CRUISE SHIP PROGRAM
OCEAN RANGER ASSESSMENT REPORT

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ACRONYMS AND ABBREVIATIONS

A.S. ..... Alaska Statute
AAC ..... Alaska Administrative Code
CDC ..... United States Centers for Disease Control and Prevention
CFR……..Code of Federal Regulations
CPVEC..... Commercial Passenger Vessel Environmental Compliance
Crowley ..... Crowley Maritime Corporation
DEC ..... Alaska Department of Environmental Conservation
DNV ..... Det Norske Veritas (Classification Society)
EMS ..... Environmental Management System
EPA ..... United States Environmental Protection Agency
IMO ..... International Maritime Organization
ISM ..... International Safety Management
ISO..... International Organization for Standardization
MARPOL..... (Maritime Pollution) International Convention for the Prevention of Pollution from Ships
MSD ..... Marine Sanitation Device
NOV ..... Notice of Violation
OASIS ..... OASIS Environmental, Inc.
OWS ..... Oily Water Separator
QA/QC ..... Quality Assurance/Quality Control
SCAT ..... Systematic Cause Analysis Technique
SMS ..... Safety Management System
SOLAS ..... Safety of Life at Sea
SPAR ..... ADEC Spill Prevention and Response
USCG ..... United States Coast Guard
VSSP ..... Vessel Specific Sampling Plan

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EXECUTIVE SUMMARY

Ballot Measure 2, passed in 2006, created the Ocean Ranger Program within the Alaska Department of Environmental Conservation (DEC). The new law required Ocean Rangers be placed on board large cruise ships[1] to act as independent observers for the purpose of monitoring state and federal requirements pertaining to marine discharge and pollution requirements and to ensure that passengers, crew, and residents at ports are protected from improper sanitation, health, and safety practices.

The Ocean Ranger Program was first implemented as a pilot program in 2007 and fully implemented in 2008. In 2008, Ocean Rangers were on 456 full voyages of 516 large cruise ship voyages (88% of all large cruise ship voyages) with the other voyages covered by in-port inspections. In 2009, Ocean Rangers were on board 467 out of 514 large cruise ship voyages (91%). The remaining 47 voyages (9%) were scheduled for in-port inspections. In 2010, Ocean Rangers were on board 403 out of 449 large cruise ship voyages (90%). The remaining 46 voyages (10%) were covered by in-port inspections.

The DEC Cruise Ship Program requested that OASIS Environmental, Inc. (OASIS) provide an independent, objective evaluation of the efficacy of the Ocean Ranger Program in meeting the statutory mandates for the program. OASIS reviewed the 2008 through 2010 Ocean Ranger Daily Reports with a focus on:

1) whether identified items were violations of state or federal requirements;
2) whether there was a release or impact to the environment or human health and safety;
3) establishing a framework that DEC could use in the future to track not only the type of issues reported but also to categorize the severity and duration of the item; and
4) how future reports could be designed to better distinguish if possible, issues identified by Ocean Rangers that would not have likely been discovered without Ocean Ranger presence.

Daily Reports contain one of several checklists that cover categories such as wastewater, oil handling, safety, and health/sanitation. Each category is primarily regulated by separate authorities. Wastewater issues are regulated by the DEC Cruise Ship Program. Oil handling is regulated by the U.S. Coast Guard (USCG) and releases are regulated by both the USCG and DEC Spill Prevention and Response (SPAR). Health and sanitation issues are regulated by the U. S. Centers for Disease Control and Prevention (CDC). Safety issues are regulated by the USCG. Each regulatory authority has different reporting requirements, inspection procedures, and compliance policies for self-reporting violations.

The Ocean Ranger Program has provided independent data indicating that the cruise ship industry has a high degree of compliance with respect to items observed by Ocean Rangers while in Alaskan waters. The Ocean Ranger Program has also been successful in providing high quality data identifying environmental compliance/pollution prevention and health and safety related items that could be targeted for improvement. Oil, health,

[1]All large cruise ships that have berths for over 250 passengers.

and safety-related items are reported to the Cruise Ship Program solely through the Ocean Rangers.

Ocean Rangers have provided information on compliance items that would not have otherwise been reported. For example, the occurrences of inaccurate Vessel Specific Sampling Plans (VSSPs) and errors in wastewater discharge logs were reported through the Ocean Rangers only. The most numerous incidents reported by Ocean Rangers had to do with oil. DEC SPAR issued two Notices of Violation (enforcement action) based on oil items initially reported by an Ocean Ranger.

This evaluation determined the Ocean Ranger Program meets the intent of the statute to monitor [compliance with] state and federal requirements pertaining to marine discharge and pollution requirements very well. The Ocean Ranger Program identifies and documents incidences of potential non-compliance that may not be required to be reported to a respective regulatory agency; however, this identification, documentation, and reporting helps protect people (crew, passengers, and port residents) from improper sanitation, health, and safety practices.

DEC Addendum to the Executive Summary: As noted in the "Executive Summary" above, OASIS reviewed Ocean Ranger data from the 2008, 2009, and 2010 seasons; and provided comments, an overview of the Ocean Ranger Program, and recommendations about the DEC Ocean Ranger Program to DEC Cruise Ship Program staff. The draft "Cruise Ship Program Ocean Ranger Assessment Report" prepared by OASIS dated April 6, 2011, was updated to include Ocean Ranger data from 2014, and was finalized in March 2015. Effective October 2011, OASIS became part of the Environmental Resources Management (ERM) group and the initial OASIS staff who prepared the draft report, did not finalize the report. This report, including all the Figures, Tables, and Appendices, was reviewed, edited where necessary, and finalized by James Weise, an independent third party outside of the DEC Division of Water, Cruise Ship Program. James Weise, is an Environmental Program Manager within the DEC Division of Environmental Health and has 21+ years of experience in environmental and public health program management including solid waste, air quality, and drinking water. This reviewer recommends the DEC Cruise Ship Program continue to enhance the training and guidance provided to Ocean Rangers about Best Available Technologies not only for treatment objectives for water quality (wastewater and potable water) but also for real time electronic monitoring (collection of data) and reporting of cruise ship activities while operating in Alaska waters. The Ocean Rangers are an effective tool in the "tool box" to better assure cruise ship compliance as the DEC Cruise Ship Program staff work towards 24/7 electronic monitoring, tracking, and reporting of cruise ship activities.

1. BACKGROUND

1.1. Legal Framework for Ocean Ranger Program

In 2006, Alaska voters passed Ballot Measure 2 creating an Ocean Ranger Program in the Alaska Department of Environmental Conservation (DEC). The text of this ballot measure, which became law, is available on the DEC website at http://www.dec.state.ak.us/water/cruise_ships/Law_and_Regs/Ballot%20Measure%202%20Cruise%20Ship%20Initiative.pdf.

In addition to creating the Ocean Ranger Program, the resulting statutes required that owners/operators of large cruise ships obtain a wastewater discharge permit (DEC 2010a) from DEC in order to discharge any treated sewage, graywater, or other wastewater into the marine waters of the state. The law required that vessels meet Alaska Water Quality Standards for their wastewater effluent at the point of discharge.

The DEC Commercial Passenger Vessel Environmental Compliance Program (CPVEC, or "Cruise Ship Program") was created in 2001 to monitor cruise ships in Alaska waters. As a result of these statutes, the DEC was directed to:

- Issue permits to large cruise ships that choose to discharge wastewater in Alaska (A.S. 46.03.462);
- Require cruise ships to collect hourly vessel positional tracking data and monthly discharge logs (A.S. 46.03.465); and
- Place Ocean Rangers onboard large cruise ships[2] to act as independent observers for the purpose of monitoring state and federal requirements pertaining to marine discharge and pollution requirements and to ensure that passengers, crew, and residents at ports are protected from improper sanitation, health, and safety practices. (A.S. 46.03.476).

The Cruise Ship Program is responsible for implementing the environmental changes required by the law.

1.2. Ocean Ranger Program Details

Alaska is the first and only state to require Ocean Rangers on board vessels to act as independent observers monitoring state and federal environmental and marine discharge requirements. Ocean Rangers also check that passengers and crew are protected from improper sanitation, health, and safety practices.

Ocean Rangers are USCG-licensed marine engineers or a person holding a degree in marine safety and environmental protection from an accredited maritime educational institution.[3] Ocean Rangers use a daily report form as an inspection checklist to monitor

[2] All large cruise ships have berths for over 250 passengers.

[3] Ballot Measure 2 established that Ocean Rangers be USCG licensed marine engineers. In 2009, the state legislature passed SB 183, which broadened the Ocean Ranger minimum requirements to include "a person who holds a degree in marine safety and environmental

compliance with state and federal requirements pertaining to marine discharge and pollution. As observers, Ocean Rangers monitor items that are included on the daily report and include any other pertinent observations about items that could be a compliance issue. Ocean Rangers do not have enforcement authority. DEC reviews the Ocean Ranger daily reports and has the authority to take enforcement action, as necessary, such as issuing a warning letter or Notice of Violation (NOV) based in part or in whole on the Ocean Ranger's findings. In areas that are beyond DEC jurisdiction (e.g. potential infractions of USCG requirements or United States Environmental Protection Agency (EPA) Vessel General Permit items), the DEC Cruise Ship Program provides the appropriate agency with a copy of the daily report.

In 2007, DEC Cruise Ship Program hired OASIS Environmental, Inc. (OASIS) to help implement a pilot Ocean Ranger Observer Program. This pilot program was a precursor to the fully implemented Ocean Ranger Program. The Cruise Ship Program placed eight Observers (environmental professionals) and three Ocean Rangers (USCG-licensed marine engineers) on board cruise ships that season. The Observers and Ocean Rangers were rotated among large cruise ships. The goals were to begin observations on the vessels while simultaneously evaluating the nature of the vessels; the Ocean Ranger training needs; Ocean Ranger deployment options; and to develop a prototype for the inspection checklist or daily report in order to fully implement the new law in the following seasons.

The Cruise Ship Program selected Crowley Maritime Corporation (Crowley) as the contractor to help implement the full Ocean Ranger Program during the 2008 through 2010 Alaska cruise ship seasons. In 2008, 32 Ocean Rangers were hired and produced 2,180 Daily Reports (inspections). Ocean Rangers were on 467 full voyages (88% of all large cruise ship voyages) with the other voyages covered by in-port inspections. A full report of the 2008 season can be found at:
http://www.dec.state.ak.us/water/cruise_ships/pdfs/2008_Ocean%20Ranger_Report.pdf.

In 2009, Ocean Rangers were on board 467 out of 515 large cruise ship voyages (91%). The remaining 47 voyages (9%) were scheduled for in-port inspections. Ocean Rangers submitted a total of 2,272 Daily Reports. A full report of the 2009 season can be found at: http://www.dec.state.ak.us/water/cruise_ships/pdfs/2009_OR_Report.pdf.

In 2010, Ocean Rangers were on board 403 out of 449 large cruise ship voyages (90%). The remaining 46 voyages (10%) were covered by in-port inspections. For each day that a large cruise ship was in Alaskan waters, Ocean Rangers were onboard 93% of the time. Ocean Rangers submitted a total of 1,884 Daily Reports. A full report for the 2010 season can be found at:

http://dec.alaska.gov/water/cruise_ships/pdfs/OR/2010_Ocean_Ranger_Report.pdf

protection, or an equivalent course of study approved by the department, from an accredited maritime educational institution."

In 2014, Ocean Rangers were on board 280 out of 482 large cruise ship voyages (58%). The remaining 202 voyages (42%) were covered by in-port inspections when an Ocean Ranger was available. For each day that a large cruise ship was in Alaskan waters, Ocean Rangers were onboard 70% of the time. Ocean Rangers submitted a total of 1,514 Daily Reports. A full report for the 2014 season is not completed yet for review.

1.3. Development and Evolution of the Ocean Ranger Daily Report

1.3.1. Identification of Elements to be included in the Ocean Ranger Checklist – Pre 2007 Season

Cape International, Inc. was awarded a contract December 22, 2006, to develop and analyze options for implementing the Ocean Ranger Program aboard cruise ships in Alaska. This report, *Commercial Passenger Vessel Environmental Compliance Program Technical Assistance: Ocean Ranger Program Cruise Ship Ballot Measure Implementation*, was completed and submitted to DEC in March 2007. The report set forth the basic components of program administration including Ocean Ranger checklists. It concluded:

> *"An Ocean Ranger's Inspection and Verification Guide and Checklist, a handbook similar to US Coast Guard vessel exam books, will be the backbone of program, promoting consistency from Ocean Ranger to Ocean Ranger and thoroughness on the part of individual Ocean Rangers".*[4]

Ships are complex. Comprehensive checklists have always been essential to any inspection, audit or compliance verification program. Cape International envisioned the checklist as a job aid that would not only provide essential inspection guidance but also serve as the focal point for training Ocean Rangers. The consultants believed that if prospective Ocean Rangers could master use of this document they would be successful in the technical and administrative aspects of the assignment.

The initial inspection checklist was developed using the following rationale and guidelines:

- Checklist items should cover environmental regulations as required by state or federal regulation, or international code.
- Checklists items should be written in a manner that a cruise ship could be verified as compliant or not. In other words, the Ocean Ranger would not be expected to conduct an open-ended evaluation of a shipboard program but instead determine whether benchmarks were met for that program (e.g. the quality of wastewater discharged was within compliance criteria, proper log entries were made, the oily water separator (OWS) was operating within its performance standards that matched the federal and state requirements to prevent oil pollution (33 CFR 155.380, A.S. 46.03.740, 18 AAC 70.020(b)(17)).

[4] See page 5, 'Overview' of *Commercial Passenger Vessel Environmental Compliance Program Technical Assistance Ocean Ranger Program Implementation*. DEC Contract No. 18 - 2017 -07.

- The focus would be on compliance issues that could easily be verified and directly address the concerns of the Cruise Ship Program (e.g. potential for an unauthorized discharge in Alaska waters).
- The checklist should identify specific cruise ship practices that were innovative or commendatory and which, if shared, could improve programs throughout the maritime industry.

The report recommended that the inspection and verification guide and checklists should include, at a minimum, relevant components of:

- *USCG Foreign Passenger Vessel Pollution Survey Exam Book*[5] which by design incorporates federal passenger vessel regulations for waste stream management including wastewater, oil, garbage and hazardous waste.
- International codes regulating ship operations for Safety of Life at Sea (SOLAS)[6], and marine pollution (International Convention for the Prevention of Pollution from Ships known as MARPOL).[7]
- Owner/operator safety and environmental management system (SMS/ISM) auditor's checklists.[8]
- United States Centers for Disease Control and Prevention (CDC) Vessel Sanitation Program inspection guidelines.[9]

The *Commercial Passenger Vessel Environmental Compliance Program Technical Assistance: Ocean Ranger Program Cruise Ship Ballot Measure Implementation* report

[5] USCG Navigation Vessel Inspection Circular (NVIC) 04-04, ENVIRONMENTAL INSPECTION CHECKLIST; ADDENDUM TO FOREIGN PASSENGER VESSEL EXAMINATION BOOK, CG-840. (See http://www.uscg.mil/hq/g-m/nvic/index00.htm) This 14-page checklist focuses on certificates of compliance issued by government regulatory agencies, equipment data/records information, company Safety Management System (SMS), environmental procedures, marine sanitation devices (MSD), oily-water separators (OWS), garbage logs, oil record books, and waste stream management (graywater, blackwater, oil, hazardous and non-hazardous material).

[6] Safety of Life at Sea (SOLAS) is an international code developed by the United Nations International Maritime Organization (IMO) and incorporated by reference into U.S. law and regulation.

[7] MARPOL is a comprehensive set of international codes addressing marine pollution from ships developed by the United Nations International Maritime Organization (IMO). Most, but not all, of the MARPOL annexes have been incorporated by reference into U.S. law and regulation.

[8] A vessel operating internationally under the flag of a country that is a party to Safety of Life at Sea (SOLAS) must develop and maintain onboard a safety management system (SMS). SMS documents are developed consistent with the International Management Code for the Safe Operation of Ships and for Pollution Prevention or International Safety Management (ISM) Code for short. The functional requirements of the SMS include, among other things, procedures for internal and external audits on the operation of the SMS. Internal audit checklists, while they vary from company to company, have common components.

[9] http://www.cdc.gov/nceh/vsp/desc/about_inspections.htm

also made several recommendations for Ocean Ranger training and orientation. These were incorporated into the checklists as appropriate and included:

- Daily report formats.
- Correct wastewater sampling technique including proper handling and chain of custody procedures in accordance with the approved Quality Assurance/Quality Control (QA/QC) and Vessel Specific Sampling Plan (VSSP) that are DEC requirements.[10]
- Occupational safety and health issues.
- Vessel security.[11]

1.3.2. Checklist Template - 2007 Pilot Observer Program

In April 2007, the Cruise Ship Program awarded a contract to OASIS implement a pilot Environmental Observer and Ocean Ranger ship ride program for the 2007 Alaska cruise ship season.[12]

Among other items, OASIS was tasked with preparing an Ocean Ranger handbook including the ship ride checklists recommended by Cape International, Inc. Between May 9 and June 17, 2007, eight environmental observers and three Ocean Rangers rode all of the 27 cruise ships that were operating in Alaska, spending, on average, 17 hours on each vessel. For these deployments, they used the Cape International, Inc. draft checklists. Lessons learned and recommendations from the observers were used to further refine the Ocean Ranger handbook. Members of the cruise ship industry had the opportunity to review and comment, but not approve this document. The cruise industry's comments and recommendations mainly addressed correct shipboard nomenclature and personnel titles, interaction with crew and passengers, and checklist items or document requests that might reveal proprietary information. The final checklist revision was presented to the Cruise Ship Program at the conclusion of the 2007 cruise ship season. An abbreviated checklist is found in the *Final Report: Observer Monitoring for the Development of the Ocean Ranger Program*.

The checklist was designed to cover:

- Wastewater Treatment
- Bunkering and Waste Oil Management
- Potable Water
- Ballast Water Management
- Solid Waste Management
- Public Health, Sanitation and Food Safety

[10] Both the QA/QCP and VSSP are required by 18 AAC 69.

[11] As required of the Ocean Ranger by 33 CFR 104.225 and SOLAS Chapter XI-2, Part B, paragraph 13.4.

[12] DEC Purchase order (2007 – 699, 17 April 2007)

The full version of the 2007 Ocean Ranger checklist is found in the DEC *Ocean Ranger Program Handbook (draft): Ship Ride Checklists and Procedures* and is provided in Appendix A of this report.

1.3.3. Original Daily Report - 2008 Ocean Ranger Program

The most important consideration for the daily report is that it is a tool to help the Ocean Ranger Program fulfill the requirements of the broad law (A.S. 46.03.476).

The Cruise Ship Program contracted with Crowley to implement the full Ocean Ranger program during the years 2008 through 2010. As one of many contract tasks, Crowley assisted DEC with the further development of the checklist. The Cruise Ship Program and Crowley used data and experience gained during the 2007 pilot program to develop the 2008 checklist. In 2007, the 11 Observers and Ocean Rangers made a total of 114 overnight ship rides. In 2008, there were 32 Ocean Rangers on board 456 voyages. Ocean Rangers were usually aboard a particular cruise ship for several weeks before being rotated to another cruise ship. The Ocean Ranger checklist was, therefore, reformatted and expanded to facilitate a more in-depth inspection of a subject area while ensuring a level of uniformity among an increased number of Ocean Rangers. The checklist was also formatted to make it suitable for an Ocean Ranger to fill it out using a smart phone.

