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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

OAKLAND DIVISION

UNITED STATES OF AMERICA, Plaintiff, v. DIMITRIOS DIMITRAKIS, Defendant.	No. CR10-00552 DLJ SENTENCING MEMORANDUM

SENTENCING MEMORANDUM

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The United States, by and through the undersigned attorneys, respectfully submits this Sentencing Memorandum. For the reasons stated below, the Court should impose a sentence of imprisonment of six months and a fine of $20,000.

I. Introduction and Relevant Background

Distilled to its most basic facts, this case is about Defendant Dimitrios Dimitrakis's decision to falsify the records he was required by law to maintain concerning the disposal of oil-containing wastes from the ship to avoid detection of his dumping of oil-containing wastes from a ship, directly into the ocean, in contravention of a long-established international agreement. Then, to further hide his conduct from the authorities, he lied and also told his subordinates to lie to the United States Coast Guard about how oil-containing wastes from the ship had been disposed.

On February 16, 2010, the *M/V New Fortune* ("*New Fortune*"), a container ship engaged in the world-wide transport of cargo, arrived at port in Oakland, California, on a trip from South Korea. The *New Fortune* was flagged in the Marshall Islands and was subject to the provisions of the International Convention for the Prevention of Pollution from Ships as modified by the Protocol of 1978 (the "MARPOL Protocol" or "MARPOL"). The MARPOL Protocol established an international regime for, among other things, the treatment and disposal of oily mixtures generated in the machinery spaces of vessels.[1] It prohibits the overboard discharge of machinery space waste into the ocean unless the waste contains fifteen parts per million of oil or less. In addition, it requires that the ship must have in operation an Oil Water Separator, an Oil Content Meter, and a solenoid three-way valve to prevent the discharge of mixtures containing more than the legally permitted concentration of oil. It further requires that covered ships

[1] These oily mixtures will generally be referred to in this memorandum as oil-contaminated bilge waste and sludge. The fluid generally found in a ship's bilge holding tank, also known as bilge waste, is a mixture of water, lubricating oils, heavy fuel oil residues, and, potentially, other chemicals and is created when oil leaked and dripped from the engine's lubrication and fuel systems mixes with water in the space at the very bottom of the ship, known as the bilges. The sludge tanks and/or waste oil tanks contain heavy fuel oil residues and sediments, including heavy metals, derived from the fuel purification process and other processes on the ship.

maintain an Oil Record Book that records all transfers and disposals of machinery space waste. MARPOL Annex I, Regulation 20 and Appendix III. As a signatory to the MARPOL Protocol, the United States has implemented the treaty through the Act to Prevent Pollution from Ships ("APPS"). 33 U.S.C. § 1901, *et seq*. APPS incorporates the requirements of the MARPOL Protocol, including the requirement that foreign ships like the *New Fortune*, maintain an Oil Record Book, while in United States waters.

Defendant Dimitrios Dimitrakis ("Defendant" or "Dimitrakis") was the Chief Engineer of the *New Fortune* from March 1, 2009, to February 16, 2009. As the Chief Engineer, Defendant was the person in charge of the ship's Engine Department, consisting of approximately nine crew members. The Chief Engineer position included responsibility for operating and overseeing the operation of the ship's Oil Water Separator and incinerator and for making entries in the ship's Oil Record Book.

As of February 16, 2010, the *New Fortune* had not visited a United States port in over a year and, consequently, was boarded by an inspection team for the United States Coast Guard ("Coast Guard") for an annual examination when it arrived in Oakland. After two crew members notified the inspectors of possible MARPOL Protocol and APPS violations, the Coast Guard inspection team began individual interviews of crew members to assess the validity of the allegations and, eventually, a criminal investigation was opened. According to crew members, the ship's Oil Water Separator and incinerator did not work and were never used to process or discharge bilge waste or to burn sludge, respectively. See Attachment B, Report of Crew Member Interviews at 1, 3-4; Attachment C, Report of Crew Member Interviews at 2; Attachment F, Report of Interview for Rodrigo Doniego at ¶ k. Instead, a hose was connected from an interior pipe leading to both the ship's bilge pump and the ship's sludge pump to a skin valve on the ship normally used to discharge steam and hot water from the ship's boiler system. See Attachment A, Report prepared by Ian Rubio. This skin valve was known as the "boiler blow down valve." Samples were taken from both the interior and exterior side of the boiler blow down valve. Analysis of the samples showed that oil was present when, under normal

operations, no oil would be expected. See Attachment K, USCG Marine Safety Laboratory Report. The ship's Oil Record Book falsely indicated that the Oil Water Separator and incinerator had been operated regularly and did not indicate that any oil-containing wastes had been disposed of into the ocean in any other manner.

In addition, five crew members reported having conversations with the Defendant in which he instructed them not to tell the Coast Guard about the discharges through the hose and gave instructions on what lies to tell the Coast Guard about the disposal of machinery space waste if asked. See Attachment B at 1, 4; Attachment C at 2, 4; Attachment E at ¶ o; Attachment F at ¶ r; Attachment G at ¶ m; Attachment H at ¶ p. The information they were instructed to give was consistent with the false entries in the Oil Record Book and with the verbal false statements that the Defendant and the Second Engineer[2] made to the Coast Guard. See Attachment B at 2-3.

On July 30, 2010, Defendant Dimitrakis pleaded guilty to a one-count criminal Information charging him with violating APPS, 33 U.S.C. § 1908(a) and 33 C.F.R. § 151.25, by failing to maintain an accurate Oil Record Book for the *New Fortune*. In his plea agreement with the government, Defendant admitted that he knowingly and regularly made false entries in the *New Fortune's* Oil Record Book and presented the false and inaccurate Oil Record Book to the Coast Guard in Oakland, California. Plea Agreement at 3. He further admitted that, on multiple occasions while on the high seas, he ordered subordinate crew members to use a flexible hose and connectors – also referred to as the "magic hose" – to discharge sludge and bilge waste directly into the ocean. Plea Agreement at 3-4. To conceal the fact of these discharges, Defendant ordered the discharges to be made at night, ordered crew members to disconnect and clean the hose before arriving in port, and instructed three other members of the *New Fortune* Engine Department crew sign the bottom of each page of the Oil Record Book, including those that contained false entries and omitted information. Plea Agreement at 4. Both the incinerator

[2] The Second Engineer has also pleaded guilty to aiding and abetting a violation of APPS in association with this case.

and the Oil Water Separator were found to have operational problems.[3] See Attachment I at 2-3; Attachment J, Photographs taken during disassembling of stop check valve associated with OWS polishing filter; Attachment L at 8, 9, 14, 15; Attachment M; Attachment N.

In the plea agreement, the parties agreed that United States Sentencing Guideline Section 2Q1.3 provides the correct base offense level for the APPS offense. The parties also agreed that a two-level enhancement should apply for the Defendant's role in the offense, U.S.S.G. § 3B1.1, and that the Defendant is entitled to the two-level reduction for acceptance of responsibility, U.S.S.G. § 3E.1.1. As stated in the plea agreement, "[t]he parties disagree on the application of the enhancement specified at Section 2Q1.3(b)(1)(B) of the United States Sentencing Guidelines and reserve the right to present argument regarding that enhancement at sentencing."

II. Argument

As explained below, U.S.S.G. § 2Q1.3(b)(1)(B) is properly applied to Defendant Dimitrakis's conduct in this case. With the application of that four-level enhancement and applying the agreed upon enhancements and reductions, Plea Agreement at 5, Defendant's offense level is ten. Defendant's criminal history category is I. The applicable guideline range is six to twelve months of imprisonment and is in Zone B of the Guidelines sentencing table.[4] The

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[3] Additionally, the ship was found to have a "homemade incinerator" which was essentially a 55-gallon drum that was used to burn engine room garbage. This type of garbage is typically burned in the ship's incinerator, so the presence of the homemade incinerator is further evidence that the *New Fortune*'s incinerator was not operable. The China Classification Society officials who visited the ship ordered the homemade incinerator destroyed. See Attachment I at 3; Attachment L at 14.

[4] Pursuant to U.S.S.G. § 5C1.1(c), for an offense level in Zone B:

> the minimum term may be satisfied by –
>
> (1) a sentence of imprisonment; or
>
> (2) a sentence of imprisonment that includes a term of supervised release with a condition that substitutes community confinement or home detention according to the schedule in subsection (e), provided that at least one month is satisfied by imprisonment; or
>
> (3) a sentence of probation that includes a condition or combination of conditions that substitute intermittent confinement, community confinement, or home detention for imprisonment according to the

applicable fine range, pursuant to U.S.S.G. § 5E1.2, is $2,000 to $20,000. For the reasons stated below, the government asks that Defendant Dimitrakis be sentenced to 6 months of imprisonment and a fine of $20,000.

A. The Enhancement for an Offense Otherwise Involving a Discharge under U.S.S.G. § 2Q1.3(b)(1)(B) is applicable and appropriate.

United States Sentencing Guidelines Section 2Q1.3(b)(1)(B) prescribes a 4-level enhancement to the base offense level if an offense "otherwise involved a discharge, release, or emission of a pollutant." Defendant erroneously argues that this enhancement should not apply because the discharges that form the basis of the falsity of the *New Fortune's* Oil Record Book occurred outside United States waters. Defendant's argument is contrary to the construction and purpose of the Sentencing Guidelines. Defendant's reliance on on United States v. Abrogar, 459 F.3d 430 (3d Cir. 2006), is misplaced as that case addressed the 6-level enhancement under U.S.S.G. § 2Q1.3(b)(1)(A) and is not controlling in the Ninth Circuit[5].

1. The Overboard Discharges of Oil-Contaminated Bilge Waste and Sludge are Part of the Offense of Conviction

In this case, the Defendant's offense of conviction is the failure to maintain an accurate Oil Record Book, in violation of 33 U.S.C. §1908(a) and 33 C.F.R. § 151.25. In particular, and as stated in the plea agreement, the Defendant failed to accurately record the transfer and overboard disposal of bilge water, oil residue, sludge, oil, and oily mixtures in the vessel's Oil Record Book. See Plea Agreement at 3. It is part of the elements of the APPS violation that the defendant was a person responsible for operations required to be recorded in the Oil Record

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schedule in subsection (e).
The government respectfully suggests that home detention and intermittent confinement are not practicable in this case as Defendant Dimitrakis's home is in Greece.

[5]Given that the Defendant has admitted to ordering the "discharge" of sludge and bilge water, also referred to as "pollutants" in the plea agreement, "into the ocean," this memorandum assumes that there is no disagreement between the parties as to whether "pollutants" were "discharged." Instead, this memorandum focuses on the dispute between the parties as to whether the discharges of pollutants in this case should be considered for the application of the enhancement specified at U.S.S.G. § 2Q1.3(b)(1)(B).

Book, which includes disposals of oil contaminated bilge waste and sludge. It is further part of the elements that the Defendant knowingly failed to accurately record one or more such operations in the ship's Oil Record Book. See Plea Agreement at 2; 33 C.F.R. §§ 151.25(d), (g), and (h).[6] Defendant admits that he ordered *New Fortune* crew members to bypass the vessel's oil pollution prevention equipment using a "magic hose" to discharge sludge and oil-contaminated bilge waste into the ocean and that the omission of entries related to these discharges were among his acts that made the ship's Oil Record Book false. Thus, in this case under APPS, while the crime may not be completed until a foreign flagged ship enters United States waters or ports with the false Oil Record Book, the discharges prove one of the elements of the offense – the failure to accurately record the discharge – and are an integral part of the offense of conviction.

Although the Defendant did not personally connect the hose or activate the necessary pumps, he directed others to do so and therefore, the discharges are properly considered in determining the Defendant's appropriate offense level and enhancements. See U.S.S.G. § 1B1.3(a)(1)(A) (instructing that specific offense characteristics be determined, among other

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[6] Similarly, the jury in United States v. Ionia Management S.A., Criminal No. 3:07-CR-134 (D. Conn. September 6, 2007), was instructed on the elements of an APPS violation as follows:

> To prove the defendant's guilt on any APPS count, the Government must prove beyond a reasonable doubt:
> First, that the M/T Kriton was an oil tanker ship of 150 gross tons or more that was registered in a country other than the United States;
> Second, that Ionia, through its agents, was in charge of operating the oil pollution prevention and discharge equipment for the M/T Kriton, including the Oily Water Separator and Oil Content Monitor;
> Third, that for the M/T Kriton, Ionia, through its agents, knowingly, meaning intentionally or voluntarily, failed to fully and accurately maintain an Oil Record Book in which the required disposal and discharge operations were recorded; and
> Fourth, that the failure to maintain the Oil Record Book occurred while the M/T Kriton was in the navigable waters of, or a port or terminal of, the United States.

things, on all acts and omissions commanded by the defendant during the commission of the offense of conviction).

One recent district court to consider this issue was the District of Massachusetts in United States v. Oria, 08-CR-1027 (May 6, 2009), which applied the four-level enhancement under U.S.S.G. § 2Q1.2(b)(1)(B) in sentencing a Chief Engineer who pleaded guilty to violating APPS by maintaining a false Oil Record Book. Near the end of a three-day sentencing hearing, the district court concluded that:

> to talk about a reporting offense involving an actual discharge and, then, treating the actual discharge as if it were not involved is the equivalent of the old Zen Cohen(sic) of appreciating the sound of one hand clapping. They are inextricably intertwined. The discharge is directly involved. There is no other way of looking at it, and, to the degree than an argument is made that this would be replicative because Section Five [2Q1.3(b)(5)] would lead to the same result, the concealment of a substantive environmental offense, I reject it.

Attachment R, Oria Tr. at 81 - 82.

2. The Discharges are Properly Considered by the Court for Sentencing Purposes Even When They Occurred Outside of United States Waters

The United States Sentencing Guidelines point out that conduct considered for sentencing purposes may be broader than what is considered for finding criminal liability. Application Note 1 to U.S.S.G. § 1B1.3 states:

> The principles and limits of sentencing accountability under this guideline are not always the same as the principles and limits of criminal liability. Under subsections (a)(1) and (a)(2), the focus is on the specific acts and omissions for which the defendant is to be held accountable in determining the applicable guideline range, rather than on whether the defendant is criminally liable for an offense as a principal, accomplice, or conspirator.

It is not the position of the government here that the Defendant could or should be held "criminally liable" for the discharges of bilge water and sludge that occurred on the high seas. It is the position of the United States and the intent of the Sentencing Guidelines that the discharges be considered in determining the appropriate sentence for the Defendant.

In a different context, but addressing a guidelines provision using the phrase "if the offense involved...," courts, including the Ninth Circuit, have considered extraterritorial conduct

in applying Sentencing Guidelines provisions. In United States v. Dawn, 129 F.3d 878 (7th Cir. 1997), the issue of extraterritorial conduct was considered in the context of a cross-reference to a significantly more stringent Guidelines provision. In that case, the defendant pled guilty to charges for receipt and possession of child pornography. He had produced the pornographic material while in Honduras, not in the United States, then brought the material with him to the United States. Id. at 879. Guidelines sections 2G2.2 and 2G2.4, which applied to the charges to which the defendant plead guilty, both cross-referenced U.S.S.G. § 2G2.1 using the language:

> If the offense *involved* causing transporting, permitting, or offering or seeking by notice or advertisement, a minor to engage in sexually explicit conduct for the purpose of producing a visual depiction of such conduct...apply §2G2.1.

Id. at 881 (emphasis added). On appeal, the defendant argued "that the guidelines should not be applied to foreign conduct unless Congress or the Sentencing Commission has been explicit about doing so." Id.

The Seventh Circuit rejected defendant's position, stating that "unless some independent principle bars the consideration of foreign acts, the cross-reference was not only permissible, but required." Id. at 882. The Seventh Circuit, citing Supreme Court precedent, noted that the case law is clear that

> sentencing judges may look to the conduct surrounding the offense of conviction in fashioning an appropriate sentence, regardless of whether the defendant was ever charged with or convicted of that conduct, and regardless of whether he could be.... Indeed, the very purpose of looking to circumstances beyond the offense of conviction is to decide what degree of punishment to impose within the typically broad range authorized by the criminal statute, by determining what a particular defendant actually did.

Id. at 884. It further explained that in Dawn's case, whether his creation of the pornography was itself a crime either under the laws of Honduras or the United States was irrelevant because the purpose of considering it was to "shed[] light on the gravity of his conduct as a receiver and possessor" of child pornography. Id. at 884-885. It further found that "Dawn's exploitation of minors in Honduras created the very pornography that he received and possessed here in the United States. In a literal sense, then, Dawn's domestic offenses were the direct result of his

relevant conduct abroad; pragmatically speaking, they are inextricable from one another." Id. at 885. Similarly, in this case, Defendant Dimitrakis's false Oil Record Book was the direct result of his decision to order the use of the flexible hose to discharge sludge and oil-contaminated bilge waste and the falsity of the Oil Record Book is "inextricable" from the discharges.

The Ninth Circuit Court of Appeals, considering the same cross-reference as the Dawn court and citing that case, held that "[a] district court may base a § 2G2.2(c)(1) cross-reference on the basis of conduct over which the federal government would lack jurisdiction to prosecute." United States v. Speelman, 431 F.3d 1226, 1232 (9th Cir. 2005). See also, United States v. Newbert, 952 F.2d 281, 284 (9th Cir. 1991)(regarding relevant conduct that may have violated state, rather than federal, law and stating, "We now consider, for the first time, whether non-federal relevant conduct can fall within the jurisdiction of § 1B1.3(a)(2) of the federal guidelines. We hold that it can."); United States v. Wilkinson, 169 F.3d 1236, 1238-1239 (10th Cir. 1999) (stating "It would be absurd to suggest that there is a long-standing principle that judges cannot consider in calculating a sentence relevant conduct committed outside of the United States. In fact, 18 U.S.C. § 3661 clearly states otherwise, requiring that, "No limitation shall be placed on the information concerning the background, character, and conduct of a person convicted of an offense which a court of the United States may receive and consider for the purpose of imposing an appropriate sentence.").

Where the United States Sentencing Commission wished to exclude extraterritorial conduct from consideration under the Guidelines it has done so. In United States v. Ford, 989 F.2d 347 (9th Cir. 1993), the Ninth Circuit considered the applicability of a specific offense characteristic found at former U.S.S.G. § 2T1.3(b)(1),[7] under the Guidelines provision pertaining to tax offenses. The district court had imposed a two-level increase on Ford's offense level for

[7] This guideline section has since been consolidated with U.S.S.G. § 2T1.1. U.S.S.G. Appendix C, amendment 491. The specific offense characteristics under that section previously read: "If the defendant failed to report or to correctly identify the source of income exceeding $10,000 in any year from criminal activity, increase by 2 levels. If the resulting offense level is less than level 12, increase to level 12."

failing to report income exceeding $10,000 per year from criminal activity. Id. at 349-350. The criminal activity that was the source of Ford's income was a fraudulent scheme in Canada. However, Application Note 1 to U.S.S.G. § 2T1.3 at the time of the sentencing specifically limited "criminal activity" to "any conduct constituting a criminal offense under federal, state, or local law." Id. 350. Because of this specific language in the application note, the Ninth Circuit held that Ford's fraudulent conduct in Canada could not serve as the basis for an enhancement under U.S.S.G. § 2T1.3(b)(1). Id. at 351. No such limiting language appears in the text or application notes of U.S.S.G. §2Q1.3. Consequently, the appropriate interpretation is that the Sentencing Commission did not mean to exclude extraterritorial conduct from consideration under §2Q1.3.

3. This case is distinguishable from *United States v. Abrogar*, which is logically jumbled and not binding in this Circuit

In United States v. Abrogar, 459 F.3d 430 (3d Cir. 2006), the Third Circuit considered the application of the six-level enhancement under U.S.S.G. § 2Q1.3(b)(1)(A) – as opposed to the four-level enhancement under U.S.S.G. § 2Q1.3(b)(1)(B) – in the context of a failure to maintain an accurate Oil Record Book. The language of the enhancement under §2Q1.3(b)(1)(A) reads:

> If the offense resulted in an ongoing, continuous, or repetitive discharge, release, or emission of a pollutant into the environment, increase by 6 levels...

The Court concluded that it was improper to apply the six-level enhancement on the facts of that case because the defendant's offense "did not 'result[] in' the repeated discharges of oily waste upon which the sentencing enhancement was based." Id. at 431. The Third Circuit noted in a footnote at the beginning of its opinion that it was not reaching the defendant's argument that "foreign conduct may not be considered in sentencing under the Guidelines." Id. at 431 n. 1.

In this case, unlike Abrogar, the government seeks the application of the four-level enhancement under U.S.S.G. § 2Q1.3(b)(1)(B). This provision does not include the "resulted in" phrase found in the language of the six-level enhancement that was the stated reason for the

decision in Abrogar.[8] Thus, the Third Circuit's decision in Abrogar is inapposite.

To the extent that Defendant argues that the reasoning of the Abrogar case should be applied in this case, the reasoning of Abrogar is seriously flawed. In its opinion, Third Circuit did not attempt to review or analyze in any meaningful way the elements of the crime or the facts of the case in reaching its determination of what constituted the "offense of conviction" for purposes of interpreting and applying the sentencing guidelines. Instead, relying solely on its one sentence description of the offense as "failure to maintain an accurate oil record book within U.S. waters," the panel decided that the discharges on which the Oil Record Book's falsity was based were not part of the offense conduct or "relevant conduct" under U.S.S.G. § 1B1.3, at least in part, because the discharges occurred outside of United States waters.[9] Id. at 435-436. The Third Circuit's analysis of the offense of conviction and relevant conduct improperly conflates sentencing relevance with jurisdiction over criminal liability and was wrong for the reasons set forth above.

The strained logic used by the Third Circuit singles out environmental offenses for different textual interpretation than other offenses with similar guidelines language without justification. For example, in each of the child pornography cases cited above, the manufacture or production of the pornographic material occurred outside the United States and prior to the offense of conviction – possession or receipt of the material within the United States. Yet, in each of those cases, the appellate courts held that the possession or receipt of the pornographic material was an offense that "involved causing, transporting, permitting, or offering or seeking by notice or advertisement, a minor to engage in sexually explicit conduct for the purpose of producing a visual depiction of such conduct" and merited cross-referencing a harsher Guidelines

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[8] Here, as in Abrogar all of the discharges that occurred happened before Defendant Dimitrakis presented the false Oil Record Book to the Coast Guard in the port of Oakland. Consequently, the government is not seeking the six-level enhancement because the presentation of the false Oil Record Book in this case did not enable the Defendant to make additional, subsequent discharges.

[9] In doing so, the Third Circuit appears to be reaching the very issue it explicitly states, earlier in the opinion, that it was not addressing.

provision. In fact, the Third Circuit itself has been inconsistent. In an unpublished case in 2008, it favorably cited the Dawn case in a decision upholding the application of the cross-reference from U.S.S.G. § 2G2.2 to U.S.S.G. § 2G2.1. In United States v. Castro-Valenzuela, 304 Fed.Appx. 986, 992 (3d. Cir. 2008)(unpublished), the Third Circuit explained:

> While it is correct that Castro-Valenzuela was convicted for a crime that did not implicate extraterritoriality, the foreign conduct was used only to shed light on the gravity of his conduct as a transporter to make his sentence more individualized within the range. As previously noted, the District Court could consider actions over which it did not have jurisdiction in sentencing; even the inclusion of extraterritorial actions was permissible...

Abrogar is in no way binding in this case or on this Court, as it is a decision from another Circuit. See, e.g., Hart v. Massanari, 266 F.3d 155, 1170 (9th Cir. 2001). Given the unpersuasiveness of the Third Circuit's opinion and its conflict with analogous case law in the Ninth Circuit, this Court should decline to follow the Third Circuit's strained reasoning.

B. A Term of Imprisonment and a Fine Appropriately Reflect the Nature, Circumstances, and Seriousness of the Offense and Serve the Need for General Deterrence in this Case.

While the sentencing range in this case is informed by the calculation under U.S.S.G. § 2Q1.3, the Court must also consider the sentencing factors at 18 U.S.C. § 3553 to determine an appropriate sentence within the Guidelines range. Section 3553, in relevant part, names the following factors to be considered in imposing an sentence:

> 1) the nature and circumstances of the offense and the history and characteristics of the defendant;
>
> 2) the need for the sentence imposed–
>
> A) to reflect the seriousness of the offense, to promote respect for the law, and to provide just punishment for the offense;
> B) to afford adequate deterrence to criminal conduct; ...
>
> 6) the need to avoid unwarranted sentence disparities among defendants with similar records who have been found guilty of similar conduct.

1. The conduct in this case was deliberate and the Defendant took measures to conceal his wrongdoing.

As summarized above, Defendant Dimitrakis has admitted to regularly making false entries in the Oil Record Book for the *New Fortune* that concealed the fact that he had ordered

illegal discharges of oil-contaminated pollutants into the ocean and to omitting information concerning the illegal discharges from the Oil Record Book. This was not a matter of a single occasion or a single statement made in the context of an isolated and unusual circumstance, but part and parcel of Defendant's routine course of business.

Defendant has further admitted that he knew, as a seasoned and experienced Chief Engineer, that discharges, like those that occurred on the *New Fortune*, are prohibited under the MARPOL Protocol and that authorities who are charged with helping to enforce MARPOL in the *New Fortune*'s ports of call, including Oakland, California, routinely review ships' Oil Record Books to determine the ship's compliance with MARPOL. In the United States, if a ship is found to be making improper discharges or if it is found to have a missing or inaccurate Oil Record Book, pursuant to APPS, a ship can be detained and other consequences could follow. So, to corroborate his false statements, Defendant Dimitrakis had three other crew members sign the bottom of the Oil Record Book pages, essentially vouching for his false information. He further ordered crew members to disconnect and clean the flexible hose used to make illegal discharges of bilge water and sludge in order to further prevent detection. See Plea Agreement at 3-4.

What is not contained in the statement of facts in the plea agreement, but is found in the other evidence gathered in this case, is that Defendant Dimitrakis also sought to avoid the detection of his false entries in and omissions from the Oil Record Book by having other crew members lie in order to vouch for the false contents of the Oil Record Book. The Third Engineer, Fourth Engineer, and two of the ship's Oilers reported that the Chief Engineer gave them instructions to lie to the Coast Guard during the inspection of the *New Fortune* in Oakland. In summary, they were instructed not to tell the Coast Guard about the discharges through the flexible hose and, instead, to tell the Coast Guard that the incinerator ran for long periods every day and that the ship's Oil Water Separator worked. See Attachment B at 1, 4; Attachment C at 2, 4; Attachment E at ¶ o; Attachment F at ¶ r; Attachment G at ¶ m; Attachment H at ¶ p. This

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information was false and matched the information that was contained in the ship's Oil Record Book.

Defendant, himself, also lied in his verbal statements to the Coast Guard. He told Coast Guard inspectors that sludge was burned in the *New Fortune*'s incinerator everyday for approximately fourteen hours. See Attachment B at 4. He further told the Coast Guard that the OWS was run every seven to ten days for thirty minutes during the day time. See id. These false statements were reflective of what he had falsely written in the Oil Record Book.

In addition to his lies about the use of the incinerator and OWS, Defendant Dimitrakis falsely told Coast Guard inspectors that he was the only person who conducted soundings aboard the *New Fortune*, sometimes with the Second Engineer's assistance. In fact, one of the ship's oilers was actually the person who took soundings every day for all but two of the tanks in the Engine Room – the diesel oil tank and the fuel oil tank.[10] See Attachment G at ¶ j; Attachment H at ¶ o; Attachment E at ¶ m. Soundings are often used by inspectors to compare to information about tank levels that is recorded in the ship's Oil Record Book. Thus, by misrepresenting who was responsible for taking soundings, the Defendant could have prevented the Coast Guard from discovering records kept by others, in addition to those he told the Coast Guard he threw away on a daily basis. In fact, the Coast Guard did surreptitiously find a subset of sounding records during their inspection.

Defendant's conduct in this matter clearly goes above and beyond simply the writing of false information in the Oil Record Book. He made engaging in illegal behavior part of the everyday operation of the *New Fortune* and, knowing that the discharges, false entries, and omissions were wrong and could cause problems for himself and the ship, took additional actions to corroborate and conceal the false statements and omissions he made in the Oil Record Book. The nature and circumstances of the offense in this case merit a sentence including a period of incarceration and a significant fine. See 18 U.S.C. § 3553(a)(1).

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[10]Crew members further reported that the Chief Engineer was "stealing" oil from these tanks using special tubes inserted inside the existing sounding tubes to create false soundings. See Attachment A at 5-6.

2. The Defendant's conduct has potentially serious consequences for the safety of United States ports, the integrity of the regulatory regime, and the environment

Accurate and full records, such as the Oil Record Book, are an important part of the Coast Guard's effort to secure and protect U.S. ports. See Attachment S, Declaration of Captain of the Port. Accurate records are part of an overall port state control and inspection regime implemented by the Coast Guard. A false Oil Record Book, such as the one created and maintained by Defendant Dimitrakis can jeopardize the safety of U.S. waters and ports because the Coast Guard is deprived of valuable information from which it can make determinations about the need to restrict a vessel's movement or other actions to safeguard a port. Furthermore, allowing Chief Engineers and their ships to use false records undermines the entire regulatory scheme. Id. At least one study suggests that the companies who operate ships in which the crew does not comply with Oil Record Book and MARPOL requirements gain competitive advantages over law-abiding companies tied to time and money savings on maintenance, waste-management, and repairs. See Attachment P, Organization for Economic Cooperation and Development ("OECD"), "Cost Savings Stemming from Non-Compliance with International Environmental Regulations in the Maritime Sector" at 46, DSTI/DOT/MTC(2002)8/Final at 46 ("OECD Report").[11]

In fact, in this case, the Coast Guard, along with an inspector from the Marshall Islands, observed that the *New Fortune's* Oil Water Separator was not fully operable when the ship came to Oakland. Ultimately, the unit was completely overhauled. Also, shortly after the arrival of the ship at Oakland, Defendant Dimitrakis was unable to get the ship's incinerator to work for the purpose of testing by the Coast Guard, Classification Society, and Flag State inspectors. See Attachment I at 2; Attachment L at 14, 16. Repair records following that report show that the draught fan for the incinerator was "burned out" and that the piping from the waste oil tank (which holds sludge and waste oil destined for incineration) to the incinerator was so clogged that it had to be replaced. See Attachment M; Attachment N. The China Classification Society

[11] Also available at www.oecd.org/dataoecd/4/26/2496757.pdf.

reports indicate that the ship was also lacking records of proper maintenance of the Oil Water Separator and incinerator. See Attachment L at 8-9. If crew members had not come forward to report the Defendant Dimitrakis' conduct, the ship might have continued on from Oakland without having the needed repairs and maintenance performed.

The fluid generally found in a ship's bilge holding tank is a mixture of water, lubricating oils, heavy fuel oil residues, and, potentially, other chemicals. The sludge tanks and/or waste oil tanks contain heavy fuel oil residues and sediments, including heavy metals, derived from the fuel purification process and other processes on the ship. Routine and deliberate oily waste discharges like the ones in this case, though seemingly small on an individual scale, each year cause eight times the amount of oil pollution as that caused by catastrophic spills such as the Exxon Valdez oil spill. See Attachment P at 4. A Canadian study has also found that routine operational discharges such as the ones carried out by Defendant are a significant cause of seabird mortality. In Atlantic Canada alone, the study estimates that 300,000 seabirds are killed annually from this type of routine discharge of oily vessel waste. Attachment Q, Weise, F.K., and Robertson, *Assessing impacts of chronic oil discharges at sea on seabirds: a general oiled seabird mortality model applied to Eastern Canada*, in Journal of Wildlife Management (2004) 68:627-38. The conduct hidden by Defendant's false and fictitious Oil Record Book has a serious impact on the marine environment.[12] A sentence including a term of imprisonment and significant fine would reflect the seriousness of this offense and promote respect for the important legal regime established by MARPOL and APPS. See 18 U.S.C. § 3553(a)(2)(A).

3. Sentences that do not include a term of imprisonment have not effected general deterrence

In calculating an appropriate sentence in this case, the Court should consider the need to send a strong message to the maritime community, including individual Chief Engineers, that

[12] In the April 1, 2005, sentencing hearing for a case involving the dumping of oil-contaminated grain from a cargo ship in the South China Sea, the District Court for the Southern District of Florida considered the environmental impacts of the defendant's conduct when sentencing individual defendant Rick Stickle to 33 months imprisonment and a $60,000 fine. United States v. Stickle, 1:04CR200072 (S.D. Fla. April 1, 2005).

violating APPS and MARPOL and lying to the Coast Guard will not be tolerated. Despite the prosecution of vessel cases for nearly 15 years, new cases continue to be referred to the Department of Justice and United States Attorneys' Offices on a regular basis.[13] The initiative by the United States to root out vessel pollution has failed to stem the tide of deliberate vessel pollution and the generation of false record books, despite large fines and compliance plans imposed on corporate defendants. However, in many of these cases, individual defendants have

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[13] See, e.g., United States v. Fleet Management Ltd. of Hong Kong et al. (S.D. Tex. 2010)(APPS, false statement, and obstruction conviction); United States v. Triantafyllos Marmaras et al. (D. Md. 2010)(false statement and obstruction of justice convictions); United States v. Vaja Sikharulidze (E.D.N.C. 2010) (APPS violation conviction); United States v. Dalnave Navigation Inc., et al. (D.N.J. 2009)(APPS and false statement conviction); United States v. STX Pan Ocean Co. Ltd., et al. (M.D.Fla. 2009)(Conspiracy and APPS convictions); United States v. Pendulum Ship Management, Inc., et al., (E.D.Pa. 2009)(Conspiracy, APPS, false statement, and obstruction convictions); United States v. MSC Ship Management et al. (D. Mass. 2006) (APPS conviction of corporation and individuals); United States v. Fairdeal Group Management, SA (S.D.N.Y. 2005)(same); United States v. STX Pan Ocean Co., Ltd. et al. (W.D. Wash. 2008)(APPS conviction); United States v. Casilda Shipping, Ltd. et al. (N.D. Calif. 2008)(Conspiracy, APPS, and false statement convictions); United States v. Reederei Karl Schlueter et al. (E.D.Pa. 2008)(APPS conviction); United States v. B. Navi Ship Management Services et al. (S.D. Tex. 2008)(APPS and false statement convictions); United States v. Kassian Maritime Navigation Agency, Ltd (M.D. Fla. 2007)(APPS conviction); United States v. Calypso Maritime Corporation, et al. (W.D. Wash 2007)(APPS and false statement convictions); United States v. Wallenius Ship Management, Pte., Ltd. (D.N.J. 2006)(Conspiracy, APPS, and false statements convictions); United States v. Irika Maritime SA, et al. (W.D. Wash 2007); United States v. Corpus Christi Day Cruise, Ltd. (S.D. Tex. 2006); United States v. Panagiotis Kokkinos et al. (E.D.N.Y. 2005) (same); United States v. Boyang (Busan) Ltd., et al. (D. Alaska 2005) (same); United States v. DST Shipping, et al. (C.D. Calif. 2005) (APPS conviction of corporation); United States v. MMS Company Ltd., et al. (D. Oregon 2004) (APPS conviction of corporation and individual); United States v. Rodolfo Esplana Rey (C.D. Calif. 2006) (APPS conviction of individual); United States v. OMI (D.N.J. 2004) (APPS conviction of corporation); United States v. Wallenius Ship Management, Pte., Ltd., et al. (D.N.J. 2006) (APPS conviction of corporation and individual); United States v. First Marine Service Company (D. Oregon 2005) (APPS conviction of corporation); United States v. Oilmar Company Limited, Inc. (D.S.C. 2005) (same); United States v. Bottiglieri di Navigazione (S.D. Ala. 2005) (same); United States v. Evergreen International, S.A. (C.D. Calif., D. N. J., D. Ore., D.S.C, W.D. Wash. 2005) (same); United States v. Schlussel Reederei KG (D. Hawaii 2004) (same); United States v. Fujitrans Corporation of Japan (D. Oregon, C.D. Calif. 2005) (same).

received probationary sentences, allowing them to return home without other significant sentencing consequences.[14]

It is becoming clear that prosecutions resulting probationary sentences for individuals are not dissuading other individuals from participating in illegal discharges and presenting doctored Oil Record Books to the Coast Guard. In order for APPS, MARPOL, and the regulatory system to be successful in actually preventing pollution from ships, it is necessary to convince, not only companies, but the people who work for them, to comply with the laws and regulations. In order to achieve the important general deterrence goal of sentencing, jail time is merited.[15] See 18 U.S.C. § 3553(a)(2)(B). Any disparity with previously sentenced defendants is, therefore, warranted. See 18 U.S.C. § 3553(a)(6). If seafarers, like Defendant Dimitrakis, see jail time as a real possibility if caught falsifying an Oil Record Book, it will reduce their incentive to take the "easy way out" on the job – dumping oily wastes to avoid losing valuable time to faulty or inefficient equipment and shore-side disposal procedures – and to collude with their employers to assist them in gaining an unfair advantage over competitors.

III. Conclusion

For all of the foregoing reasons, the Court should sentence Defendant Dimitrakis to a period of six months imprisonment and a fine of $20,000. Such a sentence is within the

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[14] See Exhibit O, Table of Sentences for Chief Engineers, 2000-2005

[15] This was recognized in the Oria case. There the court noted that "there is a particular value to saying to Chief Engineers that the ratchet is starting to increase," Attachment R, Tr. at 115, and "[i]f people...are detained in the United States, they've been sent home on probation, then maybe it is just a cost of doing business, unpleasant cost for some people, but a cost of doing business with their employers..." Attachment R, Tr. at 116. Finding, in that case, a "rather low-level violation of the discharge, resulting in a record keeping violation and a response that, for purposes of the Guidelines, if not for purposes of prosecution, I view as obstructive" the judge imposed a sentence of one month of incarceration and a fine of $3,000.

Sentencing Guidelines range and is necessary to reflect the nature and seriousness of the crime and to achieve adequate deterrence.

MELINDA HAAG
United States Attorney

Dated: August 27, 2010

/s/
CHINHAYI COLEMAN CADET
Assistant United States Attorney

IGNACIA S. MORENO
Assistant Attorney General
Environment and Natural Resources Division

Dated: August 27, 2010

/s/
LANA N. PETTUS
Trial Attorney

ATTACHMENT

A

M.V. NEW FORTUNE
CALL: SIGN V7OH3
PORT OF REGISTRY: MAJURO, MARSHALL ISLANDS.
DATE: 07TH DEC. 2009
PLACE: EN-ROUTE GLADSTONE AUSTRALIA VIA TORRES STRAIT

THIS FILE WAS PASSED THRU THE KINDNESS OF ONE OF YOUR TORRES PILOT MR. RANA KAMBOJ FOR YOU TO RECEIVE THIS VERY IMPORTANT DETAILS OF THE SAID VESSEL.

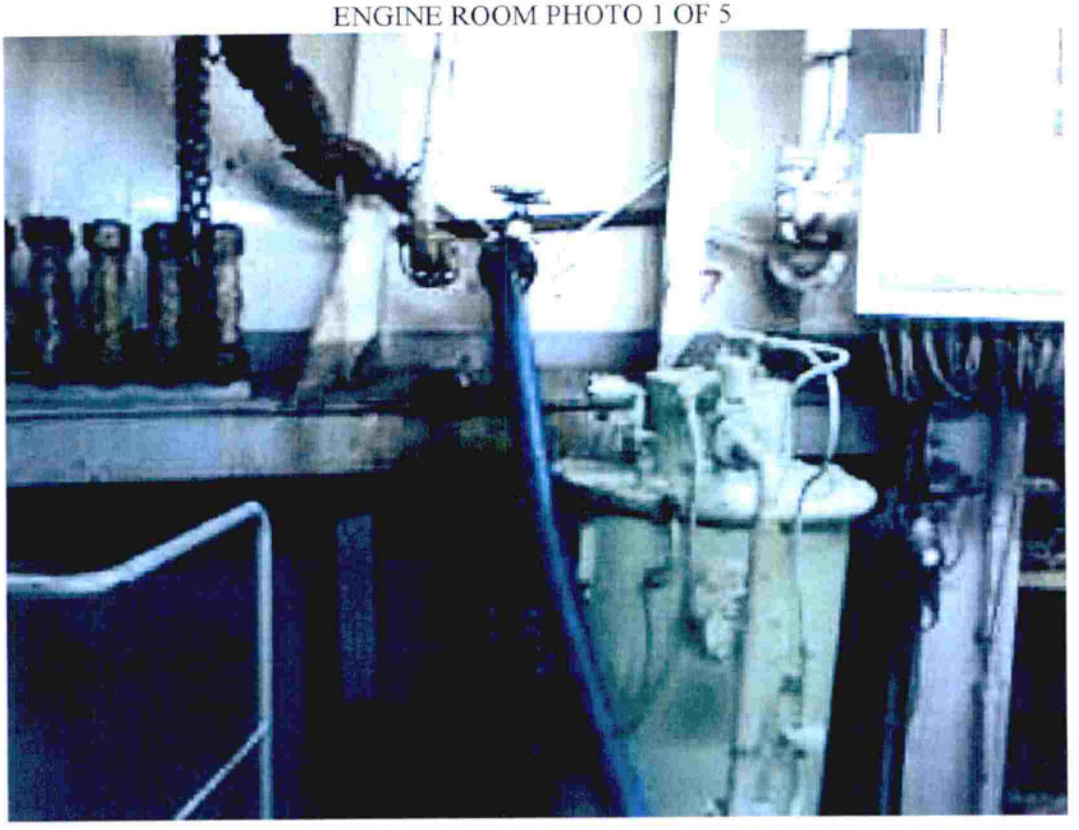
FIRST OF ALL THE PICTURES BELOW WAS ACTUAL TAKEN DURING HER VOYAGE EN-ROUTE TO GLADSTONE VIA TORRES STRAIT. THIS PICTURE WAS TAKEN ONLY THIS MORNING 07TH OF DEC 2009.

THAT THE VESSEL " M V. NEW FORTUNE" WHILE IN THE WATERS OF AUSTRALIA PARTICULARLY IN THE COASTAL ROUTE OF AUSTRALIA AND THE GREAT BARRIER REEF. **DELIVERATELY DISCHARGING OILY WATER DIRECTLY OVERBOARD WITH OUT PASSING THRU THE OILY WATER SEPARATOR OR (OWS).** WITH THE HELP OF THE PHOTOS BELOW (5 SHUTS) I HOPE IT COULD HELP YOU INVESTIGATE THE CASE AND OBTAIN THE TRUTH.

I FIRST NOTICE IT WHEN I SAW TRACES OF OIL AROUND THE HOLE ON THE BILGE OUTBOARD VIEWED FROM THE PORT QUARTER. THIS CAN BE SEEN ESPECIALLY WHEN THE VESSEL IS IN LIGHT DRAFT. UNTIL I FOUND OUT THAT A "MAGIC PIPE" WAS INSTALLED AT THE ENGINE ROOM. IT HAS BEEN USED FOR MOST OF THE TIME AND ONLY DISCONNECTED WHEN THE VESSEL IS NEARLY TO GO ALONGSIDE BERTH. ITS A PITY THAT THE VESSEL'S CHIEF ENGINEER MR. DIMITRIOS DIMITRAKIS IS THE ONE RESPONSIBLE OF DOING AND DIRECTING EVERYTHING OF THE ILLEGAL DEED. HE DOES THESE THINGS SINCE LONG TIME AGO SINCE HE WAS A REGULAR CHIEF ENGINEER TO BOARD THIS SHIP AND ONLY ASK FOR SHORT TIME RELIEVER WHENEVER HE WILL GO FOR VACATION.

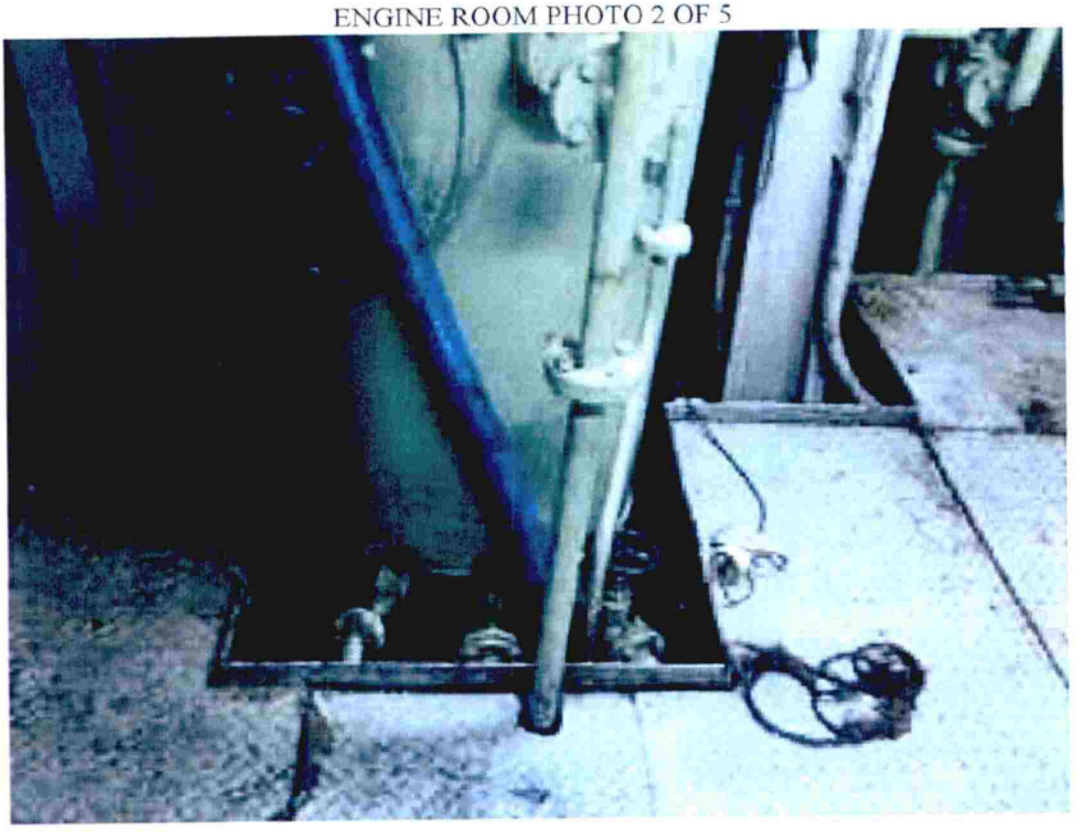
MOREOVER PLEASE HELP ME SECURE MYSELF AND KEEP THIS REPORT AS CONFIDENTIAL AS THIS MIGHT CAUSE A GREAT EFFECT TO MY FUTURE EMPLOYMENT. THE GREEK COMPANIES HAVE THEIR MUTAL RECORDS FOR THE CREW AND CAN DENY OUR APPLICATIONS FOR OUR NEXT EMPLOYMENT AND LOOSE OUR JOB. SHOULD YOU CONDUCT FURTHER INVESTIGATIONS, I SUGGEST AS EARLY AS POSSIBLE AS VESSEL'S ETA TO GLADSTONE ON 10 DEC 2009. TO INVESTIGATE THE VESSEL WHILE UNDERWAY IS A GREAT TIME AS SO YOU CAN SEE THE ACTUAL CONNECTED MAGIC PIPE. AND THRU YOUR ACTUAL CAUGHT THIS WILL NOT TAKE INTO THE MIND OF OUR COMPANY OR ANYBODY ELSE THAT SOMEBODY FROM THE OWNSHIP DID THE REPORTING. I MAY NOT MENTION MY NAME BUT I HOPE AS I SAID TO KEEP THIS THING CONFIDENTIAL. **PERHAPS YOUR INDIVIDUAL INVESTIGATION TO ALL CREW WILL HELP US SECURE FROM LOOSING OUR JOBS / EMPLOYMENT.**

ENGINE ROOM PHOTO 1 OF 5



THE ABOVE PHOTO 1 OF 5 IS THE PLASTIC BLUE PIPE CONNECTED TO THE BILGE PIPE DIRECT OVERBOARD WITHOUT PASSING THE OWS.

ENGINE ROOM PHOTO 2 OF 5



THE PHOTO 2 OF 5 IS THE CONTINUATION FROM DIRECT OVERBOARD TO THE FLOORING WHERE THE CONNECTION TO THE PIPING TO THE BILGE PUMP.

ENGINE ROOM PHOTO 3 OF 5

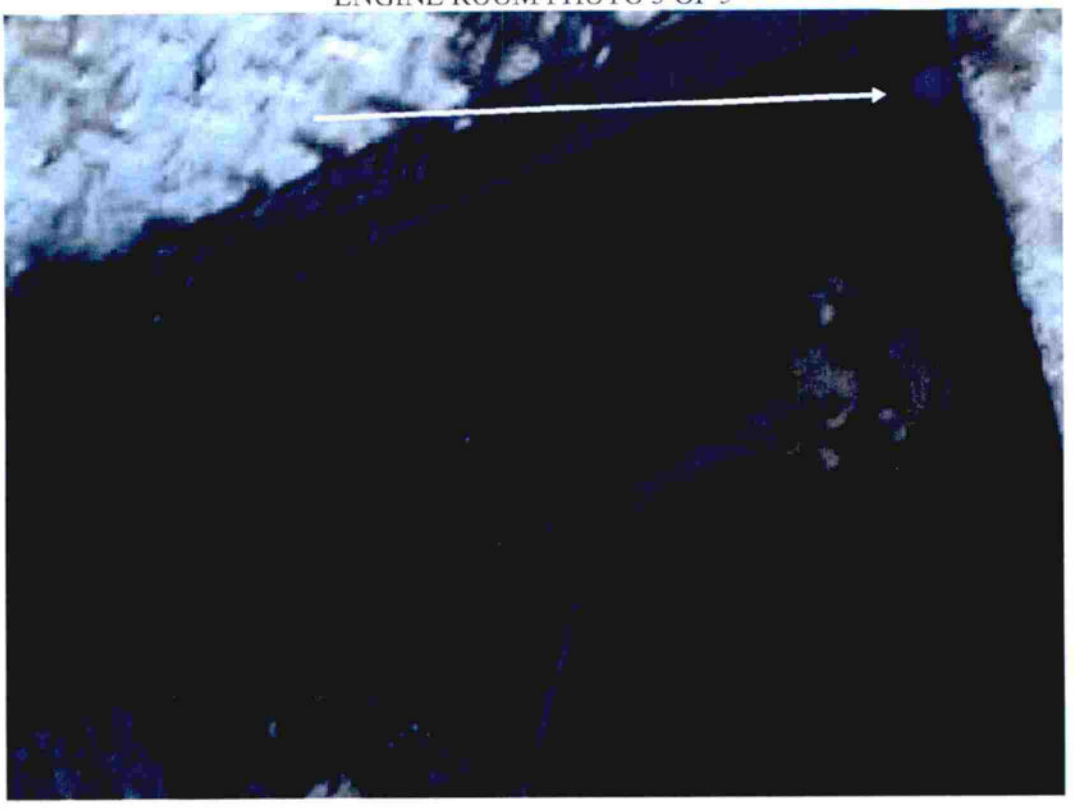


PHOTO 3 OF 5 IS CONTINUATION VIEW ON THE FLOORING CONNECTIONS. THE PLASTIC BLUE PIPE IS JUST PARTLY SEEN ON THE RIGHT UPPER CORNER OF THE PHOTO.

ENGINE ROOM PHOTO 4 OF 6

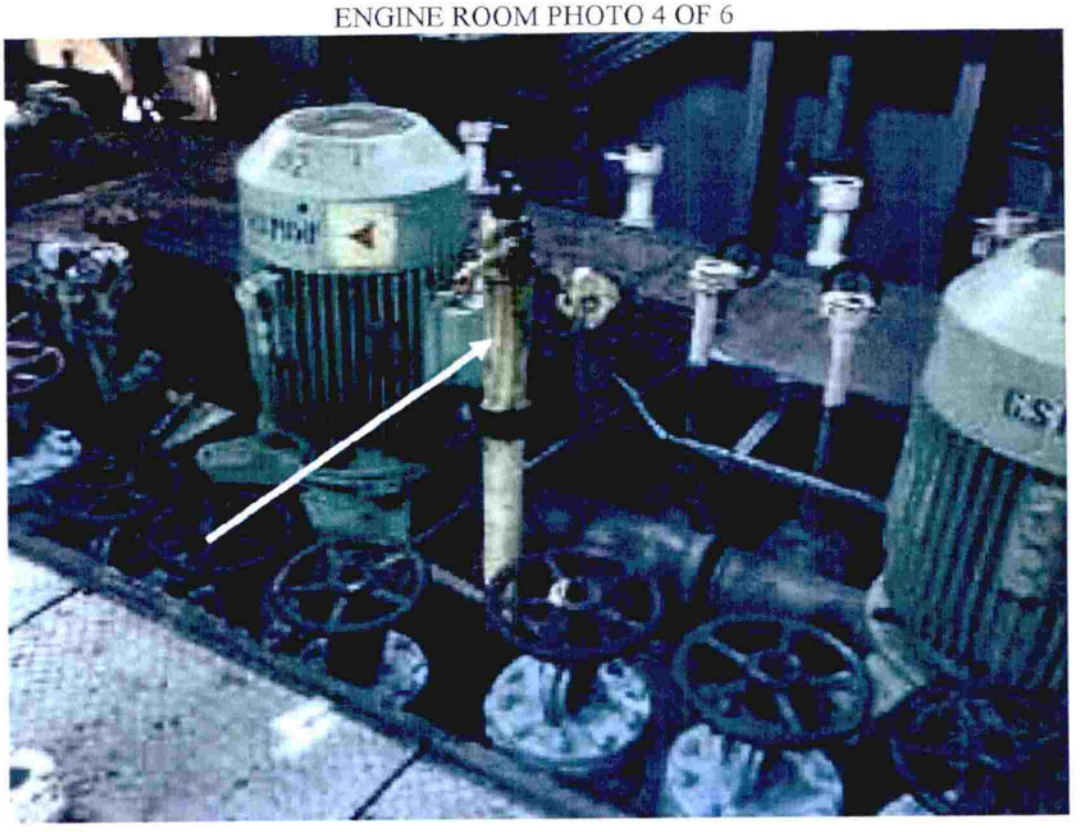


PHOTO 4 OF 5 THE G. S PUMP. THE ARROW POINTING THE PIPE IS THE MAGIC PIPE FOR STEALING BUNKER SOUNDING AT THE END OF THE CHARTERING (THIS MIGHT BE ANOTHER CASE)

ENGINE ROOM PHOTO 5 OF 5

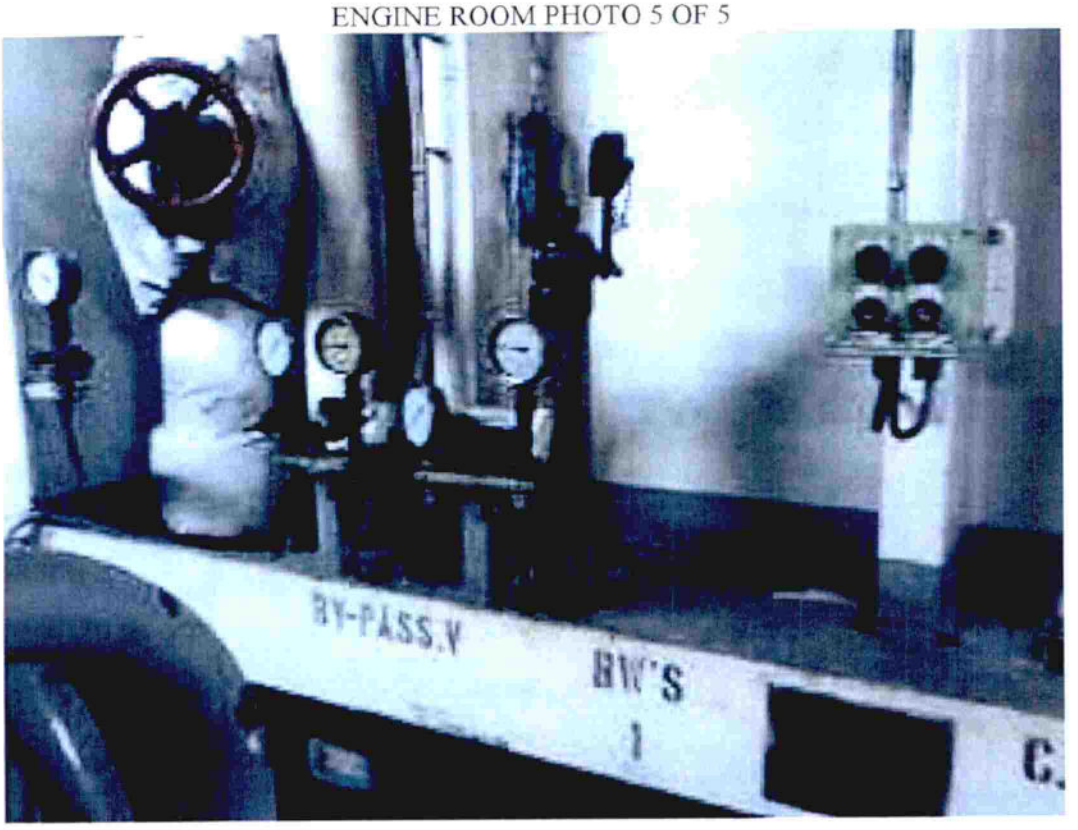


PHOTO 5 OF 5 THE ARROW POINTING THE SOUNDING PIPE FOR TANK ALL FOR STEALING FUEL FROM THE COST OF THE CHARTER. (ALSO OTHER CASE)

ATTACHMENT

B

MARPOL Interview Statement from Crew of MV New Fortune on 16February 2010
Written by ENS Sandi Carmine

1) Mane Ja, Job: 2nd Officer Reported 21Sep2009

-When asked how oil/sludge is discharged from the vessel, mbr stated Master and Chief Engineer handles all operations and 2nd Officer is not involved in OWS operations.
-Never contacted by engineering staff to run OWS. Mbr does not know how to run the incinerator; stated he is on desk on most occasions.
-Mbr stated Chief Engineer records information in the Oil Record Book (ORB).
-Has never witnessed oil being discharge into sea.

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2) Resano, Arnold: Ordinary Seaman Reported 24Jul2009

-Mbr is part of deck department and does not know anything about the OWS or incinerator operations.

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3) Relacion, Leo: 4th Engineer Reported 26Jan2010

-Mbr took flange off bilge tank and connected magic pipe from bilge pipe to overboard discharge valve.
-Stated 2nd Engineer conducts testing and maintenance of OWS.
-Stated incinerator has never been used while onboard and 2nd Engineer is in charge of incinerator operations.
-Never been asked to discharge oil and further stated only oiler was asked to discharge oil
-On 13Feb2010 during transit to SF Bay, Chief Engineer addressed the entire engineering crew in the engine control room. They were told not to discuss the overboard discharge and to state they used the incinerator if ever asked by Coast Guard.
-During transit from Korea, mbr stated Master and Chief Engineer used the magic pipe to discharge oil.
-Mbr's first time tour onboard, and when he reported, noticed magic pipe was already connected. Chief Engineer ordered use of magic pipe and the entire engineering crew had knowledge about the magic pipe.
-The magic pipe was used during the 2000-2400 watch.
-Witnessed oiler using magic pipe to discharge oil. Chief Engineer only orders one oiler to discharge oil.
-OWS overboard valve is not locked and opened underway.
-Magic pipe was used one day prior to entering SF Bay approximately Saturday night (13Feb2010 around 2200)
-At sea, magic pipe is used all the time.
-Mbr is not sure if the incinerator is working.
-Mbr took pictures of the blue hose 4 days after reporting onboard MV New Fortune.
-Witnessed 2nd Engineer throwing magic pipe overboard on Saturday (13Feb2010). Stated weight was added to magic pipe hose that it would sink.

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1 of 4 SJC

ENCLOSURE (1)
PAGE 1 OF 6 PAGES

4) Dombrovskyy, Volodymyr: 2nd Engineer Reported on 02Mar2009

Interview from Tuesday, 16Feb2010
-Stated he and Chief Engineer are in charge of the operations for OWS and Incinerator.
-Chief Engineer approves and enters log for Oil Record Book.
-When asked about oil being discharged into sea, mbr stated "it's prohibited in U.S." and there is "No magic pipe".
-No one was asked him or anyone to discharge oil through any magic pipe.
-Stated they run OWS onetime per week depending on bilge tank level and the incinerator and OWS is working.
-The OWS filter was changed last at dry dock on end of October 2009. They do have spare filter onboard.
-Sludge is incinerated everyday and transfer from sludge tank to holding tank occurs every other day.

Interview from Wednesday, 17Feb2010
-This is the 1st time working with this company
-Stated there is good relationship among the crew and Chief Engineer, but also stated "maybe 4th Engineer placed valve" as a set-up. "Would say no to placing hose if ever asked by Chief Engineer".
-He conducts operations of tank capacity and reports finding to the Chief Engineer.
-Every 7 days, bilges are emptied; last time bilge was emptied was their transit from Korea to U.S.
-Accumulate approximately 130 liters of sludge per day.
-OWS was used 3 or 4 times from Korea to U.S during its 3 week voyage, last time it was used was on either 9th or 10th February.
-Only 2nd Engineer is in the Engine Room during OWS operations. He calls Chief Engineer after OWS operation is complete.
-Normally at 0800, he comes on watch and conducts rounds of engine room and normally operates OWS during 0900-1100. His normal work hours are from 0800-2000.
-He does not know the maximum throughput of OWS.
-Stated Chief Engineer is ultimately responsible for everything in the Engine Room.
-2nd Engineer was shown pictures of the blue hose and he stated "have never seen hose."
-Stated no one has been asked to fit blue hose during his time onboard.

