

Environmental Imperatives

Essential elements of a maritime environmental compliance plan.

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Much ink has been spilled, dozens of legal challenges have been filed, and scores of impassioned speeches have been given over the past decade protesting or seeking to forestall the investigation and criminal prosecution of environmental cases against vessel owners and operators. Despite these protests, the number of environmental criminal cases filed against maritime companies by the United States Department of Justice (DOJ) continues to escalate (a record 34 new cases filed in 2007 alone), and the level of criminal penalties imposed as a result of the convictions obtained are at an all-time high (\$67 million dollars in 2007).¹

The broader reality is that the environmental profile of commercial vessel operations has been raised dramatically in the United States and around the world in recent years. The areas of environmental interest reach well beyond the management of waste oil and now include ballast water exchange, garbage, gray and black water discharges, and air emissions. This trend shows no signs of abating.

As a consequence, many vessel owners and operators are searching for technical measures and management tools to help them more effectively address environmental responsibilities and avoid the escalating risks associated with noncompliance. More maritime companies are now considering, or have already implemented, some of the practices that have been employed for decades by major shore-based businesses in many sectors of the economy to manage environmental responsibilities. Two of these are:

- a comprehensive environmental compliance plan (ECP) to address the full scope of techni-

cal and operational details of environmental compliance,

- a compliance management system (CMS) to ensure that a company's environmental compliance policies are understood and adhered to by employees at all levels of the organization.

MARITIME ENVIRONMENTAL COMPLIANCE PLANS

Organizations employ corporate environmental compliance plans to demonstrate the company's commitment and to integrate verification procedures into operational and management systems to help ensure compliance with regulatory requirements, detect non-conformities, and correct identified deficiencies. Many businesses have implemented ECPs as a component of their overall business strategy.

Numerous ECP models targeting technical, operational, and managerial standards have been commercially developed and marketed to a wide range of business, industry, and government organizations. Many of these plans have focused on achieving compliance with environmental standards and the need for implementing comprehensive compliance management systems. What is key, however, is tailoring these plans to a particular company's operations and getting buy-in from all levels of company management and employees.

From a law enforcement perspective, the existence and adequacy of an ECP is viewed as a potentially mitigating factor in the exercise of prosecutorial discretion concerning the decision whether to file criminal charges against an organization. The guidelines for the federal prosecution of business organizations require a federal



prosecutor to evaluate the adequacy of any compliance plan and direct the prosecutor to make an informed decision as to whether the corporation has adopted and implemented a truly effective program that, when consistent with other federal law enforcement policies, may result in a decision to charge only the corporation's employees and agents.² Policy guidance issued by the DOJ's environment and natural resources division in 1991 similarly requires that prosecutors handling environmental criminal cases evaluate the existence and scope of any environmental compliance program in determining the appropriateness of criminal enforcement.³ Finally, in the event criminal charges are filed against an organization and a criminal conviction is obtained, the United States sentencing guidelines for organizations advise the sentencing court to determine, as one mitigating factor, whether the company had an effective compliance program in place.⁴

Since the mid-1990s many of the criminal cases against maritime companies for environmental violations have required, as part of a plea agreement, the development and implementation of an ECP designed to prevent, detect, and remedy any environmental violations aboard the company's vessels. Performance under the environmental compliance plan is typically monitored by the court, the U.S. Coast Guard, and the DOJ throughout the period of probation. The scope and complexity of these ECPs have grown substantially over the years, and the role of the court in the design and oversight has likewise expanded. The commercially marketed ECPs, the evaluative criteria contained in the sentencing guidelines, and the ECPs associated with recent criminal prosecutions have a number of key elements in common. Although varying in format and complexity, each of these models typically includes various elements.

- **High-level management oversight.** One common feature is the designation of a shoreside environmental manager to serve as the company's overall coordinator for the environmental compliance plan. This person is charged with confirming that the elements of the ECP are being implemented as designed and ensuring that any deficiencies are identified and corrected in a timely manner. In addition, the shoreside manager is typically required to make periodic reports to the company's president and/or board of directors concerning performance under the plan.

