Health and Safety
Executive

HSE

Summary of Marine Incidents During Connected Activities

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HSE Jurisdiction of Marine Operations

The Offshore Major Accident Regulator (OMAR) is the UK's Offshore Competent Authority responsible for regulating offshore major accident hazards. HSE and OPRED work in partnership as OMAR to deliver the CA functions.

Health and Safety at Work (Etc) Act 1974 – (HSWA)

Activities Outside Great Britain Order 1995 (AOGBO)

(a) any offshore installation and any activity on it;
(b) any activity, in connection with an offshore installation, or any activity which is immediately preparatory thereto, whether carried out from the installation itself, in or from a vessel or in any other manner,

Physical Connection, Hazard & Risk Connection, Command and Control Connection

Legal Duties

Health and Safety at Work (Etc.) Act 1974 S 2(1) & S.3(1)

S2(1) It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees.

S3(1) It shall be the duty of every employer to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health or safety.

Offshore Installations and Pipelines Works (Management and Administration) Regulations 1995

Regulation 8 – Cooperation

(1) Every person shall co-operate with the installation manager, and any other person on whom any duty is placed by these regulations, so far as is necessary to enable him to comply with the relevant statutory provisions, including this regulation.

(2)….

(3) The duty in paragraph (1) is without prejudice to any duty owed by a master, captain or person in charge of any vessel or aircraft.

Marine Incidents

- Anonymised (no photos or information that could identify any of the parties)
- No details on enforcement action
- No judgement on cause or fault
- Some cases resulted in minor damage to the vessel, others resulted in significant damage to the vessel and some damage to the installation, some resulted in partial evacuation of the installation.
- The purpose of sharing this information is to promote discussion and reflection on the effectiveness of existing preventative and protective measures for reducing the risks associated with connected activities, and whether there is more that can be done.

Case 1 & 2

Case 1 – A platform supply vessel (PSV) was requested to enter the 500m zone of a fixed installation. The Chief Officer and a watchkeeping officer were on the bridge. Pre-entry checklists were completed, and the Chief Officer began manoeuvring the vessel towards the 500m zone. The Chief Officer allowed the speed of the vessel to increase above the normal rate and the watchkeeping officer was engaged in other tasks. The Chief Officer made attempts to control the movement of the vessel, during which time it struck the leg of the installation.

Case 2 – A windfarm service vessel (SOV) was transiting through the windfarm. It was daylight, weather was good, the vessel was in DP mode and there was an OOW and Dynamic Positioning Officer on the bridge. The DPO had control of the vessel and was changing heading to pass a wind turbine. The OOW was engaged in a non-navigational task. The change of heading resulted in the vessel being on a collision course with a wind turbine. The Master, who had gone to the bridge for another purpose, noticed the developing situation and took control of the vessel, but was unable to prevent collision with the wind turbine.

Case 3

Case 3 – A multi-role ERRV was standing-by outside the 500m zone of a jack-up drilling installation. The Master had just handed over to the Officer of the Watch (OOW). It had just turned midnight, the weather was good and there was a lookout on the bridge. The OOW became engaged in non-navigational tasks.The lookout asked the OOW if he could use the bridge computer and was given permission to do so. Neither the OOW nor the lookout noticed that a change in environmental conditions meant the vessel was now drifting towards the jack-up. A PSV was alongside the jack-up and raised concern that the ERRV had entered the 500m zone and was on a collision course with the installation. The jack-up control room attempted to call the ERRV and instructed them to leave the zone. The ERRV collided with one of the legs of the jack-up.

Case 4

Case 4 – A PSV was waiting on weather in the vicinity of an installation. PSV was positioned approximately 2 miles downwind of the installation. It was dark and there was one OOW on the bridge. The master requested the OOW to close the distance with the installation and the master set thrust to slowly move in the direction of the installation before leaving the bridge. Shortly after, the OOW felt ill and had to go to the bathroom on the bridge. By the time the OOW left the bathroom the vessel was in close proximity to the installation and despite attempts to manoeuvred away a collision occurred. The REWS on the installation detected the vessel on a collision course but due to a technical issue the field ERRV did not receive the alert in time to take action. The vessel BNWAS had been switched off.