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5) Dimitrakis, Dimitrios: Chief Engineer Reported Feb2009 onboard in India

Interview from Tuesday, 16Feb2010
-Sludge is burned in the incinerator everyday for approximately 14hours. Sludge contains water and water is drained.
-OWS is used approximately every 10days and is tested every Saturday.
-There is few seconds delay between monitor sensor and bilge pump shutoff.
-The bilge oil tank goes to OWS. Chief Engineer and 2nd Engineer operate OWS and incinerator every day.

ENCLOSURE (/)
PAGE 3 OF 6 PAGES

2 of 4 JQC

-Chief Engineer records in Oil Record Book at all times. According to the Safety Management System, the 2nd Engineer is supposed to be in charge of the incinerator and OWS.
-Chief Engineer has never witnessed oil being discharge into sea from vessel.
-He has "never seen or used magic pipe" and never told anyone to install or throw away magic pipe.
-He does not remember the last time they used OWS and PSC inspectors should just check the Oil Record Book.
-Used the incinerator on or about 11 or 12 Feb2010.
-Crew almost always has to contact Chief Engineer before running OWS and incinerator.
-Last time OWS and incinerator were used, Chief Engineer and 2nd Engineer was present. Normally runs OWS for 30 minutes during the day time. Incinerator used for 14-18 hours.
-Stated he has never been on vessel that has illegally discharged oil in his career.

Interview from Wednesday, 17February 2010
-Has been with the company for 5 to 6 years. His 2nd time working with his vessel.
-Has good communication with 2nd Engineer and crew "no problem with crew".
-Only person who writes in the Oil Record Book is the Chief Engineer. He is the only person who conducts soundings, but sometimes the 2nd Engineers assists.
-Runs OWS every 7 to 10 days.
-The voyage from Korea to U.S. was 15-16 days and they ran OWS approx. 2 times in the morning for 30 minutes.
-Stated they never run the OWS overnight and has never had 2nd Engineer run OWS alone, "always runs together with 2nd Engineer."
-Normal work day schedule is from 0800-2000
-When Chief Engineer was shown pictures of the blue pipe bypass connection, he did not know where the photo came from and stated has never seen the hose.
-Stated the purifier runs 24hrs a day, every day on their voyage from Korea to U.S.
-Sludge is burned in the incinerator and mixed with Diesel oil.
-He never tells Master when OWS is running, only calls the bridge to get position (lat./long.) for his log.

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6) Doniego, Rodrigo: 3rd Engineer Reported on 14January2009

-3rd Engineer sometimes runs incinerator, but normally Chief Engineer operates it.
-3rd Engineer has signed the Oil Record Book, but never entered capacity. Chief Engineer had all Engineers sign the Oil Record Book and numbers were fabricated.
-Has witnessed oil being discharged into sea and has been told to discharge oil. Was told by 2nd Engineer to conceal items from authorities.
-Chief Engineer told crew that Port State Control Inspectors were coming on board and 2nd Engineer told crew not to talk about the Magic Pipe.
-Stated OWS and Incinerator do not work for sludge, but burns oily rags.

ENCLOSURE (/)
PAGE 4 OF 6 PAGES

3 of 4 DJC

-3rd Engineer has seen blue magic pipe. Stated Oiler from the evening watch receives orders from Chief Engineer to discharge oil into sea. Oiler told him that 2nd Engineer threw the magic pipe into sea before coming into San Francisco.
-Saturday, 13Feb2010 was the last time OWS was in use.
-Stated has never seen Chief Engineer or 2nd Engineer use OWS or incinerator.
-Chief Engineer told him not to talk to anyone about OWS not being operable.
-3rd Engineer has in the past been ordered by 2nd Engineer to connect the magic pipe to discharge valve.
-Only Oiler conducted soundings.
-Stated that Chief Engineer threatened to fire him if he did not do what they ordered e.g. connected Magic pipe and signing the Oil Record Book.
-Previous crew showed him how to connect the magic pipe.
-It's the first vessel that he has been on where illegal oil discharge has occurred.
-Engine Room Watch is from 1200-1600 and has day work hours. Usually spend time in his cabin because of unmanned system.
-3rd Engineer drew a picture of magic pipe connection from bilge pump to boiler blow down valve.

-End-

Sandi J Cain, ENS, 26 Feb 2010

ENCLOSURE 1 (1)
PAGE 5 OF 6 PAGES

4 of 4 sjc

ATTACHMENT

C

Enclosure (8-7) to C[redacted]TINST M5527.1B

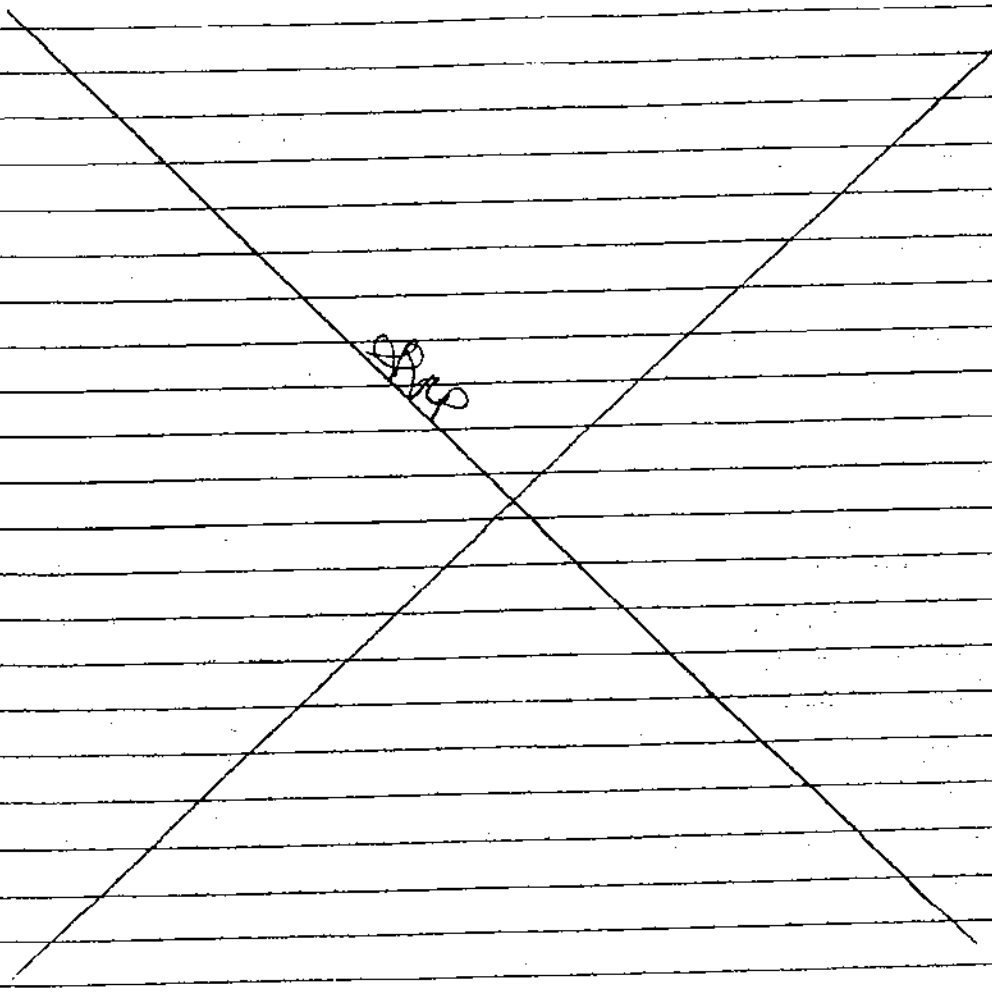
Department of Transportation
U.S. Coast Guard

COAST GUARD INVESTIGATIVE SERVICE
AFFIDAVIT

With full understanding of my rights and the knowledge that this affidavit is being taken in conjunction with an official investigation, I do voluntarily furnish the following affidavit/statement. No threats have been made and no promises have been extended to me as an inducement to make a written statement.

Roschitsch-Przeszlowski, Alexis Skye 2002072 EMPLID
(Printed/Typed Name of Person Giving Affidavit) (SSN)

CGIS -Pac Reg Office 26Feb2010 1238
(Location) (Date/Time Start)



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Page 1 of 7 Pages [redacted] Initials

ENCLOSURE (2)
PAGE 1 OF 7 PAGES

Interview Re-Cap

ON February 16, 2010, I Alexis Roschitsch-Przeszlowski attended the inspection for M/V New Fortune. I was responsible for conducting interviews with the crew for an Expanded MARPOL. The following is a synopsis of my notes from the interviews.
C/O= Chief Officer
C/E= Chief Engineer
OWS= Oily Water Seperator

Lorca, Jodan-Oiler

- Signed on the vessel on or around Sept 29, 2008. Was comfortable talking to the Coast Guard with out a representative. He works in the Engine Room and knew how the oil that accumulated in the bilges and sludge tanks was discharged. He explained the C/E told/order him to use a "magic pipe", which was blue in color, every day or every other day depending on amount of oil and water in the bilges and sludge tanks.
- The C/E was the individual who showed him how to hook up the blue "magic pipe". Mr. Lorca stated that the "magic pipe" was being used because the OWS and incinerator were not working properly.
- The "magic pipe" was connected to the Boiler Blow down and then over board which bypassed the OWS system. Connecting to the boiler blow down they would be able to use the steam which cleaned the pipe.
- When told to use the "magic pipe" the C/E would become angry if he did not comply with the order to pump the oil over board.
- Mr. Lorca stated that the "magic pipe" was used before arrival into San Francisco probably on the 13th or 14th of February.
- Mr. Lorca stated that the "magic pipe" was used mostly between 12:00-16:00 watches but seldom during hi watch, or at night.
- He stated that sludge was being pumped over board as well. He stated that since he has been on board the oil water separator has not been used and that the C/E and 2nd Engineer are in charge of the Oily Water Separator.
- Mr. Lorca stated that the incinerator is working but is not working well enough to be capable of burning sludge. Furthermore he stated that when the incinerator is used it fills the engine room with smoke.
- He identified the C/E of being in charge of the Oil Record Book.
- Mr. Lorca was told by the C/E not to discuss the illegal discharges or the magic pipe with the Coast Guard the night before the inspection (15 Feb 2010).
- Mr. Lorca was also told to throw plastics, oily rags, and other materials over board by the 2nd Engineer, including the day before arrival.

Roque, Raul- Chief Cook

- Knew nothing about the standard operations relating to the discharge of oil from the vessel.

Filosopo, Virgilio-Oiler

- Signed on the vessel on or around 23 April 2009. Was comfortable talking to Coast Guard with out a representative.
- He was aware of the procedures used to discharge oil from the vessel.

ENCLOSURE (2)
PAGE 2 OF 7 PAGES

2 of 7 ABP

- He stated that discharges of oil were made using a "magic pipe". HE was told by the C/E to discharge over board since he reported.
- Mr. Filosopo stated that the Oily Water Separator doesn't use so the C/E has the Oilers do discharges.
- MR. Filosopo stated that the incinerator works for items like paper, but not for the burning of sludge.
- Mr. Filosopo stated that the C?E is in charge of the Oil Record Book.
- He has witnessed oil being discharged from the vessel into the sea.
- The C/E and 2nd Engineer tell the crew to discharge into the sea.
- Mr. Filosopo stated that the blue pipe is always connected and is moved from the bilge pipe to sludge and then they put it overboard to discharge. The "magic pipe" has been connected since he reported and is connected the entire time they are at sea, and is removed when they make port calls.
- Mr. Filosopo was showed how to connect the house when he reported on board.
- He was unaware of the location of the "magic pipe" at the time of the interview.
- Stated that a burn barrel is used outside to burn different items.

Hadean, Romeo-Oiler

- Signed on around Sept 21, 2009, he was willing to talk to Coast Guard with out a representative.
- Mr. Hadean was aware how oil was discharged from the vessel, he stated they used a "blue hose" which the C/E showed him how to connect it and they used it to discharge over board.
- Mr. Hadean stated that the Oily Water Separator works sometimes but on the C/E or 2nd Engineer would run it.
- Mr. Hadean said that the incinerator works but only the C/E and 2nd were allowed to run it.
- Mr. Hadean had never witnessed or been asked to discharge oil overboard.
- Mr. Hadean was told by the C/E and 2nd Engineer not to discuss illegal discharge with the Coast Guard.
- Mr. Hadean remembered seeing the blue hose connected the week before they came to San Francisco and then it was disconnected before arrival into San Francisco.
- He was unaware of any plastics being thrown overboard.
- Mr. Hadean was aware of a burn barrel being used to burn rags and plastics.

Corral, Laurente- Fitter

- Signed on in June of 2009. Mr. Corral was comfortable talking to Coast guard with out representation.
- Mr. Corral was aware of how oil was discharged from the vessel and stated that they used a blue hose, "magic pipe", and that it was used every day to discharge oil and sludge.
- Mr. Corral stated that he was not sure if the Oily Water Separator worked, and the 2nd Engineer was in charge of it.
- Mr. Corral stated that a 20lt drums is being used as an incinerator and is used to burn everything.

ENCLOSURE (2)
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- Mr. Corral had witnessed oil being discharged into the sea. The last time that a discharge of oil into the sea was used before coming into san Francisco in territorial waters, and that the 2nd Engineer threw the hose over board weighted down with some steel.
- Mr. Corral had been told by Engineering Officers C/E through 4th Engineer to discharge oil over board.
- Mr. Corral had been told while in other ports to conceal items form authorities, and was told by the C/E and 2nd Engineer not to tell anyone about the magic pipe.
- Mr. Corral was show how to connect the blue hose by the 2nd Engineer when he reported to the vessel.
- While in other ports no other countries had looked into the blue pipe because they always disconnected it before coming into a port.
- Mr. Corral had taken pictures of the blue hose hooked up and relinquished a 2GB disk willingly.

Yu, Rodulfo Jr.- Able Seaman

- Reported on about 4 months ago (from 16 Feb 2010). Comfortable talking to Coast Guard without representation.
- He was unaware of the procedures used to discharge oil from the vessel as he is a deck member.
- He thought that the Oily Water Separator, incinerator and Oil Record Book was handled by the C/E.
- He was unaware of any pollution, or magic pipe.

DeJesus, Christopher- Able Seaman

- Reported on board Dec 29,2008 normal watches were 04:00:0800 and 16:00-20:00. Comfortable speaking to Coast Guard without representation.
- He was unaware of the procedures to discharge oil from the vessel, and had never witnessed any pollution form the vessel.
- Believed that the Oil Water Separator and Incinerator was handled by the Engineers.

Go, Adolfo- Ordinary Seaman

- Reported on board April 24, 2009 Normal watch hours 08:00-12:00 and 20:00-00:00. Comfortable speaking to Coast Guard with out representation.
- He was unaware of how oil was discharged from the vessel.
- Stated that the 2nd Engineer was in charge of the Oil Water Separator4.
- He had never witnessed discharge of oil from the vessel into the ocean.

Hosenilla, Humberto- Able Seaman

- Reported on board April 24, 2009. Comfortable speaking to Coast Guard with out representation.
- He was unaware of how oil was discharged from the vessel because h only works on the deck.
- He stated that the engineers were in charge of the Oily Water Separator and Incinerator.
- He had never witnessed the discharge of oil form the vessel into the sea.

Laguatan, Jojie- 3rd Officer

- Comfortable talking to Coast Guard with out representation.

ENCLOSURE (2)
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- Normal watch hours 0800-1200 and 200-2400.
- He was aware that the C/E was in charge of the Oily Water Separator.
- He stated that the C/E, C/O and CPT were in charge of the incinerator but a burn barrel was sued as well.
- He stated that the C/E was in charge of the Oil Record Book.
- He had never witnessed oil being discharged from the vessel into the sea.

Maloloy-on, Neller- Ordinary Seaman

- Reported July 24, 2009. He was willing to talk to Coast Guard with out counsel.
- He was unaware of how oil was discharged from the vessel.
- He thought the Oily Water Separator and incinerator was taken care of by the Engine Department. C/E was in charge of Oil Record Book.

Panizal, Rowell- Ordinary Seaman Cadet

- He was comfortable talking to Coast Guard without Counsel.
- He had no knowledge of how oil was discharged from the vessel or who was in charge of the OWS and Incinerator.

Raqueno, Danilo- Bosun

- Reported on 24 April 2009, he was comfortable talking to Coast Guard with out counsel.
- He was not aware of how oil was discharged from the vessel nor who was in charge of the OWS and incinerator but knew it was the Engineering department.

Rubio, Ian- Chief Officer

- Reported on October, 26, 2009. He was willing to talk to Coast Guard with out Counsel.
- He stated that he was aware of how the vessel discharged oil. When in port they would discharge to a barge if it was needed. Illegal-was deliberate discharge using a blue hose, and other parts which were thrown over board.
- He stated that to his knowledge the OWS was not working.
- He stated that the incinerator hasn't worked for a while; it is not working to burn sludge. C/E told C/O to throw oil from the galley over board.
- He had never witnessed an illegal discharge into the sea because it was mostly done at night 0000-0400, however he had seen traces of the oil on the hull.
- C/O took pictures and kept it confidential, he spoke with the 4th Engineer about how the old crew showed him how to use the.
- C/O stated that he is in charge of the drinking water. The tank is currently leaking into the bilges. Tank is capable of producing and holding 13 tons of water daily but the tank is only gaining 2-3 tons daily.
- C/O knows that the fitter was told to make the pipe by the C/E.
- C/O state that the C/E is a resident on the boat. C/E does a contract takes a few months off and then comes back on the vessel.
- C/O stated that the engine and engineering parts leak a lot of oil.
- C/O stated that he C/E and CPT had been arguing lately
- C/O stated that the 2nd Engineer may have thrown the magic pipe over board.
- C/O stated that the C/E and 2nd Engineer are buddies and get along well.

Sanchez, Ricardo- Electrician

ENCLOSURE (2)
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- Reported on July 22, 2009. Comfortable talking to Coast Guard with out Counsel.
- He knew that C/E was in charge of oil discharges from the vessel.
- Stated that the C/E and 2nd Engineer were in charge of the oily water separator at 15ppm.
- Stated that the C/E was in charge of the incinerator.
- State that the C/E was in charge of making logs in the Oil Record book and Engineering officers.
- He was unaware of any illegal discharges of oil into the sea, and that it was normal for Coast Guard to come on board and do inspections.

Kakogiannis, Georgios- Master

- He had only been on board for 21 days. He was comfortable talking to the Coast Guard with out counsel.
- He explained that ship board oil was to be discharged in accordance with MARPOL, SMS, Flag and Company instructions.
- He stated that the C/E and 2nd Engineer were in charge of the Oily Water Separator and that the C/E had reported that the OWS was working properly.
- He stated that the Engineers were in charge of the incinerator and according to the C/E it was working properly.
- He had never witnessed oil being discharged form the vessel into the ocean..
- He stated that according to the C/E everything is in proper working order.
- He knew nothing about a magic pipe or illegal discharges until the Coast Guard told him the day of the interview 16 Feb 2010.
- When he came on board the prior CPT. told him that everything was okay.
- He stated that is the C/E responsibilities to report if anything is not working, but the C/E always reported that the OWS and incinerator were working properly.

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Enclosure (8-7) to [redacted]DTTINST M5527.1B

COAST GUARD INVESTIGATIVE SERVICE
AFFIDAVIT (Final Page)

I hereby acknowledge that I have read my affidavit/statement, consisting of 7 pages, and that the information contained is the truth and correct, to the best of my knowledge and belief. I have corrected any mistakes, which I have initialed, and have reviewed this statement with the CGIS special agent(s).

Sworn and subscribed before me, this 26th day of February (Month), 2010 (Year)

1238
(Time)

(Signature of Affiant)

Miguel A. Rivas - Cardinals
(Printed/Typed Name of Witness)

(Signature of Witness)

(Printed/Typed Name of Witness)

(Signature of Witness)

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ATTACHMENT

D

CG-4608	REPORT OF INVESTIGATION (continuation sheet)
SUBJ: Motor vessel (MV) NEW FORTUNE	CCN: 0040-10GPA 0162 2E(GK)

Details:

33. On 18 March 2010, at approximately 1155 hours, PETTUS, CADET, S/A's RIVERA-CUADRADO and YUKUMOTO interviewed Laurente CORRAL at the U.S. Attorney's Office in Oakland, CA. Also present for the interview were CORRAL'S attorney, John COX; and Tagalog-English Interpreters Karenina CASTRO and Ignacio PAJARILLO. CORRAL provided the following information:

a. He was a fitter aboard the M/V NEW FORTUNE. He was a fitter for approximately 14-15 years and has worked on different vessels in his career. He completed safety classes in the Philippines through a manning agency, he paid for the training.

b. He boarded the M/V NEW FORTUNE on 16 June 2009. It was his first time working for Transmar Shipping Company (TRANSMAR), which operated the M/V NEW FORTUNE. His job was to repair the vessel and to weld when needed aboard the M/V NEW FORTUNE.

c. On his first day on the job, he was instructed by C/E DIMITRAKIS to follow his orders. C/E DIMITRAKIS made a gesture that CORRAL would be "dismissed," if he did not follow C/E DIMITRAKIS' orders. He understood that if he did not obey company orders, even if the orders were wrong, he would be sent home. He once had a problem with the boiler, he informed C/E DIMITRAKIS that the boiler needed to cool down since it was too hot; C/E DIMITRAKIS was in a hurry and did not want the boiler to cool down and due to that, the boiler was out of order several times.

d. While working on the M/V NEW FORTUNE, he took orders from C/E DIMITRAKIS and 2/E DOMBROVSKYY. He occasionally checked in with C/M RUBIO regarding his work on the vessel.

e. He did not operate the OWS or the incinerator aboard the M/V NEW FORTUNE.

f. He was shown several photographs and he acknowledged being familiar with the photographs (ENCLOSURE (19)). He took photograph 1-5 while aboard the M/V NEW FORTUNE (ENCLOSURE (20)). He provided the photographs to C/M RUBIO before arriving to Australia on 2009. C/M RUBIO wrote a description of the photographs on each document. CORRAL took the photographs because he felt it was improper to utilize a "magic hose" to discharge oil overboard without passing through an OWS.

g. He explained that photo 1 of 5 was a photograph of the "magic hose" (ENCLOSURE (21)). The blue hose was used to discharge oily wastewater overboard. He referred the blue hose as the "magic hose." He stated Rodrigo DONIEGO, Third Engineer (3/E), M/V NEW FORTUNE; Leo RELACION, Forth Engineer (4/E), M/V NEW FORTUNE; Virgilio FILOSOPO, Oiler, M/V NEW FORTUNE; Romeo BADCAN, Oiler, M/V NEW FORTUNE and Jodcan LORCA, Oiler, M/V NEW FORTUNE referred to the blue hose as the "magic hose." It was a customary practice on the M/V NEW FORTUNE to connect and disconnect the "magic hose." The "magic hose" was connected to a valve (unidentified) that led to the overboard discharge valve. The other end was connected to a flange on a pipe that led to the bilge tank.

CG-4608	REPORT OF INVESTIGATION (continuation sheet)

SUBJ: Motor vessel (MV) NEW FORTUNE CCN: 0040-10GPA 0162 2E(GK)

Details:

h. He understood the use of the "magic hose" was improper, but he followed 2/E DOMBROVSKYY orders to connect and disconnect the "magic hose" because he was his superior.

i. 2/E DOMBROVSKYY ordered him to disconnect the "magic hose" before arriving to port. CORRAL did not remember what port. He was with Jose ARLIN, Wiper, M/V NEW FORTUNE when he received his orders from 2/E DOMBROVSKYY to disconnect the "magic hose."

Special Agent's Note: Jose ARLIN was no longer part of the crew of the M/V NEW FORTUNE at the time of arrival into Oakland, CA.

k. He connected the magic hose, that was connected to the boiler blow down valve, to the overboard discharge valve. ARLIN connected the other end of the "magic hose" to the pipe that led to the bilge tank. 2/E DOMBROVSKYY ordered ARLIN; 3/E DONIEGO, FILOSOPO, and other crewmembers to connect and disconnect the "magic hose." 2/E DOMBROVSKYY also connected and disconnected the "magic hose."

l. The M/V NEW FORTUNE used a different "magic hose" before the "blue magic hose." The "old magic hose" was brown in color. He was ordered to disconnect the "brown magic hose" on one occasion by 2/E DOMBROVSKYY. When the M/V NEW FORTUNE was in dry dock in October 2009, the "brown magic hose" disappeared. He and 2/E DOMBROVSKYY were involved in cutting and creating the new "magic hose" that was blue in color.

m. C/E DIMITRAKIS installed "magic pipe" inserts in the diesel and fuel oil tanks to disguise the quantity levels in the tanks. He did not know why C/E DIMITRAKIS would steal the fuel. He was not involved with the installation of the "magic pipe" inserts. He took photographs of the "magic pipe" inserts (ENCLOSURE (22)).

n. When the M/V NEW FORTUNE left Australia to go to Oakland, CA; he wrote a letter describing the "magic hose," to the Australian authorities. C/M RUBIO went to the engine room to confirm that the blue hose was the "magic hose" after CORRAL requested it. C/M RUBIO told him that the blue hose was a "magic hose."

o. He provided a metal tool, which he described as a "flat bar." He welded two parts together to create the "flat bar." The "flat bar" was used as a tool to clean the "magic hose." He would attach a rag on the sharp, pointy end of the "flat bar" to clean the inside of the "magic hose." He was instructed by 2/E DOMBROVSKYY to clean the "magic hose" for the purposes of removing the left over oil in the hose from the illegal discharge of oil. He used the "flat bar" on two occasions. No one else used the "flat bar." The "flat bar" was stored in the steering area, where all the other hoses were kept. The M/V NEW FORTUNE'S steering area was approximately 30-40 meters away from the "magic hose." The "flat bar" was logged and secured at CGIS PACREG office by S/A Laurie CAPP-CARTER, Evidence Custodian, CGIS PACREG, Alameda, CA on 18 March 2010:

(a) One metal tool; evidence tag 170970

ATTACHMENT

E

CG-4608	REPORT OF INVESTIGATION (continuation sheet)

SUBJ: Motor vessel (MV) NEW FORTUNE CCN: 0040-10GPA 0152 2E(GK)

Details:

34. On 18 March 2010, at approximately 1320 hours, S/A's RIVERA-CUADRADO and YUKUMOTO, with PETTUS and CADET interviewed Leo RELACION, 4th Engineer on the M/V NEW FORTUNE. Also present for the interview were RELACION'S attorney, Brian GETZ; and Tagalog-English Interpreters Karenina CASTRO. RELACION provided the following information:

a. Before becoming a 4/E, he was an oiler for six years.

b. He received training in the Philippines' on MARPOL 1, 2 and 6; basic SOLAS; basic safety course; engine room management and Hazmat.

c. He began working on the M/V NEW FORTUNE on 25 January 2010, while the vessel was in South Korea. He has no prior experience working with TRANSMAR.

d. He conducted maintenance on all the purifiers onboard the M/V NEW FORTUNE engine room; pumps and any work order from 2/E DOMBROVSKYY.

e. He usually stood the night watch and at times he would stand watch from his cabin responding to any alarm from the cabin to the engine room.

f. The condition of the M/V NEW FORTUNE was relatively good in comparison to some of the other ships he has worked on. He experienced no problems with the machinery during the trip from South Korea to Oakland, CA.

g. 2/E DOMBROVSKYY has been onboard the M/V NEW FORTUNE since the time RELACION arrived onboard. From the time M/V NEW FORTUNE departed South Korea, the "magic hose" was connected from the boiler blow down valve to the oily bilge tank. He described the "magic hose" as blue, three inches wide, four meters long flexible hose with a flange at both ends of the hose. He has witnessed many times when FILOSOPO; LORCA and HADCAN connected and disconnected the "magic hose."

h. The bilge pump was used to pump the oily bilge water overboard through the boiler blow down valve and the sludge was pumped overboard utilizing the sludge pump. Since 25 January 2010, he has not seen the OWS or the incinerator operating. He did not know how the M/V NEW FORTUNE was disposing of their garbage.

i. At approximately 1338 hours, he admitted to taking pictures of the "magic hose" with his cell phone and gave the agents verbal consent to extract the pictures from his cell phone.

j. He saw the "flat bar" in the fitter's workshop and witnessed 2/E DOMBROVSKYY utilizing the "flat bar" to clean the "magic hose." He only saw 2/E DOMBROVSKYY cleaning the "magic hose" once.

k. The "magic hose" was connected from the time the M/V NEW FORTUNE departed South Korea to the time it got close to San Francisco, CA. C/E DIMITRAKIS would tell the oilers to energize the sludge pump and oily bilge tank pump to discharge the contents overboard through the boiler blow down valve. He never saw 2/E DOMBROVSKYY ordering the oilers to operate the pumps to discharge oil overboard.

CG-4608	REPORT OF INVESTIGATION (continuation sheet)

SUBJ: Motor vessel (MV) NEW FORTUNE CCN: 0040-10GPA 0162 2E(GK)

Details:

Special Agent's Note: Throughout the course of the interviews, the interviewees would say the port of entry was San Francisco. The first port of entry for the M/V NEW FORTUNE into the U.S. was the Port of Oakland, CA.

l. C/E DIMITRAKIS told him to sign the oil record book (ORB) so he could be a witness of what C/E DIMITRAKIS wrote on the ORB. He would sign the ORB because he was told to by C/E DIMITRAKIS, even though he knew it was wrong for him to sign not knowing what he was signing for, but he had no choice. He did not want to make C/E DIMITRAKIS angry nor have any problems with C/E DIMITRAKIS for not doing what he was told. He was told by the C/E DIMITRAKIS, he needed to follow all orders given by the C/E DIMITRAKIS.

m. The soundings were made by the oilers and logged on a small note pad.

n. Before the M/V NEW FORTUNE pulled into San Francisco, CA he witnessed 2/E DOMBROVSKYY remove the "magic hose" and use the "flat bar" with a rag to clean the inside of the "magic hose." 2/E DOMBROVSKYY then removed both flanges from the "magic hose" and rolled it. 2/E DOMBROVSKYY then placed the "magic hose" to the side in the engine room workshop.

o. Prior to arriving in San Francisco, CA, he was told by C/E DIMITRAKIS to tell the CG the OWS worked and that if the CG asked about the incinerator, he was to say the incinerator was operated for fourteen hours every day.

p. On 16 February 2010, while the CG inspectors were onboard the M/V NEW FORTUNE, he gave a written note and showed the pictures taken with his cell phone of the "magic hose" to ENS Sandi CARMINE, USCG, Sector San Francisco, Alameda, CA (ENCLOSURE (23)). The written note was written by CORRAL and it said "there was oil discharge overboard."

q. He was never ordered to connect the "magic hose."

r. DONIEGO; LORCA; FILOSOPO; HADCAN and he were told by C/E DIMITRAKIS while moored at Oakland, CA, to tell the CG the OWS and the incinerator were working. He saw the C/E DIMITRAKIS and 2/E DOMBROVSKYY present in the engine room while the "magic pipe" was connected to the boiler blow down valve.

s. All four oil purifiers on the M/V NEW FORTUNE worked correctly.

t. He and 2/E DOMBROVSKYY prepared the "magic pipe" while underway from South Korea to San Francisco, CA. He was instructed twice by 2/E DOMBROVSKYY to install the "magic pipe."

u. RELACION provided one drawing of the "magic pipe" and one drawing of the "magic hose" system and the interview was terminated. Both drawings were transferred to S/A CAPP-CARTER, Evidence Custodian, CGIS PACREG, Alameda, CA to be logged and secured at CGIS PACREG office.

(a) One drawing of Magic hose; evidence tag 170971
(b) One drawing of Magic pipe; evidence tag 170971

ATTACHMENT

F

CG-4608	REPORT OF INVESTIGATION (continuation sheet)

SUBJ: Motor vessel (MV) NEW FORTUNE CCN: 0040-10GPA 0162 2E(GK)

Details:

35. On 18 March 2010, at approximately 1440 hours, S/A's RIVERA-CUADRADO and YUKUMOTO, with PETTUS and CADET interviewed DONJEGO at the USAO, Oakland, CA. He provided the following:

a. He has been a 3/E for three years. Before becoming a 3/E he was a 4/E. He received training in the Philippines on: pollution, hazardous materials (hazmat) and advance firefighting. He got the training through the hiring agency in the Philippines but he paid for the training.

b. On 14 January 2010, he began working on the M/V NEW FORTUNE. It was his first time working with TRANSMAR.

c. On the M/V NEW FORTUNE he was a day worker from 0800 to 1700 hours every day, but if there was bad weather, C/E DIMITRAKIS would make him stand watch. He worked on the generators, compressors and boilers. He received his directions from 2/E DOMBROVSKYY. C/E DIMITRAKIS would give him orders every once in a while.

d. The only problem he had with C/E DIMITRAKIS was that C/E DIMITRAKIS used a "magic hose." He stated the "magic hose" was blue. When shown a picture of the "magic hose," he immediately recognized the hose as the "magic hose."

e. He stated there should be no oil on the boiler blow down valve or piping related to the boiler system.

g. He was ordered by 2/E DOMBROVSKYY to connect the "magic hose," from the boiler blow down valve to the tanks, but could not remember how many times he was told by 2/E DOMBROVSKYY to connect the "magic hose."

h. The oilers were told by C/E DIMITRAKIS to run the bilge pumps at night to pump oily water from the bilges overboard.

j. On the trip to Australia, there was a lot of water in the bilges due to a leakage problem with the boiler.

k. Since 14 January 2009, he has never seen the OWS being operated and the incinerator has never worked. Sludge was being pumped overboard.

l. He witnessed ARLIN burning garbage in a drum on the stern of the M/V NEW FORTUNE. C/E DIMITRAKIS told ARLIN to burn or throw the garbage overboard. No one from the engineering department would tell the master about the illegal discharging of oil overboard by the engineering department.

m. The "flat bar" was used by him and the oilers to clean the "magic hose" by direction of 2/E DOMBROVSKYY every time the M/V NEW FORTUNE was schedule to pull in to a port.

CG-4608	REPORT OF INVESTIGATION (continuation sheet)

SUBJ: Motor vessel (MV) NEW FORTUNE CCN: 0040-10GPA 0162 2E(GK)

Details:

o. He was told by FILOSOPO that 2/E DOMBROVSKYY tossed the "magic hose" overboard the day prior to arriving in Oakland, CA.

p. C/E DIMITRAKIS would get angry at him and be sent home, if he did not sign the ORB. When he was shown by PETTUS the ORB, DONIEGO recognized his signatures on the ORB. He stated there were discrepancies with the ORB because the incinerator did not work.

q. He has never seen C/E DIMITRAKIS taking tank soundings. The small sounding log was always on a table inside the engine control room.

r. Prior to arriving San Francisco, CA, he was told by C/E DIMITRAKIS inside the engine control room that the U.S. Coast Guard was going to board the M/V NEW FORTUNE and that he could not mention anything about the "magic hose." He was also told by C/E DIMITRAKIS to tell the CG, if he was asked that the incinerator worked for fourteen hours without stopping. 2/E DOMBROVSKYY was present when C/E DIMITRAKIS told him what to say and what not to say.

s. DONIEGO did not have any more relevant information and was not asked to provide an affidavit. The interview was terminated.

ATTACHMENT

G

CG-4608	REPORT OF INVESTIGATION (continuation sheet)

SUBJ: Motor vessel (MV) NEW FORTUNE CCN: 0040-10GPA 0162 2E(GK)

Details:

39. On 24 March 2010, at approximately 1435 hours, S/A's RIVERA-CUADRADO and YUKUMOTO, with PETTUS and CADET interviewed LORCA in the presence of his attorney COX. The interview was conducted at the USAO in the Federal Building in Oakland, CA after LORCA agreed to sign a Proffer Agreement (ENCLOSURE (26)). LORCA provided the following information:

a. He was a cadet on the M/V NEW FORTUNE for seven months prior to being promoted to oiler in which he has been performing in that capacity for the past ten months.

b. As a cadet, he took his orders from 2/E DOMBROVSKYY and his job was to wipe down machinery.

c. When he became an oiler, he stood the 0000 to 0400 and the 1200 to 1600 hour watch in the engine room. He maintained the proper liquid levels in the machinery. Since he reported onboard the M/V NEW FORTUNE, he has seen two C/E's; George GIORGIOS and the current, DIMITRAKIS; two 2/E's; Joven BALDICANAS and the current, DOMBROVSKYY. He has seen four Masters since he reported on the M/V NEW FORTUNE.

d. He took orders from 2/E DOMBROVSKYY who took his orders from C/E DIMITRAKIS. He never worked on the OWS or the incinerator. He did not know how to operate the OWS or the incinerator. C/E DIMITRAKIS would conduct testing on the incinerator but he never operated the incinerator to burn rags or sludge.

e. From the time he reported onboard the M/V NEW FORTUNE he has seen the "magic hose." Prior to the dry dock of the M/V NEW FORTUNE, in October 2009, the "magic hose" was brown in color. After the M/V NEW FORTUNE came out of dry dock, he did not see the brown "magic hose" anymore. The "magic hose" was replaced by a blue in color "magic hose."

Special Agent's Note: The M/V NEW FORTUNE conducted their dry dock in October 2009.

g. He was shown a picture of the blue "magic hose," (ENCLOSURE (27)); he immediately recognized the "magic hose" as the one used to pump oily water and sludge overboard. He recognized the valve where one end of the "magic hose" connected too, as the boiler blow down valve. When he was shown a picture of the piping underneath the deck plates, he recognized the picture as the piping coming from the bilge pump (ENCLOSURE (28)). He would connect the "magic hose" to the bilge pump piping when instructed by C/E DIMITRAKIS or 2/E DOMBROVSKYY. He and 2/E DOMBROVSKYY would connect the "magic hose" together. He connected and disconnected the "magic hose" approximately ten times. He connected the "magic hose" right after getting underway from a port of call and he disconnected before pulling into a port.

h. DIMITRAKIS went home in November and came back to the M/V NEW FORTUNE in March.

Special Agent's Note: LORCA did not give the exact years for the time period when DIMITRAKIS was off the M/V NEW FORTUNE, but based on the time period the investigation began, DIMITRAKIS was onboard the M/V NEW FORTUNE during November 2008 and March 2009.

CG-4608	REPORT OF INVESTIGATION (continuation sheet)

SUBJ: Motor vessel (MV) NEW FORTUNE CCN: 0040-10GPA 0162 2E(GK)

Details:

i. The sludge and bilge water were discharged overboard. He was ordered by C/E DIMITRAKIS on the phone to empty the bilge and sludge tanks while he was on watch in the engine control room. The discharge was done at night only. C/E DIMITRAKIS told him to empty the tanks prior to entering a port and whenever there was a high level alarm. 2/E DOMBROVSKYY never told him to empty the tanks.

j. When he or ROMEO had problems with pumping the tanks, C/E DIMITRAKIS would tell 2/E DOMBROVSKYY to pump the tanks overboard. 2/E DOMBROVSKYY helped them not more than ten occasions. ROMEO conducted all the tank soundings. He never saw the C/E DIMITRAKIS conducting tank soundings.

k. Garbage was burned in a 55 Gallon drum in the aft part of the M/V NEW FORTUNE. The burning was done by him and C/E DIMITRAKIS and it was usually done early in the morning.

l. He cleaned the "magic hose" with a wire and a rag filled with a cleaning compound named "electro clean." According to him the cleaning of the "magic hose" was done prior to arriving a port. He did not know what happened to the "magic hose" after he cleaned it.

Special Agent's Note: Luster-On 310 was a powder heavy duty, non-chelated alkaline electrocleaner formulated for the removal of smut, grease and soak cleaning residues from metals prior to electroplating.

m. He witnessed C/E DIMITRAKIS testing the incinerator but he heard an alarm shortly after it was tested. When asked if he knew the CG was coming onboard, he replied "no." C/E DIMITRAKIS told him and FILOSOPO in the engine control room, not to say anything to the CG about the sludge and bilge water overboard discharge while they were moored at the dock in Oakland, CA.

o. Prior to arriving to Oakland, CA, he and FILOSOPO disconnected the "magic hose" and cleaned it, then 2/E DOMBROVSKYY connected the boiler blow down piping and used the steam and water to blow down the boiler blow down valve. While moored in Oakland, CA, he and FILOSOPO were instructed by C/E DIMITRAKIS to get the drum used for burning garbage and to bring it to the workshop in the engine room. A Chinese Class Representative instructed C/E DIMITRAKIS and 2/E DOMBROVSKYY to destroy the drum in their presences. C/E DIMITRAKIS ordered him and FILOSOPO to destroy the drum in the work shop.

p. LORCA provided a hand written drawing by him of the piping set up for the illegal discharge operations to the agents (ENCLOSURE (29)) and the interview was terminated.

ATTACHMENT

H

CG-4608	REPORT OF INVESTIGATION (continuation sheet)

SUBJ: Motor vessel (MV) NEW FORTUNE CCN: 0040-10GPA 0162 2E(GK)

Details:

40. On 24 March 2010, at approximately 1601 hours, S/A's RIVERA-CUADRADO and YUKUMOTO, with PETTUS and CADET interviewed FILOSOPO, in the presence of his attorney COX. The interview was conducted at the USAO, Oakland, CA, after FILOSOPO agreed to sign a Proffer Agreement (ENCLOSURE (30)). FILOSOPO provided the following information:

CG-4608	REPORT OF INVESTIGATION (continuation sheet)

SUBJ: Motor vessel (MV) NEW FORTUNE CCN: 0040-10GPA 0162 2E(GK)

Details:

a. He was an oiler on the M/V NEW FORTUNE for ten months. He was an engine room watch stander for the 0400 to 0800 hours watch.

b. He was told by C/E DIMITRAKIS to energize the bilge pumps to pump oily waste water overboard. He would sometimes take tank soundings when C/E DIMITRAKIS ordered it.

c. Before the M/V NEW FORTUNE he was working onboard the M/V MED DIGNITY as an oiler for almost three years. The only difference between the two vessels was that the OWS and the incinerator were operational on the M/V MED DIGNITY.

d. He described the boiler blow down valve as the place where the "magic hose" was connected.

e. He and LORCA connected and disconnected the "magic hose" by order of 2/E DOMBROVSKYY. He has connected the "magic hose" ten times since being onboard the M/V NEW FORTUNE. He and LORCA removed the "magic hose" prior to arriving a port and they would connect the "magic hose" one day after departing a port.

f. C/E DIMITRAKIS called him while on watch in the engine control room and instructed him to pump oily water overboard, he did not remember when.

g. When he and LORCA had problems with the bilge pumps, 2/E DOMBROVSKYY would go down to the engine room and operate the pumps himself to pump sludge and oily water overboard.

h. The overboard discharge was only conducted during the night watch and if there was daylight, it would be passed to the next watch stander.

i. C/E DIMITRAKIS would get angry if they pumped oily water and sludge overboard during the day.

j. He once used diesel oil to clean the "magic hose" and when C/E DIMITRAKIS saw him, C/E DIMITRAKIS got angry and told him to use "electro clean."

k. He witnessed C/E DIMITRAKIS and 2/E DOMBROVSKYY cleaning the "magic hose" after removal.

l. On the day prior to arriving in San Francisco, CA, he witnessed 2/E DOMBROVSKYY rolling the "magic hose" and tight on it with a bronze cable then he helped 2/E DOMBROVSKYY clean both "magic hose" flanges.

m. While on watch, he witnessed C/E DIMITRAKIS testing the OWS and the incinerator but they did not work. He could not remember when that took place.

o. He never saw C/E DIMITRAKIS taking soundings. C/E DIMITRAKIS gave instructions that the only person that could take soundings was the 0800-1200 hours watch stander.

CG-4608	REPORT OF INVESTIGATION (continuation sheet)

SUBJ: Motor vessel (MV) NEW FORTUNE CCN: 0040-10GPA 0162 2E(GK)

Details:

p. He was told by C/E DIMITRAKIS to tell the CG that the OWS and the incinerator worked for fourteen to seventeen hours. He was told to say that, after he had already told the CG inspectors, the OWS and incinerator were not working.

q. He did not know or hear about the "magic hose" being thrown overboard.

r. FILOSOPO provided no more relevant information and was not asked to provide a statement and the interview was terminated.

ATTACHMENT

I

United States Environmental Protection Agency
Criminal Investigation Division
Investigative Activity Report

Case Number
0900-0427

Case Title:
M/V New Fortune

Reporting Office:
San Francisco, CA, Area Office

Subject of Report:
INTERVIEW OF GUY THERIAULT ON MAY 21, 2010.

Activity Date:
May 25, 2010

Reporting Official and Date:
Scot R. Adair, SA
25-MAY-2010, Signed by: Scot R. Adair, SA

Approving Official and Date:
Nicholas J. Torres, SAC
26-MAY-2010, Approved by: Jay M. Green, ASAC

SYNOPSIS

05/25/2010 - On the above referenced date, Special Agent Scot Adair, Trial Attorney Lana Pettus (DOJ Environmental Crimes Section), and Assistant United States Attorney Chanhayi Cadet interviewed Guy Theriault about the operating condition of the M/V New Fortune (New Fortune) when he inspected the vessel in February and March of 2010. Theriault's attorney, Greg Linsin, was present during the interview. Alison Yurovchak and Merideth Kirby (both attorneys with International Registries, Inc.) were also present.

DETAILS

Theriault provided the following information; he has an extensive background in the maritime shipping industry and vessel safety. From 1983 until 2003, Theriault was a member of the United States Coast Guard. In 2008, Theriault was hired as a "Flag State" Inspector by the Republic of the Marshall Islands. The New Fortune is a Republic of Mashall Islands flagged vessel. Theriault conducts various inspections of Republic of Mashall Islands flagged vessels at the request of his employer.

In February, 2010, Theriault was contacted by his employer and instructed to conduct a "Special Inspection" of the New Fortune which was located on the San Francisco Bay, California. On February 17, 2010, Theriault arrived at the vessel and began his inspection. During his inspection, Theriault evaluated the ship's crew and the vessels' condition. He also evaluated the crews' communication skills and their ability to safely operate the vessel. Theriault's inspection of the vessel eventually evolved into an investigation maintenance and operating procedures on board the ship. The inspection Theriault conducted is outlined in the "MI 260" guidance document.

Theriault arrived at the New Fortune on February 17, 2010. United States Coast Guard (USCG) personnel were already on the ship, including Charles Curtian. Theriault was then briefed by Curtian on his findings up to that point. Theriault stated that he observed the ship's Oily Water Separator (OWS) on that date, but that it had already been partially disassembled. It is Theriault's understanding that the OWS's intake and discharge pipes had already been seized by USCG personnel prior to his arrival on the ship. Theriault recalls reviewing the engine room computer print-out that indicated a function test had been done on the OWS on February 16, 2010.

Theriault stated that when he was conducting his inspection/investigation on the New Fortune, he was accompanied by various attorneys representing various parties aboard the vessel. The inspection took several days. He was informed that both the Chief Engineer and the 2nd Engineer

could assist him with his inspection/investigation, but that neither of them would provide him with a statement, or consent to an interview. As a result, Theriault did not ask either of them any substantive questions. Based on his observations, however, Theriault stated that it appears that the engine room crew was not following the ship's safety plan prior to arriving inside the San Francisco Bay.

Theriault stated that Curtian provided him with a "thumb drive" device that contained a document he was told was written by the ship's Chief Mate. Theriault reviewed the document and returned the thumb drive device to Curtian two days later. Theriault recalls that the document reflected the claim that oil was illegally discharged from the ship.

Theriault recalls seeing a short length of blue rubber pipe (approximately three to four feet in length) in the ship's engine room. This length of pipe was too short for use as a bypass for the ship's OWS. He added that a pipe of that type would need to be approximately twelve to fourteen feet long to bypass the OWS. Theriault recalls reviewing photographs of the ship's disassembled Boiler Blow Down Valve and recalls some of those photographs showing black residue inside the disassembled valve.

On February 18, Theriault returned to the New Fortune and met with the ship's Master. The two of them discussed Theriaults' inspection and a "detention letter" partially based on information obtained from a "Form B" generated by USCG personnel.

On February 19, Theriault was on board the New Fortune during a test of the ship's incinerator. Theriault explained that the incinerator failed to ignite on the first six attempts and that it lit on the seventh attempt. No effort was made to burn waste oil because the Chief Engineer claimed that he did not warm the waste oil tank prior to the test. Theriault stated that the waste oil on the New Fortune needs to be approximately 180 degrees Fahrenheit prior to burning. Based on the Chief Engineers' claim that the oil was too cold, the test was terminated early.

On February 21, Theriault returned to the New Fortune with Marshall Island Nautical Inspector Davis Kong. Theriault explained that Kong was on the ship to assist him with his inspection/investigation of the vessel and to observe a second test of the incinerator. Theriault was not physically present at the incinerator during the test attempt because there was not enough room for him with Kong, Chief Engineer, 2nd Engineer, USCG personnel, and lawyers present for the test. Kong later told Theriault that the test was cancelled because the incinerator was non-functional and that the crew did not know what was wrong with the unit. Theriault later observed a pipe with leaking oil present in its lagging. Theriault made note of it due to the associated fire hazard with the leak.

On February 22, 2010, Theriault and Kong returned to the vessel to observe a test of the ship's OWS. Theriault explained that the test result was "unsatisfactory" and that the OWS appeared at the time to have been non-functional for lengthy period of time. Theriault stated that the OWS produced only approximately one cup of fluid after operating for several minutes. Theriault later observed the OWS "stop check valve" being removed. The valve was highly corroded and non-functional. Theriault estimates that the stop check valve was non-functional for "weeks or months". He did not observe oil inside the stop check valve.

United States Environmental Protection Agency
Criminal Investigation Division
Investigative Activity Report

Case Number
0900-0427

Theriault explained that the OWS on the ship has an external filter near the unit. This filter is meant to filter oil out of the water after it is discharged from the OWS unit. It is sometimes referred to as a "polishing filter". Theriault observed the disassembled filter and noted that it appeared to be comprised of non-factory components, including charcoal pellets. The filter did appear to work after the OWS was repaired and functional several days later. When the OWS was finally repaired, Theriault noted that it discharged water containing less than 15 parts per million of oil "like a fire hose". Theriault recalls reading a Class Society Audit report in which reviewed maintenance records from the New Fortune claim the OWS was "overhauled" in October, 2009.

Theriault explained that he encountered an "alternate incinerator" in the form of a "burn barrel" on the New Fortune. The barrel was used apparently to burn trash when the vessel was at sea. Theriault does not believe the burn barrel was hidden from him or other inspectors.

Sometime later in his inspection, Theriault became aware that the ship's incinerator was missing its "forced draft fan" because it was sent in for repair. He also became aware that the incinerator's intake feed line was clogged. Theriault does not know when the line became clogged, but believes that the waste oil was not being burned in the incinerator when the intake line was clogged.

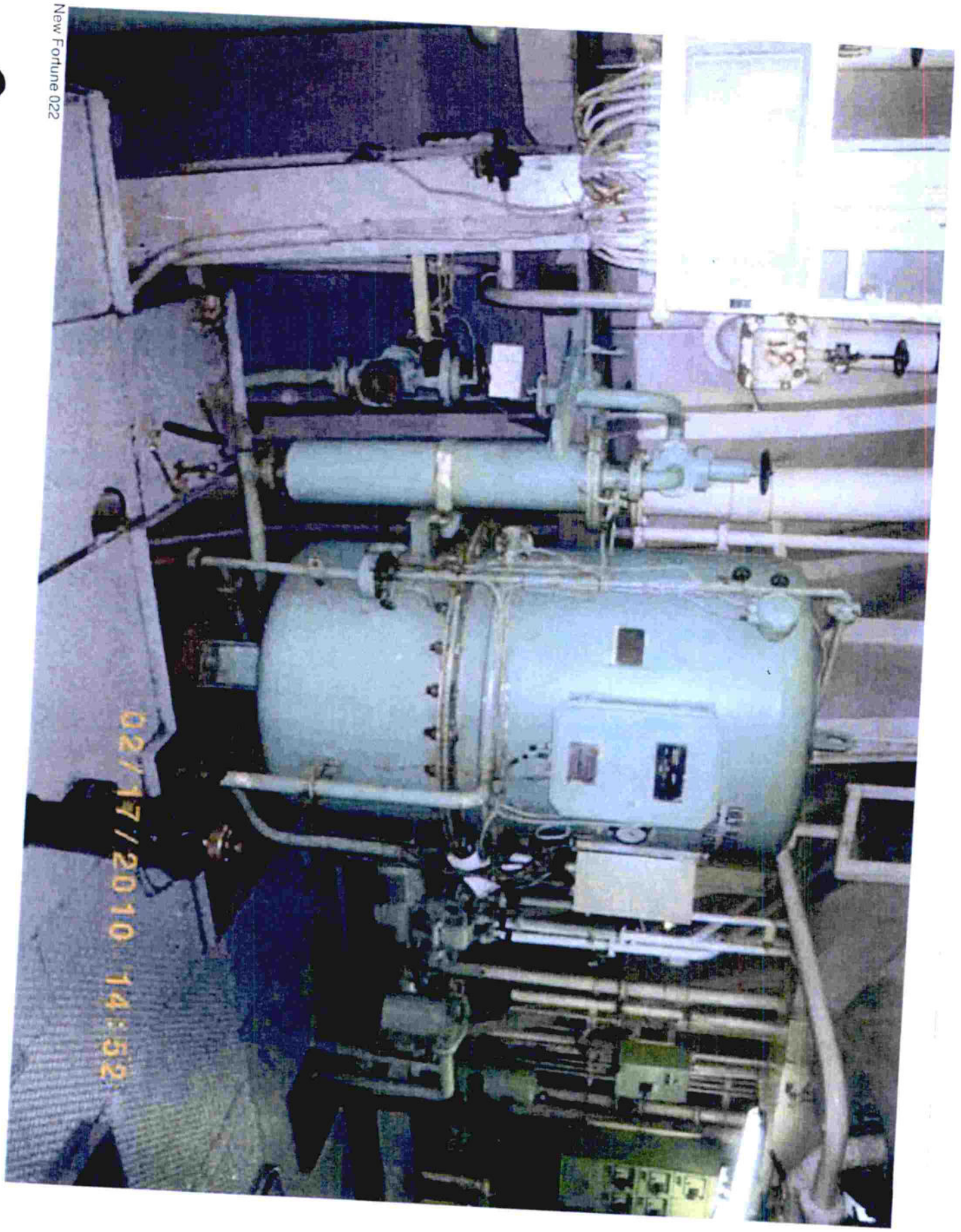
Theriault stated that he has seen many ships during his career as a Flag State inspector and USCG member. He claims that he has seen ships in worse condition than the New Fortune, but that this vessel suffered from several serious operational deficiencies.

Theriault provided the reporting agent with several photographs of the New Fortune's engine room and surrounding area (see attached photographs). Theriault noted that he did not take the photographs and that several of the time stamps on the photographs appear to be inaccurate.

ATTACHMENT
Attached Photographs M/V New Fortune

ATTACHMENT

J


New Fortune 022
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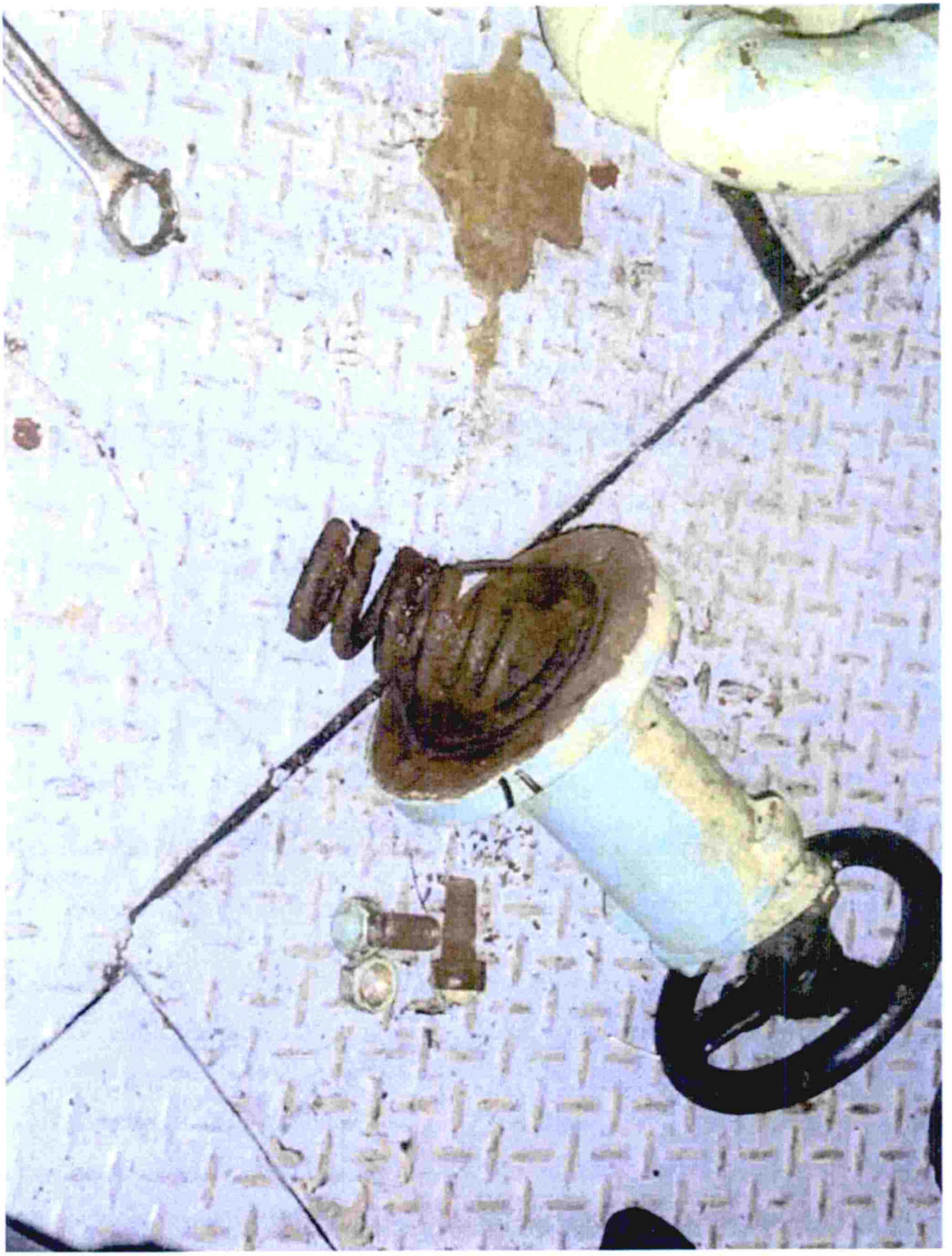

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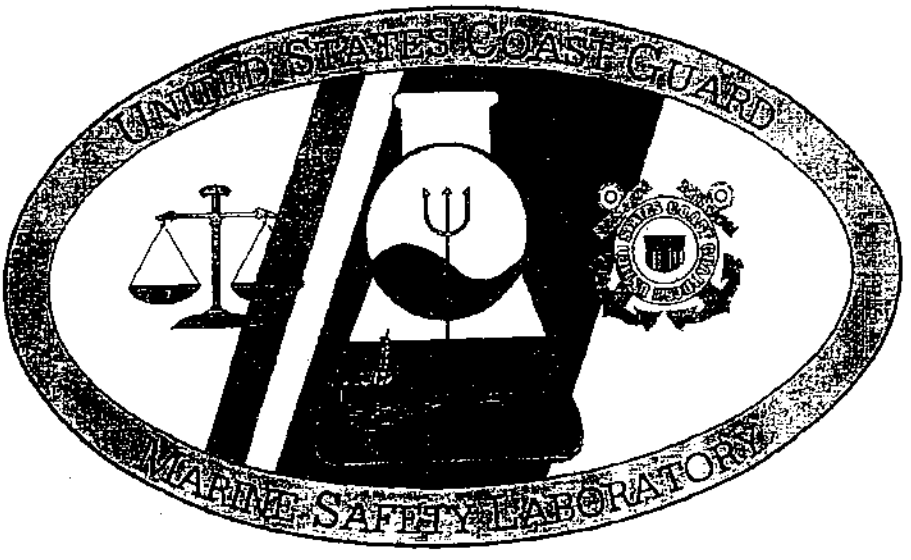
ATTACHMENT

K

Oil Sample Analysis Report

Sector San Francisco
Case / Activity Number 3681633

Marine Safety Laboratory
Case Number 10-051



ENCLOSURE (4)
PAGE 1 OF 7 PAGES

U.S. Department of Homeland Security

United States Coast Guard

Manager
U.S. Coast Guard
Marine Safety Laboratory

1 Chelsea Street
New London, CT 06320
Phone: (860) 271-2704
Fax: (860) 271-2641

16450
01 Mar 2010

MEMORANDUM

From: K. Juaire
CG MSL

To: CG Sector San Francisco

Subj: OIL SAMPLE ANALYSIS REPORT, MSL CASE NUMBER 10-051
UNIT CASE / ACTIVITY NUMBER 3681633

1. The laboratory analysis of this case has been completed and our report is forwarded. The technical data supporting the report (spectrograms and chromatograms) have been archived at our facility and are available upon request. We will maintain the oil samples in refrigerated storage pending final case disposition.

2. Questions concerning this report or the analytical methods used should be directed to the Supervisor of Analysis, Kristy Juaire.