The checklist was now termed the “daily report.” Important inspection, compliance and access information were placed on the first page. Ocean Rangers identified in the first box whether there were any potentially non-compliant items discussed in the report. This enabled DEC reviewers to prioritize their review of the seasons over 2,000 daily reports.

In the beginning of June 2008, Ocean Rangers reported not having adequate access on some of the cruise ships that they were responsible for monitoring. Ocean Rangers in some cases could not complete their observations and reporting or were denied access to non-passenger areas. The Cruise Ship Program and the cruise lines quickly resolved the issue. However, the Cruise Ship Program added a question about access on the first page of the daily report in order to track access and take appropriate follow up actions as necessary. The question asks: “Did you have sufficient time today - observing in the non-passenger areas - to accurately complete the checklist?” This question about access was retained on the front page of the 2009 and 2010 daily reports.

The 2008 daily report contained an initial “Ship Tour” of the cruise ship’s environmental systems and sanitation that was almost identical to the 2007 checklist’s “Initial Observation and Ship Tour.” However, the Cruise Ship Program replaced the more open ended 2007 format with a standardized “C” for compliant, “O” for open, or “N” for potentially non-compliant next to each of the observed areas.

The “While Underway” section of the 2007 report was renamed the “Daily Checks at Sea.” The 2008 section was expanded by five questions that included questions about any maintenance of wastewater treatment equipment and verification that the ship’s opacity monitoring systems were functioning properly.

The “Daily Checks In Port” section of the report was expanded to include two new questions pertaining to wastewater sampling. A new section was added to help the Cruise

Ship Program determine if the ship was following their state-required Hazardous Waste and Substance Offload Plan (18 AAC 69.040) and their Non-Hazardous Solid Waste Offloading and Disposal Plan (18 AAC 69.035).

Short sections were added for ships that discharged wastewater in Alaska and for ships that did not discharge wastewater in Alaska. These sections required the Ocean Ranger to gather information related to the volume of graywater (e.g. shower and sink water) and blackwater (sewage) that was produced and where it was discharged. At this time, it is important to note that without "master meters" to determine accurate flow rates and volumes of wastewater (gray water and blackwater) treated and discharged that accurate and reliable wastewater quality discharge information and characteristics are not possible.

The daily report was then divided into five sections that represented the following focal areas:

- Section A – Document Review
- Section B – Wastewater Water
- Section C – Oil Handling
- Section D – Waste
- Section E – Sanitation

The "Agency reports and inspection records," "Reports and Logs," and "Plans and permits" sections from the 2007 checklist were merged into the new "Document Review - Section A." Many of the questions were made more specific and uniform. For example, the open-ended "Oil record book" question now included specific items for verification such as whether the book was signed by the master, that the book had been maintained for three years, and that manifests matched oil record book entries.

Sections B through E each contained about two pages of specific questions related to the environmental or sanitation system being inspected that day. The questions were formulated to determine compliance with state and federal requirements. At the end of each section, there was space for Ocean Rangers to include narrative related to their findings. A section for photographs was found at the end of the full report.

The Cruise Ship Program instructed the Ocean Rangers to randomly select a section to complete each day that the ship was in Alaska waters. After a complete voyage, the Ocean Ranger daily reports would cover multiple areas and systems.

In addition to the daily report, there was a separate incident report. Ocean Rangers were instructed to fill out this report whenever a potentially non-compliant item was observed. The incident report was more concise and included a space for photographs. The Cruise Ship Program could then forward the incident report to other agencies as appropriate (e.g., USGC, DEC Spill Prevention and Response, CDC, etc.) thus avoiding transmission of the more lengthy daily report.

Prior to the commencement of the 2008 cruise ship season, DEC provided the cruise ship industry with a copy of the daily report. The Northwest Cruise Ship Association, Holland America, and Princess provided written feedback on the daily report. The Cruise Ship

Program and representatives of the cruise ship industry met to discuss the industry's comments.

The cruise ship industry was concerned about the change in the format of the daily report and the additional sections (Sections B – E). They expressed concern there were redundant questions in the beginning sections (e.g. Ship Tour, Daily Checks at Sea, Daily Checks In Port) and Sections A – E. The industry expressed particular concern that the longer daily report would be a drain on the Environmental Officer and engineering staff's time. However, DEC retained the general structure of the report (a beginning section to be completed daily plus Sections A through E). The Cruise Ship Program concluded that the more in-depth daily report was necessary to meet the statutory obligations of the broad Ocean Ranger law (AS 46.03.476). In addition, the Cruise Ship Program also retained more specific questions associated with the review of environmental and sanitation systems (Sections A – E) to help to ensure that different Ocean Rangers performed their inspections in a more consistent manner.

The cruise ship industry objected to the Ocean Ranger reviewing or auditing the company's SMS[13] procedures manual. As a result of these concerns, questions that required the Ocean Ranger to review the SMS audit results and USCG audit inspection environmental results were removed. This is significant because under the ISM code regulations that require an SMS system, it is a violation if the company does not follow their own standards. Although the Ocean Ranger was not required to review and audit the company's SMS procedures manual, the daily report contained elements that may also be included in the SMS plan.

The cruise ship industry requests for an Ocean Ranger code of conduct, standard procedures for performing inspections, and Ocean Ranger notification to the ship's officers of any potentially non-compliant items were included in the Ocean Ranger Guidebook. Although these items have been present since the beginning of the program, they continued to be discussed during Ocean Ranger training, which industry representatives attended.

Appendix B contains a blank of the final 2008 version of the complete Ocean Ranger daily report. A sample of a completed Ocean Ranger daily report for one day is found in Appendix B1 and a sample (blank) Incident Report is found in Appendix B2.

1.3.4. Daily Report Refinements - 2009 Ocean Ranger Program

The Ocean Ranger daily report continued to evolve in 2009. It was modified to incorporate changes that eased review by Cruise Ship Program staff, replaced less pertinent

[13] A vessel operating internationally under the flag of a country that is a party to Safety of Life at Sea (SOLAS) must be in compliance with the International Management Code for the Safe Operation of Ships and for Pollution Prevention or International Safety Management (ISM) Code for short. In order to comply with the ISM code, a ship must develop and maintain a safety management system (SMS). The functional requirements of the SMS include, among other things, procedures for internal and external audits on the operation of the SMS. Internal audit checklists, while they vary from company to company, have common components.

questions with items that were of greater concern, and added several questions that verified compliance with requirements of the newly effective EPA Vessel General Permit.[14]

Identification information such as the cruise ship name, Ocean Ranger name and report date were added to the first page of the report.

The "Ship Tour" section increased from 19 to 22 questions. Several questions in the 2008 "Ship Tour" section were deleted either because they duplicated questions in other sections (e.g. Ship Tour question 16 about onboard wastewater sampling) or were moved to applicable sections that covered that subject (e.g. "Ship Tour" question 11 about fuel bunkering was moved to Oil Pollution Handling – Section C). These questions were replaced with items of concern from the 2008 season such as whether the ship had suspected cases of swine flu, questions to understand the ships practices for discharging boiler wash and blowdown (DEC had concerns about the potentially high concentration of metals, alkalinity and temperature of the discharge), and a new question about biofouling preventative systems used (covered in the EPA Vessel General Permit).

The "Daily Checks" remained largely the same. One question about tracing-out the overboard discharge system was deleted from the Daily Checks at Sea. Three items were added to the "Daily Checks in Port" from the EPA Vessel General Permit (minimizing debris going into marine waters during deck wash down/hull cleaning, record keeping for anchor chain wash down, and verification that fire mains only discharged in emergency).

Four questions were added to the section on "Non Discharge Ships" - cruise ships that do not discharge wastewater in Alaska. These questions were added to help DEC ascertain whether there was sufficient holding tank capacity for the wastewater.

The "Document Review - Section A" was very similar to 2008. One new item required the Ocean Ranger to check deck maintenance logs. The other new question asked if the vessel had an International Air Pollution Prevention or Engine International Air Pollution Prevention certificate (a MARPOL Annex VI requirement). The Ocean Ranger asked the cruise ship's staff for this certificate at the beginning of the Alaska cruise season and then made a copy for the ship-specific notebook; Ocean Rangers would not have to ask the ship staff for this item again during the rest of the season. One existing question about the proper disposal of pool water was expanded in light of a number of pool water discharges in 2008 and new EPA Vessel General Permit record keeping requirements.

The "Black and Gray Water Systems – Section B" was also very similar to 2008. Several questions in the graywater section were re-worded for clarity based upon cruise ship industry and Ocean Ranger feedback. A new question about water maker reject water not containing hazardous waste was added based upon the EPA Vessel General Permit requirements. There were no changes to the black water section.

[14] EPA's Clean Water Act vessels program issued a Vessel General Permit that regulates discharges that are incidental from the normal operation of many types of vessels. Incidental discharges include, but are not limited to, ballast water, bilge water, graywater (e.g., water from sinks, showers), and anti-foulant paints (and their leachate).
http://cfpub.epa.gov/npdes/home.cfm?program_id=350

The "Oil Pollution Handling - Section C" was also very similar to the 2008 version. Questions in the 2008 daily report related to checking oil transfer hoses were deleted since it these operations were not observed to occur in Alaska.

"Hazardous and Non-Hazardous Waste – Section D" included three new questions at the end of the hazardous waste section (questions 13 – 15). The non-hazardous waste section was identical to that of 2008.

The "Sanitation – Section E" deleted a less pertinent question about sanitation test kits and a total of five questions were added that either related to the EPA Vessel General Permit or provided additional emphasis on pool and spa water discharges in light of a number of discharges during the 2008 season.

In addition to the daily report, a new Oil & Hazardous Substances Spill Notification report was added in 2009. It was created by DEC Spill Prevention and Response (SPAR) division staff along with a reference guidebook for identifying and properly reporting oil spills and sheens. The Oil & Hazardous Substances Spill Notification report was created to apply consistency in reporting and DEC response to reported spills. The report contained the type and format of data that was useful to SPAR. It was used during both the 2009 and 2010 seasons.

The Cruise Ship Program provided the cruise ship industry with a copy of the 2009 daily report in advance of the beginning of the Alaska cruise ship season. The Northwest Cruise Ship Association provided comments on the daily report, which the Cruise Ship Program and the industry met to discuss. The industry voiced similar concerns about the length of the daily report as were discussed in 2008. In addition, the industry voiced the concern about the verification of items from the EPA Vessel General Permit. The Cruise Ship Program staff understood the cruise industry's concern but interpreted the Ocean Ranger law to require that the Ocean Ranger Program verify compliance with both state and federal pollution prevention requirements. Less than 10 EPA Vessel General Permit verification questions were included in the 2009 daily report, most of the questions regarding EPA items were already part of the checklist.

The Cruise Ship Program did make improvements to the daily report based upon some of the cruise industry comments. One of the security questions was removed to make it clear that the Ocean Ranger was to receive a security briefing but that the Ocean Ranger did not review or provide oversight on the vessel security plan. Some questions were also re-worded for accuracy and clarity. For example, it was made clear that oily water is allowed to be sent to the bilges but may not be sent to the wastewater treatment system. It was also clarified that the use of detergents was only a concern if it was used to remove the appearance of sheen. It is important to note the International, and federally required "Oil Record Book" has to be maintained because it is used to keep track of all the operations regarding oil and oily water. Ocean Rangers need to be vigilant in routinely checking the updates to the Oil Record Book.

Appendix C contains a blank of the final 2009 version of the complete Ocean Ranger daily report. A copy of the Oil & Hazardous Substances Spill Notification report is found in Appendix D.

1.3.5. Daily Report Refinements - 2010 Ocean Ranger Program

The Ocean Ranger daily report was modified for efficiency in 2010. Items that only needed to be reviewed once per ship per season were removed from various sections of the daily report and placed in a new "Seasonal Information Review" section. The first Ocean Ranger aboard a cruise ship for the season would verify the items in this section. He would also record the information in the Ship Specific Notebook, which was retained on the ship for the season. The next Ocean Ranger could review the items in the Ship Specific Notebook without requiring the crew's time.

The majority of the items in the "Seasonal Information Review" section were derived from "Document Review – Section A." A smaller number of items were moved from the "Black and Gray Water Systems – Section B," "Oil Pollution Handling – Section C," and "Hazardous and Non-Hazardous Waste – Section D." The items in "Sanitation – Section E" did not lend themselves to a once per season check and no questions were moved to the new section.

Although the 2010 daily report was restructured, the content of the report was almost identical to 2009. Only three new questions were added to the entire report. A question about the efforts the ship was making to minimize the usage of anti-biofouling systems in port was added to the "Ship Tour." This question reviewed an item contained in the EPA Vessel General Permit. Due to the discovery of incomplete VSSPs including holding tanks that were not documented, a question was added to the "Non Discharge Ship" section that required more information on the holding tank regime. The third new question was added to the "Black and Gray Water Systems – Section B." The Ocean Ranger was asked to fill in whether the ship discharges only when underway. The question related to a new Alaska wastewater permit[15] regime where some ships were only authorized to discharge wastewater in Alaska when the quality of the discharge met certain standards and the ship was underway.

The Cruise Ship Program shared the daily report format with the cruise ship industry prior to the 2010 Alaska cruise ship season. Neither the Northwest Cruise Ship Association nor the individual cruise lines provided any written comments. Appendix E contains a blank of the final 2010 version of the complete Ocean Ranger daily report.

1.3.6. Daily Report Refinements – 2014 Ocean Ranger Program

The Ocean Ranger daily report for the 2014 field season was the result of continual modifications for both Ocean Ranger effectiveness and efficiency from the previous years, 2007 – 2013, based upon feedback from the Ocean Rangers. The overall relatively minor Ocean Ranger checklist improvements included: 1.) updates to items that normally do not change during vessel operation, such as, responsible person, signs, and certifications; 2.) fuel quality requirements updated with more concise questions; 3.) inclusion of new items driven by regulatory changes for SOx reduction to include scrubber installations and fuel sulfur content; 4.) enhanced instructions on witnessing sample events to include more

[15] DEC. 2010. Large Commercial Passenger Vessel Wastewater Discharge General Permit No. 2009DB0026

detailed notes; and 5.) ballast water items updated. It is important to note that the new system used by the contractor (Crowley) for storing and reporting the 2014 Ocean Ranger daily reports to ADEC was improved and that reports are rarely lost and the recovery of reports due to electronic malfunctions are very good.

1.4. Framework for Evaluating the Ocean Ranger Program

In order to establish the framework that DEC could use to track issues reported by Ocean Rangers, OASIS evaluated the Ocean Ranger program from a risk analysis or management system framework.

The International Organization for Standardization (ISO) sets the international standards for management systems, including environmental management systems (EMSs). It defines EMS as "that part of the overall management system which includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the organization's environmental policy." An EMS provides the structure by which specific activities related to environmental protection and compliance can be effectively and efficiently carried out.

EPA has also acknowledged the prevalence of industry EMSs by allowing EMS components to be integrated into compliance agreements (EPA 1997). According to information on its website, EPA is interested in promoting and testing EMSs because EPA believes EMSs, if implemented properly, could serve as a valuable tool to help organizations improve their environmental performance, increase the use of pollution prevention and improve compliance.

The United Nations International Maritime Organization (IMO) has established an international code, Safety of Life at Sea (SOLAS), to provide international standards for the safe management of ships and for pollution prevention (ISM 2002). SOLAS is incorporated by reference into U.S. law and regulation. A vessel operating internationally under the flag of a country that is a party to SOLAS must develop and maintain onboard a safety management system (SMS). SMS documents are developed consistent with the International Safety Management (ISM) Code. By 2002, most of the international shipping industry was required to comply with ISM. The functional requirements of the SMS include, among other items, procedures for internal and external audits on the operation of the SMS and an analysis of non-conformities that requires that non-conformities, accidents, and hazardous situations are … investigated and analyzed with the objective of improving safety and pollution prevention.[16]

Management system programs are widely used in both land based and maritime industries. The goal of a management system is to ***improve safety and pollution prevention performance***. Therefore, OASIS reviewed the Ocean Ranger Program to

[16] http://www5.imo.org/SharePoint/mainframe.asp?topic_id=287

determine how data generated from the Ocean Ranger Program can better prevent the occurrence and recurrence of incidents related to oil discharge, waste water, sanitation, and safety. OASIS also reviewed the existing data to determine the number and type of incidences that Ocean Rangers report that otherwise may not have been reported to a regulatory agency.

2. OCEAN RANGER PROGRAM DATA

2.1. Methodology / Approach

OASIS reviewed the Cruise Ship Program 2008 and 2009 Ocean Ranger reports (DEC 2009 and DEC 2010b) for an overview of the program implementation during those two years. OASIS also reviewed the Ocean Ranger daily reports from 2008 through 2010, paying close attention to any changes made during the successive years of program implementation. (A description of the changes to the daily reports each year is provided in Section 1.3.)

OASIS reviewed the reports with identified potential compliance issues for the years 2008 through 2010. Information about the 2014 Ocean Ranger Report was provided as an update to the work completed by OASIS and was applied to the Methodology / Approach of this *Ocean Ranger Assessment Report.*

These reports were reviewed with a focus on:

1. whether identified items were violations of state or federal requirements;
2. whether there was a release or impact to the environment or human health and safety;
3. establishing a framework that DEC could use in the future to track not only the type of issues reported but also to categorize the severity and duration of the item; and
4. how future reports could be used to distinguish issues identified by Ocean Rangers that would not have likely been discovered without Ocean Ranger presence.

The reported events were evaluated and compiled to identify potential metrics to use for system-wide analysis.

The metrics identified are presented in Section 3. The data were evaluated against the metrics and the findings of that evaluation are presented in Section 4.

2.1.1. Additional Observations

Ocean Rangers also report observations that are valuable, but not included here as metrics. For example, during the 2009 cruise season, the Ocean Rangers received verification project assignments in addition to completing their daily reports. These verification projects were assigned to obtain additional information regarding the vessel's systems in relation to the environment. Ship crews were helpful and through the Ocean Ranger Program, the Cruise Ship Program obtained valuable up-to-date vessel system intelligence that was not previously made available to DEC.

An example of where Ocean Rangers provide valuable information to the Cruise Ship Program is on the subject of cruise ship air emissions. All marine vessels in Alaska must comply with the marine vessel emission standard found in the state's air regulations, 18 ACC 50.070. Cruise Ship Program staff and a contractor monitored the visible emissions from cruise ship smoke stacks each season using EPA Method 9. Method 9 procedures prevent certified readers from taking readings from onboard a ship. Therefore, no air metric is included in this analysis. However, the Ocean Rangers do provide the Cruise

Ship Program with valuable information related to opacity concerns such as incinerator and engine maintenance practices, continuous opacity monitor types and usage, alarms, fuel use and fuel switching and reporting smoke/no smoke observations. Ocean Rangers made several observations that were pertinent to DEC opacity concerns such as the burning of oil filters and burning of oily sludge which tends to affect the combustion and opacity performance. During the 2008 to 2010 time frame, Ocean Rangers reported 20 instances where they thought that the ship had high levels of opacity but there was no corresponding cruise line self-report of opacity exceedance.

