Office of Recommendations

- Highlighted Recommendations

  - **U.S. Ink Fire –** R1 to OSHA
  - **Aghorn Operating Waterflood Station H2S Release**
    - R8 to OSHA
    - R9 to RRC
  - **Donaldson Enterprises, Inc. Fatal Fireworks Disassembly Explosion and Fire –** R11 to EPA
  - **West Fertilizer Explosion and Fire –** R3 to EPA

U.S. Ink Fire

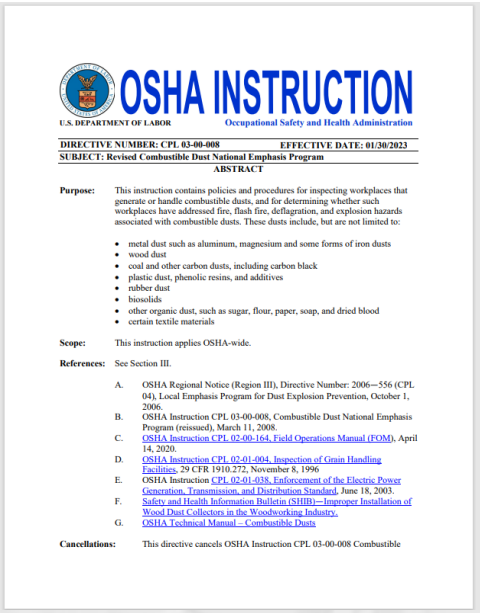
- Oct. 9, 2012
- During start-up
- New dust collection system
- combustible dust ignited
- 7 workers sustained burn injuries (3 were 3rd degree)

CSB Rec No. 2013-01-I-NJ-R1 to OSHA:

Add NAICS Code 325910, Printing Ink Manufacturing, to the list of industries in the Combustible Dust National Emphasis Program (NEP).

U.S. Ink Fire

OSHA implementation of R1:



OSHA INSTRUCTION

U.S. DEPARTMENT OF LABOR — Occupational Safety and Health Administration

DIRECTIVE NUMBER: CPL 03-00-008 **EFFECTIVE DATE: 01/30/2023**

SUBJECT: Revised Combustible Dust National Emphasis Program

ABSTRACT

Purpose: This instruction contains policies and procedures for inspecting workplaces that generate or handle combustible dusts, and for determining whether such workplaces have addressed fire, flash fire, deflagration, and explosion hazards associated with combustible dusts. These dusts include, but are not limited to:

- metal dust such as aluminum, magnesium and some forms of iron dusts
- wood dust
- coal and other carbon dusts, including carbon black
- plastic dust, phenolic resins, and additives
- rubber dust
- biosolids
- other organic dust, such as sugar, flour, paper, soap, and dried blood
- certain textile materials

Scope: This instruction applies OSHA-wide.

References: See Section III.

A. OSHA Regional Notice (Region III), Directive Number: 2006—556 (CPL 04), Local Emphasis Program for Dust Explosion Prevention, October 1, 2006.
B. OSHA Instruction CPL 03-00-008, Combustible Dust National Emphasis Program (reissued), March 11, 2008.
C. OSHA Instruction CPL 02-00-164, Field Operations Manual (FOM), April 14, 2020.
D. OSHA Instruction CPL 02-01-004, Inspection of Grain Handling Facilities, 29 CFR 1910.272, November 8, 1996
E. OSHA Instruction CPL 02-01-038, Enforcement of the Electric Power Generation, Transmission, and Distribution Standard, June 18, 2003.
F. Safety and Health Information Bulletin (SHIB)—Improper Installation of Wood Dust Collectors in the Woodworking Industry.
G. OSHA Technical Manual – Combustible Dusts

Cancellations: This directive cancels OSHA Instruction CPL 03-00-008 Combustible

- OSHA revised their Combustible Dust NEP on Jan. 23, 2023
- NAICS Code 325910 – Printing Ink Manufacturing was added to the revised NEP

