

Oily water separator violations: is there a way out?

Faced with the difficulties of mounting legal challenges to prosecution for MARPOL breaches, shipowners and operators must take an active approach to compliance. We are grateful to William Pallas, a partner with Freehill, Hogan & Mahar LLP, specialising in the areas of environmental law, as well as cargo and casualty defence, for this comprehensive update on the US approach to the problem.

The prosecution of MARPOL violations relating to the alleged bypass of oily water separator (OWS) systems by the US government has attracted a great deal of attention throughout the industry in recent years. This is principally because of the huge fines that have been levied against shipowners and the lengthy periods of incarceration imposed on individual crew members found guilty of violations. The scale of these penalties has made eye-catching headlines for journalists.

However, these headline figures do not tell the whole story. They do not, for example, highlight the considerable consequential losses that fall on both owners and crew whenever a violation is alleged – whether or not the owner or crew member is actually found guilty of the offence. Investigations by the US Coast Guard and other government agencies will often result in extensive delays to the vessel, plus all of the associated logistical issues and expenses associated with such a detention.

Furthermore, it is not uncommon for ‘innocent’ crew members to be detained as material witnesses under what is essentially house arrest for several months while the authorities investigate and prosecute the alleged violations. In some cases, entire engine-room complements have been detained, resulting in extensive maintenance expenses and lost wages, not to mention legal fees for both the individual crew members and the company.

Finally, even after the criminal violations have been resolved, most commonly by way of a plea agreement with the government, vessel owners and operators are often required to enter into extensive environmental compliance plans which may last anywhere from three to five years, costing millions of dollars to develop and implement.

Obviously, the easiest way to avoid criminal liability is to avoid committing a violation in the first place. However, the reality is that companies are ultimately at the mercy of the weakest link in their chain of employment. Many shipowners and operators feel helpless trying to protect themselves against the seafarer who ignores his training, ignores the company’s manuals, ignores the warnings in articles like this and goes on to commit an offence.

So, is there anything that shipowners and operators can do? It is not easy to answer that question, because many of the losses (such as delay and legal bills) are unavoidable after an offence is alleged. Nevertheless, there are some practical steps that may be taken by vessel management and officers at least to minimise, if not eliminate, the potential for criminal liability on the part of the owner and operator. In this article, therefore, we have examined some recent

legal developments in this field (in part one) and looked at some practical ways in which owners can try to protect their interests (in part two).

PART I **The legal framework**

Contrary to common perception, the prosecution of an OWS, or ‘magic pipe,’ case in the US is not based on the fact that the OWS has been bypassed or that oil has been illegally discharged. This is because, in the vast majority of cases, where the vessel is foreign flagged and the discharge occurs in international waters, the US does not have jurisdiction to prosecute for the actual illegal discharge. Rather, the illegal discharge is a matter for the flag state.

This means that criminal prosecution in the US is usually based on record-keeping violations and charges relating to the obstruction of justice – crimes that are committed when crew members hide or falsify evidence in an attempt to cover up what has really happened.

Here is a synopsis of some of the most common violations charged by the Department of Justice in a ‘typical’ OWS prosecution:

Act To Prevent Pollution From Ships, 33 USC § 1901 at seq.

The Act to Prevent Pollution from Ships, commonly referred to as APPS, is essentially the codification of MARPOL 73/78 in the US. The APPS statute and its associated regulations are the driving force behind the majority of OWS prosecutions and, as discussed above, have been the focus of most of the legal challenges in these cases.

The incorporation of MARPOL’s requirements regarding the use of oil pollution prevention equipment and the recording of waste oil processing are set forth in the APPS implementing regulations, most notably 33 CFR Part 151. In particular, the APPS regulations preclude a vessel from discharging oily mixtures from the vessel’s machinery space bilges unless the oil content of the mixture is less than 15 parts per million and the vessel has in operation the appropriate pollution prevention equipment (i.e. an oily water separator).

