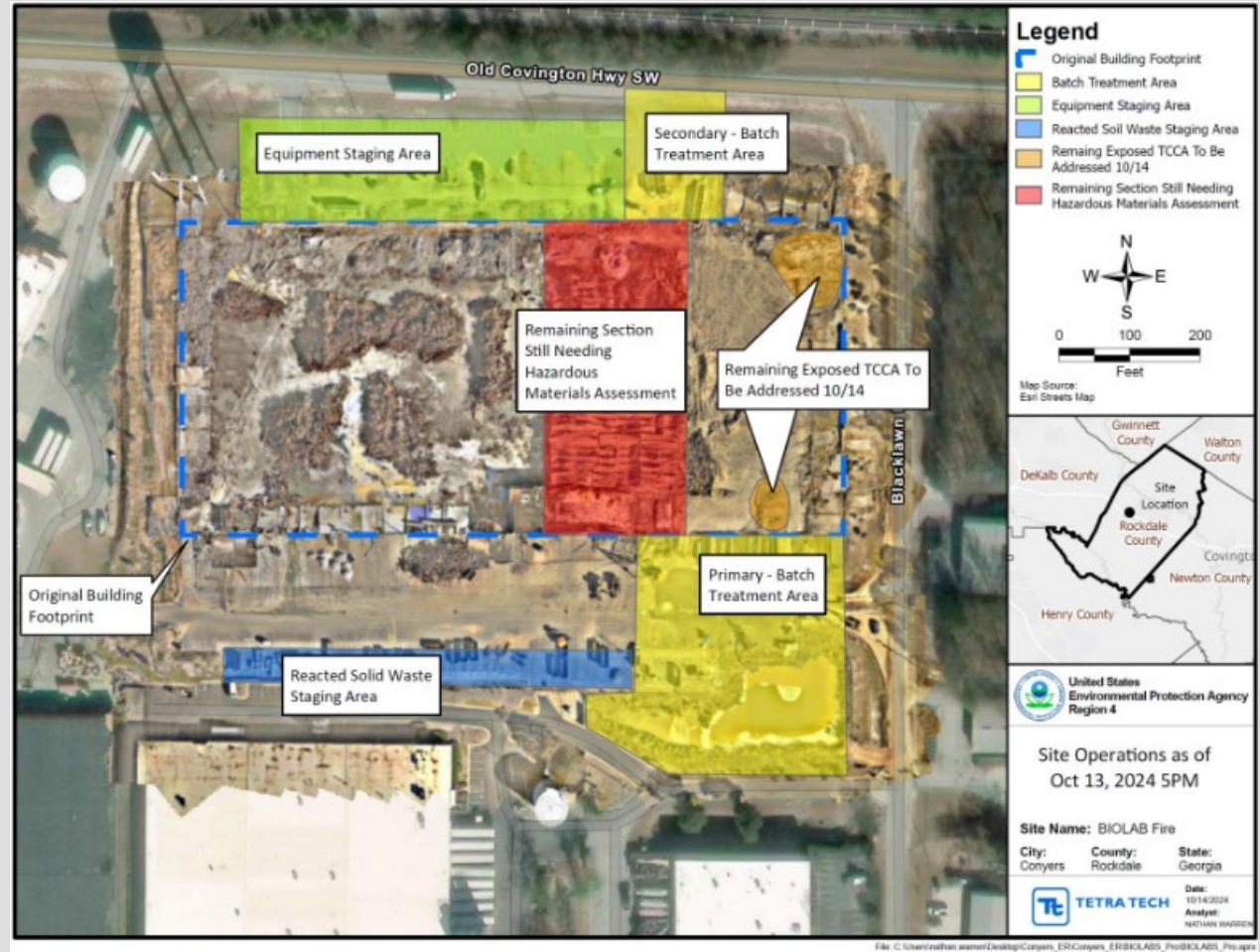
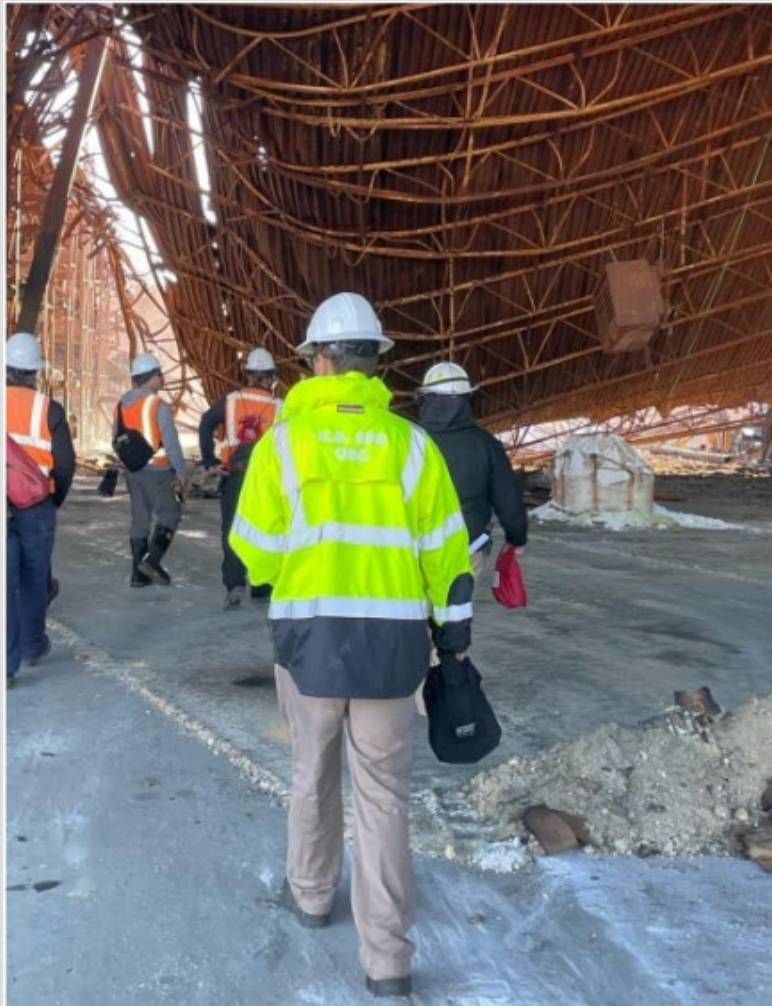
Clean Up Operations