#

Enclosure: (1) MSL Report 10-051

ENCLOSURE (1)
PAGE 1 OF 2 PAGES

United States Coast Guard
Marine Safety Laboratory
Oil Spill Identification Report
10-051

Requestor: Sector San Francisco
Unit Case/Activity Number: 3681633
Received: 24-Feb-10 Via: Federal Express 863197093320/30/41/52

Number Of Samples: 21
Lab NO. of Spills: 1, 2, 3, 4, 5, 7, 8, 9, 10 and 11
Lab NO. of Suspects: 12, 13, 14, 15, 16, 17, 18, 19, 20 and 21
Lab NO. of Background: 6

Analysis Methods:

- ☑ GAS CHROMATOGRAPHY (GC)
- ☑ GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GC-MS)
- ☐ INFRARED SPECTROSCOPY (IR)

Laboratory's Conclusion (as explained below): NON-MATCH

RESULTS:

1. Samples 10-051-1, 2, 3, 4, 5, 7, 8, 9, 10 and 11 were specified to be representative of spilled oil. Analysis indicates:
   A. Samples 10-051-3 and 4 are similar to each other and contain very slightly degraded fuel oil mixed with lubricating oil. Differences are consistent with weathering.
   B. Samples 10-051-8 and 11 are similar to each other and contain very slightly degraded fuel oil mixed with lubricating oil. Non-petroleum contamination is present in both samples. Minor differences observed between samples 10-051-8 and 11 are consistent with weathering and non-petroleum contamination.
   C. Sample 10-051-5 contains a mixture of fuel oil and lubricating oil with characteristics different from those of spill samples 10-051-3, 4, 8 and 11. Differences are not consistent with weathering or non-petroleum contamination.
   D. Sample 10-051-10 contains a mixture of fuel oil and lubricating oil with characteristics different from those of spill samples 10-051-3, 4, 5, 8 and 11. Non-petroleum contamination is present. Differences observed between sample 10-051-10 and samples 10-051-3, 4, 5, 8 and 11 are not consistent with weathering or non-petroleum contamination.
   E. Samples 10-051-1, 2, 7 and 9 contain petroleum oil. However, the quantity is not sufficient for comparison purposes.

2. Suspected source samples 10-051-12, 13, 14, 15, 16, 17, 18, 19, 20 and 21 contain various petroleum oils with characteristics different from those of spill samples 10-051-3, 4, 5, 8, 10 and 11. Differences are not consistent with weathering or non-petroleum contamination.

3. Sample 10-051-6 was specified to represent clean water. No petroleum oil was detected.

CONCLUSIONS:

1 Samples 10-051-3 and 4 represent different portions of the same spilled oil. Differences are attributable to weathering.

SUPERVISOR OF ANALYSIS K JUSTICE DATE 01-Mar-10 ENCLOSURE (4)
PAGE 3 OF 7 PAGES

United States Coast Guard
Marine Safety Laboratory
Oil Spill Identification
Report Continuation
10-051

2. Samples 10-051-8 and 11 represent different portions of the same spilled oil. Differences are attributable to weathering and non-petroleum contamination.

3. Samples 10-051-5 and 10 are different from each other and from samples 10-051-3, 4, 8 and 11. Differences are not attributable to weathering or non-petroleum contamination.

4. Suspected source samples 10-051-12, 13, 14, 15, 16, 17, 18, 19, 20 and 21 and spill samples 10-051-3, 4, 5, 8, 10 and 11 are not derived from a common source of petroleum oil. Differences are not attributable to weathering or non-petroleum contamination.

5. Samples 10-051-1, 2, 7 and 9 do not contain a quantity of petroleum oil sufficient for correlation analysis

6. Sample 10-051-6 contains essentially oil-free water.

ENCLOSURE (4)
PAGE 4 OF 7 PAGES

SUPERVISOR OF ANALYSIS K. JUAIRE DATE 01-Mar-10

United States Coast Guard
Marine Safety Laboratory

Oil Spill Identification Analysis
Cost Recovery Documentation

Laboratory Case Number:	10-051
Requestor:	Sector San Francisco
Unit Case/Activity Number:	3681633
Number of Samples:	22
Cost Per Sample Prepared:	$20.00
Total Costs of Sample Preparation:	$440.00
Number of Analysis:	46
Cost Per Sample Prepared:	$86.00
Total Costs for Analysis:	$3,956.00
TOTAL COSTS:	$4,396.00

This documentation is provided for purposes of Phase IV - Documentation and Cost Recovery under the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300)

Signature: Kristy Juarez **Date:** 01 Mar 10

ENCLOSURE (4)
PAGE 5 OF 7 PAGES

United States Coast Guard
Marine Safety Laboratory Sample
Check-In Log

MSL Case/Activity Number: 10-051

Requestor: Sector San Francisco

Unit Case Number 3681633

Federal Project Number:

Delivery Method: Federal Express

Received Date: 24 Feb 10

Delivery Number: 863197093320/30/41/52

Priority: No **Rush:** Yes **Comparison** No

Lab Number 10-051	Sample Descriptions from Sample Jars	Spill	Source
1	ECN# 3681633-01-JAM BOILER BLOW DOWN VALVE 16FEB10 / 1744	☑	☐
2	ECN# 3681633-02-JAM INBOARD BOILER BLOW DOWN VALVE 16FEB10 / 1748	☑	☐
3	ECN# 3681633-03-JAM BILGE PUMP TO BILGE TANK PIPE 16FEB10 / 1802	☑	☐
4	ECN# 3681633-04-JAM SHEEN NET USED TO SWAB INSIDE OF THE BILGE PUMP TO BILGE TANK PIPE 16FEB10 / 1809	☑	☐
5	ECN# 3681633-05-LAM ENGINE ROOM PORT SIDE BOILER BLOWDOWN OVERBOARD VALVE SKIN SIDE 17FEB10 / 1335	☑	☐
6	ECN# 3681633-06-LAM CLEAN WATER SAMPLE TAKEN NEXT TO M/V NEW FORTUNE 17FEB10 / 1520	☑	☐
7	ECN# 3681633-07-LAM BOILER BLOWDOWN VALVE GASKET SWIPE WITH SORBENT PAD SAMPLE TAKEN FROM VALVE REMOVED FROM VSL 16FEB10 18FEB10 / 1215	☑	☐
8	ECN# 3681633-08-LAM BOILER BLOWDOWN VALVE GASKET RESIDUE SAMPLE TAKEN FROM VALVE REMOVED FROM VSL 16FEB10	☑	☐
9	ECN# 3681633-09-LAM BOILER BLOWDOWN VALVE SWIPE WITH SORBENT PAD SAMPLE TAKEN FROM VALVE REMOVED FROM VSL 17FEB10 18FEB10	☑	☐
10	ECN# 3681633-10-LAM BOILER BLOWDOWN VALVE SWIPE WITH SHEEN NET SAMPLE TAKEN FROM VALVE REMOVED FROM VSL 17FEB10 18FEB10	☑	☐

Remarks: Samples 1-11 changed to "spill" by direction of reporting unit.

Samples checked in by: MST3 MIKE RUSHANE — **Date:** 24 Feb 10

Sample Custodian: MST2 JOHN AGAPITO — **Date:** 2/26/10

Supervisor of Analysis: K. BLAIR — **Date:** 01 Mar 10

ENCLOSURE (4)
PAGE 6 OF 7 PAGES

United States Coast Guard
Marine Safety Laboratory
Check-In Log

MSL Case Number: 10-051

Lab Number 10-051	Sample Descriptions from Sample Jars	Spill	Source
11	ECN# 3681633-11-LAM BOILER BLOWDOWN VALVE GASKET RESIDUE SAMPLE TAKEN FROM VALVE REMOVED FROM VSL 17FEB10 18FEB10	☑	☐
12	ECN# 3681633-12-EDJ WASTE OIL INCINERATOR TANK NEW FORTUNE 19 FEB 10 1303	☐	☑
13	ECN# 3681633-13-EDJ DIESEL OIL TANK FOR INCINERATOR NEW FORTUNE 19 FEB 10 1315	☐	☑
14	ECN# 3681633-14-EDJ HEAVY FUEL OIL SET TANK NEW FORTUNE 19 FEB 10	☐	☑
15	ECN# 3681633-15-EDJ DIESEL OIL SET TANK NEW FORTUNE 19 FEB 10	☐	☑
16	ECN# 3681633-16-EDJ SLUDGE TANK NEW FORTUNE 19 FEB 10	☐	☑
17	ECN# 3681633-17-EDJ HEAVY FUEL OIL SER TANK NEW FORTUNE 19 FEB 10	☐	☑
18	ECN# 3681633-18-EDJ DIESEL OIL SER TANK NEW FORTUNE 19 FEB 10	☐	☑
19	ECN# 3681633-19-EDJ BILGE OIL TANK NEW FORTUNE 19 FEB 10	☐	☑
20	ECN# 3681633-20-EDJ FUEL OIL DRAIN TANK NEW FORTUNE 19 FEB 10	☐	☑

Samples checked in by: MST3 MIKE RUSHANE — Date: 24 Feb 10

Sample Custodian: MST2 JOHN AGAPITO — Date: 3/26/10

Supervisor of Analysis: K. JUAIRE — Date: 01mar10

ENCLOSURE (4)
PAGE 7 OF 7 PAGES

ATTACHMENT

L

Form: RWPSM7(01/2-11(E)

中国船级社
CHINA CLASSIFICATION SOCIETY
ADDITIONAL AUDIT REPORT FOR SMS

DOC [ ] SMC [x] Control No NY108551

Ship	Name of Ship: NEW FORTUNE		
	Class No.: 94P33 65	IMO Number: 9082946	
	Flag: the Republic of Marshall Islands	Cert. No. of SMC: BJ088737	
	Call sign: V7OH3	Port of Registry: Majuro	
	Type of Ship: Bulk Carrier	Gross Tonnage: 26136	
Company	Name of Company:		
	Address:		
	Cert. No. of DOC:	Designated Person:	
	Tel No.:	Fax No.:	

Report

At the request of the management company of the vessel and under the instruction from CCS Headquarters, an additional verification in scope of Intermediate verification was carried out to deal with the deficiencies concerning safety management system imposed by USCG PSC Inspection Report(MISLE Activity No. 3680366) and Flag State Detention Order dated on Feb. 22, 2010

On Feb. 23-24, 2010, the undersigned auditor did attend on board the ship at Oakland anchorage, CA, USA, for purpose of carrying out a field audit to the Master, Deck Dept., Engine Dept and the ship's personnel associated with the SMS according to the audit plan. The audit was conducted through inquiring or talking with the crew except C/E and 2/E, checking relevant records, ship and equipment on-site inspection and observing the exercises . The verification was mainly focused on the crew's duties and responsibilities, onboard training, key shipboard operations, maintenance of the ship and equipments, etc.. Based on the objective evidence collected,, 2 major non-conformities and 6 non-conformities were identified. The corrective and preventive actions plan to all non-conformities were proposed by the ship's company and master, which has been approved by the undersigned on 1st March 2010.

On 7th-8th March 2010, the undersigned did attend on board again to confirm that the corrective actions for downgrading the major non-conformities had been taken and verified to be effective. Meanwhile, the present C/E and 2/E after hand-over were interviewed with respect to their duties and responsibilities with satisfaction. Therefore 2 major non-conformities have been downgraded to non-conformities in result

Based on the above-mentioned, and according to CCS Rules and Regulations for certification of SMS, a follow-up additional verification within three months is required to confirm the effectiveness of corrective and preventive actions to the NCs, and further evaluate the running effectiveness of SMS on board.

Audit details:	Date of Audit: 2010.02.23-24 2010.03.7-8	Place of Audit: Oakland Anchorage, CA, USA
	Lead Auditor: 舒华(Shu Hua)	
	Auditor: 舒华(Shu Hua) 田斌(Tian Bin)	

DATE: March 8, 2010 LEAD AUDITOR: For (Shu Hua)

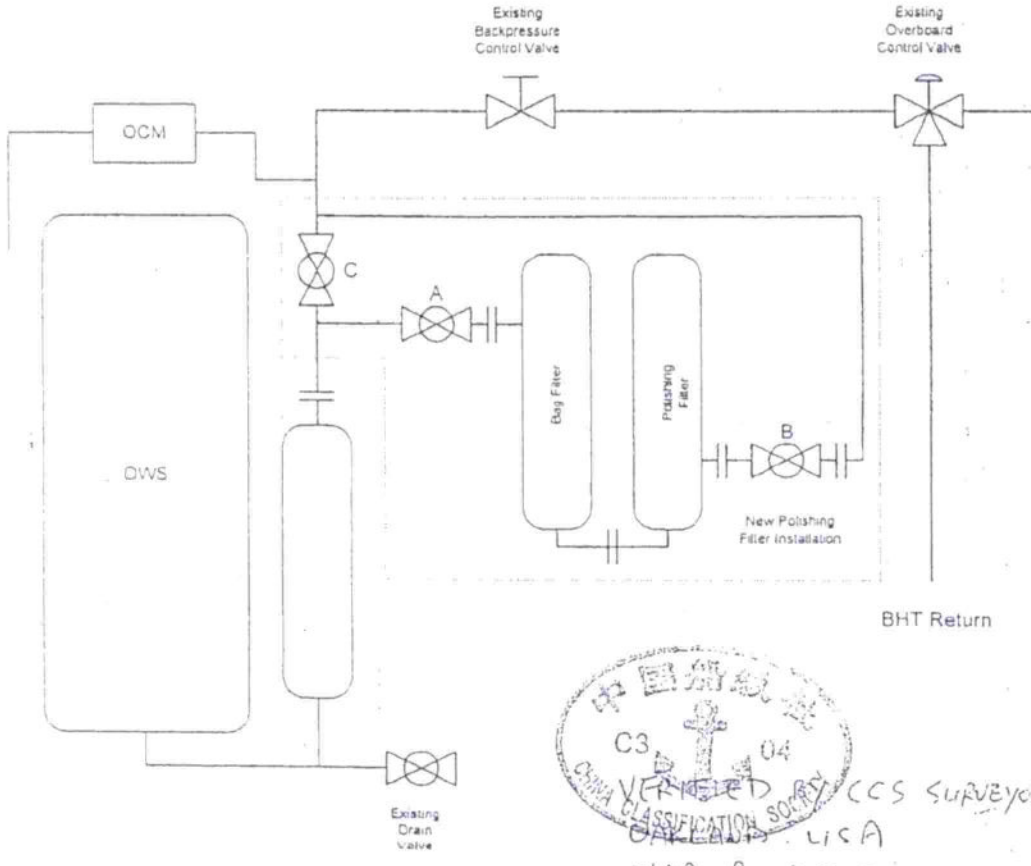
REMARK: [X] APPLICABLE [ ] NOT APPLICABLE

(Rev.8.0 20091115-1/1)

ENCLOSURE (14)
PAGE 1 OF 20 PAGES

COPY

ENCLOSURE (14)
PAGE 1 OF 22 PAGES



Operating procedures:

Bypass of polishing filters:
If the OWS is capable of producing a discharge below 15 PPM then the polishing filters can be bypassed to allow for a more economical discharge.

1. Open valve 'C'.
2. Close valves 'A' and 'B'
3. Adjust the Backpressure Control Valve for proper pressure inside the OWS.

Using the polishing filters:
When the OWS discharge cannot be consistently kept below 15 PPM then the polishing filter can be put online. You may also chose to modulate valve 'C' to mix treated water and raw water to obtain a PPM value less than 15 rather than passing all water through the filters, which in most cases will produce near 0 PPM.

1. Open valves 'A' and 'B'.
2. Close valve 'C' completely to direct all flow through the polishing filter.
3. Open valve 'C' slightly to allow mixing of raw and polished water that will produce a discharge consistently below 15 PPM. This method will help reduce filter consumption if the lowest PPM possible is not required.
4. Adjust the Backpressure Control Valve for proper pressure inside the OWS.

C3 04
VERIFIED BY CCS SURVEYOR
CHINA CLASSIFICATION SOCIETY
OAKLAND, USA
MAR. 8, 2010

New Fortune			VIGILANT MARINE SYSTEMS, 7000 Merrill Ave., Suite F Bldg. Chino, CA 91710 PHONE (1) 909-597-9508 FAX (1) 909-597-9514
Eliminator Polishing Filter Layout			
REV 1	DWG NO ELM-NWFT-100115-P1	Part Number N/A	DRAWN BY: CRAIG A. MI
1 OF 1 SHEET		NONE SCALE	March 7, 2010

Form:RWPSM7012-E(E)

中 国 船 级 社
CHINA CLASSIFICATION SOCIETY
SMS观察项记录
OBSERVATION NOTE FOR SMS

公司/船舶名： NEW FORTUNE
Company/Ship：

工作控制号： NY108051
CONTROL NO.

序号 (No.)	观察项 (Observations)	ISM规则章节号 (ISM Code Ref.No.)
1	Procedure OP-08 "Vessel Condition Monitoring", the interval of inspection to vessel by superintendent is "at least once per	4
	calendar year". For M/V New Fortune, the recent two inspections were on Jan. 2008 and May 2009.	

REMARK: [X] APPLICABLE [ ] NOT APPLICABLE

(Rev.8.0 20091115-1/1)

ENCLOSURE (14)
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格式: RWPSM7012-G

中国船级社
CHINA CLASSIFICATION SOCIETY
SMS不合格记录
SMS Non-conformity

工作控制号 NY108551

公司/船舶名: NEW FORTUNE Company/Ship:	日期: 2010年02月23日 不合格序号: 1 Date: N.C.No.:
不合格项陈述 (Non Conformity): Check Form D-14 "Deck Cranes Planned Maintenance Report", the auditor found that last inspection of deck cranes was conducted on Nov. 09, 2009. The inspection interval of deck crane is 3 months based on the requirement of Deck ISM Manual. It's more than 3 months from Nov. 09, 2009 to Feb. 23, 2010.	ISM规则章节号: 10.2 ISM Code Para. No.: 不合格场所: Deck Department N.C.Location: 审核组长: Lead Auditor: 审核员: Auditor: 公司/船舶代表: Rep. Acknowledge:
	严重不合格 (Major N.C.) ☐ 不合格 (N.C.) ☒
纠正措施的建议及计划完成日期(可在审核完成一周内递交审核组长): Proposed Corrective Action And Proposed Comp. Date (may be submitted to the leader auditor within 7 days from a.m. date by the company): Refer to attachment	严重不合格降级 Major N.C. Downgraded: 是 Yes ☐ 否 No ☐ 不适用 (N/A) ☐ 确认不合格已降级, 审核员签署/ 日期 Date/Signature Auditor: 不适用(NMAJU) 是否安排附加审核 Additional Verification Required: 是 Yes ☒ 否 No ☐ 附加审核日期/结论/工作控制号 Control number/Outcome/Date of Additional Verification: 不适用 (N.A) ☐ 不合格消除 N.C. Cleared: 已消除 (Yes) ☐ 未消除 (No) ☐ 不合格关闭日期 DATE OF N.C CLEARED:
公司/船舶责任人员: 审核员认可: Responsible Person(s): Auditor Approved:	审核员确认日期 AUDITOR CONFIRMED:

备注:1. 不合格序号为本次审核的不合格项的顺序编号, 不合格场所指发现不合格的地点;
N.C No. indicates the serial number for N.C. of this verification; N.C. location indicates the place where N.C. was found.

2. 公司/船舶代表由公司/船舶指定, 如指定人员(公司), 船长或大副(船舶);
Representative of company/ship was appointed, such as designated person(company), captain or chief mate(ship).

3. 建议完成日期, 严重不合格需在发证/签证前消除或降级, 不合格须在三个月内纠正;
Proposed completed date: Major N.C is to be cleared or downgraded before issuance/endorsement of cert.; N.C. is to be corrected within 3 months.

4. 公司/船舶责任人员由公司/船舶指定, 如指定人员或部门经理(对公司); 船长或部门长(对船舶).
Responsible person(s) are appointed by company/ship, such as designated person or manager of dept(company); captain or chief officer/ engineer(ship).

5. [X] APPLICABLE [ ] NOT APPLICABLE

ENCLOSURE (14)
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中国船级社

CHINA CLASSIFICATION SOCIETY

SMS不合格记录

SMS Non-conformity

工作控制号 NY108551

公司/船舶名：NEW FORTUNE Company/Ship:	日期：2010年02月23日 不合格序号：2 Date: N.C.No.:
不合格项陈述（Non-Conformity） Check Form Y-22 "Job Order List of Defects/ Problems" dated on April 23rd, 2009, 9 items were reported. But no evidence of follow-up actions taken and/or feedback from the Company was identified on board, which does not comply with the requirements of Procedure OP 08 "Ship Maintenance Montoring".	ISM规则章节号：10.2 ISM Code Para. No.:
	不合格场所：Master N.C.Location:
	审核组长：Hua Shu Lead Auditor:
	审核员：Hua Shu Auditor:
	公司/船舶代表： Rep. Acknowledge:
	严重不合格（Major N.C.）☐ 不合格（N.C.）☒
纠正措施的建议及计划完成日期（可在审核完成一周内递交审核组长）： Proposed Corrective Action And Proposed Comp. Date (may be submitted to the leader auditor within 7 days from a.m. date by the company): Refer to attachment.	严重不合格降级 Major N.C. Downgraded：是 Yes ☐ 否 No ☐ 不适用 ☒
	确认不合格已降级，审核员签署/日期 Date/Signature Auditor：不适用（N.A）☒
	是否安排附加审核 Additional Verification Required：是 Yes ☒ 否 No ☐
	附加审核日期/结论/工作控制号 Control number/Outcome/Date of Additional Verification：不适用（N.A）☐
	不合格消除 N.C. Cleared：已消除（Yes）☐ 未消除（No）☐
	不合格关闭日期 DATE OF N.C CLEARED
公司/船舶责任人员： Responsible Person(s): 审核员认可： Auditor Approved:	审核员确认日期 AUDITOR CONFIRMED

备注：1. 不合格序号为本次审核的不合格项的顺序编号，不合格场所指发现不合格的地点；
N.C No. indicates the serial number for N.C. of this verification; N.C. location indicates the place where N.C. was found.

2. 公司/船舶代表由公司/船舶指定，如指定人员（公司），船长或大副（船舶）；
Representative of company/ship was appointed, such as designated person(company), captain or chief mate(ship).

3. 建议完成日期，严重不合格需在发证/签证前消除或降级，不合格须在三个月内纠正；
Proposed completed date: Major N.C. is to be cleared or downgraded before issuance/endorsement of cert., N.C. is to be corrected within 3 months.

4. 公司/船舶责任人员由公司/船舶指定，如指定人员或部门经理（对公司）；船长或部门长（对船舶）。
Responsible person(s) are appointed by company/ship, such as designated person or manager of dept(company), captain or chief officer/ engineer(ship).

5. [X] APPLICABLE [ ] NOT APPLICABLE

ENCLOSURE (14)
PAGE 5 OF 20 PAGE

格式: RWPSM701/2-G

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CHINA CLASSIFICATION SOCIETY
SMS不合格记录
SMS Non-conformity

工作控制号 NY108551

公司/船舶名: NEW FORTUNE Company/Ship:	日期: 2010年02月23日 不合格序号: 3 Date: N.C.No.:
不合格项陈述 (Non-Conformity): During site inspection in Engine Room, the auditor found no operating instruction of Sewage Treatment Plant, Aux. Generator and Oil Purifier were posted near by these equipments.	ISM规则章节号: 7 ISM Code Para. No.: 不合格场所: Engine Dept N.C.Location: 审核组长: Hua Shu Lead Auditor: 审核员: Hua Shu Auditor: 公司/船舶代表: Rep. Acknowledge:
	严重不合格(Major N.C.) ☐ / 不合格(N.C.) ☒
纠正措施的建议及计划完成日期(可在审核完成一周内递交审核组长): Proposed Corrective Action And Proposed Comp. Date (may be submitted to the leader auditor within 7 days from a.m. date by the company): Refer to attachment.	严重不合格降级 Major N.C. Downgraded: 是 Yes ☐ 否 No ☐ 不适用 N.A ☒ 确认不合格已降级, 审核员签署/ 日期 Date/Signature Auditor: 不适用(N.A) ☒ 是否安排附加审核 Additional Verification Required: 是 Yes ☒ 否 No ☐ 附加审核日期/结论/工作控制号 Control number/Outcome/Date of Additional Verification: 不适用(N.A) ☐ 不合格消除 N.C. Cleared: 已消除(Yes) ☐ 未消除(No) ☐ 不合格关闭日期 DATE OF N.C CLEARED:
公司/船舶责任人员: 审核员认可: Responsible Person(s): Auditor Approved:	审核员确认日期 AUDITOR CONFIRMED:

备注: 1. 不合格序号为本次审核的不合格项的顺序编号, 不合格场所指发现不合格的地点;
N.C No. indicates the serial number for N.C. of this verification; N.C. location indicates the place where N.C. was found.

2. 公司/船舶代表由公司/船舶指定, 如指定人员(公司), 船长或大副(船舶);
Representative of company/ship was appointed, such as designated person(company), captain or chief mate(ship).

3. 建议完成日期, 严重不合格需在发证/签证前消除或降级, 不合格须在三个月内纠正;
Proposed completed date: Major N.C. is to be cleared or downgraded before issuance/endorsement of cert.; N.C. is to be corrected within 3 months.

4. 公司/船舶责任人员由公司/船舶指定, 如指定人员或部门经理(对公司); 船长或部门长(对船舶).
Responsible person(s) are appointed by company/ship, such as designated person or manager of department(company); captain or chief officer/ engineer(ship).

5. [X] APPLICABLE [ ] NOT APPLICABLE

ENCLOSURE (14)
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中 国 船 级 社

CHINA CLASSIFICATION SOCIETY

SMS不合格记录

SMS Non-conformity

工作控制号 NY108551

公司/船舶名: NEW FORTUNE Company/Ship:	日期: 2010年02月23日 不合格序号: 4 Date: N.C.No.:	
不合格项陈述 (Non-Conformity): The Annual Training Program (Instruction Safety-05) does not include the Conventions, Regulations, Rules applicable to the ship.	ISM规则章节号: 6.5 ISM Code Para. No.:	
	不合格场所: Master N.C.Location:	
	审核组长: Hua Shu Lead Auditor:	
	审核员: Hua Shu Auditor:	
	公司/船舶代表: Rep. Acknowledge:	
	严重不合格 (Major N.C.) ☐	不合格 (N.C.) ☒
纠正措施的建议及计划完成日期(可在审核完成一周内递交审核组长): Proposed Corrective Action And Proposed Comp. Date (may be submitted to the leader auditor within 7 days from a.m. date by the company): Refer to attachment.	严重不合格降级 Major N.C. Downgraded	是 Yes ☐ 否 No ☐ 不适用 (N.A) ☒
	确认不合格已降级, 审核员签署/ 日期 Date/Signature Auditor	不适用 (N.A) ☒
	是否安排附加审核 Additional Verification Required	是 Yes ☒ 否 No ☐
	附加审核日期/结论/工作控制号 Control number/Outcome/Date of Additional Verification	不适用 (N.A) ☐
	不合格消除 N.C. Cleared	已消除 (Yes) ☐ 未消除 (No) ☐
	不合格关闭日期 DATE OF N.C CLEARED	
公司/船舶责任人员: 审核员认可: Responsible Person(s): Auditor Approved:	审核员确认日期 AUDITOR CONFIRMED	

备注:1. 不合格序号为本次审核的不合格项的顺序编号, 不合格场所指发现不合格的地点;

N.C No. indicates the serial number for N.C. of this verification; N.C. location indicates the place where N.C. was found.

2. 公司/船舶代表由公司/船舶指定, 如指定人员(公司), 船长或大副(船舶);

Representative of company/ship was appointed, such as designated person(company), captain or chief mate(ship).

3. 建议完成日期, 严重不合格需在发证/签证前消除或降级, 不合格须在三个月内纠正;

Proposed completed date: Major N.C is to be cleared or downgraded before issuance/endorsement of cert., N.C. is to be corrected within 3 months

4. 公司/船舶责任人员由公司/船舶指定, 如指定人员或部门经理(对公司); 船长或部门长(对船舶).

Responsible person(s) are appointed by company/ship, such as designated person or manager of dept(company); captain or chief officer/ engineer(ship)

5. [X] APPLICABLE [ ] NOT APPLICABLE

ENCLOSURE (14)
PAGE 2 OF 20 PAGES

格式 RWPSM701/2-C

中国船级社
CHINA CLASSIFICATION SOCIETY
SMS不合格记录
SMS Non-conformity

工作控制号 NY108551

公司/船舶名：NEW FORTUNE Company/Ship:	日期：2010年02月23日 不合格序号：5 Date: N.C.No.:
不合格项陈述（Non-Conformity）： 1. During operation and function test of Oily Water Separator on Feb. 22nd, 2010, it was found the OWS could not work properly. Up to now, the OWS still cannot work normally. 2. Checked the Form T-28 "Engine Dept Monthly Maintenance Report", the maintenance records of OWS only found in Feb. and Jan. in 2009. According to Form T-1 "Planned maintenance schedule for engine department secification of work to be done", the OWS should be tested and inspected every month. Also, no specific maintenance requirements of OWS was found on board.	ISM规则条款号：7, 10 ISM Code Para. No.: 不合格场所：Engine Dept. N.C.Location: 审核组长：Hua Shu Lead Auditor: 审核员：Hua Shu Auditor: 公司/船舶代表： Rep. Acknowledge: 严重不合格(Major N.C.) ☒ 不合格(N.C.) ☐
纠正措施的建议及计划完成日期(可在审核完成一周内递交审核组长)： Proposed Corrective Action And Proposed Comp. Date (may be submitted to the leader auditor within 7 days from a.m. date by the company): Refer to attachment.	严重不合格降级 Major N.C. Downgraded：是 Yes ☒ 否 No ☐ 不适用 (N.A) ☐ 确认不合格已降级，审核员签署/日期 Date/Signature Auditor：不适用(N.A) ☐ 8/3-2010 是否安排附加审核 Additional Verification Required：是 Yes ☒ 否 No ☐ 附加审核日期/结论/工作控制号 Control number/Outcome/Date of Additional Verification：不适用(N.A) ☐ 不合格消除 N.C. Cleared：已消除（Yes） ☐ 未消除（No） ☐ 不合格关闭日期 DATE OF N.C CLEARED
公司/船舶责任人员： Responsible Person(s): 审核员认可： Auditor Approved:	审核员确认日期 AUDITOR CONFIRMED

备注：1. 不合格序号为本次审核的不合格项的顺序编号，不合格场所指发现不合格的地点；
N.C No. indicates the serial number for N.C. of this verification; N.C. location indicates the place where N.C. was found.

2. 公司/船舶代表由公司/船舶指定，如指定人员(公司)，船长或大副(船舶)；
Representative of company/slup was appointed, such as designated person(company), captain or chief mate(ship).

3. 建议完成日期，严重不合格需在发证/签证前消除或降级，不合格须在三个月内纠正；
Proposed completed date: Major N.C. is to be cleared or downgraded before issuance/endorsement of cert., N.C. is to be corrected within 3 months.

4. 公司/船舶责任人员由公司/船舶指定，如指定人员或部门经理(对公司)；船长或部门长(对船舶)。
Responsible person(s) are appointed by company/ship, such as designated person or manager of dept(company); captain or chief officer/ engineer(ship).

5. [X] APPLICABLE [ ] NOT APPLICABLE

ENCLOSURE (14)
PAGE 8 OF 20 PAGES

格式: RWPSM7012-C

中国船级社
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SMS不合格记录
SMS Non-conformity

工作控制号 NY108551

公司/船舶名: NEW FORTUNE Company/Ship:	日期: 2010年02月23日 不合格序号: 6 Date: N.C.No.:
不合格项陈述 (Non-Conformity): Checked the Form T-28 "Engine Dept Monthly Maintenance Report", the maintenance records of Incinerator only found in Feb. and Jan. in 2009. According to Form T-1"Planned maintenance schedule for engine department secification of work to be done"and manufacturer's manual, the incinerator should be inspected every month. The incinerator cannot work due to malfunction of its draught fan.	ISM规则章节号: 10.2 ISM Code Para. No.: 不合格场所: Engine Dept. N.C.Location: 审核组长: Hua Shu Lead Auditor: 审核员: Hua Shu Auditor: 公司/船舶代表: Rep. Acknowledge:
	严重不合格 (Major N.C.) ☒ 不合格 (N.C.) ☐
纠正措施的建议及计划完成日期(可在审核完成一周内递交审核组长): Proposed Corrective Action And Proposed Comp. Date (may be submitted to the leader auditor within 7 days from a.m. date by the company): Refer to attachment.	严重不合格降级 Major N.C. Downgraded: 是 Yes ☐ 否 No ☐ 不适用 (N.A) ☐ 确认不合格已降级, 审核员签署/日期 Date/Signature Auditor: 不适用 (N.A) ☐ 8/3-2010 是否安排附加审核 Additional Verification Required: 是 Yes ☒ 否 No ☐ 附加审核日期/结论/工作控制号 Control number/Outcome/Date of Additional Verification: 不适用 (N.A) ☐ 不合格消除 N.C. Cleared: 已消除 (Yes) ☐ 未消除 (No) ☐ 不合格关闭日期 DATE OF N.C CLEARED:
公司/船舶责任人员: 审核员认可: Responsible Person(s): Auditor Approved:	审核员确认日期 AUDITOR CONFIRMED:

备注: 1. 不合格序号为本次审核的不合格项的顺序编号, 不合格场所指发现不合格的地点;
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2. 公司/船舶代表由公司/船舶指定, 如指定人员(公司), 船长或大副(船舶);
Representative of company/ship was appointed, such as designated person(company), captain or chief mate(ship).

3. 建议完成日期, 严重不合格需在发证/签证前消除或降级, 不合格须在三个月内纠正;
Proposed completed date: Major N.C. is to be cleared or downgraded before issuance/endorsement of cert.; N.C. is to be corrected within 3 months

4. 公司/船舶责任人员由公司/船舶指定, 如指定人员或部门经理(对公司); 船长或部门长(对船舶).
Responsible person(s) are appointed by company/ship, such as designated person or manager of dept(company); captain or chief officer/ engineer(ship).

5. [X] APPLICABLE ☐ NOT APPLICABLE

ENCLOSURE (14)
PAGE 01 OF 20 PAGES

格式: RWPSM701/2-G

中国船级社
CHINA CLASSIFICATION SOCIETY
SMS不合格记录
SMS Non-conformity

工作控制号 NY108551

公司/船舶名: NEW FORTUNE Company/Ship:	日期: 2010年02月23日 不合格序号: 7 Date: N.C.No.:
不合格项陈述 (Non-Conformity): Checked Form T-28 "Engine monthly miantenace Reprot", item 40/09 was set up on Sept. 2009, and remained to Oct., 2009, but no any followed-up actions on this item was found in Nov., 2009.	ISM规则条节号: 10.2 ISM Code Para. No.: 不合格场所: Engine Dept. N.C.Location: 审核组长: Hua Shu Lead Auditor: 审核员: Hua Shu Auditor: 公司/船舶代表: Rep. Acknowledge:
	严重不合格(Major N.C.) ☐ 不合格(N.C.) ☒
纠正措施的建议及计划完成日期(可在审核完成一周内递交审核组长): Proposed Corrective Action And Proposed Comp. Date (may be submitted to the leader auditor within 7 days from a.m. date by the company): Refer to attachment.	严重不合格降级 Major N.C. Downgraded: 是 Yes ☐ 否 No ☐ 不适用 (N.A) ☒
	确认不合格已降级，审核员签署/日期 Date/Signature Auditor: 不适用(N.A) ☒
	是否安排附加审核 Additional Verification Required: 是 Yes ☒ 否 No ☐
	附加审核日期/结论/工作控制号 Control number/Outcome/Date of Additional Verification: 不适用(N.A) ☐
	不合格消除 N.C. Cleared: 已消除 (Yes) ☐ 未消除 (No) ☐
	不合格关闭日期 DATE OF N.C CLEARED:
公司/船舶责任人员: 审核员认可: Responsible Person(s): Auditor Approved:	审核员确认日期 AUDITOR CONFIRMED:

备注: 1. 不合格序号为本次审核的不合格项的顺序编号，不合格场所指发现不合格的地点;
N.C No. indicates the serial number for N.C of this verification; N.C location indicates the place where N.C. was found.

2. 公司/船舶代表由公司/船舶指定，如指定人员(公司)，船长或大副(船舶);
Representative of company/ship was appointed, such as designated person(company), captain or chief mate(ship).

3. 建议完成日期，严重不合格需在发证/签证前消除或降级，不合格须在三个月内纠正;
Proposed completed date: Major N.C. is to be cleared or downgraded before issuance/endorsement of cert.; N.C. is to be corrected within 3 months.

4. 公司/船舶责任人员由公司/船舶指定，如指定人员或部门经理(对公司)；船长或部门长(对船舶)。
Responsible person(s) are appointed by company/ship, such as designated person or manager of dept(company); captain or chief officer/ engineer(ship).

5. ☒ APPLICABLE ☐ NOT APPLICABLE

ENCLOSURE (14)
PAGE 10 OF 20 PAGES

格式 RWPSM701/2-C

中国船级社
CHINA CLASSIFICATION SOCIETY
SMS不合格记录
SMS Non-conformity

工作控制号 NY10855]

公司/船舶名：NEW FORTUNE Company/Ship:	日期：2010年02月23日 不合格序号：8 Date: N.C.No.:
不合格项陈述（Non-Conformity）： Checked Form 1-1 "Planned maintenance schedule for engine department specification of work to be done", the interval of inspection of items ME-07-14, ME-07-15 and ME-07-17 is 8000hrs. The running hours of these equipements in Feb 2009 have been over 8000hrs. But these items have been inspected or checked till May 2009	ISM规则章节号：10.2 ISM Code Para. No.: 不合格场所：Engine Dept. N.C.Location: 审核组长：Jhua Shu Lead Auditor: 审核员：Jhua Shu Auditor: 公司/船舶代表： Rep. Acknowledge:
	严重不合格(Major N.C.) ☐ 　 MAJOR(N.C.) ☒
纠正措施的建议及计划完成日期(可在审核完成一周内递交审核组长)： Proposed Corrective Action And Proposed Comp. Date (may be submitted to the leader auditor within 7 days from a.m. date by the company): Refer to attachment.	严重不合格降级 Major N.C. Downgraded：是 Yes ☐ 否 No ☐ 不适用 (N.A) ☒
	确认不合格已降级，审核员签署/日期 Date/Signature Auditor：不适用(N.A) ☒
	是否安排附加审核 Additional Verification Required：是 Yes ☒ 否 No ☐
	附加审核日期/结论/工作控制号 Control number/Outcome/Date of Additional Verification：不适用(N.A) ☐
	不合格消除 N.C. Cleared：已消除 (Yes) ☐ 未消除 (No) ☐
	不合格关闭日期 DATE OF N.C CLEARED：
公司/船舶责任人员： Responsible Person(s): 审核员认可： Auditor Approved:	审核员确认日期 AUDITOR CONFIRMED：

备注：1. 不合格序号为本次审核的不合格项的顺序编号，不合格场所指发现不合格的地点；
N.C No. indicates the serial number for N.C. of this verification; N.C location indicates the place where N.C. was found.

2. 公司/船舶代表由公司/船舶指定，如指定人员(公司)，船长或大副(船舶)；
Representative of company/ship was appointed, such as designated person(company), captain or chief mate(ship).

3. 建议完成日期，严重不合格需在发证/签证前消除或降级，不合格须在三个月内纠正；
Proposed completed date: Major N.C. is to be cleared or downgraded before issuance/endorsement of cert , N.C. is to be corrected within 3 months.

4. 公司/船舶责任人员由公司/船舶指定，如指定人员或部门经理(对公司)；船长或部门长(对船舶)。
Responsible person(s) are appointed by company/ship, such as designated person or manager of dept(company); captain or chief officer/ engineer(ship).

5. [X] APPLICABLE ☐ NOT APPLICABLE

ENCLOSURE (14)
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NY/08551

M/V FORTUNE IMO No 9082946 – CCS Audit 23/02/2010 : Follow Up Report

N/C	Type	Deficiency/Description	Ref	Immediate corrective Action	Further Corrective/Preventive Actions
1/8	NC	Check form D-14 "Deck Cranes Planned Maintenance", the auditor found that last inspection of deck cranes was conducted on Nov. 09, 2009. the inspection interval of deck crane is 3 months based on the requirement of DECK ISM Manual. It's more than 3 months fron Nov. 09, 2009 to Feb. 23, 2010.	10.2	Deck cranes to be inspected and the form D-14 to be completed accordingly prior CCS inspection	• Extra Vessel Internal Audit • Extra Training as necessary
2/8	NC	Check form T-22 "Job Order List of Defects/Problms" dated on April 23rd, 2009, 9 items were reported. But no evidence of follow-up actions taken and/or feedback from the Company was identified onboard, which does not comply with the requirements of Procedure OP-08 "Ship Maintenance Monitoring".	10.2	As per Office records T-22 form, dated 23/04/09, has been completed. Copy will be forwarded to the Vessel by e-mail.	• Extra Vessel Internal Audit • Extra Training as necessary
3/8	NC	During site inspection in Engine Room, the auditor found no operating instruction of Sewage Treatment Plan, Aux. Generator and Oil Pourifier were posted near by these equipments.	7	Operating instructions of the Sewage Treatment Plan, Aux. Generator and Oil Purifier to be posted near by these equipments, according to maker's manuals, prior CCS inspection	• Extra Vessel Internal Audit • Extra Training as necessary
4/8	NC	The Annual Training Program (Instruction SAFETY-05) does not include the Conventions, Regulations, Rules applicable to the ship.	6.5	Annual Training Program to be reviewed and enhanced, incorporated and finalised within next SMS revision	SMS Review
5/8	MNC	1. During operation and function test of Oily Water Separator on Feb. 22nd, 2010, it was found the OWS could not work properly. Up to now, the OWS still cannot work normally. 2. Checked the form T-28 "Engine Dept Monthly Maintenance Report", the maintenance records of OWS only found in Feb. and Jan. in 2009. according to form T-01 "Planned maintenance schedule for engine department specification of work to be done", the OWS should be tested and inspected every month. Also, no specific maintenance requirements of OWS was found onboard.	7, 10	1. The OWS to be repaired by qualified workshop. 2. Monitoring/Maintenance records/and test procedures to be identified to be included Included at the next SMS revision within 3 months. Specific maintenance requirements of OWS to be on board prion to departure. 3. Training and internal audits required prior and after the revision .	• Extra Vessel Internal Audit • Incident review to identify Root causes • Extra Training as necessary • Extra Management Review at the office • Extra Office Audit
6/8	MNC	Checked the form T-28 "Engine Dept Monthly Maintenance Report", the maintenance records of Incinerator only found in Feb and Jan. in 2009. According to form T-01 "Planned maintenance schedule for engine department specification of work to be done" and manufacturer's manual, the incinerator should be inspected every month. The incinerator cannot work due to malfunction of its draught fan.	10.2	1. Incinerator to be repaired by qualified workshop. 2. Monitoring/Maintenance records/and test procedures to be included at the next SMS revision within 3 months. 3. Training and internal audits required prior and after the revision .	• Extra Vessel Internal Audit • Incident review to identify Root causes • Extra Training as necessary • Extra Management Review at the office • Extra Office Audit

ENCLOSURE (1) TO PAGE 12 OF 20 PAGES

Reviewed & Approved
1/3-2010

1/3-2010

nYic8551

I/V FORTUNE IMO No 9082946 – CCS Audit 23/02/2010 : Follow Up Report

N/C	Type	DEFICIENCY DESCRIPTION	Ref.	Immediate Corrective Action	Further Corrective/Preventive Actions
7/8	NC	Checked fim T-28 "Engine monthly maintenance Report", item 40/09 was set up on Sept. 2009, and remained to Oct., 2009, but no any followed up actions on this item was found in Nov., 2009.	10.2	Item 40/09 to be included at the form T-28 month of February, prior CCS inspection.	• Extra Vessel Internal Audit • Extra Training as necessary
8/8	NC	Checked from T-01 "Planned maintenance schedule for engine department specification of work to be done", the interval of inspection of items ME-07-14, ME-07-15 and ME-07-17 is 8000hrs. the running hours of these requirements in Feb. 2009 have been over 8000hrs. but these Items have been inspected or checked till May 2009.	10.2	Technical departmet to arrange by message or Circular to inform the Vessel's that The interval inspections to carried out prior the required running hours. Prior CCS inspection	• Extra Vessel Internal Audit • Extra Training as necessary

Outline Corrective Action Plan

Item	Description of Action	Responsible	Due Date	Remarks/Status
1.	Ensure all PSC findings and NCs attended to the satisfaction of PSC / CCS and vessel will sail with all certificates ASAP	DPA / Master & C/Eng	**Prior Vessel's Sailing**	IN PROGRESS – Vessel is attended as necessary
2.	Extra Internal Audit of the Vessel, to be carried out immediately	DPA / Consultants	**Prior Vessel's Sailing**	IN PROGRESS / Consultants already onboard for extra training and audit
3.	Extra Training to enhance the implementation of the SMS to the weak areas identified (if any)	DPA / Consultants	**Prior Vessel's Sailing**	IN PROGRESS / Consultants already onboard for extra training and audit
4.	Investigation of the Root Causes of the Major NCs and the overall picture of the vessel	DPA / Consultants	15/5/2010	IN PROGRESS
5.	Extra Management Review to assess the status of the situation and develop action plan	Management	15/5/2010	Reviewing situation currently
6.	Extra Audit of the Office Implementation	Management / Consultants	15/5/2010	IN PROGRESS
7.	Extra Training of the Office Staff (if necessary)	Management / Consultants	30/5/2010	Will be decided at the result of Extra Audits and Management Review
8.	Follow up of ALL NCs, PSC items, and MR actions	DPA	30/5/2010	IN PROGRESS
9.	SMS review and Finalisation based on the results of the audits and feedback received and subsequent evaluations	DPA	30/5/2010	
10.	Extra Management review to assess the implementation of all of the above actions and verify effectiveness of the measures as necessary	Management	30/5/2010	

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EXHIBIT 1 TO CLOSURE (14)

Reviewed & Approved

I/V FORTUNE MAJURO

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FORTUNE004207

Form RA

中 国 船 级 社

CHINA CLASSIFICATION SOCIETY

REPORT OF SURVEY No.:NY10SS00010

Name of Ship	NEW FORTUNE	Class No.	94P3335

Alteration(s)		Renewal(s)		Damage(s) and Repair(s)		Others	x

1. Others (Class & Statutory)

THIS IS TO CERTIFY that at the request of the owner of M/V NEW FORTUNE, the undersigned did attend on board the ship at Schnitzer Steel Terminal, Oakland and Anchorage of Oakland from Feb. 21, 2010 to March 8, 2010, for purpose of carrying out an occasional survey to examine the reported deficiencies in USCG Inspection Report (MISLE Activity No. 3680366) and Flag State Detention Order (No.3089). Upon inspection, the undersigned reports as follows:

USCG Inspection Deficiencies

Item 1: 1200 Load line: Fore peak tank air vent has pin hole, which is causing water to leak into the boatswain's store. Item must be addressed by class and administration.

Rectification and inspection: The holed FPT air vent has been renewed partly, checked with satisfaction.

Item 2: 2199 Located above the incinerator waste oil tank, there is a home made incinerator, which is not approved under MARPOL. Address to the satisfaction of class and the administration.

Rectification and inspection: The home made incinerator was found on the top floor in E/R located above the incinerator. It was destructed completely.

Item 3: 0750 Fire doors throughout the house, engine room, there are fire doors, which do not close properly as will not stay closed. All doors must be adjusted and corrected to the satisfaction of class and the administration.

Rectification and inspection: All above-mentioned fire doors have been adjusted by crew. Visual inspection and opening/closing test were carried out and found in order.

Item 4: 0600 The following lifesaving items were identified during our port state control inspection. All items must be addressed by class and the administration.

1) Port and starboard becket lines disconnected.

2) Port lifeboat has fuel leak and possible transmission leak. Engine was hard to start during testing.

3) Launching instructions as per ships SOLAS training manual are not being followed. Tricing pendant added, no bowsing tackle on board and C/O believes embarkation deck is upper deck.

4) Several of the immersion suits are too large for crew members.

Rectification and inspection: Port and starboard lifeboats' becket lines have been fixed and found in order. Fuel leakage in port lifeboat was removed. Inspection to engine and transmission was carried out and found in order. Starting test to engines of both lifeboats were carried out and found in order. Tricing pendant of both lifeboats has been removed. After site inspection, bowsing tackles are not required for this vessel. Five

Marks to be used: Applicable [x] Not Applicable [ ]

ENCLOSURE (11)
PAGE 1 OF 12 PAGES

small size Immersion suits have been supplied. Visual inspection was carried out and found satisfactory. The Particulars of the immersion suits is as follows:

Manufacturer: Revere Supply Co., Inc.;

Approved by USCG with number 160.171/21/0; 160.171/3/0

Height: 150-178cm; XL

S/N: 227388, 223027, 227417, 224487, 223038 ; 224636

Item 5: 1400 The following engineering items were identified and need to be addressed by class and the administration.

1) Emergency generator fuel leakage;
2) Emergency generator extra wires on starts;
3) Emergency generator spare batteries unsecured in space;
4) Main engine air cooler S/W discharge pipe 2cm crack;
5) F/W cooler modification for shore supply;
6) Sewage pipe leaking;
7) M/E L.O. settling tank, crack at bracket left of identification piste;
8) Forward hydraulics in forward boatswain's store leakage on power packs for mooring and hatch rams.

Rectification and inspection: The emergency generator fuel leakage and extra wires were removed. Running test to emergency generator was carried out and found in order. The cracked S/W discharge pipe of M/E air cooler has been renewed. F/W cooler pipe has been rectified properly. The defective sewage pipe has been renewed. The crack located between M/E L.O. settling tank and bracket has been fixed by welding. Mooring and hatch rams in forward boatswain's store have been fixed and found in order.

Item 6: 3000 ISPS: The following security items were noted:

1) Doors to aft accommodation house cannot be open from outside, key missing. Safety/security issue.
2) Excess keys in engine control room. No one is assigned responsibility for these.

Rectification and inspection: Five locks of the door to aft accommodation house have been renewed, the keys are kept by C/O. The excess keys in engine control room have been removed and kept by C/O.

Item 7: 2510 It appears the chief engineer has not ensured pollution prevention requirements as defined in major conventions (SLOAS, MARPOL) and in the company's safety management system, indentify and address to the satisfaction of class/flag the proper implementation of the company's environmental protection policy.

Rectification and inspection: ISM additional audit was carried out. For details please refer to additional audit report (NY108551).

Item 8: 1720 Proper operation of the oily water separator is suspect. Oily water discharge piping was removed and it appears it has not been used in a long period of time. Entries of the oil record book are not consistent with visual evidence of non-use from the discharge piping. Address the testing and proper operation to the satisfaction of class/flag/USCG.

Item 11: 1730 The vessel oil filtering equipment is not working as designed. The operation of the system cannot ensure any oily mixture discharged into the sea after passing through the system in less than 15ppm. The attending classification society representative and flag representative must ensure proper operation prior to departure. (Dated on 22nd Feb. 2010)

ENCLOSURE (14)
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Rectification and inspection: The oily water separator has been checked and repaired by professional service supplier. The oil content meter has been renewed as follows:
Manufacturer: DECKMA HAMBURG GmbH
Type: OMD2005;
Standard: MEPC. 107(49);
S/N: 1012364;
Calibration certificate No.: 5013159.
Inspection and running test to oily water separator was conducted and found in order.

Item 9: Chief engineer and 2nd officer appear to be unfamiliar with the use of the incinerator with regards to disposal of sludge. The incinerator does not appear to be working according to manufacturer's specifications. A portable burn barrel was found in the engine. Address the testing and proper operation to the satisfaction of class, flag, USCG.
Rectification and inspection: The incinerator has been repaired by professional service supplier. Running test to incinerator according to manufacturer's manual was carried out and found in order.

Item 10: The captain of the port of San Francisco questions the adequacy of the implementation of the vessels safety management system under the ISM Code. An external audit is recommended to be conducted by the flag state or recognized organization to determine whether the ship is operating in accordance with the ISM Code prior to departure from SAN FRANCISCO. (Dated on 22nd Feb. 2010).
Rectification and inspection: An additional audit was conducted, for details please refer to additional audit report (NY108551).

Item 12: Due to the failure of both the oil filtering equipment and incinerator, the vessel's capability to retain oil residues and water oil mixtures are in questions. The capacity of oily waste generated daily must be determined by class and flag representative to ensure the vessel has enough capacity for the next voyage.
Rectification and inspection: The oily water separator and incinerator have been repaired and could be working normally now.

2. Others (Statutory)
According to the instruction by Flag State dated on Feb. 18, 2010, an additional survey with scope of annual survey of IOPP was carried out on March 8th, 2010. During the inspection, function test to oily water separator and incinerator was carried out with satisfactory. Capacity of sludge tank and bilge tank were verified by reviewing the vessel's capacity plan.

3. Other (Class)
Boiler down discharge valves were renewed and particular as follows. The function test was carried out and found in order.
F7409 BC/BC Globe Check Valve (SB), Class 16K, Size 40A, Key Sung Metal Co. Ltd.
JIS F 7303 Bronze 16K Globe Valve, 40A, C & J Co.

4. Other (Class)
During inspection, M/E air cooling S/W temperature control valve body was found crack. The valve was

ENCLOSURE (14)
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cracked during repair by crew, and to be renewed. Due to shortage of the spare, at the request of the owner and instructed by our Head Office, it's granted to be renewed within 6 months.

The valve was temporary replaced by a pipe. An operation procedure to control sea water temperature manually was established, it should be implemented by crew strictly.

A COC was given at this time.

Place Oakland, USA

Date March 08, 2010

(Bian Tian) For (Shu Hua)

Surveyor to CHINA CLASSIFICATION SOCIETY

ENCLOSURE (14)

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Form GP

中 国 船 级 社

CHINA CLASSIFICATION SOCIETY

REPORT ON CLASS MAINTENANCE SURVEY

No. NY10SS00010

Name of Ship	NEW FORTUNE	Class No.	94P3335
Flag	Marshall Islands	Gross Tonnage	26136
Port of Registry	Majuro	Date Keel Laid	05.03.1994
Ship Owner	RAY SEA S.A.		
Ship Operator	Transmar Shipping Company S.A. Panama		

Character(s) of Classification and Class Notation(s):

★CSA Bulk Carrier;Holds Nos.2 & 4 may be Empty with Restrictions Imposed by SOLAS XII/14;Strengthened for Heavy Cargoes;Loading Computer (S, I);ESP

★CSM AUT-0;CMS

Place of Survey	Oakland Anchorage, CA, USA			
Date of Survey	First Visit:	21.02.2010	Last visit:	08.03.2010

THIS IS TO CERTIFY that the following survey(s) carried out in accordance with the Rules and Regulations of this Society and the ship found to be in satisfactory condition subject to outstanding recommendation(s)(if any)

I. Actions and Status of Class Surveys:

Kind of Survey	Actions *	Kind of Survey	Actions *
1. Class Occasional Survey			
2. Boiler Surveys(O: Oil Fired Aux. Boiler; E: Exhaust Gas Boiler; C. Composite Boiler; T: Thermal Oil Heater)			
3. Screwshaft and tube shaft survey			

II. Action and Status of Classification Certificates:

1) Interim Classification Certificate issued ☐

2) Full term Classification Certificate endorsed ☐

3) Appendix to Classification Certificate issued ☒

III. The following reports issued accordingly:

Issued Form: RA,GP

IV. Alteration(S),Renewal(s),Repair(s),and/or Damage(s),Others,etc.reported in the report Form RA ☒

V. Outstanding Recommendation(s) and/or Memorandum(s) was(were) given,postponed and/or deleted ☒

The undersigned declares that the class surveys did fully cover the items of SAFETY CONSTRUCTION in Reg. A 997(25) as per the requirements of Reg. I/10 and/or Reg. I/7 (a) (ii) of SOLAS 1974 or its 1988 Protocol.

Place Oakland, USA

Date March 8,2010

CHINA CLASSIFICATION SOCIETY 04

(Shu Hua)

Surveyor to CHINA CLASSIFICATION SOCIETY

Notes: *Actions Completed—means all the survey items completed by steps; Commenced, partly 2, partly3, etc.— means surveys carried out by steps but not completed; Fully Completed means all the survey items completed in one case of survey

"F" Overdue survey carried out this time

Symbols ☒ Applicable ☐ Not applicable

Ver. 3.2 200905

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OUTSTANDING RECOMMENDATION (S)

No.	Type	Issue at	Issue Date	Due Date	Postponed	Status
COC001	CLS	Oakland, USA	2010.03.08	2010.09.07		Given

Description: The M/E cooling S/W temperature control valve is to be renewed as soon as possible, but not later than Sept. 07, 2010.

ENCLOSURE (14)
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Form FC

中 国 船 级 社

CHINA CLASSIFICATION SOCIETY

STATUTORY SURVEY REPORT

No. NY10SS00010

Name of Ship	NEW FORTUNE	Class No.	94P3335
Flag	Marshall Islands	IMO No.	9082946
Port of Registry	Majuro	Distinctive Number or Letters	V7OH3
Gross Tonnage	26136	Date Keel Laid	05.03.1994
Ship Owner	RAY SEA S.A.		
Ship Operator	Transmar Shipping Company S.A. Panama		
Place of Survey	Oakland Anchorage, CA, USA		
Date of Survey	First Visit: 21.02.2010	Last Visit:	08.03.2010

THIS IS TO CERTIFY that the undersigned did carry out the survey(s) relevant to the certificate(s) as follows:

I. Certificate(s) and Survey(s)

Certificate	Term *	Action **	Date of Issued	Date of Expiry	Extended Until	Survey(s) Conducted Relevant to the Cert.
COP	FULL TERM	ADS	19.01.2010	26.10.2014	--	ADS
CSE	SHORT TERM	ADS	27.01.2010	26.03.2010	--	ADS
CLL	FULL TERM	ADS	19.01.2010	26.10.2014	--	ADS

II. Following Supplement(s) and/ or records of Certificates issued and/ or corrected:

Issued Form:	--
Corrected Form:	E,A

III. Upon the survey(s), the ship found to be in compliance with the requirements of the Convention(s) and/ or Code(s) corresponding to the certificates subject to the outstanding recommendation(s) (if any).

IV. Alteration(s), Renewal(s), Repair(s), and/or Damage(s),others, etc. reported in the report Form RA ..... ☐

V. Outstanding Recommendation(s) and/ or Memorandum(s) was (were) given, postponed and/ or deleted ..... ☐

VI. The full term Certificate(s) is (are) recommended to be issued by Headquarters with the expiry date(s) of:

Place Oakland, USA

Date March 8, 2010

FOR (Shu Hua)
Surveyor to CHINA CLASSIFICATION SOCIETY

*Terms (full term, interim, short term, conditional, etc). ** Actions (Issued, Extended, Endorsed, Withdrawn,Sealed-up, etc.)

Abbreviations: INS: Initial Survey RS: Renewal Survey PS: Periodical Survey IS: Intermediate Survey AS: Annual Survey ADS: Additional Survey BTS: Inspection of the Outside of the Ship's Bottom CLL: International Load Line Certificate COP: International Oil Pollution Prevention Certificate CSE: Cargo Ship Safety Equipment Certificate

Symbol: ☒ Applicable ☐ Not Applicable

PP: Postponed PC: Partly Conducted COMM: Commenced COMP: Completed

Ver.4.2 200903

ENCLOSURE (14)
PAGE 20 OF 21 PAGES

ATTACHMENT

M

Please remit to: Dahl-Beck Electric
2775 Goodrick Avenue
Richmond, CA 94801-1109 USA
5102372325
5102370608
sales@dahlbeckelectric.com

Invoice

Customer Number	Invoice Number
PAC400	RI10-0248

Contact	Order Date	Shipped Date	Invoice Date
Paul Sogotis	2/25/2010	2/27/2010	3/5/2010

Bill To:
Pacific Coast Maritime Agencies, Inc
Attn: Accounts Payable
61 Avenida DeOrinda
Suite F
Orinda, CA 94563

Ship To:
Dahl-Beck Electric Co.
Richmond, CA 94801

Ship Via	Terms	Salesperson	Customer PO	Original Order #
Will Call	Net 30	House Account	M/V New Fortune	RJ10-0724

Motor ID: 0.55 Kw Motor
Make: Dutchi NL
HP: 0.55 Kw
RPM: 1405
Model:
Enclosure:
Frame:
Frequency: 60
# of Phases:
Rated Voltage: 380/420
Rated Current: 1.51/1.60 A
Serial Number: 1583738009

Product Number	Qty	Ship	Description	Sales Price		Total
Labor	1	1	Furnished Labor and equipment required to Test, disassemble, steam cleaned parts, stripped and rewound stator, balanced rotor, installed 2 new bearings and cooling fan, assembled, test run, Painted and Picked-up by customer.	2,375.00		2,375.00
	1	1	Misc Materials	246.00		246.00

Dahl-Beck Electric is a member of the Electrical Apparatus Service Association (EASA) and we adhere to the Limited Warranties set forth by EASA.

NOTE--PLEASE SEE ATTACHED COPY OF SIGNED RECEIPT.

DUPLICATE

	Subtotal:	2,621.00
	Freight:	0.00
	Other:	0.00
9.750 %	Sales Tax 1:	23.99
0.000 %	Sales Tax 2:	0.00
	Total:	2,644.99

Thank You

Our Fed Tax ID: 94-0416800

Your Fed Tax ID:

ENCLOSURE (16)
PAGE 1 OF 1 PAGES

ATTACHMENT

N

THE CARPENTER GROUP

ISO 9001 REGISTERED

GENERAL ENGINEERING

A DIVISION OF CARPENTER RIGGING

222 NAPOLEON ST. • SAN FRANCISCO, CA 94124

PHONE 415/391-2255 • FAX 415/285-0176

To: Master of the M/V New Fortune

Re: Incinerator Piping Repairs

Furnished men and equipment to attend the vessel at anchorage in order to attempt to unplug piping that goes from the waste oil tank to the incinerator.

