



Services Performed

IRC completed safety assessment studies and provided safety engineering support for the Thunder Hawk project. Topsides gas dispersion and potential fire events were modeled and assessed using in-house tools and industry accepted software packages.

Objectives

- Influence and verify the adequacy of the design based upon outputs from Formal Safety Assessment (FSA) studies
- Support and justify deviations from ABS class requirements using risk based arguments
- Provide input into the design to improve safety of the facility

Project Description

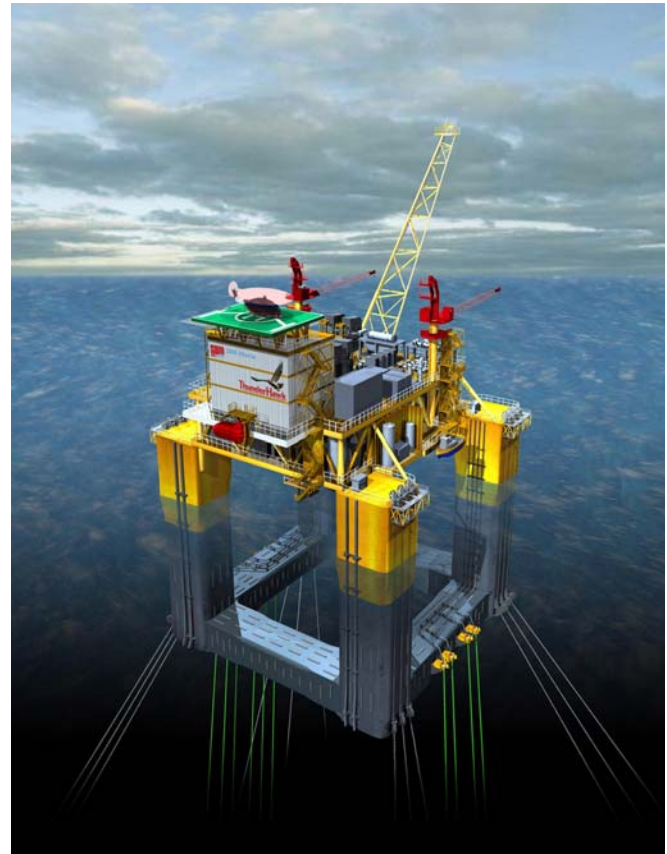
Murphy Oil is developing the Thunder Hawk field, in the Mississippi Canyon block, ultra-deepwater GoM. The facility comprises a semi-submersible floating production unit with main and production decks in approximately 6,000 ft of water.

IRC performed detailed engineering FSA studies and provided general safety engineering support to the project, including:

- Fire risk analysis
- Escape, temporary refuge, evacuation and rescue analysis
- Vent gas dispersion studies
- Hazard Identification (HAZID) study
- Hazard and Operability (HAZOP) study

Fire analysis included assessment of adequacy of fire detection, protection and mitigation systems, including determination of passive fire protection requirements. As part of this work scope, risk based arguments were used to justify deviation from ABS class requirements for the LQ, emergency generator enclosure and MCC.

Gas dispersion studies, which considered aerosol effects and liquid rain out, determined the safe location for methanol storage tank vents.



Key Benefits to Client

- Changes to design were made to reduce risk to personnel and to help ensure personnel could evacuate to a place of safety for any credible major accident event
- The analysis demonstrated that certain fire risks were negligible, enabling deviations to ABS class requirement and reducing project costs