Remains of the Warehouse



Post ER Walkthrough



Air Monitoring Needed?

- Both uncontrolled and controlled reactions released Chlorine and other toxic compounds
- EPA and RP deployed air monitoring
 - On-site for personnel safety
 - Off-site in surrounding community



EPA Air Monitoring Operations



- Off-site
 - Fixed air monitoring nearby the site near potential exposures.
 - Mobile air monitoring conducted downwind to monitor extent of plume and inform shelter in place or evacuation orders
 - TAGA utilized outside of shelter in place zone and at nearby county schools and hospitals



EPA Air Monitoring Stations





EPA Air Monitoring Stations – Day 1



EPA Air Monitoring Equipment and Data

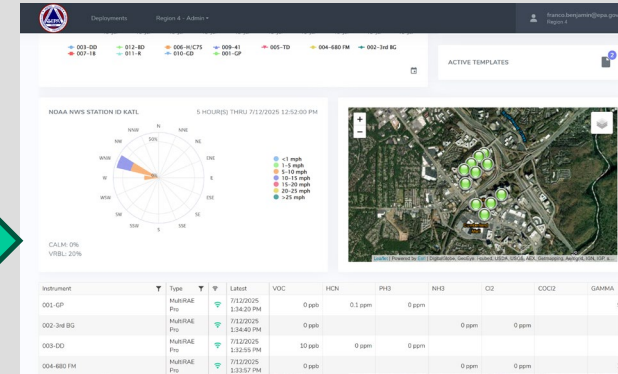
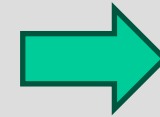


