SAFETY BULLETIN



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Improper Procedures Result in Explosion and Evacuation

In November 2017, an explosion and fire occurred on an offshore production platform in the Gulf of Mexico, resulting in the evacuation of the platform. The Bureau of Safety and Environmental Enforcement (BSEE) <u>investigation</u> determined the causes to be multiple instances of improperly executing established procedures.



Flame, as seen from the main deck

Post-incident damage

At the time of the incident, the crew was performing the 30-inch sales gas pig loading procedure. After loading the pig and closing the pig launcher door, the crew began to pressurize the pig launcher. At approximately 300 psi (MAWP of 1950 psi), an explosive gas release occurred, causing the pig launcher door to separate from the pig launcher. The resulting fire was likely ignited by metal-to-metal contact or electrical arcing from the blast damage. The fire continued to burn for nearly 27 hours after activation of the emergency shutdown system while the remaining gas volume in the sales gas pipeline vacated through the pig launcher door opening.

The BSEE investigation concluded that the crew did not secure the pig launcher door in accordance with Original Equipment Manufacturer (OEM) procedures, preventing the pig launcher door from properly sealing. Furthermore, the crew neglected to lock out and tag out (LOTO) some of the valves as outlined in their job procedure.

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Therefore, BSEE recommends that operators:

- Consider incorporating established OEM procedures into operator-approved job procedures.
- Emphasize the importance of adhering to established OEM and operator procedures, even during routine tasks.
- Consider implementing visual or other verification methods for proper pig launcher door seal as a procedural step in pig loading/launching procedures.
- Emphasize the importance of adhering to LOTO procedures.

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