



# Sierra Club Sampling Post Carus Explosion Overview

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# We are better together!

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# How We Learned About Carus Chemical Company Explosion



## Visible impact

Ash turned green and also pink

## Invisible threats

Lead, mercury other heavy metals handled on the site



# Sierra Club IL Rockton Response Chemtool Explosion (2021)

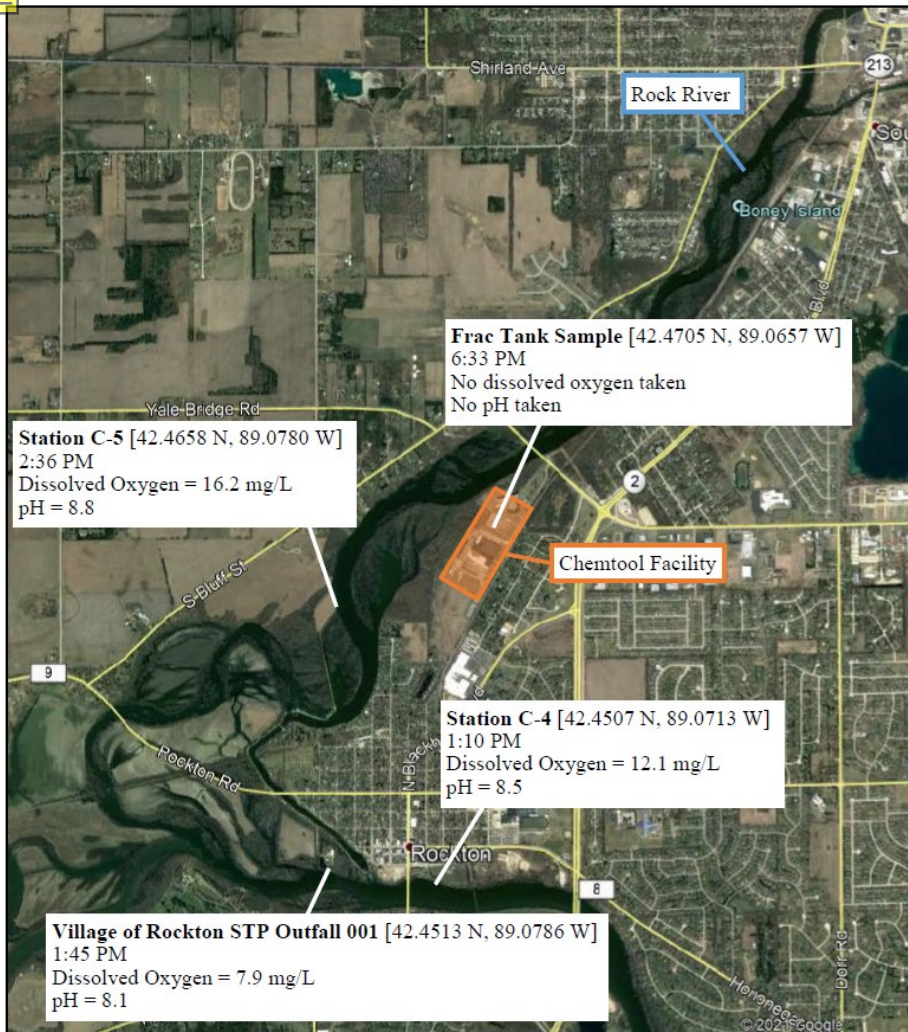
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Smoke billows from an industrial fire at Chemtool Monday in Rockton. The fire at the chemical plant, which produces industrial grease and fluids, prompted evacuations. | Scott Olson, Getty

- Connected with local volunteer leaders (Steven Hall) and others using a Chemtool Fire Facebook Group
- Community was concerned and confused about health departments guidance
- Sierra Club toxics specialist noted the limited testing for PFAS, SC volunteer collected water samples, which showed PFAS in river
- Sierra Club organizer Emilee Chaclas coordinated a Q+A with a healthcare professional
- A health guide was created
- Community members testified at an EPA hearing on disaster prevention rules

## Rockton Chemtool Fire occurred on June 14, 2021



- AFFF containing PFAS was used on the fire.
- Some runoff from fire went to the Rockton sewage treatment plant (STP). The STP also discharges to the Rock River.
- IEPA sampled STP outfall on 6/17/2021 and high levels of PFAS were detected.
- Sierra Club sampled similar locations of Rock River for PFAS on 6/23/2021. Documented PFAS and pre-cursors in water.
- River sediment not tested for potential chemicals of concern (COC).
- Rockton drinking water report indicates 2.2 ppt PFBS & 14 ppt PFHxS in 2020 tests, both below criteria. **Recommend filtering water at DW tap.**

# Importance of Sufficient Environmental Sampling Post Crisis

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- Confirmation sampling can identify **priority hotspots** of contamination
- Sufficient sampling **helps decision makers set course of action** for isolation and clean up
- Sufficient information allows community to **seek full compensation** of damages
- Coordinated sampling leads to a clearer picture
- Reliable information **rebuilds trust** in the community



Photo by GregorBister/iStock.