SPM Flex

- Chemical cassette
- Hydrogen Chloride and Phosgene

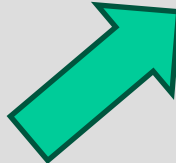


Wireless transmission to a common operating picture



AreaRae Pro

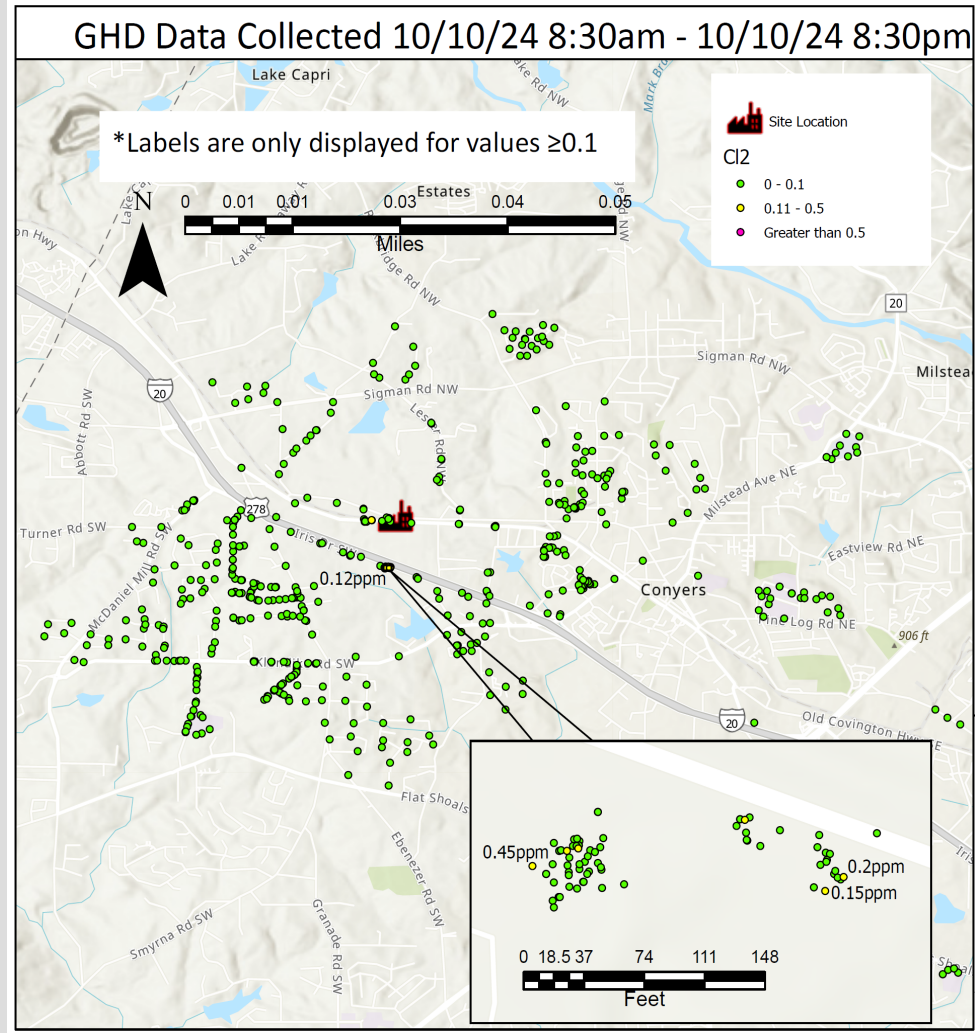
- Photoionization Detector
- Electrochemical sensors.
- Detected VOC, CO, LEL, H2H, O2, CL2





BioLab's Contractor GHD Data

- Conducted mobile monitoring
- Data was shared with Air Monitoring Branch for single information flow to EMA
- EPA posted on public facing website



CONCENTRATIONS IN PPM ABOVE 0.1

SampleDate	CI2
2024-10-10T19:29:21	0.1
2024-10-10T14:08:38	0.1
2024-10-10T14:02:35	0.1
2024-10-10T14:02:18	0.1
2024-10-10T13:59:01	0.1
2024-10-10T12:59:29	0.1
2024-10-10T12:56:37	0.1
2024-10-10T16:30:31	0.12
2024-10-10T20:04:42	0.15
2024-10-10T13:14:47	0.15
2024-10-10T13:14:23	0.15
2024-10-10T19:57:52	0.2
2024-10-10T13:07:52	0.2
2024-10-10T16:34:07	0.45
2024-10-10T13:17:45	0.45