Closed – Acceptable Action

Aghorn Operating Inc. Waterflood Station H2S Release

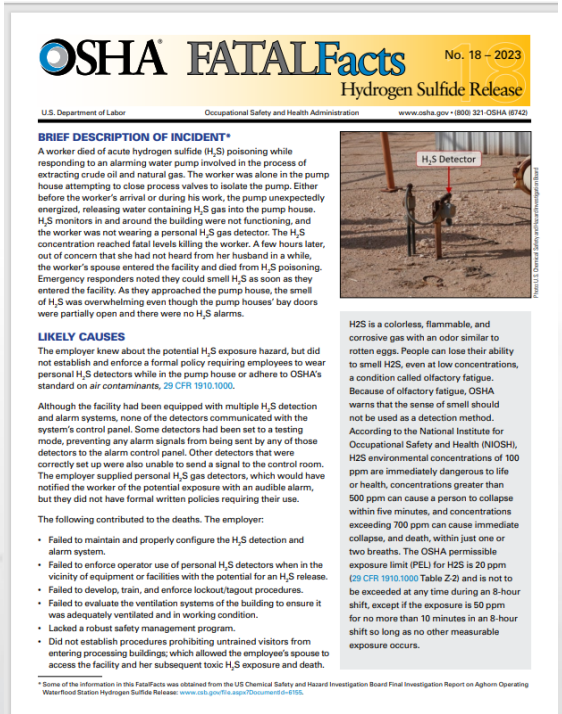
- Oct. 26, 2019
- Worker responds to a faulty pump
- Pump came on (in auto)
- Water w/H2S was discharged
- 1 fatally injured worker
- 1 fatally injured member of the public (worker's spouse)

CSB Rec No. 2020-01-I-TX-R8 to OSHA:

Issue a safety information product that addresses the requirements for protecting workers from hazardous air contaminants and from hazardous energy.

Aghorn Operating Inc. Waterflood Station H2S Release

OSHA implementation of R8:



OSHA FATALFacts No. 18 – 2023

Hydrogen Sulfide Release

U.S. Department of Labor | Occupational Safety and Health Administration | www.osha.gov • (800) 321-OSHA (6742)

BRIEF DESCRIPTION OF INCIDENT*

A worker died of acute hydrogen sulfide (H_2S) poisoning while responding to an alarming water pump involved in the process of extracting crude oil and natural gas. The worker was alone in the pump house attempting to close process valves to isolate the pump. Either before the worker's arrival or during his work, the pump unexpectedly energized, releasing water containing H_2S gas into the pump house. H_2S monitors in and around the building were not functioning, and the worker was not wearing a personal H_2S gas detector. The H_2S concentration reached fatal levels killing the worker. A few hours later, out of concern that she had not heard from her husband in a while, the worker's spouse entered the facility and died from H_2S poisoning. Emergency responders noted they could smell H_2S as soon as they entered the facility. As they approached the pump house, the smell of H_2S was overwhelming even though the pump houses' bay doors were partially open and there were no H_2S alarms.

LIKELY CAUSES

The employer knew about the potential H_2S exposure hazard, but did not establish and enforce a formal policy requiring employees to wear personal H_2S detectors while in the pump house or adhere to OSHA's standard on *air contaminants*, 29 CFR 1910.1000.

Although the facility had been equipped with multiple H_2S detection and alarm systems, none of the detectors communicated with the system's control panel. Some detectors had been set to a testing mode, preventing any alarm signals from being sent by any of those detectors to the alarm control panel. Other detectors that were correctly set up were also unable to send a signal to the control room. The employer supplied personal H_2S gas detectors, which would have notified the worker of the potential exposure with an audible alarm, but they did not have formal written policies requiring their use.

The following contributed to the deaths. The employer:

- Failed to maintain and properly configure the H_2S detection and alarm system.
- Failed to enforce operator use of personal H_2S detectors when in the vicinity of equipment or facilities with the potential for an H_2S release.
- Failed to develop, train, and enforce lockout/tagout procedures.
- Failed to evaluate the ventilation systems of the building to ensure it was adequately ventilated and in working condition.
- Lacked a robust safety management program.
- Did not establish procedures prohibiting untrained visitors from entering processing buildings; which allowed the employee's spouse to access the facility and her subsequent toxic H_2S exposure and death.