The APPS regulations further require that all tank vessels of 150 gross tons and above, and non-tank vessels of 400 gross tons and above, maintain an oil record book in which all discharges, transfers and other disposals of oil waste from the vessel’s machinery spaces are fully recorded ‘without delay’. It is the alleged failure to record such transfers, discharges and other disposals of oil waste in the oil record book that results in owners/operators being charged with violations of APPS.

A violation of MARPOL, the APPS statute or the implementing regulations may result in a fine up to US\$500,000 per count for a corporation and may also result in a period of incarceration of up to six years for individual defendants.

There are a number of significant aspects of APPS which makes it such an effective enforcement tool for the government:

i Detention of the vessel and security

APPS provides the US Coast Guard with the authority to detain a vessel for suspected violations of MARPOL, the APPS statute and/or implementing regulations. The statute allows the Coast Guard to demand a bond ‘or other surety satisfactory to the Secretary’ as a condition to release the vessel.

The Coast Guard takes an exceptionally broad view as to the type of security which it may demand under the statute. It relies upon this section of the APPS statute not only to demand monetary security, usually a surety bond in the range of US\$500,000 to US\$1,000,000, but also to require owners/operators to enter into very broad and onerous ‘security agreements’. These ‘agreements’ require the owners/operators to guarantee that they will lodge, feed and pay wages for all of the crew member witnesses nominated by the Coast Guard. In some cases, this might involve the entire engine-room complement of the vessel, and may last several months while the government conducts its investigation.

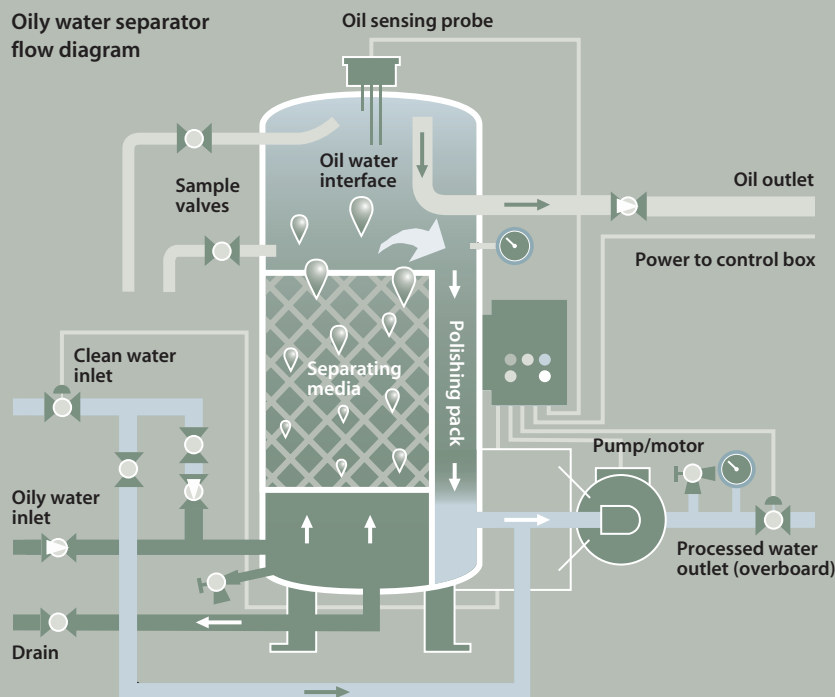
ii In rem liability

The APPS statute provides for in rem liability with respect to any criminal fines or civil penalties assessed as a result of a violation of MARPOL, the APPS statute or its implementing regulations. Given the scale of the fines, in theory this could be a significant issue should an owner transfer ownership to a third party and then not be able to satisfy the amount of the fine. However, as yet, there do not appear to be any cases in which the government has sought to enforce a fine against a vessel in the hands of an innocent third party.

iii Whistleblower awards

The APP statute provides for an award up to half the amount of the fine for any person giving information which leads to a conviction. The amount of the award is left to the discretion of the court. This aspect of the APPS statute has generated a great deal of controversy as some would argue that it provides incentive for crew members to fabricate violations in the hopes of obtaining sizeable financial rewards.