Biolab Fire Response 2024
 Data Collected by GHD,
 Contractor KIK-BioLab
 Downloaded and reported by EPA
 GHD Data Collected
 10/10/24 8:30am - 10/10/24 8:30pm
 FOR OPERATIONAL USE ONLY
 City: Conyers County: Rockdale State: Georgia
 Date: 10/11/2024
 Analyst: NATHAN WARREN



EPA Air Monitoring Experts Brief UC





Action Levels AEGL 1

Focus was on Chlorine, Acute Exposure Guidelines Levels – Level 1 for 1-Hour period.

- Notable discomfort, irritation, or certain asymptomatic non-sensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.*

Chlorine (PPM)	10 min	30 min	60 min	4 hr	8 hr
AEGL 1	0.50	0.50	0.50	0.50	0.50
AEGL 2	2.8	2.8	2.0	1.0	0.71
AEGL 3	50	28	20	10	7.1

The mean odor threshold for chlorine lies between 0.2 and 0.4 ppm. Source: ATSDR ToxGuide-172



EPA Air Monitoring Daily Data Summary Sheets

- Produced every 12 hours:

Example 9/29 5:05 PM to 9/30 4:58 AM, Station 8 vs Station 6

Station 8 - Old Covington Highway (33.6742900, -84.0470600)							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No, 1-hr average did not exceed	1187	915	0-119365 ppb	3716.60 ppb	9000 ppb 8hr avg
	CO	No	1187	95	0-14 ppm	0.32 ppm	83 ppm 1hr avg
	H2S	No, 1-hr average did not exceed	1187	33	0-1 ppm	0.02 ppm	0.51 ppm 1hr avg
	O2	No	1187	1187	20.90-20.90 %	20.90 %	<19.5 or >23%
	LEL	No	1187	0	0-0 %	0 %	0.1
	CL2	No, 1-hr average did not exceed	1187	55	0-0.70 ppm	0.01 ppm	0.5 ppm 1hr avg

Station 6 - VFW Drive (33.6719360, -84.0342200)							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No, 1-hr average did not exceed	1190	73	0-31083 ppb	250.88 ppb	9000 ppb 8hr avg
	CO	No	1192	0	0-0 ppm	0 ppm	83 ppm 1hr avg
	H2S	No	1192	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	O2	No	1192	1192	20.90-20.90 %	20.90 %	<19.5 or >23%
	LEL	No	1192	0	0-0 %	0 %	0.1
	CL2	No, 1-hr average did not exceed	1192	765	0-1.70 ppm	0.19 ppm	0.5 ppm 1hr avg