Case 5

Case 5 – A PSV was standing by a jack-up drilling installation. It was daytime, the weather was good and there was a single OOW on the bridge. The vessel was configured in “green DP” meaning the DP system was controlling surge but not sway. The OOW began some administrative tasks on the bridge computer but kept an eye on the installation through the bridge front window, knowing that if he kept the installation ahead of the vessel, the “green DP” configuration meant he would not drift towards it. The view from the OOW’s position at the bridge computer out the side window was blocked by the bridge toilet and ships funnel. The OOW was therefore unaware that the vessel was drifting sideways towards a neighbouring fixed installation. The PSV drifted inside the 500m safety zone and collided with the leg of the installation.

Case 6

Case 5 – A PSV was engaged in cargo operations alongside a mobile drilling installation. It was dark, weather conditions were marginal, and the vessel was in a drift-on position with the bow into the wind. The Master was in control of the DP system and a watchkeeping officer was supporting him on the bridge. The crane operator on the installation asked if the vessel could change heading to enable access to cargo outside the reach of the crane. The Master pulled away from the installation a short distance and changed the vessel heading. This action resulted in the DP system being unable to maintain position and the vessel drifted towards and collided with the drilling installation.

Case 7

Case 6 – A PSV was engaged in cargo operations alongside a weather-vaning FPSO. There were two DPO's on the bridge and weather was good. DP system was set up "follow target" mode. DP system alerted DPO's to "close to heading deviation" and SDPO noticed distance between vessels to be closing. SDPO entered a heading change, but this was rejected by DP system. SDPO selected DP joystick mode but this was also rejected by DP system. FPSO continued to weathervane and there was contact between PSV and FPSO. Investigation found DP system rejected SDPO inputs because they conflicted with "follow target" command. "Follow target" should have been deselected first and SDPO would have been able to manoeuvre vessel.

Case 8

Case 7 – A PSV was engaged in cargo operations alongside a weather-vaning FPSO. Weather was good. Both Master and Chief Officer had experienced difficulty maintaining uniform distance between PSV and FPSO throughout the operation. Neither had much experience working at weather-vaning FPSO and neither were aware the DP system could be operated in “follow target mode”. The vessel was operated in the same manner as it would at a fixed installation, with two fixed and one relative PRS. The movement of the FPSO resulted in the relative system to keep dropping out. The master was aware that this put him into “advisory” column of the ASOG but continued the operation after performing dynamic risk assessment. Soon after, one fixed system dropped out resulting in the vessel thrusting towards and making contact with the FPSO.

Case 9

Case 8 – Multirole ERRV standing-by offshore installation at a distance of 750m. Weather was good. Vessel was positioned upwind of installation and was operating on one out of four engines. One of the engineers erroneously stopped the engine resulted in a vessel blackout. Vessel began drifting towards installation and was eventually stopped by dropping an anchor. Vessel got to within 150m of installation. Subsequent investigation found that the displacement and speed of the vessel before it was stopped could have caused loss of structural integrity of the installation and possible collapse.

Common Factors

- Bridge resource management
- Distraction / loss of situational awareness
- Lack of understanding of DP system
- Lack of appreciation of environmental conditions
- All those involved were competent, experienced seafarers.

Safety Alert

Risk of collision with offshore installations from attendant vessels

Health and Safety Executive - Safety notice

Department name: Energy Division

Bulletin number: ED01-2025
Issue date: 03/25
Target audience: Offshore installation duty holders, owners and operators of offshore vessels, windfarm operators, principal contractors, contractors.

Issue

HSE has identified a rise in the number of incidents of attendant ships colliding with offshore oil and gas and renewable energy structures. Failure of navigational watch processes and systems, is resulting in collisions or risk of collisions.