The management aspects of environmental compliance are often collected in a separate document, generally a compliance management system, and the

requirements of that system must be thoroughly integrated into the overall ECP.

- **Defined shipboard responsibility.** The compliance management systems associated with most ECPs require the company to issue clear, comprehensive policy statements specifying how crewmembers are to meet environmental objectives. These policy statements often establish detailed monitoring responsibilities concerning environmental compliance for senior shipboard officers.

In addition to the predictable set of responsibilities for the chief engineer regarding the management and disposal of oily wastes, many compliance policies require the master to be actively engaged in oversight and to verify that the training, operational, and documentation elements of the ECP are consistently fulfilled. The master is also typically designated as the primary point of contact with the shoreside environmental manager.

Some companies have further strengthened their ECPs by creating a new officer position aboard their vessels—an environmental, compliance, or operational integrity officer—whose sole responsibility while the vessel is underway is to monitor compliance with safety and environmental standards and to ensure that any nonconformities are understood and promptly remedied.

- **Auditing processes.** The most critical component of an environmental compliance plan is the procedure for conducting comprehensive audits of the vessel's pollution control systems, equipment, and components, as well as assessing the knowledge, skills, and abilities of shipboard and shoreside personnel. There is, of course, a wide variety of auditing procedures and different requirements from company to company depending on the size and age of the fleet, the vessel classification, the age and technical capabilities of the pollution control equipment, the maintenance practices for that equipment, and the commitment of shoreside management to make the sustained investment required to reduce the risk of environmental noncompliance.

Depending on the company's degree of environmental sophistication and its prior auditing practices, the initial audit process may have to establish a baseline of information regarding the quantity and characteristics of the waste streams generated aboard each vessel; the performance capabilities of the vessel's oily water separator, incinerator, sewage system, and ballast system, among others; the ability of the crew to handle the operational, maintenance, and repair

workloads of all pollution control systems and maintain the associated records; the adequacy of policies and practices regarding the storage and disposal of waste streams; the adequacy of environmental compliance training; and the adequacy of procedures and reporting systems (internal and external) for detecting, responding to, and remedying deficiencies.

More generally, some of the periodic audits should be conducted while the vessel is underway to permit a more realistic assessment of the systems and their capabilities. Many companies utilize an internal auditing group to handle auditing functions, but it is beneficial to incorporate a third-party audit and unannounced audits into the schedule to help ensure integrity and improve the credibility of the audit results.

Finally, audit reports and recommendations must be distributed in a timely manner to shoreside management and shipboard officers, and procedures must be in place to ensure that identified deficiencies are tracked and promptly corrected. It is critical that findings are shared among ships in the fleet to ensure that any identified deficiencies are corrected fleet-wide and not just on the ship that garnered the particular finding.

- **Technical requirements.** An ECP must also address the engineering features aboard the vessel that will facilitate compliance with environmental standards and help prevent intentional efforts to circumvent pollution prevention equipment. These can include the use of uniquely numbered seals on all crossover valves or flanges associated with overboard piping that could be used, for example, for the discharge of oily bilge water. Some environmental compliance plans incorporate the use of other protective or mechanical devices, such as “white boxes” or “envirologgers,” which are designed to prevent unauthorized access to or tampering with the pollution control systems. But even these devices can be defeated, so the ECP must incorporate periodic operational testing of the pollution prevention equipment by engineering personnel not assigned to the vessel. Many companies are also requiring the use and certification of tank sounding logs by engine department personnel to provide an independent means of cross-checking and verifying entries in the machinery space oil record book.
- **Budget.** An adequate and flexible budget for environmental compliance and procedures for monitoring such expenditures is a critical component of any environmental compliance plan. In the past, companies have too often established unreasonably low opera-