H2S is a colorless, flammable, and corrosive gas with an odor similar to rotten eggs. People can lose their ability to smell H2S, even at low concentrations, a condition called olfactory fatigue. Because of olfactory fatigue, OSHA warns that the sense of smell should not be used as a detection method. According to the National Institute for Occupational Safety and Health (NIOSH), H2S environmental concentrations of 100 ppm are immediately dangerous to life or health, concentrations greater than 500 ppm can cause a person to collapse within five minutes, and concentrations exceeding 700 ppm can cause immediate collapse, and death, within just one or two breaths. The OSHA permissible exposure limit (PEL) for H2S is 20 ppm (29 CFR 1910.1000 Table Z-2) and is not to be exceeded at any time during an 8-hour shift, except if the exposure is 50 ppm for no more than 10 minutes in an 8-hour shift so long as no other measurable exposure occurs.

* Some of the information in this FatalFacts was obtained from the US Chemical Safety and Hazard Investigation Board Final Investigation Report on Aghorn Operating Waterflood Station Hydrogen Sulfide Release: www.csb.gov/file.aspx?DocumentId=6155.

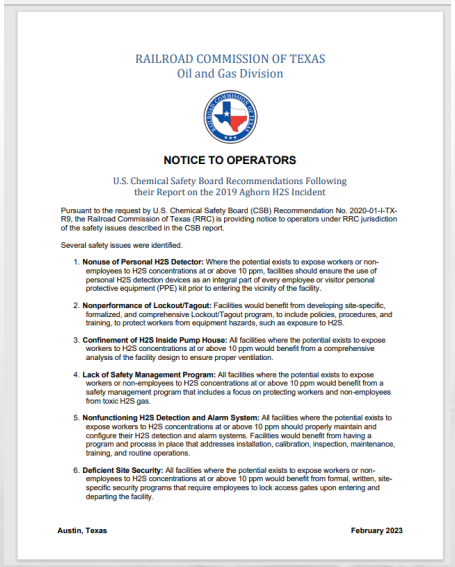
- Jan. 13, 2023, OSHA published a FatalFacts guidance document
- “Hydrogen Sulfide Releases”
- Fully addressed the recommendations

Closed – Acceptable Action

Aghorn Operating Inc. Waterflood Station H2S Release

CSB Rec No. 2020-01-I-TX-R9 to RRC:

Develop and send a Notice to Operators to all oil and gas operators that fall under the jurisdiction of the Railroad Commission of Texas describing the safety issues identified in the Aghorn report.



RAILROAD COMMISSION OF TEXAS
Oil and Gas Division

NOTICE TO OPERATORS

U.S. Chemical Safety Board Recommendations Following their Report on the 2019 Aghorn H2S Incident

Pursuant to the request by U.S. Chemical Safety Board (CSB) Recommendation No. 2020-01-I-TX-R9, the Railroad Commission of Texas (RRC) is providing notice to operators under RRC jurisdiction of the safety issues described in the CSB report.

Several safety issues were identified.

1. **Nonuse of Personal H2S Detector:** Where the potential exists to expose workers or non-employees to H2S concentrations at or above 10 ppm, facilities should ensure the use of personal H2S detection devices as an integral part of every employee or visitor personal protective equipment (PPE) kit prior to entering the vicinity of the facility.
2. **Nonperformance of Lockout/Tagout:** Facilities would benefit from developing site-specific, formalized, and comprehensive Lockout/Tagout program, to include policies, procedures, and training, to protect workers from equipment hazards, such as exposure to H2S.
3. **Confinement of H2S Inside Pump House:** All facilities where the potential exists to expose workers to H2S concentrations at or above 10 ppm would benefit from a comprehensive analysis of the facility design to ensure proper ventilation.
4. **Lack of Safety Management Program:** All facilities where the potential exists to expose workers or non-employees to H2S concentrations at or above 10 ppm would benefit from a safety management program that includes a focus on protecting workers and non-employees from toxic H2S gas.
5. **Nonfunctioning H2S Detection and Alarm System:** All facilities where the potential exists to expose workers to H2S concentrations at or above 10 ppm should properly maintain and configure their H2S detection and alarm systems. Facilities would benefit from having a program and process in place that addresses installation, calibration, inspection, maintenance, training, and routine operations.
6. **Deficient Site Security:** All facilities where the potential exists to expose workers or non-employees to H2S concentrations at or above 10 ppm would benefit from formal, written, site-specific security programs that require employees to lock access gates upon entering and departing the facility.

