



# INVESTIGATIVE REPORT

## National Oceanic and Atmospheric Administration (NOAA)

### INVESTIGATION INTO ENVIRONMENTAL STEWARDSHIP ON NOAA RESEARCH VESSEL



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# Chapter I: Introduction

On May 5, 2014, the United States Department of Commerce (Commerce), Office of Inspector General (OIG) opened an investigation based on a complaint by a former National Oceanic and Atmospheric Administration (NOAA) employee (complainant). The complainant was an [REDACTED] assigned to an ocean-going NOAA research vessel named *NOAA Ship [REDACTED]* from [REDACTED] 2013 until complainant's employment was terminated on [REDACTED], 2013. The issues reported primarily concerned what the complainant believed were Equal Employment Opportunity violations, but within the allegations was a mention of a potential violation of the Federal Water Pollution Control Act (Clean Water Act or CWA), 33 U.S.C. §§ 1251 *et seq.* We opened an investigation into the CWA issue in addition to the complainant's claim of retaliation for reporting the CWA violation. We did not open an investigation into the discrimination matters since they were already under investigation by other entities with jurisdiction.<sup>1</sup> [REDACTED] the [REDACTED] had a fuel spill at a [REDACTED] in [REDACTED]. Our investigation included this incident because of the overall implications on environmental stewardship practices.<sup>2</sup>

## I. Executive Summary

The OIG's investigation uncovered no evidence of retaliation against the complainant, but confirmed personnel from the engineering staff of the [REDACTED] intentionally and repeatedly discharged untreated bilgewater into [REDACTED] waters, often less than one nautical mile (nm) from shore. Each improper discharge resulted in approximately 100 gallons of untreated bilgewater being released into the ocean. The United States Environmental Protection Agency (EPA) issued a Vessel General Permit (VGP) to the vessel that prohibits discharges of a certain kind. NOAA Policy also prohibits such discharges. In a 2½ month sample period in 2013, the [REDACTED] engaged in improper discharges of untreated bilgewater on average every 6 days. In total, 69% of these improper discharges were within 3 nms of shore; 54% were within 1 nm of shore. These distances are relevant because VGP discharge limitations key on these two boundaries with respect to discharges.

[REDACTED] Pollution control standards were significantly enhanced with the passage of the Clean Water Act (CWA) in 1972. The OIG's investigation found that improper bilgewater discharges occurred during 2013, and this was the apparent practice of the ship prior to our investigation and until a solution was implemented in September 2013.

The OIG inspected the [REDACTED]'s Oil Record Book (ORB)—a mandatory reporting document—and found that the improper discharges were not reported as required. Instead, minimal notations about the improper discharges were recorded in an Engineering Log, which was typically only seen by the [REDACTED] staff. We also found occasions when the Engineering Log

<sup>1</sup> Case Serials 1-8.

<sup>2</sup> Case Serials 46, 48.

reported a different location from where the ship actually was when the discharges occurred, giving the appearance that the ship was outside of the three nm zone identified in the VGP.

The [REDACTED] also made routine discharges of treated bilgewater. Treated bilgewater is processed through an Oily Water Separator (OWS), which is used to separate oil and other contaminants that may be harmful to the ocean. During the 2013 season, 48% of the [REDACTED]'s OWS discharges were done within 1 nm of shore. While some discharge of treated bilgewater is acceptable by regulation, the VGP states that no discharge of treated bilgewater should occur within 1 nm of land unless it is technically infeasible to do so. The staff of the [REDACTED] claimed that they had no technical capacity to store bilgewater, when in actuality, they chose not to pursue environmentally sound configuration changes to conform to VGP standards; compliance could have been achieved by investing less than \$6000. Noteworthy is that the NOAA Ship [REDACTED], a [REDACTED] ship of the [REDACTED] had written Best Management Practices<sup>3</sup> (BMPs) that did not allow discharges of untreated bilgewater within 1 nm and was able to delay pumping bilgewater overboard for several weeks.<sup>4</sup> A site visit to the [REDACTED] found that the aft steering eductor was “tagged out” and interviews of the ship’s crew confirmed the practice apparently conformed to their BMPs.<sup>5</sup>

Officials from NOAA’s Office of Marine and Aviation Operations (OMAO) initially argued that OMAO fell within the CWA exemption for “public vessels”, and thus the improper discharges were not a violation of law. The ship’s [REDACTED] cited the [REDACTED] of the [REDACTED] in conjunction with the public vessel exception.<sup>6</sup> This report details the specifics of how OMAO misapplied the public vessel exception.

The OIG’s investigation noted a general lack of oversight concerning the engineering operations of the [REDACTED] by the ship’s command, which is part of the NOAA Commissioned Officer Corps (NOAA Corps), and a culture that in some instances discouraged environmental compliance efforts.<sup>7</sup> We believe contributing factors to the incidents reported is stagnation and lack of rotation in the engineering staff. We also found that OMAO management, NOAA Corps officers, and crew knew about possible pollution violations, failed to report the incidents to the OIG or other cognizant agency, and became serious about the issues only after the OIG became involved.

Additionally, the OIG found the [REDACTED] aboard the [REDACTED] is in the direct supervisory chain for a [REDACTED] who is a family member, which could give rise to the appearance of favoritism or special treatment.

The OIG also discovered that on March 31, 2014, OMAO submitted an official document to the EPA that contained false statements. This form certified that the [REDACTED] did not discharge treated bilgewater within 1 or 3 nms of shore during calendar year 2013. These statements are

<sup>3</sup> OMAO published BMPs that were ship-specific; the [REDACTED]'s BMP constructed an argument of technical infeasibility that allowed them to discharge bilgewater within 1 nm of shore.

<sup>4</sup> Case Serial 65 and 96 (pg 76, line 1883-1888 and pg 78, lines 1934-1955).

<sup>5</sup> Case Serial 65, 66, 70-74

<sup>6</sup> Case Serial 12

<sup>7</sup> For instance, [REDACTED]'s reported instances where they were discouraged from asking the [REDACTED] crew questions, and experienced a general climate that made their role as [REDACTED] difficult.

false. According to the ship's own records and witness testimony, both treated and untreated bilgewater were knowingly discharged within 3 nms of shore, and often within only 1 nm.

Finally, the OIG investigated a significant fuel spill, which occurred in [REDACTED] at a [REDACTED] harbor in [REDACTED]. The fuel spill was the result of two preventable conditions: (1) the lack of maintenance by OMAO led to corrosion of a pipe, causing diesel fuel to leak into a greywater tank, and (2) the failure of [REDACTED] staff to shut off a diverter valve causing greywater (laden with [REDACTED] gallons of fuel oil) to be discharged directly overboard. OIG discovered that on at least three prior entrances to the [REDACTED] the greywater diverter valve was not turned to the inboard/onboard position as required by harbor policy.

## II. Scope and Methodology

The OIG investigation focused on bilgewater management operations for the [REDACTED] during the 2013 season ([REDACTED] 2013 through [REDACTED] 2013). We also reviewed the circumstances surrounding the fuel spill that occurred in [REDACTED] on [REDACTED].

The OIG conducted this investigation by interviewing relevant witnesses and subjects; reviewing the numerous records, policies, and evidence collected during the course of the investigation; conducting data analysis; and researching applicable legal and policy standards. We interviewed the complainant, the Commanding Officers of NOAA Research Vessels and other OMAO personnel, including Environmental Compliance Officers (ECOs); the [REDACTED] OMAO; the [REDACTED] of the Marine Operations Center [REDACTED]; NOAA Fleet Inspection engineers; crewmembers from the engineering and deck staffs from three different NOAA Research Vessels; and personnel from the EPA and USCG. We also consulted with Commerce's Office of Civil Rights (OCR). In most cases, the witnesses were sworn and the interviews were recorded. We obtained records from several witnesses, EPA, and USCG. We obtained assistance from EPA's Criminal Investigations Division, USCG's Legal Division, and from the Environment and Natural Resources Division (ENRD) of the U.S. Department of Justice (DOJ), and NOAA's Office of Law Enforcement assisted in nautical charting and mapping of ship locations during relevant periods.

## III. Organization of the Report

This report will begin with an overview of the NOAA fleet and the organization of their Research Vessel program; and a review of the relevant laws, regulations, and rules related to the environmental stewardship problems. One major concern is how these rules apply to NOAA vessels given the claim of a "public vessel" exemption under the law. After noting the allegations to be resolved, the report will discuss the facts determined during the investigation and our analysis of those facts. The report will close with our findings and recommendations for NOAA.



## Chapter 2: Background

This chapter will provide an overview of the NOAA fleet and the relevant laws, regulations, rules and policies governing the issues identified in this report.

### I. Overview of the NOAA Fleet

NOAA is a federal agency within the U.S. Department of Commerce. Its main focus is on science and stewardship related to climate, weather, oceans, management of coastal and marine ecosystems, and natural resources.

NOAA maintains a fleet of approximately 16 large<sup>8</sup> research vessels that play a critical role in the collection of oceanographic, atmospheric, hydrographic, and fisheries data. The NOAA fleet is managed and operated by the OMAO, an office composed of civilians, wage mariners, and the NOAA Commissioned Officer Corps. The NOAA Corps is one of the seven uniformed services of the United States, and currently has 321 authorized commissioned officers whose ranks mirror the U.S. Navy's, though they are not considered members of the U.S. Armed Forces.<sup>9</sup> NOAA's research and survey ships compose the largest fleet of federal research ships in the nation. The fleet ranges from large oceanographic research vessels capable of exploring the world's deepest oceans, to smaller ships responsible for charting the shallow bays and inlets of the United States. The fleet includes ships located in the Pacific (MOC-P), Hawaii (MOC-PI), and Atlantic (MOC-A).<sup>10</sup>

This investigation focuses on the [REDACTED] but the OIG also conducted on-site visits of two other NOAA research vessels, including the [REDACTED]. We did not find similar issues on any other NOAA vessels.<sup>11</sup> Additionally, we asked OMAO to produce relevant records for ships that discharge or are capable of discharging effluent through a firemain or eductor dewatering system. An eductor is a high velocity jet pumping device that uses seawater from the firemain system to create a suction that removes accumulated liquids and solids from the bilge. The seawater supply from the firemain system is referred to as motive water or force for the eductor. In this case, the eductors were designed as an emergency dewatering system that evacuated the aft steering bilges directly overboard, which in times of emergency would be appropriate. OMAO claimed that [REDACTED] have such configurations.<sup>12</sup>

<sup>8</sup> The ships range from approximately 700 tons to over 3250 tons displacement, and from 120 to 274 feet in length.

<sup>9</sup> See 10 U.S.C. § 101(a)(4). NOAA Corps is considered a non-combatant uniformed service, but may be militarized by Executive Order during wartime, in which case they would be detailed to branches of the U.S. Armed Forces.

<sup>10</sup> Case Serial 36.

<sup>11</sup> Case Serials 64, 65, 69-74.

<sup>12</sup> Case Serial 77.

## II. Relevant Law – The Standards

Section 312 of the Clean Water Act, 33 U.S.C. § 1322, establishes the basic rules regulating the discharge of pollutants by vessels into the waters of the United States. The CWA made it unlawful to discharge any pollutant into navigable waters, except by permit issued by the EPA's National Pollutant Discharge Elimination System (NPDES) permit program. The CWA's implementing regulations are carried out jointly by the EPA and USCG.

One of the major international agreements relevant to ship pollution is the International Convention for the Prevention of Pollution from Ships<sup>13</sup> (MARPOL (Maritime Pollution 73/78)). The United States ratified and implemented MARPOL 73/78 with the passage of the Act to Prevent Pollution from Ships (APPS), 33 U.S.C. §§ 1901 *et seq.* By definition, APPS incorporates MARPOL 73/78.<sup>14</sup> While these are large bodies of law, this report narrows the focus to oil pollution standards within MARPOL/APPS.

## III. Oil Pollution Standards

This case concerns oil pollution standards specifically related to bilgewater. Bilgewater is a mixture of fresh and sea water, oily fluids, lubricants, cleaning fluids and similar wastes. It comes from a variety of sources, including engines and mechanical systems of the ship, leaks, and spills which collect in the hull (or hold) of the ship, and consists of oil, grease, chemical substances, and solid wastes such as rags, metal shavings, paint, and glass. It may also contain oxygen-demanding substances, volatile organic compounds, semi-volatile organics, inorganic salts, soaps, detergents, dispersants, and degreasers used to clean machinery.<sup>15</sup>

Of particular issue in this case is hydraulic fluid, which is a liquid made up of many different chemicals. The three most common hydraulic fluids are mineral oil (the major chemical ingredient which is a petroleum distillate), organophosphate ester (a product of phosphoric acid), and polyalphaolefin (which are used in synthetic lubricants, greases and fluids).<sup>16</sup> These three types of hydraulic fluids are considered effluents which should be treated as oily water.<sup>17</sup>

For ships subject to the CWA and APPS, bilgewater may not be discharged into the sea within 12 nms of land, unless certain conditions are met.<sup>18</sup> Generally, bilgewater can only be discharged into the sea after being treated onboard with an OWS. The conditions for discharge include:

<sup>13</sup> Nov. 2, 1973, Int'l Maritime Org., Doc. Sales No. IMO-52OE (1997) as modified by the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, Feb. 17, 1978, Int'l Maritime Org., Doc. Sales No. IMO-520(E) (1997)

<sup>14</sup> 33 U.S.C. §§ 1901(a)(4) and (5); 33 C.F.R. § 151.01.

<sup>15</sup> Office of Wetlands, Oceans & Watersheds, EPA, *Cruise Ship Discharge Assessment Report* § 4.1, EPA Ref. No. 842-R-07-005, [http://www.epa.gov/owow/oceans/cruise\\_ships/dish\\_assess.html](http://www.epa.gov/owow/oceans/cruise_ships/dish_assess.html) (Dec. 29, 2008). Though this definition is used by the EPA in this and other publications, there seems to be no actual regulatory or legal definition of what constitutes bilgewater.

<sup>16</sup> Agency for Toxic Substances and Disease Registry, Centers for Disease Control and Prevention, *Hydraulic Fluids*, <http://www.atsdr.cdc.gov/toxfaqs/tfacts99.pdf> (Sept. 1997); see Case Serial 93.

<sup>17</sup> *Id.*

<sup>18</sup> 33 C.F.R. § 151.10.



