

2024

CHEMICAL SECURITY SEMINARS

July 18, 2024

[#ChemicalSecurity](#)



LaSalle, IL Chemical Fire

January 11, 2023



CISA Chemical Security Seminar - 7/18/2024

Background



- 0900 fire in warehouse storing Potassium Permanganate
- > 1m lbs of material (RQ = 100 lbs)
- Shelter-in-place order issued by LaSalle FD
- Social media reports of 'fallout,' aerial deposition of material
- Potential impact to Little Vermillion River?
- Company directed no foam use



Carus Chemical Fire

January 11, 2023



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Carus Chemical Fire

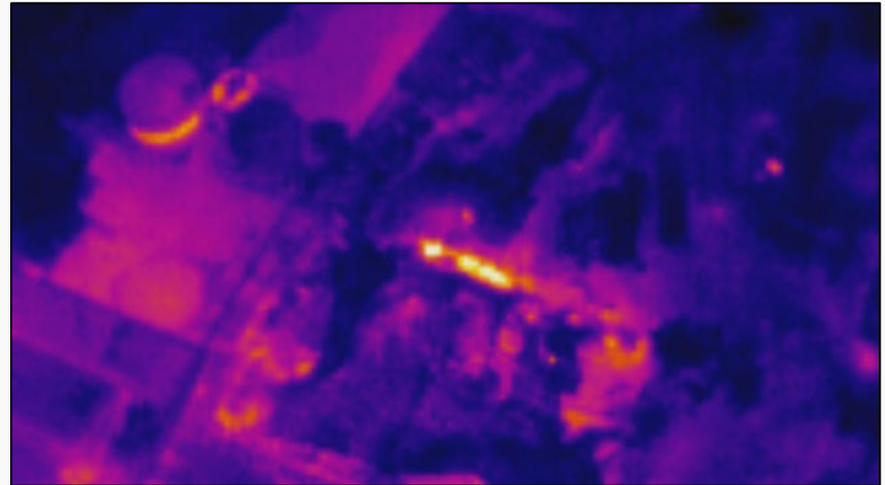
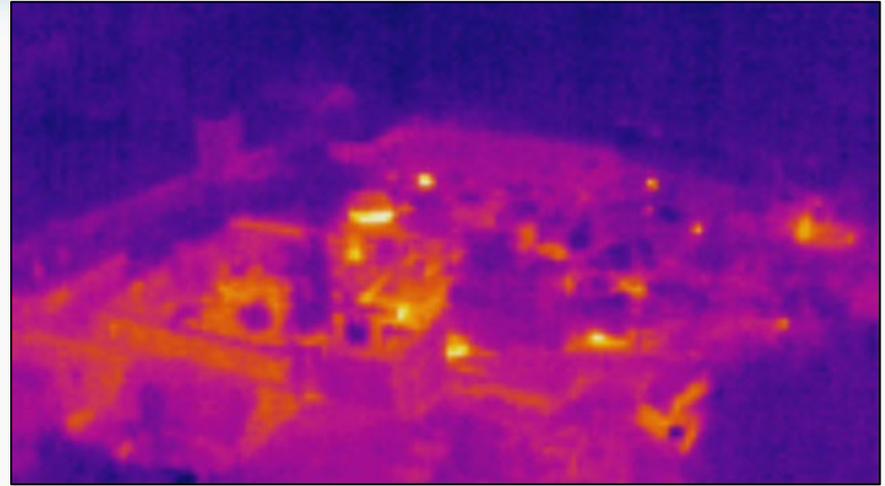
January 11, 2023