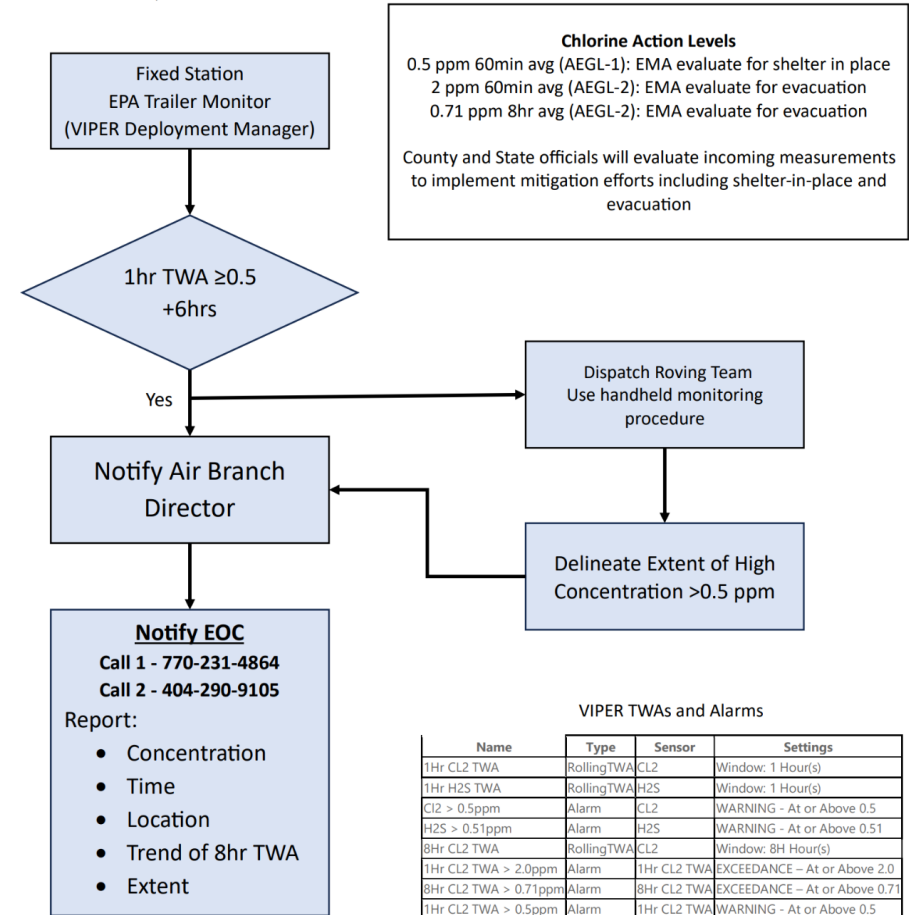


Fixed Station Decision and Reporting Tree

EPA developed a decision tree for the evaluation/implementation of shelter in place/evacuations.

EPA and GHD used this in the field

Conyers Biolab Chemical Fire 2024
 Air Monitoring Branch
 Fixed Station (VIPER) Decision and Reporting Tree
 Version – October 13, 2024



- Notify EOC**
 Call 1 - 770-231-4864
 Call 2 - 404-290-9105
- Report:
- Concentration
 - Time
 - Location
 - Trend of 8hr TWA
 - Extent



Public Health Involvement - Health Advisory Group

Agencies:

- GA Poison Control
- GA Department of Public Health
- GA Environmental Protection Division
- Gwinnett/Newton/Rockdale Public Health
- Agency for Toxic Substances and Disease Registry

These SMEs assisted with:

- Reviewing (TAGA) air monitoring data.
- Recommending school openings and lifting shelter in place and evacuation orders.