- Oil content of the effluent without dilution does not exceed 15 parts per million (ppm);<sup>19</sup>
- The ship has an OWS, a bilge monitor and alarm or combination of both, which is approved under 46 C.F.R. § 162.050. That device also must have an automatic shut-off if the effluent exceeds 15 ppm. 33 C.F.R. § 151.13;
- Ships over 400 gross tons must keep an ORB Part I (Machinery Space Operations). 33 C.F.R. § 151.25. Entries to the ORB are required whenever certain machinery space operations take place, including discharge overboard of bilgewater. That ORB is to be maintained on the ship. 33 C.F.R. § 151.25(d) and (h).

#### IV. National Pollutant Discharge Elimination System (NPDES)

EPA's NPDES program regulates incidental discharges from the normal operation of vessels, which include bilgewater, consistent with the CWA.<sup>20</sup> The centerpiece of the NPDES vessels program is the VGP, which specifies the limitations and conditions under which a ship operating under the permit may discharge effluents. A VGP does not apply to vessels of the U.S. Armed Forces, but in this case, a NOAA vessel is **not** considered a vessel of the U.S. Armed Forces, and is therefore not exempt with respect to the requirements of the VGP.<sup>21</sup>

NOAA's fleet operates under a VGP; the version in effect at the time of the reported violations was dated February 5, 2009.<sup>22</sup> The VGP prohibits the discharge of untreated bilgewater into waters within 3 nms of shore. The VGP states "[a]ny noncompliance with the requirements of this permit constitutes a violation of the Clean Water Act. Each day a violation continues is a separate violation of this permit."<sup>23</sup> Section 2.2.2 is specific to bilgewater and provides:

- All vessels must minimize the discharge of bilgewater into waters subject to this permit. This can be done by minimizing the production of bilgewater, disposing of bilgewater on shore where adequate facilities exist, or discharging into waters not subject to this permit (i.e., more than 3 nautical miles (nm) from shore) for vessels that regularly travel into such waters. . . .
- Vessels greater than 400 gross tons shall not discharge untreated oily bilge-

<sup>19</sup> The OWS has a gauge that measures oil content in ppm. It is designed to automatically shut down a discharge if the oil content exceeds the threshold of 15 ppm.

<sup>20</sup> Compare 33 U.S.C. § 1342 with 40 C.F.R. § 122.

<sup>21</sup> See 33 U.S.C. § 1322(a)(14). This part of the *United States Code* codifies Section 312(a)(14) of the Clean Water Act. Section 1.2.1 of the 2009 VGP states "Nothing in this permit shall be interpreted to apply to a vessel of the Armed Forces as defined in § 312(a)(14) of the Clean Water Act." Since that section states that a vessel of the U.S. Armed Forces is either a Department of Defense or USCG operated vessel, a NOAA vessel does not meet the statutory definition. This definition **differs** from that found in the public vessel exceptions found at 33 U.S.C. §§ 1321(a)(4) and 1322(a)(4); see 33 C.F.R. § 151.09(b)(1).

<sup>22</sup> Case Serial 17. Page ii of the 2009 VGP indicates the permit became effective on [REDACTED] for [REDACTED].

<sup>23</sup> VGP § 1.4. See VGP § 2.1.15 (The VGP also requires that discharges comply with Section 311 of the CWA, 33 U.S.C. § 1321; the APPS, 33 U.S.C. §§ 1901 et seq.; the National Marine Sanctuaries Act, 16 U.S.C. § 1431 et seq.; the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §§ 136 et seq.; the Oil Pollution Control Act of 1990, 33 U.S.C. §§ 2701-2720j and the implementing regulations are located at 15 C.F.R. Part 922 and 50 C.F.R. Part 404.).

water into waters subject to this permit.<sup>24</sup>

- Vessels greater than 400 gross tons that regularly sail outside the territorial sea (at least once per month) shall not discharge **treated** bilgewater within 1 nm of shore if technologically feasible (e.g. holding would not impact safety and stability, would not contaminate other holds or cargo, would not interfere with essential operations of the vessel). Any discharge which is not technologically feasible to avoid must be documented as part of the requirements in Part 4.2.<sup>25</sup>
- Vessels greater than 400 gross tons shall not discharge **treated** bilgewater into waters referenced in Part 12.1 unless the discharge is necessary to maintain the safety and stability of the ship. Any discharge of bilgewater into these waters must be documented as part of the recordkeeping requirements in Part 4.2 and vessel operators must document whether this bilgewater discharge was made for safety reasons.
- For vessels greater than 400 gross tons that regularly sail outside the territorial sea (at least once per month), if **treated** bilgewater is discharged into waters subject to this permit, it must be discharged when vessels are underway (sailing at speeds greater than 6 knots), unless doing so would threaten the safety and stability of the ship. EPA notes that vessel operators may also choose to dispose of bilgewater on shore where adequate facilities exist. Any discharge which is made for safety reasons must be documented as part of the requirements in Part 4.2.

VGP § 2.2.2 (emphasis added).

## V. NOAA's Compliance Workbook to Supplement the VGP

The OIG obtained a copy of the EPA's 2009 *Vessel General Permit for Discharges Incidental to the Normal Operation of Vessels* (VGP) from the [REDACTED]'s [REDACTED] which includes a document titled *National Pollutant Discharge Elimination System Permit Compliance Workbook* (NPDES Workbook). The ship's [REDACTED] said the NPDES Workbook was developed as a fleet standard, and each ship's ECO (with assistance from the fleet's [REDACTED]) tailored that document to the unique characteristics of each ship. It is considered their best practice.<sup>26</sup>

Of particular concern with the [REDACTED]'s NPDES Workbook was a section entitled "Ship-Specific BMP,"<sup>27</sup> which states:

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<sup>24</sup> The [REDACTED] is [REDACTED] tons.

<sup>25</sup> The [REDACTED] goes beyond the territorial sea. The territorial sea, as defined by United Nations Convention on the Law of the Sea, Dec. 10, 1982, U.N. Div. for Ocean Affairs & Law of the Sea Office of Legal Affairs, U.N. Sales No. E.97.v.10 (1997), is a belt of coastal waters extending 12 nms from the low-water mark of a coastal state. Office of Coast Survey, NOAA, *U.S. Maritime Limits & Boundaries*, <http://www.nauticalcharts.noaa.gov/csdl/mbound.htm> (last visited June 10, 2015)

<sup>26</sup> Case Serials 17, 96.

[The █████] has █████ for bilgewater, making onboard storage not technically feasible; as a result a discharge of treated bilgewater may occur within one nautical mile of shore owing to ship's working areas<sup>28</sup>

The BMP also indicates that the ORB should, “record dates, location, visible sheen, observation and estimated volume of discharges within 3nm of shore or to shore facilities.” It further directs, “[r]ecord these circumstances: discharge of treated bilgewater [within] 1 nm of shore; discharge of treated bilgewater into protected waters; any discharge made for safety reasons within 3nm of shore.”<sup>29</sup>

The OIG obtained a copy of OMAO Procedure 0701-03, titled *National Pollutant Discharge Elimination System Vessel General Permit Compliance Procedures*, with an effective date of March 24, 2010, which was applicable during the period in question. This policy states, *inter alia*:<sup>30</sup>

- Each vessel in the NOAA Fleet shall maintain a VGP and shall operate under the requirements of the VGP listed in the standard operating procedures (SOPs) below.
- The NPDES VGP covers discharges to the environment incidental to normal vessel operations in U.S. territorial seas extending 3 nm from land.
- Treated bilgewater shall be discharged to shoreside facilities or beyond 3 nm from shore, when possible, in accordance with USCG regulations.
- Untreated bilgewater discharges are prohibited.
- Treated bilgewater discharges within 1 nm of shore are not permitted, if holding is technologically feasible and the vessel makes at least one trip per month more than 3 nm from shore.<sup>31</sup>
- OWS shall be tested in accordance with preventive [sic] maintenance system.
- Record keeping requirements for bilgewater operations: Maintain the following information in the NPDES Workbook: dates, location, visible sheen observation, and estimated volume of discharges to sea within 3 nm or to onshore facilities. . . . Discharges under the following circumstances must be noted in the NPDES Workbook: discharge of treated bilgewater within 1 nm of shore, which were technologically

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<sup>28</sup> During our initial discussions with the USCG, they questioned what legal authority or other basis that this direction was crafted. Further investigation found this precise language is cited in VGP § 2.2.2, but caveats it saying such discharges have to be recorded appropriately. Further it is specific to treated bilgewater; the allegations in this case, with respect to the aft steering space, involve untreated bilgewater. The fact that in █████ 2013 the steering-gear space on the █████ was plumbed to the OWS at minimal cost, indicates that it was technically feasible; OMAO just chose not to address this issue until complaints were made by crewmembers.

<sup>29</sup> Case Serial 17. As this report will document in the following chapters, the ORB included GPS coordinates of OWS (treated bilgewater) discharges, none of the reported discharges included any indication that the discharge met any of these conditions.

<sup>30</sup> Case Serial 77.

<sup>31</sup> OMAO claims that it was not technically feasible to hold bilgewater in the █████, but even if that were true, the █████ did regularly go beyond 3 nm from shore. It appears this policy is constructed in a way that both conditions must be present before the ship could discharge within 1 nm – that is, the ship would not be able to hold its bilgewater and it did not go beyond 3 nm at least once a month.

infeasible to avoid.

- Discharges of an oily water mixture must pass through an OWS, must have an oil concentration of less than 15 ppm, and leave no sheen or discolor the water (Section 3.4). Even non-oily machinery wastewater must meet the 15 ppm standard.<sup>32</sup>

This same policy outlines the inspection schedule for NOAA ships, including weekly visual inspections by the [REDACTED] when the ship was operating within 3 nm of shore, and quarterly samples of any discharge streams.<sup>33</sup> None of the interviewed [REDACTED]s on the [REDACTED] knew the aft steering bilge was discharged overboard, and thus did no testing of this particular discharge stream or the aft steering bilge.

## VI. U.S. Coast Guard Licensing

Most skilled employment positions aboard NOAA vessels require an active Merchant Mariner Credential (MMC) as is condition for employment. The MMC is a credential issued by the USCG in accordance with the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers to United States guidelines to show evidence of a mariner's qualifications. The USCG has the authority to suspend or revoke an MMC for cause.<sup>34</sup>

## VII. Allegations to be Resolved

In May 2013, the [REDACTED] and a [REDACTED] assigned to the [REDACTED] allegedly ordered a crewmember to illegally discharge the steering-gear space bilges of the [REDACTED] into [REDACTED] waters, near [REDACTED]. This was accomplished by pumping bilgewater through the emergency eductor dewatering system (firemain valve) connected to the steering-gear space (see Figure 1). It was further alleged that the [REDACTED] did not have an OWS installed in the steering gear room, nor piping to connect the steering

Figure 1: Eductor Valve on the [REDACTED]

<sup>32</sup> Case Serial 24. See OMAO Procedure 0701-03, *National Pollutant Discharge Elimination System Vessel General Permit Compliance Procedures* §§ 1, 3, 3.6.1, 3.32.1, and 3.32.3. This policy was later revised and effective on November 27, 2013, after undergoing significant changes to make an 18 page policy into a four page policy (with a three page Annex).

<sup>33</sup> Case Serial 77. OMAO Procedure 0701-03, pg. 15 of 18, states, "At least once per quarter sample any readily accessible discharge streams that cannot be visually inspected during routine visual inspection (i.e., those discharged below waterline)...Look for signs of pollutant, discoloration, visible sheen, suspended solids, floating solids or lack of clarity."

<sup>34</sup> 46 C.F.R. Pt. 10 et seq. See also Case Serials 39, 43

gear bilges to a holding tank or the main engine room bilges, where an OWS was installed. The machinery space bilgewater in the steering gear room allegedly contained hydraulic oil and lubricating grease. The complaint was that pumping bilgewater overboard was neither normal nor legal because bilgewater is hazardous to the environment.<sup>35</sup>

Bilgewater discharges from the [REDACTED] were routine and included instructions of “concealment” such as to pump the bilge only at night, while the ship was underway, and only after an oil soak pad had absorbed the worst of the discharge were ordinary, according to the complainant. The complainant claims to have witnessed and reluctantly performed discharging the steering gear room bilge pockets as ordered. It is alleged that the complainant was [REDACTED] by the ship’s [REDACTED] and [REDACTED] ([REDACTED]) as a result of trying to stop the discharges by securing a firemain valve that supplied pressure to the steering gear room eductors.<sup>36</sup>

The OIG initiated this investigation to determine whether the complaint had merit, to reveal misconduct and policy violations aboard the [REDACTED] and their causes. We also investigated to what extent OMAO management had addressed related environmental stewardship issues, including the investigation of all bilgewater discharge practices (treated and untreated) aboard NOAA ships, in conjunction with the circumstances around a fuel spill at a [REDACTED] in [REDACTED] in the [REDACTED].

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<sup>35</sup> Case Serials 37, 38.

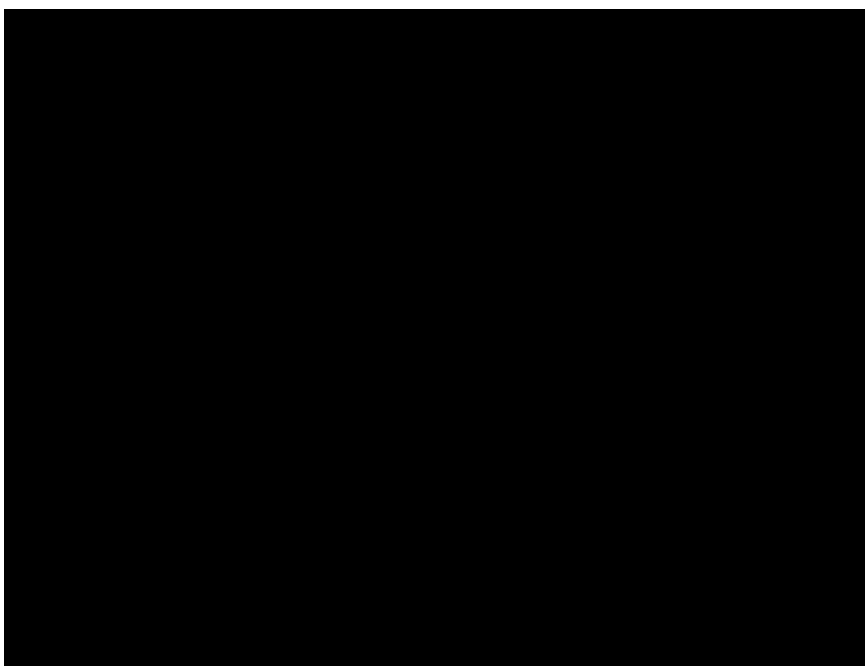
<sup>36</sup> *Id.* The EEO record confirms that the complainant “secured” the firemain valve, but it was inconclusive concerning whether the complaint was related to a dispute over an improper discharge. It appears that by securing the firemain valve, a water hammer condition occurred in the ship’s systems. A water hammer is a pressure surge caused when a fluid in motion is forced to stop or change direction suddenly, which can create safety concerns and damage the pump. See EEO R. Exh. 20, p. 6; see also Case Serial 41.