Loaded up equipment onto the launch and went out to the vessel. Off loaded equipment onboard and down into the engine room. Disconnected one (1) section of straight piping and proceeded to unplug it. After that pipe was clear, air was used to blow through it in order to show that there were no blockages.

Two (2) other sections of pipe with bends were disconnected and worked on. The pipes could not be cleared on board so they were removed from the ship and brought ashore. They were worked on in the shop but could not be cleaned. New pipes were fabricated. A target was set up for each pipe. The material was cut to size, elbows and flanges fit, then it was welded. The pipe was then delivered back to the ship on Sunday, February 28th via the launch. The pipes were rigged aboard and down into the engine room. The new pipes were installed with new gaskets, nuts and bolts.

All work done on a rush basis. It was all inspected and accepted by the Chief Engineer upon completion.

Peter Blake
General Manager

ENCLOSURE (17)
PAGE 2 OF 5 PAGES

ATTACHMENT

O

Sentencing of Chief Engineers from 2005 to 2010*

Case Name (Defendant)	Case No. & District	Date	Statutes of conviction	Sentence
U.S. v. John Wylie Davis	1:09-CR-00025 D.N.M.I.	2/23/2010	18 U.S.C. § 1001 33 U.S.C. §1908(a)	One year of probation, 200 hours of community service, license suspended for 1 year
U.S. v. Dalnave Navigation Inc., et al. (Panagiotis Stamatakis)	2:09-CR-00130 D.N.J.	9/3/2009	33 U.S.C. §1908(a)	Three months of probation with a special condition of one month's home confinement
United States v. Georgios Stamou	2:09-CR-00186 E.D. La.	11/5/2009	33 U.S.C. §1908(a) 18 U.S.C. §1001	Five years of unsupervised probation, $15,000 fine
United States v. Carmelo Oria, et al. (Carmelo Oria)	1:08-CR-10274 D. Mass.	5/6/2009	33 U.S.C. §1908(a)	One month of incarceration, two years of supervised release, $3,000 fine
United States v. Carmelo Oria, et al. (Vadym Tumakov)	1:08-CR-10274 D. Mass	4/13/2009	33 U.S.C. §1908(a)	One week of incarceration, two years of supervised release, $2,000 fine
United States v. STX Pan Ocean Co. Ltd., et al. (Hong Hak Kang)	8:09-CR-00153 M.D. Fla.	6/5/2009	33 U.S.C. §1908(a) 18 U.S.C. § 1001	Three years of probation, $1,500 fine
United States v. Kun Yun Jho	1:06-CR-00065 (E.D. Tex)	4/30/2009	33 U.S.C. § 1908(a)	One year term of probation
United States v. Pendulum Ship Management Inc., et al. (Alfredo Onita)	2:08-CR-00765 E.D. Pa.	1/13/2009	18 U.S.C. § 371 33 U.S.C. §1908(a)	Three year term of probation, $500 fine
United States v. General Maritime Management, et al. (Antonio Rodrigues)	2:08-CR-00393 S.D. Tex	2/10/2009	18 U.S.C. §1001 33 U.S.C. §1908(a)	Five years of probation, three months in a halfway house, $500 fine

Case Name (Defendant)	Case No. & District	Date	Statutes of conviction	Sentence
United States v. Hae Wan Yang, et al.	3:08-CR-05653 W.D. Wash	12/30/2008	33 U.S.C. §1908(a)	Two months of home confinement, two years of supervised release
United States v. Robert Racho, et al. (Robert Racho)	M.D. Fla.	12/19/2008	33 U.S.C. §1908(a)	One year of probation, $1,000 fine
United States v. Igor Krajacic, et al.	1:08-CR-00824 D.N.J.	12/16/2008	33 U.S.C. § 1908(a)	One year of probation, $18,000 fine
United States v. Casilda Shipping Ltd, et al. (Pantelis Thomas)	4:08-CR-00448 N.D. Calif.	10/31/2008	18 U.S.C. § 371 18 U.S.C. § 1908	Three years of unsupervised probation, $5,000 fine.
United States v. Patrick Brown et al. (Patrick Brown)	1:07-CR-0098 and 1:07-CR-00339 D.Md.	7/2/2008	18 U.S.C. § 371 18 U.S.C. § 1001	Two years of unsupervised probation, $1,000 fine, 80 hours of community service
United States v. Patrick Brown et al. (Deniz Sharpe)	1:07-CR-0098 and 1:07-CR-00339 D.Md.	7/2/2008	18 U.S.C. § 1908(a)	Two years of unsupervised probation, $500 fine, 60 hours of community service
United States v. Reederi Karl Schluter, et al. (Nikola Ilijic)	2:08-CR-00341 E.D.Pa	6/16/2008	33 U.S.C. § 1908(a)	30 months of probation, $5,000 fine
United States v. Frank Coe	1:07-CR-00177 D.Md.	3/12/2008	18 U.S.C. § 371 33 U.S.C. § 1908(a)	Two-year term of probation, $500 fine
United States v. B. Navi Ship Management Services et al. (Dushko Babukchiev)	4:08-CR-00032 and 00033 S.D. Tex.	2/19/2009	18 U.S.C. § 1001	Three-year term of probation

Case Name (Defendant)	Case No. & District	Date	Statutes of conviction	Sentence
United States v. Stephen Karas et al.	1:06-CR-00299 D. Md.	2/28/2008	18 U.S.C. § 371 18 U.S.C. §1001	Two-year term of probation, 60 days community service, $500 fine (provided significant cooperation and testified at trial of Mark Humphries)
United States v. Mark Humphries	1:06-CR-00299 D.Md.	1/10/2008	18 U.S.C. § 371 18 U.S.C. §1001 (two)	Six months of incarceration, two years supervised release
United States v. Oleg Kiselyov	4:07-CR-00009 E.D.N.C.	12/7/2007	18 U.S.C. § 1001	Five year term of probation, no fine due to inability to pay
United States v. Petros Renieris, et al.	3:07-CR-00199 D. Conn.	12/3/2007	33 U.S.C. § 1908(a)	Two years of probation, $9,000 fine
United States v. Calypso Maritime Corporation et al. (Jesus Reyes)	3:07-05367 W.D. Wash.	7/6/2007	18 U.S.C. § 1001	One year term of probation, no fine
United States v. Mykola Dobrovolsky (second engineer)	4:07-CR-00014 E.D.N.C.	5/7/2007	33 U.S.C. § 1908(a)	Three-year term of probation
United States v. Irika Maritime SA, et al. (Ilias Dimitriou Ntais)	W.D. Wash.	November 2006	33 U.S.C. § 1908(a)	$2,500 fine
United States v. Ioannis Vafeas	2:06-CR-00585 C.D. Calif.	11/27/2006	33 U.S.C. § 1908(a)	Seven months of confinement, with credit for four months previously completed. The remaining three months served with one month of incarceration and two months of home confinement. Two years supervised release.

Case Name (Defendant)	Case No. & District	Date	Statutes of conviction	Sentence
United States v. Abrogar (on remand)	1:05-CR-00649 D.N.J.	8/30/2006	33 U.S.C. § 1908(a)	Sentenced to time served (approximately 6 months, original sentence was 12 months, 1 day of incarceration and three years of supervised release)
United States v. Wallenius Ship Management, et al. (Nyi Nyi)	2:06-CR-00214 D.N.J.	8/3/2006	18 U.S.C. § 1001	Two-year term of probation (downward adjustment for cooperation)
United States v. Ashok Kumar, et al. (Mani Elangovan)	2:02-CR-00406 D.N.J.	5/19/2006	18 U.S.C. § 1001	Two years of probation and $3,000 fine
United States v. Corpus Christi Day Cruise, Ltd. (Gojko Petovic)	2:06-CR-00079 S.D. Tex.	5/4/2006	18 U.S.C. § 1001	Three-year term of probation with the condition prohibiting service as a crew member on any vessel in United States waters, $5,000 fine
United States v. Panagiotis Kokkinos, et al.	1:05-CR-00347 (E.D.N.Y.)	10/6/2005	33 U.S.C. § 1908(a) 18 U.S.C. § 1001	30 days of incarceration, three years of supervised release
United States v. Fujitrans Corporation of Japan (Pyeong Gab Jung)	3:05-CR-00207 D. Oregon, C.D. Calif.	7/31/2002	33 U.S.C. § 1908(a)	Three months of incarceration, two years of supervised release.
United States v. Pacific and Atlantic Corporation, et al. (Joey Lebuna)	3:05-CR-00007 D. Oregon	1/24/2005	33 U.S.C. §1908(a)	Two year term of probation, $1,000
United States v. Boyang (Busan) Ltd, et al. (Jong Chul Lee)	3:04-CR-00123 D. Alaska	1/27/2005	33 U.S.C. § 1908(a)	Three months of incarceration

Case Name (Defendant)	Case No. & District	Date	Statutes of conviction	Sentence
United States v. Felipe Arcolas, et al.	2:04-CR-00100 D. Maine	1/13/2005	18 U.S.C. § 1001	Two year term of probation with one-month home confinement, $3,000 fine
United States v. Alfredo Lozada	2:04-CR-00101 D. Maine	1/13/2005	18 U.S.C. § 1001	Two year term of probation with one-month home confinement, $3,000 fine

* This table may not capture all sentences received by Chief Engineers in the stated time period. The information here is dependent on U.S. Attorney's offices voluntarily reporting such sentences to the Environmental Crimes Section. Additionally, sentences have not been included for Chief Engineers who pleaded guilty to (or were convicted of) obstruction charges for their conduct, as those individuals were subject to higher Sentencing Guidelines base offense levels.

ATTACHMENT

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MARITIME TRANSPORT COMMITTEE

COST SAVINGS STEMMING FROM NON-COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL REGULATIONS IN THE MARITIME SECTOR

This report examines the the unfair commercial advantage afforded to substandard shipowners who fail to comply with international environmental regulations that apply to their ships. It has been prepared for the Maritime Transport Committee and is being made available to a wider audience.

Organisation for Economic Co-operation and Development
Organisation de Coopération et de Développement Economiques

2003

FOREWORD

This report examines the unfair commercial advantage afforded to substandard shipowners who fail to comply with international environmental regulations that apply to their ships.

It is the second in a series intended to highlight the cost savings and ensuing competitive advantage that such shipowners gain over their law-abiding counterparts. The first report examined the unfair economic advantage to be derived through non-compliance with international rules pertaining to safety at sea* and the third will seek to quantify how unscrupulous shipowners/operators can unfairly benefit from non-compliance with international rules related to the manning of vessels.

In January of 2003 this report was presented to the Maritime Transport Committee (MTC) of the Organisation for Economic Co-operation and Development. It was declassified by the MTC at that meeting.

The report was prepared by Philippe Crist. It is published on the responsibility of the Secretary-General of the OECD.

* "Competitive Advantages Obtained by Some Shipowners as a Result of Non-observance of Applicable International Rules and Standards", 1996

Organisation for Economic Co-operation and Development 2003
Organisation de Coopération et de Développement Economiques

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SUMMARY

On 19 November 2002, the aged single-hulled product tanker Prestige broke in two and sank off the coast of Galicia after nearly six days of struggling in heavy seas. Nearly two years earlier, another aged single-hulled product tanker, the Erika, similarly broke in two and sank off the coast of Brittany. In the past ten years another three major oil spills have occurred off the coasts of Europe – the Sea Empress (Milford Haven, 1996), the Braer (Shetland Islands, 1993) and the Aegean Sea (Galicia, again, in 1992). In each of these cases, distressingly familiar images of soiled beaches, dead wildlife and desolate coastal communities have made their way around the world. If nations have come together to craft international environmental regulations pertaining to maritime transport, surely it is to prevent these types of accidents from occurring.

Yet every year, unscrupulous ship operators release more oil illegally into the marine environment than all of these spills combined. Put in another perspective, according to one recent study, the illegal discharge of oil into the sea through routine operations is equal to over eight times the Exxon Valdez oil spill or over 48 times the 1997 Nakhodka spill off the coast of Japan – every year.

Oil pollution is not the only environmental impact stemming from maritime transport. Garbage and sewage discharges, air pollution, ecosystem damage stemming from hull coatings and the devastating impacts generated by the introduction of intrusive non-native species through ballast water discharges are all addressed through a comprehensive international regulatory framework negotiated at the International Maritime Organisation (IMO).

Most ships and shipowner/operators actively seek to comply with this body of environmental regulations. Nonetheless, recent evidence from port state inspections reveal that nearly half of vessels inspected violate at least one aspect of the international environmental rules concerning the stowage and disposal of oil. Not all of these violations are evidence of wilful misconduct, nor are they all serious, but they do underscore that compliance with international environmental rules still leaves something to be desired.

The real problem lies with a relatively small percentage of vessels and owners that persist in consistently operating their vessels in full contravention to the IMO's body of environmental regulations. In relative terms, the numbers are small – approximately 10-15% of the world fleet. However, in absolute terms, this subset of owners accounts for a large number of vessels. The world fleet is composed of nearly 88 000 vessels of which approximately 50 000 trade internationally[1]. Given a compliance rate of 85% to 90%, that still leaves potentially 5 000 to 7 500 substandard commercial vessels polluting the seas through their non-compliance with international environmental regulations.

Worse still, many of these operators are actually *rewarded* for breaking these rules in those parts of the world where the risk of being apprehended is small and the ensuing fines, if any, are low. Savings derived by not complying with the IMO's regulations leads to lower operating costs that can be used to derive an unfair advantage in the notoriously competitive ship charter market. When added to the cost savings derived by not complying with international safety and crewing requirements, a substandard operator can substantially undercut quality vessels – especially when, as often is the case, the substandard vessel is older or is operating in a non-remunerative charter market.

[1] Lloyd's Register, 2001 (87 939 ships over 100 GT) – the International Chamber of Shipping estimates the world commercial fleet to be comprised of approximately 50 000 vessels.

Frustratingly, the opposite is not true – the quality shipowner is usually not rewarded for complying with MARPOL and other related international environmental rules. In many cases, they might even be penalised by having to go out of their way in order to comply with the rules. Herein lies the insidious impact that substandard shipping can have on this global industry – as long as substandard operators get away with breaking the rules and make money and gain market share by doing so, other operators will be tempted to follow in their footsteps with repercussions on the safety of vessels, the well-being of crews and, in the present case, on the environment.

It is important, therefore, to highlight this problem and seek to quantify the unfair competitive advantage thus derived by substandard operators in order for policy makers to best craft their response. This paper builds on previous work undertaken by the MTC on the cost savings unscrupulous ship owners and operators could realise by running substandard ships. It seeks to characterise and identify the costs avoided by substandard operators through non-compliance with international environmental regulations.

Six major points stand out from the report's analysis:

- **First order costs of compliance are not high**

  The first is that the "first order" costs of compliance on "average" ships are not that great. These costs include the capital, maintenance and repair costs for environmental equipment. They also include the costs for disposing of residual wastes not treated by on-board systems. The former typically range approximately USD 30 000 per year (with variations due to ship size, type and trading patterns). The latter are variable according to the amount of fuel consumed (and hence, fuel sludge produced), oily bilgewater build-up, number of crew and number of days at sea. These costs can theoretically range as high as over USD 150 000 per year for a VLCC and over USD 55 000 per year for a medium-large container vessel. Given average operating costs, these amounts can account for anywhere from 3.5% to 6.5% of the ship's operating costs. However, when margins are tight (*e.g.* when revenues are below the costs of financing and operating the ship), some owners and operators might be tempted to avoid these costs, especially as non-compliance with environmental regulations does not directly endanger ship, crew or cargo.

- **Avoiding equipment maintenance leads to high second-order compliance costs**

  Avoiding the first-order costs outlined above often results in equipment failure meaning that no wastes can be treated on board. These wastes build up and, according to international regulations, must be discharged in port. While the costs for discharging these wastes vary (anywhere from ~USD 20/m^3 to over USD 115/m^3 for oily wastes depending on the region), it remains an expensive option that many substandard operators might choose to forgo. Their savings are directly proportional to the wastes they produce (and dump illegally overboard) ranging for example from ~USD 50 000 to nearly USD 400 000 per year in the examples given in this paper.

- **Older, less-maintained vessels and non remunerative markets increase the relative cost of compliance**

  Generally, as ships get older, their environmental compliance costs increase. One might expect compliance costs for an older and poorly maintained VLCC, medium-large container carrier and a capesize bulker to be in the order of USD 273 700, USD 113 500 and USD 142 700, respectively. These costs are exacerbated in a non-remunerative market – *e.g.* with charters negotiated at 30% below operating costs, environmental compliance costs can account for 11% to 15% of the ship's revenue in this example.

- **Fines must be adapted to the level of cost savings derived through non-compliance**

  Penalties for non-compliance are effective if the risk of apprehension *and* prosecution for offenders is high and the level of the fine sufficiently elevated to make environmental compliance a more economical solution. The former relies on effective ocean surveillance, port state inspections and judicial processes whereas the latter depends on the effective level of fines levied. A deterrent fine should at a very minimum be equal to the costs avoided through non-compliance. Despite recent increases in the level of penalties, it is not yet clear that the average fine levied on merchant ships for breaches of MARPOL conform to this definition.

- **New environmental regulations will heighten the need to combat substandard practices**

  As realisation of the environmental risks posed by shipping grows, so too will future compliance costs. The advent of several necessary international instruments will most likely have and impact on the environment-related costs of shipping. This paper projects that these new costs will be anywhere from 1.5 to 3 orders of magnitude greater than current environmental compliance costs for average vessels. This highlights the need to be especially vigilant of substandard practices as the non-complying operator will be able to derive an even greater commercial advantage over the quality ship owner of the future.

- **Dirty fuels lead to high storage and disposal costs for sludges – and to cost savings through illegal ocean dumping for substandard operators**

  Heavy fuel oil (HFO) sludges are the greatest source of illegal oil discharges from ships. As long as ships' engines run on these extremely "dirty" final products of the refining chain, ships will accumulate sludges that, according to international regulations, can only be disposed of in port reception facilities and/or burned in approved incinerators. Weaning the maritime sector away from these fuels and towards cleaner sources of energy, much as what has been done for land transport, would go a long way towards reducing sludge production, oil discharges and, ultimately, the competitive advantage accruing to non-compliant vessels.

COST SAVINGS STEMMING FROM NON-COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL REGULATIONS IN THE MARITIME SECTOR

The world's maritime transport system has been an essential element in the growth of global prosperity since the first trading ships sailed several thousand years ago. Today, perhaps more than ever, a properly functioning and competitive maritime transport system is essential for ensuring continued economic and social well-being. However, as with any industrial sector (although arguably less than most other industrial sectors), maritime transport has been the source of both spectacular releases of pollution as well as a more subdued and constant stream of waste and garbage into the seas and onto shorelines.

Countries, recognising that certain fundamental rules were necessary to reduce the incidence of pollution from ships, have developed an international body of environmental regulations for the shipping sector. Most shipowners and operators have chosen to abide by these and have complied with these rules. However, a certain number of less scrupulous operators and owners have taken advantage of the difficulty the international community has faced in enforcing these regulations, and have sought to either avoid complying, or only partially comply, with these rules and regulations. Insofar as such owners and operators are able to avoid paying for equipment, operations, crew and waste disposal costs, they can derive an unfair competitive advantage over other shipowners and operators.

This study seeks to gauge the nature of that competitive advantage in order to aid national administrations seeking to eradicate sub-standard shipping. Calculating the costs associated with environmental compliance is a very complex task as these vary according to a number of factors including ship type, size, installed equipment, propulsion systems, and the geographic regions visited. As such, it is difficult to give an average cost of compliance and/or savings incurred through non-compliance.

Furthermore, collecting operating cost data from shipowners and operators is a difficult exercise as many feel that such data is commercially sensitive. However, using a mix of primary and secondary data sources, this paper attempts to estimate the cost implications of the principal environmental regulations governing shipping and will seek to illustrate the type of cost savings that substandard owners can derive through non-compliance with these rules.

Regulatory background

If sub-standard operators are able to derive a competitive advantage from non- or partial-compliance with environmental regulations, it is often because they feel that this course of action is worth the risk. That is, the financial benefit from non-compliance more than outweighs the chances of being caught and any financial penalties they might face if discovered[2]. In order to better understand the risks, one must keep in mind that the responsibility for the elaboration and enforcement of these rules is divided among several actors and institutions. These include the International Maritime Organisation (IMO), Flag States, class societies and the Port States.

2. In some cases, however, non-compliance may be the result of poor management rather than a calculated and deliberate attempt to derive cost savings.

International environmental regulations for shipping: the actors

International Maritime Organisation

First and foremost among these actors is the IMO. It is here that nations form the common body of law that serves to guide international maritime transport. Through its international Conventions, the IMO sets the regulatory framework for reducing the incidence of pollution from ships. This framework has evolved over time, as has awareness of the maritime sector's environmental impact. Currently the bulk of international regulations pertaining to pollution prevention for ships are contained in the International Convention for the Prevention of Pollution from Ships of 1973 as amended in 1978 and thereafter (MARPOL 73/78). This Convention seeks to reduce pollution from ships by specifying both structural requirements and performance standards for various ship subsystems that represent a potential source of pollution.

Nations have also sought to address other environmental impacts from shipping within the IMO – most notably concerning the ecosystem impacts from the use of tin-based anti-fouling compounds and the spread of invasive species through the release of ballast water. These negotiations have led to a Convention that is in the process of being ratified in the case of the former, and to efforts to develop an appropriate instrument to address the latter. While the bulk of this report will focus on those elements of MARPOL 73/78 that have already come into force, some discussion will be devoted to the cost implications of the Antifouling and developing Ballast Water Conventions.

Flag states and class societies

The principal responsibility for complying with the IMO's regulatory framework has always remained with Flag States. These states traditionally exercise direct control over national fleets and their crews that tended to be nationals of those states. However, the development of "open" registries – where non-national shipowners could register their ships in national registries with a sometimes-tenuous link to the flag – saw the direct ship-Flag State-national crew link weakened. This of itself has not necessarily been a bad thing as the development of open registries and the international sourcing of crews has offered cost savings to owners and new employment opportunities for seafarers around the world. However, this shift of registries has rendered the control of the quality of world fleets' and their crews more problematic.

Most Flag States carry out their regulatory responsibilities either directly or through intermediary Class Societies. However, a certain number of states have sought to reduce their expenditures related to the administration of their fleet and/or have sought to develop their registry solely as an income-generating venture. These and other smaller states simply do not have the budgets and/or administration necessary to ensure that their fleets continue to meet IMO requirements. Class Societies have played an increasingly more important role in ensuring the safety, seaworthiness and quality of these national registries. Yet, it is commonly recognised that stiff competition in the classification/certification market has led to the emergence of certain Class Societies willing to cut corners in order to gain or retain clients.

Port states

Given the complexities inherent in an international framework for registry and class certification, Port States have increasingly exercised their right to inspect incoming vessels. Port state inspections have become the principal rampart against substandard shipping, at least to the extent that countries are able to, and choose to, exercise this prerogative. Many countries have organised their Port State Control Agencies into international groupings ("Memoranda of Understanding" – MOU) that exchange information among participants. The principal MOU's cover Europe, the Asia-pacific region and North America. Not all ships

are inspected, but, with the development of targeted boarding matrices, Port State Control inspections have a fairly reasonable chance of catching the most egregiously substandard ships. This threat of discovery, however, only exists in regions with strong and proactive Port State Control administrations – there are many parts of the globe where these are lacking and where substandard operators can operate with relative impunity.

THE REGULATORY FRAMEWORK

The international convention for the prevention of pollution from ships: MARPOL 73/78

Background

The body of MARPOL 73-78 and its amendments are divided into six thematic annexes covering different pollution-source vectors from maritime transport. These are:

- Annex I: Prevention of Pollution by **Oil**.
- Annex II: Control of Pollution by **Noxious Liquid Substances**.
- Annex III: Prevention of Pollution by **Harmful Substances in Packaged Form**.
- Annex IV: Prevention of Pollution by **Sewage** from Ships.
- Annex V: Prevention of Pollution by **Garbage** from Ships.
- Annex VI: Prevention of **Air Pollution** from Ships.

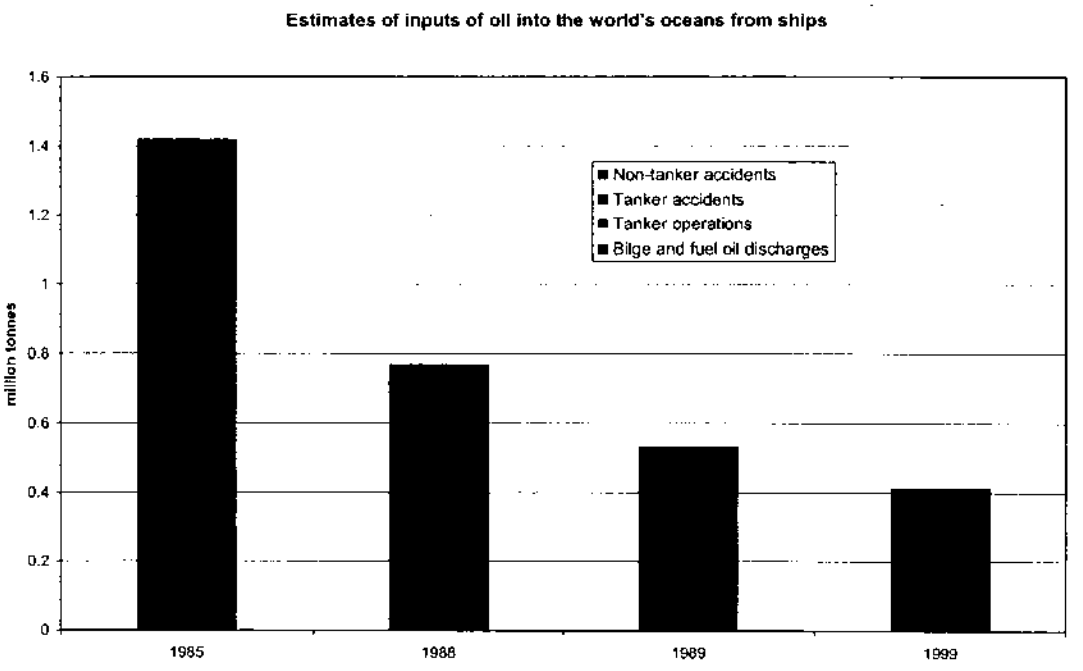
Each of these annexes details technical requirements and standards to which ship operators and owners must adhere in order to comply with the law. All member states of the International Maritime Organisation must accept and comply with the first two annexes of MARPOL. Annexes III through VI are voluntary – that is, countries may choose not to ratify these texts. However, once one of these annexes comes into force and a country ratifies it, it becomes binding. Five of the annexes have come into force and a substantial portion the world tonnage is registered in countries having signed onto these texts. Annex VI will come into force when countries representing at least 50% of world ship tonnage have ratified it. Although few countries have formally ratified the text, many shipowners and operators are already seeking to comply with its rules.

Status of MARPOL 73-78 annexes (November 2002)				
MARPOL annex	Entry into force year	Contracting parties (out of 193 IMO members	% of world tonnage	OECD contracting parties (out of 30 members)
I: Prevention of pollution by oil	1983	123	96.92	30
II: Control of pollution by noxious liquid substances	1983	123	96.92	30
III: Prevention of pollution by harmful substances in packaged form	1992	105	82.95	28[1]
IV: Prevention of pollution by sewage from ships	2003	89	51.14	20[2]
V: Prevention of pollution by garbage from ships	1988	110	89.26	29[3]
VI: Prevention of air pollution from ships	(n/a)	6	24.97	2[4]

1. Mexico and Turkey have not yet ratified Annex III.
2. Australia, Canada, Iceland, Ireland, Mexico, Netherlands, New Zealand, Korea, Turkey and the United States have not yet ratified Annex IV.
3. Canada has not yet ratified Annex V.
4. Within the OECD, only Norway and Sweden have as of yet ratified Annex VI.

Annex I: Prevention of pollution by oil

Annex I of the MARPOL Convention grew out of a long history of efforts to reduce oil pollution at sea. These efforts included the OILPOL Convention of 1954 and its amendments of 1962, 1969 and 1971. In this Convention, ships were prohibited from discharging significant quantities of oil (over 100 parts per million - ppm) within 50 miles of land. Furthermore, signatories were required to promote the development of port-side reception facilities for oily wastes. These two elements of oil pollution prevention – the reduction of oily effluent discharge at sea and the development of port-side reception facilities, still serve to frame the IMO's efforts to prevent operational oil pollution. The 1954 convention also underscored the fact that, despite catastrophic oil spills resulting from tanker groundings and/or losses at sea, the principal source of ship-source oil pollution was, and remains, routine operational discharges. (see figure below).



Source: IMO,1989, US NRC, 2002.

Many of the OILPOL clauses were incorporated into the first annex of the 1973 International Convention for the Prevention of Pollution from Ships (MARPOL). Annex I of this Convention, as amended in subsequent years, sets out rules for ship construction and operation in order to reduce the risk of oil pollution. As can be expected, these requirements carry sometimes-substantial costs for ship owners and operators. However, before looking at the regulatory requirements of Annex I, it might be helpful to understand the sources of operational oil discharges from ships.

The problem: Oil discharges from ships

Oils and other hydrocarbon substances are essential for the operation of most sea-going vessels. These substances serve as fuel (heavy oil bunkers or marine diesel fuel), lubrication for the ship's engines and machinery and as cargo for tankers ensuring the global supply of energy. There are various technical sub-systems aboard ships that handle the containment, flow and use of these substances and each can be a source of oil/fuel leakage and pollution. These systems include the following: hull/ballast tank systems, cargo tank and cargo pumping systems (for oil and product tankers), fuel tank and piping systems, engine and propulsion systems, and the oily water treatment and discharge system.

Hull and ballast systems

Failure of the structural integrity of a ship's hull has been the most visible cause of accidental oil spills. Indeed, once the hull of a single-walled tanker is ruptured, there is little that can be done to prevent the massive outflow from the affected cargo tanks. Although proponents of double-hulled construction for oil tankers had pushed for changes in international legislation in the past, it was not until the grounding of the

single-hulled Exxon Valdez in 1989 and the subsequent passage of the 1990 United States Oil Pollution Act (OPA 90) that maritime transport operators were faced with mandatory requirements to phase-out single hulled tankers. Although OPA 90 only impacted US-flagged vessels and ships calling on ports in US waters, its impact soon spread as the IMO considered and adopted amendments to Annex I of MARPOL calling for the phase-out of single-hulled tankers. Following the sinking of the tanker Erica off the coast of France in 1999 the IMO agreed to an accelerated timetable for phasing out single hulled tankers that will see most single hulled tankers withdrawn from the world fleet by 2015 at the latest. Oil tankers built since 1994 are all required to have double hulls or an IMO-approved functional equivalent.

In order to maintain their structural integrity and seaworthiness, ships must be able to take on and discharge ballast water in order to compensate for changes in the ship's buoyancy as cargo is loaded or unloaded. In the past, different ship designs called for this water to be stored directly in cargo and/or bunker tanks (in the case of oil tankers and other product tankers) or in segregated ballast tanks. It was the common practice of oil and product tankers to load and discharge ballast water directly from cargo/bunker tanks that led to high rates of oil discharges into the sea. Following MARPOL 73/78, tankers were required to designate "clean" cargo tanks (CBT) to serve as ballast tanks, or to be built or retrofitted with a completely segregated ballast system (SBT). While tankers still have the right to take on ballast in cargo tanks in order to stabilise the ship in extreme weather, this is a relatively rare occurrence and, in general, ballast water is rarely directly mixed with liquid cargoes.

Cargo tank and pumping system for oil tankers

Following the delivery of their cargo and before the loading of new cargo, oil tanker cargo spaces must often be cleaned to avoid cross-contamination with different grades of oil products. In the past, this cleaning was accomplished through the use of high-pressure water spraying. The resulting oily water was either directly discharged (representing a non-inconsequential loss of money for the cargo owner) or – more often – discharged to a settling tank. After the oil had separated to the top, the remaining water was discharged from the bottom. The difficulty inherent in this system was that ships often did not precisely stop the discharge when the oil-water interface was reached. Furthermore, the formation and presence of oil-water emulsions and oil sludges made clean water discharges difficult to achieve. Following MARPOL 73/78, tankers gradually moved to crude oil washing systems that washed the cargo tanks using the cargo itself. These systems have greatly reduced the discharge of oil-water mixtures from tankers.

Nonetheless, tankers will typically wash 3-4 cargo tanks at least two times during the year in order to facilitate inspections and/or repair work. The industry group INTERTANKO estimates that approximately 6 000 m^3 of wash water is discharged by an average tanker per year. These operations if not undertaken properly and with functioning monitoring and oil separation equipment, represent a potential source of oil pollution.

Sediments also collect in cargo tanks of tankers and must be transferred to the ship's "slop" tank for later discharge to a port waste reception facility and/or disposed of in a another manner consistent with MARPOL 73/78 (*e.g.* through incineration).

Fuel tank and piping system

Ships generally rely on either heavy fuel oil (a blend of residual oils with lighter oils to achieve a desired viscosity) or marine diesel as fuel. These are loaded into bunker tanks and are piped to the engine room for filtration, treatment and use. Poorly maintained pipelines, joints and/or cracks in the bunker tanks can be a source of fuel oil leakage into the ship's hull. These leaked oils collect in the ship's bilge where they mix with water and other compounds (*e.g.* cleaning detergents). The ensuing oily-water mixture must be

pumped out of the ship or else it can impact the ship's stability. In the past, these mixtures were pumped directly overboard. Now, however, oily bilgewater must be either be processed in order to remove oil compounds before it is allowed to be discharged overboard. Oil separated from this water must be kept on board and or disposed of in a manner consistent with MARPOL 73/78.

Finally, heavy fuel oil contains a small percentage of sludge that cannot be used as fuel (typically between 1.5% to 2% of the fuel oil volume). This sludge must be discharged in a port waste reception facility or otherwise burned onboard (either by being homogenised and burnt with fuel or by being burnt in an incinerator).

Engine and propulsion system

Even well-maintained engines, gearboxes, propeller shafts and other associated propulsion systems will leak small quantities of fuel and lubricating oil. As the level of maintenance goes down and as the age of the engine, gaskets, etc, goes up, so will the quantities of leaked oil. These can be caught in drip-pans and processed directly into the slop tank but more likely than not, these oils will find their way into the bilge where they will mix with water and other compounds generated by the daily operation of the vessel. This bilgewater must be disposed of in accordance with the requirements of MARPOL 73/78 as detailed in the preceding section.

Oily water treatment and discharge system

Eventually, all water containing oil collected in the slop tanks and/or in the bilge of the ship must be processed through an oil-water separating system (OWS) before being discharged overboard Alternatively, these oil-water mixtures must be kept on board and discharged to a port reception facility. Leaks in the oil-water separating system's piping and/or in the slop tank can be a source of oil. Water discharged overboard must contain only trace amounts of oil (15 ppm – as this amount of oil should not leave a sheen on the surface of water, any visible sheen in a ship's wake can be interpreted as evidence of a discharge above 15 ppm). This oil concentration is monitored either manually or automatically. Failure to shut off the discharge flow when this concentration is exceeded will result in oil being released into the sea.

The United States National Research Council's (NRC) recent report "Oil in the Sea: Inputs, Fates and Effects" (2002), provides an estimated breakdown of oil inputs into the sea by ship subsystems (see table below). Two points stand out from reading this table. The first is that ships that are not in compliance with MARPOL are responsible for almost 98% of oil discharged through vessel operations. The second point is that fuel oil sludges compromise almost 85% of all oil illegally discharged through vessel operations. Given the NRC figures and assuming an average disposal cost of USD 50 per tonne, illegal dumping of fuel sludges alone saves substandard operators nearly 12.8 million USD per year.

Oil Inputs into the sea from maritime transport, 1999 (tonnes)

	Operational tanker discharges	Tanker bilge oil discharge	Non-tanker bilge oil discharge	Fuel sludge discharge, all vessels	Totals
Compliant vessels	7 056	36	171	0	7 263
Non-compliant vessels	29 381	1 129	15 436	255 700	301 646
Totals	36 437	1 165	15 607	255 700	308 909

Annex I. Regulatory Requirements for Operational Procedures, Equipment and Ship structure.

The requirements of Annex I are complex and address many different ship types. This section will look at the principal requirements that have an incidence on the capital and operating costs of vessels.

Annex I develops two approaches to controlling oil pollution from vessels. The first focuses on procedures and processes that must be adhered to in order to ensure the minimum release of oil into the sea. These requirements outline certification, record-keeping, discharge procedures and other criteria regulating shipboard operations. The second approach emphasises technical design specifications that ships must adhere to in order to minimise the accidental or operational discharge of oil. Whereas the first approach involves the responsibilities of crews, Flag and Port states in ensuring compliance, the second relies on the structural make-up of the ship to prevent oil pollution. Finally, Annex I generally differentiates requirements according to ship category (tankers vs. all other vessels) and size classes (as measured by gross ton weight). These requirements will be highlighted where appropriate.

Certification and record-keeping

As with many other of the MARPOL annexes, one of the principal requirements of Annex I is that ships must carry on board valid international certificates indicating that they comply with the requirements of the Convention. In the case of Annex I, this certificate is the International Oil Pollution Prevention Certificate (IOPP – required for all oil tankers over 150 gwt and all other ships above 400 gwt). This certificate is issued by the Flag State or a class society on behalf of the Flag State after an initial survey. A periodical survey must be undertaken every 5 years and an intermediate survey must be taken at least once in the period between periodical surveys. Finally, vessels must also have onboard a Shipboard Oil Pollution Emergency Plan (SOPEP) that details actions to take and operational procedures to follow in the event of an accidental outflow of oil. Developing such a plan costs approximately USD 3-5 000 per vessel and updating it costs about USD 500.

Ships are also required to keep a detailed record of all movements of oil and oily wastes on the ship and to the sea and/or port reception facilities. Tankers are required to keep a log of all product movements as well. These entries are to be logged into the Oil Record Book and must be signed by the person in charge of the operation and each page must be signed by the master. This provides a written record of the storage, processing and discharge of oil and oil-water mixtures that can be checked against the ship's discharge data recorders and correlated to the ship's estimated production of oily waste. Software for tracking this information costs approximately USD 1 000 per year and logging duties are estimated to take an officer approximately one hour per day.

Ship's masters are also required to report any oil pollution incident observed while at sea whether or not they are responsible. This reporting requirement calls for the master to fill out a form and to process it through the Flag State.

Annex 1. Oil/oil mixture discharge requirements

Adherence to these rules relies on the responsible actions of shipowner/operators and their crews. As such, they also represent one of the areas where Annex I can most easily be subverted.

These requirements are differentiated according to whether or not the vessel is underway within a specially designated "special area". These areas cover bodies of water that, because of their geographic situation, are less easily flushed by ocean currents. Therefore all discharges of oil/waste are prohibited except in very

specific circumstances. For the purposes of Annex I of MARPOL 73/78, the designated special areas are the:

- Mediterranean Sea.
- Baltic Sea.
- Black Sea.
- Red Sea.
- The "Gulfs".
- Gulf of Aden.
- Antarctic.
- North West European Waters.

While these areas cover relatively little of the ocean's surface, they comprise some of the world's busiest shipping lanes. As a result, shipowners/operators face considerable restrictions on allowable discharges for significant portions of their voyages when navigating to, from and through these areas. Vessels wishing to discharge oil from their cargo tanks and bilges in excess of the limits set for special areas must either re-route their course outside of these areas (and face a time and cost penalty for doing so) or contravene MARPOL.

The oil-water discharge requirements of Annex I are detailed in the following table:

Discharge of oil from **cargo tank, pump room and cargo-related areas** (**Oil tankers** all sizes)	
Within Annex I Special Areas or Within 50 Nautical Miles (nm) of nearest land (outside Special Areas)	• Any discharge of oil is prohibited • Only clean or segregated Ballast water may be discharged
Outside Annex I Special Areas And More than 50 nm of nearest land	• Discharges of oil and oil-contaminated ballast water are permitted only when the following conditions are met: 1. The tanker must be proceeding en route, and 2. the instantaneous rate of discharge of oil does not exceed 30 litres/nm (an oil discharge at this rate does not produce a visible sheen on the water's surface), and 3. the total quantity of oil discharged into the sea does not exceed 1/15 000 (for MARPOL existing tankers - built before 1982) or 1/30 000 (for tankers built thereafter) of the total quantity of cargo carried on the previous voyage*, and 4. the tanker has in operation MARPOL-compliant monitoring and control system for the discharge of oil and slop tank arrangements. * However, the requirement that discharged effluent not exceed 15 ppm (see below) means that in reality, operational discharges are limited much below these maximum values).

Discharge of oil from **machinery spaces** (**Oil tankers** all sizes and **other ships** of more than 400 GRT)	
Within Annex I Special Areas	• The discharge of oil collecting in machinery spaces is only permitted when the following conditions are met: 1. The ship must be proceeding en route, and 2. The oil content of the effluent without dilution does not exceed 15 ppm, and 3. The ship has in operation oil filtering equipment with a 15 ppm monitor and *automatic* stopping device, and 4. bilge water is not mixed with oil cargo residue or cargo pump room bilges (on oil tankers)
Outside Annex I Special Areas	• The discharge of oil collecting in machinery spaces is only permitted when the following conditions are met: 1. The ship must be proceeding en route, and 2. The oil content of the effluent does not exceed 15 ppm, and 3. The ship has in operation oily-water separating or filtering equipment with a 15 ppm, and 4. bilge water is not mixed with oil cargo residue or cargo pump room bilges (on oil tankers)
Ships below 400 GRT (other than oil tankers)	
Within Annex I Special Areas	The discharge of oil collecting in machinery spaces is only permitted when the oil content of the effluent without dilution does not exceed 15 ppm.
Outside Annex I Special Areas	The discharge of oil collecting in machinery spaces is only permitted when the Flag State considers that the following conditions are satisfied as far as practical and reasonable: 1. The ship must be proceeding en route, and 2. The oil content of the effluent is less than 15 ppm, and 3. The ship has in operation MARPOL-compliant equipment suitable for ensuring the above.

The cost implications of Annex I discharge criteria

The requirement banning the disposal of fuel sludges at sea leads to one of two costs: the first is the direct cost for disposing of these sludges to a port waste reception facility, the other is the cost to purchase, maintain and operate an incinerator on board.

Oil-water wastes that cannot be discharged according to the Annex I criteria must be held on board and discharged to a port waste reception facility. Port States are required to provide these and ensure that their operation does not impose undue delays on the ship's voyage. However, many states have failed to provide these facilities or effectively facilitate their provision by private operators and port authorities. Furthermore, even when such a facility exists, it may not accept all types of oily wastes (sludge, slop tank oils, etc) and/or may not be available or accessible during the tight schedule many ships must keep to in port. This leads to a situation where ships cannot, or cannot easily, discharge their oily wastes to shore – increasing the incentive for disposing of these wastes at sea.

These facilities are often (although not exclusively) operated by private contractors and tariff levels and structures vary from port to port and from region to region. In some, cases, the waste reception fees are built into the general port fee schedule so that all ships pay regardless of whether they discharge wastes or not ("non special fee"). This has the advantage of removing the incentive for ships to avoid using these facilities in order to reap cost savings. In other cases, the visiting ship must pay a fee based on the volume of waste that it discharges. In these cases, shipowners and operators can realise sometimes-significant savings by not discharging oily wastes to port.

The tables below set out estimated costs for two types of oily waste streams for a representative sample of vessels. The first is for sludges originating from the heavy fuel oil (HFO) used as bunkers. These sludges are stored in a ship's slops tanks, along with oil separated out of bilgewater by the oil-water separator (OWS). In order to reduce the costs of disposal, many ships burn oil from the slops in an on-board incinerator, or in some cases, directly in the engine. The figures below assume that no such equipment is used on board. Furthermore, the table only accounts for the cost of shore disposal of HFO sludges and not slops originating from the OWS and/or cargo tank washings. The latter can be particularly voluminous and increases the costs of shore disposal significantly for tankers. Finally, the table uses figures obtained from Rotterdam, Singapore and ports in the UK. These can be considered in the high range of disposal costs (one industry source communicated the following general Annex I waste reception costs: Asia = approx. USD 80/m^3, North America = approx. USD 115/m^3 and Europe = approx. USD 20/m3). Ships can reduce these significantly by sailing to ports with lower waste reception costs – on condition that the ship's commercial operation and/or charter contract allows for this.

Estimate of representative costs for discharging HFO sludges to port waste reception facilities (prices in EUR)							
		UK	Rotterdam	Singapore	UK	Rotterdam	Singapore
Tanker	46466 GRT	1800	4708	7468	60	157	249
Bulker	37282 GRT	1375	3595	5703	46	120	190
Container	23691GRT	3780	9885	15680	126	330	523
Dry Cargo	3388 GRT	2991	7822	12408	99	261	414

Using the same ship types and ports, one can calculate the costs of in-port disposal of oily bilge water as follows:

Discharge of all oily bilge water into port reception facility (prices in EUR)							
		UK	Rotterdam	Singapore	UK	Rotterdam	Singapore
Tanker	46466 GRT	1051	1833	533	35	61	18
Bulker	37282 GRT	843	1470	428	28	49	14
Container	23691GRT	711	1240	361	24	41	12
Dry Cargo	3388 GRT	165	288	84	6	10	3

These costs should be considered as an extreme case, as most ships process their oily bilges onboard. In cases of equipment failure, however, MARPOL normally requires these oily waters to be discharged to land – hence, the estimated costs in the above table can be considered the avoided costs for shipowners and operators who dispose of oily water at sea without going through an operating oily water separating system.

Annex I's discharge criteria require the purchase, operation and maintenance of specific pollution prevention equipment as well the crewing and training of qualified personnel to carry out the prescribed operational procedures. Both of these areas have implications on the operating costs of vessels.

The equipment specifications necessary for compliance with Annex I centre on the oil-water separating system. The main components of this system are:

- A bilge pump.
- An oily-water collection tank.
- An oil-water separating device (OWS).
- Piping into the OWS.
- An overboard discharge pipe out of the OWS connected to an oil content monitor.
- A two-way shut-off valve on the discharge pipe capable of shunting any discharge over 15 ppm. back into the oily water collection tank.
- Piping for extracting oil from the OWS.
- An oil collection/slops tank for oil extracted by the OWS.

Furthermore, the discharge requirements require that piping used for transferring sludge to the slops tank be segregated from the bilge water piping and that the slops tank be fitted with piping and a standard interface for discharging wastes to port reception facilities (or, alternatively, into a homogeniser and/or incinerator if the sludges are to be burned onboard).

The discharge requirements for cargo tank cleanings and oily ballast water from oil and product tankers also have a cost – in particular, the requirement for segregated and/or clean ballast water discharges requires separation of the ballast water and cargo piping and pumping systems as well as the presence of a discharge flow-rate monitor.

OWS costs range from USD 10 000 for a simple parallel plate system to upwards of USD 100 000 for a membrane system with a centrifuge pre-treatment unit. Typically, older ships will have lower-cost systems onboard. Amortised over the OWS's lifetime (which is variable according to the make and level of maintenance), the cost for many of the simpler systems is not that high. However, this equipment – and especially the older and/or more basic units – must be maintained to a high standard. Furthermore, in order to work, they must be operated by knowledgeable and trained personnel. Training in the operation of the OWS system can range from USD 3 000 to USD 5 000 per year – and yet since, strictly speaking, this is not a mandatory requirement, many ship owners may choose to forgo this cost. Furthermore, properly managing the flow and disposal of oily wastes on board, according to one industry source, accounts for 1 person-equivalent per 8 hour watch (composed of both an officer and seafarer). This figure, given for tankers, would be less for other vessels.

Failure to maintain and operate the OWS according to the manufacturer's instructions will likely cause the OWS to fail or to not operate correctly. Proper maintenance of OWS systems includes regular cleaning in order to ensure that the system allows for oils to separate from water. Even "self-cleaning" systems must be periodically checked, washed and have their filters changed. The cost for maintaining an OWS in operating condition depends on the system but can run from USD 3 000 per year and upwards.

Failure to adhere to relatively strict procedures for other daily ship operations can also cause the OWS to fail. For instance, any presence of detergents in the bilgewater can cause thick oily emulsions that not only cannot be treated by most OWS systems but can also foul both the OWS and related piping systems requiring their disassembly and/or flushing. In order to avoid the formation of potentially OWS-clogging emulsions in the bilge, crews should collect machine room wash water and other detergent-containing wash liquids separately or use only specifically formulated "bilge-safe" detergents. Rust, dirt and other common contaminants found in the ship's bilges can also cause the OWS to malfunction.

If the OWS malfunctions, the ship's master must make a note in the Oil Record Book and refrain from discharging oily water to sea unless the ship's safety is compromised. The bilgewater should be discharged to a port waste reception facility at a cost to the shipowner/operator.

Ensuring a properly functioning OWS implies that crews are made aware of the necessary precautions to take when generating bilge water and are properly trained to deal with OWS failure and on-board repair. This type of training should be extended to all crew and not just the seafarers directly responsible for the OWS.

Other elements of the oil-water treatment systems onboard ships also require close attention. The 15 ppm oil content monitor, for instance, must be properly calibrated and maintained. It is not uncommon for this sensitive piece of equipment to malfunction and therefore care must be given to following the manufacturer's maintenance instructions. False readings can generate alarms and automatic shutdown of the OWS discharge valve causing crews to bypass the monitor completely.

When the OWS breaks down, the cost of spares and/or replacement, the cost of shore-side disposal of wastes and the time necessary for crew to repair the system can be significant. During this time oily water cannot be processed and discharged overboard. In some cases, the holding limit of the oily-water collection tank may be reached as bilge water continues to be pumped in. This leads to a situation where the ship's crew will bypass the OWS and directly discharge untreated oily-water overboard. In some cases, shipowners and operators will voluntarily forgo the necessary corrective actions and instruct ship's crews to bypass the OWS thereby reaping cost savings equal to the avoided costs of the repairs for the duration of the period the OWS was not functioning and the avoided costs of discharging the accumulated oily water into a port waste reception facility.

Annex I. Structural requirement

The second part of Annex I of MARPOL 73/78's approach to reduce the incidence of oil pollution from ships centres on specifying various structural components for ships' hull and ballast systems. These specifications have evolved over time and mainly concern oil and product tankers.

Annex I. Ballast system requirements

Approximately 0.35% of an oil tanker's cargo is left clinging to the walls of it's cargo tanks after discharging. A 150 000-ton Suezmax tanker can therefore potentially discharge 520 tons of oil when emptying ballast water held in product tanks. In order to reduce this type of pollution, MARPOL 73/78 and its subsequent amendments have sought to completely separate ballast from cargo systems in oil and product tankers.

MARPOL violations concerning oily water separators:
Evidence from recent prosecutions

Faced with malfunctioning OWS systems and seeking to avoid the time and cost required to repair, replace and or properly maintain these units, some shipowners, operators and/or crewmembers choose to circumvent the OWS and oil monitor system entirely in order to dump oily wastes directly overboard. Evidence presented in recent criminal proceedings dealing with breaches of MARPOL are instructive as to the methods utilised by crews to circumvent oily water discharge requirements.

Ship's crews will typically use one of two methods to dump oily water directly overboard. The first method involves bypassing the oily water separator entirely by fitting some form of temporary and/or flexible bypass hose from the slops tank and/or bilge pump directly to the overboard discharge manifold. This method requires falsifying the oil record book to indicate that the discharge was processed through the OWS and conjuring some plausible explanation for the malfunction of the15 ppm monitor (which must also be bypassed). The second method involves running the oily wastes through a malfunctioning OWS and tricking the 15 ppm. monitor into registering an allowable concentration of oil in the outflow by purposefully flushing the monitor with clean seawater. While this method does away with the need to explain why the 15 ppm. monitor was malfunctioning, it still requires the crew to falsify oil book entries.

Several port states have increased their scrutiny of OWS and Oil Record books systems in order to apprehend polluters. These inspections have resulted in the indictment and prosecution of a wide range of vessels, masters and companies. In particular, they have highlighted the fact that MARPOL violations are not the sole domain "rustbucket" vessels – several high profile investigations have uncovered suspected OWS bypass pipes in prestigious cruise lines and at least one world-class container operator. In many of these cases, court records reveal that crew and/or operators bypassing OWS systems did so in order to save money.

Selected examples from recent court cases:

Boyang Maritime Kyeong Shin Deep Sea Fisheries Company of Pusan, Korea, Boyang Limited, Trans-Ports International (TPI) and Oswego Limited, 2002, pled guilty to being part of a wide-ranging conspiracy designed to hide routine discharges of oil sludge and oil contaminated bilge waste directly into the ocean from their fleet of ships since at least 1995.

According to the U.S. Justice Department, the companies' fleet of more than a dozen cargo freighters carried thousands of tons of frozen seafood between Alaska and Asian ports. On each journey, the ships dumped as much as 1 000 gallons of oil sludge in U.S. waters.

The companies pled guilty to a 10 count felony information, charging that they worked together to maintain false log books, obstruct justice and tamper with witnesses in order to avoid the spending time, money and other resources to comply with the laws designed to prevent oil pollution from ships (extract from http://www.usdoj.gov/opa/pr/2002/August/02_enrd_487.htm).

Carnival Corporation, 2002, pleaded guilty to falsification of oil record books on several of its ships. The falsifications occurred on numerous occasions between 1996 and 2001, during which period employees ran fresh water past the sensors in the oil water separators of Carnival ships, generating false oil concentration readings. As a result, the sensors failed to activate a diversion valve which would have otherwise kept the contaminated water on board. This allowed the bilge water with oil levels exceeding the allowable limit of 15 ppm to be flushed into sea. Crew members then took the false sensor readings and recorded them in the ships' oil record books (extract from www.usdoj.gov/usao/fls/Carnival.html).

Norwegian Cruise Line Ltd. 2001, Norwegian admitted polluting the ocean in two ways: flushing an oil sensor with fresh water to make contaminated discharges look clean and dumping untreated wastewater overboard. It is unknown how much oil and contaminated water was dumped.

.../...

Until 1998, the SS Norway had a single Oil Water Separator that was referred to by the engineers as "an old piece of junk" Other equipment was used to dump the waste directly overboard. Even after a new and second Oil Water Separator was purchased, ship engineers continued to circumvent the pollution prevention machine until May 2000, when NCL's new owners stopped the practice, according to the factual statement. Ship officers continued to pollute and maintain false records despite the prominent display in the engine room of newspaper articles about the prosecution of Royal Caribbean Cruise Lines Ltd. for similar violations. NCL financially benefited by not expending the resources necessary to maintain its pollution prevention equipment, failing to properly offload waste oil in port and not purchasing adequate equipment in the first place (extract from: www.usdoj.gov/opa/pr/2002/July/02_enrd_441.htm).

Royal Caribbean Cruises Ltd. 1998, RCCL discharged oil contaminated bilge waste, including harmful quantities of oil, from RCCL cruise ships by using equipment and procedures that bypassed the oil water separator. RCCL cruise ships were equipped with bypass pipes that circumvented the oil water separator. Bypass pipes were installed by RCCL and crew members were instructed on their use.

RCCL avoided expenses and commitment of other resources associated with regular maintenance of the oil water separators, replacement of membranes and other spare parts, and offloading of oil contaminated bilge waste in port. Membranes for the oil water separator on some RCCL cruise ships, such as the Sovereign of the Seas, cost approximately USD 10 000 for a single set of membranes (consisting of four membranes). While these membranes were usually changed between zero and one time each year prior to the government's investigation, RCCL now finds it necessary to replace this type of membrane between five and ten times each year per cruise ship using this design. Similarly, where oily bilge waste was offloaded infrequently in port prior to the government's investigation, RCCL now frequently offloads large quantities of bilge waste from some of its cruise ships, including at times more than 100 000 gallons from certain ships each year (extract from: www.usdoj.gov/opa/pr/1998/June/248.htm.html).

Holland America Line, Ltd., 1998, ...the investigation was initiated by an Assistant Engineer on board the SS Rotterdam who refused an order to pump untreated bilge water overboard...Holland America made a conscious decision to defer needed maintenance of the Rotterdam's steering gear, causing the vessel to ship excessive seawater. They then pumped the seawater and oil overboard in knowing violation of the law (extract from: www.usdoj.gov/opa/pr/1998/June/290.htm.html).

Initially MARPOL 73/78 called on tankers to adopt the "load on top" system in which ballast water and clinging cargo were pumped into a designated holding tank. During the ballast voyage, the oil separated from the water that was then pumped from the bottom of the tank and discharged overboard. New ballast and tank washing water was loaded into this tank and the process repeated as necessary. Upon arrival at port, any remaining water was discharged from the bottom and new oil was loaded on top of the residue slops in the holding tank. This had the advantage of allowing cargo owners to retrieve valuable cargo that had previously been flushed to sea.

The "load on top" system institutionalised the use of a segregated "slop" or oily waste holding tank that is still a feature of most ocean-going ships. MARPOL 73/78 however, called on oil and product tankers to adopt a number of other changes to their ballast and product tank washing systems. These are summarised below:

Vessel type and size	Annex I requirements for tank washing and ballast systems
Oil Tankers over 20 000 DWT	Segregated ballast tanks Crude oil washing System
Product Tankers over 30 000 DWT	Segregated Ballast Tanks
Oil Tankers between 40 000 and 70 000 DWT	Clean ballast tanks*, or Segregated ballast tanks, or Crude oil washing system (*Clean ballast tank must be upgraded to segregated ballast system by 1986)
Oil Tankers over 70 000 DWT	Clean ballast tanks*, or Segregated ballast tanks, or Crude oil washing system (*Clean ballast tank must be upgraded to segregated ballast system by 1984)
Product Tanker over 40 000 DWT	Clean ballast tanks, or Segregated ballast tanks
Crude Oil Washing System (COW): A cargo tank washing system utilising crude oil in lieu of seawater. Clean Ballast Tank (CBT): A ballast system where one or several existing cargo tanks is designated as a permanent ballast tank. Oil is no longer loaded into the "clean" ballast tank although the "clean" tank still shares pumping and piping arrangements with the cargo system. Segregated Ballast Tank (SBT): The ballast tanks, pumps and piping are completely separated from the cargo system. Later amendments to Annex I called for the SBT piping to be routed in such a way that it does not enter or cross cargo tanks.	

When initially proposed, shipowners strongly lobbied against these requirements as they required significant investments in new, SBT-compliant vessels or expensive retrofitting costs for installing SBT pumping and piping arrangements. At the time, non-compliant owners could expect to reap a benefit by not upgrading and continuing to trade as before although the presence and/or absence of SBT arrangements was and still is easy to detect by Port State inspection officers.

Most crude oil tankers above 20 000 DWT and product tankers above 30 000 DWT delivered since 1983 are equipped with SBTs (see table). However, a considerable number on non-SBT pre-MARPOL tankers are still trading. These tankers normally operate with CBTs but many also still load ballast into non-dedicated cargo tanks (their shared ballast/product pumping arrangements make it possible for shipowners/operators to take on oil in the otherwise designated clean tank which, if undetected and unpunished, increases the revenue-earning potential of the tanker). Given that ships must take on ~25-30% of their deadweight in ballast in order to navigate safely when not loaded, a considerable amount of oily ballast is generated for each return voyage. For example, a 150 000 DWT tanker would in this case produce 37 500 to 45 000 tonnes of oily ballast that must be processed through the OWS and 15 ppm monitoring system. Short ballast voyages and/or any breakdown of the OWS system can lead to a situation where owners must incur the cost of discharging this ballast to a port reception facility and/or face the decision to illegally discharge this waste at sea.

Status of ballast tank arrangements for world tanker fleet in 1999				
	Vessels	DWT (millions)	Vessels	DWT (millions)
Crude oil tanker	594	79.5	1188	159
Product tanker	1756	14.4	3513	28.9

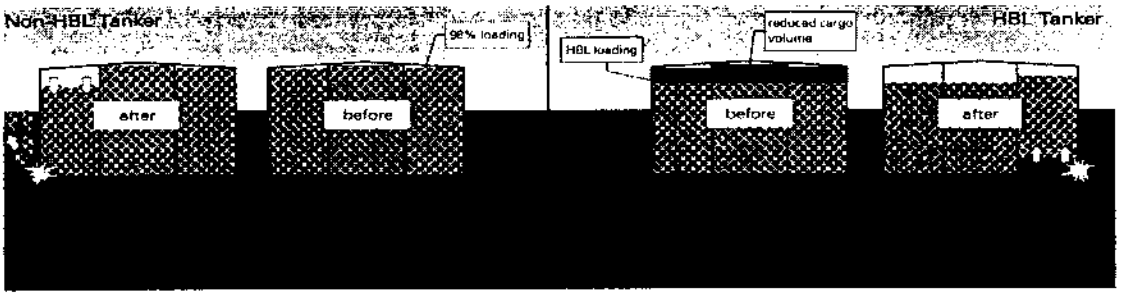
Annex I. Hull requirements

MARPOL 73/78 initially only called for structural changes to be made to ships' ballasting systems despite the calls by a segment of the international community for more stringent hull requirements – and in particular for the phasing out of single hull tankers. Following the Exxon Valdez oil spill, however, and the subsequent unilateral passage of the United States Oil Pollution Act of 1990, the IMO significantly amended Annex I to include double hull construction requirements for new oil tankers. The IMO also agreed to a schedule for the retirement of single-hulled tankers. The 1992 Annex I amendments came into force in 1993 and tankers built after 1994 are all required to have double hulls or an equally effective alternative. It is generally believed that the requirement for double hull construction added 15-20% to the cost of constructing tankers at the time of the requirement. This cost differential, however, has abated with the recent favourable cycle for buyers in the ship construction market.

