National Oceanography Centre

WORLD CLASS MARINE SCIENCE AND TECHNOLOGY FOR YOUR BUSINESS

Collaborating with Industry

Monitoring the marine environment

SENSOR DEVELOPMENTS

Monitoring the marine environment is important to BP. After discussions between NOC's sensors development team and BP's Environmental & Social Responsibility Team a project was formed to develop two types of sensor targeted at two key parameters of marine conditions

pH - Precise pH measurements are needed to assess ocean acidification and related effects

PAH (Polyaromatic hydrocarbons) - A key indicator of hydrocarbon discharges from both natural sources and as a result of oil and gas exploration and production.

This project is constituted in two main parts:

- Proof of concept study of synthetic aptamer sensor technology, and to demonstrate this for PAH detection and quantification in the laboratory.
- to develop existing and proven in situ lab on a chip technology for deployment in deepwater settings which will be demonstrated with application to pH determination

The pH system was successfully re-designed from a bench top system (with a micro fluidic core) into a fully *in situ* system over a six month period.

This *in situ* system has been entered into the Wendy Schmidt Ocean Health X-prize in August 2014 and has successfully moved onto phase 3.

bp

quote

To talk to us about ways of working together
contact: business@noc.ac.uk