



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATION STATUS CHANGE

SUMMARY

Report:	Aghorn Operating Inc. Waterflood Station Hydrogen Sulfide Release
Recommendation Number:	2020-01-I-TX-R5
Date Issued:	May 21, 2021
Recipient:	Aghorn Operating Inc.
New Status:	Closed – Acceptable Action
Date of Status Change:	September 6, 2025

Recommendation Text:

For all waterflood stations where the potential exists to expose workers to H₂S concentrations at or above 10 ppm, ensure the H₂S detection and alarm systems are properly maintained and configured, and develop site-specific detection and alarm programs and associated procedures based on manufacturer specifications, current codes, standards, and industry good practice guidance. The program must address installation, calibration, inspection, maintenance, training and routine operations.

Board Status Change Decision:

A. Rationale for Recommendation

On October 26, 2019, an Aghorn Operating Inc. (Aghorn) employee responded to a pump oil level alarm at Aghorn's Foster D waterflood station in Odessa, Texas. In response to the alarm the employee worked to isolate the pump. He closed the pump's discharge valve but only partially closed the pump's suction valve. At some point on the night of the incident, the pump automatically turned on and water containing hydrogen sulfide (H₂S), a toxic gas, was discharged from the pump. The employee was fatally injured from his exposure to the H₂S. Subsequently, the spouse of the employee gained access to the waterflood station and searched for her husband. During her search efforts, she was also exposed to the released H₂S and was fatally injured.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found that the employee was not wearing his personal H₂S detection device and there was no evidence that Aghorn management required the use of these devices. The CSB also found that at the time of the incident, Aghorn did not have any written Lockout/Tagout policies, procedures, or associated training. As a result of these findings, the CSB issued seven recommendations to Aghorn. This status change summary addresses CSB Recommendation No. 2020-01-I-TX-R5.

B. Response to the Recommendation

Aghorn installed an updated H₂S detection and alarm system which is regularly maintained in accordance with good industry practice. Aghorn provided purchase receipts, training records,

calibration and inspection records for their fully automated H2S monitoring and alarm systems that include personal, portable, and fixed H2S monitors. The information and supporting documentation provided by Aghorn demonstrated an effective H2S monitoring and alarm program that addressed all of the requirements of the recommendation.

C. Board Analysis and Decision

Based upon the information above, the Board voted to change CSB Recommendation No. 2020-01-I-TX-R5 to: “Closed – Acceptable Action.”