In at least one case, an owner was exonerated after convincing the jury that the crew had fabricated the allegations of a bypass. The company was assisted in large part by



testimony from a third party who said that he had overheard the crew members discussing the prospects of recovering a reward prior to reporting the alleged violation to the Coast Guard.

False Statement Act, 18 USC § 1001

The False Statement Act provides another effective enforcement tool for the government in OWS prosecutions. The act provides in relevant part as follows:

'Whoever in any matter within the jurisdiction of the United States, knowingly and willfully: 1) falsifies, conceals, or covers up... a material fact; 2) makes any materially false, fictitious, or fraudulent statement or representation; or 3) makes or uses any false writing or document knowing the same to contain any materially false, fictitious, or fraudulent statement or entry; shall be fined under this title or imprisoned not more than five years or both...'

The False Statement Act applies to both verbal and written statements to the authorities. Thus, a false entry in the oil record book or other log, or written statement submitted to the Coast Guard, would constitute a violation of the Act; as would lying to a Coast Guard investigator. It is not uncommon in OWS cases to see multiple False Statement Act charges.

A violation of the Act may result in a fine of up to US\$500,000 for a corporation and up to five years' imprisonment for an individual defendant.

Obstruction of Justice, 18 USC § 1505

Obstruction of Justice charges are quite common in OWS prosecutions. The violations

may include tampering with evidence, lying to investigators, ordering or coercing subordinates to lie to investigators or tamper with logs or other evidence. It is quite common to see multiple obstruction charges in a single case. The government will often rely on multiple obstruction charges to increase the potential fines.

Again, this is an expensive proposition as obstruction of justice violations likewise carry fines up to US\$500,000 per count and up to five years' imprisonment for individual defendants.

Sarbanes-Oxley, 18 USC § 1519

The Sarbanes-Oxley Act is a relatively new enforcement tool in OWS cases. The Act was introduced in the wake of high-profile corporate fraud cases such as Enron and WorldCom. It is similar in application to an obstruction of justice, as violations are premised upon tampering with corporate records.

Violations of Sarbanes-Oxley carry fines up to US\$500,000 per count. However, the implications for individual defendants may be much more severe, as violations carry jail terms of up to 20 years.

In addition to the above statutes and regulations, the government may also include other miscellaneous charges, such as conspiracy, to further inflate the value of these cases.

Vicarious liability

In accordance with general principles of US Criminal Law, a corporation (i.e. the owners and/or operators of the ship) may be charged with violations of any of the above statutes on

the basis of vicarious liability for the acts of its employees (i.e. members of the crew). Thus, to the extent a jury finds that the employee was acting within the scope of his employment and for the benefit of the company, the company will be subject to criminal liability.

One of the common issues in these cases is whether the company can establish that the offending crew member was acting contrary to company policy and thus, arguably, outside the scope of his employment. Unfortunately for owners and operators, the courts in the US take a very broad view as to what constitutes 'scope of employment', making it very difficult for corporate defendants to prevail on this argument. Owners/operators must bear in mind that they cannot simply argue that they had written policies and procedures specifically forbidding the illegal discharge of oil. The company must be able to demonstrate that those policies and procedures were enforced.

We shall return to this issue later in the article.

Challenges to the government's jurisdiction to criminally prosecute violations of APPS (MARPOL)

We observed at the beginning of this article how the aggressive approach taken by the Coast Guard and the Environmental Crimes Section of the Department of Justice has resulted in the prosecution of companies ranging from small operators to some of the largest fleets in the industry. However, these increasingly large fines have also inspired some shipowners to mount legal challenges, both by way of motion practice and, in some cases, trial.

The most significant recent challenges to the government's jurisdiction to criminally prosecute foreign flag vessel owners/operators for record-keeping violations in US waters under APPS are as follows:

United States v. Abrogar

The decision of the Third Circuit Court of Appeals in *United States v. Abrogar* was significant in that it provided perhaps the first indication that the courts may not be willing to acknowledge the virtually unlimited jurisdiction claimed by the government under APPS.