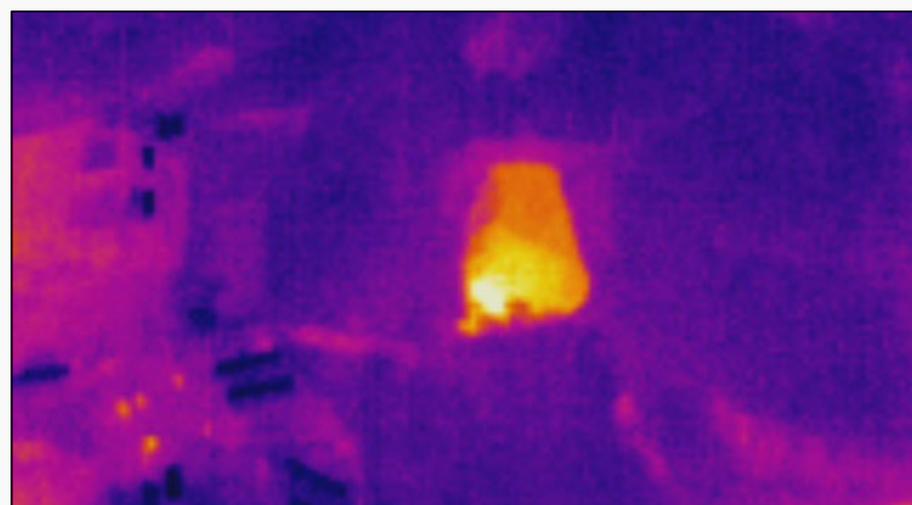
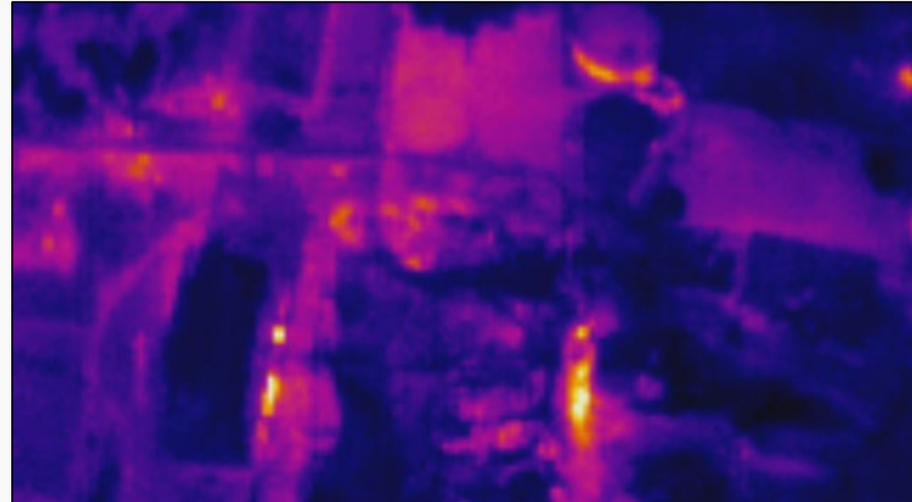
Night / Day



Infrared Aerials



Infrared Aerials



Response



- Upon arrival multiple companies, HazMat, and EMAs manage fire, fallout
- USEPA START
 - Air monitoring - particulates, 4 gas, acids (i.e., mineral acid as indicated by HCl), oxidizers (F as indicated by Cl)
 - Off-site impact assessment



Potassium Permanganate



- Potassium Permanganate (KMnO_4) as a solid is a strong oxidizer and caustic in water solution.
- Degrades in the environment to form Manganese Dioxide (MnO_2).
- Dark purple in concentrated form, pink in water to ~ 1 ppm.
- MnO_2 forms of manganese oxides, which can be green, black or brown in color.
- Used to treat harmful contaminants in both drinking water and wastewater plants.



HazMat Response



- MABAS Division 15 Hazmat Team requested around 1128hrs.
- We are a regional team made up of team members from 9 of 24 departments in our MABAS division.
- Responded with 2 hazmat squads, 1 mobile decon unit, 1 tender, 1 ambulance, and 3 Chief Officers, and 14 Hazmat Technicians.
- Staged at the LaSalle Firehouse and moved up to scene.
- Sent to southside of the incident to set up a decontamination line.
- As soon as we arrived on the southside so did “Murphy”
 - Had crews waiting for us to be decontaminated already
 - Being told this was not a big deal and just hose them off
 - Potential of over 100 people to decon
 - Team was trying to determine what are we dealing with
 - Were should we set up decon?
 - City street or on their property

HazMat Response



- Large water main break
- Assigned a Chief the command post
- Established a Decon Group Supervisor and Science Officer
- Received approval and moved Decon to west side
 - On Carus property
 - All run off would get contained by their emergency containment pool
- Decon line finally established
 - Level B and SCBA used for Decon group
 - Neutralizing agent provided by Carus to use for decon
 - Everyone checked for contamination as they came in. (Dark purple staining on gear/skin)
 - Hands & exposed skin sprayed down with the neutralizing agent & rinsed off
 - All PPE bagged for professional cleaning
 - Everyone sent through EMS and advised of any signs and symptoms to exposure
 - Hospital was contacted and advised of incident by ambulance crew

HazMat Response



- Lessons Learned:
 - Getting to I/C or obtaining a better “picture” of the scene.
 - We (I) kind of got pulled into the “well they said they want decon set up here”.
 - Communicating with crews that had to wait for Decon better.
 - In this situation, have a guide that would explain to the fire crews what was going to happen and make that a smoother operation.

HazMat Response



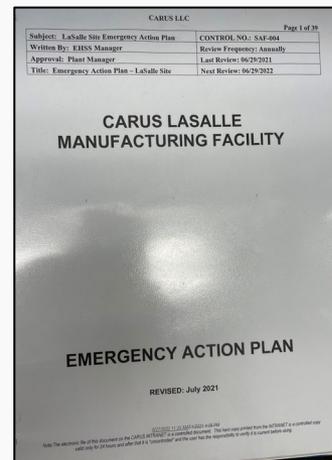
Decon vs Toss Hoses?