3. RECOMMENDED METRICS

Based upon the Cruise Ship Program Ocean Ranger Summary reports and Ocean Ranger daily reports that identified potential compliance issues, OASIS developed metrics to evaluate the efficacy of the Ocean Ranger Program.

Ocean Rangers are authorized as observers only. In addition to including general observations about vessel operations, Ocean Rangers also report items, incidents or issues that could be violations of federal or state law, regulation, or permit. The Cruise Ship Program reviews the potential compliance issues and makes the determination of whether state laws, regulations or permits in their purview have been violated and any compliance action is necessary. The Cruise Ship Program passes any daily reports that indicate that requirements of other programs or agencies (e.g., SPAR, USCG, EPA, and CDC) may have been violated to the appropriate agency.

These water quality, oil, health and safety metrics are categorized according to the severity and frequency of the reported incidents and are described in this section. These categories are flexible and should be updated by the Cruise Ship Program in the future as appropriate. The findings are described in Section 4.

3.1. Water Quality Reporting Metrics

The water quality metric includes wastewater items (e.g. Alaska wastewater permit violations [DEC 2010a]) and the discharge of halogenated pool water. Ocean Rangers report on many wastewater concerns such as discharges in unauthorized areas, inaccurate VSSPs and wastewater discharge logs, treatment system malfunctions, compliance wastewater samples that are not representative of the wastewater that is typically discharged, field results (e.g. pH or chlorine) that are violations of permit limits or internal wastewater spills. The Ocean Ranger does not; however, have access to laboratory wastewater sample results. Compliance wastewater samples are reviewed separately by DEC and are not considered as part of the Ocean Ranger water quality reporting metric.

In 2008, the Cruise Ship Program categorized the discharge of halogenated pool and spa water with the wastewater items. In 2009, the Cruise Ship Program categorized pool water discharges with the EPA statistics for the newly issued EPA Vessel General Permit. Since the discharge is an issue that affects water quality, OASIS continued to count it with the water quality statistics.

Incidences relating to water quality were placed into one of four categories: Category A, highest potential for negative environmental effects to Category D, lowest potential for negative effects. Category A and Category B are reportable compliance violations.[17] Category C and Category D are items that if left uncorrected, could lead to negative impacts on receiving water. They are not reportable compliance violations. The events

[17] Agencies may use enforcement discretion and not all reportable compliance violations warrant enforcement action.

that define each category are not an all-inclusive list and it is anticipated that these definitions will be updated regularly.

The definitions of each category are described below:

- Category A –
  - Unauthorized wastewater discharge (either untreated wastewater, or ship does not have an Alaska wastewater permit, or discharge in a prohibited area such as Skagway); or
  - More than one pool unauthorized wastewater discharge per ship per season.
- Category B –
  - One unauthorized discharge of pool or spa water that has not been de-chlorinated or de-brominated; or
  - Compliance field sample that exceeds allowable permit limits.
  - Inaccurate or No Vessel Specific Sampling Plan. (This is a required plan per regulations. Inaccurate plans may contribute to a higher likelihood of accidental discharges.); or
  - Errors in wastewater discharge logs (e.g. inaccurate or unclear log entries indicate that unauthorized discharge may have taken place).
- Category C –
  - Wastewater treatment system equipment failure or malfunction (e.g. ruptured membranes) on cruise ships that continue to discharge wastewater in Alaska, even if there is no associated sample data; or
  - Process sample that exceeds allowable state wastewater permit limits (not taken at compliance point); or
  - Internal wastewater spills or overflows;
  - Overboard valves not locked; or
  - Unexplained drop in wastewater tank volumes for non-discharging ships in Alaska.
- Category D –
  - Wastewater treatment system equipment failure or malfunction that did not likely impact the quality of discharged wastewater in Alaska (e.g. the cruise ship was not discharging wastewater during that time period); or
  - Questions about wastewater sampling methods or missed samples; or
  - Errors in documentation other than wastewater discharge logs (e.g. expired certification on marine sanitation device (MSD) for ship that doesn't discharge wastewater in Alaska; errors in ballast water logs; inaccurate pool discharge log book); or
  - Inaccurate ship board manuals (e.g. Alaska wastewater permit limits incorrect in manuals); or
  - *De minimus* items such as some run off from the Lido deck from exterior shower or unknown sources such as foam on the water.

3.2. Oil Reporting Metrics

There were numerous Ocean Ranger reports of sheens where further investigation by the Ocean Ranger revealed that the sheen could not be attributed to a cruise ship or associated tender boats. Thus, incidences relating to oil releases were separated into two groups: cruise ship related reports and sheens reported but likely not cruise-ship related. All incidents were placed into one of four categories: Category A, highest potential for negative environmental impacts, to Category D, lowest potential for negative environmental impacts. Category A and Category B are compliance violations and will likely result in a negative impact on receiving water. Category C and Category D are items that if left uncorrected could lead to negative impacts on receiving water.

- Category A:
  - Ship or ship's tender[18] spill of recoverable oil (not sheen).
- Category B:
  - Ship oil pollution incident observed - Non-recoverable oil on water surface (sheen); or
  - Ship's tender oil pollution incident observed - Non-recoverable oil on water surface (sheen); or
  - Oil record (log) book procedures not followed or incorrect entries made; or
  - Privately-owned shore-based cruise ship support vessel (excursion vessel, garbage scow, or other vessel) oil pollution incident observed. Or source of pollution incident is unclear. - Non-recoverable oil on water surface (sheen).
- Category C:
  - Excessive oil in bilge; or
  - Oily Water Separator (OWS) procedures not followed or concern about equipment; or
  - Internal oil leaks from seals at the oil/sea interface (oil lubricated stern tubes, bow and stern thruster seals, fin stabilizer seals, etc.); or
  - Internal oil leaks that have not been adequately addressed or which will require substantial repairs to correct.
- Category D:
  - Internal oil leaks that were promptly detected and miscellaneous items where corrective action was immediately taken [noted as "Other" on the 2008 – 2010 Ocean Ranger Oil Incident Reports]; or
  - Mystery sheen observed on the water surface where the source cannot be identified by the Ocean Ranger or the cruise ship or the cruise ship tender is not the probable source.

[18] Tenders are defined here as life boats or other small vessels that are used to ferry passengers and crew from anchored cruise ships to shore.

3.3. Health Reporting Metrics

Incidences relating to health and sanitation were placed into one of four categories: Category A, most serious to Category D, least serious. Category A and Category B include instances where individuals are confirmed to be sick. Category C and Category D are items that if left uncorrected could have negative impacts on human health. All of the reported incidences would be considered deficiencies during an inspection according to the CDC Vessel Sanitation Program Operations Manual; however, with the exception of certain types of illness when arriving in the U.S. from a foreign port, most deficiencies identified below are not required to be self-reported.

A standard gastrointestinal illness report describing all the reportable cases of gastrointestinal illness must be submitted no less than 24 hours but not more than 36 hours before the vessels expected arrival at the U.S. port. A special report must be submitted when the cumulative percentage of reportable cases entered in the gastrointestinal illness log reaches 2% among passengers or 2% among crew. Additional CDC requirements may be required in special situations for particular outbreaks.

- Category A: Illness is confirmed to be caused by the cruise ship operation or personnel.
- Category B: Communicable disease (e.g. "swine flu" or influenza like illness, norovirus, gastrointestinal illness, chicken pox, tuberculosis, etc.).
- Category C: Procedures or events could lead to illness or contamination. This includes
    - Potable water concerns, or
    - Food handling, or
    - Other sanitation items.
- Category D:
    - Incidents where cruise ship takes appropriate corrective action (e.g. corrects pH in spa or immediately sanitizes pool or spa after vomit incident or an accidental fecal release).
    - *De minimus* or miscellaneous items (e.g. complaint of sewage odor) that are unlikely to cause illness or health concerns.

3.4. Safety Reporting Metrics

Incidences relating to safety were placed into one of four categories: Category A, most serious to Category D, least serious. Category A and Category B include instances where there are confirmed accidents or safety items or where passengers or crew are confirmed hurt or missing. Category A includes items that the cruise line is required to report to USCG on form CG-2692.[19] Category B are not reportable, but are considered significant. Category C and Category D are items that if left uncorrected could have negative impacts on safety.

[19] http://www.uscg.mil/forms/cg/CG_2692.pdf

- Category A: Accidents or incidents that the cruise line is required to report to the USCG per form CG-2692, including, but not limited to, the list of events below:
  - Loss of life; or
  - Damage to property in excess of $25,000; or
  - Loss of steering or propulsion system or associated component which causes a reduction in the maneuvering capabilities of the vessel; or
  - Complete loss of power; or
  - Passengers or crew are confirmed missing; or
  - Passengers or crew incur injury that requires professional medical treatment or renders a crew member unfit to perform routine duties; or
  - Loss of hotel power only; or
  - Loss of communications between the engine room and the bridge.
- Category B: Confirmed incidents that the cruise lines are not required to report to the USCG such as:
  - Small fires or incidents (e.g. less than $25,000 worth of damage and quickly extinguished); or
  - Passenger or crew minor injury (e.g. scrape or cut).
- Category C: Items where procedures or events could lead to safety problems. This includes:
  - Open water tight doors, fire doors, or floor plates; or
  - Crew with inadequate personal protective equipment; or
  - Electrical or wiring concerns; or
  - Debris on deck (trip hazard); or
  - Mislabeling or incorrect storage of chemicals or paints; or
  - Man lift safety concerns; or
  - Lifeboat maintenance items; or
  - Lack of first aid kits at pools.
- Category D:
  - *De minimus* items (e.g. signage or label items, extraneous items in hazardous materials storage area).
  - Miscellaneous (e.g. identification of potential security weaknesses).

4. FINDINGS

OASIS used the metrics described in Section 3 to conduct the analysis of the Ocean Ranger Program for calendar years 2008 through 2010. Incidents were sorted according to the metrics described in Section 3. For each metric, the number and severity of incidents were analyzed to see if there were changes over time.

Note when comparing 2008 to 2009, many Ocean Rangers reported inadequate access on 11% of the ships for about 1 month during 2008. There were 2,180 daily reports in 2008 and 2,272 daily reports in 2009 (DEC 2010c).

4.1. Water Quality

There were 81 water quality-related items reported by Ocean Rangers during the 2008 to 2010 time period. The items ranged from incidents with a higher potential for negative environmental effects, such as unauthorized wastewater discharges to incidents with less potential for negative environmental impacts, such as errors in documentation. The cruise lines often self-reported the most serious items directly to the Cruise Ship Program. The number of self-reports has increased since the Cruise Ship Program has been placing Ocean Rangers onboard ships.

Category A and Category B include items that are violations of state or federal law or regulations.[20] Cruise lines generally reported Category A and Category B items to the Cruise Ship Program directly. Items shaded in gray in Table 1 were violations that were generally reported to the Cruise Ship Program only by the Ocean Ranger.

Category C and D include items that are not violations of state or federal law or regulations, but if left uncorrected, could lead to negative impacts on the receiving water. Category C and D information was only provided to the Cruise Ship Program through the Ocean Rangers. A summary of the number and type of water quality incidents reported by Ocean Rangers is provided in Table 1. Data are displayed graphically by category and year in Figure 1.

Spreadsheets showing individual water quality incidents for 2008-2010 are provided in Appendix F.

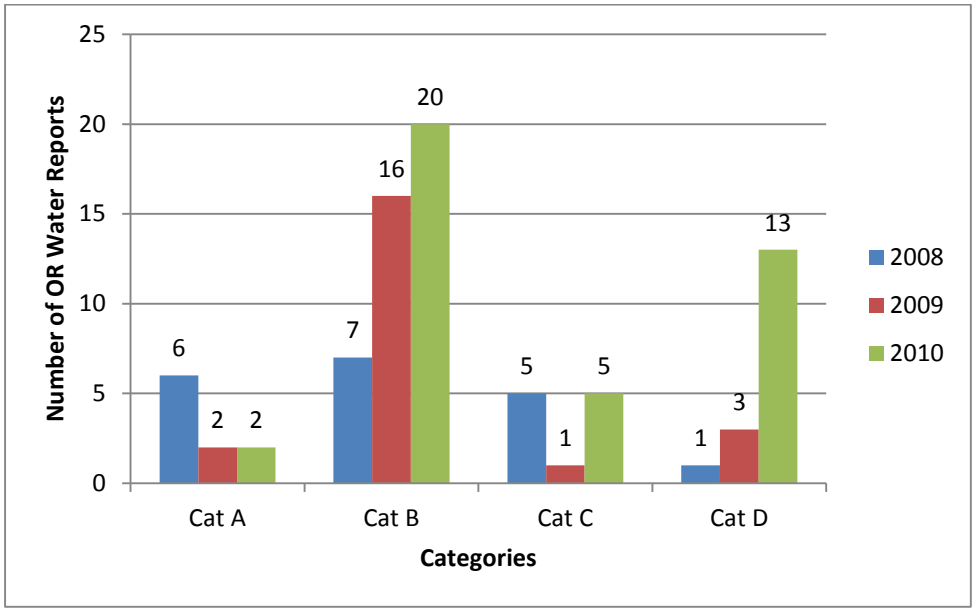
[20] Note that although Category A and B incidents are violations, they do not necessarily result in enforcement action. The incidents summarized in this report are not a list of Notices of Violations (NOVs). Many factors are considered before an agency issues an enforcement action.

TABLE 1: WATER QUALITY – POTENTIAL COMPLIANCE ITEMS FROM DAILY REPORTS

	Year			
Type of Water Quality Incident Report	**2008**	**2009**	**2010**	**Total**
Total number of water quality related reports	**19**	**22**	**40**	**81**
Category A – Highest potential for negative environmental effects.				
Unauthorized wastewater discharges.	6	1	2	
More than one unauthorized pool or spa water discharge per ship per season.	0	1	0	
Category A - Total	**6**	**2**	**2**	**10**
Category B				
Pool or spa water that had not been de-chlorinated or de-brominated before discharge.	2	5	3	
Compliance field sample that exceeds allowable permit limits.	0	1	1	
Inaccurate VSSPs[21]	5	9	12	
Errors in wastewater discharge logs[22]	0	1	4	
Category B - Total	**7**	**16**	**20**	**43**
Category C				
Wastewater treatment system equipment failure or malfunction on cruise ships that continue to discharge wastewater in Alaska, even if there is no associated sample data.	1	0	0	
Process sample that exceeds allowable state wastewater permit limits. (Not taken at compliance sampling point or not using approved compliance sampling methods.)	2	1	2	
Internal wastewater spills.	1	0	0	
Overboard valves not locked.	1	0	2	
Unexplained drop in wastewater tank volumes for non-discharging ships in Alaska.	0	0	1	
Category C - Total	**5**	**1**	**5**	**11**
Category D – Lowest potential for negative environmental effects.				
Wastewater treatment system equipment failure or malfunction that did not likely impact the quality of discharged wastewater in Alaska.	0	1	5	
Questions about wastewater sampling methods or missed samples.	0	0	4	
Errors in documentation other than wastewater discharge logs.	0	1	2	
Misc. – Lido deck shower run off, questions about biomass discharge, unidentified foamy discharge, inaccurate manuals, etc.	1	1	2	
Category D– Total	**1**	**3**	**13**	**17**
Total # reports	2,180	2,272	1,884	6,336
Total # water items/ total # reports	0.87%	0.97%	2.1%	1.3%

[21] Only reported by Ocean Ranger
[22] Only reported by Ocean Ranger

FIGURE 1: WATER QUALITY REPORTS BY CATEGORY PER YEAR



The number of water quality-related items reported on Ocean Ranger reports increased from 19 in 2008 to 40 in 2010. Although the total number of Ocean Ranger reports has varied, the percentage of total reports with water quality-related items has also increased. However, the percentage of Ocean Ranger reports with water quality items was below three percent in all years, 2008 - 2010.

Cruise ships reported unauthorized wastewater discharges and unauthorized discharges of pool or spa water directly to the Cruise Ship Program and sometimes informed the Ocean Ranger as well. Inaccurate VSSPs and errors in wastewater discharge logs are violations that were only reported to the Cruise Ship Program by the Ocean Ranger.

Due to the number of VSSP items, the Cruise Ship Program may consider adding a question to the checklist requiring the Ocean Ranger to check to see if the compliance wastewater samples were taken in accordance with VSSP and the QA/QC Plan and are representative of the type of wastewater that is typically discharged.

Category C and D items were only reported to the Cruise Ship Program via the Ocean Rangers.

4.2. Oil

There were 218 reported oil-related incidences in 2008-2010. Of those, 101 reports dealt with cruise ship or ship associated (e.g. tender) operations. The remaining 117 incidents were mystery sheen reports to the USCG and DEC where cruise ships operations were not the probable source. Both types of incidents are included in this report because of the frequency of Ocean Ranger reports of sheens that could not be attributed to cruise ships or cruise ship tenders. Sheens, regardless of source, represent an impact to the environment and are therefore considered relevant to this analysis.

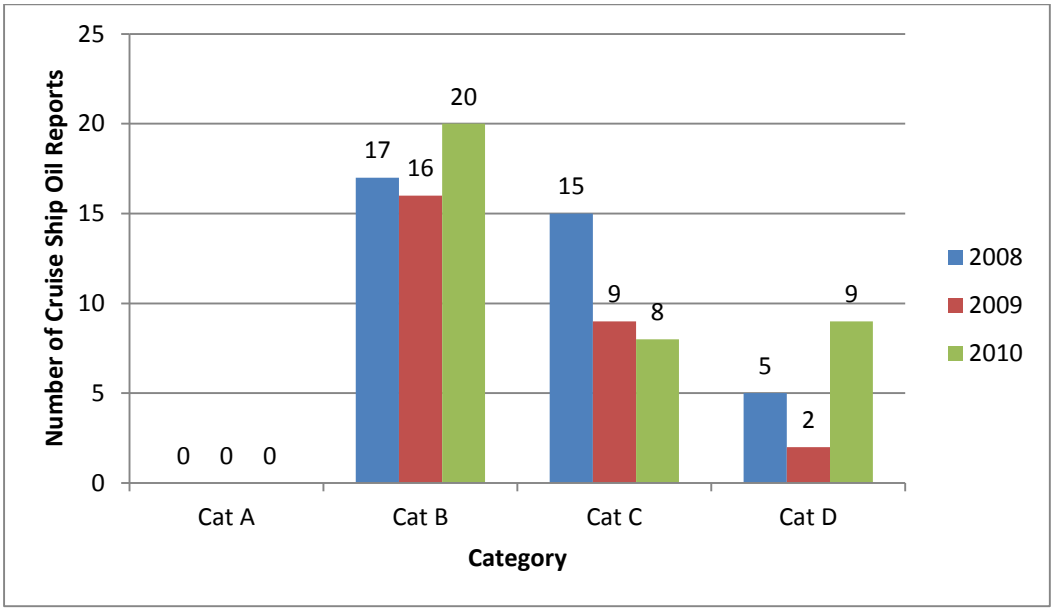
A summary of the number and type of oil-related incidents attributable to cruise ships or cruise ship-owned tenders reported by Ocean Rangers is provided in Table 2. Data are displayed graphically by category and year in Figure 2. A summary of oil-related incidents (mostly sheens) reported, but not attributed to a particular cruise ship or cruise ship-owned tender is provided in Table 3. Data for incidents not able to be attributed to cruise ships are displayed graphically by category and year in Figure 3.