The phase-out conditions for existing tankers were differentiated according to whether the tanker was built before the passage of MARPOL 73/78 ("pre-MARPOL tankers") or after ("post-MARPOL tankers"). Under an enhanced survey programme, pre-MARPOL tankers were allowed to trade until they were 25 years old at which time they were to be fitted with double hulls or an equivalent alternative arrangement. Once these tankers reach their thirtieth year, they were to be retired from service or fitted with a double hull. Post-MARPOL tankers were allowed to trade until they were 30 years old at which time they were to be retired or fitted with a double hull. The cost of retrofitting an old tanker with a double hull, however, is so prohibitive that 30 year old tankers are typically retired.

Four alternative arrangements to double hull retrofitting were approved for use on pre-MARPOL tankers between their 25th and 30th year. These included the designation of CBT's, the installation of protectively located SBT's covering 30% of the tankers sides or bottoms, the provision of double bottoms or bulkheads to reduce the potential for oil outflows and/or the operation of hydrostatically balanced loading (HBL – see box below). HBL represented a relatively attractive option for shipowners seeking to continue trading after a pre-MARPOL vessel's 25th birthday. HBL, however, requires careful attention by trained crew to detailed operational procedures. Furthermore, requirements for HBL operation are more easily circumvented than the more concrete requirements for double-hulls. Unscrupulous operators could derive a competitive advantage over quality operators by trading 25+ year-old pre-MARPOL tankers without adhering to the strict requirements of HBL. As long as this practice remained undetected, the operator would derive added revenue from the increased carrying capacity of the tanker and save on the costs of training crew and operating the HBL system.

Hydrostatically balanced loading (HBL)



Hydrostatically balanced loading (HBL) relies on the fact that oil is lighter than water and thus floats on its surface. A full cargo tank is filled to approximately 98% of its capacity (to allow for changes in volume and vapour concentrations). In a typical tanker, 98% loading implies that oil is loaded above its natural flotation level – that is, the pull of gravity is greater than the oil's buoyancy. In such a situation, a bottom grounding will result in an outflow of oil until the level of oil in the tank reaches its natural flotation point -- slightly above the water line. HBL loading calls for less oil to be loaded into the cargo tanks so that the tank levels are slightly below the oil's natural flotation level. This means that a bottom grounding will result in an *inflow* of water rather than an outflow of oil. HBL loading typically means that a tanker must forgo 5-8% of its normal capacity.

In December 1999, the single-hulled product tanker Erica sank in the Atlantic dispersing its cargo on the western shores of France. This prompted a new round of calls for the early phase-out of such vessels. The threat of unilateral action on the part of the European Union led to the rapid amendment of Annex I's single hull phase-out schedule in April of 2002. The crux of the amended schedule (see table below) is that single-hulled tankers will be phased much sooner than previously planned under the 1992 amendments to Annex I. Indeed, all pre-MARPOL non SBT tankers are to be phased out by 2007 and all other single hulled tankers must be retired by 2015 at the latest.

Category	Tanker type	DWT	Cargo	Phase-out
1 [a]	Pre-MARPOL	≥ 20 000	Crude/Dirty oil	2003-2007
	No protectively located/segregated ballast (pre 1981)	≥ 30 000	Oil other than crude/dirty oil	
2 [b]	Post-MARPOL	≥ 20 000	Crude/Dirty oil	2003-2015
	Protectively located/segregate ballast (1982-1996)	≥ 30 000	Oil other than crude/dirty oil	
3	Oil and product tankers under the size limits set in MARPOL	5 ≤dwt ≤ 20 000	Crude/Dirty oil	2003-2015
		5 ≤dwt ≤ 30 000	Oil other than crude/dirty oil	

[a] Category 1 Tankers may trade beyond their 25th anniversary if they either:

- operate with HBL, or
- are fitted with protective wings or double bottom spaces.

Furthermore Category 1 tankers delivered between 1976 and 1981 will only be allowed to reach their maximum phase-out dates if they undergo a more rigorous Condition Assessment Scheme (CAS) is carried out under the responsibility of the Flag State. If they fail the CAS, they must be retired by 2005.

[b] category 2 tankers delivered between 1984 and 1996 will also require to undergo a CAS if they are to reach their maximum permissible lifespan. Otherwise, they must be retired by 2010.

As with the requirements for ballast tank systems, the Annex I requirements for hull structures are relatively straightforward and compliance is generally easily checked through a quick inspection. New ships must be built to these specifications before they can be certified and existing ships must be retrofitted with protective arrangements and have these approved by Flag states and/or class inspections. As with the 1992 amendments, however, it is conceivable that pre-MARPOL non-SBT tankers may still seek to forgo HBL in order to gain more revenue.

Annex II. Control of pollution by noxious liquid substances

The problem: Pollution at sea from ship-borne chemicals

Unlike oil, noxious chemical compounds are not typically generated in the daily operation of a vessel. More often than not, pollution from chemicals at sea comes from the ship's cargo rather than from different technical subsystems of the vessel. Chemicals from the cargo tanks of specialised carriers, however, do make their way into the sea – either through catastrophic hull failures and accidents, through loading and unloading of cargo and/or through cargo tank washing. Annex II concentrates on the latter and sets specific discharge requirements for tank wash water. Unless these criteria are met, this water must be retained onboard and discharged into an appropriate waste reception facility.

Annex II. Regulatory requirements

Certification and record-keeping

Ships carrying noxious liquid substances must be designed and approved for the class of chemicals they are carrying. These ships are required to have an International Pollution Prevention Certificate for the Carriage of Noxious Liquids in Bulk that attest that they meet the conditions necessary for safely handling various non-oil liquid cargoes. The validity of this certificate is conditioned upon an initial survey to ensure compliance with the International Bulk Chemical Code, a periodical survey every five years and an intermediate survey at least every 30 months. These surveys, as in the case of Annex I surveys, are often carried out by class societies.

Certain national regulations call for compliance and certification documents beyond those required by MARPOL. Ship's wishing to trade in these countries must provide these additional documents (*e.g.* the United States requires a United States Coast Guard Letter of Compliance accompanied by additional documentation relating to the cargo and vessel examination).

Ships subject to Annex II must have a "Procedures and Arrangements Manual" (P&A Manual) specifying operational instructions for dealing with noxious chemical cargoes loaded on board. All operations involving the ship's cargo must be made in accordance with the instructions contained in the P&A Manual.

The ship's officers and Master must also update a Cargo Record Book analogous to the Oil Record Book of Annex I. The details of all chemical cargo movements and operations onboard (along with discharges overboard) must be kept in this log and countersigned by the officer in charge. The master must also sign each page.

Finally, the chemical carrier must have onboard an updated Marine Pollution Emergency Plan for Noxious Liquid Substances.

Annex II. Noxious liquid substance discharge requirements

Annex II's discharge requirements are differentiated according to the toxicity of chemicals involved. These are categorised into four classes of substances with decreasing toxicity:

Category	Hazard to human health and/or marine ecosystems	Harm to amenities or other legitimate uses of the sea
A	Major hazard	Serious Harm
B	Hazard	Harm
C	Minor hazard	Minor harm
D	Recognisable hazard	Minimal harm

Discharge requirements are also differentiated according to whether the ship is within an Annex II "special area". These are the Baltic Sea, the Black Sea and Antarctica.

As a general rule, the washing of tanks containing hazardous substances must take place in port and the wash water discharged at a reception facility. Seawater can then be used to rinse the tanks and this rinse water can be discharged overboard as long as the concentration of the cargo is below a set level according to its toxicity and the ship's location. Ships, however, are not required to discharge any pre-wash water into the same port as the discharging port. In these cases, the ship will proceed to a port of its choosing (in many cases the port where it will be receiving its next cargo) and empty its tank(s) of pre-wash water at that location. However, in order to save time and money, some ships could elect to wash out their tanks at sea in contravention to MARPOL Annex II.

The requirements for Annex II discharges are as follows:

Noxious substance category	Annex II. Discharge requirements	
A, B, C	The ship must be proceeding en route, and the vessel must be operating at a minimum speed of 7 knots (self-propelled) or 4 knots (not self-propelled), and the vessel must be located at least 12 nautical miles from the nearest land, and discharge must take place below the water line, and discharge must take place in water at least 25 metres deep (except for category D substances). - and -	
A	Maximum concentration of effluent after port tank washing is **0.1 %** by weight	Maximum concentration of effluent after port tank washing is **0.05 percent** by weight
B	• Maximum **1 m3 or 1/3 000** of the tank's capacity in m3 can be discharged per tank • Concentration in the wake astern of the ship is no more than **1 ppm.**	• The tank must be **pre-cleaned** and the washings stored onboard and/or discharged to a waste reception facility • Concentration in the wake astern of the ship is no more than **1 ppm.**
C	• Maximum 3 m3 or 1/1 000 of the tank's capacity in m3 can be discharged per tank • Concentration in the wake astern of the ship is no more than **10 ppm.**	• Maximum **1 m3 or 1/3 000** of the tank's capacity in m3 can be discharged per tank • Concentration in the wake astern of the ship is no more than **1 ppm.**
D	Maximum **one in 10** part dilution of the substance in water.	Maximum **one in 10** part dilution of the substance in water.

In order to achieve the dilution levels referenced above, the ship's crew must be trained to deal with a wide range of noxious liquid substances and must be completely familiar with the operations outlined in the P&A Manual as mistakes can lead to non-compliant discharges. For instance, if a ship's crew inadequately strips the cargo pipe and pumping system following discharge of a high viscosity substance, the resulting residue can contaminate discharged cargo tank rinse water that would otherwise be MARPOL-compliant.

Complying with Annex II's discharge requirements also implies the presence of functioning discharge recording equipment that can at a minimum record the time, date and flow rate and duration of the discharge. This information can be compared to entries in the Cargo record Book in order to determine compliance. The equipment must be maintained and/or repaired, otherwise, if it fails, rinse water must be kept onboard and discharged into a port waste reception facility.

As with the reception of Annex I wastes, the fees for transferring tank pre-wash water to port waste reception facilities varies from port to port and according to the type of noxious liquid cargo involved. As an example, fees for disposing of these wastes can range from EUR 47/tonne to EUR 155/tonne in the United Kingdom. Furthermore, in many cases, waste contractors will want some assurance of the exact nature of the waste they receive as they might be held liable for disposing of unidentified and/or mis-identified chemical wastes. This might entail paying for tests to ensure that the waste transferred to shore is indeed what the shipowner/operator says it is.

Port pre-washing of tanks containing hazardous substances must be observed by an approved surveyor and, following pre-wash, the cargo piping and pumping systems must be stripped. These requirements entail a cost and/or time penalty that the unscrupulous operator might choose to avoid.

Annex III. Prevention of pollution by harmful substances in packaged form

Annex III of MARPOL 73/78 concerns the identification, labelling and safe stowage onboard of harmful substances in packaged form. It relates to cargo carried by ships and, therefore does not concern ship's stores. Compliance with Annex III's requirements generally falls on the part of the shipper. The principal exception is the responsibility for carriers to develop and follow a plan for the storage of harmful substances in packaged form onboard. As with other ship-board plans (*e.g.* such as the SOPEP), this requires an initial outlay and proper training on the part of the crew in order to adhere to its instructions. The Annex also calls for the ship to have a keep a detailed manifest of dangerous and/or harmful packaged cargoes onboard. Many ports require advance communication of the contents of this manifest.

Compared to the two previous Annexes, compliance costs for Annex III are relatively few minor.

Annex V. Prevention of pollution by garbage from ships

The last of the MARPOL 73/78 annexes currently in force, Annex V seeks to address the other major environmental impact of shipping – the dumping of ships' garbage at sea. While requirements for different waste streams are dealt with separately under this Annex, it should be highlighted that this regulation completely bans the disposal of plastics at sea.

The Problem: Waste disposal at sea

Traditionally ships had relatively simple waste streams consisting of dunnage from packing goods and food wastes from the galley. These wastes were typically dumped of overboard. However, just as land-side waste streams have diversified and grown tremendously in recent years, so too have waste flows from ship-board operations. These now include dunnage, lining and packing (wood and plastic), food and food packing wastes, metal, glass, paper, medical wastes, packaging for cleaning and maintenance compounds, etc. When thrown overboard, this garbage often makes its way to coastlines and/or interferes with marine life. Annex V seeks to regulate these waste streams in order to reduce their impact on marine and coastal ecosystems.

Annex V. Record-keeping requirements

All garbage movements off the ship must be logged into the Garbage Record Book. This record, signed under the responsibility of the Master, allows tracking of the ship's generation and disposal of garbage in order to aid Port State inspectors. A log must be kept of the discharge of garbage to port waste reception facilities, garbage burnt in the incinerator, if present, and/or disposed of overboard in compliance with Annex V's requirements.

Annex V. Waste disposal requirements

The requirements pertaining to the disposal of shipboard garbage, like other discharge requirements, are differentiated according to the whether the ship is in an Annex V "special area" e.g. according to waste type. Annex V special areas are the:

- Mediterranean Sea.
- Baltic Sea.
- Black Sea.
- Red Sea.
- The "Gulfs".
- Antarctic.
- Caribbean.
- Northwest European Waters.

Annex V's garbage disposal requirements are as follows:

Type of garbage	Disposal requirements	
	Inside Special Areas	Outside of Special Areas
Plastics (includes synthetic ropes, fishing nets, plastic containers, plastic bags, biodegradable plastics, etc)	Disposal at sea prohibited in all areas	
Cargo packing waste Includes floating dunnage, lining and packing materials.	Disposal at sea prohibited	
Food wastes	Disposal at sea permitted at least 12 nautical miles from nearest land.	
Other garbage Includes rags, paper, glass, metal, crockery, etc.	Disposal at sea prohibited	
Comminuted/ground food or other wastes.	Disposal at sea prohibited (unless only food and then at least 12 nautical miles from nearest land)	
Incinerator Ash	Disposal at sea prohibited	

Compliance with the above rules requires that ship waste streams be segregated and treated accordingly. This implies that ship's crews are trained in the handling and disposal of wastes at sea. Space is tight on ships and the accumulation of waste garbage can lead to unhygienic living and/or working conditions. In this context, there is every incentive for ship's crews to dispose of waste quickly. However, their ability to do so in compliance with Annex V is conditioned on the ship being out of a "Special Area" and at some distance from land. Crews must store waste onboard until such time as they can discharge it at sea legally or to a port waste reception facility. In this context, they might be tempted to dump the waste overboard in infringement of MARPOL 73-78. Another option available to them is to compact, shred and/or incinerate the waste onboard in order to reduce its volume.

Annex V does not require ships to have comminutors, compactors, shredders or incinerators but it does set performance standards for these when they are present. This waste processing machinery provides shipowners/operators with more flexible options for storing and disposing of waste onboard and can save money by reducing port waste reception fees. Incinerators also serve a dual purpose in that they can also be used to burn oil residues and sludges rather than paying for their disposal in port. Costs for incinerators vary according to capacity and size but a typical unit can cost in the order of EUR 60 000.

As with other waste-processing equipment on board, these devices can and do break down. Accordingly they require a certain level of maintenance. If the machinery breaks down, ship's crews may be tempted to dump wastes illegally overboard rather than storing them onboard and or disposing of them in compliance with Annex V's requirements. Until repairs are made, shipowners/operators save on the required repair costs and the avoided waste disposal fees, just as they might have saved on necessary maintenance costs beforehand. In practice, however this would entail the falsification of the garbage record book, and Port State authorities are likely to detect discrepancies, especially if they are suspicious about the low quantity of garbage carried on board.

Annexes not yet entered into force

Annex IV and VI of MARPOL 73-78 have yet to come into force. Shipowners who choose to comply with their requirements might put themselves at a competitive disadvantage (if only costs are considered) and shipowners not implementing these requirements may gain a competitive cost advantage. However, the competitive outcomes of following the rules contained in Annex IV and Annex VI do not stem from non-compliance as such. Therefore the competitive advantage/dis-advantage is not unfairly or illegally gained – at least until the instruments come into force.

It is important, however, to look at some of the cost implications of the requirements of these Annexes as they will eventually come into force. At that time, shipowners will be required to abide by them and unscrupulous owners will be able to derive unfair cost savings by not complying.

Annex IV. Prevention of pollution by sewage from ships

Annex IV aims to reduce the sanitary risk from "black water" (discharges containing human, animal and/or medical wastes). Many States have local requirements regarding these discharges as well, especially as Annex IV has yet to come into force. As with other MARPOL 73/78 Annexes, the rules call for both certification and operational/equipment requirements.

Annex IV. Certification requirements

In order to comply with Annex IV, ships must be issued an International Sewage Pollution Certificate. Renewal of this certificate is conditional upon a periodical survey of the ship's sanitation systems and piping every five years.

Annex IV. Sewage discharge requirements

Ships have three options for discharging their black water according to the type and level of pre-treatment applied. The requirements for sewage discharge are as follows:

Annex IV. Sewage discharge requirements		
Untreated	Comminuted and disinfected	Treated
• Sewage must be retained in holding tanks, and, • Discharge must take place at least **12 nautical miles** from the nearest land, and • The discharge rate must be approved by the Flag State, and • The ship is proceeding en route at a minimum speed of four knots.	• Discharge must take place at least **4 nautical miles** from the nearest land, and • The equipment must be MARPOL-compliant and approved by the Flag State, and • The ship is proceeding en route at a minimum speed of four knots.	• The treatment plant must be MARPOL-compliant and approved by the Flag State, and • There are no floating solids and/or discoloration surrounding the discharge.

If these requirements cannot be met (*e.g.* a ship with no treatment facilities navigating within 12 nm of shore and/or at quay), then sewage waste must be held on board and transferred to a port waste reception facility. The cost advantages that could eventually be derived from non-compliance include the

savings from avoided port waste fees (*e.g.* EUR 23/tonne in the United Kingdom), avoided capital costs associated with the sewage processing facilities and/or maintenance and repair costs for the equipment.

Annex VI: Prevention of Air Pollution from Ships

The text of Annex VI, agreed at the IMO in 1997, details measures to reduce the emissions of sulphur and nitrogen oxides from ships. It also stipulates actions to be taken to reduce the use and emission of ozone-depleting substances and other harmful air emissions.

This Annex calls for the sulphur content of marine bunkers to be capped at 4.5 % world-wide. In addition, it defines "SOx Emission Control Areas" (ECA – currently the Baltic and North Sea) where the sulphur content should not exceed 1.5%.

All Marine propulsion systems installed on ships constructed after January 2000 or engines having undergone a major conversion after that date will have to comply with the Annex's NOx Technical Code which calls for significant reductions in NOx emissions.

Annex VI. Certification and record-keeping requirements

Ships will be required to hold an International Air Pollution Prevention Certificate that will be issued by the Flag State or its representative upon an initial survey. This survey is to be followed up by a periodical survey at least once every five years and by an intermediate survey every 30 months.

In addition, ship's will be required to retain bunker delivery notes onboard for a period of three years and fuel oil samples for at least one year following delivery.

Annex VI. Emission and operational requirements

Meeting the world-wide sulphur content restriction of 4.5% is a relatively easy task – especially as bunkers today have an average sulphur content of 2.7%. However, ships sailing in ECA's will have to ensure that the fuel they burn meets the lower requirement of 1.5%. Low sulphur bunkers are typically more expensive since their processing is more time- and energy-consuming although the volatile nature of bunker markets makes an exact estimation of the sur-cost of low sulphur fuel difficult. Generally, this value seems to be approximately 20-30% above of the cost of regular bunkers – approximately EUR 32 per tonne. Given limited refinery capacity for low-sulphur bunkers, however, an increase in demand for these fuels might push these prices up until new refining capacity comes on-line.

Meeting the low-sulphur bunker requirement for ECA's will also require ships to either fill up completely with low-sulphur bunkers before their arrival into the ECA – a highly unlikely outcome given the need to empty the tank of existing high sulphur bunkers and the added cost of steaming with low-sulphur fuels – or have a dual fuel system onboard. While this is not necessarily a problem on newly built (or on some older ships that were designed to use marine diesel oil for manoeuvring in ports), retrofitting existing ships with such a system will prove expensive. Another option afforded shipowners/operators by Annex VI is the installation of flue seawater scrubbers to reduce the sulphur content of exhaust emissions to below 6 g. Sox/kW h. This is an expensive option as well and precludes the use of the system in ports given the high acidity of the scrubber discharges.

The NOx Technical Code of Annex VI calls for an important reduction in NOx emissions from new and/or refitted engines. This reduction can be obtained through one of three methods: by using gas turbines in

place of heavy fuel oil (HFO) engines, by fitting current engines with exhaust catalysts or by modifying the combustion properties of existing engines.

The first two solutions allow for reductions in NOx of up to 95% but involve significant costs. Modifying the temperature of the combustion chamber (and thus the formation of NOx) seems a more promising and lower-cost alternative at present. However, this strategy can reduce the efficiency of the engine and slightly increases the amount of fuel necessary to achieve the same performance as before. The options available to reduce NOx from HFO combustion to within Annex VI's criteria are summarised below:

NOx reduction method	Description	Potential reduction	Investment costs (base 1999) in EUR
Emulsification	The engine runs on an emulsion of water and fuel. This leads to a 10% reduction of NOx per 10% of water present in the emulsion. Fuel consumption can increase by 1% for every 10% of water content.	20-40% reduction	~30 300 (for engines less than 3 MW)
Humidification (fumigation)	Cooled moist air added to the combustion exhaust can reduce NOx significantly	50-80% reduction	Unknown
Direct injection	Water or other liquids are injected directly into the combustion chamber.	50-60% reduction	From 9 000 to 26 700
Selective catalytic reduction	Using a catalyst results in the highest reductions of NOx. Requires low sulphur fuel (<2%) and other consumables (urea and replacement of catalyst material).	85-90% reduction	36 to 61 per kW for engines over 1000 kW 61 to 182 per kW for engines under 1000 kW Running costs included
Engine tuning and injection retardation	Reducing the exhaust temperature and/or retarding the start of the oil fuel injection, NOx reductions can be achieved at very low costs – albeit with a fuel efficiency penalty.	10-30%	Low cost

International Convention on the Control of Harmful Anti-fouling Systems on Ships

Ship's hulls attract all kinds of shellfish and algae colonies. As these grow and spread, they can have an impact on the operating efficiency of the vessel. In particular, the increased drag caused by these organisms can impose a significant fuel-efficiency penalty. For this reason, ships were regularly rid of these organisms through dry-dock or underwater cleaning. The advent of paints containing organotin biocides, (and Tributyltin – TBT – in particular) in the 1970's however, obviated the need for these frequent and expensive cleanings. Ships painted with TBT could go as long as five years between hull paintings with little significant fouling. The longevity of these compounds, however, combined with their release into the water through normal wear, resulted in a significant ecological hazard for marine ecosystems.

Recognising TBT as a danger to marine ecosystems in 1989, the IMO agreed to ban these compounds in a International Convention agreed in 2001. This Convention calls for a complete ban of the use of organotin biocides for ships painted or repainted starting in 2003. Ships painted on or after 2003 will have to have a International Anti-fouling System Certificate onboard that will be issued after an initial survey. This certificate will be renewed following another survey each time the ship is repainted.

The Convention also calls for all ships hulls to be free of organotin-based antifouling paints, or to have these sealed in such a way as to avoid leaching by 2008.

Some countries, such as Japan, have banned TBT for over a decade and have built up considerable experience with tin-free compounds, as have certain commercial operators who have experimented with these paints before the IMO ban. Their experiences, however, have been mixed. Tin-free anti-fouling paints have typically been more expensive that TBT paints. They also have tended to be less effective, requiring more frequent applications and/or hull cleanings. While paint suppliers are making advances in providing equally effective and durable non-tin paints, shipowners/operators must still bear this cost differential. These costs include the cost of purchasing and applying the paints, undertaking more frequent hull cleanings, lost trading revenue while ships are painted/cleaned and a fuel consumption penalty for steaming with fouled hulls.

According to figures from Sea-Land Corporation, these additional costs were estimated to be approximately USD 200 000-USD 270 000 per vessel (container carrier) per five year dry dock cycle (or USD 110-USD 148/day). These costs include regular hull cleanings every six months after 2.5 years and additional fuel costs due to hull fouling. While some companies claim equal performance from non-TBT anti-fouling paints, most commercially available TBT-free coatings have an effective life of 2.5 to three years. For shipowners wishing to remain on a five-year dry dock cycle, this entails the added cost of regular hull cleanings. Alternatively, these ships must be dry-docked and re-painted at shorter intervals and considerable cost to the owner. However, the shorter life of non-TBT coatings might not pose a significant problem for ships on a tighter dry dock schedule (*e.g.* many older ships and heavy use vessels such as ferries) – although the higher cost of TBT-alternatives still remains an issue.

It is likely that the development of commercially viable TBT-free anti-fouling coatings will accelerate as demand increases, thus the cost premium associated with tin-free paints will probably decrease in the future. Already, some shipping companies and paint providers claim five-year intervals for non-TBT paints. Furthermore, the development of unmanned remote hull-cleaning technologies will also contribute to lowering the costs of using non-TBT paints.

However, the cost differential remains and could be unfairly used by a substandard operator to gain an advantage over a competitor complying with the TBT ban. The savings for the non-complying operator would be substantial, yet the risk of discovery would likely be high as such a strategy would require the shipowner to obtain fraudulent compliance documents and would involve the co-operation of a willing paint contractor, dry-dock facility and (possibly) certification officer – and would be detectable through a hull paint sample test.

Draft International Ballast Water Convention

The problem: Organisms in ballast water

Coastal states have always faced the problems caused by the spread of non-native organisms carried by ships. These plants and animals typically were carried on the ship's hull and introduced into new ecosystems where in many cases, spurred by the absence of natural predators, they spread rapidly and caused significant harm to local ecosystems and economies. Now, these organisms are primarily spread through the discharge in arrival ports of ballast water loaded in departure regions. The damage caused by these organisms can be tremendous – running into the millions of dollars for regional contaminations such as that caused by the Zebra Mussel in North America or by the *Caulerpa taxifolia* algae in the Mediterranean. The IMO has recognised that the presence of parasitic organisms in ships' ballast waters poses a serious threat and has commenced work on a draft convention to address the issue.

Options for reducing the risk from parasitic organisms in ballast water

There are three major categories of ballast treatment options: chemical, mechanical and/or physical.

Chemical methods for ballast water decontamination involve changing the physical properties of the water taken on board to kill unwanted organisms. Many of these options tend to be potentially expensive to put in place and operate, given the relatively large amounts of chemicals necessary and the cost of treating chemical residues in the clean ballast.

Mechanical technologies involve separating contaminating organisms from the ship's ballast water or removing contaminated ballast water from the ship. The former typically involves running ballast waters through filtration and/or separation systems in order to reduce the number of contaminating organisms. These are generally considered to be lower cost options than those enumerated above but are equally considered to less effective. Problems include filter clogging, space requirements, disposal of residues and the problem that these systems experience in removing very small marine organisms.

Removing ballast waters from the ship, however, is increasingly seen as one of the principal methods for treating ballast waters. This operation can involve the discharge of ballast water to port reception facilities (with all of the problems that this might entail as seen in the case of Annex I wastes) or by exchanging ballast water at sea. The latter can be accomplished by sequentially emptying and refilling ballast tanks at sea or by running fresh seawater through the ballasts until these are fully renewed. Both of these are relatively low cost options compared to the chemical treatments but pose problems as they can compromise the stability of the ship in certain conditions and/or lead to lost trading time as the ship reduces speed or stops to exchange ballast water. These mechanical options also do not address the risks posed by organisms present in the sludges that remain after ballast water exchanges.

Finally, several physical techniques have been considered for the treatment of ballast water. Of these, ultra-violet radiation and ballast water heating have shown the most promise. As with other potential treatments, however, many of these technologies remain experimental and have yet to be fully tested at the scale required for ballast applications. The table below provides an early assessment of the costs of a selection of ballast water treatments:

Method	Description	Technical efficiency	Cost EUR/m^3	Cost EUR/day (30 days) 150000 DWT tanker	Cost EUR/day (30 days) 80000 DWT container vessel	Cost EUR/day (30 days) 40000 DWT bulk vessel
Open ocean ballast water exchange	Currently the main option for ballast water management. Rigby said this was the cheapest but poses a very serious risk of excessive organism invasion.	95-99% water replacement	.022	29	18	12
Heating with ballast water tank flushing/exchange	Technology uses heat from the ship (or another source) to heat the water in the tanks to temperatures that would kill nuisance organisms.	Could be close to 100%	.034 w/o flushing .055 w/flushing	44 w/o flushing 72 w/ flushing	27 w/o flushing 44 w/ flushing	19 w/o flushing 30 w/ flushing
Filtration	Using a filter system to strain out nuisance species. Efficiency varies by screen diameter in microns.	82-95% at 50 microns 74-94% at 25 microns	.071 to .194	92 to 252	57 to 155	39 to 106
Chemicals	Types include hypochlorite (chlorine), hydrogen peroxide, ozone and others.	Variable	.145 to 24.3	189 to 31590	116 to 19440	79 to 13284
Ultra violet (UV) radiation	Irradiating the ballast water with UV radiation requires pre-filtration.	Ineffective for certain organisms	.17 to .511 w/ filtration	221 to 664	136 to 409	93 to 279

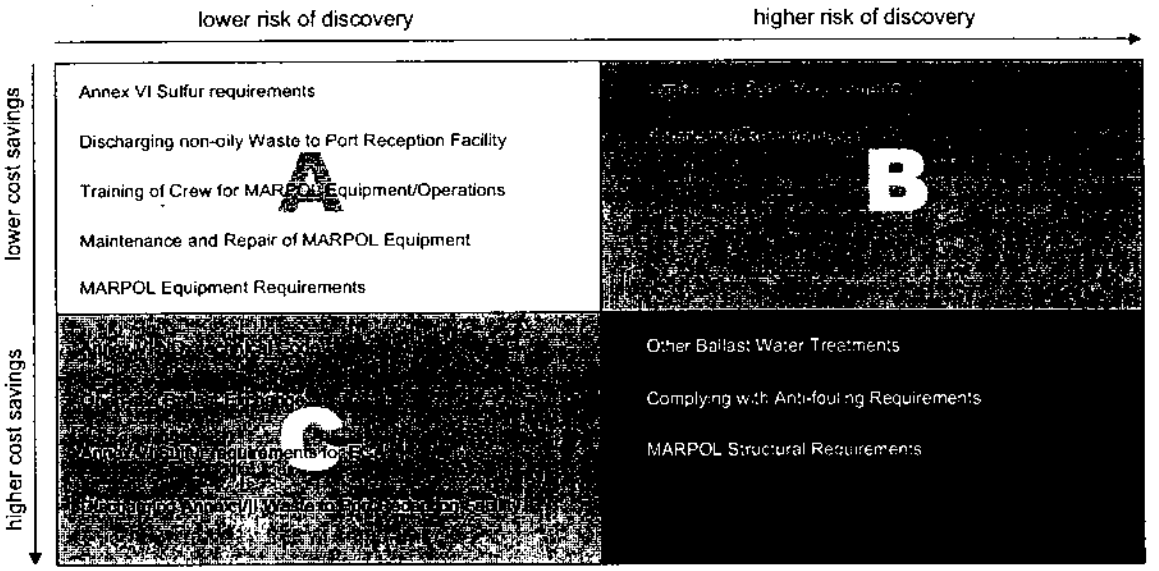
Source: Adapted from http://www.cqdjournal.com/Hot_Events/ballast-imo/ballast-tech/ballast-tech.htm (May 3, 2002).

Despite the uncertainties surrounding ballast water treatment options, the Draft Ballast Water Convention has started to take form. This Convention will be shaped on the conviction that ballast water treatment systems will, in the future, have to be part of the fundamental design issues addressed by shipbuilders. Ballast tanks and ballast systems will have to be designed in such a way as to reduce the risk of contamination by invasive species. This will likely imply the imposition of operational ballast water plans, logging requirements and mechanical recording devices as for many of the MARPOL annexes. This will also mean that when ships are designed for open water ballast exchanges, they must be built in such a way as to resist the stresses this method imposes. These requirements will impose costs on top of those highlighted in the above table.

Costs and risks of non-compliance

As can be seen in the previous sections, there are a number of cost considerations inherent in international environmental regulations.

The figure below illustrates the relative costs and risks of non-compliance with different elements of the body of international environmental regulations governing shipping. These are only intended to convey the relative orders of magnitude as actual costs and risks vary tremendously according to ship type, age, trading pattern, flag state and port state administrations.



While the cost implications of MARPOL's structural requirements (*e.g.* for ballast tank systems and/or double hulls for tankers) are considerable, non-compliance with these is relatively easy to detect and shipowners/operators will likely not seek cost savings by disobeying these regulations. Certification, likewise, is relatively easy to verify and shipowners/operators are likely to forgo these requirements.

The operational aspects related to complying with MARPOL and its related instruments represent a much easier target for non-compliance. Especially as many of these can be bypassed with a relatively low risk of discovery. Furthermore, these requirements are such that they can be followed in some instances, (*e.g.* not dumping plastics-containing incinerator ash before going to a port with strong Port State Control inspections), and not in others. This possibility of occasional non-compliance allows substandard owners and/operators to save money by disregarding these rules when the risks are the lowest or the costs are the greatest (*e.g.* dumping oily sludge overboard before going into a port with high waste reception fees).

It might be anticipated that substandard operators would contemplate savings from non-compliance measures in boxes A and C of the above figure. While owner/operators who regularly contravene regulations in these boxes are relatively few, one can expect that some borderline operators might be tempted to achieve savings in these areas in tight market conditions – if only occasionally.

Generally the operational costs related to environmental compliance can be separate into four broad categories:

1. The costs associated with ship's equipment for processing, reducing, storing and disposing of waste.
2. The costs of regularly maintaining this equipment.
3. The costs of waste disposal to port waste reception facilities.
4. The cost of staffing training and educating ship's crews to comply with these regulations.

However, gaining insight into which strategies unscrupulous shipowners and operators use to requires information on the typical patterns of non-compliance with international regulations.

Evaluating non compliance with environmental regulations

Characterising the cost savings realised by substandard shipowners/operators requires a detailed understanding of common and substandard practices intended to avoid compliance with international environmental regulations. This insight, for obvious reasons, is notoriously difficult to obtain from substandard shipowners/operators themselves. Fortunately, the IMO rules allow for a detailed inspection regime that sheds light on current practices in the maritime sector.

Flag States and Port States share responsibility for compliance with the IMO's rules. Flag States have primary responsibility for ensuring this compliance and must certify that ships flying their flag are operating in conformity with international environmental regulations. Port states, on the other hand, have the right to ensure that vessels entering their ports do indeed comply with this regime before they are allowed to sail. Of the two, Port States have the greatest incentive to ensure this compliance given that any pollution stemming from non-compliance will impact them foremost. In many instances, Port State inspections provide the best insight into actual compliance practices amongst shipowners/operators since these typically occur much more frequently than Flag State inspections. Data on these is relatively easy to come by, at least for many OECD member countries.

Another source of data on compliance is the result of private vetting inspections undertaken by commercial charterers. These inspections, common in the oil trade, allow charterers to ensure that the ships they use meet their standards for safety and environmental performance. Data from these inspections is relatively harder to come by, however.

Furthermore, not all ships entering ports are inspected. Inspection rates vary from country to country and from region to region. Among the member countries of the Tokyo Memorandum of Understanding on Port State Control (Tokyo MOU – covering much of the Asia-Pacific area), approximately 65% of all individual ship visits were inspected by authorities. Within the Paris MOU area, 28.6% of visiting ships were inspected.

The possibility that no inspection will occur might lead certain shipowners/operators to gamble that non-compliance with MARPOL 73-78 requirements might go undetected. Port State Control authorities realise this and periodically organise targeted inspection campaigns. These tend to reveal that some MARPOL violations typically go undetected during normal inspections. Port State authorities also seek to increase their chances of uncovering non-compliant vessels by developing targeting matrices. These define boarding criteria based on the type of vessel, Flag State, class society, past history and vessel age in order to ensure that vessels with the greatest history/potential for non-compliance are caught.

A slight majority of ships boarded display some sort of deficiency. In 2000, 61.79% of vessel inspections in the Paris and Tokyo MOU areas uncovered violations of international maritime regulations. Many of these deficiencies were relatively minor and did not lead to the detention of the ship[3]. The fact that these deficiencies were rectified in port during the scheduled stop does not necessarily mean that a significant breach of international regulations did not occur. For instance, inspectors might find that the Oil Record Book of a visiting ship was improperly filled out and that the 15 ppm oily water discharge monitor was malfunctioning. These two deficiencies can be relatively quickly rectified in port and would not lead to the detention of the vessel. However, the vessel might have illegally discharged much of its oily bilgewater into the sea in contravention of Annex I of MARPOL 73-78. Hence, while the deficiencies in this hypothetical case were not grounds for detention, they do not preclude the fact the vessel had acted illegally – and saved money by doing so (*e.g.* by not paying for the discharge of its oily bilgewater to a port reception facility). This said, however, even conscientious owners may have discrepancies discovered

[3] In 2001, the Paris and Tokyo MOU's reported detention rates of 9.9 and 7.7 % respectively.

during their ships' inspections. The existence of deficiencies on a ship should therefore not be considered as prima facie evidence of a substandard operation.

Port state control inspections, deficiencies uncovered and detentions
2000, Paris MOU and Tokyo MOU areas.

	Inspections	Inspections w/ deficiencies	% Inspections w/ deficiencies	Detentions	% Detentions
Bulk carriers	8 776	5 153	58.72%	598	6.81%
Chemical carriers	1 481	785	53.00%	92	6.21%
Gas carriers	616	276	44.81%	20	3.25%
General dry cargo	12 793	9 079	70.97%	1 593	12.45%
Passenger ships/ferries	861	473	54.94%	43	4.99%
Refrigerated cargo	1 269	767	60.44%	92	7.25%
Container-ro-ro-vehicle carrier	5 108	2 906	56.89%	203	3.97%
Tankers combined carriers	2 786	1 418	50.90%	196	7.04%
Other types	903	517	57.25%	28	3.10%
Total	**34 593**	**21 374**	**61.79%**	**2865**	**8.28%**

As can be seen in the above table, gas and chemical carriers display the lowest rates of deficiencies and, along with container, roll on-roll off and vehicle carriers, share the lowest detention rates. General dry cargo vessels on the other hand, have deficiency and detention rates much higher than average. These ships earn low freight rates, have extremely tight operating budgets and are likely to be tempted to seek cost savings whenever possible and in some instances, illegally.

The Paris and Tokyo MOU members also keep data on the various types of deficiencies encountered. These show that, overall most deficiencies uncovered during Port State inspections are not related to environmental regulations. Only 8% of all deficiencies discovered during recent Paris and Tokyo MOU inspections are categorised as MARPOL-related and an additional 5% relate to ship's certification and documentation which includes environmental certification (*e.g.* the International Oil Pollution Prevention Certificate). However, closer analysis of the Paris MOU data reveals that the ratio of MARPOL-related deficiencies to individual ships is much higher – as high as 43% concerning Annex I violations. This last figure is troubling as almost half of all vessels inspected by Paris MOU members revealed some violation of Annex I.

While exact figures on MARPOL compliance – *e.g.* figures that separate out minor deficiencies from those signalling breaches of MARPOL – are difficult to come about, one study estimated non-compliance rates for Annex I of MARPOL to average approximately 13% internationally, adjusted for the composition of the world fleet (United States National Academy of Sciences , "Oil in the Sea III: Inputs, Fates and Effects (2002)"). In this study, compliance rates ranged from 99% for large new tankers to 85% for commercial non tanker vessels.

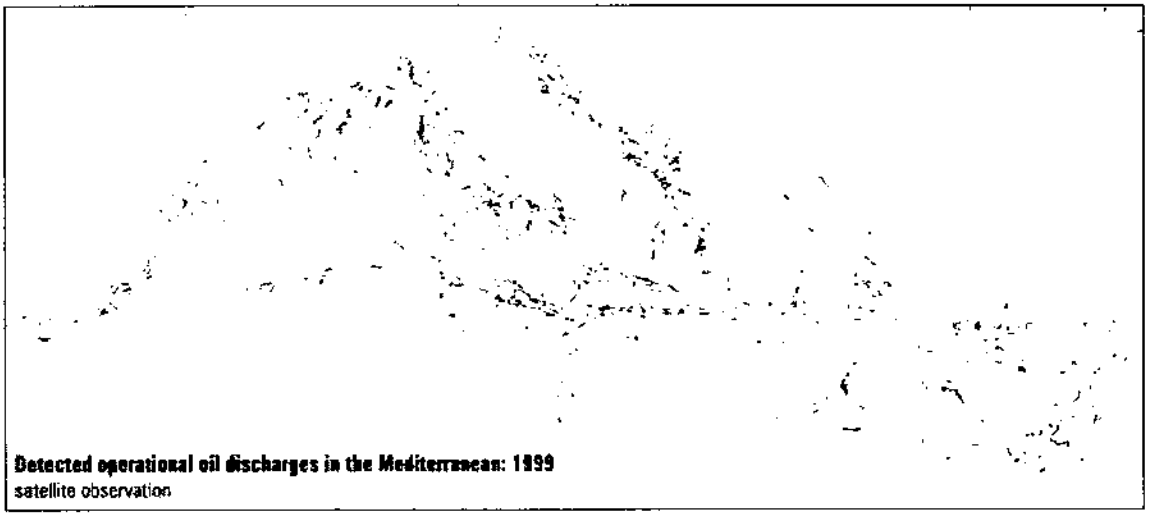
The Paris MOU's data for 2000 provides more detailed insight into the exact nature of MARPOL violations.

Deficiencies discovered during Paris MOU Port State inspections in 2000			
Annex I	67%	Oil Pollution Prevention (IOPP)	879
		MARPOL – SOPEP	1012
		Oil Record Book	1441
		Control of Discharge of Oil	160
		Retention of Oil on Board	418
		Segregation of Oil and Ballast	9
		Oil Filtering Equipment	780
		Pumping Discharge Arrangements	80
		Oil Discharge Monitoring and Control System	112
		15 ppm Alarm Arrangements	340
		Oil/Water Interface Detector	8
		Standard Discharge Connection	55
		Ballast Arrangements: SBT/CBT/COW	16
		Pollution Report - Annex I	14
		Ship Type and Designation - Annex I	3
		Suspected of Discharge Violation	48
		Oil-Oily Mixtures in Machinery Spaces	118
		Other Annex I	379
Annex II	1%	Certificate Pollution Prevention Noxious Liquid Substances	8
		Cargo Record Book	19
		P&A Manual	12
		Residue from Discharge Systems	2
		Tankwashing Equipment	4
		Cargo Heating Systems for Cat. B Substances	7
		Ventilation Procedures/Equipment	8
		Pollution Report - Annex II	2
		Loading/unloading/cleaning Cargo tanks	6
		Other Marpol Annex II	17
Ann. III	.5%	Marking and Labeling	4
		Documentation	6
		Stowage	12
		Other Annex III	9
Annex V	13%	Placards	94
		Garbage Management Plan	364
		Garbage Record Book	251
		Garbage	422
		Other Annex V	33
Other	19%	Other Marpol Operations	72
		Ballast Fuel and Other Tanks	290
		Cleanliness of Engine Room	1218
		Bilge Pumping Arrangements	118

This table reveals that the overwhelming majority of MARPOL violations discovered during port State inspections concern principally Annex I (Oil) and, to a lesser extent, Annex V (Waste) of the Convention.

Annex I. Violations

That pollution from ship operations is still a problem is no surprise. Despite tremendous reductions in the amount of oil released to the sea, some ships continue to dump cargo, fuel or bilge oil and sludge illegally. The figure below illustrates the frequency of oil discharges in the Mediterranean captured by satellite in 1999. This image is telling – especially as the Mediterranean is a MARPOL Annex I "Special Area" where no visible discharges of oil are allowed. Other satellite and aerial surveillance campaigns of the Baltic, North Sea and Southeast Asia reveal similar pictures. The truth is that even though a small *percentage* of ships contravene Annex I, an unacceptable number of vessels continue to discharge oil to the sea in relative impunity.



Source: EU DG-SRC (IPSC) "Oil spill statistics in the Mediterranean Sea", ERS 1/2 remote sensing data.

Not all ships discharging oil to the sea in violation of Annex I do so illegally, and not all ships discharging illegally share the same motivations. In the normal operation of a ship, accidental discharges of oil can occur, although on a well-run ship with a proper safety and environmental management system, this should be a relatively rare occurrence.

Other vessels will discharge oil knowingly because they cannot discharge to land. For example, a tanker sailing between areas where few adequate oily water waste reception facilities exist (*e.g.* in the Gulfs area) and offshore reception terminals (where no discharge facilities exist) can soon find itself with full slops tanks. The master can either sail for a port with reception facilities despite the loss in time, money and likely breach of charter contract, or discharge at sea. This last point is an important one because many charter contracts contain terms that, when combined with the lack of waste reception facilities, put pressure on masters to discharge slops at sea. For example, charter contracts calling for the use of the "full capacity" of the tanker means that the slop tanks must be empty at the start of the charter. One possible solution is to load cargo on top of the slops but few charterers accept this. An alternative solution is for the ship to empty its tanks at sea (if port waste reception facilities are not available).

The inadequacy of port waste reception facilities is a significant contributing factor to Annex I violations. Incidents such as the voyage of a tanker forced to conserve slops on board for three months described below are, unfortunately, still relatively commonplace in many parts of the world and show the difficulty some ship owners face when seeking to comply with Annex I:

Highlights from a three month tanker voyage in late 2000:

Jubail: *Port refused to receive slops.*

Bahrein: *Port slop discharge connection blocked due to coagulation (not the first time this has happened) – no discharge of slops.*

Koweit: *Berthing denied because the master requested to discharge slops before loading. The ensuing conversation with the Port Captain revealed that the small oily waste reception facility was built "just to satisfy the IMO", that the installation had not worked in the past three months, that the port authority had no intention to repair the facility, that anyway, ships coming to load in Kuwait knew to arrive with no slops on board and that whatever ships did with slops prior to arriving in Kuwait was not the Port Authority's problem – which goes far to explains why the sea was covered in oil four to five hours outside of this zone.*

Ulsan: *Port refused to take slops.*

Sri Racha: *Lack of adequate reception facilities at loading terminal.*

Singapore: *Lack of adequate reception facilities at unloading terminal (the master finally arranged for a barge to receive the contents of the slop tanks – although this operation was undertaken in dangerous conditions) (AFCA N, 2001).*

Some ships might also contemplate discharging oily wastes to sea wilfully despite the existence of adequate reception facilities. The principal motivation for such discharges is to avoid paying the fee for receiving oily wastes ashore and/or face the loss of time necessary for disposing of Annex I wastes appropriately.

Under-maintenance, under-manning and postponement of repairs for OWS systems and/or incinerators can lead to a situation where ships that previously had the capacity to treat oily wastes and oily water on-board can no longer do so and may choose to discharge these overboard rather than pay for their proper land-side reception. Evidence from the prosecution of oil pollution court cases reveal that OWS and/or 15 ppm oil monitor bypass pipes have been found on all types of ships, from decrepit cargoes to prestigious cruise ships.

Maintenance costs on vessels typically rise more quickly as vessels age while charter costs typically decrease. In general, these costs are significant given that repairs and maintenance represent the second largest operating cost after manning. Owners must make a determination as to the amount of maintenance they feel is worthwhile given the slowly dwindling trading life of the vessel. The index of maintenance costs in the table below highlights that past a ship's 20th birthday, some owners may feel that high maintenance/repair outlays are no longer worthwhile and these decrease markedly. From the perspective of environmental compliance costs, this means that ships most able to pollute (fewer SBT tankers, fewer modern OWS, fewer incinerators, etc) are often not maintained in such a way as to avoid MARPOL infractions.

Index of maintenance and repair costs with ship's age (ship class 5-9 years-old = 100)		
0-4	80	40
5-9 *	100	100
10-14	125	175
15-20	160	200
+ than 20	200	135

Source : Drewry Shipping Consultants.

Shipowners and operators are free to determine the level of maintenance they wish to keep for their ships. Low maintenance in itself is not a violation of international maritime rules and is often used as a cost-saving strategy in tight market conditions. Low maintenance, however, can lead to equipment breakdowns which then imply much higher compliance costs. These may be avoided by unscrupulous operators by postponing repairs and disposing of oil waste at sea. Thus, while the first-order costs of Annex I operational procedures are not that great, the second-order costs to shipowners and operators are significantly higher. Avoiding these provides the non-compliant owner/operator with an advantage over a competitor that spends more on maintenance, repairs, stores, manning and waste disposal.

Illustrative examples

Precisely determining the aggregate cost savings accrued through non-compliance with international environmental regulations is a difficult task. The rules are complex, refer to numerous specific sizes and classes of vessels, span a wide range of environmental media and non-compliance strategies vary enormously. Many operators who keep specific track of these costs are hesitant to share this information because of its commercial sensitivity. Others simply do not have in place systems for monitoring their environmental compliance costs per se. In this context, it may be worthwhile to examine some specific examples to gain insight into the nature and scope of the cost savings achieved by non-compliant operators.

The following table illustrates three representative environmental compliance budgets for a container vessel, a large bulker and a large tanker. The tables have been built using data collected through public sources, industry interviews and responses to a detailed questionnaire. However, for all of the reasons cited above, they should be considered indicative of the general magnitude of current and projected compliance costs. In all three cases, the ships are assumed to fully comply with current environmental regulations and have on board well-maintained and functioning environmental equipment, including an incinerator. All oily bilges are assumed to be processed through the OWS to the extent of the OWS's treatment capacity. The costs for waste disposal reflect average costs that can be encountered in world-wide trading. Finally, all three vessels are assumed to comply with MARPOL at all times, regardless of the existence or not of adequate port state reception facilities.

Environmental compliance costs (USD)			
	66 000 DWT Containership (4800 TEU)	150 000 DWT Bulk Carrier	280 000 DWT Oil Tanker
Daily Operating Cost	7 212	6 432	8 747
Total Daily Fixed Cost	23 431	17 326	29 102
Oily-Water Separator	10000	10000	10000
15 ppm. Monitor	1000	1000	1000
Incinerator	45000	45000	45000
Annex VI equipment (proposed)	*50000*	*50000*	*50000*
sub-total	56000	56000	56000
Capital Costs per year	**4 655**	**4 655**	**4 655**
Capital Costs per day	13	13	13
Capital Costs per day (w/ Annex VI equipment)	24	24	24
Filters	2000	2000	2500
Maintenance OWS	1000	1300	1600
Maintenance OWS system pipes, valves and tanks	1530	1000	780
Maintenance Incinerator	1000	1000	1000
Maintenance Annex VI	*1500*	*1500*	*1500*
Record-keeping	14700	14700	18000
Training	2850	2850	3600
MARPOL fixed costs per year	**23080**	**22850**	**27480**
MARPOL fixed costs per day	63	63	75
MARPOL fixed costs per day (w/ Annex VI)	67	67	79
Delay caused by Oily Waste discharge	n/a*	n/a*	5000*
Garbage discharge (~70/m3 – part incinerated)	3 322	767	1 278
Oily Bilge Water (~50 USD/m3, partly processed through OWS)	0	13 140	33 641
Sludge/Slops (~50 USD/m3, partly processed through incinerator)	54 933	13 980	131 179
Total Waste Costs/year	**58 254**	**27 886**	**166 097**
Total Waste Costs/day	160	76	455
Ballast/day, @.20 USD m3, 40-day voyage	99	308	172
Total Waste and Ballast Costs/day	259	384	627
* Industry sources have indicated that delays caused by off-loading oily waste are generally insignificant – however, when they do occur because of insufficient facilities or queuing for access to facilities, they can grow quickly.			
Annex I certification per year	335	335	1370
Annex IV certification per year	87	87	87
Certification Costs per day	1	1	4

TBT painting	218 489	173 952	334 048
TBT-free paint sur-cost	63 158	38 172	95 388
Hull washing (1 every 2.5 years)	7 000	10 000	10 000
Anti-fouling Convention Compliance Costs/day	38	26	58
Total Estimated Compliance Costs per Day w/ Annex VI	252	168	563
Total Estimated Compliance Costs per Day w/ Annex VI and Antifouling Convention	291	195	620
Total Estimated Compliance Costs per Day w/ Annex VI, Antifouling Convention and Ballast Water Management (open sea exchange)	390	502	793
*As a percentage of Daily **Operating** Costs*	*3.4%*	*2.6%*	*6.4%*
As a percentage of Daily Operating Costs w/ Annex VI	*3.9%*	*2.6%*	*6.4%*
As a percentage of Daily Operating Costs w/ Annex VI and Antifouling Convention	*4.5%*	*3.0%*	*7.1%*
As a percentage of Daily Operating Costs w/ Annex VI, Antifouling Convention and Ballast Management (open water exchange)	*6.1%*	*7.8%*	*9.1%*
*As a percentage of Daily **Fixed** Costs*	*1.1%*	*0.9%*	*1.9%*
As a percentage of Daily Operating Costs w/ Annex VI	*1.1%*	*1.0%*	*1.9%*
As a percentage of Daily Operating Costs w/ Annex VI and Antifouling Convention	*1.2%*	*1.1%*	*2.1%*
As a percentage of Daily Operating Costs w/ Annex VI, Antifouling Convention and Ballast Management (open water exchange)	*1.7%*	*2.9%*	*2.7%*

One of the most striking results of this cost simulation is that the overall environmental compliance costs are not that great and do not account for an extravagant expense in a remunerative charter market *(e.g.* time charters negotiated above operating and capital costs). Environmental compliance costs represent approximately 1-2% of the total fixed costs (capital and operating costs) of the respective vessels chosen in this simulation. However, these costs do account for approximately 3.5 to 6.5% of the daily operating costs (excluding the costs of financing the vessel). This figure is significant for several reasons.

The first is that these costs are related to systems that have no impact on the ship's ability to navigate. They represent "risk-free" cost-cutting opportunities if one only considers the safety of crew and the navigability of the vessel. A ship with a poorly-maintained and inoperative OWS can still sail and earn income, one with cracked bulkheads and an inoperative radar, however, is at great risk of a catastrophic loss of ship and cargo. Thus, substandard operators might wish to cut costs in their environmental-related expenditures first (along with, dismayingly, safety expenditures for crew).

Environmental Compliance Costs: Older Vessels in Tight Markets

Shipowners seek to ensure a positive rate of return when leasing and/or operating their vessels. However, when faced with unfavourable market conditions, many shipowners must make a difficult decision -- laying up the vessel until market conditions improve, or continuing to trade at rates that are substantially below fixed costs. Many owners choose the latter option as this at least provides them with some revenue until the market swings back into their favour at which time they expect to compensate for their losses. It is in this case -- ships trading below fixed costs in a tight charter market -- that the costs related to environmental compliance are greatest and the temptation to contravene MARPOL and related laws is strongest. This is especially true for older ships whose environmental compliance costs are greater than newer and better-maintained vessels.

For example, let us assume that in a particularly tight market, owners are negotiating vessel charters at 30% below operating costs. Let us further assume that these vessels are older and are maintained to a lower standard. The ships consume more fuel, produce more fuel sludges and oily bilges, and would -- for strict compliance with MARPOL -- require more frequent maintenance of their pollution control equipment. Let us further assume that the OWS has become inoperative because of poor maintenance and all oily bilges and sludges must be disposed of in port. The table below illustrates costs that one could expect to encounter:

Compliance Costs (USD): Older, poorly maintained ships in tight charter markets	66 000 DWT Containership (4800 TEU)	150 000 DWT Bulk Carrier	280 000 DWT Oil Tanker
Estimated Required Env. Reg. Compliance Costs per Day	391	311	750
Estimated Actual Env. Costs per day - Non-Complying Vessel	*28*	*28*	*31*
Costs of Full Compliance in a Tight Charter Market: ratio of costs to charter rate negotiated at 30% below operating costs			
Compliance Costs MARPOL	10.1%	8.6%	15.1%
Compliance Costs w/ Annex VI	10.9%	8.7%	15.2%
Compliance Costs w/ Annex VI and Antifouling Convention	12.0%	9.4%	16.4%
Compliance Costs w/ Annex VI, Antifouling Convention and Ballast Water Management (open sea exchange)	14.7%	17.9%	19.9%

Thus, in this case, environmental compliance costs range from 10% to 15% of the charter rate. With implementation of new environmental regulations, these costs could increase to 15% to almost 20% of the charter rate. A non-complying shipowner/operator could forego most of these costs by not maintaining the OWS and other pollution control equipment and dumping most, if not all, of the sludges, oily bilges and other waste overboard. With unavoidable costs ranging from 28 to 31 USD per day, the non-complying operator can expect to derive a significant unfair and illegal competitive advantage over a complying shipowner trading with similar vessels.

The second reason that these costs are significant is that while these costs are small in a remunerative or break-even market (*e.g.* timecharter rates equal to capital costs plus operating costs), they loom ever larger in a market characterised by oversupply and low time-charter and spot rates. For example, while the 1999 break-even-rates for the above ships were USD 17 326 for the Bulker and USD 29 102 for the Oil Tanker, average timecharter rates for the same type of vessels in 1999 were USD 11 260 and USD 25 750, respectively. While shipping markets are cyclical, and operators have other means at their disposal to reduce costs (e.g. through lower-cost crewing), these gaps between revenue and costs serve to underscore the pressure operators face to cut costs wherever possible (see box).

Another point highlighted by the cost calculation above is the magnitude of costs that will be faced by operators as Annex VI, the Antifouling Convention and the soon-to-be-defined Ballast Water Convention come on-line. These will represent a higher order of magnitude of costs for operators and, therefore, a greater opportunity for non-complying operators to gain an unfair competitive advantage.

The table below estimates the cost savings realised through "typical" non-compliance. Information gleaned from Port State Inspections and court cases indicate that many non-complying operators have inoperative OWS systems. For this example, let us assume that these operators do not maintain their OWS system, do not store spares and/or otherwise fix inoperative OWS systems. Let us further assume that they do not have an incinerator on board and that they dump most, if not all, of their garbage overboard. Their only MARPOL-related costs are related to (fraudulent) record-keeping in their Oil and Garbage Record Books and certification. Under these realistic assumptions, the cost savings resulting from non-compliance can be estimated as follows:

Total estimated daily environmental costs (USD): non-complying ship	66 000 DWT containership (4800 TEU)	150 000 DWT bulk carrier	280 000 DWT oil tanker
Total Estimated Daily Environmental Costs	**28**	**28**	**31**
% savings over complying operator's environmental costs	*89%*	*83%*	*94%*
Avoided Waste Disposal Costs: Sea dumping by Non-complying Ship	*209*	*139*	*1 044*

Thus the substandard operators in this case can expect to reduce their environmental compliance costs by 83-94%. Furthermore, by dumping all wastes overboard rather than retaining them on board if and when their OWS and/or incinerators fails, they can expect to reap additional savings over a compliant operator facing an OWS/incinerator breakdown. These avoided costs represent perhaps the largest category of cost savings obtained through environmental non-compliance. In absolute terms, low maintenance and repair of equipment may represent approximately USD 35 to USD 45 per day cost savings for the unscrupulous operator, direct overboard dumping (in the event of an OWS breakdown) will save the same operator anywhere from USD 140 to USD 1 044 per day.

The above examples illustrate "typical" cases on "average" non-compliant ships. As mentioned in the opening of this section, the costs associated with non-compliance can vary enormously. It would take little -- say an increase in the production of bilgewater and/or HFO sludges, or a trading pattern linking a high-cost waste discharge area (*e.g.* east coast of North America) to an area where no port waste discharge facilities exist (*e.g.* West Africa) to significantly increase costs and render non-compliance more attractive.

The above calculations also assume that there are little if no delays related to MARPOL compliance. However, industry sources indicate that while delays attributable to MARPOL compliance (*e.g.* off-loading oily waste into a port reception facility) are not extremely common, when they do occur, they increase costs. These costs can be attributed to the amount of time a vessel is taken off-hire for repairs (say, in the case of having to receive and install a new OWS) or the amount of lost trading time due to delays in off-loading oily wastes due to queuing for insufficient port reception capacity. Assuming that daily revenue for a vessel is equal to its operating costs and that a vessel encounters 10 half-day delays in the year, the costs of full compliance with all MARPOL annexes and draft ballast water rules increases by approximately 1% from 6-9% to 7-10% of operating costs depending on ship type and size.

The above examples serve to illustrate that on average, while not overwhelming, certain costs *can* be saved through non-compliance with international environmental regulations. Cost savings from non-compliance must also be put into their temporal context. The longer the period of non-compliance, the larger the savings. For example, one low-risk strategy for non-compliance might involve delaying necessary repairs on MARPOL equipment in areas with ineffective Port State Control agencies. The savings from these delayed operations, and the savings from at-sea disposal of oily wastes, give the non-complying ship owner/operator an advantage over other operators who choose to maintain their equipment to a higher standard and/or seek to dispose of their oily wastes in concordance with Annex I's restrictions if their OWS is inoperative.