In *Abrogar* the defendant, a chief engineer, had previously pleaded guilty to an APPS violation. This meant that the only issue before the court was to determine his sentence. Specifically, the issue was whether the discharge that had taken place in international waters (and, therefore, outside US jurisdiction) should be taken into account for purposes of sentencing. The district court had applied a six level enhancement under the sentencing guidelines based upon the evidence of unlawful discharges of waste oil

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in international waters. (In other words, the number of points calculated under the Federal Sentencing Guidelines was increased sixfold – not the sentence.) The defendant appealed to the Third Circuit Court of Appeals.

The Third Circuit noted that the offence to which the defendant pleaded guilty was a failure to maintain an accurate oil record book within the navigable waters of the US – not an illegal discharge of oil, which had occurred in international waters, beyond the jurisdiction of the US. The Third Circuit held that evidence of the discharges in international waters was not relevant conduct sufficient to justify an enhancement of the defendant's sentence.

While *Abrogar* was a significant decision, it is important to appreciate its limitations. The holding in *Abrogar* did not expressly limit the US jurisdiction to prosecute APPS/MARPOL violations within US waters. Nevertheless, the court did make it clear that the actual discharge, alleged to have occurred in international waters, was not within the jurisdiction of the US and should not be considered for the purposes of sentencing.

United States v. Jho

The decision of the District Court for the Southern District of Texas in *United States v. Jho* (generally known as the OSG case) went a step further. Here, the court held that the government's jurisdiction to prosecute criminal violations of APPS had to be exercised in conformity with customary international law. The court noted that this requirement is expressly set forth in § 1912 of the APPS statute.

The court based this holding on Article 230 (2) of UNCLOS which provides that 'monetary penalties only may be imposed with respect to violations of national laws and regulations or applicable international rules and standards for the prevention, reduction and control of pollution of marine environment, committed by foreign vessel in the territorial sea, except in the case of a willful and serious act of pollution in the territorial sea'.

Based upon the application of customary international law, as reflected in UNCLOS, the court held that the US did not have jurisdiction to criminally prosecute the defendant solely for record-keeping violations, i.e. failing to maintain an oil record book within the navigable waters of the US but without any evidence of a 'willful and serious act of pollution'.

The decision in OSG clearly has far-reaching implications. However, the victory for owners/operators was apparently short-lived as a number of subsequent courts have declined to follow the decision in that case. The decision did not have any bearing upon the ability of the government to charge under the

False Statement Act or other statutes. While the author may be accused of being biased, the reasoning of those courts refusing to follow OSG is subject to some criticism.

The current position is therefore unclear and, without some guidance from the appellate courts, the OSG holding appears to express a minority view in terms of its limitations of the government's criminal jurisdiction under APPS.

Despite the successful motion to dismiss the APPS charge, OSG subsequently settled its case with the government and agreed to pay a total fine of US\$37 million to resolve numerous additional charges pending against the company in several jurisdictions. However, the case has proceeded against the chief engineer and the company has appealed the district court's holding on the jurisdictional limitation of APPS.

Who is responsible for maintaining the oil record book?

In addition to the jurisdictional challenge under the OSG holding, the APPS statute has also come under attack based on what appears to be a significant ambiguity with respect to the language of the implementing regulations. Specifically, in accordance with 33 CFR §151.25 (j), the master 'or other person having charge of a ship' is charged with the responsibility for maintaining the oil record book. However, because it is almost always the chief engineer who actually maintains the record book, it should not be possible to charge the master with 'knowingly' having failed to maintain an accurate book. Thus, there is a valid argument to be made that in the absence of a knowing violation by the master, there can be no basis for vicarious liability on the part of the owner/operator.

