



Opening and Closing Statements from Public Board Meeting on the Hydrogen Sulfide Release at the Aghorn Operating Waterflood Station

CSB No. 2020-01-I-TX

May 4, 2021

Opening Statement

Thank you for joining us, and welcome to this virtual meeting of the Chemical Safety and Hazard Identification Board.

I am Katherine Lemos, and I'm honored to serve as the Chairman and CEO of the CSB.

Today, we meet in open session, as required by the Government in the Sunshine Act. The board will consider the chemical release of hydrogen sulfide at the Aghorn Operating Waterflood Station in Odessa, Texas on October 26, 2019. This toxic chemical release claimed two lives, that of an Aghorn employee, and a member of the public, through their acute inhalation of the chemical.

On behalf of all of us at the CSB, I offer our most sincere condolences to the families that lost their loved ones. Please understand that the reason for our investigation of this tragedy, and thus, today's meeting, is to learn from this incident to prevent similar tragedies in the future.

In response to the chemical release we discuss today, Odessa Fire Rescue was the first to arrive on-scene. A special thanks to these first responders, both paramedics and fully trained firefighters, that possessed knowledge and expertise in the dangers of hydrogen sulfide.

Fortunately, the chemical release did not claim any other lives, nor was there impact to a nearby residential community.

Today we will discuss the incident, the events leading up to the incident and the response. Staff will present the Board with pertinent facts and their analysis from the draft report, followed by their proposed findings, probable cause statement, and recommendations.

In considering adoption of the report, the Board will ask questions of staff to ensure it provides the best opportunity to enhance safety.

We'll discuss the dangers associated with hydrogen sulfide, or H₂S, and how, in certain geographic locations, the

waterflooding process, designed to increase production, yields H₂S as a byproduct.

Due to the pervasive nature of H₂S in the oil-bearing reservoirs in Odessa, TX, and in many other locations across the Permian Basin, workers and residents alike may be desensitized to the odor.

Over 85% of the natural gas produced from the Permian Basin contains a concentration of H₂S that is immediately dangerous to life or health. So, our review of this event is not just about the unfortunate loss of two lives, it is about the nearly 5000 facilities in Texas, alone, that produce H₂S as a byproduct of the waterflooding process that required our careful consideration.

The sheer number of facilities that potentially expose workers to the risk of toxic levels of H₂S by non-operational detection and alarm systems or other safety gaps warrants our attention, especially when these workers are commissioned to work alone in their daily surveillance of these facilities.

For this reason, we'll talk about the detection of H₂S, and will examine the methods employed by Aghorn to detect and alert for the presence of toxic levels.

In broader fashion, we will discuss the importance of design, maintenance, test and operational procedures in safely operating

this type of chemical facility during routine operations, and in responding to off-nominal conditions.

In addition to detection and alert systems, critical elements for waterflooding facilities that involve H₂S include the design of both the physical environment and operational procedures to ensure proper ventilation in the event of a release, and site security measures to protect the public.

We will talk about the importance of safety management programs in addressing myriad risks at chemical facilities, and will examine whether Aghorn adopted a comprehensive and purposeful approach in protecting their workers.

We will examine whether they provided their employees with the necessary equipment, information, procedures, training and management to ensure their safety.

The regulations in place by the Occupational Safety and Health Administration (or OSHA) aimed at protecting workers at chemical facilities will be a part of this conversation.

Whether a company is mandated to comply with a formal safety management system, such as OSHA's Process Safety Management or the Environmental Protection Agency's (or EPA's) Risk Management Program, does not preclude their

responsibility to adequately address risks in protecting employees and the public.

On that note, we sincerely appreciate the support of our federal, state and local partners. Odessa Fire Rescue, Ector County Sherriff's Department, the Railroad Commission of Texas, OSHA and EPA all who contributed to this investigation.

At this time, I will turn the meeting over to our Acting Managing Director, David LaCerte.

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Closing Statement

In closing, I want to thank staff for completing this investigation and their diligent preparation for this board meeting. Their professionalism and industry knowledge brings attention to important safety issues for the community.

Meeting our mission at the CSB requires the full support of all staff, not just the investigation and recommendation teams. I appreciate the efforts of each employee at our agency for the dedication they bring to making every day a productive step towards raising the safety bar across a diverse chemical industry.

Even the most basic of protections for workers were not reinforced by Aghorn. Training and management attention to safety items such as wearing a personal H₂S detector is the best and first line of defense in preventing this type of fatality, for workers and public alike. Worker safety must be prioritized by especially by those companies with employees working in remote locations.

The recommendations that we issued today go a long way to set the example for how companies of all sizes should prioritize the safety of their workers, and what they need to do to demonstrate that. Meeting the minimum mark is essential. Going beyond this is a commitment to your employees.

Safety management programs are a comprehensive approach to risks at any chemical facility, and we encourage all operators to embrace these principles and practices, whether this is mandated by any regulatory oversight authority.

If our recommendation to OSHA is implemented, this would send a strong message to the chemical industry of their priority to protect workers from the risks of chemical releases, such as those in this incident. This statement would not be limited to H₂S, but would encompass workers across chemical facility domains.

If our recommendation to the RRC is implemented, this would make significant strides to educating the chemical industry involved in extracting natural gas, and address the majority of waterflood stations that involve H₂S. Many of these companies are small, and this recommendation would go a long way to help educate those companies that may not be on the leading edge of safety.

As I mentioned in opening this meeting, the impact of our investigation into this Aghorn event is not just about the unfortunate circumstance of two lives and their families, albeit tragic. This is a call to action for all companies, large and small, to step up to the plate to prioritize the safety of your workers and your community.

We stand adjourned.

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