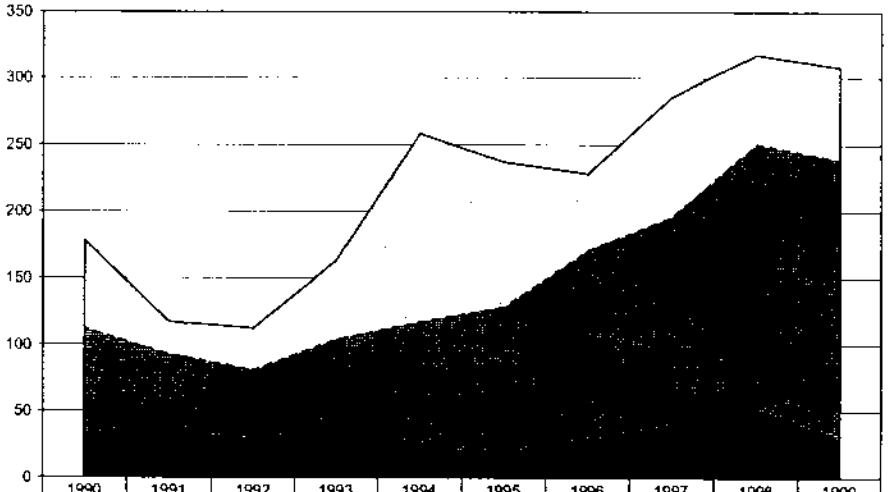
Negative incentives: MARPOL prosecutions and fines

Some shipowners, operators and crews feel that the cost savings available to them through non-compliance with MARPOL are worthwhile given the relatively small chance of being caught and/or convicted of polluting at sea. As seen previously, Port State inspections can be instrumental in discovering evidence of improper conduct. They can uncover evidence of illegal activities such as traces of oil in flexible piping found in the pump room, oil residue in the overboard discharge manifold, discrepancies in the Oil Record book, etc, but they very rarely catch vessels in the act of polluting.

Illegal discharge of wastes at sea often takes place away from shorelines and under cover of night. These two factors make it difficult for port and coastal states to detect acts of pollution, and/or positively identify the polluting vessel. Furthermore, if the discharge takes place outside of the coastal state's exclusive economic area, the sole competent authority is the flag state – some of whom have dismal records relating to the prosecution of MARPOL contraventions. In those instances, coastal states can relate details of the suspected discharge to port states who then can seek to investigate the vessel in port and, possibly, charge the master, owner and/or operator with presenting a fraudulent Oil Record book.

Many coastal states have in place some form of aerial surveillance programme consisting of aircraft outfitted with optical and/or radar detection units. These can catch photographic and or video proof of the polluting vessel's identity and, in the case of radar units, can detect polluting ships at night. These, along with the expert testimony of a qualified observer, are usually sufficient to prosecute cases where the illegal discharge takes place within the coastal state's exclusive economic zone. However the ratio of observed spills to prosecutions remains low.

Results of Maritime Pollution Surveillance Efforts in France 1990-1999



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Oil slicks reported to the authorities	178	117	112	163	258	237	228	286	318	308
Oil slicks reported in ship's wakes	112	93	81	104	117	128	171	196	251	239
Polluting vessels positively identified	32	40	24	45	23	19	28	39	52	30
Legal proceedings instigated	19	23	16	37	17	19	21	40	37	27

The results of France's surveillance efforts are representative of other efforts to apprehend maritime polluters using airborne surveillance techniques. As can be seen from the above figure, the ratio of proceedings instigated to slicks reported is typically low at an average of nearly 13% for the nine years covered. The ratio of proceedings instigated to observed ship wake pollution incidents, while still low, increases to nearly 20% and when a ship has been positively identified, nearly four out of five cases (and in some years 100% of cases) result in the instigation of legal proceedings.

Similar figures are reported by the German Federal Maritime and Hydrographic Agency (BSH) – the German Authority responsible for imposing fines in the cases of MARPOL-related convictions. In 2000, the BSH recorded 329 cases of oil pollution caused by the disposal of oily-water, fuel sludges and oily tank washings. Of these, the BSH reported that in 57 incidents, the ship was positively identified. The BSH also reported 221 cases of improperly kept Oil Record books, 51 cases of illegal OWS bypass piping and 35 cases of improperly kept Garbage record books. In 52 cases, proceedings were suspended and 38 cases were referred to the competent Flag State.

Fines for breaches of MARPOL vary enormously throughout the world. Liability for MARPOL breaches also varies among different jurisdictions with some countries targeting the master and/or crew and others seeking to place responsibility higher up the chain of command. Finally, there can exist a wide variance between the theoretical level of fines outlined in official texts and fines imposed in real-world cases which serve as the actual deterrent against illegal activity. However, the general trend – at least in OECD countries – has been for fines to increase in recent years.

Examples of recent fines and penalties imposed in the prosecution of MARPOL offences[4]			
Spain	2002	Queen T	594 000 USD
United States	2002	M/T Alkyon, Ionia Management S.A.	1 035 000 USD
United States	2002	Fleet-wide breaches of MARPOL, Carnival Corporation	18 000 000 USD
United States	2002	Shipping Fleet, Boyang Maritime Kyeong Shin Deep Sea Fisheries Company of Pusan Korea, Boyang Limited, Trans Ports International (TPI) and Oswego Limited	5 000 000 USD
Canada	2002	M/V Baltic Conference	78 335 USD
France	2002	Stonegate	75 000 USD
France	2002	Nada III	75 000 USD
United States	2001	Lihue, Matson Navigation Company	3 000 000 USD
United States	2001	SS Norway, Norwegian Cruise Line Ltd.	1 500 000 USD
France	2001	Kestutis	90 000 USD
Canada	2000	Nordholt	27 265 USD
United Kingdom	2000	Stena Alexita, Partrederiet Stena Ugland Shuttle Tankers	11 737 USD
United Kingdom	2000	Crystal Rubino, Finbeta Spa	32 863 USD
France	2000	Hyundai Continental	120 000 USD
France	2000	Great Century	100 000 USD
France	2000	Irongate	45 602 USD
United States	1999	Fleet-wide breaches of MARPOL, Royal Caribbean Cruises Ltd.	18 000 000 USD
Canada	1999	Brandenburg	16 500 USD
Netherlands	1999	M/V World Prophet	81 000 USD
United Kingdom	1999	Sirte Star, Seatide Shipping Ltd	40 987 USD
United Kingdom	1999	Luckyman, Lindos Shipping Co Ltd	13 239 USD
France	1999	Far East Victory	91 470 USD
United States	1998	Fleet-wide breaches of MARPOL, Royal Caribbean Cruises Ltd.	9 000 000 USD
United States	1998	SS Rotterdam, Holland America Line Ltd	2 000 000 USD
United Kingdom	1998	M/V Weser	411 000 USD
United States	1997	M/V Frances Hammer	509 000 USD

As seen in the preceding table, fines related to the successful prosecution of acts of intentional pollution vary enormously and can run into the millions of dollars. Owners and operators of ships facing relatively small fines may consider these to be part of the "normal" costs of doing business. For instance, a 30 000 USD fine represents approximately 82 USD per day for a vessel caught once during the course of the year. When one considers that environmental compliance costs presented in the examples on page 44 range from 164 to 558 USD per day, this seems like a relatively good bargain for the unscrupulous operator. Large fines, on the other hand, may make some shipowners and operators think twice about polluting[5]. This is especially true as fines resulting from breaches of MARPOL are typically not covered in the ship's Profit and Indemnity (P&I) insurance cover.

4. The fines presented in this table are illustrative of the wide range of penalties imposed among OECD members. In many non-OECD jurisdictions, both the fines and the odds of being apprehended may be lower (*e.g.* in the Philippines, fines for discharging oily water and/or sludges range from USD 76 to USD 190 USD).

5. However, put into perspective, the largest penalties ever levied for breaches of MARPOL -- 18 million USD for both Royal Caribbean and Carnival Cruise Lines -- only represented 0.7% and 0.4% of operating revenues respectively for those companies in the year the fines were imposed.

Insurers belonging to the International Group of P&I Clubs cover approximately 90% of the world's merchant fleet. The remaining 10% are covered by smaller independent P&I clubs or have insurance cover through other commercial establishments. The coverage offered by all of the International Group member policies is of the "named risks" type – that is, the policies specifically state which risks are covered and which are not. All International Group members state in their rules that coverage for fines resulting from oil pollution are covered only in the case of *accidental* discharges – and seven of these specifically state that they do not cover fines resulting from breaches of MARPOL and/or other wilful misconduct (see table below).

P&I Club	Coverage of fines linked w/ "accidental discharge" of oil.	Specific clause relating to non-coverage of deliberate MARPOL violation
West of England Ship Owners Mutual Insurance Association	yes	no
The United Kingdom Mutual Steam Ship Assurance Association (Bermuda) Ltd.	yes	yes
The Swedish Club	rules not posted	rules not posted
The Steamship Mutual Underwriting Association (Bermuda) Limited	yes	no
The Steamship Mutual Underwriting Association (Europe) Ltd.	yes	no
The Steamship Mutual Underwriting Association Ltd.	yes	no
The Standard Steamship Owners Protection and Indemnity Association (Bermuda) Ltd.	yes	yes (qualified as "wilful misconduct"
The Standard Steamship Owners Protection and Indemnity Association (London) Ltd.	yes	yes (qualified as "wilful misconduct"
The Standard Steamship Owners' Protection and Indemnity Association Ltd.	yes	yes (qualified as "wilful misconduct"
The Shipowners Mutual Protection and Indemnity Association (Luxembourg)	yes	yes
The North of England Protecting and Indemnity Association Ltd.	no	ambiguous
The Japan Ship Owners' Mutual Protection and Indemnity Association	rules not posted	rules not posted
The London Steam-Ship Owners' Mutual Insurance Association Ltd.	rules not posted	rules not posted
The Britannia Steam Ship Insurance Association Ltd.	yes	yes
The American Steamship Owners Protection and Indemnity Mutual Association Inc.	yes	yes (qualified as "wilful misconduct"
Assuranceforeningen Gard (Gjensidig)	yes	no
Assuranceforeningen Skuld (Gjensidig)	yes	no

Of course fines are not the only costs that can arise from a MARPOL prosecution – these can also include the costs of legal proceedings and lost trading time. Again, the International Group of P&I clubs only covers these costs in relation to a *successful* claim to a Club member – insofar as wilful contravention of MARPOL and its annexes does not constitute grounds for such a claim, these extra costs are therefore not covered. However, as seen in the previous section, not all prosecutions are successful and in these instances, legal and other related costs would be recoverable from the P&I.

Conclusions

MARPOL 73/78 and other international conventions clearly set out the regulatory framework for international maritime transport vis-à-vis this sector's environmental impact. These rules apply to all ships sailing the flag of countries that have ratified these Conventions and their annexes. Abiding by these rules, however, requires ship owners and operators to adopt specific operating procedures, invest in equipment and build and/or modify ships and engines according to specific technical requirements. As such, these rules bear certain compliance costs.

The most important compliance costs are those related to structural changes in ships and, eventually, engines and ballast water treatment. In particular, requirements for mandatory double hull construction and the installation of SBT systems have been quite large compared to many other environmental compliance costs. However, it is perfectly legal for a 25+ year-old tanker to operate a CBT/HBL system and compete in the same trades as a more recent tanker. While the costs of operating such a ship can be lower due to the lower capital costs, this is not a case of "unfair" competition from a non-complying vessel.

Generally the structural changes brought about by MARPOL, by their nature, are not sources of "unfair" competition by operators. This cannot be said for the operational requirements of MARPOL and other environmental maritime conventions. What happens on board a ship, as opposed to the shipyard, can and is a source of "unfair" non-compliance by unscrupulous operators.

Take the example given above, two ships, one pre-MARPOL CBT tanker operating with HBL and one post-MARPOL double hull SBT ship compete for the same spot charter. The first will have higher operating costs (if maintained to standard by the owner) and lower financing costs. The second might have lower operating costs but will have much higher financing costs. All things being equal, a charterer interested primarily in the lowest price might go with the former. Even though cheaper and older, the former has not contravened MARPOL and its lower cost does not constitute an ill-gained competitive advantage.

Now, take the case of the same vessel as in the first instance and put it up against the same type of ship for another spot charter. However, in this case, the second boat decides to forgo the operational requirements calling for it to use HBL. In this case, the second ship will derive an "unfair" competitive advantage equal to the extra amount of oil it can load in contravention to the HBL restriction (5-8% more cargo can be loaded in this case thus increasing the attractiveness of this boat to the cost-focused charterer).

Put in the perspective of average operating costs, MARPOL's operational requirements are not typically a great source of cost outlays. The cost of maintaining and repairing equipment in order to meet discharge requirements are not terribly large – in a remunerative market. This paper estimates these to be in the order of 3% to 6% of daily operating costs on a MARPOL-compliant ship. However, when pushed to the wall by low charter rates and unchanging and/or increasing operating costs – some shipowners might seek to gain whatever savings they can by lowering their maintenance standards, repair frequency, seafarer training, etc. This paper estimates that environmental compliance costs on older vessels operating in an unremunerative market (for instance, with charters negotiated at 30% below operating costs) quickly swell to 9% to 15% of daily operating costs. Some shipowners and operators may even feel that contravening MARPOL may be a "safe" cost-cutting strategy in that they can reduce their environmental compliance costs without endangering the integrity of the vessel, its crew or its cargo. This is a choice fraught with financial risk because when environmental subsystems fail on a vessel – especially those systems responsible for the management of wastes and water -- compliance costs suddenly increase in proportion to the wastes to be unloaded in ports, the time necessary to unload these wastes and the cost of repairs to be undertaken.

There are several possible strategies to address shipowners' and operators' non-compliance with operational requirements of international environmental rules.

The first is preventative. The existence of better enforcement, inspection, surveillance and more deterring penalties factor into the decision to infringe MARPOL's requirements. Technology advances allowing Coastal States to detect bilge dumping at night, better oil sample identification methodologies and stiff deterring fines (recently as high as USD 18 million each in two high-profile cases against cruise lines systematically bypassing their ships' OWS) all serve to deter shipowners from risking non-compliance with MARPOL. However, most fines levied in cases of maritime pollution are as high and therefore may not serve as an adequate deterrent – especially insofar as their payment represents a smaller outlay than environmental compliance. Furthermore, efficient surveillance, effective port state controls, well-functioning courts and heavy fines are all reunited in only a few of the globe's regions. The absence of one, or several of these factors, increases the facility with which substandard operators can breach international environmental regulations.

The second is to provide shipowners and operators with the opportunity to comply. As seen previously, the necessity for Port States to supply adequate port waste reception facilities is a necessary pre-condition for ensuring compliance with many of MARPOL's annexes. However, these are notoriously lacking in many parts of the world. Furthermore where they do exist, they are often impractical or expensive. Port States have a responsibility to ensure that ship's wastes can be received onshore in good conditions. Furthermore, they have an incentive to develop fee structures and waste disposal requirements that make it easier, rather than harder, for ships to comply. In this respect, integrating at least a portion of the waste disposal fee in to harbour duties and requiring the discharge of certain types of wastes (as recently adopted within the EU) would seem to be a good first step.

A third strategy would be to continue to regulate the on-board operations of ships. This has formed part of the IMO's approach in the past and much progress has been made with respect to putting in place verifiable systems to track environmental compliance onboard ships (*e.g.* different record books, monitors and recording devices). However, in their current configuration, these requirements sometimes fail not because they are ill suited to the task but because they require strong and constant oversight by Port States and Flag States. Better enforcement of what exists would be more helpful than the imposition of new rules.

A fourth strategy exists as well, and goes to the heart of the problem of illegal oil discharges from ships. The principal source of petroleum hydrocarbons dumped at sea by ships are by far the remnant fuel oil sludges that non-complying vessels do not wish to keep on board and discharge into ports as required by MARPOL. That ships produce these sludges is no surprise as the vast majority of ocean-going vessels consume one of the "dirtiest" of all fuel sources available - heavy fuel oil. While progress has been made in cleaning up this fuel, it still remains the final residue of the oil refining chain and, as such, will remain a source of toxic and persistent sludges. Weaning the maritime sector away from these fuels and towards cleaner sources of energy, much as what has been done for land transport, would go a long way towards reducing sludge production, oil discharges and the competitive advantage accruing to non-compliant vessels.

Finally, this paper has tried to highlight the financial advantages that can accrue through non-compliance. While a small percentage of shipowners and operators would contravene international environmental rules no matter what the economic context – almost by habit and/or a lack of "environmental culture" (much as some operators simply have not developed a "safety culture"), many choose to avoid compliance costs when margins are tight. The maritime sector is characterised by a high level of fragmentation and a near chronic oversupply problem. Ensuring a more balanced shipping market may go a long way towards reducing the pressure on shipowners and operators to achieve savings no matter what the cost. In this respect, addressing some the fundamental supply/demand imbalance and possible ways to relieve this imbalance may hold promise for reducing the incidence of operational pollution from ships.

APPENDIX A: SAMPLE SHIP CAPITAL AND OPERATING COST BUDGETS (1999 DATA) AND SHIP CHARACTERISTICS

(see table on page 43)

	66 000 DWT containership (4800 TEU)	150 000 DWT bulk carrier	280 000 DWT oil tanker
Year built	1992	1992	1992
Size (DWT)	66 000	150 000	265 000
Replacement Cost	71 218 866	47 835 843	89 378 355
Annual Capital Cost	5 919 893	3 976 237	7 429 356
Daily Capital Cost	**16 219**	**10 894**	**20 354**
Crew Cost (ITF Crew)	997 875	828 206	1 094 467
Lubes & Stores	355 875	314 381	488 764
Maintenance & Repair	686 750	378 495	448 845
Insurance	472 375	630 391	904 461
Administration	119 625	196 194	256 169
Fixed Annual Operating Cost	2 632 500	2 347 667	3 192 706
Fixed Daily Operating Cost	**7 212**	**6 432**	**8 747**
Total Annual Fixed Cost	8 552 393	6 323 904	10 622 062
Total Daily Fixed Cost (break-even point for Timecharter rate)	**23 431**	**17 326**	**29 102**
HFO consumption (tonne/day)	170	60	80
HFO Sludge Production (m3/day)	2.86	1.01	1.34
Bilge Water Production (m3/day)	1.10	1.70	3.00
Tank Washing (6000 m3: washing 3-4 holds/year) m3/day			16.44
Total Slops/sludge Produced/day	3.01	1.25	7.52
Ballast (m3 per voyage - ballast voyage for tanker)	19 800	61 500	68 900
Other Garbage (m3/day)	0.16	0.05	0.07

Source: US ACE 2000 (Economic Guidance Memo), EMARC Project, Drewrys.

ATTACHMENT

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Assessing seabird mortality from chronic oil discharges at sea
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pg. 627

ASSESSING SEABIRD MORTALITY FROM CHRONIC OIL DISCHARGES AT SEA

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Abstract: Chronic marine oil pollution is an ongoing global problem, yet no model currently exists to assess seabird mortality from continuous low-level inputs of oil. Taking into account persistence and detection rates of birds on beaches, and the wind-dependent proportion of birds lost at sea, we present a general mathematical Oiled Seabird Mortality Model (OSMM) to assess seabird mortality due to chronic oil pollution along a given coastline, using birds counted during systematic beached-bird surveys. We applied our OSMM to Newfoundland, Canada, where the incidence of chronic oil pollution is among the highest in world. We estimated that between 1998 and 2000, an average of 315,000 ± 65,000 murres (common [*Uria aalge*] and thick-billed [*U. lomvia*]) and dovekies (*Alle alle*) were killed annually in southeastern Newfoundland due to illegal discharges of oil from ships. Thick-billed murres that overwinter on the Grand Banks made up 67% of this kill. This species already is subject to extensive summer and winter hunting in Greenland, as well as winter hunting in Newfoundland, which harvests an additional 250,000–300,000 birds/year. Although populations remain stable, these levels of sustained mortality make thick-billed murre populations vulnerable to pulse perturbations and ocean regime shifts and hamper our ability to set harvest at sustainable levels.

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Key words: chronic, dovekies, model, mortality, murres, Newfoundland, oil, pollution, seabirds.

Oiled birds have washed ashore for decades in many regions of the world where heavy ship traffic overlaps with dense seabird concentrations (Chardine 1990, Camphuysen and Heubeck 2001). Unless the direct result of a catastrophic spill, oil found on beached seabirds usually is heavy fuel oil, the type typically found in bilges of large ocean-going vessels, such as tanker, cargo, and container ships (Averbeck et al. 1992). In fact, oiled, beached birds often are the only indications that oil has been illegally spilled into the marine environment (Furness and Camphuysen 1997). Beyond the obvious number of dead, oiled birds found on beaches, assessing total seabird mortality accurately is difficult, even when oil spills are large and well documented (Ford et al. 1987, Page et al. 1990, Piatt et al. 1990, Burger 1993, Van Pelt and Piatt 1995, Fowler and Flint 1997).

The effects from numerous chronic oil spills may be more important to long-term seabird population stability than occasional large spills (Hunt 1987, Burger 1992, Nur et al. 1997). Seabirds typically are long lived, so mortality sources that kill adult birds have a strong impact on populations. Some seabird populations also face other anthropogenic mortality sources, such as fisheries bycatch and sport and subsistence harvests (Falk and Durinck 1992, Elliot 1991, Österblom et al. 2002). Accurate estimates of all sources of seabird mortality, including chronic oil-pollution mortality in which these levels are high, are needed so that effective seabird conservation and management plans can be developed and implemented.

Estimating the number of birds that die at sea due to chronically spilled oil is a complex issue, although it shares some common points with estimating seabird mortality resulting from catastrophic spills (Ford et al. 1987). Only a small proportion of birds that die at sea wash up on shore, as most birds sink, are scavenged, or drift away from shore (Ford et al. 1987, Page et al. 1990, Hlady and Burger 1993, Wiese 2002*a*). Of those birds that arrive on a beach, many are not tallied during regular beached-bird surveys because they are not detected, are eaten by scavengers, or are covered by the beach substrate through wave action (Ford et al. 1987, Page et al. 1990, Hlady and Burger 1993, Fowler and Flint 1997, Wiese 2002*a*). Detailed and geographically specific information is needed for all these factors to accurately estimate seabird mortality due to chronic oil pollution.

We developed a general mathematical model to estimate seabird mortality due to chronic oil pollution in a defined area. We then applied our model to southeastern Newfoundland, Canada,

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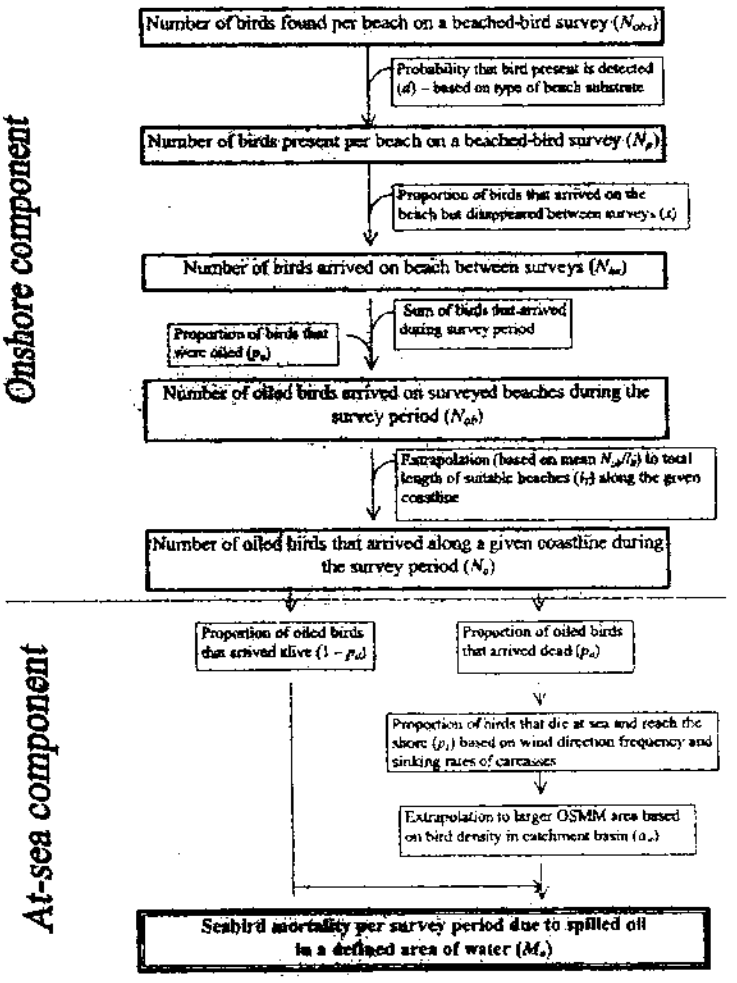

Fig. 1. Schematic diagram of the Oiled Seabird Mortality Model (OSMM).

an area where chronic oil pollution is among the highest recorded in the world (Wiese and Ryan 2003), to estimate the numbers of thick-billed murres, common murres, and dovekies killed annually due to chronic marine oil pollution. These first 2 species are harvested legally in Greenland and Newfoundland, so estimates of oil mortality also are needed to help set harvest regulations at sustainable levels.

METHODS

Oiled Seabird Mortality Model

The process of estimating seabird mortality at sea due to chronic oil pollution can be divided into 2 components (onshore and at-sea mortality) and is the reverse of the natural process that occurs after seabirds encounter oil on the water (Fig. 1). For the onshore component, the number of birds found on beaches is extrapolated through a sequence of 4 steps to estimate the total number of oiled birds (N_o) that arrived along a defined stretch of coastline during the survey period. During the at-sea component, N_o is extrapolated out to sea in a sequence of 4 steps to determine total seabird mortality (M_o) due to spilled oil in a defined area of water.

Onshore Component.—First, the number of dead birds found on a beach during a regular beached-bird survey (N_{obs}) is corrected for the probability of detecting birds on the beach (d). This probability can be dependent on beach substrates and the observer. Second, N_{obs} is further corrected using a persistence coefficient (s) to account for birds that arrived on a beach following the last survey but disappeared in the interim period due to scavenging or substrate turnover. Once the correction factors are applied, the result is an estimate of the actual number of birds that arrived on a particular beach between surveys (N_{bs}). Third, the total number of oiled birds that arrived on surveyed beaches during each survey period (N_{ob}; e.g., winter months) is calculated by summing N_{bs} for all beaches over the entire survey period and multiplying this number by the overall proportion of oiled birds found (p_o) during the survey period. An estimate of the total number of oiled birds that arrived along the portion of a given coastline where deposition can

occur (l_T) is calculated by extrapolating the number of oiled birds that arrived on surveyed beaches to include any beaches not surveyed within the limits of the coastal survey area (e.g., due to inaccessibility). Our assumption for this extrapolation is that all areas along the coastline considered suitable for deposition have equal probabilities of collecting birds. In areas where this assumption is not met, the extrapolation can be modified accordingly. Finally, all estimates of N_o are summed over the entire survey period. Thus, the number of oiled birds that arrive along a given coastline during a survey period is calculated as:

$$N_o = \left[\sum_{t}\left[\sum_{beaches}\frac{N_{obs}}{d*s}\right]\right]* p_o * \frac{l_T}{l_b}, \qquad (1)$$

where:

t = total survey period,

beaches = beaches surveyed,

N_{obs} = number of birds found per beach on a given survey,

d = probability that a bird present on a beach is detected,

s = persistence coefficient,

p_o = proportion of birds found that are oiled,

l_T = total length of coastline between survey limits where deposition can occur, and

l_b = length of surveyed beaches.

At-sea Component.—The proportions of birds that die at sea and passively drift to shore (p_d), or swim or fly to shore and die on the beach ($1 - p_d$), must be considered. The later group is tallied in beach surveys as "birds found alive" and is an actual count that does not have to be further corrected. The former represents only the fraction of birds that die at sea and reach the shore and must be extrapolated to a defined area of water. In all likelihood, this extrapolation is wind dependent because the proportion of birds that die at sea and reach the shore (p_s), as well as the area of ocean from which birds found on the beach originate (a_w, catchment area), is variable and directly dependent on wind conditions immediately after death (Wiese 2002*a*). Finally, if desirable, this estimate can be extrapolated to a larger area of ocean, based on knowledge of seabird distributions, ship traffic densities, and known chronic oil spill locations. When combined, these factors will result in an estimate of seabird mortality in a defined area of water during the survey period.

The total seabird mortality due to spilled oil per survey period in a defined area of water is calculated as:

$$M_o = \frac{N_o * p_d}{p_s * a_w} + \left(N_o * (1 - p_d)\right), \qquad (2)$$

where:

N_o = number of oiled birds that arrive along a given coastline during a survey period,

p_d = proportion of birds found on shore that arrive dead,

p_s = proportion of birds that die at sea and arrive on shore based on wind direction frequencies and sinking rates of carcasses at sea, and

a_w = wind-specific catchment area of water from which birds reaching the shore originate.

Correction factors (p_o, s, p_d) with associated errors can be combined using the Delta Method (Williams et al. 2002:736–737), resulting in a final oiled seabird mortality estimate with standard errors and 95% confidence intervals. Alternatively, if error distributions are not well known, or known to be not normally distributed, Monte Carlo simulations using ranges or other assumed error distributions can be used to derive estimates of error.

Oiled Seabird Mortality Model Applied to Newfoundland

Onshore Component.—Most parameters needed to estimate seabird mortality due to chronic oil discharges are geographically distinct and can vary within and among years. We initially determined that 10 days or less was the preferred survey interval to permit accurate interpretation of the number of beached birds found in Newfoundland (Wiese 2002*a*). As a result, the Canadian Wildlife Service in St. John's, Newfoundland, Canada, conducted periodic surveys along a well-monitored stretch of coastline in southeastern Newfoundland (Fig. 2) between October and April during the years 1998–1999, 1999–2000, and 2000–2001. Surveys were conducted only in winter because previous beach surveys have shown that very few oiled birds were found on beaches outside the winter (Wiese and Ryan 1999). A series of further studies determined beached-bird detection rates and persistence coefficients (Wiese 2002*a*, Table 1). We determined species composition and oiling rates using international beached-bird survey protocols (Camphuysen and van Franeker 1992, Camphuysen and Heubeck 2001), and we recorded the ratio of live to dead oiled birds. Prior to extrapolating to

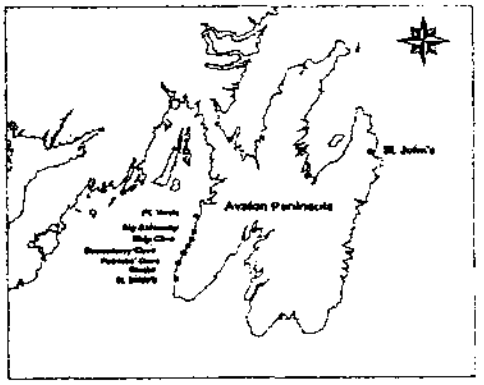

Fig. 2. Study area on the southeast coast of Newfoundland, Canada. Location of periodic beached-bird surveys conducted on the Cape Shore from 1998 to 2001.

the entire coastline, we calculated the number of oiled birds on surveyed beaches during each winter survey period by summing the number of birds that arrived on all beaches during the survey period and multiplying that sum by the weighted mean proportion of oiled birds found for the species considered. We used only that proportion of the birds that arrived on a particular beach between surveys and was made up of species found in both coastal and offshore areas, namely common and thick-billed murres and dovekies.

We determined the total stretch of coastline suitable for carcass deposition on the Cape Shore in southeastern Newfoundland (Fig. 2) using Environment Canada's Sensitivity Mapping Program. This extrapolation was linear, and we assumed that no birds were deposited on cliff edges, or if they were, were eventually dislodged. We also assumed equal probabilities among beaches to collect birds.

At-sea Component.—We determined wind-dependent catchment areas and carcass recovery rates using drift-block experiments (Table 2, Fig. 3). We obtained wind data from a weather station in Argentia (Fig. 3) from the Atlantic Climate Centre in Fredericton, New Brunswick, Canada. The best predictor of the number of onshore carcass recoveries was the cumulative wind-direction vector for the first 3 days after bird carcasses start passively floating at sea (Wiese 2002*a*). We could not assign a wind vector to each bird found during each beach survey because birds may drift for up to 10–14 days at sea (Wiese 2003) and remain on the beach for an average of 3 days (Wiese 2002*a*). Instead, we partitioned wind data for each of the 3 winter survey seasons into 3-day blocks. The cumulative wind vector was calculated for each 3-day block and classed into the 8 categories (N, NW, W, SW, S, SE, E, NE). The frequency of wind directions in each of these 3-day blocks was determined for the entire winter survey. We apportioned the proportion of oiled birds that arrived dead based on the wind-direction frequencies during which onshore recoveries can be expected, namely northwest, west, southwest, and south winds (Table 2). During winds when no recoveries were observed or none were expected, we did not assign birds. We assigned each calculated fraction of N_0 to wind-specific catchment areas and extrapolated using the proportion of recoveries from that area based on drift-block experiments (Wiese 2002*a*; Table 2). For northwest winds, a probable catchment area was used, although others were considered. We then extrapolated the estimated number of dead oiled birds in the catchment area into the larger OSMM extrapolation area, based on the ratio of the catchment area to the defined OSMM area.

The OSMM area selected comprised 56,670 km^2 of the southwest portion of the Grand Banks, including coastal areas around southeastern Newfoundland out to the shelf edge, west to the edge of the Bank, and east to Cape Race (Fig. 3). The boundaries were based on the knowledge that murres and dovekies occur from coastal areas out to the shelf edge (Tuck 1961, Lock et al. 1994), that ship tracks cover the entire shelf, and that mystery oil spills of ship origin have been sighted in the entire area, with most ships discharging their bilges west of Cape Race (Lock et al. 1994; Environment Canada, unpublished data).

Table 1. Parameter estimates or equations used in our Oiled Seabird Mortality Model (OSMM) for Newfoundland, Canada, and compiled from Wiese (2002*a*). Standard errors are given where applicable.

Parameter	Value
Substrate-dependent probability that a bird present is detected (d)	Sand: 0.792 ± 0.029 Cobble: 0.855 ± 0.022 Boulder: 0.879 ± 0.019
Time-dependent persistence coefficient (s)	$0.9718e^{-0.4329x} + 1.366e^{-2.86 \times 10^{-10}}$ where x = survey interval in days
Length of coastline between survey limits on the Cape Shore where deposition can occur (l_T)	14.8 km
Mean length of shoreline surveyed per survey period (l_b)	5.6–6.8 km
OSMM extrapolation area	56,670 km^2

Table 2. Wind-vector frequencies and proportions of oiled birds recovered (±SE) for 3-day periods throughout winters (Oct–Apr) 1998–2001 along the southeast coast of Newfoundland, Canada, rounded to the nearest percent. Catchment areas are derived from Wiese (2002a).

Wind direction	1998–1999 (%)	1999–2000 (%)	2000–2001 (%)	Catchment area (km²)	Proportion of birds recovered
N	10	8	16	0	0
NW	37	32	44	432	0.058 ± 0.009
				1,100[a]	0.058 ± 0.009
				2,200	0.058 ± 0.009
W	40	29	18	2,066	0.122 ± 0.011
SW	2	17	7	2,066	0.122 ± 0.011
S	3	3	0	2,066	0.122 ± 0.011
SE	2	3	0	0	0
E	3	3	2	0	0
NE	5	5	14	0	0

[a] Assumed most accurate.

Finally, the proportion of oiled birds that arrived alive was added to the morality estimate to produce the total seabird mortality estimate due to spilled oil per survey period in the defined area of water. Therefore, live birds were not extrapolated and were assumed to arrive from the entire OSMM area. We repeated this entire process for each winter.

Monte Carlo Model.—Although error estimates for onshore components were generally good, we also used a Monte Carlo procedure (Ford et al. 1996). We ran the model 1 million times for each year. For each run, a value was randomly selected from a normal probability distribution for each of the parameters that had measured errors (Tables 1, 2).

Assumptions and Perturbation Analysis.—We made a number of critical assumptions when applying the general model to Newfoundland. (1) The probability of birds being deposited on surveyed and nonsurveyed beaches was equal. (2) Catchment areas and recovery rates during southerly and southwesterly winds were comparable to westerly winds, and southeasterly, easterly, and northeasterly winds led to no recoveries. (3) The proportion of oiled birds found alive was representative for the entire winter and area. (4) The OSMM area chosen was an accurate representation of the area in which most seabird mortality due to oil occurs. (5) Bird density and the probability of birds encountering oil were uniform in the OSMM area.

To test the sensitivity of some these assumptions, we considered the following alternative scenarios for 1999–2000 (the year with the best data): (1) the probability of birds arriving on surveyed beaches was twice as high as that of nonsurveyed beaches, (2) alternative catchment areas for northwesterly winds, (3) the proportion of oiled birds that arrived alive was 0.10, and (4) the OSMM area was 10% smaller than initially assumed. Further, oil risk zones have been determined based on the available information of seabird distribution and ship traffic densities (Environment Canada 1998). We also assumed an additional OSMM area that included only the main extreme and high-risk seabird oiling zones on the Grand Banks and along the south coast of Newfoundland.

RESULTS

Oiled Seabird Mortality Model Applied to Newfoundland

Onshore Component.—During the winter periods (Oct–Apr inclusive), 67 oiled birds were found on survey beaches in 1998–1999, 151 birds in 1999–2000, and 66 birds in 2000–2001. Of these birds, 15% were found alive. During 1998–1999 and 1999–2000, the survey period lasted only 20 and 21 weeks, respectively, compared to 27 weeks

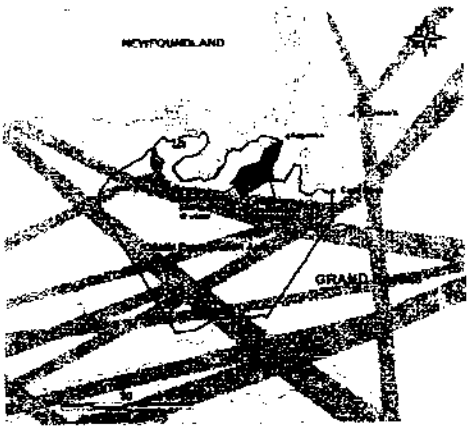

Fig. 3. Two wind-dependent catchment areas (a_w) for birds found on beaches along the Cape Shore of southeastern Newfoundland, Canada. Only 1 catchment area is shown for northwesterly winds for clarity. The overall Oiled Seabird Mortality Model (OSMM) extrapolation area and the location of the weather station in Argentia are indicated. Major shipping lanes are shown as gray bars. FR = France.

Table 3. Number of birds found per winter (Oct–Apr) 1998–2001 along selected beaches on the Cape Shore, southeastern Newfoundland, Canada, and the result of subsequent extrapolations to the oiled seabird mortality area using our Oiled Seabird Mortality Model (OSMM). Where applicable, standard errors are indicated.

	1998–1999	1999–2000	2000–2001	Mean
Survey period (weeks)	20	21	27	
No. of surveys	14	19	28	
Mean survey interval (days)	12 ± 13	9 ± 5	8 ± 3	
No. of birds found (N_{obs})	67	151	66	95
Estimated no. of birds on beaches (N_{bs}; standardized to 27 weeks)	336 ± 6.5	409 ± 6.6	363 ± 2.7	360 ± 5.3
Proportion of murres and dovekies	0.821	0.689	0.788	0.766
Proportion of oiled murres and dovekies (p_o)	0.872	0.955	0.805	0.804
Proportion surveyed of shoreline considered suitable for deposition (l_b / l_t)	0.44 ± 0.18	0.45 ± 0.14	0.38 ± 0.07	0.42 ± 0.13
Estimated no. of oiled murres and dovekies on Cape Shore (N_o)	561 ± 147	586 ± 41	420 ± 10	522 ± 118
Estimated no. of dead oiled murres and dovekies in catchment area (M_o in s_m)	5,845 ± 1,239	5,840 ± 598	4,986 ± 606	5,557 ± 1,028
OSMM mortality estimate (M_o)	308,500 ± 66,216	298,200 ± 32,900	338,800 ± 37,800	315,200 ± 45,600

in 2000–2001 (Table 3). Survey intervals varied among years due to weather-dependent accessibility and other logistical considerations. The mean survey interval was 12 days (range = 6–49) in 1998–1999, 9 days (range = 6–27) in 1999–2000, and 8 days (range = 4–15) in 2000–2001. To facilitate direct comparison, we standardized all years to 27 weeks by using the median number of birds found per beach, per week, and per winter for the weeks that were not surveyed. Correcting for detection probabilities and carcass persistence rates resulted in estimates of 336, 409, and 363 birds arriving on these beaches throughout the 27-week winter period in each of the 3 years, respectively (Table 3).

Species composition of birds found varied among years. Between 25 and 50% of murres found could not be identified to species because only parts of birds were found. We partitioned unidentified murres into common and thick-billed murres based on the frequency of these species in the rest of the dataset. By far the most abundant species was the thick-billed murre, accounting on average for 45% of all birds found. Combined, murres and dovekies accounted for 82, 69, and 79% of all birds found during the 3 winters, respectively. Because the distribution of most other species in winter tends to be coastal or is poorly understood (Lock et al. 1994), we used only common murres, thick-billed murres, and dovekies for subsequent extrapolations of the number of birds dying at sea. The weighted average proportion of birds oiled for these 3 species was 87.2 in 1998–1999, 95.5 in 1999–2000, and 60.5 in 2000–2001 (Table 3).

The 3-year mean proportion of surveyed shoreline considered suitable to collect birds was 0.42, but varied among years (Table 3). Based on Equation (1), we estimated that the total number of oiled murres and dovekies that arrived on the shoreline between mid October and mid-April was 561, 586, and 420 for the 3 years, respectively (Table 3).

At-sea Component.—The distribution of 3-day wind-direction frequencies differed among years (Table 2). Most importantly, periods of wind with easterly and northerly components—where no recoveries took place (Wiese 2002*a*)—occurred >31% of the time in 2000–2001 compared to about 19% in the 2 previous years. In addition, northwesterly winds (for which the proportion of birds recovered was lower and the catchment area smaller; Fig. 3), were 29–39% less frequent in 1998–1999 and 1999–2000 compared to 2000–2001.

Despite differences among the initial number of birds found, after differences in species composition, proportions of oiled birds, and wind directions were accounted for, the total seabird mortality estimates for the 3 winters were within 41,000 birds of each other (Table 3), averaging 315,200 ± 45,600 (95% CI: 225,800 to 404,600) oiled murres and dovekies per year. Of these, 68% (214,600 ± 31,000) were thick-billed murres, 10% (31,700 ± 5,900) were common murres, and 22% (69,900 ± 8,700) were dovekies.

Monte Carlo Model.—Results of the Monte Carlo model showed that drawing parameter estimates from random distributions gave slightly higher estimates of mortality (Fig. 4), most likely because the interactions of the model processes are multiplicative. The annual mortality estimate averaged 321,900 ± 56,000 (95% CI: 217,800 to 458,600) murres and dovekies killed by oil pollution during the 3 years (Fig. 4).

Perturbation Analysis.—Assuming that 50% more birds arrived on surveyed beaches than on nonsurveyed beaches resulted in a 41% reduction in the estimate of M_o. Varying the proportion of birds that arrive on the beach alive or the OSMM extrapolation area resulted in linear changes in the final estimate, as expected from Equation (2). Finally, changes in the catchment area led to inverse proportional changes in M_o. Using high and extreme seabird oiling risk zones on the Grand Banks as the OSMM extrapolation area resulted in a 22% larger area (69,096 km^2), and, overall, resulted in an average M_o of 384,300 ± 55,600.

DISCUSSION

To our knowledge, this is the first report of a mathematical model to assess seabird mortality from chronic spills, and the first empirically based seabird mortality estimate due to chronic oil pollution. Although many of the same parameters are required to estimate mortality caused by single large events (Ford et al. 1996), the process of estimating seabird mortality due to chronically spilled oil does differ. Unlike large oil spill events, timing and location of chronic spills are unknown; thus, overlays of slick trajectories, seabird distributions, and carcass trajectories cannot be done (Ford et al. 1987, 1996). Nevertheless, estimates of seabird mortality may be derived with measures of error due to chronic spills throughout a season, and the mathematical model we presented provides the means by which data can be interpreted and applied to a local area.

The southeast coast of Newfoundland, Canada, has been subjected to some of the highest rates of chronic oil pollution in the world (Wiese and Ryan 2003), and records of oiled birds in this region date back to the late 1950s (Tuck 1961). Previous estimates suggest that 20,000–500,000 seabirds die annually in Newfoundland from oiling (Tuck 1961, Piatt et al. 1985). However, little information was available to obtain more accurate estimates. Calculations used to arrive at these estimates included extrapolating the density of beached carcasses per km, determined from monthly beached-bird surveys, to the entire coastline of Newfoundland considered suitable for deposition. These calculations also assumed that 10–30% of oiled birds that died at sea arrived on shore and were counted on monthly surveys. However, several very large uncertainties existed with these estimates. Additional and critical aspects that need to be considered include drift-block design (Wiese and Jones 2001), beach-survey interval

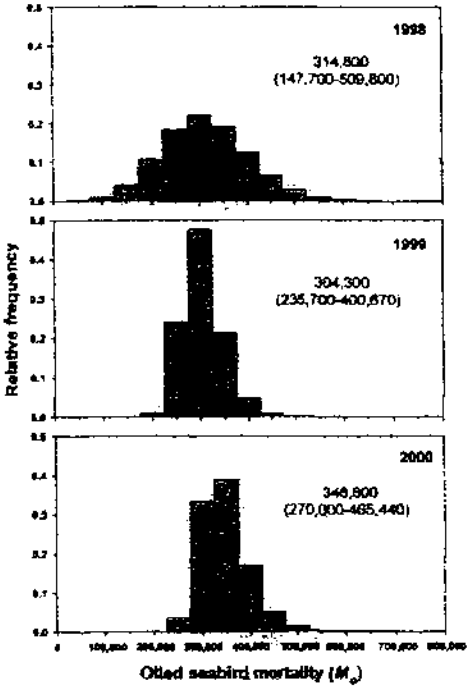

Fig. 4. Distribution of oiled seabird mortality estimates in Newfoundland, Canada, within the Oiled Seabird Mortality Model extrapolation area from Monte Carlo simulations based on 1 million iterations. Mean and 95% profile likelihood intervals are presented.

(Wiese 2002*a*), carcass sinking rates (Wiese 2003), and no obvious relationship between at-sea seabird mortality and the length of coastline considered suitable for bird carcass deposition.

We estimated that, on average, about 315,000 ± 45,600 murres and dovekies die due to illegal discharges of machinery waste oils from tanker, cargo, and container vessels each winter off the coast of southern Newfoundland. If model parameters are drawn randomly from normal distributions, the estimate is slightly higher at 322,000 ± 56,000 murres and dovekies. Regardless, these new estimates lie well within the previous estimates of seabird mortality in Newfoundland due to chronic oil pollution (Tuck 1961, Piatt et al. 1985). Although the final 95% confidence interval ranged only between 226,000 and 405,000 birds, the standard error of the estimate for 1998–1999 was 2 to 3 times as large as the following years. The accuracy of estimates for the total number of birds that arrive on a beach between surveys is related to the interval between surveys, which was

greatest and most variable in 1998–1999. More importantly, the error increased substantially in 1998–1999 as we extrapolated to the entire shoreline. In 1 instance, the proportion of shoreline surveyed was <10%, and the error of this estimate contributed >90% of the resulting error in N_0.

Assumptions and Perturbation Analysis

Parameters that led to the greatest uncertainties in the final estimate were the proportion of the total extrapolation area comprised of the catchment area, the proportion of available beaches searched, and the proportion of birds deposited on surveyed versus unsurveyed beaches. While the latter parameter is most likely not as skewed as the presented scenario, the importance of surveying as many of the beaches where deposition can occur cannot be overstated and coincides with findings for mortality models applied after large oil spills (Ford et al. 1996). Similar to the model presented by Ford et al. (1996), the uncertainty in the catchment areas and recovery rates of dead floating birds are concerns. More drift-block studies to reduce this uncertainty are desirable.

We made several assumptions to arrive at the final estimate of about 315,000 murres and dovekies killed annually. If monitored beaches were more likely to collect birds than other sections of the coastline, we have overestimated total seabird mortality. We also assumed that the catchment area during southerly and southwesterly winds was comparable to the area measured during westerly winds, and that southeasterly, easterly, and northeasterly winds lead to no recoveries along the surveyed shoreline. These assumptions were made without any drift-block recovery data for such winds, but rather, were based on the geography of the area. Although these assumptions require further testing, we do not believe them to be a large source of error. The exact determination of the catchment areas, however, has a large influence on the final mortality estimate and additional extensive drift-block experiments, laid out in a grid in the area of interest, are needed to improve current estimates.

We are not aware of any published values for the proportion of live oiled birds found during periodic surveys for comparison with our study. Many dead oiled birds, but no live oiled birds, were detected during 70 daily beach surveys spread over 3 winters conducted for carcass persistence studies (Wiese 2002*a*). Information gathered during emergency responses on the west coast of the United States after large catastrophic spills documented that an average of 15% of all oiled birds were found alive (R. G. Ford, Ecological Consulting, personal communication). In these instances, however, the oil often is close to shore and birds are heavily oiled. These factors should increase the likelihood for oiled birds to come to shore and exit the water to avoid hypothermia.

In contrast to large spills, chronic spills often occur well offshore, and live oiled birds found on beaches usually die within hours of arriving. Over 75% of oiled birds in Newfoundland have ≤25% of their bodies oiled and are highly emaciated (Wiese and Ryan 2003). This suggests that oiled birds lived for periods of time at sea after oiling and only attempted to leave the water as a last resort once their energy reserves were depleted. As a result, we consider a rate of 15% oiled live birds on beaches in areas of chronic oil pollution a maximum estimate. Alternatively, birds oiled to a small extent could retain the ability to fly and may fly or swim into the catchment area and die. These birds would consequently be counted as dead birds on beaches and extrapolated accordingly, leading to an overestimate in seabird mortality in the whole OSMM area.

Currently, no data are available to support these assumptions; clearly, the behavior of oiled birds at sea is still poorly understood and requires further investigation. We also assumed that observed oiling rates of birds found on beaches in Newfoundland is a reasonable representation of a bird's risk of dying from spilled oil. Oiling mortality is underestimated by excluding birds whose carcasses lacked external oil but that died due to internal contamination (Leighton, 1995; Briggs et al., 1997). Vauk (1984) suggested that internal contamination could be the cause of death for as many as 20% of clean birds found. Alternatively, oiling rates may be overestimated by including birds oiled postmortem (Kuyken, 1978; Camphuysen and van Franeker 1992). However, recent drift-block experiments around the Newfoundland coast suggest that postmortem oiling in this region is negligible (Wiese 2002*a*), and that sinking rates of oiled and unoiled birds are comparable (Wiese 2003). Additionally, no difference has been found in the persistence time of oiled and unoiled birds on beaches (Wiese 2002*a*). Combined, these facts provide strong evidence that observed oiling rates are a good proxy for the bird's risk of dying from spilled oil.

Finally, we made assumptions about the size of the OSMM extrapolation area and the uniformi-

ty of seabirds encountering oil within the area. The perturbation analysis showed that varying the size of the area by 10% results in a direct 10% change in the final estimate. Hence, alternative scenarios should be considered based on information collected elsewhere. Therefore, we also used oil risk zones determined from information of seabird distribution and ship traffic densities. Unfortunately, many ships that cross this area are not reported to local authorities (Wiese 2002*a*), and, as a result, ship density is most likely underestimated for many parts of the continental shelf. In addition, detailed information on seabird distribution and density during the winter months is very sparse for southern Newfoundland (Lock et al. 1994), and most distribution data are not detailed enough to define specific areas that should be included in, or excluded from, an extrapolation area. Using the oil risk zones on the Grand Banks to define the OSMM area resulted in a larger extrapolation area, and therefore oiled seabird mortality estimate M_o that was 22% higher than the initially chosen OSMM area.

Seabird Mortality due to Chronic Oil Pollution in Atlantic Canada

Despite the limitations in the data we used to calculate oil risk zones, the range of estimates depending on the areas chosen, and uncertainties in other model parameters, we consider a level of seabird mortality due to chronic oil pollution in our study area of about 300,000 murres and dovekies per winter period a reasonable, and potentially conservative, estimate for the following reasons. First, we used in our model the most-conservative side of each measured parameter yielding the lowest overall mortality estimate. For instance, we considered blocks that were found onshore until day 14, even though 95% of carcasses sink within 10 days (Wiese 2003). We also assumed that all live birds originated from the entire OSMM area, and we assumed that recovery rates of blocks were equal to birds, even though surveys for blocks were more intense than regular surveys and blocks were painted bright orange (Wiese 2002*a*). Second, our estimates only include the winter months, even though oil pollution does occur in the summer when small numbers of oiled birds are found on beaches (Wiese and Ryan 1999). Third, we only considered 69–82% of dead birds found, and the inclusion of other species would further increase total losses. Fourth, reports exist of oiled birds from other parts of Atlantic Canada, including other parts of Newfoundland and Nova Scotia (Lock 1992; Wiese et al. 2001; Environment Canada, unpublished data), and are not reflected in the current estimate. Finally, ample evidence suggests long-term effects of oil on seabirds (Irons et al. 2001, Lance et al. 2001, Esler et al. 2002), including decreased reproductive success (Hartung 1965, Ainley et al. 1981, Albers 1983, Leighton 1995) and long-term survival (Peakall et al. 1980, Esler et al. 2000). However, the amount of additional mortality these long-term effects may cause is unknown and cannot currently be estimated.

MANAGEMENT IMPLICATIONS

Our OSMM is the first of its kind, applicable to any area after the required parameters are estimated. Given that chronic oil pollution is well documented in many parts of the world where marine waterfowl and seabirds occur (Camphuysen and Heubeck 2001), we hope that comparable analyses can occur.

The most critical element in our model that allows an accurate interpretation of the number of birds found on beaches is the wind-specific extrapolation for catchment area and proportion of birds lost at sea. Without this approach, a constant value for the proportion of birds lost at sea, and a uniform catchment area, would have to be assumed and likely lead to biased estimates. To achieve reasonable confidence intervals on total seabird mortality estimates, beach surveys should be conducted within 8 days of each other, and as much of the available shoreline as possible should be surveyed.

The absence of a strong relationship between spill volume and seabird mortality points to the necessity of thoroughly investigating impacts of smaller spills (Burger 1993). Concerns have been raised that chronic small spills may kill as many seabirds as do more widely publicized large spills, and chronic spills may be equally, or more, detrimental to long-term population stability (Hunt 1987, Camphuysen 1989, Burger and Fry 1993, Oka et al. 1999). Our results confirm this concern. Despite remaining uncertainties in some parameter estimates, we conservatively estimate an annual seabird kill of 300,000 due to chronic oil pollution in our study area. This level of annual mortality is comparable to the *Exxon Valdez* kill in 1989 (Ford et al. 1996, Piatt and Ford 1996).

We estimate that >65%, or roughly 200,000, of the birds killed annually due to illegal oiling are thick-billed murres. This species already is subject to extensive summer and winter hunting in

Greenland (Kampp 1991, Evans and Kampp 1991, Christensen 2001), as well as the legal murre hunt in Newfoundland, which harvests an additional 250,000–300,000 birds/year (Chardine et al. 1999). These 2 anthropogenic mortality sources have lowered the annual population growth rate of the thick-billed murre population in the eastern Canadian Arctic by an estimated 4.7% (Wiese et al. 2004). These levels of sustained mortality make thick-billed murre populations vulnerable to pulse perturbations and ocean regime shifts and hamper our ability to set harvest at sustainable levels.

Seabird mortality due to oil is caused by illegal activities that could be avoided. International conventions such as International Convention for the Prevention of Pollution from Ships (MARPOL), and Canadian national laws such as the Canada Shipping Act, the Environmental Protection Act, and the Oceans Act, prohibit these discharges. Furthermore, the Migratory Birds Convention Act protects these species by law. With a scientifically based mortality estimate now in hand, we look to national and international authorities to increase efforts to reduce this problem regionally and internationally (Wells 2001, Canadian Coast Guard 2002, Wiese 2002*b*).

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ATTACHMENT

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UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

UNITED STATES OF AMERICA : DOCKET NUMBER 08-CR-10274

versus : UNITED STATES COURTHOUSE

CARMELO ORIA : BOSTON, MASSACHUSETTS

MAY 6, 2009

9:15 a.m.

TRANSCRIPT OF SENTENCING HEARING

DAY 3

BEFORE: THE HONORABLE DOUGLAS P. WOODLOCK
UNITED STATES DISTRICT JUDGE

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PROCEEDINGS REPORTED USING MACHINE STENOGRAPHY
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PROCEEDINGS

SENTENCING HEARING

DAY 3

THE DEPUTY CLERK: All rise.

This Honorable Court is back in session.

You may be seated.

THE COURT: So let's go back to the defendant's explanation of what's going in the -- with the simulation.

MR. LEVY: Addressing March 18, Your Honor?

THE COURT: Mm-hmm.

MR. LEVY: Let me just make some opening comments, and I think, from hearing The Court's question correctly, you want to know why, what circumstantial evidence, I think -- I believe that's what the Court said yesterday in your closing comments, what circumstantial evidence supports the simulation theory.

You know, from the day this case came in and I -- I got on this case, the the notion that a person would engage in this conduct between St. Croix and Boston, knowing the Coast Guard was on each end, really made no sense, and a couple comments the Government made, and I'm going to get to the circumstantial evidence in one second, but a couple of comments the Government made in their sentencing papers I think don't -- don't comport with common sense.

There was a phrase, in the sense that he thought he

got away with it, and that's why he did it

That doesn't -- that's not consistent with the facts, with the Coast Guard on each end.

They also referred to it as an expedient a decision-making expedient discharge.

Expedient means necessary, and I think as The Court identified yesterday, there was nothing necessary about this discharge.

The tank was one quarter full There was no reason to discharge.

They were going

THE COURT: It wasn't one-quarter.

It was more than that, wasn't it? About --

MR. LEVY: One-ninth full, I'm sorry.

THE COURT: No, no. The -- the discharge was one-ninth of the, as I understand it, the full tank.

MR. LEVY: I misspoke.

The discharge was one-ninth, the tank was less than half full.

THE COURT: Right.

Not -- not by much but --

MR. LEVY: Not by much, but there was no reason to discharge. They were going to New Orleans.

We tried to pull some information together on the on how much it costs.

It's a couple thousand dollars to to empty -- 4- to $5,000 for the full tank, so that we're talking a small amount of money saved, if you're talking one-ninth of a tank, and that operation is typically about a half a day, so it is not something that would hold the -- hold the ship in port.

There's zero evidence at all in the record, or in the case, as far as I know, in all the documents that there was any financial motive for Mr. Oria.

There's no personnel evaluations praising him for saving money or for coming in under budget, or anything like that.

There's no documented pressure on him to -- to save money, so this notion that he would have some financial motive, clearly, there is no personal financial motive here.

THE COURT: No, I don't I don't buy that. I mean, even though it may not be on a checkoff sheet, but somebody who is runs a tight ship, in terms of the expenditures of more money, is someone who is valued by management.

So, you know, it's part of the management ethos to make unannounced discharges or, at least, leave to the discretion of their employees that, you don't necessarily have to receive a bonus for discharges.

If you save some money. You save some money.

Maybe that's not the most compelling thing in the

world, but it has certain value.

MR. LEVY: And I think it's a thank you very much.

It would be a small amount of money at issue.

And the last thing, I just wanted to correct one thing or clarify one thing for The Court, that the oil water separator, the machine that normally used to process, it was working when they arrived in Boston.

It was inspected in Boston by a third party

THE COURT: Well, the argument that I understand that is not that it wasn't working but that it wasn't working very well. That it was slower than it should have been, or whatever.

MR. LEVY: Actually, I think it was working fine. The notion that it alarms means it is working and that you're

THE COURT: Well, that's a pain in the neck then, or pain in the ears, and people tend to avoid that.

MR. LEVY: That -- that -- that may be that may be so, but I didn't want The Court to be under the impression the machine wasn't working It was working. That would have been

THE COURT: Well, okay, so it's -- it's working and it makes this noise, and, you know, all other things being equal, people would prefer not to have a machine talking back

to them.

MR. LEVY: You know, that is a that is a theory the Government's put out, but the notion that - that one would have to do a discharge because the oil water separator is not working is not the facts of this case.

On the circumstantial evidence that supports this simulation, Your Honor, I think there are a couple facts I'd like to point out for the Government, the few things that support -- excuse me -- find for The Court I do think support on this notion.

First of all, I think it has been established that there was a swirl of activity on the ship or discussion on the ship about this financial incentive, and people were aware of that, and that -- that plays into Mr. Oria's concerns that there may be people who were providing information to the Government.

Secondly, we submitted in our sentencing papers testimony or excerpt from the testimony of Mr. Arriba, who was on the vessel at the time, and he reported hearing Mr Oria tell Jorilla and Sanchez to tell the Coast Guard everything about March 18, and that is, Your Honor, consistent with someone who is not trying to hide that fact, who is not trying to --

THE COURT: I don't know.

That's more like consistent with Gary Hart telling

newspaper reporters to follow him wherever he goes.

It's an act of great hubris

MR. LEVY: I think it could -- it could be read either way.

But, if the Government is -- is putting forth a theory that Mr. Oria is engaged in obstructive conduct to hide this from the Coast Guard, having someone on the ship who overheard Mr. Oria tell Jorilla and Sanchez to tell the Coast Guard everything I think is consistent with someone who has put together this -- this simulation, however --

THE COURT: I still don't understand this simulation.

He's got one guy who's been there four days, who happened to be talking to the Chief Cook, and he's got another guy who's got more of an involvement, but why pick these two for simulation?

I just don't understand the simulation, what sense it makes.

If, you know, if you're taking names to figure out who the snitches are, then, presumably, you know, you'll want to know more than just the new guy on the ship, and this seems a kind of random thing.

I don't, you know, you call it a simulation, it's -- you know --

MR. LEVY: Well, Your Honor, I think I said this

yesterday: I -- I don't have the explanation that would make Your Honor or myself say: Well, I was in those shoes. This is how I choose to handle that situation.

All I can say to The Court is having spent the year with Mr. Oria, and we met, you know, over seventy-five times, I've gotten to know him. It doesn't -- it's --

THE COURT: That's vouching.

MR. LEVY: Well --

THE COURT: I'm not going to listen to that.

