WASHINGTON State FACE Program
Fatality Assessment & Control Evaluation

CONSTRUCTION
FATALITY NARRATIVE

FACE

Day Laborer Burned in Adhesive Explosion

INCIDENT FACTS

REPORT #: 71-265-2025s

REPORT DATE: April 18, 2025

INCIDENT DATE: April 1, 2022

WORKER: 53 years old

INDUSTRY: Other Building Finishing Contractors

OCCUPATION: Day Laborer

SCENE: Commercial building

EVENT TYPE: Explosion and Fire

SHARP
Safety & Health Assessment & Research for Prevention

Washington State Department of Labor & Industries

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A 53-year-old day laborer died when the vinyl flooring adhesive he was applying ignited and the vapor exploded. He worked for his employer, a general contractor, for four years doing random odd jobs on an informal, as-needed basis.

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He and an assistant were installing vinyl flooring in a commercial building under renovation. They were working alone and unsupervised but received instruction from the employer over the phone. They hoped to finish quickly, but the liquid flooring adhesive was not bonding well. The laborer said the room was too cold and decided to use an open-flame propane torch to heat up the adhesive and flooring.

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Forty minutes later, the torch ignited either the adhesive vapor or liquid on the floor. The workers tried to stamp out the fire with their feet but were unable to. The assistant yelled at the laborer to flee and ran for an exit door. He then felt an explosion, looked back, and saw the laborer trying to shut off the torch as smoke filled the room. Dizzy and nauseous, he yelled again to the laborer but lost sight of him as he continued toward the door.

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When he reached the door, a second explosion threw him outside. He was then able to move further from the building. The laborer came out shortly after, in flames and screaming. He fell near the door just before a third explosion blew it off. The area around him was too hot for the assistant to approach. Neighbors called 911. First responders rescued the assistant and extinguished the blaze. The laborer died at the scene from burns and smoke inhalation.

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Following the incident, investigators found:

- The employer did not have an accident prevention program (APP) nor provide the workers Safety Data Sheets (SDS), chemical hazard training, and fire extinguishers before the job began.
- The SDS for the flammable liquid adhesive indicated it had a high risk of explosion at a low vapor concentration in the air. The adhesive spread over the large surface area in the unventilated building emitted enough vapor to reach the lower explosive limit and ignite while the torch was lit.
- Four 5-gallon buckets of adhesive were left open in the building, increasing the vapor concentration.

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Photo 1. Open bucket of adhesive in building.