This argument was found to be persuasive by Judge Fox in the Eastern District of North Carolina in the recent case of *United States v. Kiselyov*. In that case, which went to trial, the District Judge advised the parties at the close of testimony that if the jury did return a guilty verdict on the APPS charge, he would set it aside based upon this ambiguity with respect to the implementing regulations. Unfortunately, this is a somewhat technical argument and it remains to be seen whether it will be followed by other courts.

In addition to the ambiguity regarding the implementing regulations, there is also a statutory argument to be made that (under the terms of the APPS statute) false statements and misrepresentations are expressly subject to civil and not criminal sanctions. Again, while this argument initially appears to be persuasive, the district courts have thus far rejected it by simply holding that the government has prosecutorial discretion under APPS to charge either criminal or civil violations.

The arguments discussed above have thus far only been addressed at the district court level and ultimately will have to be tested at the appellate court level.

Has the Department of Justice overstated the value of these cases?

For many years, the common wisdom has been that courts would probably sentence owners/operators to the maximum fines sought by the government, i.e. US\$500,000 per count. Therefore, having taken the various economic and commercial considerations into account, the vast majority of these cases have been resolved by way of plea agreements – thereby avoiding the risks of trial. Many defendants have agreed to pay millions of dollars by way of criminal fines.

However, in recent months, we have seen two cases where the validity of these assumptions has been challenged. In both cases, the defendants elected to take the case to trial, where they were convicted by juries and sentenced by the respective judges. What is interesting, however, is that in the first case (*United States v. Petraia*) the court assessed a fine of just US\$175,000 per count. To the extent that this was significantly below the statutory maximum, this was viewed as a favourable result for the defence. Not surprisingly, the government has been quick to describe this case as something of an anomaly, noting that the defendant was a single vessel owning entity and was effectively defunct at the time of the sentencing. It should be noted that one of the factors to be considered by courts in assessing fines is the financial status of the defendant. The fines are designed to be sufficient to punish the defendant and to dissuade further violations, yet not so much as to put the defendant out of business.

The second, and more recent case, may provide a more telling indication as to how courts value these cases. In *United States v. IONIA*, which involved a defendant convicted of a repeat violation, the government had sought a total fine of US\$9 million based upon the 18 counts for which *IONIA* was convicted. The government also sought to preclude *IONIA* from trading to the US for a period of five years. The judge did not impose the statutory maximum, but rather condensed the 18 counts down into seven 'groups' and assessed a total fine of US\$4.9 million dollars. The judge again arrived at a value of US\$175,000 per group, which was then multiplied against a multiplier, calculated under the federal sentencing guidelines. The government objected to this procedure as technically the federal guidelines are not applicable to environmental and obstruction charges against corporate defendants.

The court likewise rejected the government's request to preclude the company from

trading to the US for five years. Rather, as discussed further below, the court imposed various restrictions and conditions on the company's operations, including the appointment of a 'special master'.

Hopefully, the result in *IONIA* provides an indication that courts may be reluctant to view these cases in the same light as the Department of Justice in terms of their monetary value. However, the government has yet again sought to distinguish *IONIA*, noting that the judge's refusal to assess the statutory maximum fines was a reflection of *IONIA*'s moderate size, and that the same result should not be expected with respect to larger companies. *IONIA* apparently operated/managed 10 vessels at the time it was indicted and 7 at the time it was sentenced.

Alternative punishment: strict probationary terms

While *IONIA* may reflect some degree of reluctance on the part of the courts to award the statutory maximum in terms of fines, it may also provide an indication that courts are much more willing to entertain very strict probationary terms and restrictions on the company's ability to conduct business. The imposition of onerous environmental compliance plans has long been a hallmark in plea agreements resolving OWS cases in the US.

In *IONIA*, the court imposed extremely severe sanctions on the owners, including a 'special

master', weekly and monthly reporting requirements (relating to waste oil production and disposal) and a requirement that all vessels trading to and from the US be equipped with special 'white boxes' to monitor waste oil processing. To the extent that these measures will probably cost *IONIA* several million dollars to implement, it can hardly be said that they escaped with a mere 'slap on the wrist', notwithstanding the reduced amount of the fine.