## Chapter 3: Bilgewater Discharge Practices

### I. Timing and Description of Bilgewater Discharges

The complainant was hired on [REDACTED], 2013, as an [REDACTED] aboard the [REDACTED]. The ship's 2013 season began on [REDACTED], 2013, when the ship left the NOAA's [REDACTED]. The [REDACTED]'s [REDACTED] made the first discharge of untreated bilgewater of the 2013 season on [REDACTED] 2013, about 18 miles [REDACTED] of the [REDACTED] coastline.<sup>37</sup>

The bilge pockets in question were in the back (aft) of the [REDACTED] at the lowest floor in a space that contained the steering apparatus, which consisted of two large rudder “posts” on each side of the room, connected by a large control arm. Between the two rudder posts was a hydraulic control unit that powered the steering mechanism (see Figures 2 and 3). During an on-site visit on September [REDACTED], 2014, the OIG noticed that there were white absorbent diaper-like pads placed throughout the room, most of which had visible oil spots on them.



**Figure 2: Hydraulic Control Unit**

The OIG interviewed crewmembers of the [REDACTED] who served during the 2013 season. The interviewees knew that the aft steering

space bilge pockets (see Figure 4) were emptied on a regular basis, but some did not know where or how it was drained. All of the witnesses were aware that there was no OWS in the aft steering space, though some assumed the bilgewater must somehow get to an OWS because “they wouldn’t dump oil overboard.”<sup>38</sup>

All of the witnesses except for the [REDACTED] said that the aft steering space of the [REDACTED] is mechanical or machinery space containing bilge pockets which would fill with oily water.<sup>39</sup> This distinction is important because laws and regulations, including 33 C.F.R. § 151, distinguish

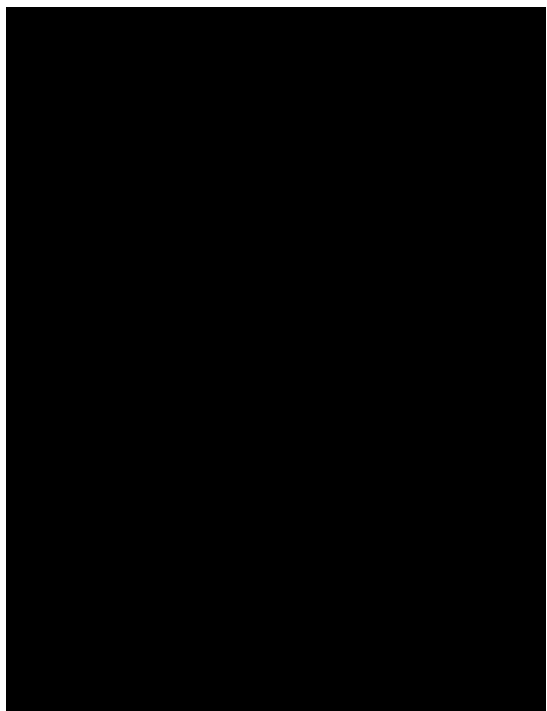
<sup>37</sup> Case Serial 104. See App. I to this report for details on each discharge from the aft steering space of the [REDACTED] during the 2013 season. All distances cited are based on GPS coordinates documented on ship records.

<sup>38</sup> Case Serial 54.

<sup>39</sup> Case Serials 52-61, 63, 66, 69, 79, 91, 96.



machinery space operations from cargo areas. Specifically, 33 C.F.R. § 151.25 requires that the ORB be annotated when discharges from machinery spaces occur. The ORB instructions provide a comprehensive list of items that define machinery space operations, including discharges of bilgewater which accumulate in machinery spaces.<sup>40</sup> The aft steering space was consistently referred to by witnesses as a machinery space, and contains the rudder posts, steering mechanisms, and a hydraulic power unit, which all require grease and hydraulic fluid to operate.<sup>41</sup>



There was no written protocol for how to manage the aft steering bilgewater, but when the bilges filled, it was protocol to pump the bilge using the eductor system. All of the crewmembers acknowledged that they knew discharging bilgewater overboard was illegal, but several relied on the mistaken application of the “public vessel exception.” The [REDACTED] and [REDACTED] admitted they knew the aft steering bilgewater was discharged directly overboard without going through an OWS. They [REDACTED] and stated they knew untreated bilgewater should not be discharged into the ocean.<sup>42</sup> The [REDACTED] was also aware of and condoned the practice.

[REDACTED] crewmembers explained that the [REDACTED] [REDACTED] aboard the [REDACTED] was chiefly responsible for the instructions to discharge bilgewater from the aft steering bilges through the eductor system. The [REDACTED] said [REDACTED] learned

### Figure 3: Rudder Post

“the ropes” from the [REDACTED] and the [REDACTED] and never raised any questions about the procedure, even though [REDACTED] knew that bilgewater was to go through an OWS. [REDACTED] did nothing because [REDACTED] believed NOAA had a “public vessel exception.”<sup>43</sup> One crewmember said that upon arrival, the [REDACTED] did a “walk-through, talk-through,” which included how the eductor system in the aft steering space worked. When asked where the eductor pumped to, the [REDACTED] told [REDACTED] [REDACTED] didn’t need to know that information.<sup>44</sup> Other witnesses learned of the process from peers, but said the [REDACTED] confirmed the practice.

Records indicate that on May [REDACTED], 2013, the [REDACTED] was anchored at the [REDACTED] end of [REDACTED] about a half mile from shore, when again, the [REDACTED] discharged untreated bilgewater from the aft steering bilge space. Another discharge occurred on May [REDACTED], 2013 while the ship was anchored on the [REDACTED] side of [REDACTED],

<sup>40</sup> MARPOL, Annex I, Regulation 17, Section 2.4.

<sup>41</sup> Case Serials 17, 34, 50, 52-62, 66, 69-74, 77.

<sup>42</sup> Case Serials 62, 63, 91.

<sup>43</sup> Case Serial 91.

<sup>44</sup> Case Serial 61.

within a few hundred feet of shore. The OIG noticed a trend where the Engineering Log recorded a location that is outside the 3 nm line, when the ship was much closer to shore. Both the Weather and Deck Logs were used to cross-reference and verify the accuracy of the locations. The Engineering Log for the [REDACTED] discharge recorded a distance of 4.677 nm [REDACTED] of land, while the Deck and Weather Logs confirm the ship was anchored just off the coastline at the time of the discharge.

Two additional discharges of untreated bilgewater occurred on May [REDACTED], 2013. The [REDACTED] discharged untreated bilgewater in the morning, only 0.937 nm from the [REDACTED]. The second discharge took place while the ship was anchored within 1 nm of the [REDACTED], however, the Engineering Log records that the discharge took place almost 29 nms [REDACTED] of the actual location.

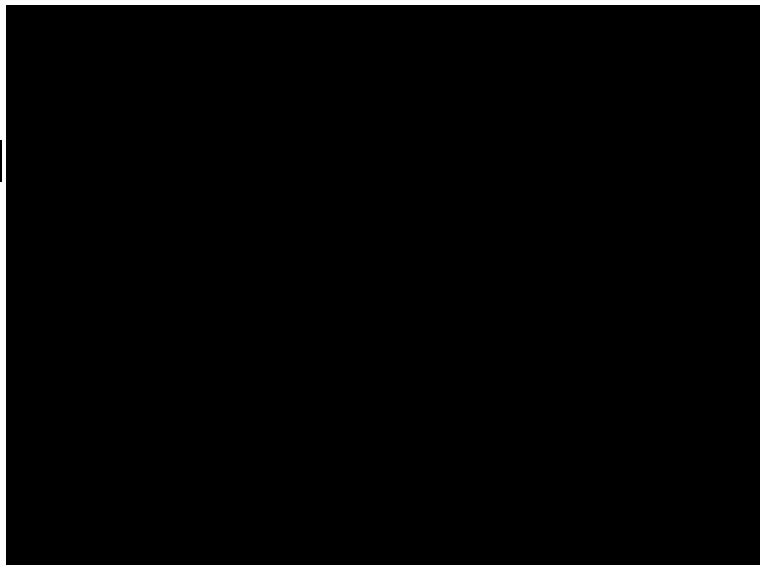


Figure 4: Aft Steering Bilge Pocket–Empty

[REDACTED] ay [REDACTED], 2013, an [REDACTED]<sup>45</sup> [REDACTED] joined the crew of the [REDACTED]. In that short period, [REDACTED] identified and objected to the discharge practice related to the aft steering bilge, and brought the matter to the attention of the [REDACTED] who at the time was [REDACTED]. According to this witness, the [REDACTED] reacted as though [REDACTED] had never considered the environmental consequences of discharging bilgewater directly into the ocean. The remedial actions of the [REDACTED] included a retrofit, which meant the installation of a Wilden pump. Wilden is a brand name, but is commonly used to describe Air Operated Double Diaphragm pumps that handle fluids. Until the pump was installed, the [REDACTED] said they would start using buckets to bail the bilge pockets and transport them to the engine bilge where there was an OWS.<sup>46</sup> The [REDACTED] said [REDACTED] discussed with the complainant why the discharge practice was improper. The [REDACTED] rotated off the ship within a week of making the complaint. Though [REDACTED] was told the practice would be discontinued, evidence shows it continued unabated throughout most of the remaining 2013 season.

While the OIG could not corroborate the complainant's allegation that [REDACTED] was [REDACTED] for shutting down the firemain during a discharge in [REDACTED] 2013, the records also do not contradict this claim. The [REDACTED] noted in a journal entry on [REDACTED], 2013 that the complainant "secured the forward firemain manifold while [another crewmember] was pumping

<sup>45</sup> OMAO regularly used [REDACTED].

<sup>46</sup> Case Serial 69.

out bilge in aft steering,” and that, “[t]his is a process which is done frequently onboard and was done while [complainant] was learning the oilers rounds during [redacted] orientation.”<sup>47</sup> While we found no actual formal [redacted] of complainant in writing from any of the ship’s command, some witnesses have reported a similar event but were not able to pinpoint an exact date.

Complainant, and some of the [redacted] crew, also claimed the complainant brought a similar objection<sup>48</sup> about discharging the aft steering bilge to the [redacted].<sup>49</sup> One crewmember disclosed that while [redacted] was showing the complainant how the system worked, the complainant kept asking where the bilgewater went, and when the complainant realized that it was being sent directly overboard, [redacted] expressed that it was wrong. The crewmember said [redacted] didn’t want to make waves, that was “just the way we do it.” The crewmember said that complainant later told the [redacted] that complainant wasn’t going to pump the bilge. Complainant was upset about the interaction with the [redacted] but the crewmember didn’t inquire any further.<sup>50</sup>

Though the complainant appears to have had disputes concerning the improper discharges, whether [redacted] directly confronted the issue was obscured by [redacted] own [redacted]. None of the crewmembers had firsthand knowledge whether complainant actually made a complaint to the [redacted]. While some witness testimony partially substantiated complainant’s allegation, they were vague, and other witness testimony contradicted the assertions of the complainant; no documentary evidence firmly supported the claims. By [redacted] 2013, complainant’s employment with NOAA was terminated. It wasn’t until several months after the termination that complainant became focused on the discharge issue.

The [redacted]’s [redacted] explained that in response to the [redacted]’s complaint about how the aft steering bilge was being discharged, the space was equipped with a Wilden pump, and the existing piping was re-utilized to allow bilgewater that accumulated in the steering flat to be pumped into the engine room bilge, where it was treated by the ship’s OWS.<sup>51</sup> The total cost to install the Wilden pump was \$5837.57.<sup>52</sup> The pump was purchased on July [redacted], 2013, the equipment received on the ship on about August [redacted], 2013, installation began on August [redacted] 2013, and, according to the ship’s Engineering Log, installation was completed September [redacted], 2013.<sup>53</sup>

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<sup>47</sup> Case Serial 41, page 665.

<sup>48</sup> Similar in that the complaint was generally the same complaint the [redacted] had made concerning discharge of the aft steering bilge spaces.

<sup>49</sup> Case Serials 37, 42, 53, 61.

<sup>50</sup> Case Serial 53.

<sup>51</sup> Case Serials 12, 16, 17, 24.

<sup>52</sup> This amount consists of \$2770.57 for the pump, about \$1000 for piping supplies, and \$2058 in labor costs to have the [redacted] install the pump (40 hours).

<sup>53</sup> Case Serial 68. The engineering log only has one entry concerning the Wilden pump, logged by the [redacted] on September [redacted] 2013.

## II. Nature of the Aft Steering Space Bilgewater

Bilgewater is fluid that accumulates in the bilge<sup>54</sup> of a ship, but varying accounts were received on whether the bilgewater in the aft steering bilge pockets was actually oily. Whether the bilgewater was oily is irrelevant in the regulations, as they presume that any fluid that collects in a mechanical space bilge is oily. The OIG pursued this claim and several witnesses described seeing a sheen on the bilgewater from the steering space. Complainant said the bilgewater contained hydraulic fluid and grease.<sup>55</sup> One crewmember witnessed a gelatinous mass, with a yellowish lard-like substance about an inch thick, on the surface of the water. ■ described it as “dirty nasty looking water.”<sup>56</sup> Another crewmember witnessed oil in the bilges, and after the bilges were emptied through the eductor system, the oil would be gone. ■ said soak pads were intended to take oil off the top to avoid a sheen, but they were ineffective.<sup>57</sup> An ■ witnessed grease accumulate on top of bilgewater previously, but didn’t recall noticing a sheen.<sup>58</sup> The ■ admitted that ■ witnessed grease in the bilgewater.<sup>59</sup> A ■, who had been on the ■ for ■ years, and is the ■ to the ■<sup>60</sup> said ■ would know if the bilgewater was oily because there was a “slight sheen” on the water. ■ said soak pads were “always” placed over the location in the aft steering space, including inside the bilge pockets. ■ also said they would stop pumping the bilge when there were a few inches left in the bilge pocket to avoid pumping any oil (which tended to be on top) from going overboard.<sup>61</sup> Several witnesses echoed this same practice.<sup>62</sup>

EPA guidelines indicate that a sheen on the surface of the water is *prima facie* evidence of unacceptable levels of oil in the water.<sup>63</sup> Additionally, the VGP for the ■ requires that bilgewater discharges be compliant with EPA guidelines.