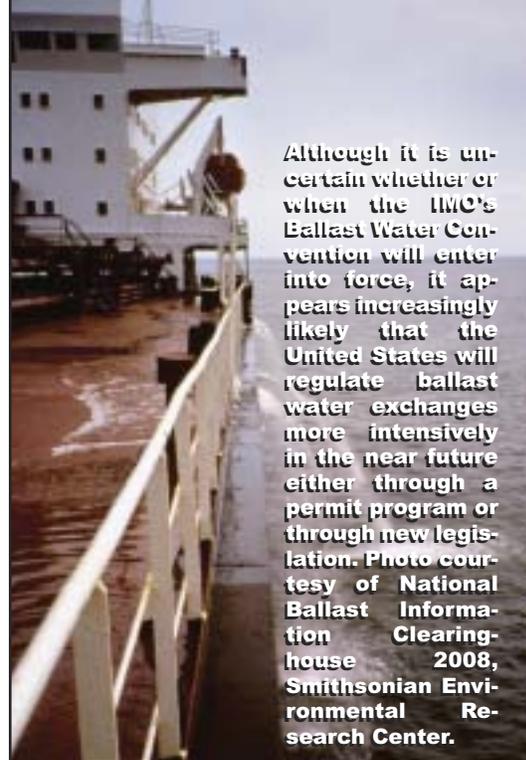
tional budgets for environmental compliance and, to compound the problem, have sometimes tied bonuses for shipboard officers to meeting those budget targets. This arrangement has inadvertently incentivized chief engineers to restrict “discretionary” expenditures for environmental compliance.

One solution is to remove environmental management and maintenance budgeting from the operational budgets of individual vessels and to task the shoreside environmental manager with overseeing the environmental budget for the fleet. Regardless of whether changes are made in the budgeting process, the ECP must contain clear policy guidance, reinforced by training and managerial oversight, that the company views expenditures for environmental compliance as priority budget items and that shipboard personnel will be provided the technical, logistical, and financial support needed to comply fully with environmental standards.

- **Procedures to determine reason for nonconformity and ensure correction.** One additional feature found in many ECPs is the need to incorporate management review of the environmental compliance plan and the CMS on a periodic basis to assess the adequacy and effectiveness of the program. These management reviews must draw data from a broad range of sources and should actively evaluate the need for changes and improvements.

ELEMENTS TO ADDRESS IN ENVIRONMENTAL COMPLIANCE PLANS

Management of all major waste streams and systems, such as bilge, black and gray water, ballast, and agricultural, chemical, and universal wastes must be incorporated into the ECP. Other items that must be incorporated include federal, state, and local release reporting requirements. Many of these programs are well established and fairly static.



Although it is uncertain whether or when the IMO's Ballast Water Convention will enter into force, it appears increasingly likely that the United States will regulate ballast water exchanges more intensively in the near future either through a permit program or through new legislation. Photo courtesy of National Ballast Information Clearinghouse 2008, Smithsonian Environmental Research Center.





The United States Congress has passed legislation implementing MARPOL Annex VI governing air emissions from vessels, and other pending legislation would impose stringent new requirements for ballast water management.

However, vessel owners and operators must contend with an onslaught of new laws and regulations governing ship operations at the international, federal, and state levels. These new developments, on the environmental front, are predominantly related to ballast water exchange and air emissions from ships. The regulatory attention to the environmental effects of commercial vessel operations is very likely to intensify in the coming years. Thus, it is imperative that ship operators closely monitor and track these new developments to help ensure compliance.

By incorporating these developing requirements into the environmental compliance plan now, the vessel owner and operator can more efficiently manage environmental objectives and adjust the standards more smoothly as the regulatory programs develop.

Ballast Water Management

The management of ballast water discharges began with the enactment of the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA) as an effort to prevent the introduction of additional invasive species into the Great Lakes. Since then, NANPCA was amended by the National Invasive Species Act of 1996 and the issue has progressed over the intervening years to a much larger campaign to regulate all vessel discharges into U.S. waters. The issue is currently being played out before the courts and Congress and, as such, changes in the regulatory regime are imminent.

There are several key components of the ballast water management equation. The first is the International Maritime Organization's International Convention for the Control and Management of Ships' Ballast Water and Sediments (adopted February 2004), which enters into force 12 months after ratification by 30 states representing 35 percent of world tonnage. At present, it has been ratified by 13 states representing 3.62 percent of the tonnage. The convention requires ballast water ex-

change and has a staged transition to treatment, but likely will not go into effect for several years.

