

# Dudley Chemical Fire

DISASTER MANAGEMENT & RECOVERY SERVICES



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# **OVERVIEW**

The Dudley Fire caused extensive damage to the main building of a chemical manufacturing company. NEDT responded within hours to lead the cleanup, including chemical spill response, site stabilization, and contamination detection and remediation.



#### BACKGROUND

In August 2022, a chemical fire and multiple explosions occurred а chemical at manufacturing facility in Dudley, MA. While emergency personnel were able to contain the fire, there was extensive damage to both the main building of the facility and the surrounding site grounds, spreading hazardous chemicals and airborne contaminants, as well as extensive damage to facility machinery. Firefighting also resulted in a large amount of wastewater containing hazardous chemicals that could not be allowed to seep into the local watershed and aquifer.

NEDT, a trusted emergency spill response partner for the facility, was called to the scene within hours. Over the course of this one year project, NEDT provided chemical spill response, access control, wastewater recovery, chemical identification, remediation and cleaning, and removed and disposed of PFAS and chrome-contaminated water and soil.

## THE CHALLENGE

The fire and resulting firefighting efforts caused widespread contamination of soil and wastewater with PFAS, chrome, asbestos, and other chemicals, as well as burning off identifying labels on chemical drums. NEDT needed to provide rapid containment and cleanup in enhanced protective gear.

Fire Damage & Instability	Due to the fire and multiple internal explosions, the main building warehouse was unstable and had severe structural issues.
Hazardous Wastewater Containment	Over 147,000 gallons of wastewater from firefighting containing hazardous chemicals needed to be contained and disposed of.
Asbestos Contamination	Worked in known asbestos-impacted areas. Personnel received specific asbestos training to handle their duties safely.
PFAS & Chromium Contamination	PFAS—Per- and polyfluoroalkyl substances— and chromium chemicals were present in both wastewater from the fire and surrounding soil.
Chemical Identification and Cleanup	The main building contained hundreds of fire- damaged drums of containers that required inspection, identification, and proper disposal.

## **NEDT'S RESPONSE**

NEDT was mobilized immediately, even while firefighting was underway, deploying crews and equipment to contain contamination and stabilize the site. As the situation developed over the next several days of 24-hour work, a response plan was put into place to deal with hazardous materials so the site could be restored in a timely fashion.



## **A Timeline**

#### Aug 30, 2022 – July 2023

Initial response and stabilizing the site

Fenced property to control access

Berming of containment areas around chemical tanks

Recovery of accumulated contaminated wastewater from firefighting and storage in frac tanks

Soil remediation of site of fire and fire water runoff

Entry and removal of chemical drums and debris from main building, identification of chemicals from proper disposal

Cleaning and pressure washing of building surfaces and floors due to PFAS and chromium contamination

Pumped out damaged chemical storage tanks

Disposal of identified drums and containers

## **Emergency Disaster & Chemical Spill Response**



Dispatched crews and equipment within hours to begin contamination mitigation. Coordinated with emergency responders to identify, stabilize, and remove chemical drums and tank contents in the immediate and surrounding area of the fire. Deployed berms and vacuum trucks to contain hazardous chemical spills and fire wastewater to prevent further environmental contamination. Secured site access with perimeter fencing and controlled access points to ensure safety and regulatory compliance.

## SITE STABILIZATION

- Site inspection and analysis found immediate environmental threats with many problem areas.
- Bermed containment areas around chemical tanks, including isopropyl alcohol.
- Provided bottled drinking water to abutting properties whose wells were impacted.

- Recovered accumulated contaminated fire water and put into 7 x 20,000-gallon frac tanks.
- Provided all electrical needsfor the operations (pumps,lights, etc) with generators.
- Confined space entry inspections on tanks followed by emergency pumping where needed.





## IDENTIFICATION & WASTE REMOVAL

The main building, a warehouse filled with chemical containers, required intensive analysis and identification of contents, including intact containers and spills/cleanup.