The fleet-wide ■ presumed the term “bilgewater” was standard knowledge throughout the industry and thus nobody ever thought to describe what it was with any particularity during training. Despite direct discussions with the ■ about related compliance issues, it was never mentioned that the ■ had bilge pockets in the steering-gear space. The ship’s ■ informed the ■ that bilgewater was being discharged from the aft steering space in

<sup>54</sup> A bilge is the area that forms the transition between the bottom and the sides of a ship’s hull. It is that enclosed area between the frames at each side of the floors where seepage collects, also called a bilge well or pocket. It is often the lowest compartment on a ship.

<sup>55</sup> Case Serial 37.

<sup>56</sup> Case Serial 53.

<sup>57</sup> Case Serial 61.

<sup>58</sup> Case Serial 69.

<sup>59</sup> Case Serial 63.

<sup>60</sup> The U.S. Merit Systems Protection Board (MSPB) considers nepotism a prohibited personnel practice. See 5 U.S.C. §§ 2302(b) and 3110. See also MSPB, *Prohibited Personal Practice of the Month, This Month: Nepotism*, <http://www.mspb.gov/ppp/mayppp.htm> (May 2012). The ■ is in the direct supervisory chain for this ■; they are ■. While ■ may be far enough removed to avoid jurisdiction as a Prohibited Personnel Practice (PPP), appearances make direct supervision a practice that NOAA seeks to avoid.

<sup>61</sup> Case Serial 60.

<sup>62</sup> Case Serials 12, 53, 59, 61, 62, 63, 91.

<sup>63</sup> By regulation, the EPA and USCG have defined harmful quantities as discharges that cause a “sheen upon . . . the surface of the water or adjoining shorelines.” 40 C.F.R. § 110.3 (2012). “Sheen” is defined as an iridescent appearance on the surface of the water. 40 C.F.R. § 110.1.

early April 2014, and that the discharges were beyond the 3 nm limit, and outside of the VGP's jurisdiction. The fleet-wide [REDACTED] also learned that employees made complaints about this space as early as May 2013, but was not informed about it until April 2014, even then it was in the context of EEO complaints by the complainant, not as a compliance issue. The [REDACTED] never received any calls or information from the [REDACTED] staff aboard the [REDACTED] on this issue.<sup>64</sup>

### III. Public Vessel Exception – Applicability to NOAA Vessels – The First Explanation

On May 8, 2014, the [REDACTED] of the [REDACTED] did not deny that bilgewater discharges had occurred, but excused such discharges by saying the [REDACTED] was a [REDACTED] year old “public vessel.” Additionally, several witnesses have heard or used the “public vessel exception” as justification for discharging untreated aft steering bilgewater. The [REDACTED] further argued that the “regulations” regarding oil pollution exempt NOAA ships from compliance. [REDACTED] knew that the steering bilge was not plumbed into the OWS, and knew the eductor system discharged directly overboard. However, [REDACTED] claimed that to remain in compliance with their VGP, the standard procedure was to only discharge bilgewater from this space outside of 3 nms. [REDACTED] also said that while pumping this space, they did not pump it dry, leaving several inches of water to ensure that any oil floating on top of the water would not be discharged.<sup>65</sup> The [REDACTED]'s e-mail stated, “[i]t is my assessment as [REDACTED] that any orders given to pump this space that were compliant with this stated procedure were legal and did not violate any state or federal laws.”<sup>66</sup>

On June 26, 2014 the OIG interviewed the [REDACTED] of NOAA's OMAO, who stated during the interview that [REDACTED] had held that position since [REDACTED]. [REDACTED] said the CME is responsible for evaluating whether bilgewater meets the particulate limits for proper discharge. [REDACTED] further noted that all NOAA engineers are licensed by the USCG, meaning that they have to be compliant with environmental regulations. The CME is accountable and liable for any discharges of untreated bilgewater, which [REDACTED] said would be a crime. Like the [REDACTED]'s [REDACTED] the [REDACTED] explained that NOAA ships are considered “public vessels,” and are therefore excluded from the applicable law, but that NOAA vessels voluntarily operate under a VGP.<sup>67</sup>

The OIG found that APPS applies to all U.S. flagged ships anywhere in the world, and all foreign flagged vessels while operating in the navigable waters of the United States, or while at a port or terminal under the jurisdiction of the United States. The only exception is “a warship, naval auxiliary, or other ship owned or operated by the United States when engaged in non-commercial service.”<sup>68</sup> The initial claim by very senior OMAO officials was that the [REDACTED] fit

<sup>64</sup> Case Serial 96.

<sup>65</sup> Case Serials 12, 16, 17, 24.

<sup>66</sup> Case Serial 12.

<sup>67</sup> Case Serial 27, 34.

<sup>68</sup> 33 U.S.C. § 1902(b)(1)(A). The USCG promulgated the implementing regulations for MARPOL/APPS. 33 C.F.R. § 151. 33 C.F.R. § 151.09(b)(1) indicates that the Oil Pollution rules do not apply to ships operated by the United States government in non-commercial service.

under this category and was therefore excluded from oil pollution standards under APPS or the CWA.<sup>69</sup>

Through the course of this investigation, conflicting interpretations about whether NOAA is exempt have materialized. Though they may fit under the narrow exception in 33 U.S.C. § 1902(b), some witnesses<sup>70</sup> contend this is a misunderstanding because the law also requires federal agencies with excepted vessels to implement internal policies that mirror the law for commercial vessels. Ships claiming an exemption must cite a legitimate reason and explain the steps they are undertaking to come into compliance.<sup>71</sup> 33 U.S.C. § 1902(h), entitled *Noncommercial shipping standards* states:

The heads of Federal departments and agencies shall prescribe standards applicable to ships excluded from this chapter by subsection (b)(1) of this section and for which they are responsible. Standards prescribed under this subsection shall ensure, so far as is reasonable and practicable without impairing the operations or operational capabilities of such ships, that such ships act in a manner consistent with the MARPOL Protocol.

This section of the law requires compliance by public vessels with the MARPOL protocol, and includes the discharge of bilgewater.<sup>72</sup>

Even if NOAA itself has a statutory exemption concerning what would otherwise be an illegal discharge of bilgewater under the CWA, individual employees may still be subject to criminal, civil, or administrative liability for such acts. Typically, the actions of individual employees on vessels are imputed to their employer under the legal principle of *respondeat superior*, even when their employer had no knowledge of the criminal conduct and had policies prohibiting such conduct.<sup>73</sup> When that employer is the federal government, the doctrine of sovereign immunity prevents the government from acquiring criminal liability for the actions of its agents. While the Federal Tort Claims Act, 28 U.S.C. § 1346, ensures that the federal government is liable for tortious acts committed by an employee who is acting within the scope of their duties, it does not extend to criminal acts. Regarding the incidents present in this report, the DOJ has declined to prosecute based on complications around the claimed public vessel exception. Had it not been for that issue, DOJ indicated the conduct would have likely resulted in criminal charges as it would have for any commercial vessel engaged in the same conduct.<sup>74</sup>

The OIG interviewed a [REDACTED] employee, who is currently the [REDACTED] of the OMAO Fleet Inspections, and asked about the frequent refrain from OMAO management of the public

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<sup>69</sup> A public vessel is defined as a vessel owned or bareboat chartered and operated by the United States, or by a state or political subdivision thereof, or by a foreign nation, except when the vessel is engaged in commerce. 33 U.S.C. §§ 1321(a)(4) and 1322(a)(4).

<sup>70</sup> The two witnesses who stressed this the most were [REDACTED] and [REDACTED] with specific skill sets and positions that would give them particularized knowledge on this subject.

<sup>71</sup> Case Serial 83.

<sup>72</sup> Case Serials 83, 96.

<sup>73</sup> See *United States v. Offshore Vessels, LLC*, No. 10-CR-00183, Factual Basis for Information (E.D. La. 2010) and *New York Cent. & Hudson River R.R. v. United States*, 212 U.S. 481 (1909). In *Offshore Vessels*, the defendant pled guilty to an APPS violation. It was a private research vessel under contract to the National Science Foundation. Crewmembers knowingly discharged oily bilgewater directly overboard and falsified the ORB.

<sup>74</sup> Case Serial 76.



vessel exemption under 33 U.S.C. § 1902(b). ■ was also asked how the requirement to implement internal policies that mirror the law for commercial vessels was implemented. ■ replied via e-mail that ■ office was “well aware of 33 U.S.C. § 1902(h),” responding:

This portion of the law is not new and has consistently been raised by the Fleet Inspection Team (FIT) during my tenure here. In fact, I am fairly confident that the FIT recognized the issue well before I was a part of NOAA’s Office of Marine and Aviation Operations. The direct answer to your question is, in my opinion, encapsulated in our move to examine, inspect, and audit our vessels to the standards applicable to similar ships which are not public vessels. These standards are found in 46 C.F.R. Subchapter “U” (Oceanographic Research Vessels). We also examine, inspect, and audit our vessels, to the best of SECD’s ability, for conformance to the applicable international regulations. Areas of nonconformance are noted on annual inspection reports. In an attempt to rectify long standing issues regarding “prescribe standards applicable”, we previously had Statements of Voluntary Compliance (SOVCs) which were issued by the American Bureau of Shipping (ABS) on behalf of USCG. We are once again in the process of obtaining SOVCs from ABS to demonstrate our efforts to comply.<sup>75</sup>

NOAA officials stated that by implementing Subchapter “U” requirements, they in effect implemented 33 U.S.C. § 1902(h) with respect to the NOAA fleet.<sup>76</sup>

#### ***A. Requirements for Ships of the Armed Forces Argue Against NOAA’s Public Vessel Exception Claim***

Because so much emphasis has been placed on OMAO’s claim of exempt status, the OIG investigated how the U.S. Armed Forces have dealt with environmental concerns related to bilgewater. The National Defense Authorization Act for Fiscal Year 1996, Pub. L. No. 104-106, 110 Stat. 186, amended Section 312 of the CWA to require the Secretary of Defense and the Administrator of the EPA develop uniform national discharge standards for vessels of the U.S. Armed Forces for “discharges, other than sewage, incidental to the normal operation of a vessel of the Armed Forces.” 33 U.S.C. § 1322(n)(1).

In April 1999, EPA published final rules related to surface vessel bilgewater practices for the U.S. Armed Forces.<sup>77</sup> This document specifically concludes that steering gear rooms are spaces that generate bilgewater.<sup>78</sup> In it there is a detailed analysis of discharges with the conclusion:

Surface vessel bilgewater and OWS discharges have the potential to cause an adverse environmental effect for the following reasons:

<sup>75</sup> Case Serials 77, 81, 84.

<sup>76</sup> Case Serial 112

<sup>77</sup> Case Serial 105. EPA, *Phase I Final Rule and Technical Development Document of Uniform National Discharge Standards (UNDS), App. A: Surface Vessel Bilgewater/Oil Water Separator: Nature of Discharge*, EPA Ref. No. 842-R-99-001, [http://water.epa.gov/lawsregs/lawsguidance/cwa/vessel/unds/upload/2007\\_07\\_10\\_oceans\\_regulatory\\_unds\\_TDDdocuments\\_appAsurface.pdf](http://water.epa.gov/lawsregs/lawsguidance/cwa/vessel/unds/upload/2007_07_10_oceans_regulatory_unds_TDDdocuments_appAsurface.pdf) (Apr. 1999)

<sup>78</sup> *Id.* § 2.1.1, p. 2.

1. Bilgewater, if discharged without treatment, would contribute significant amounts of oil to the environment at concentrations exceeding water quality criteria and discharge standards.
2. OWS effluent contributes significant amounts of oil to the environment at concentrations exceeding water quality criteria and discharge standards.”<sup>79</sup>

The overall point is that military vessels do not rely on the public vessel exception and recognize that “all vessels produce bilgewater . . . every surface vessel has an onboard system for collecting and transferring bilgewater.”<sup>80</sup> In other words, they have holding tanks for bilgewater. Unlike the [REDACTED] “the Armed Forces do not discharge untreated bilgewater to surface waters”<sup>81</sup> and thus do not rely on a public vessel exception.

#### IV. Second Explanation – Chevron Clarity Oil

By the time the OIG arrived at the [REDACTED] on September [REDACTED] 2014, the emphasis shifted from the public vessel exception claim to an explanation concerning the nature of the hydraulic fluid used in the aft steering space. The [REDACTED] [REDACTED] and [REDACTED] of the [REDACTED] all claimed they did not consider the aft steering space bilgewater to be oily because the hydraulic oil used in the steering space was “eco-friendly.” All three mentioned the name Chevron Clarity (Clarity) as the hydraulic fluid used.<sup>82</sup> The [REDACTED] considered the bilgewater in the aft steering space to be no different than ballast water, though it was never verified through testing.<sup>83</sup> While the [REDACTED] argued the bilgewater was not hazardous, [REDACTED] admitted to using soak pads to gauge the amount of oil that was in the bilgewater. Those soak pads were then stored and disposed of as hazardous waste. The soak pads were used to minimize the oil and to avoid conflict with people who did not “understand” the nature of the oil they were using, according to the [REDACTED]. The [REDACTED] also mentioned that [REDACTED] staff was told not to discharge the steering bilge while in port because it could “discolor” the water, which could cause questions.<sup>84</sup>

The [REDACTED] claimed the Wilden pump was ordered because [REDACTED] expected amendments to the 2013 VGP, specifically that the VGP requirements would become more stringent, resulting in Clarity not meeting environmental standards.