Spreadsheets showing individual oil-related incidents for 2008-2010 are provided in Appendix G.

TABLE 2: OIL – INCIDENTS FROM CRUISE SHIPS OR CRUISE SHIP-OWNED TENDER

	Year			
Type of Oil Incident Report	**2008**	**2009**	**2010**	**Total**
Total number of oil related reports	**37**	**27**	**37**	**101**
Category A – Highest potential for negative environmental effects.				
Ship or ship's tender oil pollution spill of recoverable oil (not sheen).	0	0	0	
Category A - Total	**0**	**0**	**0**	**0**
Category B				
Ship oil pollution incident observed (external leak) - Non-recoverable oil on water surface (sheen).	14	6	13	
Ship's tender oil pollution incident observed (external leak) - Non-recoverable oil on water surface (sheen).	1	10	6	
Oil record book procedures not followed or incorrect entries made.	2	0	1	
Category B - Total	**17**	**16**	**20**	**53**
Category C				
Excessive oil in bilge.	2	0	0	
OWS procedures not followed or concern about equipment.	2	0	1	
Internal oil leaks from seals at the oil/sea interface (oil lubricated stern tubes, bow and stern thruster seals, fin stabilizer seals).	11	9	7	
Category C- Total	**15**	**9**	**8**	**32**
Category D – Lowest potential for negative environmental effects.				
Internal oil leaks that were promptly detected and miscellaneous items where corrective action was immediately taken. [Noted as "Other" on 2008 – 2010 Ocean Ranger Oil Incident Reports.]	5	2	9	
Category D – Total	**5**	**2**	**9**	**16**
Total # reports	2,180	2,272	1,884	6,336
Total # oil items/ total # reports	1.7%	1.2%	2.0%	1.6%

FIGURE 2: NUMBER OF CRUISE SHIP OIL REPORTS / CATEGORY / YEAR



As expected, Ocean Rangers did not report any significant (Category A) spills or potential significant spills. Potential causes of Category A heavy fuel oil spills would be bunkering accidents or ship groundings. Cruise ships rarely bunker in Alaska. There has not been a serious large cruise ship grounding in 15 years. Although we are not aware of any spills of this type, there may be potential for 50-100 gallon diesel (non-persistent oil) spills during tender refueling. We recommend the Cruise Ship Program consider updating the 2010 Ocean Ranger daily reports (Section C, page 15, rev G) to include a review of tender and lifeboat refueling procedures.

All incident reports of oil pollution observed on the water surface where the source was the cruise ship or cruise ship tender were the result of small spills or potentially small spills (sheen) from tenders or hydraulic fluids from seals at the oil/sea interface (external leaks from shaft, thruster, stabilizer and Azipod seals).

Ocean Rangers noted several oil sheens originating from the main propulsion Azipod[23] seals. The Ocean Ranger oil spill guide provides a reference photograph for Azipod hydraulic fluid leaks.

Internal leaks of lubricating oils will occur on ships. However, on a ship that employs a comprehensive SMS there will be a system for preventive maintenance, inspection, and

[23] Azipod® units, when installed on ships, replace traditional main propulsion long shaft propellers and rudders. The Azipod 'pod' is attached outside the ship's hull and houses a variable speed electric motor that drives a fixed pitch propeller. The pod can be rotated to provide propulsion or thrust in any direction. Seal leaks on these units have on occasion caused loss of hydraulic steering fluids. New Azipod design now incorporates electric rather than hydraulic steering which may decrease oil loss/spill potential.

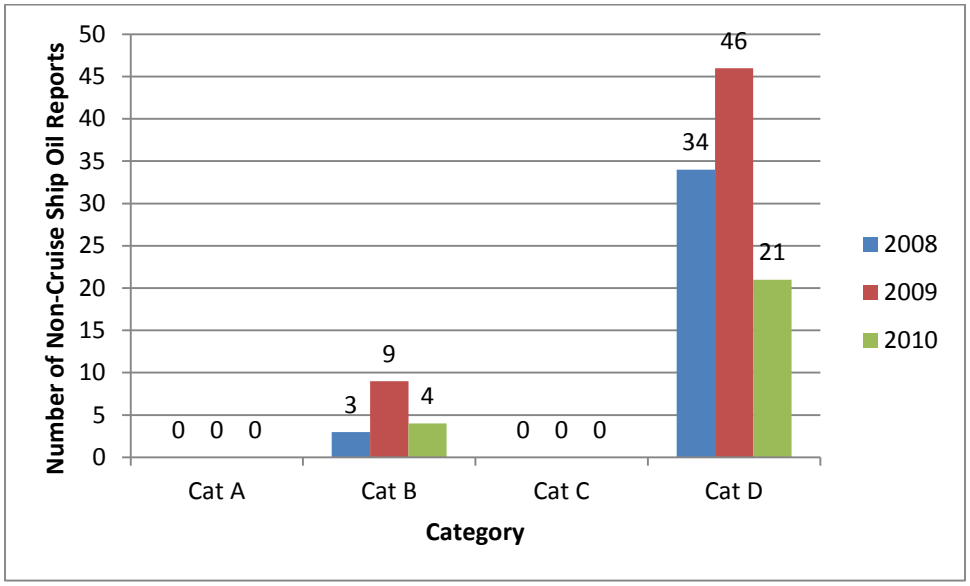
prompt correction. Future checklists should reflect whether an internal oil leak was detected and corrected in accordance with the ship's SMS (Category D) or not (Category C).

DEC SPAR issued two Notices of Violation (enforcement actions) based on oil items initially reported by the Ocean Ranger and subsequently investigated by SPAR.

TABLE 3 OIL – INCIDENTS NOT ABLE TO BE ATTRIBUTED TO A PARTICULAR SHIP

	Year			
Type of Oil Incident Report	**2008**	**2009**	**2010**	**Total**
Total number of oil related reports	**37**	**55**	**25**	**117**
Category A – Highest potential for negative environmental effects.				
Oil pollution spill of recoverable oil (not sheen).	0	0	0	
Category A - Total	**0**	**0**	**0**	**0**
Category B				
Privately-owned shore-based cruise ship support vessel (excursion vessel, garbage scow or other vessel associated with tourist industry) oil pollution incident observed - Non-recoverable oil on water surface (sheen).	3	9	4	
Category B - Total	**3**	**9**	**4**	**16**
Category C – Internal Oil Leaks or OWS malfunctions.				
Category C- Total	**0**	**0**	**0**	**0**
Category D – Lowest potential for negative environmental effects.				
Mystery sheen observed on the water surface where the ship, tender, or associated vessel is not the probable source.	34	46	21	
Category D – Total	**34**	**46**	**21**	**101**
Total # reports	2,180	2,272	1,884	6,336
Total # oil items/ total # reports	1.7%	2.4%	1.3%	1.9%

FIGURE 3: NUMBER OF NON-CRUISE SHIP OIL REPORTS / CATEGORY / YEAR



When oil on the water was reported, it was reported as sheen or minute droplets of oil. Nearly half of the reports were sheen observations from a non-cruise ship source or where a particular cruise ship could not be identified as the likely source. This is to be expected. The main deck of a large cruise ship provides an excellent vantage point for an observant Ocean Ranger. In active harbors sheen may be observed on the water at some point on most days, particularly when the observer is standing at some height above the water surface. Silvery oil sheen is pollution and must be reported by the responsible party, except when caused incidentally by small boat motor operation. However, sheen is an extremely thin layer of oil on the water surface, less than 0.000003 inches thick (8.0 x 10-5 mm). To place this in perspective, less than one half of a gallon of oil could create a visible silver sheen over a water body the size of a football field. Sheen is not recoverable by oil skimmers or absorbent material. Recovering enough oil from sheen to fingerprint the pollutant to a source is difficult, requiring Teflon sampling strips and special handling. Moreover, as noted, there are a number of potential sources of mystery sheen in an active harbor, which makes fingerprinting time consuming and expensive.

All sheen caused by the discharge of oil from a vessel are reportable compliance violations and are grouped in Categories A and B. Incidents in Categories C and D are only reported to the Cruise Ship Program through the Ocean Ranger Program.

4.3. Health

There were 75 health-related potential compliance items reported by Ocean Rangers during the 2008 to 2010 time period as shown in Table 4. The items ranged from Category B confirmed illnesses, such as “swine flu” (i.e. influenza-like illness) and norovirus-like illness to the least serious incidents, such as sewage odors. The categorization also recognizes where cruise lines took appropriate and timely action such as sanitizing pools and spas after vomit incidents.

A summary of the number and type of health-related incidents reported by Ocean Rangers is provided in Figure 4. All of the reported incidences would be considered deficiencies during an inspection according to the CDC Vessel Sanitation Program Operations Manual; however, with the exception of gastrointestinal illness, cruise ships are not required to self-report deficiencies to CDC.

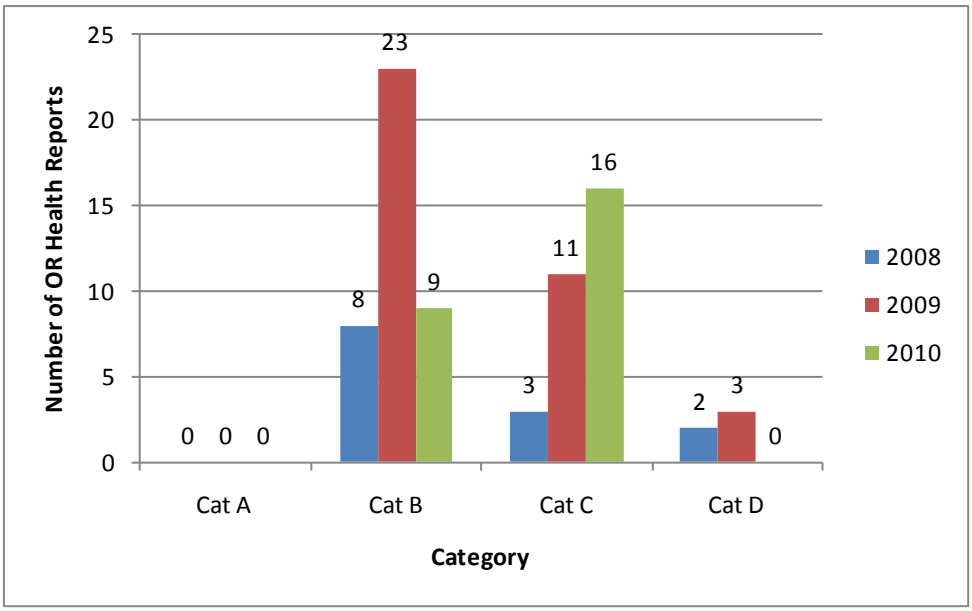
Cruise ships are required to routinely report all incidences of gastrointestinal illness no less than 24 hours prior to arriving at a U.S. port from a foreign port. A special report must be submitted when the cumulative percentage of reportable cases entered into the gastrointestinal illness surveillance log reaches 2% among passengers or 2% among crew and the vessel is within 15 days or expected arrival at a U.S. port.

Spreadsheets showing individual health-related incidents for 2008-2010 are provided in Appendix H.

TABLE 4: HEALTH – POTENTIAL COMPLIANCE ITEMS FROM DAILY REPORTS

	Year			
Type of Health Report	**2008**	**2009**	**2010**	**Total**
Total number of health related reports	**13**	**37**	**25**	**75**
Category A – Most Serious				
Illness confirmed to be caused by cruise ship operations or personnel.	0	0	0	
Category A – Total	**0**	**0**	**0**	**0**
Category B - Incidents of communicable disease.				
"Swine flu" or Influenza-like illness	0	15	1	
Norovirus or gastrointestinal illness	8	7	4	
Chicken Pox	0	1	3	
Tuberculosis	0	0	1	
Category B – Total	**8**	**23**	**9**	**40**
Category C				
Food Handling Issues.	1	2	9	
Problems with potable water.	2	9	6	
Food waste/water line pipe broke and spilled into cabin.	0	0	1	
Category C – Total	**3**	**11**	**16**	**30**
Category D – Least Serious				
Incidents where cruise ship takes appropriate corrective action (e.g. corrects pH in spa or immediately sanitizes after vomit incident).	2	1	0	
Misc. or *de minimus*	0	2	0	
Category D – Total	**2**	**3**	**0**	**5**
Total # reports	2,180	2,272	1,884	6,336
Total # water items/ total # reports	0.60%	1.6%	1.3%	1.2%

FIGURE 4: NUMBER OF HEALTH REPORTS / CATEGORY / YEAR



No Category A items were recorded in any of the Ocean Ranger daily reports. These results are expected since it would be difficult to conclusively determine cruise ship personnel or operations caused an illness.

Most health items were Category B reports of confirmed illness. These illnesses will likely reflect their incidence in the general population, reporting trends (e.g. passengers and crew may be more likely to report potential illness if there is heightened awareness of an illness in a particular year), and cruise line preventative sanitation measures (e.g. quarantining sick passengers and crew, crew sanitizing common areas, encouraging use of hand sanitizer, shutting down buffet, etc.). For example, there was significant concern and media coverage of “swine flu” (influenza like illness) in 2009. Reports of “swine flu” were the single most numerous health items of 2009.

The Cruise Ship Program has received legislative questions regarding infectious illness on cruise ships. In addition, the Cruise Ship Program forwards reports of health items to the state Department of Health and Social Services as well as the Alaska CDC representative. Therefore, it is appropriate for the Cruise Ship Program to continue to include these Category B items on the Ocean Ranger daily report even though their incidence reflects more than items that are within the cruise ship industry control. Data were not available for preparation of this report to compare whether Ocean Ranger reports of illness were also reported to CDC by each cruise line.

Category C items identify areas where cruise line personnel, procedures or events could lead to illness or contamination. These are items which would be considered deficiencies during a CDC inspection. This includes potable water concerns, food handling, and water lines breaking and spilling into cabins. Ocean Rangers are marine engineers and are

familiar with correct procedures for bunkering potable water and preventing water line breakage. However, the Ocean Rangers do not have formal education in public health and proper food handling and sanitation procedures. Increased training in this area may further serve to strengthen this aspect of the Ocean Ranger Program. The increasing number of Category C reports already provides anecdotal evidence the Ocean Rangers are getting more familiar with these subjects.

There is no legal requirement for cruise ships to self-report any health-related item to the Cruise Ship Program. Therefore, it is important to note the significant value of the Ocean Ranger Program and the fact the Ocean Rangers documented their observations of health-related items and reported this information to DEC Cruise Ship Program staff. Without the Ocean Rangers, the DEC Cruise Ship Program would not have information on any of these health-related items.

4.4. Safety

There were 43 safety-related potential compliance items reported by Ocean Rangers during the 2008 to 2010 time period as shown in Table 5.

Category A includes any item that the cruise lines would be required to report to the USCG on form CG-2692. Failure to report these marine casualties would be a violation of USCG regulations. Among other items, this form requires reporting loss of propulsion, steering, or an associated component that reduces the maneuvering capability of a vessel. It also requires reporting damage in property in excess of $25,000 and any occurrence that adversely affects the vessel's seaworthiness or fitness for service.

It is unclear in the Ocean Ranger reports of damage to stabilizers, propellers, or azipods whether or not there was a reduction in the maneuvering capacity of the vessel or whether damage would exceed $25,000. OASIS was conservative and included these reported items as Category A. In addition, the circumstances surrounding the loss of hotel power (e.g. duration) and loss of communication between the bridge and engine room (e.g. whether there were other functional redundant communication systems) could affect whether the vessel would need to report the item on form CG-2692. Therefore, the Cruise Ship Program may consider updating the daily report to require the Ocean Ranger to specify whether the safety item was a marine casualty required to be reported to the USCG on form CG-2692.

Reports in Categories B through D were not items that a cruise ship must self-report. There were reports in each category but the reports in Category C were the most numerous. A summary of the number and type of safety-related incidents reported by Ocean Rangers is provided in Figure 5.

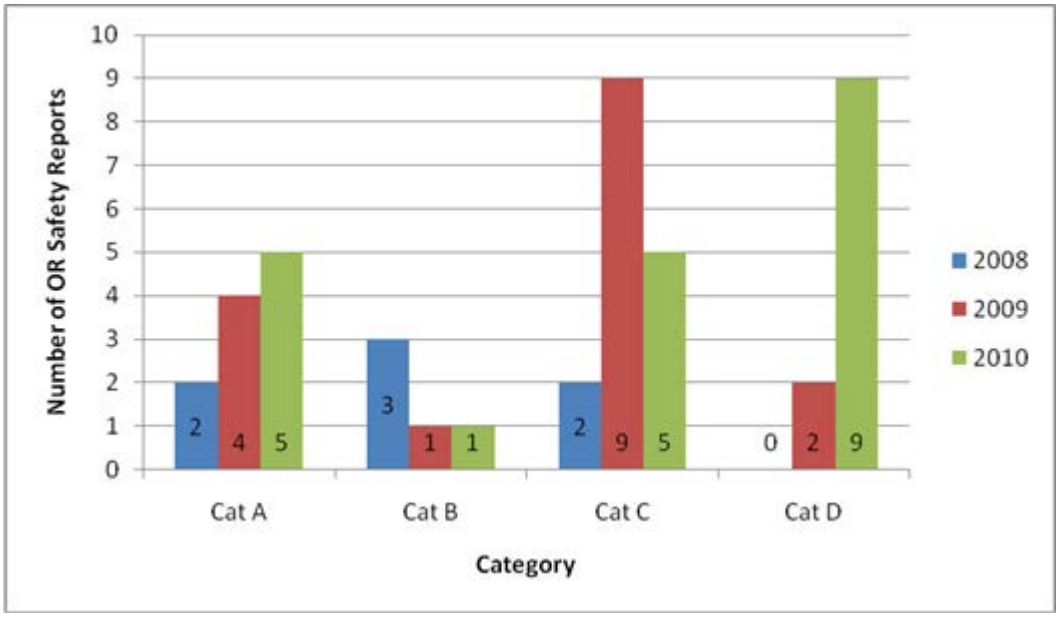
Spreadsheets showing individual safety-related incidents for 2008-2010 are provided in Appendix I.

Similar to the health category, there is no legal requirement for cruise ships to self-report any safety item to the Cruise Ship Program. Without the Ocean Ranger Program, the Cruise Ship Program would not have had information on any of these items.