Sampled, analyzed, and characterized 100's of 55gallon drums to identify them for proper disposal since the fire had burned off all identifying labels. Managed off-site disposal of 140,000 gallons of impacted fire water contaminated with chromium and PFAS.

Managed off-site disposal of 8 X 30 cubic yard rolloff containers of contaminated soils.



### REMEDIATION

- The site had extensive contamination from the fire and wastewater from firefighting, including the presence of PFAS, chromium, and asbestos.
- Remediated exterior soils impacted by fire water runoff. Put soils into 8 x 30 yard roll-off containers for disposal. Removed and disposed of over 200,000 lbs of PFAS contamined soils.
- Pressure-washed/cleaned chemical-contaminated floors.
  Building and floors were contaminated with spilled chemicals, including chromium and PFAS.
- Worked in known asbestosimpacted areas. Personnel received specific asbestos training to handle their duties safely.





# **RESULTS & OUTCOMES**





#### **Chemical Spill Response**

Rapid response by NEDT contained both fire wastewater and damaged chemical tanks, preventing environmental impact.



#### **Efficient Cleanup & Remediation**

All hazardous waste, including chemicals, wastewater, soil, and hazardous debris, was removed and disposed of properly, preventing further contamination.



#### **Regulatory Compliance & Coordination**

Successfully collaborated with local, state, and federal agencies to meet all compliance requirements.



#### **Client Business Recovery**

The client was able to continue business operations from adjacent buildings while the cleanup continued.

## PROJECT IMPACT

140,000 gallons of impacted fire water disposed of off-site.

200,000 lbs of PFAS-contaminated soil removed and disposed of.

100's 55-gallon drums of chemicals identified and disposed of.

8000 sq ft building and 12-acre site remediated and restored.



#### **Best Outcomes for Client:**

- Earned confidence and trust of regulatory agencies through diligent, professional work results and cooperation
- No further fines or violations for client
- Reduced media and political scrutiny
- Building cleaned for future use
- One contractor to handle complex response

# **CUT SHEET**

Developer, manufacturer, and marketer of chemical and biochemical specialties.

#### **Project Overview**

Date: April 2022 Project Cost: \$1.2 million

Scope: Responded to a catastrophic fire at a developer, manufacturer, and marketer of chemical and biochemical specialties.

#### **Key Challenges**

- Client faced an existential crisis and needed rapid response for business survival.
- Fire caused severe structural instability, with extensive environmental contamination.
- Large quantities of fire damaged hazardous chemical containers required immediate stabilization and removal.
- Environmental contaminants spread throughout the local area.
- Multiple Local, State, and Federal agencies involved in regulatory oversight.
- Extensive negative media exposure for the client.

#### **NEDT's Role & Actions Taken**

- Served as prime environmental contractor for the emergency response and remediation.
- Emergency Response: Secured site access, stabilized structures, and prevented contamination spread. Immediately pumped and secured vulnerable tank systems. Recovered and managed 140,000 gallons of PFAS and chrome contaminated fire water.
- Hazardous Waste: Sampled, analyzed, and characterized 100's of unknown 55 gallon drums.
- Site Remediation: Remediated exterior soils impacted from fire water runoff. Put soils into 8 x 30 yard roll off containers and properly disposed of them at off-site facility.

#### **Key Accomplishments**

- Successfully stabilized and remediated a 8,000 sq ft facility and 12-acre site.
- Ensured full compliance with all regulatory agencies with no further violations or fines.
- Completed 4,600+ work hours with zero safety violations or injuries.
- Provided strategic counsel to the client throughout the entire project.

## CONCLUSION

The Dudley Chemical Fire presented an escalation from standard emergency spill response. This case study underlines the major risks of chemical fires, including hazardous releases, the aftermath of fire wastewater containment, fire-damaged labels and information systems requiring identification, and the need for a rapid response from a company like NEDT who has the training and planning to handle rapidly developing situations in both the first 24 hours and the days of remediation and regulatory compliance that follows.

# **CONTACT US**

For more information on how NEDT can assist with hazardous waste management and emergency response, contact us today.



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