The [REDACTED] claimed [REDACTED] consulted with OMAO Fleet Inspections, who approved the use of Clarity hydraulic fluid and authorized the discharge of bilgewater directly overboard because Clarity had no detrimental impact on the environment. Though the [REDACTED] saw no records which confirmed it was safe to allow such oil to be discharged into surface water, [REDACTED] decided to use and discharge the untreated bilgewater anyway. The [REDACTED] indicated that [REDACTED] started using Clarity in [REDACTED], before the [REDACTED] believed the OMAO Fleet [REDACTED] with whom [REDACTED] claimed

<sup>79</sup> *Id.* § 5.0, p. 8.

<sup>80</sup> *Id.* §§ 2.1.3 and 2.3, pp. 2-3.

<sup>81</sup> *Id.* § 3.1, p. 4.

<sup>82</sup> Case Serials 62, 63, 91.

<sup>83</sup> None of the witnesses interviewed during this investigation indicated that anybody ever took samples of this bilgewater to determine how hazardous it might be, including the on-board [REDACTED]s.

<sup>84</sup> Case Serials 62, 63.

to have spoken with was even employed by OMAO.<sup>85</sup> The OIG determined that the [REDACTED] with whom the [REDACTED] claimed authorized the use and overboard discharge of Clarity gave no such approval. In fact, the [REDACTED] maintained Clarity is a petroleum product and is considered a pollutant. The [REDACTED] provided a copy of an e-mail exchange with the [REDACTED] in which the [REDACTED] emphasized the necessity to either process the bilgewater through an OWS or store it onboard until on-shore disposal facilities were available.<sup>86</sup>

Oil pollution standards do not differentiate between types of oil. Oil is defined by statute as “oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.”<sup>87</sup>

The [REDACTED] produced a Materials Safety Data Sheet (MSDS) during [REDACTED] interview in which [REDACTED] asserted that there was no risk of environmental harm when Clarity was discharged. Section 12 of the MSDS does say that Clarity is considered “inherently biodegradable” and is not expected to be harmful to aquatic organisms. However, Section 6 of the same document clearly lists spill management procedures, explaining the need to “[c]ontain [the] release to prevent further contamination of soil, surface water or groundwater.” It further specifies that personal protective equipment should be worn for cleanup, removal of “contaminated soil,” to “place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.” MSDS dictates that spills should be reported to USCG’s National Response Center. Section 9 identifies Clarity as insoluble in water. In Section 11 it states that “[t]his product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating.”<sup>88</sup>

The OIG compared the MSDS of Clarity to the MSDS of Chevron Hydraulic Oil AW and found them to be practically identical. Both identify the composition as highly refined mineral oil (C15-C50), both list the same health effects; both have the same first aid measures; both have the same fire classifications; both have nearly identical flashpoints; both have the same occupational exposure limits; both have the same physical and chemical properties; and both have the same ecotoxicity (*i.e.*, not expected to harm aquatic organisms). The only *slight* difference is in the viscosity and density measurements. The only *significant* difference is the regular hydraulic fluid says it is not expected to be readily biodegradable.<sup>89</sup>

## V. OMAO VGP Annual Inspection Report

On March [REDACTED], 2014, an NPDES VGP Annual Inspection and Report, NOAA Form 57-07-13, was submitted on behalf of the [REDACTED]. This form was submitted to the EPA and certified that the [REDACTED] did not discharge treated bilgewater within 3 nms of shore. It separately certified that it

<sup>85</sup> Case Serials 62, 83. This particular OMAO Fleet [REDACTED] denied ever discussing Clarity with the [REDACTED] and said [REDACTED] did not and would not have given him any advice suggesting this particular oil could be treated differently than regular oil. As a note for clarity, the inspector in question was in fact employed with OMAO prior to [REDACTED], but the [REDACTED] during [REDACTED] interview, stated that [REDACTED] believed the inspector may not have yet been employed during that period of time. (See Case Serial 62 Transcript, pg 33, line 807).

<sup>86</sup> Case Serial 83.

<sup>87</sup> 33 U.S.C. § 1321(a)(1).

<sup>88</sup> Case Serial 62.

<sup>89</sup> Case Serial 106.

did not discharge treated bilgewater within 1 nm of shore. The certification, which was signed by the ship's [REDACTED] states "I reviewed the information in this Annual Report; the information contained is accurate and complete." This form certified the previous calendar year's compliance, so it is certifying for the 2013 calendar year.<sup>90</sup>

## VI. E-mail Analysis

The OIG conducted a review of e-mail traffic among relevant NOAA employees for the time period in question. We found no evidence of reprisal in the e-mails, but did find that the [REDACTED]'s [REDACTED] [REDACTED] [REDACTED] and [REDACTED] were all involved in e-mail conversations demonstrating knowledge of bilge space operations. One e-mail between the [REDACTED] and the [REDACTED] involved a diagram of all the overboard discharge points of the ship, including the aft steering eductor port. An e-mail from June 2013 focused on how expensive it was to reconfigure the ship related to handling the aft steering bilgewater, and the [REDACTED] indicated an alternative plan to use the eductor system to pipe the bilgewater into the engine bilge.<sup>91</sup>

## VII. Environmental Compliance Officer & the Culture at NOAA

Commerce requires operating units to fully adhere to environmental pollution control laws, regulations, and directives.<sup>92</sup> NOAA's Environmental Compliance program establishes the position of an ECO, and one is required on each ship.<sup>93</sup>

During witness interviews, the OIG noted that few of the staff knew who the ECO was or what they did. The ECO's duties are typically assigned to a junior NOAA Corps officer. ECO personnel changes occurred frequently, and [REDACTED] have said that they did only the minimal work required because of competing interests with their many other responsibilities. ECO work is a collateral duty, meaning duties that lie outside their primary role.

The [REDACTED], who reported the bilgewater discharges to the [REDACTED] [REDACTED] indicated that [REDACTED] did not know who the ECO was, and that [REDACTED] would never have thought to go to an [REDACTED] regarding the bilgewater because "this kind of thing tends to stay in the department." [REDACTED] said [REDACTED] would go to [REDACTED] [REDACTED] first. [REDACTED] never saw an ECO or a NOAA Corps officer doing any testing or asking any questions about bilgewater discharges.<sup>94</sup>

Another [REDACTED] crewmember also did not know who the ECO was. When the [REDACTED] [REDACTED] came asking questions about how the eductor system was used in late 2013 or early

<sup>90</sup> Case Serial 80.

<sup>91</sup> Case Serial 103.

<sup>92</sup> Departmental Administrative Order (DAO) 216-17; see NOAA Administrative Order 216-17, NOAA Environmental Compliance Program, effective September 29, 1998. The OIG notes that as of June 8, 2015, DAO 216-17 no longer exists in the Commerce's electronic library of DAO's located at <http://www.osec.doc.gov/opog/dmp/daos.html#A216>. However, NAO 216-17 was still in effect as of June 8, 2015. (Case Serial 111).

<sup>93</sup> NOAA, OMAO, Environmental Compliance Program Policy Memo dated March 6, 2002, located on June 8, 2015 at <http://www.ems.noaa.gov/MOC/Demo/OMAO%20Environmental%20Compliance%20Program%20Policy%20Memo.pdf>. See Case Serial 111.

<sup>94</sup> Case Serial 69.

2014, the [REDACTED] was told that the bilgewater was discharged directly overboard through the eductor. [REDACTED] replied “really,” and following the crewmember’s confirmation, that was the end of the discussion.<sup>95</sup> Another crewmember said [REDACTED] was unaware of any of the NOAA Corps officers assigned to the [REDACTED] having knowledge of what was happening with this bilgewater, though the [REDACTED]’s [REDACTED] and the [REDACTED]’s [REDACTED] both asked questions after the complaint was received by the U.S. Department of Commerce.<sup>96</sup>

The OIG interviewed [REDACTED] different [REDACTED] who served as [REDACTED] on the [REDACTED] since [REDACTED], none of whom served more than [REDACTED] months in the [REDACTED] role. The first described the initial “hand-off” of the job from the previous [REDACTED] as “vague,” and [REDACTED] wasn’t trained on the [REDACTED] duties until near the end of [REDACTED] tenure as [REDACTED]. The focus of their work included weekly inspections or walk-throughs that were part of the NPDES program. An inspection checklist is part of the record and was a factor of review during the annual comprehensive inspection conducted by OMAO Fleet Inspections. None of the [REDACTED]s took any samples of any of the discharge streams that existed on the [REDACTED]; nor did they know that the aft steering bilge was discharged directly overboard. The [REDACTED]s also had no knowledge that the [REDACTED] had a BMP which allowed them to discharge “treated” bilgewater within 1 nm of shore; they thought the ship did not discharge any bilgewater and held it until they reached a port.<sup>97</sup>

One [REDACTED], and former [REDACTED] employee, indicated that bilgewater which accumulated from the aft steering space should not have been discharged without going through the OWS. [REDACTED] said that neither the use of “environmentally-friendly” hydraulic oil, nor the use of soak pads, would have mitigated or changed the nature of the fluids in the bilge space – it should have been sent through an OWS no matter the mitigation tactics used. This [REDACTED] said that “the NPDES workbook (0701-03A) Ship Specific Instruction for the [REDACTED] designates the Oil Record Book as the only location of recording bilge water discharge.”<sup>98</sup>

One [REDACTED] advised that the culture on the [REDACTED] was such that the NOAA Corps officers assigned to the ship were discouraged by members of the [REDACTED] crew from asking questions of the [REDACTED] crew. [REDACTED] said the typical answer would be something like the NOAA Corps didn’t need to know. That [REDACTED] attributed this atmosphere with why [REDACTED] never asked about how bilgewater was being managed.<sup>99</sup> Another [REDACTED] indicated that [REDACTED] frequently heard conversation while aboard the ship that it was a public vessel and therefore “exempt” and that the viewpoint was generally held by “everybody.” [REDACTED] said [REDACTED] “heard that all the time – that we’re government so are exempt.”<sup>100</sup>

The [REDACTED] aboard the [REDACTED] never served as an [REDACTED] and the [REDACTED]s on the ship did not regularly report to [REDACTED]. [REDACTED] was aware that the [REDACTED] had an eductor system in the aft steering space, its purpose was for dewatering, and that the system was not connected to an OWS. [REDACTED] was not aware that the eductor system was used to discharge the aft bilge pockets

<sup>95</sup> Case Serial 53.

<sup>96</sup> Case Serial 61.

<sup>97</sup> Case Serials 56, 66, 79.

<sup>98</sup> Case Serials 56, 80.

<sup>99</sup> Case Serial 66.

<sup>100</sup> Case Serial 79.

until after an [REDACTED] began questioning the process. [REDACTED] never contacted the fleet-wide [REDACTED] concerning the discharge of the aft steering space bilge because the [REDACTED] was handling the issue. [REDACTED] said [REDACTED] was only vaguely familiar with the VGP and had not read it.<sup>101</sup>

The fleet-wide [REDACTED] is responsible for environmental compliance and training initiatives for NOAA. [REDACTED] said ship-specific BMPs were created by a [REDACTED], which went discharge-by-discharge concerning the VGP requirements. The BMPs discuss technical feasibility, and the [REDACTED]'s BMP specifically states that because the ship [REDACTED], they were authorized to discharge within 1 nm of land. [REDACTED] assumed that the [REDACTED] were only talking about the engine bilge – [REDACTED] had no knowledge of the bilge space in the aft steering area because the [REDACTED] never disclosed that such a bilge space existed. Conversely, the [REDACTED]'s BMP was different than the [REDACTED]'s, even though they are [REDACTED] ships with the [REDACTED]. The BMP confirms that the [REDACTED] can hold bilgewater and won't need to discharge except beyond 3 nms. The [REDACTED]'s bilge storage capacity lasts for over a month. There was no recognition by the fleet-wide [REDACTED] that the [REDACTED] ship's practices differed in regards to this area. During training on environmental compliance, the fleet-wide [REDACTED] teaches that untreated bilgewater discharges are prohibited. [REDACTED] confirmed that [REDACTED] is aware of a culture of animosity and that makes it difficult for the ship's ECOs to perform their job effectively. It differs from ship to ship, but there are some engineers in the fleet that avoid engaging, and are hostile concerning environmental compliance. [REDACTED] understands that some chief engineers encourage their engineers to “keep it ours” and not engage with the ECOs.<sup>102</sup>

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<sup>101</sup> Case Serial 94.

<sup>102</sup> Case Serial 96.



## Chapter 4: [REDACTED] Fuel Spill

On [REDACTED], while docked at a [REDACTED] in [REDACTED], the [REDACTED] discharged an estimated [REDACTED] gallons of diesel fuel into the ocean on the [REDACTED].

### I. Initial Discovery

Prior to the OIG's September [REDACTED] 2014 site visit to the [REDACTED] we learned through [REDACTED] about a reported fuel spill involving the [REDACTED] on or about [REDACTED].<sup>103</sup> Since this incident involved the improper discharge of petroleum products into the ocean, and was indicative of repeated failures concerning pollution controls, we questioned the [REDACTED] crewmembers about the incident as part of our ongoing investigation. We also consulted with USCG authorities who had responded to, or were responsible for, investigating the fuel spill.

Upon the OIG's arrival on September [REDACTED], 2014, the ship's [REDACTED] informed us that the preliminary finding was that the spill occurred because fuel leaked into the forward greywater tank. This led to further questioning about a three-way diverter valve that was supposed to have been moved to an inboard/onboard position, which would send greywater into a storage tank while in port (see Figures 5 and 6). One witness stated that [REDACTED] and others saw a milky liquid substance coming from the forward greywater discharge port with significant force on the day of the spill,<sup>104</sup> which is indicative that the three-way valve may have been in the overboard position. When interviewed, the [REDACTED] stated that [REDACTED] personally checked the valve and it was in the correct position (to storage tank).<sup>105</sup>

**Figure 5: Three-Way Greywater Diverter Valve**

Further inquiry led us to question the [REDACTED] account of the circumstances leading up to the fuel spill. For instance, both the [REDACTED] and the [REDACTED] claimed the fuel leak was caused by rubber seals within the diverter valve causing them to disintegrate

<sup>103</sup> Case Serials 46-48.

<sup>104</sup> Case Serial 57, 84.

