OFFSHORE HSE CASE AND STUDIES SUPPORT

- **Location:** Glasgow and Aberdeen, UK
- **Date:** 2008 - 2009

Overview

HRM provided technical support services for the development of a HSE Case (and supporting study integrations) for the conversion of a ship to an accommodation and deck working ship for North Sea operations. The vessel was a former South African Forces troop carrier that had
been converted for extreme weather conditions and subsequently for North Sea accommodations and deck construction working.

The HSE Case was developed to support SIMOPS and Combined Operations in the North Sea with the ability for sail away to locations as required with full construction team complement capable of working in extreme weather conditions.

Work undertaken was in support of the HSE Case writing, studies development and interpretation, and specific input to the overall hazard management process for the following stages:

- **Design and Conversion** - provision of data for the basis for the hazard management process
- **Vessel Operations** - hazard management across normal Vessel activities and “Non-Producing Installation” mode
- **Combined Operations** - hazard management for the Vessel whilst in “Installation” mode

**Approach**

**HSE Case**

- **Section 1 - Development Process**: Described briefly the boundaries of the Hazard Management process across all facets of the Vessel development and HSE Case requirement
- **Section 2 - Management of Health and Safety:** Described the processes which had been undertaken to ensure that the risks associated with the Vessels operation had been identified, controlled and reduced to ALARP

- **Section 3 - Hazard Management Overview:** Described the hazard identification studies that had been carried out together with examples of their findings

- **Section 4 - Hazard Identification and Risk Assessment:** Discussed the identification of hazards and the semi quantitative risk assessment studies that had been carried out and their results / impact on the operations

- **Section 5 - Risk Profiles:** Presented a listing of assessed hazards and their management

- **Section 6 - Escape, Evacuation and Rescue:** Described the analysis process for identifying and quantifying the risks associated with escape, evacuation and rescue in the event of an emergency on the Vessel

- **Section 7 - Safety Critical Systems and Performance Standards:** Presented the Safety Critical Systems that had been identified, their Performance Standards, and the process of verification that is used to ensure that the defined Performance Standards are achieved

- **Section 8 - ALARP Demonstration:** Described the current implementation of risk reducing measures and provided discussion of the future risk reducing measures which would demonstrate how the risks to personnel and the Vessel, from all the major hazards, shall be reduced to a level which is as low as reasonably practicable

- **Section 9 - Ongoing Hazard Management Programmes and actions:** Outlined ongoing programmes that had been identified as well as a programme for capturing relevant HSE and integrity actions from the risk assessment process

- **Section 10 – References:** Provided a listing of relevant reference material by hierarchal rating to support the hazard management process
Studies Support

- Integration of QRA, Vessel Impacted and associated risk studies for hazard management programme
- SCE/SCA and Performance standards with WSE
- Hazard Strategies
  - Loss of Structural Integrity
  - Loss of Stability
  - Fire and Explosion
  - Escape and Evacuation
  - Loss of Propulsion and/or Positioning
  - Gangway Failure
  - Helicopter Operations
  - Lifting Operations
  - Occupational Hazards
- Management Plans

Deliverables

From the work stream the following deliverables were issued in both an electronic and hard copy format;

- HSE Case sections
- Study integration reports
- Hazard Management Strategies and Hazard reviews
- SCE/SCA listing, Performance standards and WSE
- Seconded support