The second component has developed from a 2003 lawsuit Northwest Environmental Advocates (NEA) brought against the Environmental Protection Agency (EPA). In that lawsuit, NEA challenged the EPA's long-standing position that discharges incidental to normal vessel operations, including ballast water discharges, were exempt from National Pollution Discharge Elimination System permits under the Clean Water Act.

In September 2006, the District Court for the Northern District of California sided with the environmental groups and ordered the EPA to vacate this regulatory exemption, which included discharges of ballast water, gray water, bilge water, and deck runoff, among others, despite EPA's argument that Congress had acquiesced in EPA's interpretation of the law, which had been in place for over 30 years.⁵ The court issued an order requiring EPA to develop a permitting program for incidental discharges from vessels by September 30, 2008. Although the case is on appeal, EPA has, in the meantime, begun a rulemaking to institute a permitting process for discharges of pollutants incidental to the normal operation of vessels. This program could cover more than 18 million vessels—more than all other point sources regulated by EPA.

The third key component is the plethora of pending legislative proposals regarding ballast water management. Companion bills (S. 2645 and H.R. 5594) introduced early in 2008 would render the ruling of the District Court in *NEA v. EPA* moot by removing from EPA the authority to regulate incidental discharges from vessels and giving separate authority to the U.S. Coast Guard to establish a new uniform national discharge standard in lieu of any permit program. Two other bills (Ballast Water Treatment Act of 2007, incorporated in Title V of H.R. 2830, the U.S. Coast Guard Authorization Act of 2007, and S. 1578) seek to strengthen NANPCA. Both bills track the Coast Guard's current ballast water management scheme, and address the critical issue of pre-emption, allowing state regulation of ballast water management provided the state regulation does not conflict with federal standards.

Finally, the administration, through the Coast Guard and EPA, has put forth a legislative proposal that would moot the District Court ruling and implement national uniform discharge standards for ballast water and other incidental discharges in lieu of a permitting regime. At this time, the legislative outlook is unclear. As a result,

barring a contrary ruling from the Ninth Circuit on appeal, EPA must proceed with a regulatory regime for permitting incidental vessel discharges by September 30, 2008. This will likely take the form of a general permit specifying standards and planning requirements with which the industry will have to comply.

Air Emissions From Ships

There are also efforts at the international, federal, and state levels to regulate air emissions from vessels, generally including the more traditional pollutants, such as nitrogen and sulfur oxides (NO_x and SO_x), particulate matter, and certain ozone depleting substances. On the international and federal front, in July 2008 the Senate passed and the president signed the Marine Pollution Prevention Act of 2008 into law to implement MARPOL Annex VI, which entered into force on May 19, 2005. Annex VI sets international standards for NO_x and SO_x emissions, among others.

In a related development, the EPA has issued regulations that would impose stringent exhaust emission standards for marine diesel engines on U.S. and foreign-flag ships, generally consistent with Annex VI. In addition, the IMO has approved and is expected to formally adopt a series of amendments to MARPOL Annex VI to achieve greater reductions in the emission of air pollution from ships. It appears that it is only a matter of time before the EPA and the international community adopt more stringent regulation of NO_x and SO_x emissions from ships. Thereafter, it appears likely that greenhouse gas emissions from ships will receive additional scrutiny.

The California Air Resources Board (CARB), impatient and dissatisfied with federal government actions to regulate vessel emissions, adopted its own regulations. On January 1, 2007, CARB began enforcing state regulations limiting emissions of particulate matter, NO_x, and SO_x from the auxiliary diesel engines of ocean-going vessels operating within 24 miles of California's coast. The regulations were challenged by the Pacific Merchant Shipping Association and, after much litigation and several appeals, the Ninth Circuit Court of Appeals held the regulations were pre-empted by the Clean Air Act.⁶ Thus, while this on-again, off-again rule wound its way through the judicial system, shipowners were extraordinarily challenged with keeping track of compliance obligations. CARB has announced that it intends to redraft its regulations and to petition EPA and seek permission to develop its own standards.

These regulatory initiatives regarding ballast water management and air emissions from ships all require ship certification and detailed record-keeping—documentation that will certainly be scrutinized closely during port state control inspections. Thus, as these new regulatory requirements are finalized, they should be quickly incorporated into an ECP.