<sup>105</sup> Case Serials 63, 90.

when they came in contact with the fuel. There are mechanical reasons why that argument fails, including that no such O-rings or rubber gaskets exists in ball valve. Furthermore, even if the rubber seals malfunctioned, that would not explain the force with which witnesses said the spillage was occurring.<sup>106</sup> This was compounded by testimony that the [REDACTED] and the [REDACTED] disassembled the valve, then fearing they could not find the necessary parts if they further broke it down, inexplicably decided to return it to service. If the valve had malfunctioned to the point of causing a [REDACTED] gallon fuel spill, it made no sense to reinstall it.



**Figure 6: Close-up of Greywater Diverter Valve**

As a result of further OIG probes and requests, OMAO agreed to remove the valve and have an independent third party inspect the three-way valve for defect. The valve was removed by a contractor to NOAA and placed in FedEx to deliver to a third-party testing firm on October [REDACTED], 2014. There is no indication that this valve was intentionally lost, but as of the date of this report, FedEx has not delivered the valve, and has been unable to locate the package, thus no mechanical testing of the valve occurred.<sup>107</sup>

## II. Results of OMAO's Internal Review of the Fuel Spill

The OIG interviewed members of the OMAO Fleet Inspections team who were tasked with conducting their own investigation into the causes of the fuel spill in [REDACTED]. They reported key evidence demonstrating inconsistencies with the [REDACTED] staff's statements regarding the collected evidence. The Fleet Inspection report details a series of failures, mistakes, and problems which ultimately contributed to the fuel spill in [REDACTED]. Key findings include:<sup>108</sup>

- The three-way valve had no valve handle, nor did it have the required sealing lubricant on the valve's cylinder plug, as per the manufacturer's maintenance procedures.
- Lack of inspections, poor design, not being ABS classed, and poor maintenance were all contributing factors, causing a corrosive hole in the sounding tube for the forward grey-

<sup>106</sup> Faulty seals typically result in small leaks where fuel could escape around metal parts that come together. A valve of that kind would typically use a rubber seal, gasket, or O-ring to compress between the metal parts that come together. In a ball valve, there is a spherical closure that contains a bore (hole) on one side where fluids can pass easily through, but when the ball is turned to the off position, the part of the spherical closure that has no bore prevents the liquid from passing through.

<sup>107</sup> Case Serials 101, 102.

<sup>108</sup> Case Serial 84.

water tank, located in the bottom of the diesel fuel tank, allowing over [REDACTED] gallons of fuel to leak into the greywater tank.

- A repair request dated [REDACTED] for the forward greywater tank was not processed in accordance with approved procedures. Had it been processed properly the sounding tube pipe deterioration would have been discovered, and likely corrected prior to the failure.
- The discharge valve was determined to be configured in the overboard position. This conclusion was supported by:
  - Three different eyewitness accounts of a high flow of effluent from the starboard side greywater overboard discharge port. The valve manufacturer stated that if the valve had not been in the overboard position it would not have been able to produce the volume of flow as was witnessed.
  - No evidence of diesel fuel backflow into other parts of the [REDACTED]'s sewage system, and no reports of diesel fuel contamination in the receiving side of the [REDACTED]'s sewage system.
  - The valve itself had no markings to clearly indicate the correct flow direction; the valve also did not have a locking device to prevent unintended or deliberate adjustment to the wrong position.
  - The report noted “[i]f the breach in the forward greywater tank’s sounding tube had not occurred, then greywater would have been illegally discharged into [REDACTED] during this period as per [REDACTED] Base policies.”
  - The three-way valve had no oily residue on the sewage outlet, but the overboard outlet had a significant amount of oily residue. This is compelling evidence that diesel fuel flowed through the overboard outlet, not the sewage/storage tank outlet.<sup>109</sup>

### III. Statements of [REDACTED] Personnel Involved with Manipulation of the Greywater Valve

The OIG interviewed an [REDACTED]<sup>110</sup> who was the [REDACTED] and [REDACTED] Engineering Log for the period of [REDACTED] hours. [REDACTED] confirmed that [REDACTED] the entry entitled [REDACTED] *Sewage and G/W Diverted Onboard*. [REDACTED] also reported that the physical action of turning the three-way valve to the inboard/onboard position was accomplished by the “[REDACTED],” who happened to be in the position of [REDACTED]. It was [REDACTED] responsibility as the [REDACTED] to [REDACTED] that the [REDACTED] had performed this action, but [REDACTED] did not inspect to make sure the duties were accurately performed.<sup>111</sup> The [REDACTED]

<sup>109</sup> Case Serials 83-85.

<sup>110</sup> [REDACTED]

<sup>111</sup> Case Serial 87.

██████████ confirmed that the ██████████ is ██████████ for making sure the greywater valve is turned to the inboard/onboard position prior to docking. However, the ██████████ usually has the ██████████ person do that task and typically does not double check that it was actually accomplished. It is a quarter of a turn on the greywater diverter valve to move it from one position to another.<sup>112</sup>

The crewmember tasked with ██████████ was also interviewed and confirmed that the ██████████ the Engineering Log entry of the incident, and that the diverter valve was “absolutely” switched to the inboard/onboard position, which would have diverted the greywater to the storage tanks. ██████████ said that ██████████, and that the ██████████. ██████████ claimed ██████████ standard procedure was to double check everything ██████████ does, and this ██████████ was no exception. Both times ██████████ said the ██████████. The second check would have been later in the day after the ██████████ was secured dockside. To ██████████ knowledge, there was ██████████ to that point. ██████████ recalled that on the day of the refueling (██████████), happened to ██████████. ██████████ denied knowing that ██████████.<sup>113</sup>

Since OMAO Fleet Inspections concluded that the three-way diverter valve was left open, the ██████████ was asked more detailed questions about the incident. During a second interview, ██████████ indicated that while the ██████████ was on shore power, the greywater tanks would not have been emptying into the storage tanks, but would instead flow into the sewage system to be handled by the shore systems. ██████████ contends that since they were docked on the starboard side, the greywater discharge should have been going through the deck sewage connection. ██████████ continued to argue that the diverter valve was positioned inboard/onboard, but because the system had significant back-pressure, the greywater discharged directly overboard and that if the valve were tested, it would be found faulty. Lastly, the ██████████ could not explain why an oily residue was found only on the overboard port on the valve and denied turning the three-way diverter valve to the inboard/onboard position.<sup>114</sup>

Upon receiving new and conflicting information from our initial interviews of the ██████████ and ██████████ the OIG pursued an explanation for the differing accounts; however, the ██████████ for the OMAO Fleet Inspections said there was no evidence of fuel in the shore waste systems and that the available evidence does not support the ██████████ account. The ██████████ asserted that the only reasonable explanation for the eyewitness testimony and physical evidence is that somebody left the greywater discharge valve in the overboard position.<sup>115</sup>

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<sup>112</sup> Case Serial 90.

<sup>113</sup> Case Serial 89.

<sup>114</sup> *Id.*

<sup>115</sup> Case Serial 99.

#### IV. Review of Greywater Valve Entries in Engineering Log

Since OMAO's inspection report concerning the [REDACTED] fuel spill revealed that the Engineering Log recorded that the greywater valve had been turned to the inboard/onboard position *prior* to the [REDACTED] docking, the OIG undertook an analysis of the Engineering Log entries from [REDACTED] to [REDACTED].<sup>116</sup> The purpose of the review was to determine whether this valve was routinely turned inboard/onboard and documented as such. Several incidents were recorded which suggests that reporting was performed in a haphazard manner. Our investigation discovered at least four incidents where the Engineering Log either does not report that the greywater valve was turned to the inboard/onboard position, or that it was turned to the overboard position, prior to pulling into port with no record of a change through time of docking.

However, the documentation was sloppy enough that these discrepancies could have arguably been a clerical error. For example, on [REDACTED] the [REDACTED] docked in [REDACTED] without any Engineering Log entries for the prior days indicating the greywater valve had been turned inboard/onboard; but on [REDACTED] after leaving [REDACTED], there is an Engineering Log entry indicating that the greywater valve was turned to the overboard position, indicating that the valve had either been turned inboard/onboard sometime prior but was not recorded, or that the valve positions were out of sync with their expected position.<sup>117</sup>

#### V. Ship Maintenance and Compliance Issues

The [REDACTED] was built in [REDACTED], [REDACTED]. As with other ships here [REDACTED], workarounds abound in an attempt to meet current environmental and safety requirements. The generalized statements of the ships' crew that the OIG interviewed suggest a long list of repair and upgrade requests that often took a considerable amount of time to implement.<sup>118</sup> The [REDACTED] crew complained of frequent occasions where repairs or other work was delayed due to funding issues. The [REDACTED] fuel spill illustrates the potential environmental impacts created by a lack of maintenance. In [REDACTED] 2014, the [REDACTED] for the [REDACTED] sought authorization for repairs on the tank that failed, but that repair was postponed as a result of funding issues.<sup>119</sup>

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<sup>116</sup> Reference Case Serial 50.

<sup>117</sup> Case Serial 97.

<sup>118</sup> See Serials 64 and 65, 69-74.

<sup>119</sup> Case Serial 62, *Voyage Repair Request* ([REDACTED] 2014).

## Chapter 5: Conclusions and Recommendations

The OIG has made the following conclusions based on the facts uncovered during this investigation, and the analysis described in this section:

### I. Conclusions

#### A. Violation of Regulation, Policy, and the EPA Vessel General Permit Requirements

Numerous environmental laws, regulations, rules, NOAA Policies, and the VGP requirements were violated resulting in the discharge of untreated bilgewater. Further, OWS discharges that occurred within 1 nm of shore are a technical violation of both OMAO Policy and the VGP. OMAO relied on a technical limitation of the [REDACTED] to allow discharges so close to shore. Only after complaints were made by crewmembers did NOAA invest the less than \$6000 necessary to solve the problem of piping the aft steering bilge to the engine room. The BMPs for the [REDACTED] and [REDACTED] differed, which could have raised questions as to why and, potentially, uncovered the improper practice. Furthermore, the [REDACTED] of the [REDACTED] could and should have consulted with the [REDACTED] to determine how that ship was able to solve the holding tanks problem and thus avoid bilgewater discharges within 1 nm.<sup>120</sup>

Even if the limitation was legitimate, for the period of our review, the [REDACTED] always failed to record discharges of the aft steering gear bilgewater in the manner required by law.<sup>121</sup> The failure to report how often improper discharges were occurring obscured the true nature of routine operations aboard the [REDACTED]

Conditions point to a deliberate effort to obscure bilgewater discharge violations, including the [REDACTED]'s directions to discharge the bilgewater at night; not to pump the bilgewater down all the way empty (so that oil sheen would not be obvious); and to avoid discharging bilgewater while in port because it may “discolor” the water. Additionally, none of the witnesses were aware of any written instructions concerning the aft steering bilge, perhaps because such written instructions would lead to scrutiny.<sup>122</sup> The [REDACTED] who initially brought the issue to the attention of the ship's command was misled into thinking that mitigation tactics were being taken, and as soon as [REDACTED] left the [REDACTED] the processes were not followed.<sup>123</sup> As indicated in the initial allegation<sup>124</sup> this behavior conceals the true bilgewater removal operations of the ship. The actions of the [REDACTED] and [REDACTED] created a culture which discouraged the engagement of the [REDACTED] crew and [REDACTED]s, and aided in the mismanagement of bilgewater discharge activities. Furthermore, the deviating excuses given during this investigation are troubling. The excuses regarding the untreated discharges of bilgewater have

<sup>120</sup> The Fleet [REDACTED] stated that the [REDACTED]'s [REDACTED] told [REDACTED] none of the holding tanks aboard the [REDACTED] could reasonably be converted to hold oily bilgewater; see Case Serial 96.

<sup>121</sup> 33 C.F.R. § 151.25. See Chapter 2, Section V of this report for details on these requirements.

<sup>122</sup> Case Serials 52-62, 66, 69-74, 79, 91, 94, 96.

<sup>123</sup> Case Serial 69, corroborated by other witness interviews (Case Serials 52-62, 66, 70-74, 79, 91, 94, 96).

<sup>124</sup> Case Serial 37.

gone from the public vessel exception, to the age of the vessel, to the use of Clarity hydraulic fluid, and lastly, that the bilgewater wasn't really oily.

The discharge of untreated aft steering bilgewater was clearly a violation of OMAO Policy and the VGP. Absent and false reporting in the Engineering Logs and ORB seems to have been a consistent and deliberate process to avoid the responsibility of compliance with regulatory, statutory, and agency requirements (i.e., discharging bilgewater within the 1 or 3 nm mark). The effect was to create an audit trail that even if inspected, would seem to indicate discharges were occurring in a manner consistent with the requirements of the VGP.

### **B. Oil Record Book and Engineering Log Records were Improperly Annotated and Contained Inconsistencies**

The OIG attempted to reconcile the ██████'s own records with witness testimony. Many witnesses did not even know whether the aft steering bilgewater discharges were recorded in any document. Many guidance points exist to indicate that any discharge of bilgewater, including from the aft steering space, should be recorded in the ORB. Directions in the ORB, OMAO's own policies in the NPDES Compliance Workbook, several witnesses, including the ██████s, all agree that the ORB should reflect all bilgewater discharges.<sup>125</sup>

However, when it came to the aft steering bilgewater, for the period of our review, none of the discharges were recorded in the ORB. Our investigation found there were 13 documented instances where discharges from the aft steering bilge occurred.<sup>126</sup> The ██████ said the discharges recorded in the ORB were from the engine room bilge only, after going through the OWS. ██████ did not know why the aft steering bilge discharges were not recorded in the ORB. The ██████ said that when the aft steering bilge was emptied, an entry should be made in the Engineering Log, which ██████ reviews and signs each day. ██████ further claims that the aft steering bilge discharges were not recorded in the ORB because ██████ didn't think it needed to be. ██████ claimed only discharges run through the OWS are recorded in the ORB.<sup>127</sup>

The OIG obtained copies of the ██████'s ORB for October 25, 2011 through September 8, 2014. The instructions in the ORB are quite clear, and include a list of items to be recorded, which includes Section D, *Non-Automatic Starting of Discharge Overboard, Transfer or Disposal Otherwise of Bilge Water which has Accumulated in Machinery Spaces*. Section D requires the following items to be recorded about such discharges:<sup>128</sup>

- Quantity discharged, transferred or disposed of in m3, gal or bbls., including identification and capacity of the bilgewater holding tank(s) and quantity retained in the holding tank.
- Time of discharge, transfer or disposal (start and stop).

