

SAFETY **ALERT**



Blackout Condition Results in Loss of Station Keeping Ability and Activates an Emergency Disconnect from the Well

Alert 2-22

WHAT HAPPENED:

A Drillship was performing well completion operations while operating in an open bus configuration with three engines online (one in each engine room), when the fire and gas (F&G) detection system received a “watermist release” signal for all six engines. While the signal proved erroneous and no water was physically released from the watermist system, the F&G system triggered a shutdown/block command to all engine local control panels. This action was in agreement with the system’s design logic. All engines were shutdown/blocked, inhibiting the automatic blackout recovery sequence. The emergency generator powered up and operated as designed.

The vessel drifted off the specific location and upon reaching the red watch circle limit, the Driller activated the emergency disconnect sequence (EDS) as per site specific operating criteria (SSOC), thereby securing the well.

ROOT CAUSE

Unrecognized, critical system, single point failure - Single watermist programmable controller capable of instructing the F&G system to trigger an Emergency Shut Down (ESD) of the power plant had not been identified during the vessel’s Failure Modes and Effects Analysis (FMEA).

LESSONS LEARNED:

- Design redundant watermist controller system to remove the risk of single point failure
- Modify the Cause and Effects logic for the F&G system in line with the Company’s ESD philosophy
- Incorporate learnings in the Company’s Dynamic Positioning (DP) FMEA protocols