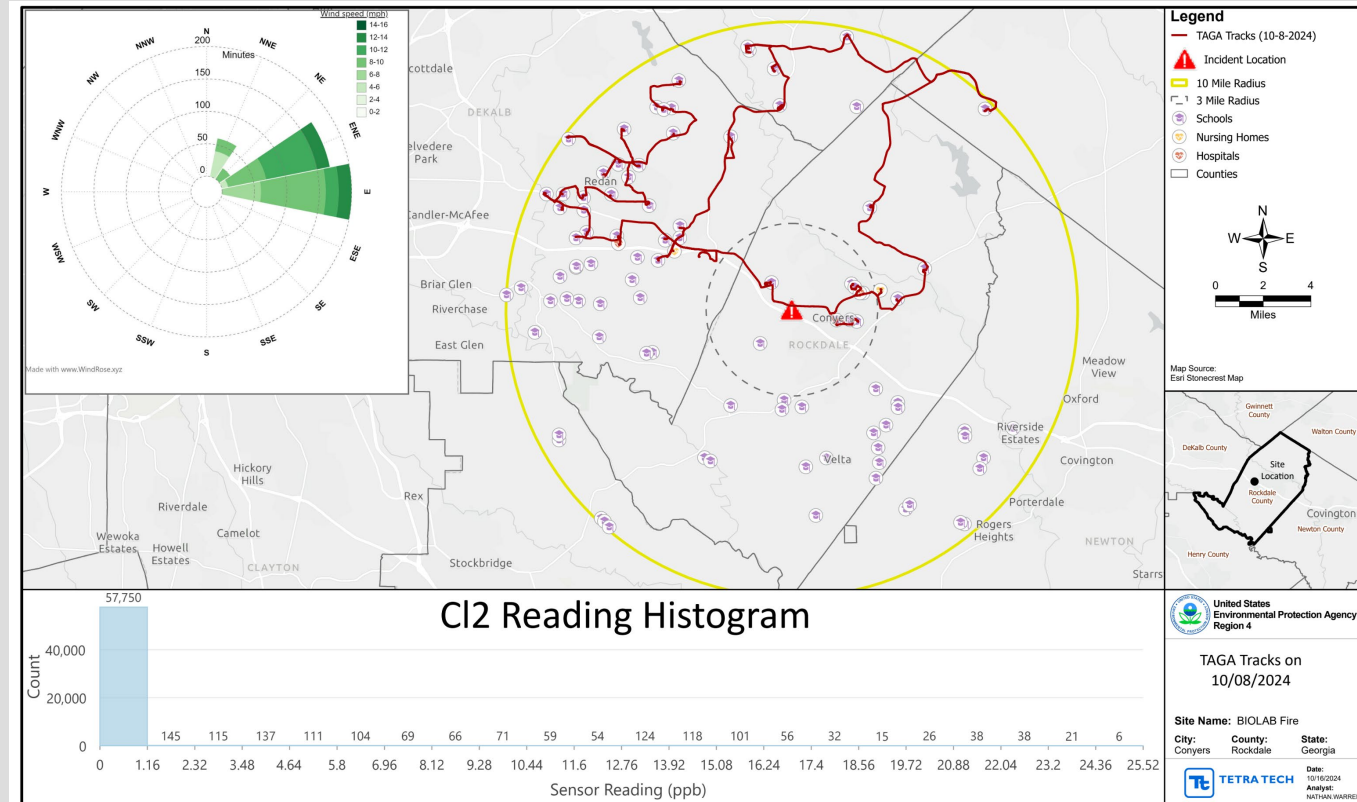
EPA Air Monitoring Toxic Air Gas Analyzer (TAGA) Bus

Air monitoring around sensitive receptors:

- schools, hospitals, nursing homes, etc

TAGA data reduced the shelter in-place from almost county wide to a 2-mile buffer

