

2025 Interspill Abstract – Nathan Young, Manager – Operations Australian Marine Oil Spill Centre

The increasing vessel size of the international tanker fleet has been shown to significantly reduce the cost of long-haul transfer of hydrocarbon cargos to refineries and terminals globally. However, the draft of fully laden vessels often surpasses the capacity of nearshore shipping channels, limiting the access to many refineries and terminals. To counter this issue, Ship-to-Ship transfer operations of the inbound vessels has become widely used to facilitate this transfer through depth limited transit channels.

Pollution control in support of ship-to-ship transfers – an operational summery

Operation:

Pollution control measures during ship-to-ship (STS) transfers of hydrocarbon (crude) product between two Very Large Crude Carrier (VLCC) or similar whilst berthed.

Risk (most likely):

Loss of containment, typically through hose failure or mechanical malfunction.

Should a release occur, the location of the STS transfers in conjunction with the fast current sea conditions would have hydrocarbon (crude) product likely impact sensitive shorelines in a short timeframe.

Risk mitigations:

Measures to mitigate potential risk included a multi-barrier approach.

A primary barrier of purpose made booms deployed between the two vessels outside of the transfer hose.

A second barrier was by way of prepositioned advanced boom system, capable of operating in high currents. This vessel remained near the operation, relocating at the change of tides.

Equipment & personnel:

Air driven equipment was used, with VLCC air supply.

Each vessel contained dedicated response equipment including skimming, pumping and waste storage equipment.

Response personnel were located onboard the VLCC vessel for the full duration of the transfer for both boom tending and response needs, supported by ship crews.

Learnings

Minor modifications to the equipment and process to optimise efficiency.

Insight has been gained through these operations which could assist in the planning and deployment for other organisations that may be engaged to support similar activities.

Close:

The STS operation has been completed successfully several times by AMOSC Operations.