*“PFAS build up in human blood, take years to leave the body and don't break down in the environment.” (Hawthorne)*



# LaSalle-Summary of Samples Collected to Date

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## Sample information

- Jan. 11th & 12th **Illinois EPA** collected soil/ wipe samples, Little Vermillion, a Carus retention pond and unknown pond
- **Region V EPA** set up mobile ambient air monitors north and south of the Carus Site - started recording 4:30 PM the 11th and ran through to noon on the 12th
- **Brownfield** collected soil and other samples from homes surrounding Carus on January 20th and 24th.

## Gaps or problems with data:

- No information of where soil or wipe samples were collected. One pond is an unknown/redacted location.
- PM2.5 is of particular concern. For approximately 12 hours, the monitor readings were in mg/m<sup>3</sup> and not ug/m<sup>3</sup>.
- Results only reported for potassium and manganese. No depth or specific location provided. No sediment collected from Rotary Park pond.







# Summary of Samples Collected to Date

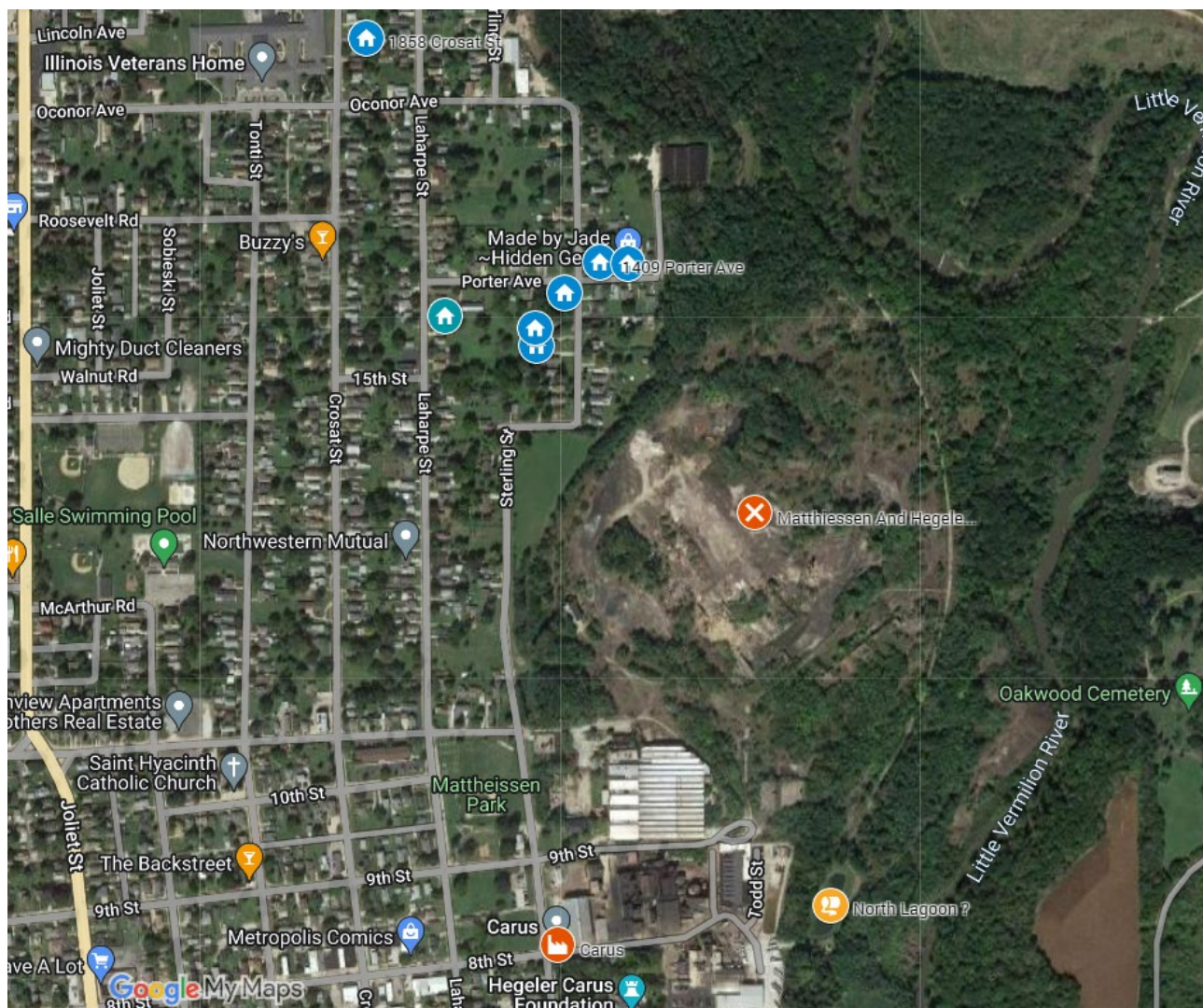
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## What we learned from the sample results

- IEPA collected most samples from Carus Site. Results show many metals are present. Little Vermillion River has slightly elevated levels of chloride and zinc. pH and potassium were high in the Carus retention pond.
- EPA air monitoring for PM2.5 show a max level 100 ug/m<sup>3</sup> 2:38 AM on January 12th, including “sensitive receptors”. The wind was from the north @ 8 mph. PM2.5 was 14 ug/m<sup>3</sup> by noon on the 12th.
- Sampled at ~ 6”. Nothing in the Brownfield data indicates levels above regulatory limits except manganese in a water run-off sample from a home. The granular material that was fallout from the fire showed very high levels of manganese and potassium.