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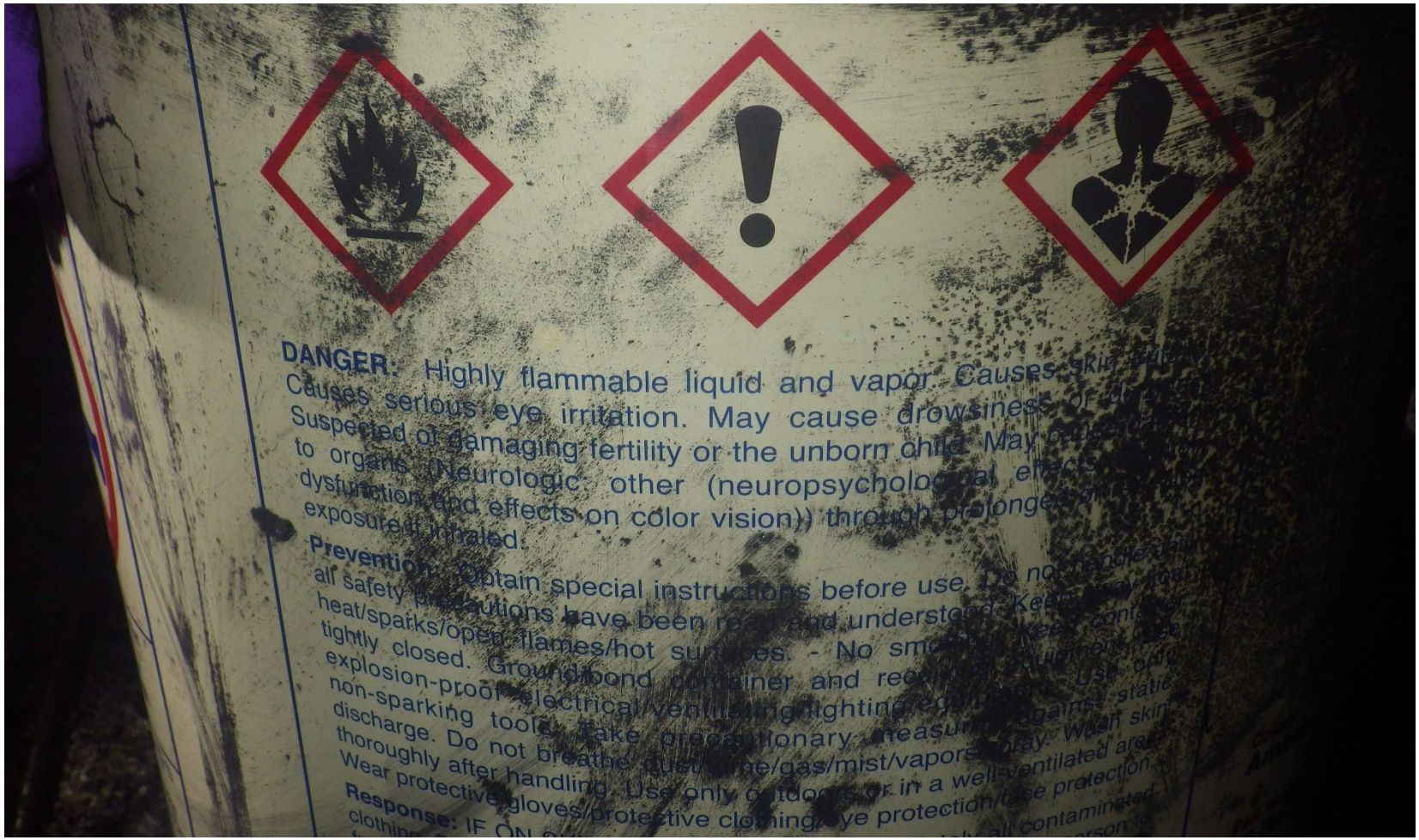

Photo 2. Pictograms and labels on bucket showing chemical flammability and health hazards.

