

COS SAFETY SHARE

WHAT WILL WE DO TO PREVENT THIS FROM HAPPENING HERE?

SERVICE VESSEL DOWNLINE CONTACTS MOORING LINE

What happened?

The incident occurred following the installation of a subsea jumper (pipe connector used to transport production fluids between two subsea components) from a marine support vessel. A spreader bar was used to lower the jumper into its final position. After setting the jumper in place, the spreader bar was kept at around 100 ft above the seabed using the vessel crane to clear subsea assets. Then, the vessel initiated a move to a 'safe-overboarding zone' (SOZ), where the spreader bar could be recovered to the surface. During this process, a downline (either the crane wire or Remote Operated Vehicle (ROV) umbilical) contacted and severed a polyester section of the platform's mooring line. A second mooring line was also contacted, but ROV inspections confirmed that only marine growth had been removed and the integrity of this mooring line was not compromised.

What went wrong?

Vessel mobilization kick-off / operations meetings and Job Safety Analysis did not cover vessel moves within the mooring pattern and 'in-water assets' were not adequately identified, communicated and understood.

Lack of written procedures /standardized practices for communicating and verifying vessel moves within the spar's mooring pattern led to selecting an incorrect SOZ, which put the vessel in a trajectory that crossed one of the platform mooring line clusters.

Why did it happen?

Verification / SOZ Selection – The survey navigation display of in-water assets was unclear; and the labelling conventions used for vessel way-points resulted in naming two SOZ with the same name. This contributed to the selection of a safe over-boarding zone, which was not appropriate for the location where the job was being executed.

The Activity Specific Operating Guideline (ASOG) contains requirements that stipulate gradual vessel moves while working within 500 meters of the asset to allow verification of the trajectory and reduce the likelihood of impacting assets; however, this guideline was not followed.

Final vessel move was not monitored. After the vessel move was initiated, the hazard (mooring lines) in the path of the vessel went undetected for around 20 minutes, until the downline severed a mooring line just below the platform chain.

What areas were identified for improvement?

Implement an automated Hazard Alarm on the survey navigation screen when vessel enters a marked exclusion zone, and add an automated Hazard Alarm to respond when vessel proposed path intersects water column assets.

Implement an assurance process for vessel operations and formalize the assurance responsibilities for Company representatives onboard Contractor vessels.

Improve Offshore Installation Procedures: (1) Standardize data exchange format of Companies infrastructure drawings files to make known hazards obvious (i.e., seafloor assets, in-water column assets, and surface assets); (2) Contractors to provide project-specific safe work location, safe ingress/egress routes and vessel transit routes; and (3) Contractors to provide a written protocol for making vessel moves with downlines in the water column while working in the 500m zone or within mooring pattern of a Facilities/Vessels with in-water assets (e.g., mooring lines, risers, etc.).

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