

Services Performed

IRC completed an escape and evacuation analysis (EEA) for BHP Billiton Angostura Gas Project offshore Trinidad. The performance and adequacy of the escape and evacuation facilities at the gas export platform (GEP) and the Aripo platform were assessed and potential risk reduction measures were recommended.

Objectives

- Identify the major accident events that can impair escape and evacuation facilities of the GEP and Aripo platforms
- Evaluate the performance of escape and evacuation facilities in the event of a major accident
- Evaluate the risk associated with GEP evacuation via lifeboats compared to life rafts
- Recommend risk reduction measures to ensure that safety goals are met

Project Description

BHP Billiton expanded the Angostura field development to include facilities for gas production and exportation including upgrades to the Aripo wellhead platform and installation of a bridge linked GEP.

As a part of the risk and hazard management process, IRC undertook an escape and evacuation analysis to assess the ability of the escape and evacuation facilities to meet personnel safety goals during an emergency.

The assessment included evaluation of escape routes, lifeboats (TEMPSC), life rafts, and lifesaving equipment (life jackets, rapid descent devices). Various events that could impair escape and evacuation facilities were analyzed including explosion, thermal radiation, and flame impingement.

Although a limited number of events could potentially impair escape and evacuation, the potential risk reduction measures identified for consideration for both Aripo and the GEP were:

- Use of Davit-launched life raft as alternative to a “kick-over” life raft
- Modification of the existing “kick-over” life raft with escape chute or donut descent device
- Installation of a “Geronimo line” for the crane operator to reduce time of exposure to high thermal radiation levels and reduce likelihood of jumping from a significant height



Key Benefits to Client

- The study provided BHPB with detailed understanding of the escape and evacuation facilities at the GEP and Aripo platforms
- Various impairment events were identified and measures to reduce risk were presented