TABLE 5: SAFETY – POTENTIAL COMPLIANCE ITEMS FROM DAILY REPORTS

	Year			
Type of Safety Report	**2008**	**2009**	**2010**	**Total**
Total number of safety related reports	**7**	**16**	**20**	**43**
Category A – Most Serious				
Loss of life	0	0	2	
Accidents or incidents listed on USCG form CG-2692, including damage over $25,000.	1	0	1	
Loss of steering or propulsion system or associated component which causes a reduction in the maneuvering capacity of the vessel.	0	2	1	
Passenger or crew confirmed missing.	0	1	0	
Loss of hotel power.	0	0	1	
Loss of communications between bridge and engine room.	0	1	0	
Complete loss of power.	1	0	0	
Category A- Total	**2**	**4**	**5**	**11**
Category B - Confirmed incidents or minor injuries.				
Small fires (< $25K damage, quickly extinguished).	3	1	0	
Minor injury of passenger or crew (e.g. scrape or cut).	0	0	1	
Category B - Total	**3**	**1**	**1**	**5**
Category C - Procedures or events that could lead to safety problems.				
Water tight doors, fire doors, or floor plates left open.	1	2	1	
Lack of first aid kits at pool.	0	1	0	
Crew - Inadequate PPE.	0	0	1	
Electrical or wiring concerns.	0	3	0	
Mislabeling of or incorrect storage of chemicals or paints.	0	1	3	
Manlift or lifeboat safety concerns.	1	1	0	
Trip hazards (e.g. debris on deck).	0	1	0	
Category C - Total	**2**	**9**	**5**	**16**
Category D – Least Serious				
De minimus (e.g. signage or label problem, extraneous items in hazmat storage area).	0	2	7	
Miscellaneous (e.g. identification of potential security weakness).	0	0	2	
Category D – Total	**0**	**2**	**9**	**11**
Total # reports	2,180	2,272	1,884	6,336
Total # water items/ total # reports	0.32%	0.70%	1.1%	0.7%

FIGURE 5: NUMBER OF SAFETY REPORTS / CATEGORY / YEAR



4.5. Summary

The Ocean Ranger Program provides data on compliance violations and issues that could lead to compliance violations.

The full Ocean Ranger Program has only been implemented for three years. As the program matures, the number of potentially non-compliant items reported is expected to increase as inspectors become more experienced and adept at performing inspections. However, if the overall program (i.e. Ocean Ranger Program and cruise industry partners) is successful, the severity of the issues and the duration it takes for remedies to be implemented should decrease. These are metrics that DEC could confirm in future seasons. The severity of the items was tracked for this analysis. However, the duration component was not consistently tracked in the current format of the Ocean Ranger daily reports and therefore could not be analyzed. The Cruise Ship Program may consider editing the daily reports to make the duration of the items more apparent.

To some degree, the expected trend was observed in the water quality reports. The number of water quality related items reported on Ocean Ranger reports increased from 19 in 2008 to 40 in 2010. Although the total number of Ocean Ranger reports has varied, the percentage of total reports with water quality-related items has also increased. The pattern of an increase in the number of items being reported is typical in the early stages of the implementation of an inspection program as the Ocean Rangers (or inspectors in a management system) become more experienced.

In general, the oil incident reports do not follow the expected trends for a maturing program. However, shipboard oil spill potential has been the subject of IMO, flag state, USCG, and company prevention systems and programs for years. Thus, the oil spill prevention management system, unlike the advanced wastewater treatment program, may have matured before the advent of the Ocean Ranger Program. However, the number

of items in Category B indicate that there is still room for improvement. Especially in the installation areas where equipment failures (e.g. connectors / hoses, etc.) are not well maintained and preventive maintenance could have reduced these oil related incidents.

For the health metric, there are no Category A items, Category B items do not follow the trend of a decreasing number of incidents. However, Category B may be driven largely by the incidence of the infectious disease in the general population. Category C does generally follow the expected trend of showing an increasing number of items as the program matures.

In the safety metric, there was an increase in the total number of reports from 2008 to 2010. In addition, there was an increase of the number of lower risk Category C and D items reported.

It must be stressed for all of these metrics that these are preliminary results due to imposing a new category structure upon the data several years after the events. During this process assumptions sometimes had to be made in the absence of complete information. If the Cruise Ship Program decides upon metrics, these metrics or other metrics, provides consistent training to Ocean Rangers, incorporates the metrics into the daily reports, and routinely tracks items in real time, the accuracy of the metric reporting data will improve.

5. ANALYSIS AND RECOMMENDATIONS

The Cruise Ship Program contracted with OASIS to provide an independent and objective evaluation of the efficacy of the Cruise Ship Ocean Ranger Program in meeting the statutory mandates for the program. According to Alaska Statute 46.03.476, the intent of the Ocean Ranger Program is: 1) to monitor [compliance with] state and federal requirements pertaining to marine discharge and pollution requirements; and 2) to protect people (crew, passengers, port residents) from improper sanitation, health, and safety practices.

The success of the Ocean Ranger Program depends upon the DEC Cruise Ship Program, the contractor responsible for hiring, training, and managing Ocean Rangers, the quality and dedication of the individual Ocean Rangers, and the cooperation of the cruise ship industry. The Ocean Ranger Program has provided independent data indicating the cruise ship industry has a high percentage of compliance with respect to items observed by Ocean Rangers while in Alaskan waters. The Ocean Ranger Program has also been successful in providing high quality data identifying environmental compliance/pollution prevention and health and safety related items that could be targeted for improvement. Oil, health, and safety related items are reported to the Cruise Ship Program solely through the Ocean Rangers.

Ocean Rangers have provided information on compliance items that would not have otherwise been reported. For example, the occurrences of inaccurate VSSPs and errors in wastewater discharge logs were reported through the Ocean Rangers only. The most numerous incident reported by Ocean Rangers had to do with oil. DEC SPAR issued two Notices of Violation (enforcement action) based on oil items initially reported by an Ocean Ranger and subsequently investigated by SPAR.

The Ocean Ranger Program has also displayed adaptability. The Cruise Ship Program has updated the Ocean Ranger daily report to incorporate new requirements (e.g. EPA Vessel General Permit) and to gather more in depth information in areas where a larger number of items have been identified in the previous year (e.g. more questions related to ensuring accurate VSSP) or to gather information to determine standard industry practices that may impact the environment (e.g. boiler blow down).

OASIS reviewed the Ocean Ranger Program from a management systems perspective. Management systems are widely used in a number of industries, including the cruise ship industry (the IMO required SMS is a management system), and are generally recognized as a valuable framework for identifying issues, measuring progress towards objectives and targets, and continually improving overall performance. Using the data generated by Ocean Rangers to date, OASIS used the concept of continual improvement in management systems to develop suggested improvements to the overall Ocean Ranger Program.

The Ocean Ranger daily reports were the primary data used for this analysis. The potential compliance items on the daily reports were categorized to account for both severity and

frequency. Metrics and statistics provided in this report provide a record of compliance-related items discovered by the Ocean Rangers in Alaska for the three years, 2008 - 2010.

For the Ocean Ranger Program, the improved performance is defined by reduced pollution and increased protection from improper health and safety practices. It's difficult to assess whether the Ocean Ranger Program prevented severe or more frequent incidents from happening. While there is likely some deterrent value associated with having a full-time compliance observer on board the vessel, it is not possible to quantify the incidents that did not occur due to the Ocean Ranger's presence. This idea is a challenge for all environmental and safety management programs. To mitigate this challenge, a performance-based management system is recommended. The overall success of a performance-based management system is linked to data of consistently good quality and consistently reported.

A performance-based management system is a system that is constantly reevaluated for continual improvement. Inherent in any management system is the process to find out why an event happened and mitigate that situation. However, in order to improve safety and environmental protection performance (as mandated by IMO), a management system must to go beyond identifying the immediate cause of an event and identify the deeper root cause of an incident and to make changes to the system at that level. This evaluation is called "root cause analysis." This is often a two-step process where the more direct cause is identified and then the underlying cause is determined by an iterative process of asking why an event happened.

The current Ocean Ranger Program has been successful in gathering quality information. However, in order to have a continuing and measurable effect in reducing the number and severity of incidents over the long term, the program would need to move beyond mere yes/no checklist evaluations to a more comprehensive follow-up on the effectiveness of corrective and preventive actions cruise lines implement in response to identified instances of potential noncompliance. This process would require industry cooperation, and clear development of policies to deal with items. The two most frequently reported potential non-compliance items from Ocean Rangers have to do with oil and wastewater. The DEC Cruise Ship Program has authority for cruise ship wastewater issues in Alaska whereas the DEC SPAR division has responsibility for prevention and enforcement related to oil pollution. Therefore, a multi-division integrated approach from DEC would be necessary during the development of any policies, procedures, additional regulations (negotiated or otherwise), and a Compliance/Enforcement Strategy addressing any root cause analysis.

In the current program, the Ocean Rangers may identify an issue, and may communicate directly with the ship engineers or crew members. Ocean Rangers also report the items to the Cruise Ship Program regulators who then communicate with cruise line corporate environmental managers. The Ocean Ranger Program is entirely separate from the ship's operations. The Ocean Rangers are observers. They are contractors, not employees of the state and have no legal authority to implement changes in operations on cruise ships or take enforcement actions. The Cruise Ship Program instructs Ocean Rangers to

discuss potential non-compliance items with the crew as well as including the items in the daily report. The nature and openness of the communication between the Ocean Ranger and the ship crew varies from cruise line to cruise line and even ship to ship. The Ocean Rangers' relationship with the vessel and crew (e.g. communications) are key to successful observation(s).

The program lacks the ability for Ocean Rangers to make an assessment of whether or not the true causes of incidents have been identified and have been addressed by the ship. While Ocean Rangers may discuss immediate causes with the cruise ship crew, generally the Cruise Ship Program manager and the corporate cruise line representatives discuss incident causes removed from and often after an event has occurred. The Ocean Rangers report on the presence of a potential non-compliance and whether the issue has been corrected; but there is no evaluation of whether the fix was a quick "Band-Aid" or whether the corrective action will systematically prevent further incidents of the same type from happening.

OASIS recommends that the Ocean Rangers function and checklist should be expanded to document what the ship's crew did to formally investigate and conclude why an event happened. The Cruise Ship Program or the Ocean Ranger contractor would need to provide basic training in root-cause analysis to Ocean Rangers and develop a root-cause analysis documentation form that an Ocean Ranger can use as a framework to discuss the root cause of an incident with the ship's crew. An Ocean Ranger would be encouraged to forgo filling in the daily report for a day that they are completing a root cause analysis documentation report. In addition, the Ocean Ranger may also need access to the ship's SMS system to determine if the vessel is following its own procedures for detecting and correcting items.

Copies of root cause analysis documentation could be kept in the Vessel Specific Notebook for the subsequent Ocean Ranger to review and document the effectiveness of any corrective or preventive actions that result from the investigation. This type of follow-through will incorporate an assessment of continual improvement into the Ocean Ranger Program.

Other recommendations for modifying the Daily Reports for the 2011 season are provided here.

- Incorporate the incident categories developed for this analysis into 2011 daily reports and the Cruise Ship Program summary data. This will allow more efficient and timely tracking, evaluation, and trend analysis of the reported information.

- Modify the daily report to more clearly track the duration of events and the amount of time before corrective actions were implemented. Perhaps all open items should be placed on the front sheet of the daily report until they are rectified. Decreasing duration of open items, along with decreasing severity and frequency of incidents, would be an indicator that the Ocean Ranger Program was becoming increasingly more effective.

- Due to the number of VSSP items, the Cruise Ship Program may consider adding a question to the checklist requiring the Ocean Ranger to check to see if the compliance

wastewater samples were taken in accordance with VSSP and the QA/QC Plan and are representative of the type of wastewater that is typically discharged.

- Although there is a very low likelihood of Category A type oil releases, there may be potential for 50-100 gallon diesel (non-persistent oil) spills during tender refueling. We recommend that the Cruise Ship Program consider updating the daily reports (Section C, page 15, 2010 Daily Report rev G) to include a review of tender and lifeboat refueling procedures.
- Internal leaks of lubricating oils will occur on ships. However, on a ship that employs a comprehensive SMS there will be a system for preventive maintenance, detection, and prompt correction. Future checklists should reflect whether an internal oil leak was inspected and corrected in accordance with the ship's SMS (Category D) or not (Category C).
- Future checklists should indicate whether external oil leaks were detected and corrected in accordance with the ship's SMS.
- OASIS recommends that the Cruise Ship Program consider updating the daily report to require the Ocean Ranger to specify whether there were any safety items that were required to be reported to the USCG on form CG-2692, and whether the ship submitted the CG-2692 as required.

Many of the recommendations noted above from OASIS, the contractor, who prepared the draft Ocean Ranger Assessment Report for 2008 – 2010 have been incorporated in the Ocean Ranger Reports from 2011 through 2014, the most recent report. The enhanced training program for Ocean Rangers, use of a more thorough and functional Daily Report format/checklist, and a well described "Ocean Ranger Job Aid" to assist Ocean Rangers in completing their reports started with the 2011 Ocean Ranger season. Additional recommendations from this reviewer and Cruise Ship Program staff resulting from review of the OASIS draft Assessment Report and current state of the Cruise Ship Program's knowledge base include the following.

- Enhanced Cruise Ship Program regulations, 18 AAC 69, as well as the other appropriate and applicable Wastewater Disposal regulations, 18 AAC 72, to strengthen the requirement for use of "Master Meters" for more accurate flow volume measurements for potable water treatment and usage, and also wastewater (greywater) treatment and discharge. The master meter data should be real time and linked to the Electronic Data Reporting System (EDRS).
- Enhancement of all the appropriate and applicable cruise ship regulations to include increased stipulated penalties appropriate for noncompliance.
- Develop a General Permit to include more realistic wastewater discharge modeling parameters (mixing zone and "Point of Compliance") for vessels with discharge points (bow or stern) other than mid ship.

- Develop and implement a Compliance Assurance Agreement as part of the General Permit between the cruise ship line and DEC for each cruise ship operating in state waters.
- Develop and implement a Compliance and Enforcement Strategy that will provide a consistent format for the initiation of enforcement actions when noncompliance is documented. Establish consistent use of enforcement letters and timeframes to achieve compliance before enforcement is initiated.
- Develop and implement a "real time" acquisition of wastewater effluent monitoring data (discharge logs) using remote sensing and potential GIS mapping of the wastewater (plume) distribution. This remote sensing endeavor should be effectively pilot tested in Alaska waters before becoming a requirement; however, the goal of remote sensing of wastewater monitoring data and use of GIS positioning of cruise ships while operating in Alaska waters should be a desired requirement, not a voluntary endeavor, to best protect the environment and the cruise ship industry's sustainability in Alaska.
- Continual review of Best Available Technologies (BAT) for drinking water (supplemental treatment), wastewater treatment, and oily waste treatment. Coordinate a routine (biennial or every three years) BAT workshop for Cruise Ship owners, operators, and regulators to be held in Juneau, AK.
- Develop and implement an Electronic Data Reporting Submittal (EDRS) process for laboratory data, to specifically include drinking water, pool and spa water, and wastewater (graywater and black water) data to DEC. Use of EDRS will effectively link with the remote sensing objectives for wastewater discharge monitoring and may also allow for more effectively determining the source of the way to numerous (117) "mystery sheens" identified and reported by Ocean Rangers in the 2008 – 2010 Incident Reports.
- Require use of third party approved laboratories for wastewater effluent analyses and required use of EDRS from vessel to DEC on a form provided, or format approved, by DEC. These labs would need to be certified by the DEC Environmental Health Lab for approve protocols and test methods.
- Continue to enhance the Ocean Ranger training program to include the familiarization of new BAT and electronic monitoring and reporting.

6. REFERENCES

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United States Coast Guard (USGC) Navigation Vessel Inspection Circular (NVIC) 04-04, ENVIRONMENTAL INSPECTION CHECKLIST; ADDENDUM TO FOREIGN PASSENGER VESSEL EXAMINATION BOOK. http://www.uscg.mil/hq/g-m/nvic/index00.htm.

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APPENDIX A

Full Version of the 2007 Ocean Ranger Checklist

To: [Cruise Ship Program staff]

Subject: 2007 Daily Ship Ride Report to ADEC

M/V _____ O.N. _____

Date:

Ranger/Observer:

- ☐ Embarked: Time: Location:
- ☐ Disembarked: Time: Location:
- ☐ Accommodations provided?
- ☐ Primary liaison was:

  Name: E-mail:

  Other contacts and assistance:

Regulatory Compliance

- ☐ No illegal discharges, safety concerns, or other activities at variance with federal and state regulations were noted or observed, or
- ☐ _____
  _____
  _____

  Full report to follow in event of observed apparent violations.
- ☐ Comments:

Practices observed that were innovative or commendatory.

Spaces inspected

- Advanced wastewater treatment systems (black water, grey water, galley waste).
- Oily Water Separator (OWS).
- Incinerator room.
- Solid waste handling space.
- Food waste processing space.
- Chemical stores.
- Hazardous waste lockers.
- Wet garbage storage.
- Photo shop.
- Dry Cleaning shop.
- Bunkering stations.
- Mooring stations.
- Potable water production and treatment system.
- Overboard discharge valves.
- Medical facilities.
- Bridge: Activities related to environmental monitoring
- Topside equipment (winches, motors, etc.) housekeeping, pools, and lifeboat material condition.
- Boatswain's Paint locker.
- Other:

Activities observed or attended

- Seal checks
- rounds in the engineroom, focusing on checklist items and observing underway conditions.
- EO work routine (SMS, EMS, ISO 14001)
- Underway evolution in the engine control room
- Crew training or briefing (list all):

- AWTS sampling by 3rd party contractor.

- AWTS sampling and analysis by EO.

- Tender activation and/or boat launches.
- Drills:
- Other:
-

Records reviewed

- Ship-specific Checklist developed after reviewing previous Observer's completed checklist of May 2007.
- Sewage/graywater discharge record book.
- AWTS manufacturer's manuals.
- Oil Discharge Record.
- Automated alarm records of overboard discharges.
- Stack emission opacity logs.
- USCG continuous wastewater discharge approval letter.
- Non-hazardous waste disposal records.
- Hazardous waste disposal records.
- Ballast Water discharge reports.
- Recent wastewater sample results performed by 3rd party (Admiralty Environmental letter dated 30 July 2007).
- US CDC sanitation inspection report (April 2007).
- EO's Waste Record Log.

Items for Follow-up

List reports, records, activities, current repairs to equipment, or issues that the observer/ranger on the next visit might check or review on subsequent rides.

Brief narrative or diary of time on board (attach additional sheet if necessary)

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APPENDIX B

Blank 2008 Version of Ocean Ranger Daily Report

CROWLEY

STATE OF ALASKA
OCEAN RANGER PROGRAM - ADEC

2008 OCEAN RANGER DAILY REPORT

Revision D – 6/15/08

1) Are there any potential non-compliant issues in the below report? (If yes, report will be expedited to allow immediate follow-up from ADEC):	
2) Did you have sufficient time today - observing in the non-passenger areas to accurately complete the checklist?	

If NO for question 2 - list the time you were allowed in the non passenger spaces and the explanations from the cruise lines why your request for additional time was denied.

