



PEMEX Deer Park Investigation Update

CSB Public Meeting
January 23, 2025



U.S. Chemical Safety and
Hazard Investigation Board



Fatal Hydrogen Sulfide Release at PEMEX Deer Park Refinery

Deer Park, Texas | Incident Date: October 10, 2024 | No. 2024-054-TX

Investigation Update

November 2024

This document provides an update on the CSB's investigation of the October 10, 2024, incident at the Deer Park Refining, Limited Partnership's (DPRLP's) facility in Deer Park, Texas, hereafter referred to as the PEMEX Deer Park Refinery.

Incident Summary

- On October 10, 2024, at 4:23 p.m., approximately 27,000 pounds of hydrogen sulfide gas were released during a maintenance activity at the PEMEX Deer Park Refinery in Deer Park, Texas, shown in Figure 1 [1]. The release fatally injured two contract workers. Officials in the neighboring cities of Deer Park, Texas, and Pasadena, Texas, issued shelter-in-place orders that lasted several hours.



Figure 1. PEMEX Deer Park Refinery (Credit: CSB)

Background Information

- The PEMEX Deer Park Refinery is a petroleum refinery located in Deer Park, Texas [2]. DPRLP is an indirect subsidiary of Pemex, a petroleum company headquartered in Mexico City, Mexico, that is wholly owned by the Federal Government of Mexico [3]. Pemex owns seven refineries, including six in Mexico and the PEMEX Deer Park Refinery in the United States [2, 4].
- The Deer Park, Texas, refinery was originally founded by Shell Oil Company (Shell) in 1929 and became a joint venture between Shell and Pemex in 1993, known as DPRLP [2, 5]. Pemex acquired Shell's share of DPRLP and became the sole owner in 2022, at which time the refinery began operating as the PEMEX Deer Park Refinery [2, 6].
- The PEMEX Deer Park Refinery employs approximately 1,000 personnel and 1,200 contract workers [2]. The United Steelworkers union represents Pemex hourly maintenance and operations employees at the PEMEX Deer Park Refinery [2].
- Repron, Inc. (Repron) is an industrial services contractor headquartered in Baton Rouge, Louisiana, that provides mechanical, maintenance, and construction services [7]. Repron is a subsidiary of EMCOR Industrial Services, Inc., a construction and maintenance contractor of process facilities headquartered in League City, Texas [8]. The PEMEX Deer Park Refinery contracted Repron to conduct maintenance activities as part of a scheduled unit shutdown, called a turnaround, that included a Sulfur Recovery Unit (SRU).

- On October 10, 2024, at 4:23 p.m., approximately 27,000 pounds of hydrogen sulfide gas were released during a maintenance activity at the PEMEX Deer Park Refinery in Deer Park, Texas.
- The release fatally injured two contract workers. Officials in the neighboring cities of Deer Park and Pasadena issued shelter-in-place orders that lasted several hours.
- An investigation team deployed to the PEMEX Deer Park Refinery on October 11, 2024.
- The CSB released an Investigation Update in November 2024.

For more information, visit www.csb.gov

PEMEX Deer Park



Opened ARU7 flanged connection
on piping containing hydrogen
sulfide gas

Isolated ARU6 piping, which was
the location of the permitted work

- PEMEX Deer Park issued a work permit to Repcon to remove blinds from flanged piping segments in ARU6, which had been depressurized and purged for maintenance.
- At 4:23 p.m., two Repcon workers opened a flanged connection on ARU7, where hydrogen sulfide was actively flowing, five feet away from the permitted ARU6 location. One of the Repcon workers was fatally injured.
- Two other contractors were working 250 feet downwind from the release where the released hydrogen sulfide traveled. One was fatally injured.

