

Services Performed

IRC conducted a ship collision analysis for Woodside's OceanWay Secure Energy project offshore southern California. The analysis identified and assessed potential collision scenarios between regasification liquefied natural gas (RLNG) carriers and both project-related shipping and ambient shipping in the area.

Objective

- Assess the frequency and severity of collisions with RLNG carriers throughout the project's life

Project Description

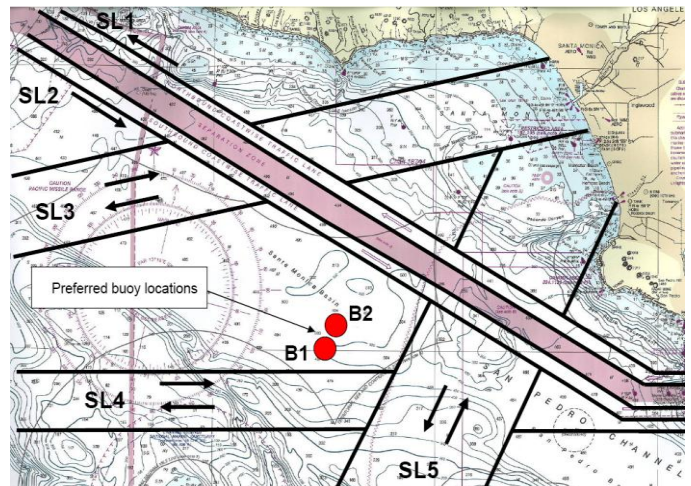
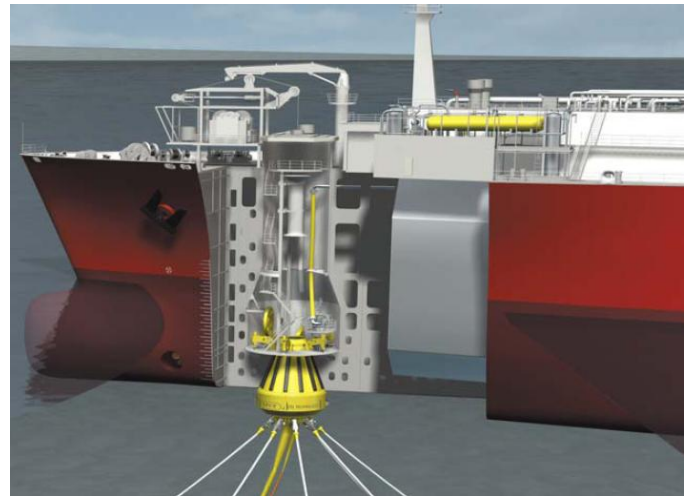
To help meet California's demand for natural gas, Woodside Natural Gas planned to develop a deepwater gas port offshore California—the OceanWay Secure Energy project.

The project was based on RLNG carriers collecting LNG from passing LNG tankers via a ship-to-ship transfer conducted away from the project site. The RLNG carriers would then travel to the project site and connect to one of two strategically placed, single-point mooring buoys. Regasified LNG would then be sent to shore via flexible risers and subsea pipelines.

The possibility of a ship collision with an RLNG carrier during its normal operations was analyzed for the following scenarios:

- Collision between an LNG tanker and an RLNG carrier during ship-to-ship transfer operations
- Collision with an RLNG carrier during transit to and from the mooring buoy
- Collision with an RLNG carrier during offloading at the buoy
- Collision with an RLNG carrier during bunkering operations

Collision with a passing vessel during RLNG carrier offloading at the buoy was determined to be the primary concern. The study included analysis of shipping lane (SL) traffic, determination of impact energies for powered and drifting collisions, and assessment of collision frequencies, which considered distances from the buoys to the shipping lanes.



Key Benefits to Client

- All collision scenarios during the operation of the OceanWay project were identified, assessed, and compiled into a report that compared scenario risks
- Recommendations were made to reduce risk during operations including buoy location Notification to Mariners, establishing communication procedures for passing vessel traffic, and the use of collision avoidance systems