<sup>125</sup> Case Serials 17, 56, 66, 79, 80, 83. See 33 C.F.R. § 151.25(d)(4) (Entries shall be made in the Oil Record Book on each occasion . . . whenever any of the following machinery space operations take place on any ship to which this section applies . . . [d]ischarge overboard or disposal otherwise of bilge water that has accumulated in machinery spaces.).

<sup>126</sup> There is no way to positively identify whether those recorded instances were the only instances as discharges not recorded by the ██████ would not be known.

<sup>127</sup> Case Serials 62, 63, 68, 77.

<sup>128</sup> Case Serial 77.



- Method of discharge, transfer or disposal, such as if through an OWS, to a reception facility (to include the port name), or if to a slop or holding tank (noting which tank).

The initial entries in the ORB were made by the [REDACTED] and contain notations that the bilgewater being pumped is from the engine bilge. Starting in about May 2012, the [REDACTED] became the primary scribe in the ORB, the timing also corresponds to a decrease in the quality and specificity of the ORB entries as required. Particularly, the bilge tank that was being discharged was no longer identified, nor were the location coordinates recorded, which is inconsistent with the standard established in the examples and instructions section for the ORB. Only the [REDACTED], [REDACTED] and [REDACTED] notated the ORB through [REDACTED]. The ship's [REDACTED] signed each page as the [REDACTED]. No notation of bilgewater from the aft steering space is made in this record.<sup>129</sup>

The OIG examined the Engineer's Log Book, spanning from [REDACTED] 2013 through [REDACTED] 2013, which represented the [REDACTED] entire 2013 work season. There were 13 discharges reported between [REDACTED] 2013 and [REDACTED], 2013. There was no discernable pattern as to the frequency, although six of the instances were only one or two days into the trip. The [REDACTED] was most often the [REDACTED] when these discharges occurred (eight times). There was no notation in the record to reflect any pumping of the aft steering bilge, either by bucketing or piping the bilgewater to the engine room bilge. There was one entry on [REDACTED], 2013, after the Wilden pump was installed, that mentioned the engine room bilge; the presumption was that on this occasion the steering bilge was pumped to the engine bilge, where the only OWS resided.<sup>130</sup>

It is evident in the instructions for the ORB, and the legal requirements laid out at the beginning of this report, that the discharges from the aft steering space represent a material omission from the required recording of these events in the ORB. Furthermore, the Engineering Logs clearly reflect at least 13 instances of discharging untreated bilgewater (i.e., from the aft steering bilge) in a 2 ½ month period (78 days), for an average of one discharge every six days, which is consistent with several witness estimates.<sup>131</sup>

The ORB is never annotated when a discharge occurs within the 1 or 3 nm zone, whether the aft steering space or OWS discharges, contrary to the requirements established in NOAA Procedure 0701-03 §§ 2 and 3.6.1.

### **C. Position of the [REDACTED] Shows the Frequency of Discharges within Restricted Zones was Substantial**

Every witness the OIG interviewed confirmed that the [REDACTED]'s normal operations stayed close to shore while performing mapping activities – usually from 200 yards to less than a mile offshore, except while in transit from one location to the next. Frequently even during transit,

<sup>129</sup> *Id.*

<sup>130</sup> *Id.*

<sup>131</sup>  $78 \div 13 = 6$ .

they were less than 3 nms from a coastline. Their typical trip would last no longer than 18 days before pulling into a port, and usually much shorter.<sup>132</sup>

The specific coordinates of the [REDACTED] at the time of discharge were determined by comparing several different pieces of evidence, including computerized tracklines<sup>133</sup> for the ship log coordinates, deck log coordinates,<sup>134</sup> hourly weather logs,<sup>135</sup> ORB entries and Engineering Logs. The coordinates placed the ship within 1 nm of shore when 54% of the untreated discharges were made and within 3 nms when 69% of such discharges occurred. Further, the Engineering Log generically listed a location that was sometimes materially different than where the ship was actually located when the discharge occurred; making it appear that the ship was outside the three nautical mile zone when they were not.<sup>136</sup> The chart at Appendix I summarizes the details of the discharges of untreated bilgewater.

The [REDACTED] also made routine discharges of treated bilgewater (i.e., run through an OWS). While some discharge of treated bilgewater is acceptable, there are limitations in the VGP, including that no such discharge of OWS-treated bilgewater occur within 1 nm of land unless it was technically infeasible. The OIG found 48% of OWS discharges during the 2013 season were done within 1 nm of shore, but the [REDACTED] had a policy, approved by OMAO,<sup>137</sup> that this particular ship had no technical capacity to store bilgewater, thus these discharges were authorized. As previously noted, the [REDACTED] did not allow such discharges and was able to store bilgewater. It appears that choices were made in regards to the [REDACTED] which led to unauthorized discharges, instead of choosing to make environmentally sound configuration changes.<sup>138</sup>

#### ***D. The Mitigation Tactics Announced after the Initial Complaint did not Stop Discharges from Occurring***

Witness testimony, corroborated by both the [REDACTED] and the [REDACTED] was that the initial complaint by the [REDACTED] in May 2013 caused the [REDACTED] to institute two primary mitigation tactics. First, the Wilden pump would eventually be installed, which would direct the aft steering space bilge to the engine bilge where it could be properly handled with an OWS. Second, until the Wilden pump was installed, the aft steering space bilges would be hand pumped into buckets, and the buckets would then be carried to the engine bilge. Some witnesses also indicated that it was about this time that a concerted effort to

<sup>132</sup> Case Serials 52-62, 66, 69-74, 79, 91, 94, 96.

<sup>133</sup> The [REDACTED] has an onboard computer system that records the GPS coordinates of the ship on a continuous basis. This data was uploaded into the Coastal Explorer program which can plot track lines on a map to show the ship's route through time, but it does not provide a time stamp – it is sequential but there is no way to pinpoint a location based on time in this system. Further, it is manually activated by the ship so there are periods where no trackline data was available. NOAA Office of Law Enforcement provided technical support in plotting the data into the Coastal Explorer program.

<sup>134</sup> The Deck Log is the primary document used to record factual entries with time and often location. Essentially all of the operations of the [REDACTED] that come to the attention of the bridge are logged in this document. Deck logs contain coordinates at least four times per day, and the coordinates are often recorded as part of the narrative.

<sup>135</sup> The Weather Log was kept as an addendum to the Deck Log, and records on an hourly basis the weather conditions. Each hourly entry includes the GPS coordinates of the [REDACTED] at the time the weather record was captured.

<sup>136</sup> Case Serial 104.

<sup>137</sup> Case Serial 17.

<sup>138</sup> Case Serial 104.

use soak pads in the aft steering space took place. However, some witnesses said that while this happened initially, as soon as the complaining ██████ left, most of these practices were abandoned.<sup>139</sup> As explained previously in this report, the ██████'s own records demonstrated that discharges of untreated bilgewater continued after May 2013 until the Wilden pump installation was completed in September 2013.

**E. OMAO VGP Annual Inspection Report for Year 2013 Contained False Representations and was Submitted to the EPA**

On March ██████ 2014, an NPDES VGP Annual Inspection and Report (NOAA Form 57-07-13) was submitted on behalf of the ██████. This report certified that the ██████ did not discharge treated bilgewater within 3 nms of shore. It separately certified that it did not discharge treated bilgewater within 1 nm of shore. The certification, which was signed by the ship's ██████ states "I reviewed the information in this Annual Report; the information contained is accurate and complete." This form certifies the previous calendar year's compliance, so this particular form is certifying for the 2013 calendar year.<sup>140</sup>

The certifications made to the EPA on NOAA Form 57-07-13 are false. Personnel aboard the ██████ did knowingly discharge both treated and untreated bilgewater within 1 and 3 nms of shore, as exhibited within the ship's own records. Upon confirming with the EPA, the OIG discovered that NOAA Form 57-07-13, signed by the ship's ██████ on March ██████, 2014, was utilized by the NOAA Fleet ██████ to create a compilation summary report that was tendered to the EPA to comply with VGP requirements. That report included zero instances of discharges of treated or untreated bilgewater during the 2013 calendar year. However, it was determined that submission of these forms was voluntary for 2013, and only became mandatory in calendar year 2014. According to the Fleet ██████, had EPA known of the falsity of the statement, there would have been no consequence, making the false statement immaterial.<sup>141</sup>

**F. ██████ Crewmembers Likely Left the Greywater Valve Open**

While the records are not conclusive, the OIG found that on at least three occasions, the ██████ docked at the ██████ in ██████ leaving the greywater valve in the overboard position in the months leading up to the fuel spill.<sup>142</sup> We believe this points to the likelihood that the fuel spill incident on ██████ was facilitated either because of habit or lack of discipline that again resulted in the engineering crew of the ██████ leaving the greywater valve in the overboard position rather than a fault in the valve itself.

Notably, leaving the greywater port open would have been contrary to USCG requirements which mandated that the greywater valves should be in a closed or inboard/onboard position while in port.<sup>143</sup>

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<sup>139</sup> Case Serials 53, 60, 61.

<sup>140</sup> Case Serial 80.

<sup>141</sup> Case Serials 95, 96, 100.

<sup>142</sup> Case Serial 97.

<sup>143</sup> Case Serial 84.

**G. [REDACTED] Crewmembers and Supervisors Knew Little About their Environmental Responsibilities and Expressed Little Motivation in Gaining such Knowledge**

In 1972, the CWA amended the requirements relating to the regulation of bilgewater. Regulations concerning the ORB have existed since at least 1983, with amendments occurring in 1990, 2001, 2006, and 2007. The Oil Pollution Act of 1990 was another major piece of legislation impacting environmental stewardship responsibilities. NOAA promulgated various policies in 2001 and 2002 related to environmental compliance.<sup>144</sup> Despite a very active legislative and regulatory period spanning over 40 years, none of the [REDACTED] crew recognized that the aft steering space bilgewater process of the [REDACTED] was a problem. Typically NOAA ship Commanding Officers rotate every few years; there have been dozens of ECOs, NOAA Commissioned Corps officers, and crewmembers who had an opportunity to discover this problem – all failed to do so. For the last several years, NOAA ships, including the [REDACTED], have undergone annual inspections, which include NPDES requirements. The Fleet [REDACTED] has been involved in ongoing training efforts that include environmental stewardship responsibilities for at least the previous three years. Despite these opportunities, it took an [REDACTED] [REDACTED] to identify these discharges as an environmental compliance issue.

For most of the [REDACTED] crew, a careless attitude prevailed. Many of them did exactly what they were told without asking questions. For some it was because they wanted to avoid conflict, while others apparently did not have enough curiosity to understand why they performed certain tasks. In one case, a crewmember learned there might be a problem related to discharging the aft steering space, so [REDACTED] simply “failed” to perform that task,<sup>145</sup> while in another case, a crewmember consistently relied on the “I just do what I’m told” excuse.<sup>146</sup> The crewmembers who failed to act either intentionally or unintentionally left the tasks to the person who just did what he or she was told.

Despite what appeared to be a genuine effort on the part of the [REDACTED] to use environmentally-friendly hydraulic fluid, [REDACTED] assumptions about the use of Clarity were erroneous; causing it to be exacerbated by the claim that an official from Fleet Inspections approved of the use of Clarity, a declaration that proved to be false. During interviews, it became clear that members of the [REDACTED] crew had little interest in environmental compliance issues, and if they did, management of the [REDACTED] division discouraged such issues being raised. Even the [REDACTED] who eventually raised the issue said [REDACTED] only did so after weighing the consequences to [REDACTED] career.<sup>147</sup>

**H. NOAA Should Re-Evaluate the [REDACTED] Organizational Structure**

Beyond the findings presented above, the OIG reached broader conclusions regarding the organizational structure of the [REDACTED]. We noted a general lack of oversight by commissioned NOAA Corps officers over engineering operations of the [REDACTED], and a culture that discouraged environmental compliance efforts. It appears that NOAA officers, including the ship’s

<sup>144</sup> Case Serial 111.

<sup>145</sup> Case Serial 53.

<sup>146</sup> Case Serial 59.

<sup>147</sup> Case Serial 69.

██████████ were unaware of ██████████ crew practices, and even after complaints started to emerge were provided with false information. For instance, the ship's ██████████ and Fleet ██████████ were convinced the discharges in question all happened beyond the three nautical mile zone when that wasn't true. We believe contributing factors to the incidents reported here are a result of stagnation and lack of rotation within the engineering staff. The ██████████ has been on the ship for approximately ██████████ years, and the ██████████ has been on the ship for nearly ██████████ years. Many witnesses reported an atmosphere that was not safe to express concerns or questions about engineering practices, so leaders and their methods were not subjected to scrutiny. This condition often leads to mistakes becoming standard practice. It is deeply disturbing that such animosity exists between civilian members of the ██████████ crew and NOAA Corps officers assigned to the ship. It created a circumstance in which the ██████████ crewmembers felt they had to keep their concerns "in house," left employees scared to ask questions, and prevented young ██████████ assigned to ██████████ duties from feeling like they could exercise authority in this area.

In short, this fractured command structure on the high seas, especially in the often ██████████ waters of ██████████, is unacceptable and leaves OMAO management ill-equipped to identify and resolve problems. In this case, it led to decades of polluting ██████████ waterways.

#### ***I. OMAO's Public Exception Claim is Spurious***

Additionally, OMAO officials should clearly communicate to its employees that any remaining vestiges of the public vessel exception for OMAO vessels should be abandoned. As outlined in this report, not even the U.S. Armed Forces rely on such an exception, and the law clearly expects federal government agencies to be every bit as stringent through policy enactment as the Clean Water Act (and its companion legislation) is on commercial interests.

#### ***J. The Complainant's Claim of Whistleblower Reprisal is Without Merit***

Though the complainant's employment was terminated within a few months of starting work at NOAA, there is clear and convincing evidence that the termination was not related to any complaint concerning the discharge of the aft steering bilge pockets. There is no evidence that the issue was ever raised to anyone in a leadership position aboard the ██████████ until after the complainant was terminated. The one document noting a May ██████████, 2013 incident, during which complainant secured a firemain while the aft steering bilge was being pumped, is the only possible indication ██████████ objected to the practice.<sup>148</sup> However, the potential damage to the pump and the created "water hammer" seems to be the focus of this documentation, not that the complainant voiced concern about the discharges. The complainant did not raise any concerns regarding the improper discharges to anyone in authority until ██████████ contacted the USCG in October 2013, about ██████████ months after ██████████ employment with NOAA was terminated.<sup>149</sup>

Documentation of complainant's ██████████ and ██████████ overwhelmingly indicate there was just cause to terminate employment. Reprisal for whistleblowing was not a factor in

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<sup>148</sup> Case Serials 29, 41.