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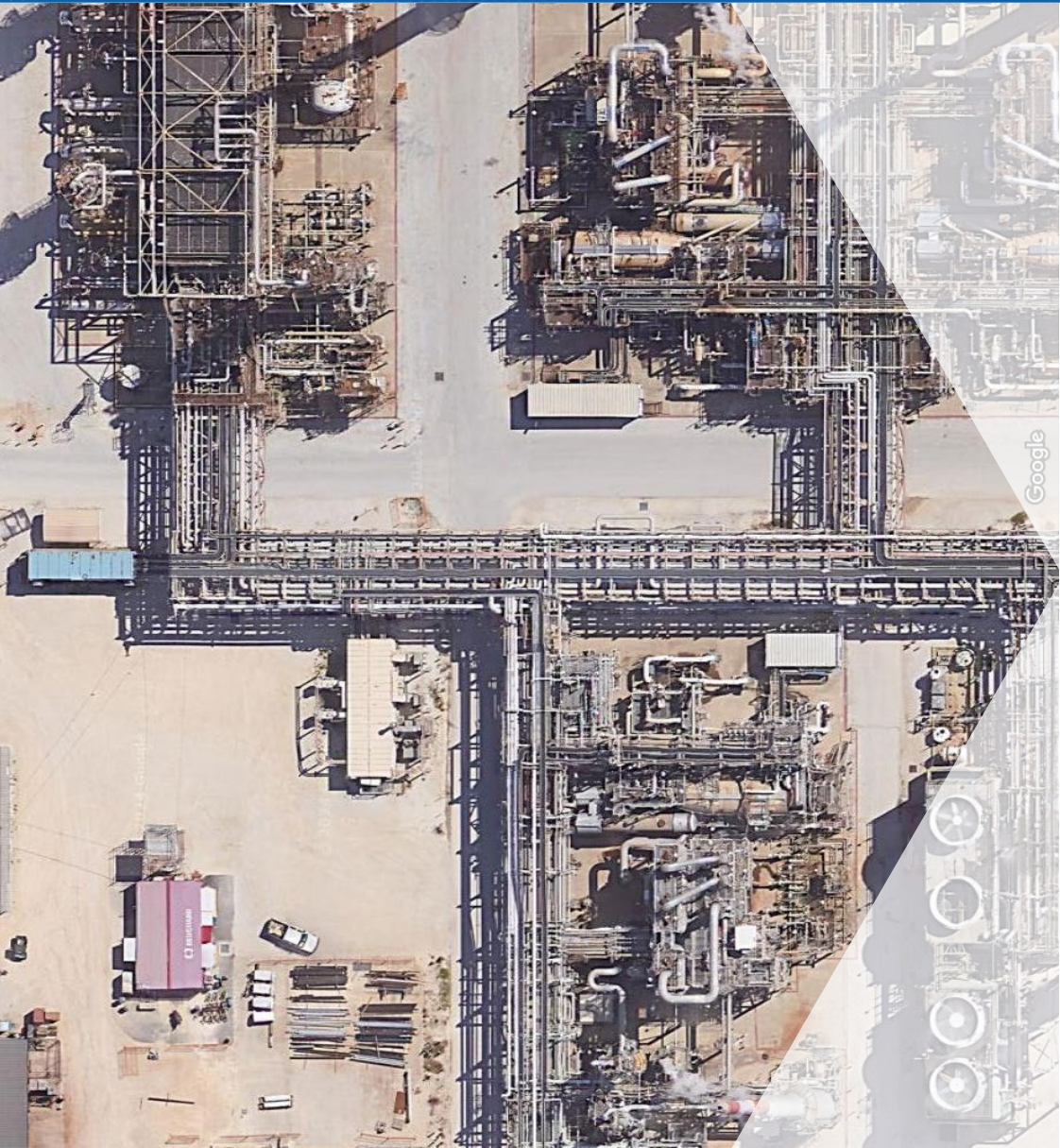


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- The release continued for one hour, releasing approximately 27,000 pounds of hydrogen sulfide.
- Thirteen workers were transported to nearby hospitals for medical evaluation.
- The neighboring cities of Deer Park and Pasadena issued shelter-in-place orders.

PEMEX Deer Park



- The CSB is continuing to gather facts and analyze several key areas, including:
 - Permit-to-work practices
 - Energy isolation procedures
 - Contractor management systems
 - Emergency preparedness and response systems
 - Emergency communication practices
 - Hazard analyses and risk assessments
 - Maintenance procedures
 - Training programs
 - Respiratory protection policies and procedures
 - Remote isolation capability
- The investigation is ongoing. Complete findings, analyses, and recommendations, if appropriate, will be detailed in the CSB's final investigation report.



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