OTHER SECTIONS COMPLETED:

Section A:	Section B:	Section C:
Section D:	Section E:	

Ocean Ranger Signature:

APPROVALS:

Crowley - Approved By:	Crowley Approval Date
ADEC - Approved By:	ADEC - Approval Date

SHIP INFORMATION:

Cruise Line		Ranger Report No.	
Ship Code Name		Date	
Advanced Water System?		Type:	
Date of Boarding			

OCEAN RANGER INFORMATION:

Name:		Employee Number	

PRE-INSPECTION:

1) Does ship discharge in Alaska waters?		5) Reviewed Non-hazardous Solid Waste Offloading and Disposal Plan	
2) Reviewed any outstanding non-compliant or open items from previous ocean ranger (pick up sealed envelope from environmental engineer)		6) Reviewed Hazardous Waste and Substance Offloading Plan	
3) Confirmed that there is no recent history of norovirus outbreaks - check on http://www.cdc.gov/nceh/vsp/surv/GIlist.htm -		7) Reviewed Discharge Permit	
4) Reviewed ship Vessel Specific Sampling Plan (VSSP)			

MEET WITH SHIP'S STAFF

	Met With Staff Member?	Name
Environmental Officer		
Chief Engineer		
Staff Captain		
Chief Officer		

Notes:

SECURITY

OR had Security Awareness Briefing		Any current security threats?	
Vessel Security Plan Briefing Y/N (house rules & emer. briefing for contractors making voyage on ship)		Select current MARSEC level	

Notes:

SHIP TOUR

C = Compliant
O = Open Item
N = Potential Non-compliance

1. Garbage handling and recycling		11. Bunkering stations, if applicable. Note: cruise ships rarely take on fuel in Alaska. Note: Bunkering manifolds are usually co-located with the sewage pump out manifold.	
2. Hazardous waste processing including pesticides, photo labs, and dry cleaning		12. Stack emissions minimization and monitoring	
3. Hazardous waste and tank storage / container strategy		13. Ballast discharge, if any.	
4. Medical facilities and		14. Overboard piping,	

bio-hazard handling		valves, and overboard valve monitoring systems	
5. Sewage and graywater treatment and discharge, including tank storage (ship) systems note: request that AWWTS operator accompany observer during observation / tracing of the system. (dischargers only) For non dischargers, review the tank storage plan and valve locking and discharge regime.		15. Boiler blow down and chemical treated cooling water handling if applicable.	
6. Observe overboard valve operation and crossover piping regime (if applicable)		16. On board wastewater sampling, if any	
7. Waste incineration and sludge handling (including biosolids)		17. General condition of sample valves	
8. Sanitation in food preparation areas		18. Spot check records related to these programs including discharge logs and SMS	
9. Production and handling of potable water		19. Oil and grease from topside equipment (winches, motors, etc.) housekeeping, pools, and lifeboat material condition.	
10. Oily water separator (OWS)			

Put any general notes and photos below - this is required for any item marked as a non-conformity or an open item.

Notes:

DAILY CHECKS AT SEA

Vessel Location:

1. Accompany the environmental officer on daily rounds		7. Accompany any engineer on his/her maintenance round to	

		witness service and maintenance of MSD systems	
2. Observing the daily wastewater lab analysis by the environmental officer (Princess only)		8. Overboard discharge valves verified closed and sealed - (includes boiler blowdown valves) Overboard valve from advanced treatment system is not sealed.	
3. Cross checking automated overboard discharge alarm records against log entries made in the Oil Discharge Record Book and the State of Alaska Blackwater and Graywater Discharge Record book.		9. Record tank levels of head tanks for "Oil to Sea Interface" areas (stern tubes, bow and stern thruster seals, fin stabilizer seals, etc.)	
4. Checking to ensure that wastewater outflow quality monitors, if installed, are functioning properly. (Effluent monitors, usually turbidity monitors, at pre-set detection readings, will stop over board discharge and redirect the effluent to a tank or back through the wastewater treatment system.)		10. Check ship daily logs and reports for any discharges, maintenance, repairs, or addition of oil to "oil to sea interface" head tanks. • Discharge report: ballast water, solid waste, black water, gray water, other • Machinery reports AWP, MSD, OWS, Incinerator, Commutator, Compactor, other	
5. Observing any non-routine or non-automatic discharges (oily water separator discharge, ballast , or any discharges through valves that are usually locked)		11. Air Emissions meet 18AAC50 - Opacity monitoring system (recorders and alarms working)	
6. Tracing-out all overboard discharge systems - from input through treatment to overboard valve - to ensure the system functions according to the manufacturers instructions.			

Notes for Daily at Sea Checks:

DAILY CHECKS IN PORT

Vessel Location

1. Waste management and waste offload and		6. Observe discharge of wastewater to shore	

condition of the off load pallets and other carriers. Review manifests and pickup arrangements.		connection (volume/procedures) (Normally only done at the South Franklin Dock in Juneau for Graywater)	
2. If the ship is at anchor, initial boat lowering and operations		7. Observe repairs, maintenance, cleaning and other operations that may affect the wastewater treatment plant effluent quality. (example - back flush cleaning with chemicals)	
3. Potable water hookups. Are they according to procedures for ship and the supplier. (see OR guidebook attachment 9)		8. Was a sampling event conducted by vessel operators, contractors, ADEC, or Coast Guard	
4. Observe special actions to prevent spills, overflows of tanks, etc.		9. Was Ocean Ranger present during the sampling event - (required that ocean ranger be onboard for ADEC and USCG sampling events)	
5. Observe wastewater sampling by contractor is done.			

Comments on Sampling Event

Was there a hazardous waste offload event?	
Was there a non-hazardous waste offload event?	
The harbors, landfills, or other offloading or disposal facilities in the state used: and whether the off-load was compatible with the non-hazardous solid waste offloading and disposal plan filed as required by 18ACC69.035	
The harbors, landfills, or other offloading or disposal facilities in the state used: and whether the off-load was compatible with the hazardous waste and substance offloading plan filed as required by 18ACC69.040	
Name and address of each contractor used for offloading	
Estimate of volume of each waste type	
Offloading or disposal method	
Describe the controlled storage, processing, or disposal facilities	

or treatment used	
Describe the vessel crew training in offloading procedures	
Number on the provided material safety data sheet (MSDS) if applicable	

Notes for Daily in Port Checks:

DISCHARGE SHIPS

At Sea Checks

Number of Passengers and Crew currently onboard	
The daily estimated volume of discharge by type;	
Description of how the daily volume by discharge type was estimated	
Time/date expressed in a 24-hour clock format at the beginning and end of each vessel route	

In Port Checks

The daily estimated volume of discharge by type; (Gray & Black water)	
Description of how the daily volume by discharge type was estimated	
Time/date expressed in a 24-hour clock format at the beginning and end of port call	
Estimate average flow rate for (Gray & Black) water	

Notes for Discharge Ships

NON DISCHARGE SHIPS

At Sea Checks

Number of Passengers and Crew currently onboard		Was there a wastewater discharge today?	
Date discharge started		Time discharge started (2400)	
Date discharge ended		Time discharge ended	

		(2400)	
Latitude at start of discharge		Longitude at start of discharge	
Latitude at end of discharge		Longitude at end of discharge	
Overboard Discharge Valves Used			
Type of discharge: (Black, Gray water)			
Volume and average discharge rate for each overboard discharge valve			
Individual in charge of discharge operations			

In Port Checks

Was there a wastewater discharge today?	

Notes for Non Discharge Ships

LOG OF OCEAN RANGER EVENTS OF THE DAY

DOCUMENT REVIEW - SECTION A

Agency Reports and Inspection Records

Review ADEC inspection reports (if any)	
Review ADEC sampling audit reports (if any)	
Checked authorization to discharge (ADEC letter and USCG letter if applicable)	
Checked source Reduction Evaluation Plan (if applicable)	

Comments:

Plans and Permits

Current Pollution Prevention Records	
Checked International Oil Pollution Prevention Certificate Expiration Date	
Checked Person-in -charge designated and qualified (certificated/licensed)	
Checked declaration of inspection (available and retained for at least one month)	
Checked PMS records for required maintenance for the selected waste stream for verification	
Checked SMS incorporates PMS activities and logs for all Waste Streams	
Checked Logs to track oil usage in systems having oil to sea interfaces (if applicable)	

Comments:

Oil Record Book	
Checked each operation signed by person-in-charge	
Checked each complete page signed by master	
Checked that book maintained for 3 years	
Checked for use of proper codes and version for vessel	
Checked that transfer receipts/manifest match oil record book entries	
Checked that OWS rates not exceeding design criteria	
Checked that incinerator rates not exceeding design criteria	
Checked for consistent bilge water management patterns	
Checked comparison of oil record book entries to vessel's daily tank sounding book	

Comments:

Shipboard Oil Pollution Emergency Plan	
Checked approval by Administration (class society)	

Checked that document is updated and current	
Checked that document is in English and working language of crew	
Checked that contact numbers for National and Local Authorities are correct (Port Authorities for ports visited not every COTP)	
Checked the immediate Actions List	
Checked the Non Mandatory Provisions (if listed in SOPEP). Spill kits located and inspected	
MARPOL Annex V	
Checked that placards are posted	
Checked Record book	
Checked garbage management plan	
Safety Management System - checked the relevant parts of the Safety management System (SMS) which describes the operation and maintenance of the various pollution control devices.	
Checked General Discharge Permit (AS 46.03.462 issued by ADEC)	
Checked the Approved Vessel Specific Sampling Plan (18 AAC 69.030)	
Checked the Approved Non-Hazardous Solid Waste Offloading and Disposal Plan (AS 46.03.47(e)(1) and 18 AAC 69.035)	
Checked the Hazardous Waste and Substance Offloading Plan (HWSOP) (18 AAC 69.040(b))	
Checked the current Alaska vessel registration and notarization papers	
Checked the approved Hazardous Waste and Substance Offloading Plan (few, if any, ships discharge waste in Alaska. There may not be a plan but a letter to ADEC stating as such)	
Checked certification from antifouling paint supplier that TBT-free coatings have been applied to the vessel.	
Checked tank plan and tank operation plan and records	
Checked the overboard valve "opening plans" discharge procedure.	
Checked the procedure to notify agencies for non-conformities, etc.	
Checked the non-tank vessel spill plans, both Alaska and US	
Checked the Garbage Management Plan	
Checked the recycling policy	
Checked the Ballast Water Report Form 33CFR151.2045	

Comments:

Ships Reports, Logs and Procedures

Discharge reporting – Checked Garbage Record Book	
Checked alarm records report (example: Wastewater, opacity, stack emissions)	
Last sludge/oily bilge discharge (date/ location / volume)	
Last oily water separator discharge (date / location / volume	
Last Bunkers (date / location / volume)	
Checked key control procedures for overboard discharge valve locks.	
Checked for proper disposal of pool water	
Checked latest 3rd party wastewater testing results	

Comments:

BLACK AND GRAY WATER SYSTEMS – SECTION B

Gray Water System

Checked that Ships Discharge Log book - up to date and complete	
Checked if prohibited Sources (hazardous materials, bilges, photo shop & print shop if hazardous wastes are commingles, hospital spaces (U.S. Only), etc)	
Checked for evidence of other drained fluids into scuppers or other entry points (photo lab, hospital, specialty spaces)	
Checked drains from spaces containing machinery (fan rooms, hotel equipment, etc.) oil free or segregated	
Checked connections to the Black Water System (if permitted in MSD Operation Manual, if so, is MSD capacity sufficient?)	
Checked connections to Ballast Water System	
Number of Gray Water Tanks	
Total tank capacity M3	
Volume Produced M3/day	
Maximum number of days in port without discharging	
Checked current capacity sufficient for persons on board and time in port?	
Checked vessel's gray water handling procedures (SMS)	
Checked that Quality Assurance / Quality Control Plan is available	
Is Gray water processed and discharged?	
Gray water disposal procedures. Shore and at Sea (company policy)	
Checked vessel's sampling procedures (if any)	
Types of test performed, equipment, and useable testing supplies readily available	
Check how often do they take samples? Review samples record book	
Checked state, federal and local regulations for gray water discharge	
Responsible crew interviewed	
Checked disposal Records	
Checked Shore (receipts available)	
Checked at sea (logs maintained)	
Checked sampling/Testing (logs maintained)	

Notes on gray water

Black Water System

Checked sources of black water	
Toilets, Urinals, scuppers	
Checked drainage from medical premises (U.S. restriction)	
Checked that black water system installed, maintained and operated in accordance with approved plans and manufacturers specifications.	
Checked Tank Capacity and Volume produced	
Checked Current volume in tanks	
Checked that Modifications are documented	
Operations and Treatment	
Checked Chemical/Biological treatment & protective equipment	
Checked Chemical Treatment level	
Checked for sufficient chemicals, additives, approved cleaning materials onboard (enzymes, "Gamazyme" chlorine)	
Checked that compressors operating, inlet filters maintained	
Checked that vacuum system operable, if applicable	
Checked that flow indicators clear - indicating flow	
Checked when the last system cleaning occurred	
Checked the macerator operating maintenance	
Checked on methods to dilute discharge	
Checked operating instructions / SMS procedures	
U.S. Marine Sanitation Device Requirements	
MSD Type	
Checked Nameplate (should be designed to resist efforts of removal or efforts to alter the information)	
Checked Certificate of Type Test. For Foreign Flag Vessels in U. S. Waters A foreign flag vessel that has a "Certificate of Type Test" under MARPOL Annex IV indicating that its sewage treatment plant meets the test requirements of Resolution MEPC.2 (VI) of the International Maritime Organization (IMO) will be accepted by the Coast Guard as being in compliance with 33 CFR 159.7(b) or (c). The Certificate of Type Test must be issued by or on behalf of a government that is a party to the MARPOL convention. Such a plant will be considered as fully equivalent to a Coast Guard certified Type II MSD as long as the unit is in operable condition. However, the unit may not be labeled as USCG certified. U.S. registered vessels will continue to be required to have Coast Guard certified MSDs per 33 CFR 159.	
Checked Proper operation (macerators, treatment chemicals) and structural integrity, no leaks	
Checked Placard is present	
Maintenance	
Check maintenance Records / Logs	
Checked one line diagram of operation	
Checked if there are any modifications to system	

Checked that routine testing done and logged	
Check any work in progress	
Check test results within required limits	
Sampling / Testing	
Check Lab analysis of fecal coliform / total suspended solids in effluent	
Check results of residual chlorine content in effluent testing	
Checked calibration records for dosing pump / proportioner	
Discharges	
Vessel has an advanced System - continuous discharge?	
Discharge Locations	
Checked sampling of effluent during discharge operations	

Notes/Findings on Blackwater

OIL POLUTION HANDLING – SECTION C

Plans and Permits

Oily Water Separator (OWS)	
Checked bilge piping, no modifications & matches approved diagram (direct to OWS, to holding tank, etc.)	
Check that system has no blanked flanges, pipe caps, or dead-ended valves, or tees on inlet or outlet piping	
Checked that there is no evidence of bolting/unbolting of associated piping segments	
Checked for recent paint on pipe segments	
Checked general housekeeping and cleanliness	
Checked OWS operation if in use, evaluate operator competency. System operating in published ranges	
Observe that unit is processing contaminated source.	
Checked for similar readings of oil content meters (units with multiple oil content meters)	
Ensure sample analyzed by meter is OWS output (trace sample line for presence of unacceptable clean water connection)	
Observe if there are obvious electrical bypasses, jumpers, extra switches on unit or meter control panel.	
Observe system has automatic re-circulate (3-way valve) or shuts down when >15ppm. Observe proper operation of valve if in use.	
Observe for proper operation of system backflush or oil purge cycle if in use.	
Visually observe processed water for gross contamination (sheen or visible oil)	
Checked comparison of ship's operational maintenance routine with actual preventative maintenance conducted.	
Checked meter calibration records	
Check strip charts if fitted	
Checked other machinery space overboard piping for unusual connections	
Checked records pertaining to OWS system repairs	
Check that oil record book corresponds to volume of bilge water, oil waste and sludge remaining onboard and with bilge waste transfer log.	
Checked that oil Pollution placard posted	
Checked Oil Transfer Procedures (cruise ships do not normally take on any fuel in Alaska)	
Checked that procedures are Posted / available in crew's language	
Checked number of persons required on duty	
Check means of communication	
Check description of transfer system including a line diagram of piping system	
Check procedure to report oil spills	
Checked standard discharge connection	

Checked Fuel / Lube sludge oil fill, vent & overflow discharge containment	
Size (<1600GT 1/2bbl, >1600GT 1 bbl)	
Fixed (if ship was built after 30Jun74)	
Drains	
Scupper Closures	
Checked prohibited oil spaces (no oil/hazardous substances carried fwd of collision bulkhead)	
Checked lighting at each transfer operations work area	
Checked lighting is adequate	
Checked lighting located / shielded to not interfere with navigation	
Checked oil transfer hose (if vessel uses to transfer in U.S. waters	
Checked condition of hose	
Checked markings on hose (MAWP, Mfg. date, test date)	
Checked hose assembly requirements (blanked off if not new, gas free, or in use)	
Check records of tests and inspections	
Checked Bilge Water Management	
Checked machinery space bilges	
Checked contamination / oil residues in bilges on bulkheads, piping, structures, within rose boxes	
Checked for leakage from systems and engines into machinery spaces (may not be seen during port operations)	
Checked engine oil usage, quantities, where lost, consumed or in bilges	
Checked for evidence of detergent usage (note-emulsions cannot separate in gravity separator and are likely to result in discharges over 15 ppm)	
Checked for hoses, fittings, and connections in areas - usage unknown	
Checked for unlocked overboard valves on bilge, bilge & ballast, salt water service	
Checked that seal management program is used	
Checked that lifeboat / security / tender vessel engineering systems leak free	
Checked ship specific bilge water management manual	
Checked that Lifeboat / security / tender vessel bilges clean	
Checked Waste / Sludge oil incineration	
Checked results of past tests and inspections	
Checked record keeping	
Checked for clean / dirty furnace, evidence of use	
Checked that operators capable	
Check air emissions if in use	
Check that estimated quantities of sludge produced - normal or excessive (fuel sludge production can exceed 2% of total fuel used)	
Check that transfer pump connected to sludge system, ashore, incinerator settler only	
Check systems with Oil to Sea Interfaces	

Checked oil lubricated stern tubes, bow and stern thruster seals, fin stabilizer seals, Azipod, etc.	
Made exterior examination in way of systems for evidence of leaking seals - (some operators use oil that sinks)	
Checked for presence of barrels, drums, hoses, pumps, and other equipment/supplies/arrangements necessary to refill systems at equipment	
Check consumption records if SMS or environmental compliance programs require such records (Oil to Sea Interface Log)	

Notes/Findings on Oil Pollution Handling

HAZARDOUS AND NON-HAZARDOUS WASTE – SECTION D

Hazardous Waste

Checked that records maintained and manifests completed for potential hazardous waste streams:	
Checked Silver Bearing Photo Processing Waste (developers, wash water, Silver Recovery Units)	
Checked X-Ray equipment waste	
Checked Print Shop Waste (inks, dyes, cleaning solvents)	
Check waste from used Solvents, Paints & Thinners	
Check on waste from fluorescent/Mercury Vapor Bulbs	
Checked on waste from batteries (universal wastes): Nickel Cadmium (Nicad); Lead Acid; Lithium; Alkaline	
Checked on waste from Pharmaceuticals/Narcotics	
Checked Dry Cleaning Waste (PERC, lint, sludge, filters, condensate water)	
Checked waste from Cleaning Solutions (de-scalers, acids, bases, other corrosives)	
Checked waste from expired pyrotechnics (from safety equipment and entertainment use)	
Checked waste from rags contaminated with hazardous wastes (also - in approved storage containers?)	
Checked waste from incinerator ash if contaminated with toxic/hazardous substances (plastics containing heavy metals)	
Review hazardous waste procedures	
Checked Hazardous Waste and Substance Offloading Plan (HWSOP)	
Checked Shipboard policies	
Checked that responsible personnel received initial and refresher training	
Check if there any evidence (e.g. lack of disposal records) of hazardous material being discharged overboard	
Check if hazardous wastes being properly stored, maintained, labeled, and placarded.	
Check that proper storage devices available	
Check that waste is not commingled	
Checked that quantities on board consistent with receipt/disposal documentation	
Checked that the crew has ready access to spill control and decontamination equipment	
Checked that records reflect reasonable accumulations of waste with respect to the capacity of the vessel, its age, technologies onboard, and amounts of repair/maintenance	
Checked that used lead acid batteries not mixed and kept dry	
Checked records of hazardous consumables kept updated Used and unused	

Hazardous Waste Notes:

Non - Hazardous Waste

Shipboard Garbage Management Plan	
Checked that shipboard garbage properly handled in accordance with Garbage Management Plan	
Checked Garbage Record Book entries	
Checked Type, amount, location, date/time for garbage entries	
Checked garbage Receipts	
Checked that each entry signed by Officer-in-Charge and each page by Master	
Checked for any reports of alleged inadequacy of port reception facilities for garbage on file	
Check that there is a designated Person-in-Charge	
Check there are no plastics or synthetics discharged overboard	
Check that waste sorted to prevent hazardous waste entering non-hazardous waste stream or incinerated. Separate defined storage areas for hazardous/non-hazardous – no commingled waste.	
Check that is in working language of crew and in English, French or Spanish	
Check that incinerator ash if discharged overboard free of plastic residue (clinkers) or free of unburned food wastes if landed ashore.	
Checked that trash chutes clean, free from oil residue (No oil stains on decks, side of hull adjacent to trash chutes)	
Check that Foreign Food Wastes handled per APHIS regulations	
Checked that Medical Wastes-incinerated or manifested as Bio-Hazardous Waste.	
Checked that non haz waste is discharged outside of special areas only (when special area restrictions are in effect)	
Checked incinerator operation observed (if in operation)	
Checked that Garbage Pollution Placards Posted	
Check for procedures to minimize amount of potential garbage	
Check if vessel is encouraging ship suppliers to consider alternate means of packing, use of other than plastics? Observe stores being loaded.	
Check if vessel is using reusable packing? Examine stockpiles for use	
Check if waste generated while in port disposed to shore reception facility prior to sailing? Observe waste being offloaded.	
Checked that ships crew is following policy for recycling. Interview crewpersons in varied work areas, casino, galley, housekeeping, etc. with recycling responsibilities for procedures used.	
Checked Maintenance and repair conducted on equipment	
Checked Incinerator	
Checked Grinders	

Checked Valves and flappers on chutes	
Checked Human Factors	
Checked that master and crew familiar with essential shipboard garbage handling procedures.	
Checked that personal protective equipment available, functioning and in place (ILO 134).	
Checked that sanitation, from a health standpoint, being maintained (ILO 147).	