Response



- US EPA, USCG MSU Chicago, IEPA, IDNR, LaSalle & Carus coordinate on operations, comms
- IEPA performed water & wipe sampling
 - Retention pond
 - Little Vermillion River
 - Wipe sampling
- Air monitoring showed no impacts



Run-off



- Run-off from fire fighting (~ 1.5m gal) went to storm drain/emergency retention pond (ERP)
- Captured by French drains, berms, small amount penetrated and on grass/gravel
- South Lagoon (NPDES outfall to Little Vermillion River) isolated from ERP by shut-off valve.
- ERP capacity ~ 4m gal, though clay bottom liner only went part way up slope.
 - Wildlife hazing efforts



Run-off



Water Control



South Lagoon



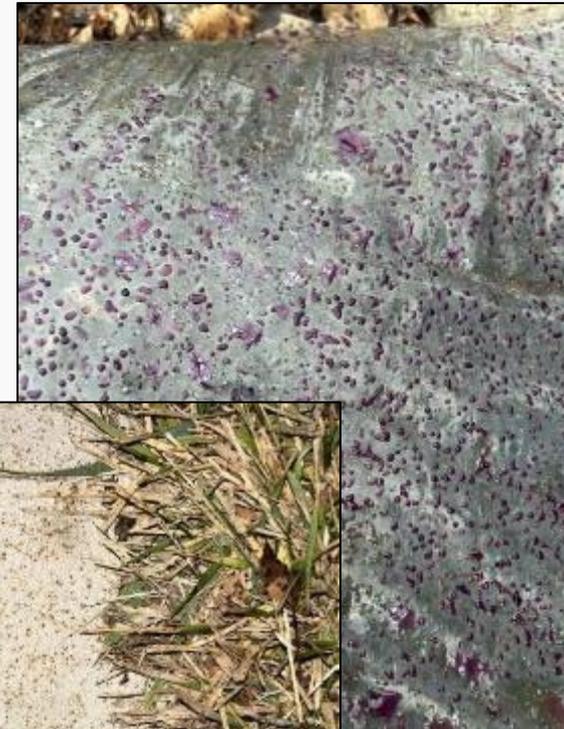
Water Management



Aerial Deposition



- Fallout observed 2 - 3 miles away
- Reports of purple/pink pond, cow (could not verify)
- Social media reports of Little Vermillion River running purple
(DNR/USCG could not verify)
- Black, brown, purple spots over property
- Corroded mailbox



Press



- Extensive media coverage
- Last minute press conference coordination
- City allowed for residents to attend
- Second press event more organized with all parties involved



Cleanup begins after La Salle fire as residents voice concerns about chemicals in air

Chemical plant manufactures potassium permanganate, which can accelerate burning of explosive material once it catches fire

By [Diane Peltier](#) and [Mehar Kavesh](#)

Thursday, January 12, 2023



Extra-alarm fire guts chemical plant in LaSalle

BY [CASSIYA PRINCE](#), [MARISSA PEELMAN](#), [ERIC HARBEDOMHL](#)
JANUARY 12, 2023 / 11:12 AM / CBS CHICAGO



Carus (RP) Response



- Set up a hotline to answer residents concerns
- Tokens for car wash
- Power washed property (local contractors)
- Home cleanings
- Deactivation solution

Carus LLC Fire News Updates

[News](#) / By [Ashley Swingel](#)

[CARUS INCIDENT INSURANCE CLAIM DOCUMENT](#)

Carus LLC Working with Neighbors on Continued Cleanup

PERU, IL (January 30, 2023 3:00 pm) – Carus LLC is working with neighbors on continued cleanup efforts in the community following a January 11 fire at the Carus manufacturing plant in LaSalle. Since the fire, the Carus community hotline has served 240 residents.

Many hotline calls have focused on property damage that occurred on the day of the fire. On January 25, Carus launched a new community resource to expedite property assessments and insurance claims for homeowners in the surrounding community. Residents are encouraged to call the community hotline at 815-224-6662 or visit www.carusllc.com for more information.

“The fire created some challenges, but we have much to be thankful for,” said Andy Johnston, President and CEO. “First and foremost, everyone is safe. The fire department and emergency responders did an incredible job. They took quick action to keep everyone safe.”