MR. LEVY: It's - it's -- it's the way that he, under the circumstances of that vessel, you mentioned scorpions in a bottle, traveling out there on the vessel, the various factions on the vessel, the way he decided to deal with the situation on the vessel, that what he thought, after going to the captain and not being told to deal with it on his own, that he thought the best way to deal with it.

I think it's a plan with some flaws, but I think the circumstantial evidence supports the fact that that's what happened, versus

THE COURT: Well, let's go to -- let's go to, I suppose, the percipient witnesses, and, whatever they say, there seems to be some agreement that there was sounding taken on this.

They say that they -- ultimately they come to rest on they, and I differentiated they took soundings -- that

there was some drop in it.

Now, what am I supposed to make of that?

I mean, is it your idea that they are so thoroughly impeached that I simply can't rely on anything they say?

If that's the argument, I understand it, but is there any other argument?

MR LEVY: Well, that is the primary argument.

But, if The Court would just let me make a few points on that, because the record is voluminous, and it's obvious how careful you read it, but I think it's really one witness, because Mr. Sanchez ultimately testified that he didn't take the soundings

His own basis for the information was what Jorilla told him.

So I think now, Your Honor, you're down to one person having sounding information that supports the Government's theory.

Now, Mr. Jorilla didn't tell the Government about the soundings in the first couple interviews

It's not until May, more than a month later, and what he testified about this note, the note, in this Rule 15 deposition, he took that note at the time that he was that he was pumping.

He said: When did you do that?

March 18 when we pumped. When I pumped, you wrote

it down? I wrote it down on a small piece of paper.

So it's a contemporaneous note.

He testifies in the Grand Jury, and he says he has the note

The Government doesn't get the note.

The Government's been on notice for the note actually for long before that, because Mr. Arriba told the Government when he was interviewed that Mr. Jorilla had told him about a note he took that night, so they're on notice. They don't get the note, and, then, Mr. Jorilla goes back to his hotel room, after testifying, and he decides to destroy the note.

Now, you could say: How do we know what the note is?

THE COURT: Yes

I mean, let's -- but isn't the note going to be necessarily inculpatory, apart from the fact that the guy destroys it?

Isn't the only conclusion to be drawn is it is inculpatory?

Why even take a note?

I mean, I suppose, if he had taken a note, took a sounding, nothing happened.

MR. LEVY: Well, or, he could take a sounding and the number is -- is quite different than what he testified to.

THE COURT: Well, it might have been different, but we're really talking about whether or not there is a reduction in the tank, that's all we're talking about.

If there's a reduction in the tank, then, there's discharge that's covered.

MR. LEVY: And if the note supports reduction in the tank, why get rid of it, and, then, Your Honor, why when you come to your Rule 15 deposition in December, you were asked by the Government: Did you write anything down, and you say: No, he lies about the note at his Rule 15 deposition.

THE COURT: So what am I supposed to make of that?

Are you contending that there really wasn't a note?

This was -- December, there was a note.

There was no note. He said that he destroyed it, and he didn't destroy it.

You know, if there was a note, the customary view is that it somehow inculpated the persons who were involved in the simulation operation.

Else, why take a note?

I mean, it would be easy to if it's the same, to say: Nothing happened on it, so something must have happened.

What are the things that could happen?

Well, one thing that could happen is there could can be more water in there. Well, that may be true. It may not.

Another thing that could happen is there could be less water in there.

If that's the case, then, we've got a discharge, a discharge that may be like the February "X" discharge, but the idea that you take a note to say nothing happened seems to me to be not credible, and, so, if I think there's a note and I think it was destroyed first, if I think there's a note, then, it's arguably inculpatory, and, then, we've got somebody who's, you know, says whatever comes -- passes through his head at any given time.

MR. LEVY: Your Honor, if I could respectfully push back on the notion that a note necessarily is inculpatory.

One could take a note if you're trying to determine what is going on and you could write down the sounding levels that you take at end of the operation.

THE COURT: Right.

MR. LEVY: You may not write down the sounding at the beginning. You may or may not You may just write down the sounding at the end.

You may check later against the board, to determine whether it's the same or it's different.

If you make a decision to destroy that note, I think there's an inference there that you have a concern about the note.

You can then make a decision to deny the existence

of the note, it further supports the notion you have a concern about the content of the note.

THE COURT: Well, I guess one way of looking at it is to say -- and this is favorable to you -- but is to say: I said he had a note. Who had the note? How do I deal with that?

Well, I'll destroy it. They haven't asked for it yet, so I'll destroy it.

And, then, when he finally comes to rest, I don't think any of these witnesses will ever come to rest. They rock back and forth on their testimony whenever they're asked a question, but the last question, the last time he's asked questions is December 15, and he says: No note.

Now, that may be accurate.

MR. LEVY: No, because on cross examination, he admitted he had a note.

THE COURT: I'm not sure what he says is -- at any given time is -- necessarily accurate.

I'm just trying to find out where I would peg the accuracy.

One of the places I peg accuracy is somebody says he's got a note, because he thinks he'll be a big shot, and, then, realizes he doesn't have a note, and, then, announces that the reason he doesn't have a note is because he destroyed the note as some sort of coverup for it --

MR. LEVY: Yeah.

THE COURT: - then, he says: I didn't have a note; then, you ask him a question, and he says: Well, I actually have a note.

MR. LEVY: That absence of the note leaves you speculating and myself speculating, and it's their burden, and their burden to get the notes.

THE COURT: I understand burdens.

I'm trying to get to what kind of treatment I ought to give to this.

MR. LEVY: Can I offer another theory on the note?

THE COURT: Yep.

MR. LEVY: Which is, you go in a Grand Jury.

You haven't testified about the soundings. You haven't given the Government information about the soundings for your first two interviews.

It's your third time when you're with the Coast Guard they start asking you about soundings.

You go in the Grand Jury and you give them numbers.

You go back to the hotel room to look to your note, and your note is not consistent with your testimony, so what do you do?

You get rid of it.

I mean, I think that's just as plausible as saying they didn't ask for it. I know these guys control whether I

go home or not, but I'm not -

THE COURT: There is some figure on there.

If there is a note, there's some figure on there.

The only reason there would be a figure on there is something that shows that there was something that happened during that operation.

MR. LEVY: Why?

Why couldn't the figure be the sounding at the end of the operation?

It's just a number, and actually when we match it up, it matches that there was no discharge.

It could actually support the notion that there was no discharge that night, because Jorilla and Sanchez both testified that that system became airbound that night, and that's exactly what happened when -- Mr. Oria didn't sabotage your valve, contrary to what Ms. Ricci said. He opened some other valves in the back of the ship.

The Government admitted in their papers it's theoretically possible.

That's what they said, to -- to manipulate the system, such that you're not pumping out the bilge water collecting tank, and, the sounding levels, had they shown that there was no movement from what's written in the grease board would support the fact that there was no discharge that night, so I think that the note, Your Honor, and Mr. Jorilla's

conduct around the note, not only the destruction of it, but ultimately lying about it under oath does should be inferred in this favor of the party who is denying access to the note, Mr. Oria.

THE COURT: I'm not going to do it that willingly, but I understand that argument.

MR. LEVY: Okay. I want to raise one other circumstantial point that you asked about yesterday and I think is worthy of The Court's consideration, and you asked about Point S and Point B, St. Croix and Boston. What do those numbers show?

And we do have those numbers, okay, and we have those numbers wholly apart from Mr. Oria and any soundings he took. We have the Coast Guard log, which we're happy to provide The Court, that one page that was taken. The bilge water collecting tank was at 12.6 tons in St. Croix. You go to Boston six days later, forget about what happens. Just put that aside from the moment in the trip up.

When the Coast Guard takes a sounding in Boston, it's 27.9 tons. That's the difference of 14 metric tons of water that's been added to the bilge water collecting tank during the course of that six-day trip. That's a lot of water to be added to the bilge water collecting tank.

There is no indication any water was moved in there from another tank, and, if you -- if you credit Mr Jorilla's

testimony that there was a discharge, in order to end up where the Coast Guard has the water at in Boston at 27.9 tons, you need to add another 7 tons.

You'd have to account for 20 tons of water being added to the bilge water collecting tank, during that six-day period.

In the end, that's not consistent with the ship's operation, in terms of the burn rate or the amount of water that consistently is added to the bilge water collecting tank.

If you'd look at that sheet - and maybe we can pass that up to The Court now.

Oh, it's in our submission, that, if you track the bilge water collecting tank, it doesn't add anywhere near that level, so I think that the Point S and the Point B water figures does support the notion or the account that there was no discharge on March 15.

And I guess the other circumstantial piece that came out, and I just want to emphasize to The Court, is, we should by all accounts, by the Government's witnesses and by Mr Oria, he went to the mess on the night of March 18, and he made a -- he was not covert in -- in saying there was going to be discharge that night.

Mr. Nuneze was there He heard it.

Mr. Jorilla heard it.

Mr. Golik was involved, and, Mr Oria, if he was

engaged in some sort of illegal conduct, certainly was not at all being discrete about it. He was trying to make it clear that this was going to happen that night, and I think that is consistent with the notion --

THE COURT: Yes and no.

I -- there was -- there was a Solicitor General of the United States, whose name was James Beck, in the '20s, I think, and he always used to begin his argument by saying: In all candor, Your Honor, to The Court, and, finally Justice Holmes got so tired of the team of having them begin that way, he said: You know, Mr. Beck, in my experience, advocacy that begins with: In all candor, Your Honor, is probably characteristically deceptive.

So, if somebody comes in and says all of this stuff in front of everybody else, that's a form of providing cover, I suppose, particularly in this bizarre setting, where nothing seems to make sense rationally as a way of acting, so he says this in front of other people.

I don't think that that's necessarily exculpatory.

It can be someone's bizarre idea of what perception could be.

Now, I'm going to see which one of these people talks about it.

MR. LEVY: It's -- it's not necessarily exculpatory, but I think it is consistent with circumstantial

evidence.

I think it is consistent with the notion that he was doing something other than engaging in illegal discharge on March 18, because, if he was engaged in illegal discharge that night, why would someone on the heels of the Coast Guard being in St. Croix, knowing the Coast Guard was going to be there in Boston, why would someone go into the mess and make it -- make it public or more widely known than necessary that you were going to engage in a discharge that night? It's no -- it makes no sense.

THE COURT: Because you're trying to flesh the mindset of someone who would engage in a simulation.

You're fleshing out the snitches. See who, which one of these people, tells the story or thinks you are; I mean, that's an explanation. I don't know these explanations are particularly resonant, but, you know, I'm not sure that applying rational analysis here is going to get us very far on these kinds of subthemes.

MR. LEVY: Well, there is one other point that came up yesterday that I think is relevant here, as well, Your Honor, which is that you didn't need the assistance to engage in this discharge.

If you were really interested in doing the discharge and wanted to get away with it, it's not so complicated that you can't open these four, five, six valves

yourself and do it yourself.

So that, again, is consistent with the notion Mr. Orio was -- was engaged in some effort to bring other crew members into this simulation, to find out what was happening on board the vessel to protect himself.

However misguided that was, whatever we may think that was not the best way to handle that situation, if his focus was in doing a discharge that night and not getting caught, he could have gone down and done it himself.

Your Honor, do you have more questions on March 18 because

THE COURT: No. I think we've explored ambiguity as much as we possibly can.

MR. LEVY: Yeah.

THE COURT: The ambiguity remains.

MR. LEVY: Alright

We left off with the sounding logs.

THE COURT: Right.

MR. LEVY: I don't know if you want me to revisit them on a couple points.

THE COURT: If there are a couple, based on what you made, go ahead.

MR. LEVY: First of all, you asked, I think yesterday: Who had the motive?

And I think it's fair to say that a Chief Engineer

may have a motive, but other people on the vessel have a motive, as well.

These vessel pollution cases are not limited to Chief Engineers.

There's a Second Engineer charged in this district in these types of cases, other crew members charged below the Chief Engineer, so multiple people have a concern if there's been illegal conduct on the ship.

THE COURT: But who else would have that motive, in light of all of the evidence in this case?

MR. LEVY: Well, the Government has charged multiple people with discharges.

Mr. Tumakov was charged with discharges. He had a --

THE COURT: He was the first engineer, wasn't he?

MR. LEVY: Chief Engineer.

THE COURT: Chief Engineer on a prior vessel.

That's a different set of voyages.

MR. LEVY: Some of the same crew members. There's overlap on the crew.

THE COURT: Okay.

So they don't know who is going to be charged.

The question is who else would be a likely candidate for being charged under these circumstances?

Are there other cases?

MR. LEVY: No, but there's Second Engineer cases.

THE COURT: But the Second Engineer and Third Engineer cases, I would suspect. I don't know because I haven't looked at them, are when they're acting, effectively, as the Chief Engineer.

MR. LEVY: No.

That's not actually -- that's not accurate.

Mr. Mahama (phonetic), who was charged -- Second Engineer charged by this office, was the Second Engineer, Mr. Singh (phonetic), who was the Chief Engineer, they acted in concert.

THE COURT: Okay.

Well, so you acted with the Chief Engineer and you're an officer. That's a different issue than anybody else, and I don't know anybody else.

First, we don't have, am I correct, we don't have a first engineer?

MR. LEVY: We did have a first engineer. Mr. Golik was the first engineer.

THE COURT: Golik.

Okay.

Well, he thinks he's home free. No Second Engineer, and you've got a Third Engineer, so the likelihood of officers being charged, there's only one officer left to be charged in this setting, among the group that's there.

MR. LEVY: Yeah.

Your Honor, I don't know who did what on that vessel, in all the months that it was at sea. Mr. Piamonte's got this notebook accusing all sorts of people of things.

There could be a lot of people on that vessel who may be concerned what operations they were involved in that would give him motive to get rid of the book.

THE COURT: There has to be, from March 1 forward, because, as I understand the book, the logbook, regarding in St. Croix, it was only March 1.

And, so, we're talking about those who would be concerned about the book being evidentiary from March 1 to the call at Boston.

MR. LEVY: Not -- not necessarily, because that -- that assumes that people who don't handle the book know its limited duration going back in time, so some think it has -- it has more soundings in it.

Whistleblowers could have an incentive to deep six the book, to cast aspersions on the Chief Engineer, so it's not limited to Mr. Oria.

Mr. Oria actually has the least motive to get rid of it, because he knows the Coast Guard has the soundings up through March 15, they've copied it.

THE COURT: Well, if this is -- if it's worse than wrong, it's stupid argument, with respect to how this would

work out, and I think we can all agree that these actions were stupid.

MR. LEVY: Well -- but Mr. Oria doesn't -- there's no content in the oil record book -- excuse me -- in the blue binder after St. Croix.

THE COURT: Well, because he's contrived that there be no contact.

MR. LEVY: But I don't think -- the deviation from the practice, up 'til that point on board the vessel, was not designed to, under the standard of the obstruction guidelines, to purposely calculate it to obstruct the investigation.

It was designed to -- to take control of the soundings on that vessel. It was not to deny the information to the Coast Guard.

I, also, point out that Mr. Sanchez, the Government's witness, saw the blue binder in Boston. So, now, we have the binder.

Mr. Oria - Mr. Ortiz sees it in St. Croix. Mr. Sanchez sees it in Boston.

There's not one witness, there's not one piece of evidence, that, beyond just suspicion, that says Mr. Oria acknowledged doing it, was seen with the blue binder, during the Coast Guard boarding.

Any evidence, direct evidence, linking him to the disappearance of the blue binder is just suspicion,

Your Honor, and I don't think the Government has met its burden on that piece.

Does The Court want to hear more on the facts or --

THE COURT: I think we've explored them; I mean, if there's something else that you think I haven't identified as on my mind and you want to address to me, I'll listen to it.

I do want to talk a little bit about what I make of Mr. Magcale.

We had a conversation yesterday about Mr. Magcale receiving money. It was simply part of the speech identification dimension to this.

Another way of looking at it is it's a payoff to influence witnesses.

MR. LEVY: Your Honor, he didn't -- there was no transaction, just so that's clear.

THE COURT: Right, but it was an offer.

MR. LEVY: It was an offer.

There is no connection of Mr. Magcale to any of the events in terms of discharges. He's not involved -

THE COURT: No, but he's sought for his intelligence or his knowledge of who's out there who might report to the Coast Guard the illegal discharge.

MR. LEVY: Who's angry at me, I think it is -

THE COURT: Mm hmm.

MR. LEVY: the question that's posed

Who's angry at me?

And it is consistent with the notion that Mr. Oria is very concerned about his back on that ship.

He's concerned about the -- the Filipino, trying to penetrate the Filipino crew members to find out who was providing information against him.

He does not -- and I don't think it -- the Government didn't charge it or even bring it up as part of the their instruction. he was not at all trying to impede or influence --

THE COURT. Well, it's paragraph fifty one of the Presentence Report, it's before me for my consideration.

MR. LEVY: Yeah, and I don't think that you have --

THE COURT: Under the heading, "Obstruction of Justice."

MR. LEVY: Had Mr. Oria received taken any action -- had he received information and taken any action to influence, contact a person who is involved in the Coast Guard investigation, that would be a different kettle of fish, but all --

THE COURT: No, the question is what do I make of what I did? And you say: Well, he's just trying to find out who likes him, or, more differently, who doesn't like him, and that's your argument about it. To what end?

Because he's concerned about snitches.

Snitches to whom?

Snitches, ultimately, to the Coast Guard.

So he's attempting to identify those who are likely to be snitches.

Now, that strikes me as going to questions of attempting to determine who it is who is going to provide evidence in connection with this case or a case.

MR. LEVY: Mr. Magcale works with Mr. Nunez, who is so he's not in the Engine Room.

He's -- he's affiliated with a person who is someone whom Mr. Oria conflicted and he had concerns about.

It's -- the notion that you would offer someone some cash to find out who's angry against you is actually consistent with the alternative theory of the simulation, and consistent with trying to figure out how do I extract myself from this mess?

Do I go to the Coast Guard?

Who's providing the information?

Is it about a black hose?

Is it about something else?

He's trying to figure out what's happening on board the vessel, not with the intent to influence the Coast Guard necessarily, or impede the investigation, but to figure out what's the best way forward?

Who does he contact?

What's the allegation against him, so he can figure out how to work his way out of the situation?

I think it's entirely consistent with, rational or not, the notion that you have a bull's-eye on your back and people are looking at you with a number sign over your head, a dollar sign over your head, because you're the ticket to get money

He's trying to figure out who it is that's providing this false information

THE COURT: So he has his own whistleblower program, in terms of payments.

MR. LEVY. He's -- you know, you can characterize it that way. Your Honor, and, had he called me from the ship and said should I do this, I would have said no.

It -- it can be read both ways, but it's I think it's absolutely consistent with, you know, an excessive concern about the dynamics on that vessel and who might be pointing the finger against him, and that is it's the whole string of conduct from St. Croix and the absolute unnecessary simulated discharge, discharge of a simulation of absolute unnecessary discharge.

When the tank's half full, there's no reason to do it. You have the Coast Guard on bookends on your trip.

The whole thing doesn't make sense if you're going to engage in illegal conduct on March 18.

It absolutely makes no sense.

These oil water separator violations are done typically when you're out at sea, the machine's a pain, you need to get some water out of the bilge water collecting tank, and you make a conscious decision if the motive typically is you don't want to spend hours down there, but you need to get rid of the water, and that's why these vessels do it.

It just defies common sense that you would choose to engage in illegal conduct when you don't have a need to get rid of the water and you're about to be in a port to empty what's left in the tank.

THE COURT: Alright. I think I understand that part of it.

Abrogar?

MR. LEVY: Your Honor, we think the Third Circuit got it right in Abrogar, and it's the reason why we really tried in our negotiations with the Government to reserve the right to argue Abrogar, because we saw, in Mr. Tumakov's plea agreement, that this office, this ECS, didn't enforce Abrogar against Mr. Tumakov

He had two discharges, and, aside from just the unfairness, we thought that the Abrogar decision was correctly reasonable.

THE COURT: Well, let me explore that a bit, in part, the discussion that I had with Mr. Mikolop which caused

me to go back and look at this again and again, look at the case again and again.

There is a difference, I think, between potential, as to Mr. Tumakov and Mr. Oria in the enhancement, the choice of enhancement.

Is it B1A or B1B?

In the case of Tumakov, presumably, it's B1A that they were talking about, and Abrogar is a B1A case, but the analysis there is it has to do with continuous repetitive discharge that resulted from the offense.

- - -

(A ringing telephone interrupted the court proceedings.)

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MR. LEVY: Apology, Your Honor.

THE COURT: It's a little different, the language is a little different on B. It's otherwise involved.

Now, assume for a moment, which I do, that the guts of Abrogar turn on the question of if the source of the discharge does not occur in the United States waters, it couldn't occur during the offense of conviction; that is, A1 -- do I have it right?

B1A didn't involve an ongoing continuous result from the failure to report in United States waters, but does it apply the same way for an offense that otherwise involved a

discharge, the difference between involved and resulted, I guess, is what I'm talking about.

But how can you have a false oil record book if you don't have a discharge?

That if you have a discharge that makes it false, then, the discharge was involved in the offense of conviction, irrespective of where that discharge takes place.

You can have a false record book, false oil record case, if you get in United States waters involving discharges elsewhere That's what this case is.

There's no suggestion that the discharge here took place in the United States waters. so I guess, you know, doing a textural analysis of this, I have to say, don't I, that this is an offense that involved a discharge.

MR. LEVY: It related to a discharge.

You don't have to have a discharge to have an offense of the statute. The oil record book could be false for -- for a variety of reasons.

THE COURT: Well, it's false -- in this instance, it was false because of a discharge. That's what the nature of this particular offense is, or, more accurately, the relevant conduct in connection with this offense.

MR LEVY: Well, if you reconstruct that -- that line, I think you've got to back up from involved to focus on the offense.

That's what I think the Abrogar Court was focusing on.

What does offense mean?

It means three things under 11b-(1.3).

The first one is: Is it during the commission of the offense?

And I think we can agree that this discharge was not during the commission of the offense.

THE COURT: Well, I'm not sure I can.

If I think about it, how can something be false, unless the falsity is part of the offense?

MR. LEVY: The offense is the presentation of the false record book.

THE COURT: Well, okay.

MR. LEVY: And, so, during the commission of that offense, the presentation of the offense, you're not engaged in a discharge.

It doesn't -- they're not - it may be related to it, but it's not they're separated in time, they're separated in location They're just not the same conduct

THE COURT: Well, so you say, but let me just get it out.

MR. LEVY: Sorry?

THE COURT Let me just get the allegation out

(Pause)

THE COURT. The offense is knowingly failing to maintain an accurate record book -- the charging language, in Count 2 knowingly failing to maintain an accurate record book in which all disposals of oil residue and oil disposals were required to be fully reported.

To have in this context an offense of false record book, without a discharge, would be the sound of one hand clapping. It's part of the same collection of things.

There's no other way

I don't I find it hard to think of it separately.

MR. LEVY: Your Honor, your record book could be -- certainly be false if there's never a discharge.

THE COURT: We're talking about the charge of conviction here.

It could be for other reasons I can see, but, if we're dealing with this kind of charge, which is that you have a false record book because you fail to record a disposal, then, it seems to me that the disposal is involved in the count of conviction.

MR. LEVY: The disposal is -- the discharge, in this case, is a predicate to this -- to this particular conviction, but it's not necessarily involved in the offense.

THE COURT: What is

MR. LEVY: It's --

THE COURT: Define involved under these circumstances.

MR. LEVY: Involved, involved would be something that is necessary to the commission of the offense.

THE COURT: And this is.

This offense, as charged, is that you've got a false oil record book. It is false because there was a discharge.

If -- if there were not the discharge in this case, there would be no false record book violation.

MR. LEVY: Your Honor, I don't disagree with that. I don't disagree with that statement.

That clearly is the theory on which the Government's proceeding.

My -- my concern or my -- the reason why I think the Third Circuit got it right in that regard is they found that the presentation of the oil record book didn't occur during the commission of the offense.

It didn't occur to conceal the record book offense. They focused on: Was it in preparation of the offense?

THE COURT: But they go back to 1(b)1.3, but, on its face, the distinction that I would draw here -- now, the distinction may turn on whether what's involved here is mere -- a mere discharge, as opposed to a repetitive discharge. It's possible that, if I find the May 18

discharge, I can be talking about repetitive discharge, and that would be in B1A.

Just for purpose of analysis. I'm keeping this, as B1B.

So, then, I go to: What's relevant conduct?

And is it something that occurred during the commission of the offense, in preparation for that offense, or in the course of attempting to avoid detection or responsibility for that offense?

Now, if I just go with the February "X" discharge. I think it's possible to say, fair to say, that this occurred during the commission of the offense; that is, they didn't report it, put it down on the -- on the record book.

Was it in preparation?

No.

Preparation in the sense that something comes before something else, I suppose, yes, but, preparation, no, and attempting to avoid detection, no, because it already occurred here, and you're not trying to do that, although, maybe you could say you are, but I have a feeling that, as I look at this, that, in the context of this case, the Third Circuit's analysis is a bit too arid.

MR. LEVY: Your Honor, at least, as my simple mind thinks of the word "during," it has a temporal connection.

THE COURT: Mm-hmm.

MR. LEVY: And you could conduct an illegal discharge, okay?

It would be a violation of American law.

Let's just say it's happening beyond the shore, a couple miles demarcation, but you could not record it in the record book and, then, you could travel a couple more days up into the United States waters and go in a Coast Guard port.

You could, at that point, say: You know what? I got to go back and change the oil record book and make it clear what happened on that day. There's -- and you would not have, because the offense is the actual presentation of it.

THE COURT: Yes, but that would exculpate you.

Here, that's not what's alleged. That's not what happened.

You have a discharge and, then, false presentation.

MR. LEVY: But my point of that, there's a temporal disconnect, that, during the commission of an offense, the "during" is the presentation, and the discharge is happening - it can happen a week, two weeks, months earlier.

Your Honor, I also want to call to The Court one more case --

THE COURT: Mm-hmm.

MR. LEVY: - which we found from the Second Circuit.

If I could approach?

THE COURT: Yes.

MR. LEVY: I flipped it open to the relevant page.

This is a case under 2Q1.2, which is a hazardous waste substance, Your Honor.

I have a copy for you.

It's -- United States versus Liebman, 40 F.3d 544.

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(Copies were distributed.)

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MR. LEVY: I'll pause, Your Honor, if you'd like me to.

THE COURT: Let me just look at it.

(Pause.)

THE COURT: This is an A case, though. B1A.

2Q1.2 parallels 2Q1.3, in that it has, as the first element is specific defense characteristics, the difference between resulting and occurring.

MR. LEVY: Yes.

THE COURT: Resulting and involving

So, just so we're on the same page, I guess, with respect to this, this addresses, as did Abrogar, the question of resulting, rather then the guideline for resulting, rather than the guideline for involvement.

MR. LEVY: It does, Your Honor, but it also has language, I think, which is instructive on Page 7 of this

Lexis printout, about -- before we get to result for involved, what does relevant conduct mean, and the passage I'm quoting is the last full paragraph on Page 7, where the Second Circuit said, "It would strain the language to conclude that the removal, release, and disposal of asbestos occurred in preparation for the failure to report the offense or report detection of that failure."

That, I think, Your Honor, parallels the reason that the Third Circuit and Abrogar, that the offense, that word "offense," before we get to result or involved, that word "offense" is limited and does not include the discharge, and, here, we have a substantive environmental offense, of real crime in the United States, this asbestos removal, the offense does not -- when your recordkeeping charge, relevant conduct does not include the discharge, that preceded it.

So, now, we have two Circuits, Your Honor, the Second Circuit and Third Circuit, which are saying that relevant conduct is limited in this way, and that the discharge that is a sufficient but not neceaaary predicate for the recordkeeping offense

THE COURT: Well, this Second Circuit case in some ways is broader than Abrogar, in that in Abrogar if there had been a discharge at the port or within the territorial waters of the United States and there was a subsequent failure to report, that would be included.

MR. LEVY: That's correct, Your Honor.

THE COURT: And, here, it's not.

It's not.

MR. LEVY: It's broader, but I think it's instructive that another Court of Appeals is agreeing with the reasoning in Abrogar on this.

And, Your Honor, if we could step, for a moment, I have to talk more about these cases, but step back for a moment

Since Abrogar was decided and we put this in our Sentencing Memorandum, I think there is a question of fairness there and how a similarly-situated defendant's --

THE COURT: That's a different that's a different issue, I guess, and it's something that I tried to tease out here.

The first thing I have to do is deal with the formalities of the Guidelines, which I will do, but then I test it against 3553, and it's in 3553 that the question of disparate, unwarranted disparities comes out, and it becomes salient, as to Mr. Tumakov, to the degree Mr. Tumakov is representative of national trends, I guess I would say, with respect to this.

MR. LEVY: And I don't mean to mix the two, the analytical approach, I fully understand where you're coming from.

I do think, though, it's relevant to the Government's representation of what this section means and how Abrogar should be interpreted.

In eleven cases of Chief Engineers, since Abrogar, charged with APPS violations did not ask for this enhancement, did not interpret it the way they stood up yesterday and interpreted that provision. I think that's relevant.

THE COURT: I don't know exactly what I want to say. If there was some guidance somewhere in the -- whatever the environment lands' people are called now, I may feel differently.

You know, it's been around awhile.

Apparently, they haven't -- I'm told they haven't sought cert. on it. On the other hand, a single decision of a single Circuit isn't generally enough to get certiorari, and, maybe, if there was a settled practice, with respect to this, I might look at that, but this -- sometimes it takes a while for it to dribble down to the troops.

MR. LEVY: There is -- there is sole practice, though. They've had -- they've not asked for this enhancement in any other APPS prosecution of a Chief Engineer since Abrogar.

THE COURT: So, Mr. Mikolop, what's the story?

MR. MIKOLOP: I'm happy to answer, Your Honor

I think there are two main points here, and the

first is that Mr. Levy misspoke when he cited ECS's involvement in the Tumakov case.

We were not involved in the negotiation of Mr. Tumakov's Plea Agreement.

THE COURT: Alright, but do you have a policy, now -

MR. MIKOLOP: We do, Your Honor.

THE COURT: -- with respect to the Abrogar issue, let's say?

MR. MIKOLOP: We do, and, I think as The Court noted, these things do take time to flesh out

The Environmental Crime Section has taken the time to determine how it wants to approach these types of cases.

Mr. Oria's negotiation was one of the first in which after which the Environmental Crimes Section has said we will now pursue this particular enhancement, but it's really --

THE COURT: So when you say Tumakov was not an ECS?

MR. MIKOLOP: I'm sorry, the Environmental Crime Section.

THE COURT: Right

Are you then throwing the United States Attorney's Office under the bus on this one?

Is that on their comparative issue?

MR. MIKOLOP With their approval, Your Honor.

THE COURT: Mm hmm.

(Pause.)

THE COURT: Now, with respect to physician-assisted suicide.

MR. MIKOLOP: Perhaps.

(Laughter.)

- - -

THE COURT: Alright.

Okay, so, you know, I'm not sure I draw these conclusions.

I asked the same question of Mr. Leverson when he was here.

Basically, it was, you know, Homer nodded.

MR. LEVY: It was what, Your Honor?

THE COURT: Homer nodded.

Even Homer sometimes nods, makes mistakes.

MR. LEVY: But, Your Honor, it's zero for eleven what they've asked for, so, it is a practice out of the Environmental Crime Section, where they are not --

THE COURT: They say it's not.

MR. LEVY: Well, I'd ask Mr. Mikolop to identify any case, similar to this, where an absence of record is a charged conviction.

THE COURT: He says it's -- this is the first case

after the internal determination was made.

Are there any others, Mr. Mikolop?

MR. MIKOLOP: I'm not aware of any others.

I do think that the chart that the Government provided to The Court, which I think is what Mr. Levy is referring to, in citing eleven other cases, doesn't fairly represent the negotiations that went on.

To say that the Government didn't ask for the enhancement isn't reflected in that chart, so --

THE COURT: Well, I guess the issue -- you know, I'm going to look at it, because my view is that it's always interesting what the parties, based on the balance and conformance of other considerations, it's not determinative for me, and, in many cases, this being one of them, it's not something I accord much deference to, so but, you know, if there's something unfair, in the sense of my being struck by lightning for Mr. Oria, then, I'll think about that, but you represent that that is the policy to pursue this.

MR. MIKOLOP: And that policy, I will say, was made sometime in the fall.

These negotiations, I think, began in earnest in mid-December.

There have been -- and I'm just, off the top of my head, thinking, in addition to Mr. Oria, maybe only one or two other Chief Engineers who have negotiated plea agreements

since early or mid-December, or, since the fall, when the policy came in.

THE COURT: And do they all have --

MR MIKOLOP: I'm not aware of their individual results.

THE COURT: So it's something you strive for but don't necessarily always get?

MR MIKOLOP: I think that's fair.

MR. LEVY: First of all, to represent his policy during our negotiations, but in October of 2008, Florida, Chief Engineer convicted on an APPS violation. No pollution enhancement

THE COURT: But those are things in the plea, in the J and C, and presumably the negotiations took place before October of 2008, or, if it's in this District, it's at least three months before -- the time period between the acceptance of the plea, pursuant to a Plea Agreement, and the implementation of it.

But, I mean, the short of it is: I don't think I'm going to say that this is -- it was unfair for them to press this and/or for probation to raise the claim.

It does raise questions about, in my mind, about unwarranted disparity more broadly, but that's a different issue.

So anything else on that?

MR. LEVY: No.

I just think, going to the second point.

I think it's clear from this that Mr. Oria was struck by lightning, and it is the only one or the first one to get this enhancement pressed on an APPS violation, so I do ask The Court to consider that in its final analysis

THE COURT: Well, what does this mean, that you have this enhancement, if the number of circumstances in which they could arise, you know, is either limited to the territorial waters of the United States by the Third Circuit or non existent, according to the Second Circuit?

MR. LEVY: Why is it in there?

THE COURT: Yes.

MR. LEVY: Well, it's in there for more than just MARPOL violations.

THE COURT: No doubt, but this applies in every in every circumstance, there is -- presumably, the reporting takes place after the discharge.

MR. LEVY: Mm-hmm.

THE COURT: There's a disconnect between discharge and reporting.

I can't think of a discharge case, maybe you can, under the Second Circuit analysis of during, and the Third Circuit didn't get to it. It will just -- Abrogar doesn't get better the more you read it, I guess, is the way I feel about

it, but, in any event, they never reached that issue. They were able to solely -- whatever it means - they didn't quite say it that way -- whatever it means, it has to take place in the waters of the United States, but, if I applied Liebman, I'd say that even in the waters of the United States it doesn't apply, which is to say that this enhancement is like a vermiform appendix. It serves no useful purpose except to inflame people from time to time.

MR. LEVY: I do think, though, Your Honor, that you're looking at it through the prism in this case Recordkeeping offenses if -- you're directed to Section Five, right?

And it says, "If a recordkeeping offense reflected an effort to conceal a substantive environmental offense, use the Offense Level for the substantive offense."

So this 2Q1.3 covers the situation, Your Honor, where you want to prosecute someone for discharging into territorial waters of the United States of a pollutant or other hazardous substance, or maybe it's not a hazardous substance, something you're not allowed to discharge overboard.

It also covers situations where you present false records relating to a discharge in territorial waters.

That enhancement could easily come into play in a situation where the Government may have twenty discharges

by by a company or a person, and they decide --

THE COURT: Not under Liebman.

MR. LEVY: Not under Liebman, not under the reason of Liebman.

But I'm not asking you to adopt Liebman.

I'm asking you to -- I pointed to Liebman because I think it correctly identifies the scope of relevant conduct.

THE COURT: Well, if it correctly identifies it, then, it means that, for discharge cases, there is no office for 2Q1.3 and 2Q1.2, and which is passing peculiar, since both of them refer to discharge releases and emissions.

MR LEVY: I think that Liebman has a flaw in that respect, Your Honor, because it seems to not give credence to the word "substantive environmental offense," prosecutable environmental offense, but, if you apply the rules of Abroger, there still is a reason for that enhancement, and the enhancement isn't superfluous, because it applies to certain situations where you have misconduct in the United States waters that could be prosecuted that are a substantive environmental offenae.

Here we have an unusual situation.

THE COURT: But then it wouldn't be an enhancement.

MR. LEVY: Why not, Your Honor?

Why couldn't -

THE COURT: Let me just see if I understand the way

in which you're reading this.

We start with the record keeper keeping base Offense Level, which is 2Q1.3(a). That's the base Offense Level.

And, then, we say: There are specific enhancements, and an enhancement is if this offense involved a discharge.

Now, you're saying involved means it has to be - I don't know what it has to be to do that.

What is it that would involve a discharge?

- - -

(No response.)

- -

THE COURT: Anything?

- - -

(No response.)

- - -

THE COURT: That would invoke that specific offense characteristic?

MR. LEVY: It would just have to be well, you could have - let's take asbestos, for example, from Liebman.

You could engage in a construction project in which you don't get the proper comments. You don't take the correct remedial action to remove the asbestos.

You tear down a roof.

You release the asbestos into the environment, and you submit a certification to the Board of Health.

Each day after the workday, as required, you say we didn't engage in any asbestos removal today.

That's a false statement.

It's a recordkeeping offense. It could be charged that way.

THE COURT: Well, is it during?

It is Liebman

Can we say it's during?

Submitted a false statement at the end of the day.

MR. LEVY: About that date.

Well, that would have the temporal nexus that we don't have.

THE COURT: What's the temporal nexus?

Where does it say twenty-four hours or twelve hours?

MR. LEVY: It doesn't, Your Honor, but you're certifying, as to the specific conduct that you engage in

THE COURT: Why aren't you certifying that with the oil record book?

MR. LEVY: The oil record book is is it relates to anything that happened prior prior to the presentation.

THE COURT: Well, it may, but or it did, it

does, but that doesn't seem to be a material difference to me.

Conceptually, I can't understand the difference.

If either a discharge that occurs before the presentation of the false record is included in the enhancement by involved, but one side resulted, but involved, or it's not

Now, if it's not, then, I don't know what this thing is doing there.

MR. LEVY: Well, I think one distinction is from Section Five, the substantive environmental offense language, which the asbestos hypothetical, maybe you can call that the Liebman situation, involves a prosecutable crime. It happens within something that could be prosecuted.

THE COURT: Right.

So let's assume that the substantive offense is sixteen when you discharge radioactive material. I don't know whether it is, but assume it's sixteen or something, but something more than twelve

MR. LEVY: Mm-hmm.

THE COURT: Which is the maximum you can squeeze out of the offense and conviction guideline and the specific offense conduct Well, look at the substantive offense there.

Now, if we're talking here about the substantive offense of discharge of pollutant, what's the substantive offense?

What's the guideline for that?

MR. LEVY: For the discharge of the pollutant in the U. S. waters?

THE COURT: Mm-hmm.

MR. LEVY: I don't know what -- I don't know what that is.

THE COURT: Do you know what it is Mr. Mikolop or Ms. Ricci?

MR. MIKOLOP: I'm fairly certain, Your Honor, it's the same.

It's 2Q1.3

- - -

(Government counsel conferred.)

-

THE COURT: So it's the same thing?

MR. MIKOLOP: It is, Your Honor.

It's -- depending on what the pollutant is, it would be 1.2 or 1.3.

THE COURT: So, just to explore this a bit more, more than perhaps, you want to, the effect of that is that someone could not be prosecuted for the substantive offense of discharge outside of the waters of the United States, but you could be prosecuted for failing to keep a record of that, and the guideline would be the same.

MR. LEVY: As if you prosecuted substantive

offense?

THE COURT: Mm-hmm.

Is that right?

Is that how that works?

MR. LEVY: Your Honor, there is an annoying circular aspect to this guideline.

THE COURT: Well, first of all, I want to see whether I'm reading that correctly

Is that correct?

MR LEVY: I think it is

THE COURT: If what was charged here was discharge in Boston Harbor.

MR. LEVY: Mm-hmm.

Of dirty bilge water.

THE COURT. Mm-hmm.

Or well, let's use February "X," if that discharge were charged directly, it would be Offense Level ten.

Is that right?

MR. LEVY: I'm not - I'm not so sure.

THE COURT: Well, let me hear from the Government on that.

MR. MIKOLOP: Are you applying a base of 6 and an increase of 4 under B1B, Your Honor.

THE COURT: Wouldn't I?

MR. MIKOLOP: That would be our application, Your Honor.

THE COURT: Okay: so why isn't it yours?

MR. LEVY: Because I think you could -- to make sense of these, to have -- render certain sections non-superfluous, you could read 2Q1.3(b)(5) as saying if it's a recordkeeping violation, as opposed to a substantive violation, you apply the Offense Level for the substantive offense and you stop there, and you only go on to B when you have the substantive events -- the substantive offense charge That's the only way, Your Honor, that you would make sense.

THE COURT: No, not necessarily, because five could be for -- well, maybe not.

Is there a substantive criminal offense other than involving something other than the discharge or emission of a pollutant?

- - -

(Government counsel conferred.)

- - -

THE COURT: I'm not sufficiently familiar with all the terms of art.

(Pause.)

MR. MIKOLOP: I think, Your Honor, under all the various statutes: Clean Air Act, Clean Water Act, Harbors Act, we're talking always about discharge of

pollutants.

THE COURT: So B5 is duplicative here.

MR. MIKOLOP: I think it is.

THE COURT: Alright.

So what?

So what?

MR. LEVY: Well, I don't think it should be read to be duplicative.

THE COURT: Why - why shouldn't it?

I mean, why not?

Okay: so that's the way it works.

MR. LEVY: I think that's the principal statutory construction.

The Court's obviously quite familiar, then, that you don't -- you try and construe a statute and analogize this to quasi statute to not render provision superfluous. And the way you would read that, to not render it superfluous, Your Honor, to stop the circularity of it is that you only - if your offense of conviction is the recordkeeping violation, you get the six points.

THE COURT: Well, I think the way in which or, four points.

The way in which --

MR. LEVY: Six.

THE COURT: Or, six and, then, the question is in

the enhancement.

The - your way of thinking about this is that five is meant to address those occasions in which there is a substantive offense, and, so, recordkeeping is submerged or merged into substantive offense.

The specific Offense Levels are at least differentiated in those cases in which you cannot charge the substantive offense but you've still got a discharge: that is, imposing some sort of sanction and actually the same sanction for discharging American waters.

Now, I'm not sure what how that plays out

Part of it is, I suppose, an argument about extra territorial application, but the culpability is the same.

MR. LEVY: I guess where I'm getting hung up, Your Honor, is you're going through the guideline analysis for the specific offender -- offense characteristics here, and you're checking off applies to my decision before me, and, when you get to five, it says, okay, now, if it's a recordkeeping offense to conceal a substantive environmental offense, use the Offense Level for the substantive offense. It doesn't say use the base Offense Level and specific offense characteristics --

THE COURT: Well, it turns out that that's the Offense Level for the substantive offense.

MR. LEVY But it doesn't say go back to the

beginning and reapply this analysis and go back to the B1234 factors.

THE COURT: Okay

So one thing or another is superfluous here not superfluous

It is redundant.

Mr. Mikolop?

MR. MIKOLOP: If I could just add another note on statutory construction, is that if Mr. Levy's theory were correct that you would just stop there, I would argue it would be a subparagraph, little C.

You would have the base Offense Level of six, specific offense characteristics, and, then, for everything else, there would be the subparagraph C.

It's not written that way, which says to me that, no matter what, you're at a base Offense Level of six and, then, you go through B.

MR. LEVY: Your Honor, there's one more place I'd direct The Court.

THE COURT: Okay.

MR. LEVY. Which is to the background section of 2Q1.2. These are parallel provisions

THE COURT: Yes.

MR LEVY: And it does discuss in there that the first four specific offense characteristics are for involve

a substantive violation, and the last two specific characteristics apply to recordkeeping offenses.

(Pause.)

THE COURT: What does that mean?

(Pause.)

THE COURT: Well, 2B1.2 is different.

It actually has a specific Offense Level for simple recordkeeping or reporting violations only, unlike 2Q1.3

MR. LEVY: Of the background section of 2Q1.3, it says that it parallels 2Q1.2, with some exceptions.

THE COURT: Well, it does, except when it doesn't.

MR. LEVY: I think what that sentence means, Your Honor, is that, when you're convicted of a recordkeeping violation, and you're not convicted of a substantive environmental offense, then, you use the base Offense Level of six.

THE COURT: And you would suggest that I decrease by two? Because that's what 2Q1.2(b)(6) does.

MR. LEVY: Well -- but we're not in -- we're not in two.

THE COURT: Right.

That's the point.

MR. LEVY: Well but five 2Q1.3b is the same as 2Q1.3b.

THE COURT: Right, except that they don't -- it

doesn't have a knock off for whatever simple reporting record keeper or reporting violation is

MR. LEVY: But actually, that five and six structure there shows the commission is -- is distinguishing between recordkeeping violations of substantive offenses and simple recordkeeping violations, and, therefore -

THE COURT: It is -- it is in the context of toxic substances, pesticides, or other pollutants, as described by those statutory provisions, but 2B1. -- the handling of toxic substances or pesticides, not pollutants.

MR. LEVY: But it's drawing that distinction there because -- and it's not sending you back up to the top of 2Q1.2.

THE COURT: If I were reading -- I think we've explored this

Unfortunately, the Guidelines -- well, they are not, but the Guidelines are not mere simulations, and so we can't we're bound to try to make sense out of it, and . . .

(Pause.)

THE COURT: So I think I understand as much as I'm going to understand about it.

I think I want to take a -- unless there's something else, I want to take a -- break before I deal with the Guidelines' applications.

MR. LEVY: No.

THE COURT: I'll hear you on the 3553.

Is there anything else?

Ms. Ricci, is there something else?

MS. RICCI: Your Honor, there was just one thing I wanted -- I think, that didn't get mentioned yesterday that I think is significant, and this is just going back to the preponderance of the evidence, burden on the Government related to March 18, and that is that it is undisputed that that pipe had oil residue on both sides of that valve when it arrived in Boston, and I just raise that to The Court's attention, because I think that got lost in the mix yesterday.

THE COURT: But the argument, as I understand it, the distinction between -- and I appreciate your bringing this to my attention because I do want to be sure I've gotten this right the argument of simulation; that is, the defendant's story, is that nothing got blown out of that pipe. Nothing was discharged out of that pipe, right?

(Government counsel conferred.)

MS. RICCI: I think it was either that it was nothing or that it was seawater.

I'll go back to the defendant's brief, but I think, either way --

THE COURT: Well, if it's nothing, then, there was

no discharge at all.

If it's seawater, then, that's an issue.

MS. RICCI: The reason I raise this is yesterday -- if - if we put aside, for a minute, everything that Mr. Oria has put forward and we look at what the Government has presented, in the way of evidence, I think that this fact, of oil on both sides of the valve, speaks to the logical nature of the Government's theory, that we've presented The Court with the facts that are undisputed, in terms of the instruction or the fact that they're all down there, and the end result is corroborated, as our theory is, and what Mr. Jorilla and Mr. Sanchez have told us, corroborated by the very fact that there is oil residue on both --

THE COURT: If nothing was blown out of the pipe on that occasion, then, it's not.

If it was just air going through it or the valves weren't turning the way that would let anything out of the pipe, then, it's not.

There may have been other discharges on other occasions, but I'll put it in a different way: If I find that there was not a discharge of seawater or any other liquid, then, that's immaterial; isn't it?

(Mr. Levy conferred with the defendant.)

THE COURT: That is, the existence of the oil residue.

We know there was one. That was the February "X."

MS. RICCI: Right.

I guess it does go to the ultimate question -

THE COURT: Okay, so let me just hear anything else anybody wants to say, about what evidence it is that it was seawater that went out.

I don't think that's quite the state of the record.

MR. LEVY: The testimony from Mr. Oria was the system was airbound and there was no water going through that pipe.

Can I just say two things: One, this is important. The February discharge did not involve that pipe. That's in the statement of facts --

THE COURT: I'm sorry.

I misspoke.

I shouldn't have said that.

MR. LEVY: And, then, to The Court's point, the Conspiracy Charge is from '06 to '08, multiple discharges, and I've seen the pipe. I don't think there is any evidence of when that oil was caked on, black oil.

It's not the dripping oil that they find in Boston, so I think that it doesn't prove -- it proves that there may have been discharge in that pipe. It doesn't prove it

happened on March 18.

THE COURT: Right.

Am I proscribed from finding -- I guess, Ms. Ricci, the way I put it, is am I proscribed from finding that the defendant's position is it was airbound, the simulation was it left the pipe airbound?

- - -

(No response.)

- - -

THE COURT: I don't think he said there was a discharge of seawater

He said there was a discharge of seawater but not involving this pipe in February "X," and -- but he can see that, since it was seawater involving bilge, that it must have involved fifteen parts per whatever.

Is there anything else you want to -

MS. RICCI: I don't -- I don't -- may I just have one moment?

THE COURT: Sure.

- - -

(Government counsel and Mr. Mikolop conferred.)

- - -

MS. RICCI: The only footnote is that, even by Mr Orla's testimony, he ordered that the pipe be flushed that night, even if you credit his testimony --

THE COURT: Well, I'm not sure I heard that.

Where do I find that, that he ordered it to be flushed?

-

(Government counsel conferred.)

- - -

MS. RICCI: He ordered -- in his direct testimony.

It's also in the testimony of the Mr Jorilla and Mr. Sanchez, but I'll go back through my own notes, but he because that was all part of the scheme, he said, which was to make absolutely certain and everyone knew that he really did intend to order this discharge.

THE COURT: It is one thing to order it.

It's another thing to say -- what did he say the operation resulted in?

Did it result in a flushing of the pipe?

MS. RICCI: I believe he testified yesterday that it did, that, irrespective of whether it was airbound or not airbound, he had pulled them off, and, at the end of it, he said flush the pipe. And then there's --

MR. LEVY: It's flush the pump. You can't flush the pipe.

You're flushing a general service pump is what continues after the discharge, not the pipe.

I don't know how you would flush the pipe.

THE COURT: How do you flush the pipe, what?

MR. LEVY: If it's airbound

THE COURT: Right.

If it's airbound.

MS. RICCI: I thought his testimony was that he ordered that they then flush the pipe, so that the whole purpose was to eliminate any oil residue, so that, even by his own testimony, seawater went through, something went through, that pipe that night

THE COURT: And was discharged?

MS. RICCI: Excuse me?

THE COURT And was discharged?

MS RICCI: And was discharged.

It was flushed out into the ocean so that it was --

THE COURT: I didn't hear it that way, but --

MR. BASIL: Your Honor, in theory, what happens, if you were going to do a discharge, you would want to flush the general service pump at the end of the operation, because the general service pump could become caked up with oil, so this is what happens, at the end of the operation, when nothing has come through this, so-called, magic pipe, you turn on the seawater that's been going through the general service pump the whole time, you leave that running, because you're trying to leave the impression, according to Mr. Orla's theory, that you're flushing the pump of oil that would have gone through

it, but nothing is going through the magic pipe at any time

THE COURT: What happens to that flushing water?

Does it end up in the village?

MR. BASIL: That saltwater comes from outside the ship, down through a big main, into the manifold, directly into the service pump, and, then, back out into the ocean. It's a circuit from the sea to the

THE COURT: Why isn't that a discharge, then?

MR. BASIL: Excuse me?

THE COURT Why isn't that a discharge, then?

MR. BASIL: Because it never touches the bilge or the machinery spaces of the ship, which is what's prohibited under CFR -- 33CFR151.25

THE COURT: But it is -- that operation would result in oil being --

MR. BASIL: No.

THE COURT: Just a moment

MR. BASIL: Pardon me.

THE COURT: If you flush it out, if you flush the general service pump out, that would result in, as you describe it, seawater that is, in some fashion, contaminated with some sort of oily substance?

MR. BASIL: If the general service pump were polluted with oil, that would be right; but the general service pump would not be polluted with oil --

THE COURT: If it were airbound, if the magic pipe had been airbound; is that right?

MR. BASIL: Yes, and, under normal operating circumstances, the only thing that goes through the general service pump is seawater.

THE COURT: So what the Government would have to show, under your theory, is that there was some oily substance in the general service pump that was being discharged.

MR. BASIL: Yes, Your Honor.

THE COURT: And there wouldn't ordinarily be such?

MR. BASIL: That's correct

THE COURT: Ms Ricci, do you want to respond to that?

MS. RICCI: Your Honor, it was the Government's understanding, that based on his testimony yesterday, and I confess our notes are not a transcript, was that he testified that -- I'm sort of cobbling together two sets of notes, but that leave the pump running on with saltwater to flush out the line to give the impression of pumping.

That's the best I can do, is cobble together my notes, but --

THE COURT: Read that again.

MS. RICCI: Perhaps, I'm cobbling together notes, Your Honor, so perhaps the transcript --

THE COURT: Alright. Go ahead, I just want to

understand.

MS. RICCI: -- the transcript is best.

I'm sorry.

I just lost my place.

(Pause.)

MS. RICCI: Leave the pump running with saltwater to give the impression I'm sorry -- to flush out the line, to give the impression of pumping, but the last part doesn't make sense, but that's

THE COURT: But that's consistent with the idea of cleaning the general service pump.

MS. RICCI: No. He said the line, to flush out the line, the pump -- excuse me -- the crossover pipe, the magic pipe, is the line.

It connects the general service pump and the donkey pump.

THE COURT: No, I understand that.

MS. RICCI: And that's the line, when he says to flush out the line.

THE COURT: Just a moment.

Mr. Basil, do you want --

MR. BASIL: Yes.

I think that we have to test -- whatever is on the transcript, we have to test that against what the physical configuration of the ship is.

If the general service pump is running, it's not pumping towards the so called magic pipe.

It can't. It's just not.

That would be the pump running in reverse.

So, if the pump is running and you leave saltwater going into it, it's moving up and out the overboard valve. It's not being pushed back through the pump, and there is no testimony that they reversed the pump.

If they did, what would happen?

Water would go through this so-called magic pipe, and it would hit a check valve next to the donkey pipe, and, then, the whole system would shut down, because the water can't move two directions once it gets to a certain point, or you could turn on the donkey pump and that would recirculate the bilge water collecting tank.

There is no reason to flush that, because the bilge water collecting tank lines are always full of oil contaminated water.

That's what's in the bilge water collecting tank, so what the Government is talking about here just doesn't match up what's on the ship, itself, and the testimony that we've had, both in the Rule 15 depositions and in the Grand Jury, is that what happens at the end of this operation is that you leave the general service pump running to flush out the pump and its lines, not the magic pipe itself.

THE COURT: That's my recollection of how I was receiving that information, I should say here, and it doesn't make any sense otherwise.

I mean, the defense that Mr. Oria is offering doesn't make any sense, otherwise.

Maybe I don't believe his defense, but, if I credit what he says was going on, this simulation, it doesn't make any sense at the end of it to flush out the magic pipe.

I don't read it that way, unless there is something else you want me to consider, and it does have to do with the mechanics of the piping.

MS. RICCI: Could I just have one moment?

THE COURT: Sure.

- - -

(Government counsel and Mr. Mallett conferred.)

MS. RICCI: Nothing additional, Your Honor.

THE COURT: Okay; so let me take -- we'll take a fifteen-minute break, and I'll resolve the Guidelines' issues, and, then, I'll hear you on the question of what the proper sentence should be, okay?

MS. RICCI: Thank you.

THE DEPUTY CLERK: All rise.

- - -

(A short recess was taken.)

THE DEPUTY CLERK: All rise.

This Honorable Court is back in session.

You may be seated.

THE COURT: Well, I think the most efficient way to deal with the various Guideline challenges is to do it in the form of directing some revisions to the Presentence Report, and, so, I'll go through what I think is in dispute, certainly is related to matters that I do consider to be important in the sentencing, not merely for Guideline purposes, but more broadly for Section 3553, so let's turn to Page 9 of the Presentence Report, Paragraph 33.

I'm going to direct that Paragraph 33 be deleted. The Government is not relying upon Mr. Piamonte here, and, so, I view it as surplusage.

I turn, then, to Paragraph 36, which deals with the March 18 purported discharge, and, here, I find that the Government has not satisfied that it's more likely than not the case that an actual discharge took place.

I will direct that there be added a final sentence to Paragraph 36 reading:

After extensive hearings, The Court found it could not credit the testimony of Messrs. Jorilla and Sanchez and that, accordingly, the Government did not meet its burden of establishing actual discharge on March 18.

I don't mean to put you in an awkward position.

Will you be able to get that done?

U. S. PROBATION OFFICER SINCLAIR: Yes, I can.

THE COURT: Okay.

Thank you.

Let me explain a bit.

I, frankly, tested the Government's evidence first, in considering the reliability of the testimony of Mr. Jorilla and Mr. Sanchez, and I find it altogether wholly unreliable. They veered on erratic courses, raising alternative and contradictory reports of events, sufficiently so that I simply would not be able to credit it.

I tried to think if there were things I could credit and not credit in this setting, and, frankly, I would have difficulty crediting any one piece of evidence and being able to explain why, concerning it.

I do believe that there was an event on that evening, and I've tested it, as well, from a kind of circumstantial point of view, and, particularly, the last bit of colloquy that we had, concerning the configuration of whether or not the configuration would lend itself, configuration of the piping, would lend itself to a non-discharge, and I find that it would, and I don't find that the existence of residue on the pipe thereafter is material, one way or the other, to the question of whether or not there

was a discharge on March 18.

Now, I tested it, as well, in light of the testimony of Mr. Oria, which I found to be by bizarre in its explanation, so bizarre that I ultimately found that it's believable.

This is one of those circumstances that perhaps illustrates the old song that even paranoid people have things to be afraid of.

It appears that Mr. Oria had some conception that there were divisions within the crew that may cause him to be held responsible for certain kinds of activity, in fact, at the time that he acted on it, March 18, he was responsible for criminal activity.

He had discharged in violation of the law, and, so, he contrived this very bizarre, is the only thing that has enduring descriptive value here, simulation of a discharge, perhaps, to smoke out, in some fashion, who might be the people that he should be properly paranoid about.

No one listening to the story, I think, found it rational as a way of responding, but, ultimately, I think it is, as I indicated, accurate, but this had the effect of creating at least the appearance that there was a discharge; hence, the dispute, and I resolved the dispute against the Government here, bearing the burden, but I've tested it against all the various perspectives that one can take on

those events in the evidence that I had before me.

I, then, turn to Paragraph 38. I believe that what I will ask the probation to do is strike the third line from the bottom of that paragraph the words, "and March 2008" and make discharge singular.

Turning to the question of the disappearance of the log. I'll leave the heading, "Disappearance of Evidence Sounding Log," but I do not find that the Government has satisfied me that the disappearance of the actual binder is something that Mr. Oria himself did.

This is a close question for me, because I do find that Mr. Oria was engaged in two parallel undertakings, involving the same acts.

One of them is this, sort of, self-created undercover operation to identify and protect himself from those who he thought was threatening.

The other was, in doing so, to manipulate the evidence that would be and he knew would be relevant to the authorities.

The sharp reversal of customary practice, with respect to the sounding logs, no longer to incorporate the information that the sounding logs expected to be or were expecting to be in the sounding log completely was designed on one track to insulate him from false reporting, from his perspective, or otherwise be vulnerable to false accusations

or accusations of any kind by the other members of the crew who had reason to fear. but, on the other track, it deprived the Coast Guard of information that they ordinarily would look to, and I find quite compelling the Paragraph Number 41, that, as the primary means of monitoring takeovers, the sounding log would have yielded critical information to corroborate and/or disprove the representations made in the oil record book.

I will strike, however, Paragraph 42, which ascribes to Mr. Orla effectively the destruction of the log itself, because I don't, as I said, find that the Government has proved that, but, as you'll see, I view the manipulation of the recordation, customary recordation of the sounding log information to be an aspect of obstruction of justice within the scope of the Guidelines.

I turn, then, to Page 12.

The first aspect in Paragraph 43 is one that I will support and not strike

The denial was in one sense false. At that time, he had been involved in pumping overboard a kind of sludge or oily water. it's the kind that's defined by the statute and regulations themselves.

If this were a perjury case, I would be -- or even a false statement case directly would impose a very rigid and demanding approach to this false statement, with the recognition that it might be read to talk about something more

than simple discharge of seawater that had come into contact with ordinary material as the February "X" discharge was and that it would be fair argument, maybe even enough to justify not treating it as perjurious, that he denied a fairly serious kind of discharge, and that's all he defined -- all he said he was not responsible for.

Nevertheless, I think it fairly falls within the scope of false statement for purposes of the Guidelines, but, more specifically, for purposes of corroboration of my basic finding of obstruction of justice, that this statement was intended to leave the Coast Guard with the view that he had not been involved in any of the violations or potential violations of discharge, which United States law recognizes, but I will strike Paragraph 44, which seems to me to be more of a summation that I think overstates the degree of obstruction.

I finally turn to the information regarding Mr. Magcale and, again, recognize that Mr. Orla was -- or find that Mr. Orla was engaged in two tracks: One track, the track of protecting himself in the closed community of the vessel, in trying to find out who the snitches were, for his own general protection, but, at the same time, through his inquiry and his payment of money, potentially influencing witnesses or seeking to do so, not merely in idle curiosity about who the people were but presumably with the view toward taking some

step to influence the way in which they would report ultimately to the Coast Guard, and, so, I find that that supports the question or the proposition that what was involved here was obstruction of justice.

Now, I turn to Paragraph 50. I'll strike Paragraph 50. This is the one that seems to depend upon actual destruction.

In any event, I think it's unnecessary in this setting and does not fairly reflect what I have not found, which is that the Government has proved that he actually destroyed the sounding log book itself. He contrived to make it meaningless, but he didn't destroy it; at least, the Government hasn't proved that.

I turn you to Paragraph 52, and I will make some further findings: First, with respect to the sixth line, I believe, which is -- talks about the obstruction guideline and its application when we're looking at questions of acceptance of responsibility, like for his criminal conduct, rather than him criminal conduct.