Given that only two cases have gone all the way to sentencing, it is very difficult to draw any broad conclusions. Nevertheless, these cases might indicate that the courts see stringent compliance programmes and probationary conditions as more effective tools in trying to prevent future non-compliance. It should be remembered, in this context, that *IONIA* was a repeat offender.

USCG Voluntary Disclosure Policy

Finally, it is worth taking a look at the Coast Guard's new initiative – aimed at encouraging companies to self-report violations. In exchange for voluntarily reporting violations, the Coast Guard is proposing not to recommend the case for prosecution by the Department of Justice.

The Coast Guard's Voluntary Disclosure Policy is premised upon a number of important qualifications. First, the policy will not protect companies where there is evidence of conscious involvement, or wilful blindness and

where it is clear that high-level corporate officials or managers have been involved. Second, the policy will not apply where the violation was discovered as a result of a 'legally mandated' monitoring or sampling system. Rather, the violation must have been discovered voluntarily by means of an audit or compliance management system. The violation must be reported to the Coast Guard in writing within 21 days and be corrected within 60 days, or as quickly as possible.

In the past, similar amnesty programmes have been criticised because the authorities have construed them too narrowly to have any practical benefit. A preliminary analysis of the Coast Guard's Voluntary Disclosure Policy raises a number of such concerns. For example, the policy requires that the violation be discovered independently, which the Coast Guard interprets to mean 'before the Coast Guard or another agency likely would have identified the problem either through its own investigative work or from information received through a third party (i.e. a whistleblower)'. From this statement we can assume that the policy would not apply where there would have been 'imminent discovery' by a regulatory agency. Obviously, these are rather subjective criteria, and it remains to be seen how they are interpreted and applied by the Coast Guard. We will probably need to await a few test cases before we can begin to form a picture of what the Coast Guard is hoping to achieve with this programme.

So, while the new policy is certain to generate a great deal of interest and debate within the industry, the true value and effectiveness of the programme will ultimately depend upon the manner in which it is interpreted and implemented by the Coast Guard.

PART II

So, bearing in mind the difficulties of mounting a legal challenge, what practical measures can a shipowner take to protect his interests?

Management

In today's maritime industry, almost all ships operate under detailed SMS requirements dictating the various correct procedures for handling and disposing of waste oil. It would be difficult to find an owner/operator who could not point to clear written policies prohibiting vessel crews from making illegal discharges or otherwise violating the requirements of MARPOL. However, just having written policies will not be sufficient for shipowners to avoid vicarious liability for violations committed by their employees. At the end of the day, policies will only be as effective as their enforcement.

This means that, in order to demonstrate actual enforcement of the company's



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environmental policies to port state control inspectors, vessel managers should consider implementing the following recommendations:

a) Vigorous self auditing

The most effective way to demonstrate good faith enforcement of company policies is by conducting audits of the company's vessels and crews. The audits may be conducted internally, or even better, by independent third parties. If a port state control investigator or a prosecutor deems the audits to be superficial, they will not have any value. It is essential that the audits have legitimacy.

To the extent the audits reveal deficiencies, such deficiencies must be addressed, and if appropriate, disciplinary action should be taken against the responsible crew members. For example, if a fleet-wide audit were to reveal widespread evidence of 'sloppy' record-keeping, the company would be expected to provide focused training for its engineers to rectify the problem. The company may also issue letters of reprimand, or even take more significant disciplinary action, against the most serious violators.

b) Improve internal recordkeeping

Port state control inspectors in the US are looking for problems, and any inconsistencies between the various engine-room records (e.g. between the oil record book and the sounding log) are certain to trigger a detailed investigation. The company should develop record-keeping procedures that enable crews accurately to determine and keep track of waste production and disposal. For example, we have a client who has developed a very effective and efficient spreadsheet which reconciles soundings in all the waste oil tanks with the entries in the oil record book and soundings log. The spreadsheet is required to be maintained by the chief engineer and submitted to shoreside management on a monthly basis.