Non Hazardous Waste Notes:

SANITATION – SECTION E

Checked EMPLOYEE HEALTH AND HYGIENE	
Checked for disease reporting records for food workers	
Checked that food workers not working with observable infected wound, communicable disease or persistent sneezing, runny nose, coughing, vomiting, diarrhea or jaundice	
FOOD SAFETY	
Checked that food workers are not handling ready-to-eat foods with bare hands	
Checked that food is protected during receiving, storage, preparation, display Foods must be protected to prevent environmental contamination. Food and food equipment must be stored at least 6 inches off the ground.	
Checked that thermometers conspicuous and used	
Checked that after being served or sold to a customer, food is not re-served	
Checked that shellfish tags are maintained	
EQUIPMENT	
Checked that food equipment to maintain product temperature cold holding foods at a food temperature of 41°F or less and at 135°F or higher for any foods that are hot holding	
Checked that food contact surfaces are properly washed, rinsed and sanitized Minimum manual warewashing wash solution temperature of 110°F Minimum manual hot water sanitization temperature of 171°F Minimum mechanical warewashing wash temperature in accordance with manufacturer's instruction Minimum mechanical warewash hot water sanitizing temperature of 180°F so that utensil surface temperature reaches 160°F	
Checked that accurate sanitation test kits are provided and used	
TOILET AND HANDWASHING FACILITIES	
Checked that facilities are convenient, accessible, cleaned and stocked	
Checked that toilet rooms are ventilated with self-closing door	

FACILITY / STRUCTURE	
Checked that there is complete separation of food and food equipment / utensils from living quarters, laundry	
Checked that floor, walls, and ceilings are clean	
Checked that lighting is shielded or shatterproof when needed	
SWIMMING POOL	
Checked that water is filtered in re-circulated swimming pool	
Checked that the halogen residual of ?1.0 mg/L and ? 5.0 mg/L maintained in re-circulated swimming pools	
Checked that a halogen test kit is provided and used	
Checked that swimming pools are maintained	
Checked that safety signs and equipment are provided	
Checked that first aid kit, rescue tube, Sheppard's crook or non-telescopic pole at least 12 feet long and a rope or floating lifeline separating shallow area from deep area at the 5 foot area. Depth markings, pool rules and warning signs where chemicals are stored.	
Checked that residual halogen logs measured and recorded every 4 hours during operation	
SPA	
Checked that water is filtered in whirlpool	
Checked that whirlpool spa water maintained with a pH between 7.2 and 7.8	
Checked that whirlpool spas are maintained with free residual halogen level of ? 3.0 mg/L (ppm) and ? 10 mg/L (ppm), or free residual of bromine of ? 4.0 mg/L (ppm) and ? 10 mg/L (ppm)	
Checked that whirlpool spa water changed daily	
Checked that spa is maintained	
Checked that safety signs and equipment provided	
Checked that residual halogen logs measured and recorded hourly during operation	
BARBER / HAIRDRESSER	
Checked that barber or beautician free of any observable communicable disease	
Checked that no barber shop shall be operated in any premises where food or drink is served, prepared, or stored, unless fully separated by a partition extending from floor to ceiling	
Checked that hair brushes, combs, razors, scissors, clippers, rollers, clips, pins and other instruments of the trade maintained in a clean and sanitary condition	
Checked that items are sanitized:	

Sanitation Notes

Photo 1		Photo 2	
Date and Time of Photo		Date and Time of Photo	
Caption 1		Caption 2	

Photo3		Photo 4	
Date and Time of Photo		Date and Time of Photo	
Caption 3		Caption 4	

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APPENDIX C

Blank 2009 Ocean Ranger Daily Report

CROWLEY

STATE OF ALASKA
OCEAN RANGER PROGRAM - ADEC

2009 OCEAN RANGER DAILY REPORT

Revision D – 5/17/09

Ship Name		**Ocean Ranger**	
Ship Code Name		**Report Date**	
Discharging? Y/N		**Inspection Type**	

1) Are there any potential non-compliant issues in the below report? (If yes, report will be expedited to allow immediate follow-up from ADEC):	
2) Did you have sufficient time today - observing in the non-passenger areas to accurately complete a section of the checklist?	

If NO for question 2 - list the time you were allowed in the non passenger spaces and the explanations from the cruise lines why your request for additional time was denied.

OTHER SECTIONS COMPLETED:

Section A:	Section B:	Section C:
Section D:	Section E:	Oil Spill Notification Form

Ocean Ranger Signature:

APPROVALS:

Crowley - Approved By:	Crowley Approval Date
ADEC - Approved By:	ADEC - Approval Date

SHIP INFORMATION:

Cruise Line		Ranger Report No.	
Ship Code Name		Date	
Advanced Water System?		Type:	
Date of Boarding			

OCEAN RANGER INFORMATION:

Name:	

PRE-INSPECTION:

1) Did ship discharge waste water in Alaska waters today? (If yes - fill out form as discharge ship)		5) Reviewed Non-hazardous Solid Waste Offloading and Disposal Plan	
2) Reviewed any outstanding non-compliant or open items from previous ocean ranger (pick up vessel specific notebook from environmental engineer)		6) Reviewed Hazardous Waste and Substance Offloading Plan	
3) Confirmed that there is no recent history of norovirus outbreaks - check on http://www.cdc.gov/nceh/vsp/surv/GIlist.htm -		7) Reviewed Discharge Permit	
4) Reviewed ship Vessel Specific Sampling Plan (VSSP)			

MEET WITH SHIP'S STAFF

	Met With Staff Member?	Name
Environmental Officer		
Captain		
Chief Engineer		
Staff Captain		
Staff Chief Engineer		
1st Engineer		
Environmental Engineer		
Others		

Notes:

SECURITY

Vessel Security Plan Briefing / Awareness briefing (house rules, briefing for contractors)		Any current security threats?	
		Select current MARSEC level	

Notes:

SHIP TOUR

1. Garbage handling and recycling		12. On board wastewater sampling, if any	
2. Hazardous waste and tank storage / container strategy		13. General condition of sample valves	
3. Sewage and graywater treatment and discharge, including tank storage (ship) systems note: request that AWWTS operator accompany observer during observation / tracing of the system. (dischargers only) For non dischargers, review the tank storage plan and valve locking and		14. Spot check records related to these programs including discharge logs and SMS	

discharge regime.			
4. Observe overboard valve operation and crossover piping regime (if applicable)		15. Check records for refrigerant usage.	
5. Waste incineration and sludge handling (including biosolids)		16. No direct gas turbine washdown within 3 NM / collected in separate system. Record date/volumes/discharges/ in notes. (Does NOT apply to turbochargers)	
6. Sanitation in food preparation areas		17. Was boiler wash water discharged in port?	
7. Oily water separator (OWS)		18. Was boiler wash water discharged underway in Alaska waters?	
8. Stack emissions minimization and monitoring		19. Was boiler blowdown water discharged in port?	
9. Ballast discharge, if any.		20.Was boiler blowdown water discharged underway in Alaska waters?	
10. Overboard piping, valves, and overboard valve monitoring systems		21. Are seawater piping Biofouling preventive systems used? If yes describe type in notes: Note the chemicals used and what efforts are made to minimize usage. (VGP EPA item 2.2.20)	
11. Boiler blow down and chemical treated cooling water handling if applicable.		22. Does ship have any suspected cases of swine flu?	

Notes:

DAILY CHECKS AT SEA

Vessel Location:

1. Accompany the environmental officer on daily rounds		6. Accompany any engineer on his/her maintenance round to witness service and maintenance of MSD systems	
2. Observing the daily wastewater lab analysis (if applicable)		7. For ships that are not authorized to discharge wastewater in Alaska, overboard wastewater discharge valves verified closed and sealed in Alaska waters.	
3. Cross checking automated overboard discharge alarm records against log entries made in the Oil Discharge Record Book and the State of Alaska Blackwater and Graywater Discharge Record book.		8. Observe tank levels of head tanks for "Oil to Sea Interface" areas (stern tubes, bow and stern thruster seals, fin stabilizer seals, etc.) Look for any significant level changes. *OR* observed for traces of oil in water during maneuvering.	
4. Check to ensure that wastewater outflow quality monitors, if installed, are functioning properly. (Effluent monitors, usually turbidity monitors, at pre-set detection readings, will stop over board discharge and redirect the effluent to a tank or back through the wastewater treatment system.)		9. Check ship daily logs and reports for any discharges, maintenance, repairs, or addition of oil to "oil to sea interface" head tanks. • Discharge report: ballast water, solid waste, black water, gray water, other • Machinery reports AWP, MSD, OWS, Incinerator, Commutator, Compactor, other	
5. Observe any non-routine or non-automatic discharges (oily water separator discharge, ballast , or any discharges through valves that are usually locked)		10. Air Emissions meet 18AAC50 - Opacity monitoring system (recorders and alarms working)	

Notes for Daily at Sea Checks:

DAILY CHECKS IN PORT

Vessel Location

1. Waste management and waste offload and condition of the off load pallets and other carriers. Review manifests and		5. Observe repairs, maintenance, cleaning and other operations that may affect the wastewater treatment	

pickup arrangements.		plant effluent quality. (example - back flush cleaning with chemicals)	
2. If the ship is at anchor, initial boat lowering and operations.		6. Observe special actions to prevent spills, overflows of tanks, etc.	
3. Potable water hookups. Are they according to procedures for ship and the supplier.		7. Observe discharge of wastewater to shore connection (volume/procedures) (Normally only done at the South Franklin Dock in Juneau for Graywater)	
4. Observe wastewater sampling by contractor (if done this port). If no, skip to 5		8. Deck wash down / hull cleaning (above waterline) Minimize debris and residues/ minimize paint, rust and materials entering water during maintenance / non toxic cleaners (VGP EPA item)	
4a. Was a sampling event conducted by vessel operators, contractors, ADEC, or Coast Guard		9. Anchor chain washdown – log keeping/ rinsing chain locker (VGP EPA item)	
4b. Was Ocean Ranger present during the sampling event?		10. Fire main discharge only in emergencies and anchor wash down. (VGP EPA item)	

Comments on Sampling Event

11. Was there a hazardous waste offload event?	
12. Was there a non-hazardous waste offload event? (If 11 and 12 are answered NO then skip 13 to 20)	
13. The harbors, landfills, or other offloading or disposal facilities in the state used: and whether the off-load was compatible with the non-hazardous solid waste offloading and disposal plan filed as required by 18ACC69.035	
14, The harbors, landfills, or other offloading or disposal facilities in the state used: and whether the off-load was compatible with the hazardous waste and substance offloading plan filed as required by 18ACC69.040	
15, Name and address of each contractor used for offloading	

16. Estimate of volume of each waste type	
17. Offloading or disposal method	
18. Describe the controlled storage, processing, or disposal facilities or treatment used	
19. Describe the vessel crew training in offloading procedures	
20. Number on the provided material safety data sheet (MSDS) if applicable	

Notes for Daily in Port Checks:

DISCHARGE SHIPS – *vessels actively discharging waste water under the Alaska General Permit while in Alaska waters.*

At Sea Checks

1. Number of Passengers and Crew currently onboard	
2. The daily estimated volume of discharge overboard by type; (black, gray, or mixed)	
3. Description of how the daily volume by discharge type was estimated	
4. Time/date expressed in a 24-hour clock format at the beginning and end of each vessel route	

In Port Checks

5. The daily estimated volume of discharge by type; (Gray & Black water)	
6. Description of how the daily volume by discharge type was estimated	
7. Time/date expressed in a 24-hour clock format at the beginning and end of port call	
8. Estimate average flow rate for (Gray & Black) water	

Notes for Discharge Ships

NON DISCHARGE SHIPS - *vessels not discharging in Alaska waters - whether they have been issued an Alaska General Permit or not.*

At Sea Checks

1. Number of Passengers and Crew currently onboard		2. Was there a wastewater discharge at sea today? If no – skip to 13	
3. Date discharge started – (outside Alaska waters)		4. Time discharge started (2400)	
5. Date discharge ended – (outside Alaska waters)		6. Time discharge ended (2400)	
7. Latitude and Longitude at start of discharge – (from log)			
8. Latitude and Longitude at end of discharge – (from log)			
9. Overboard Discharge Valves Used			
10. Type of discharge: (treated black, gray, or mixed waste water or untreated) - outside Alaska waters			
11. Volume and average discharge rate for each overboard discharge valve			
12. Individual in charge of discharge operations – if more than one discharge event today, enter data in the "notes for non discharge ships" section			

In Port Checks

Was there a wastewater discharge today?	

Both at Sea and In Port

13. Total volume (M3) of waste water in holding tanks	
14. Time when tank volumes were taken	
15. Percent of holding capacity (current volume compared to total holding capacity from VSSP)	
16. Is there sufficient waste water holding capacity until the next scheduled discharge (outside Alaska waters)?	

Notes for Non Discharge Ships

LOG OF OCEAN RANGER EVENTS OF THE DAY

Was ship in Alaska waters for 24 hours?

Times that ship exited or entered Alaska waters on this day.

Daily Log of Events

DOCUMENT REVIEW - SECTION A

Agency Reports and Inspection Records

Review ADEC inspection reports (if any)	
Review ADEC sampling audit reports (if any)	
Checked authorization to discharge (ADEC letter and USCG letter if applicable)	
Checked source Reduction Evaluation Plan (if applicable)	

Comments:

Plans and Permits

1. Current Pollution Prevention Records	
Checked International Oil Pollution Prevention Certificate Expiration Date	
Checked Person-in -charge (certificated/licensed)	
Checked declaration of inspection (available and retained for at least one month)	
Checked PMS records for required maintenance for the selected waste stream for verification	
Checked SMS incorporates PMS activities and logs for all Waste Streams	
Checked Logs to track oil usage in systems having oil to sea interfaces (if applicable)	
Checked deck maintenance logs – materials used and processes used other than routine cleaning.	

Comments:

2. Oil Record Book	
Checked each operation signed by person-in-charge	
Checked each complete page signed by master	
Checked that book maintained for 3 years	
Checked for use of proper codes and version for vessel	
Checked that transfer receipts/manifest match oil record book entries	
Checked that OWS rates not exceeding design criteria	
Checked that incinerator rates not exceeding design criteria	
Checked for consistent bilge water management patterns	
Checked comparison of oil record book entries to vessel's daily tank sounding book	

Comments:

3. Shipboard Oil Pollution Emergency Plan	
Checked approval by Administration (class society)	
Checked that document is updated and current	

Checked that document is in English and working language of crew	
Checked that contact numbers for National and Local Authorities are correct (Port Authorities for ports visited not every COTP)	
Checked the immediate Actions List	
Checked the Non Mandatory Provisions (if listed in SOPEP). Spill kits located and inspected	
4. MARPOL Annex V (Garbage)	
Checked that placards are posted	
Checked Record book	
Checked garbage management plan	
5. Does vessel have an International Air Pollution Prevention (IAPP) or Engine International Air Pollution Prevention (EIAPP) certificate for diesel engines above 130KW?	
6. Safety Management System - checked the relevant parts of the Safety management System (SMS) which describes the operation and maintenance of the various pollution control devices.	
7. Checked General Discharge Permit (AS 46.03.462 issued by ADEC)	
8. Checked the Approved Vessel Specific Sampling Plan (18 AAC 69.030)	
9. Checked the Approved Non-Hazardous Solid Waste Offloading and Disposal Plan (AS 46.03.47(e)(1) and 18 AAC 69.035)	
10. Checked the Hazardous Waste and Substance Offloading Plan (HWSOP) (18 AAC 69.040(b))	
11. Checked the current Alaska vessel registration and notarization papers	
12. Checked the approved Hazardous Waste and Substance Offloading Plan (few, if any, ships discharge waste in Alaska. There may not be a plan but a letter to ADEC stating as such)	
13. Checked certification from antifouling paint supplier that TBT-free coatings have been applied to the vessel.	
14. Checked tank plan and tank operation plan and records	
15. Checked the overboard valve "opening plans" discharge procedure.	
16. Checked the procedure to notify agencies for non-conformities, etc.	
17. Checked the non-tank vessel spill plans, both Alaska and US	
18. Checked the Garbage Management Plan	
19. Checked the recycling policy – Plans, Logs, and Records	
20. Checked the Ballast Water Report Form 33CFR151.2045	

Comments:

Ships Reports, Logs and Procedures

Discharge reporting – Checked Garbage Record Book	
Checked alarm records report (example: Wastewater, opacity, stack emissions)	
Last sludge/oily bilge discharge (date/ location / volume) – from logs books when outside of Alaska waters.	
Last oily water separator discharge (date / location / volume – from logs books when outside of Alaska waters.	
Last Bunkers (date / location / volume) – from logs books when outside of Alaska waters.	
Checked key control procedures for overboard discharge valve locks.	
Checked for proper disposal of pool water and records of direct discharge in Alaska waters including concentration of Halogens/ Chlorine/ Bromine. List volumes and locations where discharges occurred in notes below. (VGP EPA item)	
Checked latest 3rd party wastewater testing results	

Comments:

BLACK AND GRAY WATER SYSTEMS – SECTION B

Gray Water System

1. Checked that Ships Discharge Log book - up to date and complete	
2. Checked that prohibited sources [hazardous materials, bilges, photo shop & print shop (if hazardous wastes are commingled) or medical waste (e.g. syringes, blood soaked gauze, human tissue, etc.)] do not enter graywater system.	
3. Checked for evidence of other drained fluids into scuppers or other entry points (photo lab, hospital, specialty spaces)	
4. Checked drains from spaces containing machinery (from fan rooms, hotel equipment, elevator pits, effluent/condensate, etc.) are oil free before entering waste water systems(s) or is sent to the bilges/ oil water separation system	
5. Checked connections to the Black Water System (if permitted in MSD Operation Manual, if so, is MSD capacity sufficient?)	
6. Checked that reverse osmosis /distillers/water makers – the brine or reject water shall not contain hazardous waste (VGP EPA item)	
7. Checked connections to Ballast Water System	
8. Number of Gray Water Tanks (from VSSP)	
9. Total tank capacity M3 (from VSSP)	
10. Volume Produced M3/day (from VSSP)	
11. Maximum number of days in port without discharging (from VSSP)	
12. Checked current capacity sufficient for persons on board and time in port?	