Austin, Texas February 2023

RRC implementation of R9:

Feb. 6, 2023, RRC distributed a Notice to Operators that addressed all the requirements of the recommendation

Closed – Acceptable Action

Donaldson Enterprises, Inc. Fatal Fireworks Disassembly Explosion and Fire

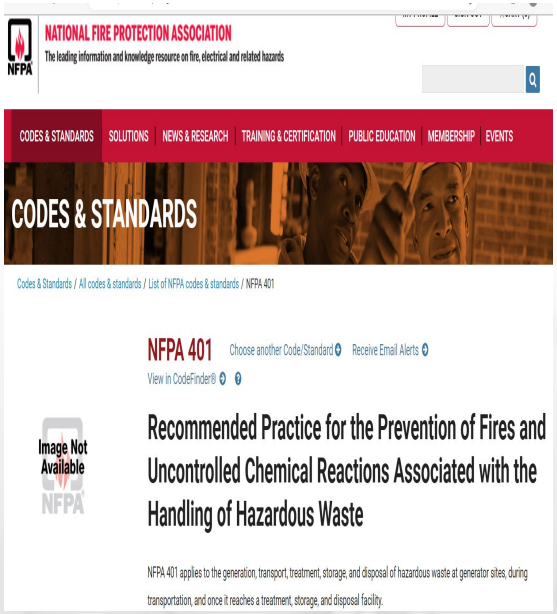
- April 8, 2011
- Explosion and fire of seized fireworks inside a storage magazine
- 5 fatalities

CSB Rec No. 2011-06-I-HI-R11 to EPA:

Participate in the NFPA's standard development process to develop guidance on the safe and environmentally sound disposal of fireworks.

Donaldson Enterprises, Inc. Fatal Fireworks Disassembly Explosion and Fire

EPA implementation of R11:



- EPA has participated in the development of the first edition Of NFPA 401 as a Principal Member of the committee since Nov. 30, 2016.
- NFPA is expected to release the Recommended Practice in the Fall 2023.

Closed – Acceptable Action

West Fertilizer Explosion and Fire

- April 17, 2013
- FGAN at a fertilizer facility exploded
- 12 emergency responders & 3 members of the public were fatally injured, 260+ injured
- damaged 150+ buildings

CSB Rec No. 2013-02-I-TX-R3 to EPA:

Revise the Risk Management Plan rule to include fertilizer grade ammonium nitrate (FGAN) at an appropriate threshold quantity on the List of Regulated Substances.

West Fertilizer Explosion and Fire

EPA implementation of R3:

53556 Federal Register / Vol. 87, No. 168 / Wednesday, August 31, 2022 / Proposed Rules

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 68

[EPA–HQ–OLEM–2022–0174; FRL–5766.6–01–OLEM]

RIN 2050–AH22

Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Safer Communities by Chemical Accident Prevention

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to amend its Risk Management Program (RMP) regulations as a result of Agency review. The proposed revisions include several changes and amplifications to the accident prevention program requirements, enhancements to the emergency preparedness requirements, increased public availability of chemical hazard information, and several other changes to certain regulatory definitions or points of clarification. These proposed amendments seek to improve chemical process safety; assist in planning, preparedness, and responding to RMP-reportable accidents; and improve public awareness of chemical hazards at regulated sources.

DATES: Comments must be received on or before October 31, 2022.

Public Hearings: EPA will hold virtual public hearings on September 26, 2022; September 27, 2022; and September 28, 2022, at *https://www.epa.gov/rmp/forms/virtual-public-hearings-risk-management-program-safer-communities-chemical-accident*. Please refer to the **SUPPLEMENTARY INFORMATION** section of this preamble for additional information on the public hearings.

ADDRESSES: You may send comments, identified by Docket ID No. EPA–HQ–OLEM–2022–0174, by any of the following methods:

- *Federal eRulemaking Portal: https://www.regulations.gov/* (our preferred method). Follow the online instructions for submitting comments.
- *Mail:* U.S. Environmental Protection Agency, EPA Docket Center, EPA–HQ–OLEM–2022–0174 Docket, Mail Code 2822IT, 1200 Pennsylvania Avenue NW, Washington, DC 20460.
- *Hand delivery or courier (by scheduled appointment only):* EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. The Docket Center's hours of operations are 8:30 a.m. to 4:30 p.m., Monday through Friday (except Federal holidays).

