Scope of Work
SOFEC designed, constructed, and installed a CALM Buoy system for the SHELL Malampaya Deep Water Gas to Power project.

The Malampaya CALM transfers condensate from the concrete gravity Production Platform to tankers through a 2.5km long 24-in pipeline. Located in 75m water depth, the CALM buoy is capable of accommodating 40,000 - 110,000 dwt tankers.

General Description
Client Name: Shell
Contract Award: November 2010
Installation Date: May 2012
Application: Condensate Transfer

Project Specifications
Water Depth: 75m (246ft)
Tanker Size: 40,000 - 110,000 dwt
Dimension: 12.5mØ x 5.3m
Floating Hose: 1 x 16-in.
Underbuoy Hose: 2 x 12-in. Lazy S
Hauzer System: 16-in. Single grommet
Anchor Leg System: 6 x 3-in. ORQ + 20%
Anchor System: Gravity anchors

Design Environmental Criteria
Operational
Significant Wave Height: 3.5m (11.5ft)
Wind Velocity: 15.7m/s (30.5 knots)
Surface Current: 0.9m/s (1.8 knots)

Survival
Significant Wave Height: 12.3m (40.3ft)
Wind Velocity: 50.2m/s (97.6 knots)
Surface Current: 2.8m/s (5.5 knots)

Comments
The Malampaya project is located in the South China Sea offshore of the Palawan Island in the Philippines.