c) Establish safeguards to ensure accountability in respect of overboard discharge

Procedures should be adopted ensuring that access to and utilisation of overboard discharge equipment, valves, etc. is closely restricted and monitored. For example, a procedure could be implemented whereby all overboard discharge valves are equipped with individual tags and locking mechanisms, the keys to which are maintained by the master and must be logged in and out by the chief engineer. Additional measures may include requiring the status of pollution prevention equipment to be addressed in hand-over notes.

d) Improve communications between crews and shoreside management

The company should encourage internal reporting, including the implementation of a

'hot line' direct to a senior member of the shoreside management team. Pursuant to company policy, crew members should be encouraged and rewarded for reporting violations.

Engineering

There are also a number of engineering steps which may help to reduce the likelihood of a MARPOL violation:

a) Companies should consider upgrading their OWS, oil content sensor, incinerator and other related pollution control equipment. If the equipment is reliable and user-friendly, crew members will be less inclined to invent creative ways to avoid using it.

b) Vessels should use cleaning agents that are consistent with OWS technology.

c) Bilge/ballast crossovers and blind flanges should be eliminated.

d) Freshwater flushing systems should be modified so that they cannot be used to 'trick' the oil content meter on the OWS.

e) As mentioned above, lock-out systems and individual tags for overboard discharge valves should be used to eliminate unauthorised discharges.

Training

Whether justified or not, there exists a common perception among port state control authorities that the frequency of MARPOL violations reflects a failure on the part of the industry to make crew members and other employees understand the importance of compliance. The aggressive enforcement measures taken by the Department of Justice are ultimately aimed at bringing about a change in the culture of the industry. Thus, the issue of training is significant, not only to avoid the violations in the first place, but also as evidence that the company does not condone – and is not indifferent to – violations by its employees.

a) MARPOL training

On joining the company, crew members should be provided with extensive training regarding the requirements of MARPOL and the company's environmental policy. Veteran employees should be provided with follow-up training on an annual basis.

b) Crew member affidavits

Crew members should be required to execute affidavits upon completion of training attesting that they have been instructed as to the requirements of MARPOL and the company's environmental policies. As part of those affidavits, the crew members should acknowledge that they are aware that the company maintains a zero tolerance policy for environmental violations and that

any such violation will be deemed to be outside of their scope of employment and grounds for immediate dismissal.

c) Environmental compliance

Environmental compliance should be awarded as a positive factor in personnel evaluations.

d) Recognition of legal rights/obligations on the part of crew members

Whenever there is an environmental incident or casualty, there is the potential for criminal liability. This makes it imperative that crew members have some basic understanding of their legal rights and obligations when interacting with port state control authorities – especially when they are faced with a potential criminal investigation.

The most fundamental rights they enjoy are as follows:

they have the right to remain silent;

the right to an attorney.

If, however, any crew member elects to speak with the authorities, **they must tell the truth**. If they do not, they risk facing obstruction and false statement charges.

Conclusion

Despite several years of aggressive prosecution of OWS cases, the extent to which the Department of Justice and Coast Guard have been successful in reducing the frequency of magic pipe violations is questionable. Certainly, they have not yet succeeded in eradicating the practice and many say they never will.

There are several theories as to why violations persist, ranging from the difficulties inherent in operating the relevant equipment, complacency in the industry and simple laziness on the part of individual crew members. It is possible that the Coast Guard's new Voluntary Disclosure Policy may be premised, at least in part, upon the recognition that the Department of Justice and the Coast Guard cannot eliminate this problem unilaterally through excessive fines and aggressive prosecution. Rather, the elimination of these magic pipe violations will ultimately require a concerted effort by both the port state control authorities and the industry working in harmony. If that is the case, it is at least a step in the right direction.

Furthermore, for shipowners and operators, while it may not be possible completely to eliminate the risk of criminal prosecution for violations of environmental laws, it is hoped that the above measures may go a long way to minimising the risk and mitigating the consequences.