When we get to the next -- the third line from the top -- from the bottom, of that paragraph, I'll strike the word, "while," and start the sentence: The defendant has admitted his involvement in the instant case.

Then, I will strike the language, the comment in the language. There is nothing about this admission which

case makes; and I'll insert the language: And The Court finds that the defendant's post arrest, post instructive conduct of accepting -- of acceptance of responsibility for the crime of conviction, while disputing certain related facts -- perhaps, I should say vigorously disputing certain related facts -- serves to make this case extraordinary.

The short of it is I'll give him acceptance of responsibility in this context.

A defendant is entitled to, it seems to me, dispute legal interpretations.

He's entitled to dispute factual conclusions that bear on the question of sentence for which he thinks there is a basis for dispute, and, if he's right, and, here, I have found him to be right, on two fundamental issues, which is the March 18 purported discharge and the actual destruction of the document, then, it is my view that he is entitled to acceptance of responsibility under the Guidelines, and I would effect that.

Now, what does that mean, in terms of the arithmetic?

Well, we turn to Page 15, and this relates to the Abrogar matter: that is, the specific offense characteristics.

I've puzzled through this, as best I can, and, as I indicated to the parties, I don't think that Abrogar becomes more persuasive by repeated greetings, which is what I've

given it here.

I recognize the awkward and quality of the Guidelines themselves in the 2Q1.2, 1.3 area.

I recognize that Abrogar in a limited way, limited to the facts in that case, and Hickman, in the Second Circuit, in a much broader way, have effectively written out of the Guideline the specific offense the characteristic that has to do with enhancement for a discharge or discharges.

I only deal with the one enhancement that will be applicable here, because we're still dealing, now, with a single discharge, and that is 2Q1.3(b)(1)(B), which provides for an enhancement if the offense otherwise involved a discharge of a pollutant, which requires a four-point increase.

My view is that this is meant to be captured by the Guideline. I've read the -- what I consider to be strained, decisions of the Second Circuit and the Third Circuit in this area I do not find them to be persuasive.

My view is that, as I expressed it earlier, to talk about a reporting offense involving an actual discharge and, then, treating the actual discharge as if it were not involved is the equivalent of the old Zen Cohen of appreciating the sound of one hand clapping.

They are inextricably intertwined. The discharge is directly involved.

There is no other way of looking at it, and, to the degree that an argument is made that this would be replicative because Section Five would lead to the same result, the concealment of a substantive environmental offense. I reject it

Now, I do have to confront the extraterritorial dimension to this, and, here -- as far as I'm concerned, I'm not dealing with the jurisdictional question of whether I have jurisdiction over the crime of conviction. It is clear that I do.

The question is whether or not extraterritorial dimensions to the relevant conduct should be disregarded, and I think they should not.

The larger purposes of MARPOL are international, the exercise of criminal jurisdictional forces is national, but, those who signed on to the MARPOL conventions are seeking to keep the waters, whether national or international, free of pollution, and, when we calibrate the relative culpability of an offender and try to capture it in relevant conduct, it seems to me to be blinking reality to make a distinction between whether or not it was done in Boston Harbor, or on the way to Boston Harbor in international waters.

It's not simply to reflect xenophobia as a mechanism of evaluation of criminal offenses, it is to effectuate the purposes of the statute itself, and, so, my

view is that the statute and the Guidelines should be read in a way that effectuates their broader purpose, unless the language seems to be pointing in another direction, and, so, recognizing that a recordkeeping violation without a discharge -- with a discharge necessarily involves a discharge and the discharge is during the offense, in some way, I find it to be relevant conduct, and, furthermore, I find it to be immaterial that this relevant conduct took place in international waters.

So I leave unmodified, except in this way, simply because the Probation Office has offered its views, with respect to Abrogar, I think there should be an insert, the parties have taken the view and the Court found that and this is simply a paraphrase, but there is an insert at the end the Court found, a four level enhancement is warranted.

MR. LEVY: Your Honor, may I be heard at one point that didn't come up earlier?

THE COURT: Yes.

MR. LEVY: Now that you have found that Abrogar does not apply here, and you're going to use the 2Q1.3 enhancement.

THE COURT: Right

MR. LEVY: Which is application note four of that provision, and it addresses the fact that a wide range of conduct will be covered by the 2Q1.3(b)(1), and it says that,

depending on the harms emission release or discharge the quantity and nature of the substance or pollutant and duration of the offense -- sorry.

THE COURT: This is too late.

If what you're saying is you want me to apply this one, it's not as if we have lots of time to think about it, so --

MR. LEVY: Well, this is --

THE COURT: What you're saying is, if it's going to be forward, rather it can be two.

MR. LEVY: What we're saying is if The Court's not going to apply Abrogar and you find a four-level enhancement and you find that 2Q1.3 applies, that you consider the whole provision of that, and that this is now -- you've made a finding, Your Honor.

THE COURT: I just have to say that I made a finding consistent with PSR, the parties' agreement, after extensive discussion, that was raised by my sua sponte expressing concern, regarding Abrogar, and, so, my view is that the issue is waived, but for my purposes, although I recognize that, you know, if you swab the deck and washed off an oily surface, it might be a two, and, here, the use of the machinery of the vessel would justify a four.

In any event, so, on those two grounds, I will not make it, but, you know, if we hadn't engaged in the extensive

discussions that we had engaged in, maybe I would look at it as not waived, just held as a hostage to fortune, to be introduced at the time that I'm in the middle of making my findings and conclusions.

In any event, I don't find that a two-level enhancement, applying the application of raised for the first time in the middle of this discussion, to be applicable.

I turn, then, to Paragraph 62, which is acceptance of responsibility, and that should be modified from minus two from zero to minus two.

And that leaves, then, the Total Offense Level to twelve, as a consequence of which, I now understand the Guideline to be ten to sixteen months' incarceration, two to three years of supervised release.

We're in Zone C, and, so, it's possible to have substituted confinement, I guess, although probation, direct probation, is no longer a Guideline; is that right?

U. S. PROBATION OFFICER SINCLAIR: That's correct, Your Honor, given his circumstances and the fact that he's not a U. S. citizen, he wouldn't actually be available for Halfway House placement.

THE COURT: I understand that, but I'm - just so the terms and conditions of the Guideline are -- or, of Zone C are recognized.

He's not eligible for probation. He would, absent

other conditions, be eligible for Halfway House or some other substituted form of confinement?

U. S. PROBATION OFFICER SINCLAIR: That's correct.

THE COURT: Okay.

And does the fine range stay the same, 3,000 to 40,000?

U. S. PROBATION OFFICER SINCLAIR: The fine range is actually 3,000 to 30,000.

THE COURT: 3,000 to 30,000.

Alright.

Based on the findings that I made here, then, is there anything further that we need to say about the Presentence Report, before I turn over to the question of the parties' recommendation and the 3553 evaluations?

MS. RICCI: Your Honor, I just had one question, just for clarity.

THE COURT: Sure.

MS. RICCI: There was also, I believe, an enhancement in the PSR, relating to organizer or leader.

THE COURT: That wasn't in dispute.

MS. RICCI: Okay.

THE COURT: I haven't -- I've listened to the parties' disputes, and, anything that's related to the parties' disputes, but I didn't understand that this - and, anything that the Probation Office had raised, as well, but I

didn't understand that to be in dispute.

MS. RICCI: Thank you, Your Honor.

THE COURT: Okay.

So are we dealing with the same set of numbers here, then?

MR. LEVY: Yes, Your Honor

MS. RICCI: Yes, Your Honor.

THE COURT: So, Ms. Ricci, what's the Government's recommendation?

MS. RICCI: Your Honor, the Government's recommendation is based on what it believes is or should be, at least, a central focus of the sentencing, and that is the general deterrent need for this type of conduct.

The seriousness of the offense, obviously, it's, also, a factor, but that is against the backdrop of a long line of pattern of conduct here that it's obvious to the Coast Guard, has not yet been appropriately dealt with.

THE COURT: Well, let me just tell you that I'm not going to deter you from wherever you want to go, but, so you don't lose me as you go, wherever you're going, the issue for me is this particular defendant in this particular setting, based on the particulars that I've found here.

And, so, if a long gray line of Chief Engineers for Consultores has, in one way or the other, encountered the magic pipe at some point during that individual's service,

it's not particularly relevant to the sentencing of this defendant, as opposed to Consultores, so what I have is this particular discharge and this relating circumstances of this particular discharge.

MS. RICCI: Understood, Your Honor

The Government's recommendation is that this defendant's conduct warrants a sentence of custody. A Guideline sentence, in this case, the Government believes, is within the range of reasonableness, understanding that it is -- it is -- there may be other reasonable sentences, and the recommendation is ten months.

THE COURT: Okay, so, let's, then, test that against Mr. Tumakov.

MS. RICCI: Yes, Your Honor.

I have spent some time myself doing that

Mr. Tumakov, I think The Court knows, was sentenced to one week of custody a short time ago; two weeks ago, I believe.

THE COURT: Right.

MS. RICCI: Mr. Oria's in given the circumstances that have been fleshed out here, relating to Mr. Oria's conduct, he is relatively more culpable in a variety of ways, but, aside from the violation or the charged conduct as to which he has been convicted, there are these other pieces that demonstrate that he was taking a deliberate

course of conduct that was adverse to what he knew and understood to be the obligations of the Coast Guard, and his role in the Coast Guard --

THE COURT: In terms of making the comparison, Mr. Tumakov was responsible for two discharges, right?

MS. RICCI: He was.

THE COURT: Okay.

Mr. Orilia (phonetic), I found, is responsible for one.

So the argument here is one of obstruction of justice being the driver, in some fashion, and, I take it that there was no obstruction, with respect to Mr. Tumakov.

MS. RICCI: Mr. Tumakov was prompt in his acceptance of responsibility.

THE COURT: It's different -- acceptance of responsibility is different.

MS. RICCI: Yes. Correct.

THE COURT: Was there a showing of some sort of obstructive conduct?

MS. RICCI: No, Your Honor.

THE COURT: Okay.

MS. RICCI: So the difference here, I think there are three pieces, but what Your Honor has identified as the parallel undertakings, if you will, of the two tracks, the second one, the manipulation of the evidence, but, there as

The Court, I think, just mentioned a few moments ago, there is the approach to Mr. Magcale.

More importantly, there is the manipulation of the sounding log, albeit not required to be maintained, but instructs his crew that it's no longer needed, and he fully well knew, having signed on to the Nautilus, he did, in writing, confirm that he understood his obligations, with respect to MARPOL and his obligation to comply with collision prevention purposes, and, then, thirdly, that written statement -

THE COURT: That's not from Tumakov; is it?

MS. RICCI: That piece of it is not, that's correct.

Well, the piece that's different is the manipulation of the sounding log

THE COURT: I understand that. I'm just trying to find out what the differences are with Tumakov. We know of two.

One is the obstruction of justice.

The other is the number of discharges.

MS. RICCI: Although just one moment

. . .

(Government counsel conferred.)

. . .

MS. RICCI: I was just trying to refresh myself on

the facts of Tumakov's two discharges.

There were two. They weren't essentially back to back, but they were close in time, and . . .

. . .

(Government counsel conferred.)

. . .

MS. RICCI: He had a -- his was -- if you accept what we have here, in terms of the backup, the facts from Mr. Orta's discharge, the counter conviction.

It is not as insidious of the dumping of sludge into the ocean, but something more along the lines of the evaporator generating a lot of freshwater.

Mr. Tumakov's discharge was similar in -- similar in nature, in terms of what he reasoned the purpose of doing that. He was cleaning out the bilge water collecting tank.

The only reason I say that is that I think just the fact that there were two, versus one, is significant in terms of a difference, but I don't know that it outweighs these other things. I think that Mr. Orta is relatively more culpable for the reasons that we just addressed.

And I do think, though --

THE COURT: The only one I understand, now, is the obstruction of justice.

MS. RICCI: Is the obstruction of justice, but there are three parts to that, if I understood the Court's

ruling, so it is - it is more than - in the one sense, they are similar, but in a sense they are different

There is the manipulation of the finding information.

There's the written statement to the Coast Guard, which, I think, is fairly read as being quite the opposite of what he actually did, and it's a knowing statement, and, third, the approach to Mr. Magcale for money.

I do think under 3553A, though, that the general deterrence is an appropriate and important consideration for The Court.

(Handed to the witness.)

THE COURT: Now, that we've slowed down what your view of the distinctions are between the two, it turns, essentially, on the obstruction of justice.

Now, from a Guideline point of view, we'll deal with 3553 in a moment, but, from a Guideline point of view, the distinction is two months, in the range, in the range

If we had - actually, it's five months

If the defendant were and I found him to be ten to sixteen, if we didn't have the enhancement to our obstruction, it would be fifteen to twenty one.

So the swing is five months, the delta.

MR LEVY: It was the other way, Your Honor?

No?

It goes down two points if you didn't have obstruction?

THE COURT: I'm sorry.

Two points make a difference of five months.

MR. LEVY: Four months, Your Honor.

If you go down two levels, it's four months.

MS. RICCI: The difference there, Your Honor, was that, as we've acknowledged, the Abrogar

THE COURT: Just a minute.

I want to be sure I've got the arithmetic right before I reject it.

If he did not have obstruction, which he does have, I see, he would be six to twelve, rather than ten to sixteen, okay.

So four months.

MS. RICCI: I agree with that.

But I did want to turn to the general deterrent.

THE COURT: Okay

So the Guideline captures this four-month swing, and we have otherwise essentially the same activity, maybe a little bit more pronounced, with respect to Tumakov in the sense that there were two of these discharges undertaken, and we have Tumakov at six and a week, and, assuming that I do take seriously the question of unwarranted disparities, why would it be anything other than reflecting an obstruction of

justice?

MS. RICCI: In Mr. Tumakov's case, there was also substantial assistance.

THE COURT: You had to file a 5K Motion?

MS. RICCI: We did. We did, Your Honor.

Another difference, and I know that we've already discussed this, and I know it's not a consistent position from the Government earlier in time, but, without the assistance of the Department of Justice, the Government failed to include the enhancement that we've addressed, the four-point enhancement in the Tumakov matter, which is why his Guideline Range was zero to six months, with a 5K Motion.

THE COURT: Okay.

MS. RICCI: And --

THE COURT: So -- so, without the Abrogar and without the obstruction of justice, the defendant here would be in the same zone, zero to six, right?

MS RICCI: Would be, without --

THE COURT: Then, the 5K Motion.

MS. RICCI: Right. I think that's correct.

THE COURT: Right.

MS. RICCI: But we do have Abrogar and, obviously, we understand, there is some discomfort with that, but we do have Abrogar, and we do have obstruction, and we don't have substantial assistance.

THE COURT: Okay.

MS. RICCI: Those are significant differences between the two, and that also explains why we're in a different range under the Guideline.

The Government believes that ten months is within the range of reasonableness, although it may not be the only reasonable sentence, and, may I address the general --

THE COURT: Yes.

MS. RICCI: -- deterrence piece?

We have submitted an affidavit from Rear Admiral Dale Gabel, from the United States Coast Guard, and I do think that it is a fair and appropriate purpose, obviously, for 3553A, for The Court to consider that

It is apparent, and the Government acknowledges that many of the sentences that are reflected in the chart, the history of sentences, in these types of cases, don't necessarily approach that type of length of incarcerated sentence.

However, what is also apparent is that there is a long line of cases, and it's just not enough to sanction the company to issue a fine, because, although there are little placards on the vessel saying don't pollute MARPOL, things of that nature, it's, absolutely, not enough, and I think there is an opportunity here or it is an appropriate time to send a message, particularly to people of the stature on these

vessels; such as, this Chief Engineer.

Long and experienced himself, he's in charge of the entire Engine Room crew, and yet, he understood not to comply with his -- his obligation.

THE COURT: Well, let's talk a bit about the ancillary effects of the charge, independence of the charge, which is an issue that's raised by the defendant, which is that his liberty, not in a formal way, but in a practical way, has been restrained for a period of about a year.

He senses that, apart from the special orders of The Court, he's been required to live in a community with which he has no real connection, under circumstances that are substantially different from what he would otherwise do.

Now, that's true of lots of mariners, who are involved in these circumstances, but can I view the prior sentences to be reflective of prior sentences, which are more modest, of being reflective of that reality as part of the punishment package?

MS. RICCI: I have not personally been involved in those other cases, but I would suggest to The Court that in this case, just in terms -- just so The Court understands all the facts, obviously, Mr. Orla has been here for fourteen -- thirteen months, but with a couple of caveats.

One is he's staying at the Mariner's House, which is a retail hotel, essentially. There are Coast Guard

personnel that stay there.

It's not

THE COURT: They've got effective choices to leave.

If they want to pay Government rate at the Mariner's House, they can.

Mr. Oria, I suppose, he can make some choices about where he wants to hang his hat, but it's substantially constrained.

MS. RICCI: Second, I just had a few things I wanted to raise with The Court

Second, my understanding is Mr. Oria has continued to be paid over this period.

I think, in the normal course, had this not happened, he would have served various contracts on and off that vessel.

He would have been out at sea, in any event, for some substantial portion of the last year, not at his home in Spain. He would have been serving --

THE COURT: No, but he's been back and forth.

He's -- I don't know exactly, I can't recall exactly, but the way in which he did over his three months on, three months off, something like that.

MS. RICCI: I think it was three to four months on, I think, was his testimony.

Typically, my understanding is the Chief Engineer

contracts are approximately three months, I think it depends on the port calls, but approximately three months on and then off, and then on and then off, and I guess that cuts both ways.

On the one hand, if it's three months on and three months off, he would have spent six out of the last twelve months, in any event, out at sea on a vessel.

And he has benefited some way by being here, if the Government's understanding is correct, by having been paid for the other six months, then typically --

THE COURT: These are, not to get too deeply in world economics, but these are not his preferences, and he would have liked to have been working, I gather, on the family farm.

That idea of going back-and-forth is an opportunity to pursue to both occupations, and that has been prescribed. He's been permitted to go visit his family on two occasions.

MS. RICCI: And, to his credit, he did come back

THE COURT: Right.

MS. RICCI: But he also did go home, when, obviously, others were still here.

Many of them -- the two material witnesses remained behind.

Mr. Tumakov --

THE COURT: I'm sorry.

The who remains behind?

MS. RICCI: The material witnesses.

There were, at one point, fourteen witnesses here, the mariners from the vessel.

None of them went home. They're all home now, but they had not gone home during the period that they were here and waiting.

THE COURT: Who was - I mean, apart from well, I mean, there were people waiting for the Rule 15 depositions, but they all left after that, right?

MS. RICCI: They all left.

THE COURT: Or was there anybody else who was detained?

MS. RICCI: No, what I mean by that, while Mr. Oria was home for the Christmas holiday, those witnesses were still here.

THE COURT: When were they sent home?

MS. RICCI: They were sent home in sequence, as soon as they testified, they would be going home.

Six testified, I believe, and there were numerous others that unfortunately they were here, during the course of the investigation, and as the United States was able to, we undertook every effort to identify them as we -- if we thought we didn't need them further, and they went home, but Mr. Tumakov did not go home

He only recently went home I think he went home last Monday or Tuesday, after serving his one week

May I just have one moment?

(Pause)

- - -

(Government counsel conferred.)

MS. RICCI: I don't have an answer for The Court, in terms of how other Courts imposing sentence have considered the length of stay. I think it varies.

My understanding is that there are other cases where the length of stay, in advance of conviction and sentencing, would be longer, in other cases, it's shorter, but what I do understand from the probation department is that in terms of placement, I know Mr. Levy has also set forth some arguments relating to what type of facility he may be eligible for and how that should affect The Court's decision, but I understand from the Probation Department that, while we can do our best to understand where he may end up, he will be evaluated as any other sentenced defendant.

THE COURT: Is there any question he's going to end up in a House of Correction?

MS. RICCI: As opposed to --

THE COURT: As opposed to the Bureau of Prison facility?

- - -

(No response.)

- - -

THE COURT: Even at ten months?

MS. RICCI: We don't know the answer to that. I don't.

THE COURT: What do you think?

U. S. PROBATION OFFICER SINCLAIR: Your Honor, my understanding is the marshals typically will leave defendants here at a House of Correction for a short period of sentence.

I'm not sure what that cutoff is for them, but I'm certain that if it's a shorter sentence, that he will not be designated

THE COURT: What about ten months?

U. S. PROBATION OFFICER SINCLAIR: It typically takes four to six weeks for someone to be designated by the Bureau of Prisons, so they may decide that a designation is appropriate to stay at the Plymouth House of Corrections.

If Your Honor sentences him to something longer than that, they may decide it is not worth their while to transport him; on the other hand, they may decide that he's still got another seven or eight months to go, and then it would be worth designating him to another facility.

THE COURT: Alright.

MS. RICCI: The other thing I did want to raise

with The Court, just in terms of comfort level for any sentence of incarceration, that we have undertaken to reach out to ICE and CBP, to confirm that Mr. Oria would not be held up in any immigration black hole, if you will, given his status whether he -- whatever the sentence might be.

THE COURT: You mean, he can depart on his own?

MS. RICCI: I think there is some process that has to be gone through, such as an interview, but we are connected to those two agencies, to confirm that he - if The Court were to sentence him to some period of incarceration, that there would not be some lingering after that.

THE COURT: He wouldn't be detained, pending exclusion from the United States?

MS. RICCI: Right.

I just wanted to give The Court that comfort, because that is something that may be on The Court's mind.

(Pause.)

THE COURT: What about fine?

MS. RICCI: The Government does suggest that The Court impose a fine in the nature of $5,000, to come from his -- to be made by him personally, as opposed to by the company or the agent.

I think that it's a fair fine.

THE COURT. How do I enforce that aspect of it?

(Pause.)

MS. RICCI: I'm not sure that The Court can

I do know that, I believe, the company's attorney is sitting in the back of the courtroom. I don't -- I think

THE COURT: Why isn't it a private arrangement?

- - -

(No response.)

- - -

THE COURT: Now, it's a private arrangement, I'll ask the company about at the time of sentencing, but it's a private arrangement.

MS. RICCI: It may be a private arrangement, but I do think it would be a fair component of the sentence.

THE COURT: But the sentence is directed at him.

MS. RICCI: Hm hmm.

THE COURT: Not if those who might volunteer to assist him, and, in fact, I don't think I have control over those who -- except in a certain way here, over those who -- volunteered to assist him

MS. RICCI: That may well be.

The Government would ask that, to the extent a fine is imposed, that it be in the nature of $5,000, and that it be paid by the defendant

THE COURT: Okay

MS. RICCI: There may be no enforcement mechanism.

THE COURT: Well, I'm not sure I have jurisdiction to do that. That's my question.

People pay for other people's sentences, I suppose, and, you know, gratuitous interlopers come in and offer to assist, and I'm not sure what my authority is to say that, and, if I were to use particular assets, which is one way to do it, they can be substituted by gratuitous interval burden.

In any event, I'm not sure I can do that, because it seems to me that that involves something similar to forfeiture.

MS. RICCI: Sorry.

I don't have a further suggestion

THE COURT: Alright.

Mr. Levy?

MR. LEVY: Thank you, Your Honor.

Your Honor, the fundamental question you need to decide here is under 3553, what sentence is necessary, but is sufficient, but not greater than necessary, excuse me, to achieve the goals that are set forth in 3553, and that's a punishment that reflects the seriousness of the offense, punishment that promotes general deterrence, specific deterrence, and rehabilitation

And I wanted to point out a couple things, and I ask The Court to consider as you're going through that analysis of what sentence is sufficient but not greater than

necessary.

First of all, Your Honor, the time Mr. Oria spent here. I just want to highlight a couple things about it. I understand The Court --

THE COURT: Well, I do want to hear the highlights, but that goes with the territory.

Someone puts out to sea is subject to circumstances that may have been, may find him in foreign ports for various kinds of activity.

I don't see anything in the Guidelines, to put it in an archway, but I wonder about the principle, in a more practical way, that says Chief Engineers from foreign countries get a special discount on their sentence because they happen to have lived and spending their time here, and Chief Engineers from the United States don't.

MR. LEVY: Well, it's not in the Guidelines, and I think it's a fact that the Guidelines didn't consider it.

If we were in the Old World, I would ask you for departure, on that basis, and we did cite some cases in our Sentencing Memorandum where Courts did take this into consideration.

THE COURT: They did. But why should I?

I mean, or why should I for the full year?

Why shouldn't I say this is being here is like a simulation of being out at sea for three more occasions.

MR. LEVY: Your Honor, there are two aspects to the answer to that question.

First of all, Mr. Oria did sign up for a life at sea, and that involves, as the Court said, three months at home and three months out at sea, or some variation of that schedule.

Those three months at home are huge; I mean, if you can't reconnect with your family, you can't see your children, your eleven year-old son, your seventeen-year-old daughter, your wife, your mother of your children, that's what -- what do we thrive on in life?

It's the nourishment of our family.

THE COURT: Well, but that's true of any person who is indicted -- not any person, but most people who are indicted for whom there is a substantial risk of flight who are indicted in Massachusetts and their family is in California.

MR. LEVY: It is, but there's a different set of factors at play in those types of offenses, for that person's conduct that would lead a Court to decide that there is a serious risk of flight.

THE COURT: Well, let's assume the Chief Engineer, making it nice and precise, but the Chief Engineer from Marin County, who is arrested in the port of Boston.

MR. LEVY: Well, I would submit that a

Chief Engineer, in that certain sense, absent something, particularly aggravating in their background, skipping out on court appearances in the past or other conduct of that nature, would not be held without bail. Would be allowed on some sort of conditions of release --

THE COURT: There were some conditions of release that permitted him to go home here.

There was an expediting of the trial. There was the creation of -- and it's one of the most extensive uses of Rule 15 that I've ever seen in some experience with the courts, so, you know, I mean, there is some compensating balances.

I understand people don't like to be taken from their families. That goes without saying. The question is whether or not you get -- because of your status as a foreign mariner, you get some benefit, in terms of the potential sentence to be imposed.

MR. LEVY: I absolutely think it should, and the other piece of it is the uncertainty, Your Honor.

He's been living here, away from his family, with the uncertainly what's been happening.

That's been the most grueling aspect of this.

THE COURT: What you described is a variation on a very common theme of every defendant facing the resolution of a criminal proceeding.

I mean, it is certainly a factor that weighs with someone, generally doesn't make any difference in terms of sentencing, because it's shared by everybody.

MR LEVY: I agree with that, Your Honor.

My point is that incredible stress that is put on someone in that situation, that is -- that goes with the territory if you're charged, but, if you're separated from your family, in trying to work through that issue, I think it exacerbates that situation, and the point of - Mr Oria has had no connection with his family

The Rule 15 depositions were not for Mr. Oria's benefit. They were to get the witnesses home.

THE COURT: They were for both benefits, because, or at least, I recall calling the parties in and somewhat surprising them of the aggressive trial schedule that I had in mind, in response to the concerns of people who were being held in a foreign country; I mean, they're part of a larger package to make the case move a lot faster than it otherwise would, and put the parties at a something of a disadvantage over the holiday season, but they're lawyer, I should say.

MR. LEVY: Your Honor, I certainly appreciate that and appreciate the fact that The Court was willing to entertain this motion to allow him to visit homes. The other no other defendants or witnesses asked for that relief.

It's not that Mr. Oria was given something special, but I would ask The Court to consider how Mr. Oria is situated, compared to most typical defendants facing this amount of time, a fifty two year old man with no criminal record.

If he was an American citizen, he would have been out on conditions of release. He would have been able to live his life.

He has had no life for over a year, and now he would have been on a vessel for some portion of that --

THE COURT: He has been paid?

MR. LEVY: He has been paid, Your Honor, and I wrote down a comment Ms. Ricci made that he benefited by being here. He got some money --

THE COURT. Well, maybe he got his ordinary salary.

MR. LEVY: He got his ordinary salary, but it is being hell being here.

Okay?

I can't -- part of the reason, but it's beyond my capability, to articulate that what the deterioration of someone who's been separated from their family, and frankly, the trips home. thank you for giving them to us, it in some respects complicates a familiar dynamic in you have the whole foreign justice system not really understanding what's happening when you're back in Spain. It's been hard enough

being here and understanding what's happening.

This, I would not -- I don't think can be overstated how serious it has been, from Mr. Oria's perspective, to be here and the pain that it has caused him, and it has been fourteen months now.

There are two other quick points I want to make, which is this effect of imprisonment and his status as a alien.

Last week, I was in Judge Zobel's courtroom. I saw a sentencing that Ms. Ricci's supervisor, Paul Levenson, did and he asked The Court to give a below Guideline sentence to a foreign national, in part, because that individual would not be eligible for Halfway House or a minimum security facility.

This either is or it isn't, and the fact is we submitted the information to the Bureau of Prisons.

If you are a foreign national, you get a higher status.

You -- the lowest facility you're eligible for is low.

You're treated differently than a similarly-situated American citizen.

Judge Gertner in the Bakius (phonetic) case, which we submitted to The Court, did take that into consideration in saying the lower sentence.

I think The Court, depending on what sentence you

give, in this case, that may become irrelevant because they may never get designated and be may be House of Corrections. but if your presence follows its procedures, because of his alien status, he does get a relatively more restrictive period of incarceration just based on --

THE COURT: That's a common problem in criminal cases involving aliens, and, you know, it raises a whole series of policy questions that are beyond my salary bracket, but two immediately come to mind. First, if you give some special benefit: well, I shouldn't say benefit, but a discount, then, you're innervating the general deterrent dimension to it, or at least you're calculating in a general deterrent dimension.

The other is the United States -- citizens of the United States get the opportunity to pay for room and board for somebody that is being asked to leave the United States, although here he is not being deported. He is simply being escorted out of the United States. As I understand it, he can still practice his craft, including his craft in the United States.

MR. LEVY: I think that's up to the Spanish licensing authorities, actually.

THE COURT: Right.

MR. LEVY. I do think that is in jeopardy, as a result of the conviction here, so I'm not sure that is clear.

Your Honor, I think it's a factor, standing alone. I think it's another factor I'd ask The Court to consider in the mix of crafting a correct sentence under 3553A.

I, also, wanted to hit for a moment the nature and circumstances of the offense, and that's obviously a very important factor in the sentencing statutes.

We spent a lot of time the last couple of days, and we truly do appreciate the time The Court gave all this, on March that there was a discharge in February, and if you read the amended -- the amended joint statement of facts, there are several things we agree on.

This discharge involved freshwater, a huge amount of freshwater. about enough to fill an above-ground swimming pool, from a freshwater tank, dropped into the bilge spaces, and pumped out overboard.

The Government put in there that they have no information about the level of pollution that's involved in that. This was freshwater being pumped out.

There are witnesses, despite it being repeatedly questioned on this and challenged on this, when they testified, said it was freshwater being discharged.

Those bilge and bilge spaces are cleaned on a regular basis.

We submitted the cleaning schedule to The Court, but they've been cleaned recently, so the water is being

dropped in and dropped out right away.

That's the discharge at issue, and that, Your Honor, I think, needs to be compared with some of these other cases we've highlighted for you in our Sentencing Memorandum, where repeated discharges of sludge of oily water have resulted in sentences of probation.

I want to focus on Mr. Tumakov for a moment, because there are some distinctions between Mr. Tumakov and Mr. Oria.

Mr. Tumakov had two discharges.

According to the Government's information, there were chemicals that were used to clean the bilge water collecting tank that were discharged in the ocean, as opposed to freshwater from the bilges, and the Government was of the position he was involved with twelve charges. That was a position in front of Judge Saris at sentencing

THE COURT: But she found two.

She makes a judgment that he's entitled to a week.

It's the ultimate judgment that I'm dealing with here, recognizing the differences and distinctions and their similarities, but I'm interested in the bottom line, which is: Yeah, I accused him of twelve, there were two that were found, as I understand it, and he's set to get a 5K1 Motion.

MR. LEVY: Those are the differences, Your Honor.

THE COURT: Let me ask: What is the Government's

recommendation?

MS. RICCI: I'm just trying to remember.

Give me one second.

- - -

(Government counsel conferred.)

- - -

MS. RICCI: I think it was four weeks.

THE COURT: Four weeks.

MS. RICCI: I think it was four weeks. Four or five weeks.

THE COURT: In that range

MS. RICCI: Four weeks or five weeks.

MR. LEVY: But that leads to a point that I just think is absolutely critical, and the judge is thinking about this, which is the 3553(a)(6), the need to avoid unwarranted disparities, sentencing disparagement in defendants with similar records, and we've submitted a lengthy section in other Sentencing Memorandum that addresses this point, Your Honor.

The only case that involved the period of incarceration for an APPS violation, since January of 2007, is the Tumakov case.

I think the Government agreed that that was the only case where someone convicted of this 1908 violation

received a period of incarceration.

THE COURT: Just so we're playing with the same database, looking at the Government's chart.

MR. LEVY: Yes.

THE COURT: I guess two things come out to me. One, that there has been wholesale disregard, call it deviance departure, whatever, from the Guidelines here.

Number 2, the idea, to the degree that you can talk more specifically about general deterrence, which is not a perfect market of information for those who might otherwise consider crime, is that the crimes continue.

Now, it's not a crime wave, I guess, on the high seas, but there is a particular value to saying to Chief Engineers the ratchet is starting to increase.

Now, the Guideline here, I don't know where they got the Guideline, or whether the Guideline had anything to do with mariners, as opposed to other kinds of discharges of other kinds of pollutants.

Ordinarily, the Guidelines are supposed to reflect practical experience that simply has been crystallized within a particular range.

That doesn't appear to be the case here.

The Guideline is different from what the experience has been, but I guess I'm concerned about the idea that there might not be or shouldn't be an involved understanding of what

the sentences should be for this kind of offense

If people, you know, are detained in the United States, they've been sent home on probation, then, maybe it is just a cost of doing business, unpleasant cost for some people, but a cost of doing business with their employers, a kind of form of care and maintenance for seamen.

MR. BASIL: Your Honor, it hasn't been a cost of doing business for Mr. Oria, but I think we need to step back and consider: Do we know that these offenses are continuing in a greater number, or not?

We have absolute numbers here. We have no relative numbers, in terms of the amount of vessels that are traveling back and forth that are coming to U. S. ports, how this compares or doesn't compare.

THE COURT: So there is not a lot of information. You do the best you can, and, so, the best I can is, that over a period of time, there have been a number of these violations, that have varying degrees of sentences imposed.

If I take the level twelves, taking the Government chart, I find eight months, five months, probation for one, thirty days for another.

One month, three months, time served

Six months

MR. LEVY: Your Honor, I believe there are a few more probations on the first page.

THE COURT: They're probations, but are they Guidelines twelve?

MR. LEVY: Yeah, look at, if you would, the District of Maryland.

THE COURT: Okay.

PSM?

Yes, I see those two.

MR. LEVY: There's two.

There's a thirteen

THE COURT: Okay.

So there's a range here.

MR. LEVY: I looked at this chart, and, if you look since January of 2007, in the post-Booker fanfan world, there have been eighteen cases that will resolve the plea, without an obstruction conviction, and every one of those cases, the sentence was probation, except for Mr. Tumakov.

THE COURT: Let me see this.

You said since what date?

MR. BASIL: 2007 forward.

THE COURT: Well, what date in 2007?

MR. LEVY: I guess I'd start with January 26, 2007.

THE COURT: Okay.

So going to the people who are twelve or above, but let's just use twelve.

We've got five ones, where you're dealing with the

ship management - just a moment.

(Pause.)

THE COURT: That's an obstruction violation.

There are two that are twelve, two twelves that are eight months and five months.

MR. LEVY: Your Honor, those are obstruction convictions.

THE COURT: Right, with the Guideline and adjusted Offense Level of twelve, and there's obstruction in this case.

(Pause.)

THE COURT: And, so, the next one I go up to is the District of Maryland that you directed me to. That's $500 and two years' unsupervised release, and another one in the district of -- I guess in the District of Maryland, just trying to be sure, a Conspiracy, 1,000 more Conspiracy, false statement, is a twelve, and that's two years.

MR. LEVY: Your Honor, I would respectfully ask The Court to draw a distinction between the obstruction found here under the Sentencing Guidelines and proving obstruction, charging someone with obstruction, which the Government chose not to do, in this case, and proving that beyond a reasonable doubt.

THE COURT: To the degree we use a touchstone, it's the Guidelines, and the Guidelines are run by the total offense level, and I'm assuming that all these people are

Criminal History Category one.

MR. LEVY: You don't know that from the chart.

THE COURT: But, in any event, that's what the Guidelines were supposed to do.

They were supposed to also recognize and calibrate the relative culpability, and, so, 12 is one way of looking at it.

It's uneven. I recognize that, but it includes some people who spent some real time.

MR. LEVY: It does, and the facts of these cases are hard to pull on the Internet, but I think you need to not just look at the charge and the Offense Level, but what do they do, what do we have here.

We have what you've found, Your Honor. I'm not going to repeat it.

Look at some of these other cases.

The Iomea (phonetic) case, the engineers in that case pumped up 968 tons of oily waste, and they were sentenced in October of 2007, to probation.

In Florida, the case was decided in 2009, Bagatano (phonetic), I believe is the defendant.

He was -- the evidence was there was an oil sheen in the Gulf of Mexico and he received probation.

THE COURT: It's an eight and ten.

I don't know how much we're talking about, in terms

of pumping and relative responsibility.

You're using that as a baseline.

It's lower, and, if it were only the amount that you were talking about, I suspect my sentence would be fairly severe here

MR. LEVY: The Guidelines -- I think partly, how we ended up with the Guidelines, is the position the Department of Justice took in this case.

Now, you made your own independent findings, but none of those sentences since 2007 has the Department of Justice been asking for this enhancement under 2Q1.3, so that's unwarranted disparity.

THE COURT: But when does enhancement kick in?

How long does the Government have to take the position, wait to take the position?

I mean, what you have is a Court saying this enhancement, which must have been asked for, at least considered, isn't applicable here, and in doing that in 2006, I think.

MR. LEVY: 2006, yes.

THE COURT: When the case came down, so it must have been before that.

You know, at some point, the -- developing the understanding of what the Guideline is -- is becomes fixed, but it's not fixed yet

I've made a determination, and, the parties, I'm not going to spend too much time, and I don't mean to overdo it. The parties negotiated this going in.

Apparently, the Government didn't know about it. I don't know whether you knew about it.

That is Abrogar, but, in any event, everybody was happy enough to let a four-point enhancement go forward, but I'm not going to draw some conclusion about they didn't choose it in one case and they did it in another when we've got an evolving administrative understanding by the Government about what they want, what legal position they want to take.

MR. LEVY: I'm not going to make much headway here, but it is two years, for a period of two years after Abrogar, that that's the position they were taking.

And that drives the number that you're looking at and comparing this case with the Guidelines number.

The Government's not seeking in those cases, the Abrogar, and they represented us in the plea negotiations.

This was office policy.

This was ECS policy, and Tumakov was an aberration where they made a mistake. That's not the case, when you look at all these.

THE COURT: Alright.

It would be unfair for me to say that you accepted it

I haven't said I won't rely on it, but I don't draw any particular conclusion about, you know, the Government getting around sooner or later figuring out what Guidelines might be applicable.

MR. LEVY: I'm being up here, Your Honor, because I think it's another factor I think the Court should be considering under 3553A6 which is the unwarranted disparities

There are two types of unwarranted disparities in this situation.

One is how were the Guidelines apply to Mr. Oria, and two is that I'd ask The Court to strive to avoid is what's going to happen in these cases.

On this charge of conviction, this count of conviction, what types of sentences the defendant will be receiving, a very low probation, for the most part, and then you look at the offense of conviction here, which is the freshwater discharge that went out.

That's the only situation, the only offense that's been proven here, and I think that a sentence of incarceration under these circumstance, Your Honor, in light of this track record, in light of what the Government's actually able to prove here, a sentence of incarceration is completely unfair, and especially in light of the time Mr. Oria spent here.

He, from the beginning, disputed March 18 and would not admit to March 18, and, as soon as his federal discharge

was identified by the Government as another offense that they were intending to pursue, we entered the plea negotiations. Mr. Oria accepted his responsibility for that discharge and wanted to move this case forward and end this nightmare for him, but he didn't want to admit to March 18, and The Court gave him a day in court here, couple days in court here, to have that sounded out, because he believed that in his heart.

Now, at the end of the process, what the Government's proven is this one freshwater discharge, and what's been admitted to is just one freshwater discharge, and, when you compare that conduct, the nature and circumstance of the offense, in light of the other Chief Engineers who have come before and in light of the sentences that have been imposed for more serious conduct, the sentence of probation here of fourteen months after Mr. Oria was first detained in Boston is the right and appropriate sentence.

I would ask The Court to impose that, to impose a modest fine on Mr. Oria, and to let him go home and start his life over again and end this nightmare

THE COURT: Alright.

Mr. Oria, I'll hear from you, if there is something that you like to say

THE SPANISH INTERPRETER: Yes, I have a few words I'd like to say.

THE COURT: Alright.

THE SPANISH INTERPRETER: I'm sorry for what I've done. I'll never commit the same error again in the future

I have suffered greatly and please have mercy on me.

THE COURT: Alright.

Thank you.

THE SPANISH INTERPRETER: Thank you, Your Honor.

THE COURT: Well, there is no question of what I'll call incommensurables in the case are substantial and at variance and imposing them is something of a challenge, but, in doing so, let me go through the basic elements of 3553.

First, the question of the seriousness of the offense, in order to promote respect for the law.

To some degree, they're reflected in the Guidelines, and one could say, reflexively, whether the Guidelines have yielded a particular sentence that reflects the seriousness of the offense.

The problem that's presented here is the one that we've been discussing, which is that the Guideline applications in other cases, to the degree that we have information about them, have been uneven, and the Guideline itself seems to have been auto generated, as opposed to the way in which the Guidelines are supposed to be generated, which is the overall practice of judges in similar cases

Nevertheless, it is the case that discharge, the

process of discharge, is a matter of great concern, not merely to the United States but to other countries that's embodied in these important conventions and treaties, and, when one acts in derogation of that, one acts in a fashion that promotes disrespect for the law and violates some important considerations, so I will view it as a serious offense.

Exotic in the sense that large numbers of people who are involved in it are not American citizens and, so, they present certain challenges, but nevertheless a serious offense that has agitated the international community and led to increasing degrees of restrictions.

I, then, turn to the question of general deterrence, and, here, as I've observed, there is no perfect market of information regarding these things, although there is, I suppose, some sea lore that gets around about what happens to you if you want to commit a violation, and it's at this point that I consider the principle of parsimony, which is at the core of Section 3553, the imposition of a sentence that is sufficient but no greater than necessary to serve the purposes.

So what's necessary to serve the purpose of general deterrence here?

Well, I'm not a big fan of the send the message locution, but it is important that mariners become aware that departures from their obligations, in respect to discharge and

the recordation of discharge can carry a significant sentence.

Here, belatedly, the Defense focused on one of the application notes, which I have considered in connection with the Guidelines already, having to do with the relative lack of serious pollution of the event that Mr. Oria engaged himself in, and I do recognize that there's a very broad range of ways in which one can technically or dramatically violate the law here, and it has to be reflected, I think, in general deterrence, that you have to square your corners when you're discharging fluids that may contain what's statutorily identified as pollutants, so, turning back to the question of general deterrence directly, it argues for some period of time in prison.

How much is the more fundamental question.

The question of specific deterrence, it seems to me, is always challenging. I've thought about this a great deal, with respect to Mr. Oria and the way that he's responded to the various dimensions of this.

I think it's fair to say that Mr. Oria is a proud man.

He is not someone who willingly engages in violations of the law lightly.

That there are circumstances and more circumstances, in connection with this vessel, and the custom and practice of his employers that made it less restrained for

him to engage in this violation, but will he engage in this violation or any violation again?

I consider it highly unlikely, whether he goes to jail, or not.

So what could crudely be called the warehouse function is sometimes called specific deterrence is not served by a period of incarceration.

I turn to penological benefit.

Well, there is no penological benefit here.

We've talked about the limitations that the Bureau of Prisons puts on people in Mr. Oria's circumstance. This isn't an opportunity for him to learn how to become a barber or get the 500 hour residential drug treatment program, so that's not a factor, either.

I do, however, focus on this question of unwarranted departure, how others dealt with this kind of case in the past.

Of course, violation of nationwide sentencing, the focus has to be nationwide, but, like politics and virtually everything else, it has a local dimension.

The local dimension is the sentence imposed on Mr. Tumakov.

One of the things that is clear is judges have not been altogether consistent in the several cases that have been presented

Some have involved six point increases that I assume have to do with the nature of the events as resulted in probation.

Judge Saris imposes a sentence in Mr. Tumakov's case of a week in prison -- or, in the House of Correction, I assume, and, focusing on disparity turns me back again to whether there's any warrant for it.

One warrant for it is that we go back to the principle of parsimony.

What do we need to make it clear to even diligent, proud, and, I think, responsible people like Mr. Oria need to know about what the consequences are. What's the going rate?

Well, I think the going rate may have to go up to make a point, but how much does it go up?

And that depends on what's warranted in the individual case.

What I found here is a rather low-level violation of the discharge or a low-level discharge, resulting in a recordkeeping violation and a response that, for purposes of the Guidelines, if not for purposes of prosecution, I view as obstructive.

Having both the effect and the intent to make the reconstruction of evidence more difficult; in part, because Mr. Oria, I think, believed that they were setting him up, and he didn't want to provide occasions for those who were setting

him up to create records, but I view this case as properly charged as a recordkeeping violation, and recordkeeping violations are important, and it is the obligation of a senior officer on a vessel to maintain those vessels accurately, and not do something that the records will reflect is a violation of the law. So I've given this a great deal of thought. My view is that I will impose a sentence of one month incarceration.

I will impose a fine of $3,000.

I will impose a period of supervised release of two years.

Because of the peculiar circumstances that we find ourselves in: that is, that all other things being equal, Mr. Oria would not like to be here, as opposed to on the high seas, but he may come here, I'm not going to elaborate beyond the standard conditions and the mandatory special conditions of probation, but I will identify that the defendant may not commit another federal, state, or local crime, and shall not illegally possess a controlled substance.

I'm waiving the testing requirements. They seem inappropriate here, but he must provide for the collection of a DNA sample.

If he is ordered excluded or is excluded from the United States, he must comply with the directives of the Secretary of the Department of Homeland Security or the

Secretary of State, regarding the entrance into the United States.

My assumption, but it's not material for purposes of doing anything other than considering the various alternatives that may face Mr. Oria, is that he will be able to continue to practice his profession as a mariner that, of course, is up to the Spanish authorities and it's up, to some degree, to American authorities who may effect his ability to call out of port or be excluded in some fashion from a port in the United States, but, to the degree he is in the United States, he is obligated to inform the probation office of the district in which he finds himself, so that they're aware that he's in the United States and subject to the standard and mandatory conditions of supervised release.

I will say that, in all of this, that I've considered the question of the defendant's alien status, the interruption of his life. That is different, I think, both in degree and kind from other persons who are facing these kinds of offenses, but, so long as the law of nations permits the enforcement of national law, in the context of international activity, this is part of the world becoming flat, that someone like Mr. Oria will, while having different challenges, because of his family and his life, will, nevertheless, be subject to the criminal process in more or less the same way as others.

Finding the proper place to put this sentence required, I think, real fact finding on the part of the Court here, and it's why I devoted the time to it that I did, to try, as best I can, to calibrate where it is that I think Mr. Oria's criminal culpability stands and what the proper sentence should be for it.

I stand by my earlier observations, that Mr. Oria is a proud person who has much to be proud of, who tried, as best he could, to engage in his profession in a proper way.

There are hydraulic pressures at work for people in Mr. Oria's circumstances, which conduce toward turning the corners in some fashion, and he was subject to that, and, having engaged in the kind of conduct that he has, a period of incarceration, but a modest one, seems me to be appropriate, in accordance with the sentence I've imposed.

You should understand, Mr. Oria, you have a right to appeal, if you want to consider whether or not to exercise that.

Mr.Levy?

MR. LEVY: Your Honor, I just want to ask a question about the sentence to make sure I understand it. I'm assuming from your comments that once that month is over he's free to live the country to self-deport?

He's had two years' supervisory --

THE COURT: I can't. I'm not, because I can't,

tell ICE what to do.

I'm not telling the Department of Homeland Security what to do.

I have a representation from the Government that this will be as seamless in departure as one can imagine under these circumstances.

MR. LEVY: I've already had those conversations I'm sure they will be cooperative.

The notion of calling the probation officer when he comes in the United States, is that if he's on a vessel -

THE COURT: Whenever he enters the United States.

It may be that, when he's on a vessel, they won't treat him as being in the United States. I don't know how Homeland Security handles those kinds of things.

This much I know, if he is permitted to be in the United States by Homeland Security, I guess, is who would be doing it, and I don't know what they do in any detail with foreign mariners, then, he's subject to supervised release during that two year period, and, so, for example, if he goes out and buys a weapon, he's violated federal law, Number 1, because he's a felon, and, Number 2, because he's violated the terms and conditions of supervised release, and, consequently, he's going to be subject to the potential for a revocation proceeding before me.

MR. LEVY: I am not at all quibbling with the term.

I'm just thinking through. Having looked at an oil record book in Pensacola to Miami, would The Court consider having him call the District of Massachusetts, one number to call each time he comes to the United States as opposed as trying to find

THE COURT: What do you do, Mr. Sinclair?

U. S. PROBATION OFFICER SINCLAIR: Yea, Your Honor, that's fine with us.

We just want to make sure we know he's here.

THE COURT: I'll direct him to call the Probation Office in the District of Massachusetts to report that he's present in the United States.

U. S. PROBATION OFFICER SINCLAIR: And our office, our supervision office, may advise that he, at that point, that he contact the other office so we can do it, as long as somebody notifies us.

MR. LEVY: Thank you.

One other point I just want to put on the record.

Your Honor, would The Court consider a recommendation he serves that one month in a Halfway House in custody of the Bureau of Prisons, in lieu of going to the Plymouth House of Corrections, where he's going to be mixed in with that general population?

THE COURT: I don't think I can do it, Number 1, and, Number 2, I don't think that's what I want.

I take it that Mr. Tumakov served his time in the Plymouth House of Corrections.

(Government counsel conferred.)

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U. S. PROBATION OFFICER SINCLAIR: That's correct, Your Honor.

MS. RICCI: I believe it's . . .

MR. LEVY: And the last comment, Your Honor, there's something I want to put on the record, which is something that's very important to my client.

It has to do with public statements about this case, and I know it's not The Court's purview, but I feel obligated to raise this, that Mr. Orta feels very strongly about this March 18 discharge, and I would ask the Government to not put anything into the press release that implies that there's multiple discharges, as the press release after the plea agreement, the plea was entered talking about multiple discharges. I think The Court's finding is that there was one discharge that's been proven.

THE COURT: Well, I don't know what -- I'm sorry.

Mister --

MR. LEVY: May I have a moment, Your Honor?

THE COURT. Sure.

(Pause.)

THE COURT: I have to say that, in the recent past, I've been disappointed in the way in which the United States Attorney's Office has conducted its press relations, but mere disappointment doesn't give me a writ to do something about it, unless there's some provision that you'd like to point me to, and I don't think any one of the Rule 83 alternatives is applicable here, so I'm not sure what I can do.

Ms. Ricci, do you have a view about that?

Seems to me it would be improper for the United States Attorney's Office to repeat that there was more than a single violation, and leave it at that?

MS. RICCI: I don't -- I would undertake to be accurate, in terms of whatever release is made, and I do not expect I'll be preparing it. It will not include anything about the March 18 discharge.

MR. LEVY: Your Honor, may I have one more moment, please?

THE COURT: Sure.

(Mr. Levy conferred with the defendant.)

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MR. LEVY: Your Honor, thank you on that issue.

I guess the last question is self-report for Mr. Orta and ask The Court to be allowed to self-report in one

week and to show up at the marshals.

THE COURT: That's agreeable to me.

I'm not sure what it does, except to let him gather his belongings together.

He doesn't effect, I don't think, classification, within the House of Correction.

MR. LEVY: I don't think it does, either, Your Honor.

THE COURT: But, so, the purpose is simply that he get things together and be ready to go?

MR. LEVY: I asked Mr. Orta how much time he believed he needed, given that it was Wednesday, and he asked for the following Wednesday.

THE COURT: Alright.

Well, from probation's point of view, is there any problem with that?

U. S. PROBATION OFFICER SINCLAIR: No.

No, Your Honor. It wouldn't -- it doesn't change the system.

THE COURT. I don't think it makes a difference in the way that self-reporting sometimes does with people who are facing classification.

MR. LEVY: Yes, Your Honor.

THE COURT: I think it highly unlikely it's going to be classified here. It's simply going to go to the county

jail, but I'll permit him. I'll permit him to report no later than noon on next Wednesday.

MR. LEVY: And that's to the marshals.

THE COURT. To the marshals.

MR. LEVY: Yes.

THE COURT: I assume that's it?

MS. RICCI: No, no objection.

I'm just clearing the date.

The Thirteenth.

THE COURT. Let's be sure we all have the same date.

(Mr. Levy conferred with the defendant.)

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THE COURT. It would be report to the marshal's office no later than noon on May 13, and, if I were you, I'd double-check with the marshals, to make sure that that's going to be the mode of transportation that day.

U. S. PROBATION OFFICER SINCLAIR. Your Honor, just a few things we would ask for, in light of the fact that Your Honor imposed a fine.

Well, it may prove academic with the special conditions. We would still ask Your Honor to impose the financial special conditions.

THE COURT: Yes.

U. S. PROBATION OFFICER SINCLAIR: Including that the this fine be paid according to

THE COURT: Well, I think you raise a point, which is that I will impose -- include a special condition, that he may not leave the United States until the fine is paid.

MR. LEVY: May I ask one -

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(Mr. Levy conferred with the defendant.)

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U. S. PROBATION OFFICER SINCLAIR: We would also ask that we be allowed to disclose the information to the financial litigation unit.

THE COURT: Yes.

The fine has to be paid

MR. LEVY: Yes, Your Honor, and I guess the one logistical question, Pretrial Services has his passport and asks he be given his passport back when he self reports, just so it's in his possession.

U. S. PROBATION OFFICER SINCLAIR: Your Honor, it's actually the marshal's preference that they don't have the passport, so it might be better to release the passport to Attorney Levy to be able to --

THE COURT: That's what I was going to do.

MR LEVY: That's fine

THE COURT: Passports may become a currency in the

House of Correction.

U. S. PROBATION OFFICER SINCLAIR: I'm sorry to interrupt, just one more final thing.

THE COURT: Sure.

U. S. PROBATION OFFICER SINCLAIR: We'd also ask that, Your Honor, once the defendant is returned to Spain, that they notify the probation office, whether it's through the -- notify the assembly in Spain or to provide a copy of the passport sheet that shows he actually went back through the country, just so just so we can verify.

THE COURT: You want notification of the consular office there; is that it?

U. S. PROBATION OFFICER SINCLAIR: Yes.

THE COURT: So there is a requirement, that once he's released and returns to Spain, he notify the Probation Office so that they know that.

MR. LEVY: That's fine, Your Honor.

THE COURT: Okay. Mr Mikolop?

MR. MIKOLOP: One note on the passport issue, Your Honor, while we have confirmation from ICE that there will not be an immigration detainer placed on Mr. Orio, CBP will place customs and border protection, will place a detainer on him, in the sense that they will want to conduct an exit interview prior to his departure.

It's my understanding that, when CBP lodges that

with the marshals, they request his passport, so, in terms of Mr. Levy requesting the passport from the marshals, I believe CBP might likely trump that.

U. S. PROBATION OFFICER SINCLAIR. And there would be an exception in this case, because that didn't actually happen with Mr. Tumakov. He seemed to be upset with the attorney keeping the passport.

THE COURT: Mr. Levy is at the center of this complex paper flow.

MR. MIKOLOP: Sure.

THE COURT: Let me just ask one other question, just so I'm perhaps better advised.

Assume that Mr Orio's license is not lifted by the Spanish authorities, what, in your understanding, happens when someone, who is a felon, under these circumstances, comes back into the United States as a mariner, if you have any understanding.

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(No response.)

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THE COURT. Are they restricted to the vessel, are they permitted to go on shore?

What happens?

U. S. PROBATION OFFICER SINCLAIR: Your Honor, I do have some information about that

THE COURT: Okay.

U. S. PROBATION OFFICER SINCLAIR: In speaking to CBP, I actually spoke to the supervisor over there, and he advised me with respect to Mr. Tumakov, and he's very familiar with this case with Mr. Oria, that, once the vessel enters the waters, they were required to advise the Coast Guard of the persons on the vessel and their status. The Coast Guard would then run a check on all the persons who are on the vessel. Mr. Oria's case will come up, because they will have entered it into the system, and that the Coast Guard will make an independent determination on whether or not to allow the defendant to exit the vessel. He will be allowed to come into U. S. ports, but he may not be allowed to disembark the vessel.

THE COURT: Okay.

MR. LEVY: Could we just translate that last part for Mr. Oria?

THE DEFENDANT: I know. I know.

THE COURT: Mr. Oria, did you understand?

THE DEFENDANT: Yes.

Of course.

THE COURT: What was said?

Alright?

Anything further?

MS. RICCI: Not from the Government.

MR. LEVY: No, Your Honor.

THE COURT: Alright

We'll be in recess.

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(The proceedings were concluded.)

I N D E X

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I N D E X
(CONTINUED)

E X H I B I T S

(NO EXHIBITS WERE MARKED.)

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C E R T I F I C A T I O N

I, DIANE M. MOLAS, a Registered Professional Reporter (RPR), a Certified Shorthand Reporter (CSR) in the States of Delaware and Massachusetts, a Certified Court Reporter (CCR) in the State of New Jersey, and a Notary Public in the Commonwealth of Pennsylvania, do hereby certify that the foregoing is a true and accurate transcript of the proceedings reported by me, on May 6, 2009, and that I am neither counsel, nor kin, to any party or participant in said action, nor am I interested in the outcome thereof.

Diane M. Molas, RPR, DE & MA CSRs, and NJ CCR
DE Certification Number 205-RPR
MA Certification Number 149208
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ATTACHMENT

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DECLARATION OF CAPTAIN CYNTHIA L. STOWE
UNITED STATES COAST GUARD

1. I am Cynthia L. Stowe, Captain, United States Coast Guard. I am currently assigned as the Sector San Francisco Commander which includes serving in the capacity of the Captain of the Port, Sector San Francisco, in San Francisco, California. As the Commander of U.S. Coast Guard Sector San Francisco, I lead more than 700 Active Duty, Reserve and Civilian personnel in their mission to support and protect Northern California's ports and waterway users and safeguard the unique environment in which they operate. The Sector's missions include search and rescue, law enforcement, environmental protection, port security, merchant mariner licensing, and vessel inspection and safety programs for all types of vessels.

2. The Coast Guard has authority under its general domestic law enforcement authority, 14 U.S.C § 89, as well as under Acts to Prevent Pollution from Ships (APPS), *see* 33 U.S.C § 1904, to board and inspect vessels for compliance with Convention for the Prevention of Pollution from Ships (MARPOL), APPS and Coast Guard regulations. Examination of the Oil Record Book that is required to be maintained by the vessel under MARPOL, APPS, and Coast Guard regulations is extremely important to the overall enforcement of these requirements.

3. Oil Record Books for U.S. and foreign flag vessels are examined regularly as part of the Coast Guard's inspection and Port State Control Program. Information from the Oil Record Book is extremely important to Coast Guard efforts to provide for the safety of ports, passengers and crews and to protect the marine environment. This information may then be the basis for a variety of actions on the part of the Coast Guard Caption of the Port to protect life, property, and the marine environment. For example, if examination of the Oil Record Book indicates that the vessel poses a safety or environmental threat to the port, it may be necessary for a Coast Guard District Commander or a subordinate Coast Guard Captain of the Port to take action and control the vessel's movement or operation under the Ports and Waterways Safety Act (33 U.S.C. § 1221 et seq.). The Coast Guard may also detain the vessel until it is determined that it no longer poses a threat to safety or the environment. Therefore, it is essential that the Coast Guard be able to rely on the accuracy and truthfulness of the information in the Oil Record Book in order to ensure the safety of our ports and protection of our marine environment.

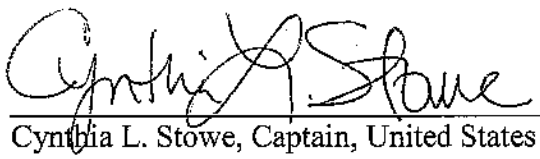
4. The international Port State Control program is premised on the truthful and accurate representations in certificates and records required to be maintained by foreign flag vessels. Its success also depends on the accurate representations made by crewmembers, especially those in the most senior leadership positions such as Chief Engineer and Second Engineer. The falsification of ship records undermines the entire regulatory scheme, calls into question the rest of the ship's records, and creates an unfair advantage over those ship operators who are complying with the law. Ultimately, given the safety, security, and environmental protection challenges we face as a nation, the Coast Guard simply cannot tolerate lying and obstructive conduct during our boarding operations.

5. The imposition of appropriate sentences in these cases greatly increases the Coast Guard's ability to create transformation and change within shipping industry culture. Unfortunately, many in the shipping industry have not made the necessary corporate cultural change to understand and address this problem in a serious way, and have viewed the fines in the past simply as a cost of doing business. Therefore, in my opinion, it is essential that we vigorously respond to the conduct by this company and its employees, and send a firm message through an enhanced, serious criminal penalty that such conduct cannot and will not be tolerated.

6. I sincerely thank the court for the opportunity for the Coast Guard to be heard regarding this important case.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on August 26, 2010, at Coast Guard Sector San Francisco, in San Francisco, CA.



Cynthia L. Stowe, Captain, United States Coast Guard
Captain of the Port, Sector San Francisco