



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATION STATUS CHANGE

SUMMARY

Report:	Wendland 1H Well Fatal Explosion
Recommendation Number:	2020-04-I-TX-R4
Date Issued:	December 26, 2023
Recipient:	Occupational Safety and Health Administration (OSHA)
New Status:	Open – Awaiting Response or Evaluation/Approval of Response
Date of Status Change:	Not Applicable – Initial Status

Recommendation Text:

Promulgate a new standard with prescriptive requirements, similar to the Control of Hazardous Energy standard, as well as a performance-based safety management system framework, similar to the OSHA Process Safety Management (PSM), that applies to the drilling, production, and servicing/workover activities surrounding onshore oil and gas wells. At a minimum, this standard should include the following:

- 1. Prescriptively address requirements for primary and secondary barriers for well control;*
- 2. Detailed written drilling, production, and servicing procedures with specified steps and equipment alignment for all operations;*
- 3. Management of change requirements (except replacements in kind) that, at a minimum, address procedures, the well plan, and equipment;*
- 4. A risk assessment of hazards associated with the drilling, production, and servicing/workover plans;*
- 5. A requirement to follow Recognized and Generally Accepted Good Engineering Practices (RAGAGEP);*
- 6. Development of a Well Construction Interface Document between the operator and the drilling contractor prior to the commencement of drilling and servicing activities and an equivalent document for production and workover contractors which, at a minimum, includes a bridging document and well plans specifying barriers and how to manage them;*
- 7. The performance and documentation of flow checks using acceptable methods at defined points during the operation for a specified duration;*
- 8. A requirement for employee participation, similar to the Employee Participation requirement in the OSHA PSM standard;*
- 9. A requirement for maintaining critical well information, similar to the Process Safety Information requirement in the OSHA PSM standard, which at a minimum includes well history and documented well control methods during workovers;*
- 10. A requirement for analyzing and assessing the hazards during all phases and steps for well servicing, similar to the Process Hazard Analysis requirement in the OSHA PSM standard;*

11. *A requirement for developing, executing, communicating, and maintaining procedures for drilling, production, and servicing operations on a well, similar to the Operating Procedures requirement in the OSHA PSM standard; and*
12. *The documentation of well control plans for drilling, production, and servicing/workover operations for a well utilizing acceptable methods for monitoring the effectiveness of well control methods.*

Board Status Change Decision:

A. Rationale for Recommendation

On January 29, 2020, the Daniel H. Wendland 1-H well (“Wendland 1-H well”) experienced a loss of well control that resulted in a blowout during the process of installing a new tubing head as part of a workover operation. Within seconds, the uncontrolled release oil and gas found an ignition source resulting in a flash fire that fatally injured three workers and seriously injured another. The incident also resulted in property damage estimated to be greater than \$1 million. The well was plugged and abandoned following the incident.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found several safety issues including inadequate well planning, insufficient industry guidance for well control for completed wells in underpressured reservoirs, and a lack of regulatory requirements for oil and gas well drilling and servicing operations. As a result of these findings, the CSB issued two recommendations to the Occupational Safety and Health Administration (OSHA). This status change summary addresses **CSB Recommendation No. 2020-04-I-TX-R4**.