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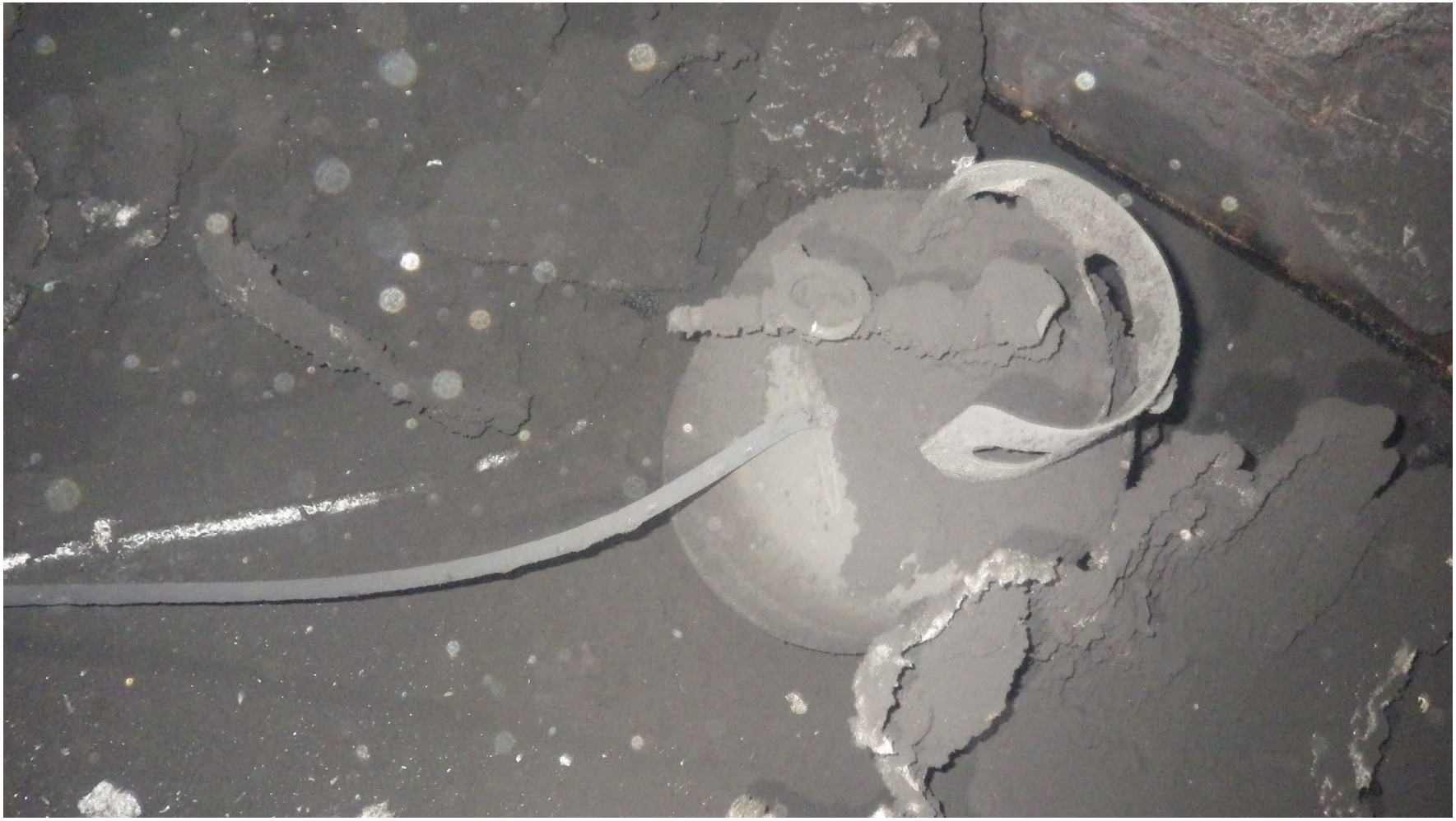

Photo 3. Propane tank and hose for torch.

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Photo 4. Handheld propane torch used to heat adhesive.

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Photo 5. Building after explosion.

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Requirements

Employers must:

- Fire protection WAC 296-155-260, flammable liquids WAC 296-155-270, and temporary heating devices WAC 296-155-280.
- Safety data sheets WAC 296-901-14014 and worker information and training WAC 296-901-14016.

Recommendations

FACE investigators concluded, that to help prevent similar occurrences, employers should:

- Develop their APP to include a written chemical hazard communication program. The program should require container warning labels, obtaining current SDS sheets and making them available, supplementing exposure controls with personal protective equipment (PPE), and providing training.
- Conduct a pre-work site hazard analysis to identify chemical hazards and explosion risks, monitor for worker exposures, and prepare emergency response plans for uncontrolled releases and fires.

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Resources

Chemical Safety Basics

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This narrative was developed to alert employers and workers of a tragic incident in Washington State and is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or conclusions regarding the cause of the injury.

Developed by the Washington State Fatality Assessment and Control Evaluation (WA FACE) Program and the Division of Occupational Safety and Health (DOSH), Washington State Dept. of Labor & Industries. WA FACE is supported in part by a grant from the National Institute for Occupational Safety and Health (NIOSH grant# 5U60OH008487). For more information visit www.lni.wa.gov/safety-health/safety-research/ongoing-projects/work-related-fatalities-face.

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