A CRITICAL ISSUE is emerging on the environmental front that could result in serious consequences for drilling contractors and their operations: biofouling.

Sometimes called “invisible pollution,” biofouling occurs when organisms attach to a surface – such as the hull of a ship – and get introduced into foreign ecosystems as the vessel moves to new places. These invasive species can then impact local marine environments and species.

Considering the nature of drilling rigs and how they’re used – they often sit at one site for five months or even five years before picking up to move elsewhere – it’s no surprise local organisms will grab on and settle in.

As the importance of environment preservation and aquaculture protection grows in recent years, regulators have taken more notice of biofouling risks and are starting to take action.

Although nobody questions the importance of the environmental stakes at hand, emerging regulations do push to the foreground critical issues that demand attention from the global drilling community. So far, awareness of the issue has remained low.

IT’S HAPPENING NOW

For one drilling contractor company, biofouling is no longer an invisible issue; they’ve seen and felt it.

In December 2007, Diamond Offshore’s semisubmersible Ocean Patriot had completed operations in New Zealand and was preparing to move to Australia when authorities there requested an inspection for potentially invasive species. That inspection resulted in finding on the hulls an infestation of green-lipped mussels – a species that is part of New Zealand’s multimillion-dollar mussel-farming business, yet one that Australia doesn’t want. At the time, Australia had just introduced its new biofouling regulations – likely the first in the world – as part of a national program to keep so-called “marine pests” out of their waters. Although the new regulation and its applications are still gradually coming into the light, it’s become apparent that all rigs, which are considered high-risk vessels, will need to be inspected for invasive species before they’ll be allowed into Australian waters. If any are found, the rig must be cleaned before entry.

For Diamond Offshore, although the rules hadn’t actually gone into effect at the time, the company said it decided to comply with the spirit of the law. To remove mussels from the rig out at sea, divers and blasters were brought in. This additional and last-minute expense resulted in $5 million in cost overruns for the quarter.

The real cost, however, was the loss of revenue from the rig being out of commission for 23 days, said Moe Plaisance, Diamond vice president of international operations. The Ocean Patriot is now operating offshore Australia at a dayrate in the high $370,000s.

In the future, the company said it will seek contractual protection from problems associated with invasive species.

WHAT’S AT STAKE

Contrary to common public misperceptions, the drilling industry is highly environmentally conscious. Everything from methods of cuttings disposal to fuel consumption to the types of drilling mud used, drilling contractors have put in more efforts than many other industries to protect the environment.

Industry does not appear opposed to biofouling regulations, but issues must be resolved, especially in a market where floater utilization is running at near 100% globally and operators can’t seem to find enough rigs to do their drilling.

Speaking in April at the 2008 Australian Petroleum Production & Exploration Association (APPEA) Conference, held in Perth, IADC president Dr Lee Hunt highlighted the issue.

“Operators who need to do work in Australia will face a great unknown in when a rig can get to location and start working,” he said. “Shipyard space is
tight worldwide, and the time it will take to schedule a dry dock between operations is an unknown factor that can run into weeks or even months.

“Rig cleaning in international waters poses safety risks and other environmental contamination problems, including dredging and clean-up expenses,” he continued.

Adding to the challenges posed by biofouling is that awareness of the issue appears to be low in the industry.

“Under typical contracts issued by IADC drilling contractor members, site entry permits are the responsibility of the operator. If an operator contracts a rig, thinking it can get into Australian waters without going to a shipyard, they may be in for a shock,” Dr Hunt said. “This will be an issue of assignment and responsibility.”

GLOBAL ISSUE

Although Australia appears to be at the forefront of this emerging issue, the issue could soon come up in the US. A mandate to perform studies to assess biofouling as potential vector for invasive species has been included in legislation introduced in the 110th session of the US Congress. It is still under consideration.

On the international arena as well, the issue has attracted the attention of the International Maritime Organization (IMO), said Alan Spackman, IADC vice president – offshore technical and regulatory affairs.

The 56th session of the IMO’s Marine Environment Protection, 9-13 July 2007, approved a new work item for its Sub-Committee on Bulk Liquids and Gasses (BLG) on the “development of international measures for minimizing the translocation of invasive aquatic species through biofouling of ships.” This comes after consideration of a proposal by New Zealand, Australia, the UK, Friends of the Earth International (FOEI) and the World Conservation Union (IUCN), urging IMO to address the issue.

A target completion date of 2010 has now been assigned, giving the sub-committee three sessions to complete the work.

BLG has since given preliminary consideration to the issue and formed a correspondence group to review research, consider best practices, consider the practicality and feasibility of various options for international measure for control and make a recommendation to the sub-committee. The group also will begin developing interim guidance for minimizing the transfer of invasive aquatic species through biofouling. IADC is participating in the correspondence group, Mr Spackman said.

BLG will consider the correspondence group report at its next session, tentatively scheduled for 2-6 March 2009, and Mr Spackman will represent IADC at the meeting.

“This is an issue that needs to be addressed,” said Mr Plaisance of Diamond Offshore. “Operators are concerned, and I think everybody needs to be concerned. There needs to be wider understanding of the issues, and I’m not sure they’re all defined at this point.”