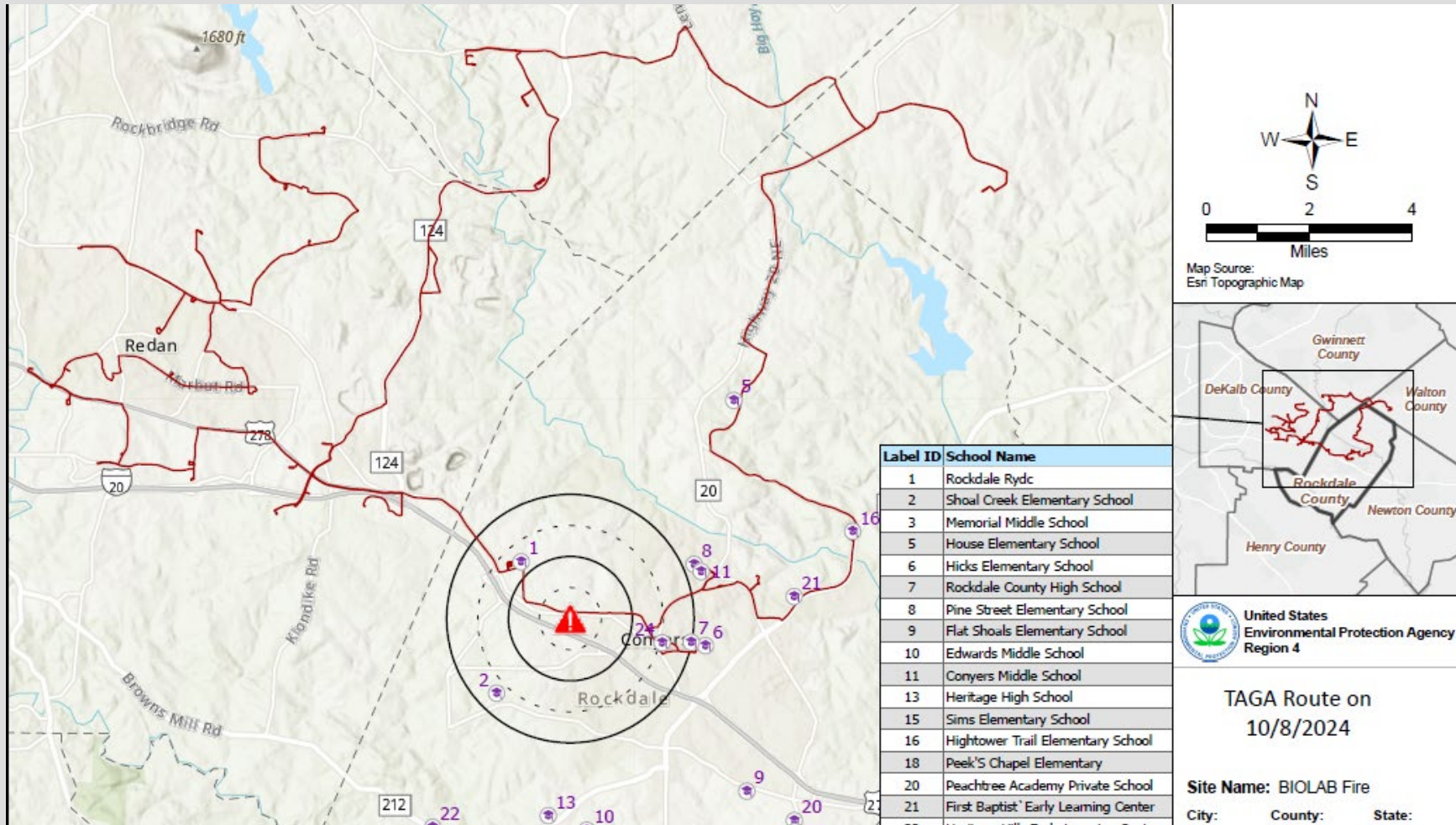
Wind direction dictated TAGA's route



Histogram: There were 57,750 Cl₂ readings between 0 and 1.16 ppb and Action Level is 550 PPB.



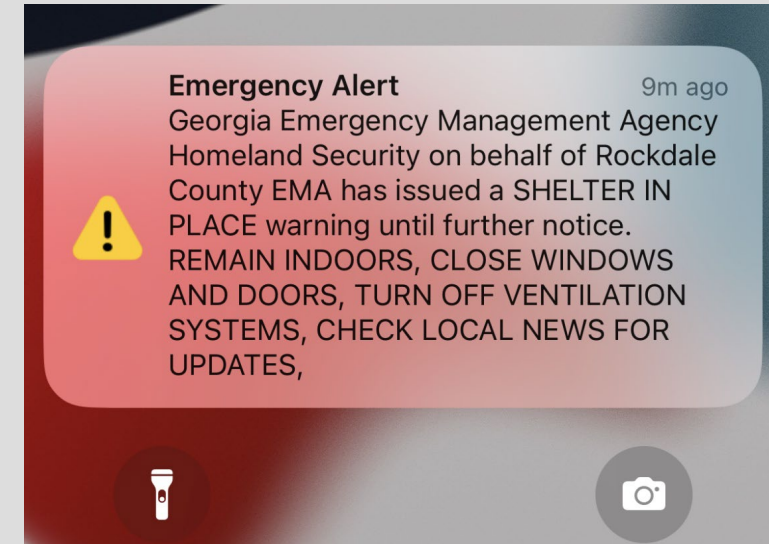
EPA Toxic Air Gas Analyzer (TAGA) Bus TAGA Route





Rockdale County EMA – Shrinking/Lifting of Shelter in Place

- October 7 – Shelter in place lifted for areas outside 2-mile radius around incident.
 - Five consecutive days of air monitoring data below action levels.
- October 17 – Shelter in place is removed completely.
 - Based on 72 hours of air monitoring showing no significant spikes
 - Cleanup actions are not producing a visible plume





The Resolution

- Rockdale County Lifted the “Shelter in Place Order” on October 17, 2024
- EPA demobilized air monitoring resources on October 18, 2024 (18 days after the incident began)
- GA EPD assumed oversight of long term remediation