General Vessel Permits

The EPA issued a notice of proposed permit issuance for vessel general permits in June 2008 to cover a broad range of discharges incidental to the normal operation of vessels, such as ballast water, washdown, deck runoff, gray water, and bilge water.⁷ If this EPA permitting regime is implemented, it will constitute a wholly new set of environmental compliance requirements. Vessel owners will be required to submit to EPA a notice of intent to be covered by the vessel general permit to maintain comprehensive records concerning permit compliance, and to routinely conduct the required inspections and monitoring.

STEPS TO CREATE OR REVISE AN ENVIRONMENTAL COMPLIANCE PLAN

A carefully crafted environmental compliance plan can reduce the risks associated with unlawful discharges from ships, including the risk of port-state control actions, criminal investigation, and prosecution. In addition, a properly fashioned plan can serve as a mechanism to enable a company to avail itself of the leniency provisions in the U.S. Coast Guard's voluntary disclosure policy (discussed below).

Many companies are under the impression that they already have an ECP in place, mistakenly believing that the safety management system meets these requirements or could with minor tweaks. It does not. The safety management system, however, is a fundamental building block to develop an ECP. It is imperative that a company invest the time and effort, including the advice of outside counsel, in developing its ECP to ensure it fits the company's operations and culture and meets all applicable regulatory requirements.

Review Current Policies, Procedures, and Practices

As an initial matter, a company should review and analyze relevant portions of its safety management system and other company guidance documents concerning environmental compliance. Second, the technical and operational parameters of pollution prevention equipment and monitoring systems should be reviewed with the assistance of a technical consultant. This should be followed by interviews of key personnel



with a significant role in environmental compliance practices at all levels of the company, including company officers, the ISM-designated person, and select chief engineers and port superintendents.

After garnering a good understanding of current practices, strengths, weaknesses, and perceptions, visit representative ships. During this time, the pollution prevention equipment and systems should be analyzed, along with the associated logs and records. Document review should also include selected inspection reports,



An environmental compliance plan must incorporate detailed procedures to ensure the proper maintenance, repair, and operation of a ship's oily water separator, as well as adequate monitoring and underway testing to ensure that the company's compliance policies are being followed. Photograph courtesy of Marlins™ 2007.

audits, and port state control inspections and detentions, as well as documentation of corrective actions.

Drafting the Environmental Compliance Plan

After the company's policies, procedures, and practices are well understood, both on paper and in real-life operations, the next steps would be to:

- establish procedures to quantify and characterize wastes from ships;
- establish procedures to minimize waste generation;
- review existing pollution control technology and maintenance protocols and assess the adequacy of each;
- review shipboard recordkeeping procedures;
- review monitoring and auditing procedures;
- confer with shoreside management to review budgetary practices;
- consider designating a shipboard environmental/compliance officer;
- review personnel practices to ensure they reward environmental compliance and penalize noncompliance;
- review/update training procedures and materials;

- identify procedures to foster internal reporting of environmental violations;
- identify procedures for prompt and appropriate tracking and correction of environmental violations, including sharing findings fleet-wide;
- specify procedures for when to engage counsel to investigate alleged violations so a well-founded determination can be made regarding reporting the violation to the flag administration and/or the U.S. Coast Guard under its policy.

After there is a solid understanding of company practices and procedures, and a good handle on what gaps remain and what holes need to be plugged, shoreside management and a technical consultant should review the draft ECP.

Developing an ECP that works for the company will require an iterative process. As a result, those involved in its development will already have an in-depth understanding of the requirements. The company then must develop a strategy for effective communication of management's priorities regarding environmental compliance. This generally involves the communication of a message that there will be "zero tolerance" for noncompliance with regulatory requirements or the environmental compliance plan.

Implementation, Review, Assessment, and Revision

There should be a formal and widespread roll-out within the company, making clear the company's expectations and delineating responsibilities. After the initial roll-out, a concerted effort will be required from senior management regarding their commitment to the success of the program.

An ECP is a living document. At the outset, it is recommended that plan evaluations be performed at six- and 12-month intervals to ensure that those responsible are on the right track and that the plan is being properly implemented. This would largely involve meeting with the shoreside environmental manager, technical consultant, select port engineers, and shipboard personnel to review implementation of the ECP and identify any areas that may need revisions.