Cleanup Efforts



- ERP measured pH = 11
 - Aeration, on-site treatment
- Pad cleaned, berm placed around pad
- Carus performed perimeter, personnel air monitoring during cleanup work
- Waste characterization, removal



Cleanup Efforts



Update

2/1/2023

facing N

Building demolition debris

Scrap metal staged in containment area

Perimeter berm reinforced w/ Aquablok

Air compressor tanks (empty)



Security Interest



- Story broke 1/17/2023
- Facility only producer of KMnO_4 in western hemisphere
- Provided +50% of domestic consumption
 - India/China only other source(s)
- Cybersecurity and Infrastructure Security Agency (CISA) interested advising facilities to find other sources

A screenshot of the EPA website showing a news article. The EPA logo and name are at the top left. A search bar is at the top right. A blue navigation bar contains links for "Environmental Topics", "Laws & Regulations", "Report a Violation", and "About EPA". Below the navigation bar, there is a "Related Topics" section with a link to "Emergency Response for Drinking Water and Wastewater Utilities". The main headline of the article is "Chemical Plant Fire and Potential Impact on Supply Chain Disruptions". At the bottom left of the article, it says "Last Updated: 1/25/2023".

EPA United States Environmental Protection Agency

Search EPA.gov

Environmental Topics ▾ Laws & Regulations ▾ Report a Violation ▾ About EPA ▾

Related Topics: [Emergency Response for Drinking Water and Wastewater Utilities](#)

Chemical Plant Fire and Potential Impact on Supply Chain Disruptions

Last Updated: 1/25/2023

Continued Public Concerns



- Lingering questions following release
- FAQs posted by City, County HD
- Questions revolving around distrust that chemicals are more hazardous than reported
- Distrust of Carus to perform cleanup work
 - Initially advised public to DIY with 1:1:1 gallon solution of water : vinegar : hydrogen peroxide
- Concern over exposure by pets to chemicals/particles on ground
 - IDAG developed Fact Sheet

PRECAUTIONS TO TAKE FOR ANIMALS IMPACTED BY THE LASALLE CHEMICAL FIRE

- **WASH OFF ANY VISIBLE DEBRIS WITH WATER AND LIMIT FURTHER SKIN EXPOSURE**
 - BRING LIVESTOCK INTO SHELTER IF THEIR PASTURE/AREA IS CONTAMINATED
 - WIPE OFF YOUR PET'S PAWS AND COAT WHEN THEY RETURN FROM OUTSIDE
 - MONITOR FOR SKIN IRRITATION
- **LIMIT RESPIRATORY EXPOSURE**
 - KEEP INSIDE IF POSSIBLE OR MONITOR FOR RESPIRATORY SIGNS (WHEEZING, DIFFICULTY BREATHING, SHORTNESS OF BREATH)
 - ANIMALS WITH UNDERLYING RESPIRATORY CONDITIONS MAY HAVE WORSENING SYMPTOMS
 - BIRDS MAY BE AT HIGHER RISK FOR RESPIRATORY IRRITATION; POULTRY SHOULD BE BROUGHT INTO COVER HOUSING IF POSSIBLE
- **WHILE UNLIKELY, ORAL OR INTESTINAL IRRITATION COULD OCCUR. ENSURE ANIMALS ARE CLEANED OF DEBRIS AND REPEAT EXPOSURE IS LIMITED**
 - DO NOT GIVE ANIMALS CONTAMINATED FEED OR WATER
- **IF YOU OBSERVE ANY SKIN IRRITATION, DIFFICULTY BREATHING, OR VOMITING/DIARRHEA YOU SHOULD CONTACT YOUR VETERINARIAN AS SOON AS POSSIBLE**

ALL COMMUNITY MEMBERS WHO HAVE CONTAMINATED PROPERTY ARE DIRECTED TO CALL THE CARUS HOTLINE AT 815-224-6662

The logo for the Illinois Department of Agriculture, featuring the text "Illinois" above "Department of Agriculture" and a stylized green and blue graphic.

1 of 1

Outreach / Communications



Communications

- City

<https://www.lasalle-il.gov/updates-regarding-carus-chemical-fire>

- Company

<https://www.carusllc.com/carus-llc-fire-news-updates/>

- US EPA

<https://response.epa.gov/lasallechemicalfire>

<https://www.epa.gov/waterutilityresponse/chemical-plant-fire-and-potential-impact-supply-permanganate-products>

- Illinois EPA

- FAQ document (posted 1/18)

- Press

https://www.starvedrock.media/wlpo/peru-chief-estimates-equipment-loss-fighting-carus-fire-is-thousands-of-dollars/article_16cf403a-9615-11ed-855c-db727e4ece14.html

<https://www.toledoblade.com/local/city/2023/01/17/fire-illinois-chemical-plant-could-affect-water-treatment-operations-toledo/stories/20230116093>



Questions ?



- Chief Jerry Janick, LaSalle FD
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- Assistant Chief Mark Reynolds, Plainfield FD
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- FOSC Paul Ruesch, US EPA Region 5
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