Instructions: All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to *https://www.regulations.gov/*, including any personal information provided. For detailed instructions on sending comments and more information on the rulemaking process, see the "Public Participation" heading of the **SUPPLEMENTARY INFORMATION** section of this preamble. For further information on EPA Docket Center services and the current status, please visit us online at *https://www.epa.gov/dockets*.

The virtual hearings will be held at *https://www.epa.gov/rmp/forms/virtual-public-hearings-risk-management-program-safer-communities-chemical-accident*. The hearing on September 26, 2022, will convene at 9:00 a.m. (local time) and will conclude at 12:00 p.m. (local time). The hearing on September 27, 2022, will convene at 1:00 p.m. (local time) and will conclude at 4:00 p.m. (local time). The hearing on September 28, 2022, will convene at 5:00 p.m. (local time) and will conclude at 8:00 p.m. (local time). Refer to the **SUPPLEMENTARY INFORMATION** section below for additional information.

FOR FURTHER INFORMATION CONTACT: Deanne Grant, Office of Emergency Management, Mail Code 5104A, Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone number: 202–564–1096; email: *grant.deanne@epa.gov* or Veronica Southerland, Office of Emergency Management, Mail Code 5104A, Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone number: 202–564–2333; email: *southerland.veronica@epa.gov*.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. EPA uses multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

List of Abbreviations and Acronyms

ACC American Chemistry Council
AN ammonium nitrate
ANPI Apache Nitrogen Products Inc.
ANSI American National Standards Institute
API American Petroleum Institute
AQMD Air Quality Management Districts
ASSP American Society of Safety Professionals
ASTM American Society for Testing and Materials
BSEE Bureau of Safety and Environmental Enforcement
CAA Clean Air Act
CAAA Clean Air Act Amendments
CDC Centers for Disease Control and Prevention
CDR Chemical Data Reporting
CCPS Center for Chemical Process Safety
CFATS Chemical Facility Anti-Terrorism Standards
CFR Code of Federal Regulations
CGA Compressed Gas Association
CSB Chemical Safety and Hazard Investigation Board
DHS Department of Homeland Security
DIR California Department of Industrial Relations
DOJ Department of Justice
DOT Department of Transportation
EHS Extremely Hazardous Substances
EJ Environmental Justice
E.O. Executive Order
EPA Environmental Protection Agency
EPCRA Emergency Planning and Community Right-To-Know Act
FEMA Federal Emergency Management Agency
FOIA Freedom of Information Act
FR Federal Register
FRS Facility Registry Service
GDC General Duty Clause
GMARD Guide for Making Acute Risk Decisions
HF hydrofluoric acid
HHC highly hazardous chemical
IEEE Institute of Electrical and Electronics Engineers
IIAR International Institute of Ammonia Refrigeration
IPAWS Integrated Public Alert & Warning System
ISD inherently safer design
IST inherently safer technology
LEPC local emergency planning committee
LPG liquefied petroleum gas
MACT Maximum Achievable Control Technology
NAICS North American Industry Classification System
NASTTPO National Association of SARA Title III Program Officials
NESHAP National Emission Standards for Hazardous Air Pollutants
NFPA National Fire Protection Association
NJAC New Jersey Administrative Code
NJDEP New Jersey Department of Environmental Protection
NREL National Renewable Energy Laboratory
NSPS New Source Performance Standards
NTTAA National Technology Transfer Advancement Act
OCA offsite consequence analysis
OSHA Occupational Safety and Health Administration
PHA process hazard analysis
PRA Paperwork Reduction Act
PSM process safety management
RAGAGEP recognized and generally accepted good engineering practices
RFA Regulatory Flexibility Act
RFI request for information
RIA Regulatory Impact Analysis
RMP Risk Management Program or risk management plan
SARA Superfund Amendments and Reauthorization Act
SCCAP Safer Communities by Chemical Accident Prevention

- Previously Closed - Unacceptable
- In EPA's Aug. 31, 2022, FR notice focused on RMP, they discussed reviewing the list and targeted FGAN as a "priority chemical" to review.
- Feb. 7, 2023, EPA gave official notice of evaluating FGAN

Open – Acceptable Response or Alternate Response