RELATIONSHIP TO U.S. COAST GUARD POLICY

In November 2007, the U.S. Coast Guard issued its voluntary disclosure policy for environmental crimes cases. In summary, the policy states that if a vessel owner/operator has previously implemented a compliance management system (CMS) to prevent, detect, and correct environmental violations and if, nonetheless, a new vio-

lation is detected and voluntarily reported, the U.S. Coast Guard will evaluate the disclosure to ensure that it meets the conditions of the policy.⁸ If the conditions are satisfied, the U.S. Coast Guard will not refer the matter to the DOJ for criminal prosecution.

It is important to understand that the compliance management system discussed in the voluntary disclosure policy is not a substitute for (or an alternative term) to describe an ECP. Compliance management systems are derived from the general corporate governance responsibilities of corporate officers and directors. An environmental CMS focuses on management's ongoing obligation to clarify the requirements of and ensure compliance with applicable environmental standards. It is an important complement to the operational and technical elements of an environmental compliance plan.

The policy highlights six elements deemed critical for a CMS:

- (1) compliance policies and procedures that specify how shipboard employees and agents are to meet environmental standards;
- (2) assignment of overall responsibility for overseeing compliance with environmental policies and standards, including those aboard each vessel;
- (3) mechanisms for systematically ensuring that compliance policies are carried out, including monitoring and auditing systems;
- (4) communication of the company's standards and procedures to all employees and agents;
- (5) appropriate positive incentives to perform in accordance with compliance policies and disciplinary mechanisms for failures to adhere to those policies;
- (6) procedures to correct violations and to modify the CMS to prevent future violations.

It is also important to note that a CMS alone, even if it tracks each of the critical elements contained in the voluntary disclosure policy, will not be sufficient to satisfy the requirements of the policy or the broader goal of improving environmental compliance. The compliance management system must be integrated with a comprehensive ECP that addresses operational and technical elements required to establish, monitor, and improve environmental compliance.

Once these individualized systems are developed, the vessel owner/operator should confirm that the six critical elements summarized in the policy are adequately

and visibly incorporated into the CMS and that the management system itself is effectively integrated with the operational and technical components of the ECP.

Finally, there is one additional factor that is not explicitly addressed in the voluntary disclosure policy, but that should be woven throughout a company's CMS and underlying ECP—the process used to oversee and document all aspects of the ECP. Documentation facilitates communication of key compliance policies to employees and confirms the company's commitment to environmental compliance. Thorough documentation creates a transparency in the environmental activities of the company that enables management to assess performance capabilities, detect instances of noncompliance, and implement and track corrective actions. Additionally, should the need arise, careful documentation of prior compliance efforts also enables a company to demonstrate to regulators or enforcement officials its prior good-faith efforts to ensure compliance with environmental requirements.

Thus, while the voluntary disclosure policy outlines several factors the U.S. Coast Guard will use to assess a company's due diligence, the policy is only a starting point for the development of a comprehensive CMS and ECP.

About the authors:

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Endnotes:

- ¹ Statistics provided by Elizabeth Janes, paralegal, Environmental Crimes Section, United States Department of Justice.
- ² Federal Prosecution of Business Organizations, United States Attorneys' Manual, Title 9, Criminal Resource Manual 162.
- ³ Factors in Decisions on Criminal Prosecutions for Environmental Violations in the Context of Significant Voluntary Compliance or Disclosure Efforts by the Violator, Environment and Natural Resources Division, July 1, 1991.
- ⁴ United States Sentencing Guidelines, §8A1.2(b)(2)(D).
- ⁵ Northwest Environment Advocates v. U.S. E.P.A., 340 F.3d 853 (9th Cir. 2003).
- ⁶ Pacific Merchant Shipping Ass'n v. Goldstein, 517 F.3d 1108 (9th Cir. 2008).
- ⁷ <http://edocket.access.gpo.gov/2008/pdf/E8-13615.pdf>
- ⁸ Environmental Crimes: Voluntary Disclosure Policy, November 2007.