<sup>149</sup> Case Serial 37.

the decision.<sup>150</sup> The OIG has confirmed with the OCR that our findings are consistent with their investigative findings in areas of overlap.<sup>151</sup>

During the OIG investigation we observed the complainant pursue a retaliatory e-mail campaign consisting of e-mails being sent to dozens of government officials, media outlets, and witnesses; these actions jeopardized the investigation. Complainant refused to limit caustic and inflammatory e-mails, and has generally demonstrated a [REDACTED] that was partially the basis for [REDACTED] termination. [REDACTED] has told the OCR that [REDACTED] plans to apply for every oiler job [REDACTED] sees and file complaints when [REDACTED] is not hired. We find no evidence of whistleblower reprisal.

<sup>150</sup> Case Serial 41.

<sup>151</sup> Case Serial 98.

# Recommendations

The OIG makes the following recommendations to NOAA, which do not necessarily build on one another. Some of the recommendations, if implemented, may result in other recommendations becoming moot; some may work in concert with others.

## **A. Recommendation 1**

The average age of the NOAA fleet is 24 years old with some vessels, including the [REDACTED], in excess of [REDACTED] years. Operating vessels of this age requires costly maintenance, repair, and modifications to maintain compliance with environmental regulations. Given the age of the ship and the costs associated with ABS classing, NOAA should take steps to replace aging vessels with more modern vessels designed to comply with current regulatory requirements when funding is available.

## **B. Recommendation 2**

For all ships in the NOAA Research Fleet, configuration changes should be tracked from inspection to inspection and among the different classes of ship to insure NOAA Fleet Inspections personnel understand what changes have been made aboard each ship, aboard ships of the same class, and between each inspection, so that they can thus inspect those changes to insure that improper, unsafe, or poor quality changes are not overlooked; and that configuration changes produce environmentally sound results. Had this been in place when the Wilden pump was installed, Fleet Inspections likely would have discovered many of the problems identified in this report.

## **C. Recommendation 3**

Shipboard ECOs should be authorized to thoroughly and rigorously inspect engineering operations that may have an impact on environmental compliance. NOAA Policy should strongly emphasize that commissioned NOAA Corps officers have priority rank over any civilian position, particularly in areas that involve safety and environmental compliance, especially over the engineering department. The OIG recommends NOAA consider transferring the ECO duties to a more senior and seasoned NOAA Corps officer of the ship. Furthermore, ECOs should receive adequate training prior to assuming the role.

## **D. Recommendation 4**

NOAA should consider making the CME position a NOAA Commissioned Corps officer, and establish a career track that extends to the Marine Engineering career field. This would improve command authority through the military standards and protocol employed by NOAA Corps.

## **E. Recommendation 5**

NOAA should rotate the shipboard engineering crew at least once every five years to avoid stagnation and encourage re-evaluation of procedures on an ongoing basis.



**F. Recommendation 6**

NOAA should insure no nepotism exists among ship crews, either real or perceived, and take steps to rotate staff to address these potential issues. This should include any family relatives being in the chain of command.

**G. Recommendation 7**

NOAA should provide additional training to its entire staff, including management and Commissioned Corps officers, on the importance of disclosing violations of law, policy and/or mismanagement to the OIG, consistent with DAO 207-10. In doing so, NOAA should notify employees that federal law imposes a duty on employees to disclose fraud, waste, abuse or mismanagement and inform them of whistleblower protections for such disclosures.

**H. Recommendation 8**

NOAA should implement a compliance program whereby they provide additional environmental compliance training to all OMAO employees. NOAA should emphasize the importance of cooperating with both fleet and ship ECOs, and include clear instruction that the obstruction or withholding of information from ECOs could result in disciplinary action. NOAA should add this violation to their penalty table with appropriate disciplinary measures identified and communicated to staff. Such training should include details about NOAA's VGP and the compliance provisions of the VGP. Training should also include renewed instruction on the proper completion of the ORB and other environmental compliance documentation, including but not limited to, the notating of how close to shore discharges occur. NOAA should also explicitly inform all employees that no public vessel exception exists as part of their compliance program. As part of the compliance plan, NOAA's annual Fleet Inspections should include protocols to identify any deficiencies noted in this report.

**I. Recommendation 9**

A separate referral has been made to the USCG for consideration of licensing action since several employees involved in these incidents have USCG mariner licenses, including the [REDACTED] the [REDACTED] and the [REDACTED].<sup>152</sup> NOAA should consider discipline for any employees involved in submitting false statements to the EPA, or for falsifying Engineering Logs or ORBs. NOAA should consider discipline for employees and NOAA Corps officers involved in the improper discharge of bilgewater from the [REDACTED] in violation of VGP requirements. This may include discharges of both treated and untreated bilgewater.

**J. Recommendation 10**

NOAA should consider taking corrective action with employees and NOAA Corps officers involved in activities resulting in the fuel spill in [REDACTED].

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<sup>152</sup> Case Serials 35, 82.

## Appendix I – Discharge Details

The following summarizes the discharges of untreated bilgewater by the [REDACTED] which were charted on nautical maps for precise locations:

### Steering Space Bilge Discharges Recorded in Engineering Log

Date	Location per Engineering Log	Time	Comparison to Other Records/Comments	Within 3nm?	Within 1nm?
[REDACTED]/2013	[REDACTED]	0526	[REDACTED]	No	No
[REDACTED]/2013	[REDACTED]	0415	[REDACTED]	Yes	Yes
[REDACTED]/2013	[REDACTED]	1830	[REDACTED]	Yes	Yes
[REDACTED]/2013	[REDACTED]	0725	[REDACTED]	Yes	Yes
[REDACTED]/2013	[REDACTED]	2200	[REDACTED]	Yes	Yes
[REDACTED]/2013	[REDACTED]	0710	[REDACTED]	Yes	Yes

Date	Location per Engineering Log	Time	Comparison to Other Records/Comments	Within 3nm?	Within 1nm?
█/2013		1950		No	No
█/2013		0310		No	No
█/2013		1740		Yes	Yes
█/2013		2300		Yes	Yes
█/2013		0755		Yes	No
█/2013		0715		Yes	No
█/2013		2220		No	No
█/2013		0650		N/A	N/A
				69%	54%

## Appendix II - NOAA Comments

A draft copy of this report was provided to NOAA to insure accuracy and to allow the opportunity for a dialogue about areas of disagreement. In large part, NOAA agreed with the report, but did make the following comments:

- NOAA suggested some technical nomenclature adjustments, such as calling the ship's [REDACTED] (our words) instead by the term [REDACTED]. They also recommended in several areas a more precise attribution to OMAO instead of NOAA. We adopted those minor changes in the final report. Minor clarifying clauses were also adopted where no change resulted to the investigative findings.
- NOAA informed us that though the [REDACTED] was placed in service in [REDACTED], that they consider the commissioned date as the date the ship was placed in service, which was [REDACTED]. The ship also was not delivered to NOAA until [REDACTED].
- NOAA preferred that we change terminology related to the public vessel exception claim to “individuals within OMAO” as opposed to attribution to OMAO on an organizational level. We considered and discussed this request, but opted to maintain that though numerous wage mariners and NOAA Corps Officers spoke about the exception, the primary proponent of that idea was the [REDACTED]'s [REDACTED] at the time we first contacted the ship, and that idea was supported, at least in part, by OMAO's [REDACTED]. Since those individuals are very senior officials, we deemed that they acted on behalf and as agents for OMAO.
- NOAA provided evidence that tank storage on both the [REDACTED] and [REDACTED] had no significant differences<sup>153</sup>, and thus disputed a sentence (see footnotes 3-5) that originally quoted the BMP for the [REDACTED] a being able to hold bilgewater for 30 days. However, the fact that both ships had nearly identical configurations with respect to holding tanks was precisely the point we wished to highlight – that if the [REDACTED] could comply with environmental regulations related to discharge of treated bilgewater within 1 nm of shore, that the [REDACTED] could do so as well, but did not. Thus NOAA's suggestion was not adopted in the final report. See also the same issue in Chapter 5, the Conclusions and Recommendations Section, where NOAA objected to a statement that staff from the [REDACTED] could have consulted with the [REDACTED] related to holding tank issues. We added some clarifying remarks, but left the original ideas under Conclusion A.
- The OIG original report pointed out that when a corroded pipe that contributed to the fuel spill was repaired, it was done so with a quality of steel that one witness suggested was substandard. NOAA provided adequate evidence to show why this situation existed, that it was a temporary fix, and that more substantial repairs are scheduled

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<sup>153</sup> Case Serial I 12, Exhibit A

during ██████'s off-season to address this issue. We thus removed that observation from our report.<sup>154</sup>

- NOAA suggested, and the OIG agreed, to alter original language related to the ██████'s responsibility related to inspection of discharge streams to make it more accurate.<sup>155</sup>
- The OIG report contained a statement that “All crewmembers acknowledged that they knew discharging bilgewater overboard was illegal.” The question, and subsequent answer, was intended to establish a baseline of knowledge of what was the appropriate practice as contrasted to what the evidence showed was actually occurring. NOAA commented, “This finding affirms that it is widely known across OMAO that this practice is against regulation and OMAO policy – thus the assertion that OMAO uses status as a public vessel to be exempt from this law does not appear to be supported by the investigation. Clearly some individuals were erroneously claiming this but not the organization as a matter of policy.” NOAA did not suggest changes, only made this comment; we made no changes as a result. We note that in this investigation, knowledge of the rule, failure to abide by the rule, and an invocation of the public vessel exception by some, but not all, parties are co-existing facts.
- NOAA provided information that they believe demonstrated a different timeline for when the Wilden pump was purchased and installed.<sup>156</sup> We agree on when it was purchased; our investigation, which was based primarily on an entry from the Engineering Log, showed the pump was installed on September ██████, 2013. NOAA provided timesheets in which it appears the ██████ conducted some unspecified work in mid-August. We added relevant dates and clarifying language to include all relevant dates.
- Under Paragraph III in Chapter 3, the OIG initially questioned whether NOAA implemented 33 USC § 1902(h). NOAA provided clarification that by implementing 46 CFR Subchapter “U”, they also implemented 33 USC § 1902(h).<sup>157</sup> We accepted that and removed this observation.
- Under Paragraph IV in Chapter 3, NOAA questioned a date when an inspector for OMAO Fleet Inspections became a NOAA employee. We clarified in a footnote that the disunity comes in that we reported what a witness told us, which was relevant in context to that witness’ statement.
- In Chapter 4, the OIG agreed to remove a sentence concerning NOAA not reporting the fuel spill to the OIG. NOAA does not believe they had an affirmative obligation to make such a report. We also corrected the exact fuel spillage from ██████ gallons to ██████ gallons.<sup>158</sup>

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<sup>154</sup> Case Serial I 12, Exhibit F

<sup>155</sup> Case Serial I 12, Exhibit B

<sup>156</sup> Case Serial I 12, Exhibit C

<sup>157</sup> Case Serial I 12, Exhibit D

<sup>158</sup> Case Serial I 12, Exhibit E

- In Chapter 5, the Conclusions and Recommendations Section, Conclusion I, “OMAO’s Public Exception Claim is Spurious”, NOAA objected to a sentence that upon further review, the OIG decided was too conclusory in nature and agreed to remove.
- In Chapter 5, the Conclusions and Recommendations Section, NOAA had the following unofficial comments to the recommendations:
  - Recommendation 1 – NOAA informed us of the cost related to ABS classing of the [REDACTED] and this resulted in us changing this recommendation to be more general with respect to the future of the [REDACTED].
  - Recommendation 2 – “NOAA’s concurs with the recommendation. OMAO has implemented a configuration control policy in November 2014 and they are currently developing the configuration control procedure which will aid in ensuring improper, unsafe, or poor quality changes are not overlooked.”
  - Recommendation 3 – “NOAA concurs in part with this recommendation. ECOs are already authorized to thoroughly and rigorously inspect engineering operations that may have an impact on environmental compliance. The violations discovered during this investigation are limited to one ship and are not occurring fleet wide. However, due to the importance of this issue, OMAO will conduct additional mandatory fleet wide training on Environmental Compliance. Additionally, ECO duties will be elevated and report directly to the ship’s Commanding Officers.”
  - Recommendation 4 – “NOAA will take this recommendation under advisement. For NOAA to implement such a change it would require a legislative change to increase the authorized end strength of the NOAA Corps and allow for direct commissioning into the NOAA Corps from Maritime Academies.”
  - Recommendation 5 – “NOAA concurs in part with this recommendation and is currently evaluating several personnel staffing models that would ensure that engineer crews rotate at least once every five years. However, in situations in where we cannot rotate the crew the internal controls that will be put in place as a result of this investigation will allow for the engineering crew to stay onboard a ship without stagnation.”
  - Recommendation 6 – “NOAA concurs with the recommendation and will review OMAO staffing and eliminate any nepotism. NOAA will direct OMAO to implement policy restricting the assignment of family members on the same vessel, where such policies would be consistent with applicable law, rule and regulation and OMAO’s collective bargaining obligations.”
  - Recommendation 7 – “NOAA concurs with the recommendation and has asked the Office of General Counsel Employment and Labor Law Division to include these topics into the suite of training already being provided to OMAO annually OGC has agreed and the topics will be added to the curriculum.”

- Recommendation 8 – “NOAA concurs with this recommendation and we address actions to be taken in several of the other answers to other recommendations. Additionally, NOAA will reiterate to all of OMAO that no public vessel exception exists during a Marine Operations All Hands/Safety Stand-down and we will reinforce this by asking the OIG to attend the XO and CO/CME seminars this winter and present on their findings. We note for the record that established OMAO policies and procedures do not invoke public vessel exemptions from the CWA or other environmental compliance regulations.”
- Recommendation 9 – “NOAA concurs with this recommendation and has directed OMAO to take appropriate, swift, and thorough personnel action to ensure environmental compliance.”
- Recommendation 10 – “NOAA concurs with this recommendation and has directed OMAO to take appropriate, swift, and thorough personnel action to ensure environmental compliance.”