## What does it mean and what to do

- Shows more than Manganese is present. Was the material in the retention pond ultimately released? **River sediment should be sample up- and downstream**
- The duration of sampling was about 19 hours, 35 minutes. The average PM2.5 was 47 ug/m<sup>3</sup>. **The regulatory limit for 24-hours is an average 35 ug/m<sup>3</sup>.**
- Lack of information is what led to the collection of furnace filters to see what was really in the fallout. Not knowing if other metals were present has led to many wanting to know what is in their yards. **Carus should do more sampling at their expense.**





# Furnace Filter Samples

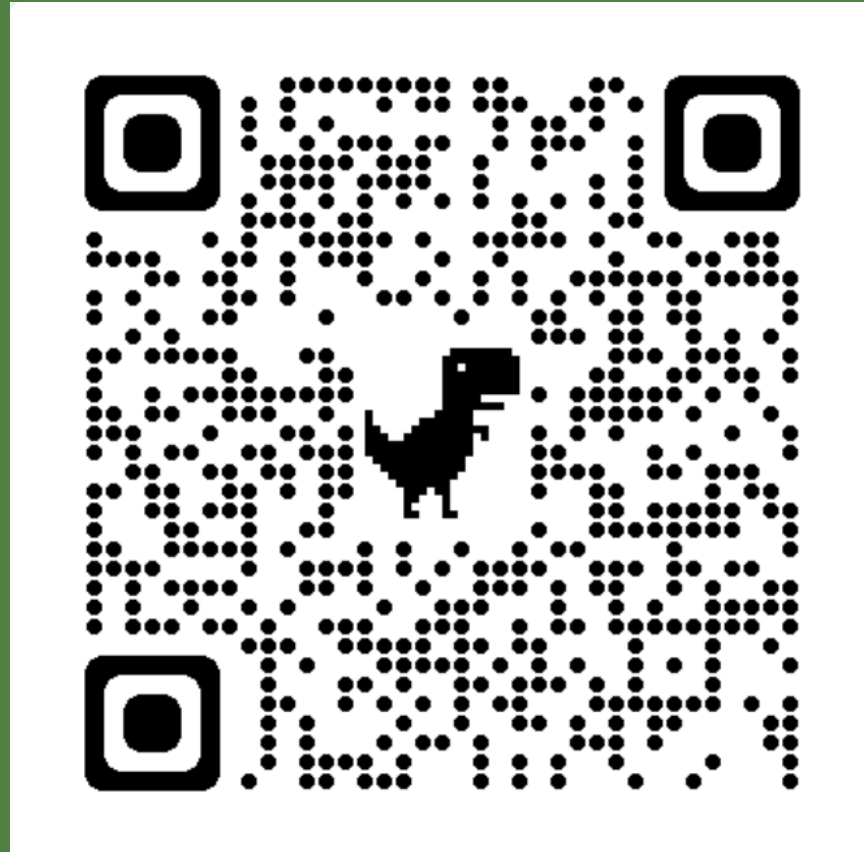
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## Purpose, Results, Meaning

- Jamie helped to coordinate and collect 8 furnace filter samples that were sent to Merit Lab in East Lansing, MI.
- Metals to test for was based on what we know Carus stores and uses provided in publicly available info.
- Every filter had the listed metals on them, these are the maximum results. Mercury, was only found on one home filter.
- Results show that more than Manganese was in fire fallout. They do not represent airborne levels but do show that a lot of particulate entered home furnaces and was captured by the filter. **The ductwork in homes should be cleaned at no expense. Recommend replacing filters with MERV 13 rated filters.**

Maximum Results	
Parameter	Result (mg/Kg)
Barium	1,330
Copper	182
Lead	53
Manganese	301
Zinc	2,820
Mercury	0.117
<b>Total</b>	<b>4,686</b>

# We want to hear from you!



# Next Steps

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Are you interested in engaging in this work and learning more about water?

- Learn more about IL Sierra Club and our water work (<https://www.sierraclub.org/illinois/issues/water>)
- Learn more about Heart of Illinois Group <https://www.sierraclub.org/illinois/heart-illinois/contact-us>
- Reach out!
  - Mila Marshall, Clean Water Advocate [mila.marshall@sierraclub.org](mailto:mila.marshall@sierraclub.org)
  - Denis Trabbic-Pointer, Sierra Club Volunteer, Michigan Chapter [dtrabbicpointer@gmail.com](mailto:dtrabbicpointer@gmail.com)