13. Checked vessel's gray water handling procedures (SMS)	
14. Checked that Quality Assurance / Quality Control Plan is available	
15. Is Gray water processed and discharged?	
16. Gray water disposal procedures. Shore and at Sea (company policy)	
17. Checked vessel's sampling procedures (if any)	
18. Types of test performed, equipment, and useable testing supplies readily available	
19. Check how often do they take samples? Review samples record book	
20. Checked state, federal and local regulations for gray water discharge	
21. Responsible crew interviewed	
22. Checked disposal Records	
Checked Shore (receipts available)	
Checked at sea (logs maintained)	
Checked sampling/Testing (logs maintained)	

Notes on gray water

Black Water System

23. Checked sources of black water	
Toilets, Urinals, scuppers	
Checked drainage from medical premises (U.S. restriction)	
Checked that black water system installed, maintained and operated in accordance with approved plans and manufacturers specifications.	
Checked Tank Capacity and Volume produced	
Checked Current volume in tanks	
Checked that Modifications are documented	
24. Operations and Treatment	
Checked Chemical/Biological treatment & protective equipment	
Checked Chemical Treatment level	
Checked for sufficient chemicals, additives, approved cleaning materials onboard (enzymes, "Gamazyme" chlorine)	
Checked that compressors operating, inlet filters maintained	
Checked that vacuum system operable, if applicable	
Checked that flow indicators clear - indicating flow	
Checked when the last system cleaning occurred	
Checked the macerator operating maintenance	
Checked on methods to dilute discharge	
Checked operating instructions / SMS procedures	
25. U.S. Marine Sanitation Device Requirements	

MSD Type	
Checked Nameplate (should be designed to resist efforts of removal or efforts to alter the information)	
Checked Certificate of Type Test. For Foreign Flag Vessels in U. S. Waters A foreign flag vessel that has a "Certificate of Type Test" under MARPOL Annex IV indicating that its sewage treatment plant meets the test requirements of Resolution MEPC.2 (VI) of the International Maritime Organization (IMO) will be accepted by the Coast Guard as being in compliance with 33 CFR 159.7(b) or (c). The Certificate of Type Test must be issued by or on behalf of a government that is a party to the MARPOL convention. Such a plant will be considered as fully equivalent to a Coast Guard certified Type II MSD as long as the unit is in operable condition. However, the unit may not be labeled as USCG certified. U.S. registered vessels will continue to be required to have Coast Guard certified MSDs per 33 CFR 159.	
Checked Proper operation (macerators, treatment chemicals) and structural integrity, no leaks	
Checked Placard is present	
26. Maintenance	
Check maintenance Records / Logs	
Checked one line diagram of operation	
Checked if there are any modifications to system	
Checked that routine testing done and logged	
Check any work in progress	
Check test results within required limits	
27. Sampling / Testing	
Check Lab analysis of fecal coliform / total suspended solids in effluent	
Check results of residual chlorine content in effluent testing	
Checked calibration records for dosing pump / proportioner	
28. Discharges	
Vessel has an advanced System - continuous discharge?	
Discharge Locations	
Checked sampling of effluent during discharge operations	

Notes/Findings on Blackwater

OIL POLUTION HANDLING – SECTION C

Plans and Permits

1. Oily Water Separator (OWS)	
Checked bilge piping, no modifications & matches approved diagram (direct to OWS, to holding tank, etc.)	
Check that system has no blanked flanges, pipe caps, or dead-ended valves, or tees on inlet or outlet piping	
Checked that there is no evidence of bolting/unbolting of	

associated piping segments	
Checked for recent paint on pipe segments	
Checked general housekeeping and cleanliness	
Checked OWS operation if in use, evaluate operator competency. System operating in published ranges	
Observe that unit is processing contaminated source.	
Checked for similar readings of oil content meters (units with multiple oil content meters)	
Ensure sample analyzed by meter is OWS output (trace sample line for presence of unacceptable clean water connection)	
Observe if there are obvious electrical bypasses, jumpers, extra switches on unit or meter control panel.	
Observe system has automatic re-circulate (3-way valve) or shuts down when >15ppm. Observe proper operation of valve if in use.	
Observe for proper operation of system backflush or oil purge cycle if in use.	
Visually observe processed water for gross contamination (sheen or visible oil)	
Checked comparison of ship's operational maintenance routine with actual preventative maintenance conducted.	
Checked meter calibration records	
Check strip charts if fitted	
Checked other machinery space overboard piping for unusual connections	
Checked records pertaining to OWS system repairs	
Check that oil record book corresponds to volume of bilge water, oil waste and sludge remaining onboard and with bilge waste transfer log.	
2. Checked that oil Pollution placard posted	
3. Checked Oil Transfer Procedures (cruise ships do not normally take on any fuel in Alaska)	
Checked that procedures are Posted / available in crew's language	
Checked number of persons required on duty	
Check means of communication	
Check description of transfer system including a line diagram of piping system	
Check procedure to report oil spills	
Checked bunkering stations, if applicable. Bunkering manifolds are usually co-located with the sewage pump out manifold.	
4. Checked standard discharge connection	
5. Checked Fuel / Lube sludge oil fill, vent & overflow discharge containment	
Checked Size (<1600GT 1/2bbl, >1600GT 1 bbl)	
Checked Fixed Containment (if ship was built after 30Jun74)	
Checked Drains	
Checked Scupper Closures	
6. Checked prohibited oil spaces (no oil/hazardous substances carried	

fwd of collision bulkhead)	
7. Checked lighting at each transfer operations work area	
Checked lighting is adequate	
Checked lighting located / shielded to not interfere with navigation	
8. Checked Bilge Water Management	
Checked machinery space bilges	
Checked contamination / oil residues in bilges on bulkheads, piping, structures, within rose boxes	
Checked for leakage from systems and engines into machinery spaces (may not be seen during port operations)	
Checked engine oil usage, quantities, where lost, consumed or in bilges	
Checked for evidence of detergent usage in oily water separator / related equipment or used to remove appearance of sheen (VGP EPA item)	
Checked for hoses, fittings, and connections in areas - usage unknown	
Checked for unlocked overboard valves on bilge, bilge & ballast, salt water service	
Checked that seal management program is used	
Checked that lifeboat / security / tender vessel engineering systems leak free	
Checked oil and grease from topside equipment (winches, motors, etc.)	
Checked ship specific bilge water management manual	
Checked that Lifeboat / security / tender vessel bilges clean	
9. Checked Waste / Sludge oil incineration	
Checked results of past tests and inspections	
Checked record keeping	
Checked for clean / dirty furnace, evidence of use	
Check air emissions (if incinerator is in use)	
Check that estimated quantities of sludge produced - normal or excessive (fuel sludge production can exceed 2% of total fuel used)	
Check that transfer pump connected to sludge system, ashore, incinerator settler only	
10. Check systems with Oil to Sea Interfaces	
Checked oil lubricated stern tubes, bow and stern thruster seals, fin stabilizer seals, Azipod, etc.	
Made exterior examination in way of systems for evidence of leaking seals - (some operators use oil that sinks)	
Checked for presence of barrels, drums, hoses, pumps, and other equipment/supplies/arrangements necessary to refill systems at equipment	
Check consumption records if SMS or environmental compliance programs require such records (Oil to Sea Interface Log)	

Notes/Findings on Oil Pollution Handling

HAZARDOUS AND NON-HAZARDOUS WASTE – SECTION D

Hazardous Waste

1. Checked that records maintained and manifests completed for potential hazardous waste streams:	
Checked Silver Bearing Photo Processing Waste (developers, wash water, Silver Recovery Units)	
Checked X-Ray equipment waste	
Checked Print Shop Waste (inks, dyes, cleaning solvents)	
Check waste from used Solvents, Paints & Thinners	
Check on waste from fluorescent/Mercury Vapor Bulbs	
Checked on waste from batteries (universal wastes): Nickel Cadmium (Nicad); Lead Acid; Lithium; Alkaline	
Checked on waste from Pharmaceuticals/Narcotics	
Checked Dry Cleaning Waste (PERC, lint, sludge, filters, condensate water)	
Checked waste from Cleaning Solutions (de-scalers, acids, bases, other corrosives)	
Checked waste from expired pyrotechnics (from safety equipment and entertainment use)	
Checked waste from rags contaminated with hazardous wastes (also - in approved storage containers?)	
Checked waste from incinerator ash if contaminated with toxic/hazardous substances (plastics containing heavy metals)	
2. Review hazardous waste procedures	
Checked Hazardous Waste and Substance Offloading Plan (HWSOP)	
Checked Shipboard policies	
3. Checked that responsible personnel received initial and refresher training	
4. Check if there any evidence (e.g. lack of disposal records) of hazardous material being discharged overboard	
5. Check if hazardous wastes being properly stored, maintained, labeled, and placarded.	
6. Check that proper storage devices available	
7. Check that waste is not commingled	
8. Checked that quantities on board consistent with receipt/disposal documentation	
9. Checked that the crew has ready access to spill control and decontamination equipment	
10. Checked that records reflect reasonable accumulations of waste with respect to the capacity of the vessel, its age, technologies onboard, and amounts of repair/maintenance	
11. Checked that used lead acid batteries are not mixed with other waste and are kept dry	

12. Checked records of hazardous consumables are kept updated "Used" and "Unused"	
13. Checked hazardous waste processing including pesticides, photo labs, and dry cleaning	
14. Checked disposal of incinerator ash / residue and method of handling.	
15. Checked disposal of bio sludges, etc. and method of handling.	

Hazardous Waste Notes:

Non - Hazardous Waste

16. Shipboard Garbage Management Plan	
Checked that shipboard garbage properly handled in accordance with Garbage Management Plan	
Checked Garbage Record Book entries	
Checked Type, amount, location, date/time for garbage entries	
Checked garbage Receipts	
Checked that each entry signed by Officer-in-Charge and each page by Master	
Checked for any reports of alleged inadequacy of port reception facilities for garbage on file	
Check that there is a designated Person-in-Charge	
Check there are no plastics or synthetics discharged overboard	
Check that waste sorted to prevent hazardous waste entering non-hazardous waste stream or incinerated. Separate defined storage areas for hazardous/non-hazardous – no commingled waste.	
Check that garbage plan is in working language of crew and in English, French or Spanish	
Check that incinerator ash if discharged overboard free of plastic residue (clinkers) or free of unburned food wastes if landed ashore.	
Checked that trash chutes clean, free from oil residue (No oil stains on decks, side of hull adjacent to trash chutes)	
Check that Foreign Food Wastes handled per APHIS regulations	
Checked that Medical Wastes-incinerated or manifested as Bio-Hazardous Waste.	
Checked that non hazardous waste is discharged outside of special areas only (when special area restrictions are in effect)	
Checked incinerator operation (observed if in operation)	
17. Checked that Garbage Pollution Placards Posted	
18. Check for procedures to minimize amount of potential garbage	
Check if vessel is encouraging ship suppliers to consider alternate means of packing, use of other than plastics? Observe stores being loaded.	

Check if vessel is using reusable packing? Examine stockpiles for use	
Check if waste generated while in port disposed to shore reception facility prior to sailing? Observe waste being offloaded.	
19. Recycling - Checked that ships crew is following policy for recycling. Interview crewpersons in varied work areas, casino, galley, housekeeping, etc. with recycling responsibilities for procedures used.	
20. Checked Maintenance and repair conducted on equipment	
Checked Incinerator	
Checked Grinders	
Checked Valves and flappers on chutes	
21. Checked Human Factors	
Checked that master and crew familiar with essential shipboard garbage handling procedures.	
Checked that personal protective equipment available, functioning and in place (ILO 134).	
Checked that sanitation, from a health standpoint, being maintained (ILO 147).	

Non Hazardous Waste Notes:

SANITATION – SECTION E

HEALTH AND HYGIENE ISSUES	
Checked for disease reporting records for food workers	
Checked that food workers not working with observable infected wound, communicable disease or persistent sneezing, runny nose, coughing, vomiting, diarrhea or jaundice	
Checked medical facilities and bio hazard waste handling	
Checked production and handling of potable water	
FOOD SAFETY	
Checked that food workers are not handling ready-to-eat foods with bare hands	
Checked that food is protected during receiving, storage, preparation, display Foods must be protected to prevent environmental contamination. Food and food equipment must be stored at least 6 inches off the ground.	
Checked that thermometers conspicuous and used	
Checked that after being served or sold to a customer, food is not re-served	
Checked that shellfish tags are maintained	
EQUIPMENT	
Checked that food equipment to maintain product temperature cold holding foods at a food temperature of 41°F or less and at 140°F or higher for any foods that are hot holding	
Checked that food contact surfaces are properly washed, rinsed	

and sanitized Minimum manual warewashing wash solution temperature of 110°F Minimum manual hot water sanitization temperature of 171°F Minimum mechanical warewashing wash temperature in accordance with manufacturer's instruction Minimum mechanical warewash hot water sanitizing temperature of 180°F so that utensil surface temperature reaches 160°F	
TOILET AND HANDWASHING FACILITIES	
Checked that facilities are convenient, accessible, cleaned and stocked	
Checked that toilet rooms are ventilated with self-closing door	
FACILITY / STRUCTURE	
Checked that there is complete separation of food and food equipment / utensils from living quarters, laundry	
Checked that floor, walls, and ceilings are clean	
Checked that lighting is shielded or shatterproof when needed	
Checked that phosphate free detergents and non-toxic degreasers are used in sculleries and galleys. (VGP EPA item)	
SWIMMING POOL	
Checked that water is filtered in re-circulated swimming pool	
Checked that free residual halogen of ≥ 1.0 and ≤5.0 mg/L (ppm) shall be maintained in re-circulated swimming pools.	
Checked that a halogen test kit is provided and used	
Checked that swimming pools are maintained	
Checked that safety signs and equipment are provided	
Checked that first aid kit, rescue tube, Sheppard's crook or non-telescopic pole at least 12 feet long and a rope or floating lifeline separating shallow area from deep area at the 5 foot area. Depth markings, pool rules and warning signs where chemicals are stored.	
Checked that residual halogen logs measured and recorded every 4 hours during operation	
SPA	
Checked that water is filtered in whirlpool	
Checked that whirlpool spa water maintained with a pH between 7.2 and 7.8	
Checked that whirlpool spas are maintained with free residual chlorine of ≥ 3.0 mg/L (ppm) and ≤ 10.0 mg/L (ppm); or free residual bromine of ≥ 4.0 mg/L (ppm) and ≤ 10.0 mg/L (ppm).	
Checked that whirlpool spa water changed daily	
Checked how pool/spa water is handled / sampled (VGP EPA item)	
Is pool/spa water discharged in Alaska waters?	
Checked that spa is maintained	
Checked that safety signs and equipment provided	
Checked that residual halogen logs measured and recorded hourly during operation	
BARBER / HAIRDRESSER	
Checked that barber or beautician free of any observable communicable disease	
Checked that no barber shop shall be operated in any premises	

where food or drink is served, prepared, or stored, unless fully separated by a partition extending from floor to ceiling	
Checked that hair brushes, combs, razors, scissors, clippers, rollers, clips, pins and other instruments of the trade maintained in a clean and sanitary condition	
Checked that items are sanitized:	

Sanitation Notes

APPENDIX D

ADEC Oil & Hazardous Substances Spill Notification Report

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

OIL & HAZARDOUS SUBSTANCES SPILL NOTIFICATION

PERSON REPORTING:	VESSEL STATIONED ABOARD:	PHONE NUMBER or EMAIL:
DATE & TIME OF SPILL:	DATE & TIME DISCOVERED:	PRODUCT SPILLED:
DISCRIPTION OF LOCATION:		LATITUDE: LONGITUDE:

QUANTITY SPILLED: ☐ gallons ☐ pounds

AREA AFFECTED:

COLOR AND APPEARANCE: ☐ silver/gray ☐ rainbow ☐ metallic ☐ transition ☐ dark/true

POTENTIAL RESPONSIBLE PARTY (PRP):

Name/Business:

Vessel Name:

Mailing Address:

Contact Name:

Contact Number:

IS PRP VESSEL AWARE OF INCIDENT? ☐ yes ☐ no

WILL VESSEL BE SELF-REPORTING INCIDENT TO ADEC-SPAR? ☐ yes ☐ no

SOURCE OF SPILL: ☐ >400 GT Vessel

CAUSE OF SPILL:

CLEANUP ACTIONS:

COMMENTS:

DEC USE ONLY

ADEC SPILL #	ADEC FILE #	ADEC LC
SPILL NAME, IF ANY:	CASE MANAGER:	DATE / TIME REPORTED:

DEC RESPONSE ☐ phone follow-up ☐ field visit ☐ took report

CASELOAD CODE ☐ First and Final ☐ Open/No LC ☐ LC Assigned

CLEANUP CLOSURE ACTION ☐ NFA ☐ Monitoring ☐ Transferred to CS or STP

Status of Case ☐ **Open** ☐ **Closed** **Date Case Closed >**

COMMENTS:

REPORT PREPARED BY:	DATE :

APPENDIX E

Blank 2010 Ocean Ranger Daily Report

CROWLEY

STATE OF ALASKA
OCEAN RANGER PROGRAM - ADEC

2010 OCEAN RANGER DAILY REPORT

Revision G – 6/21/10

Ship Name		**Ocean Ranger**	
Ship Code Name		**Report Date**	
Discharging? Y/N		**Inspection Type**	

1) Are there any potential non-compliant issues in the below report? (If yes, report will be expedited to allow immediate follow-up from ADEC):	
2) Did you have sufficient time today - observing in the non-passenger areas to accurately complete a section of the checklist?	

If NO for question 2 - list the time you were allowed in the non passenger spaces and the explanations from the cruise lines why your request for additional time was denied.

OTHER SECTIONS COMPLETED:

Seasonal Information		
Section A:	Section B:	Section C:
Section D:	Section E:	Oil Spill Notification Form

Ocean Ranger Signature:

APPROVALS:

Crowley - Approved By:	Crowley Approval Date
ADEC - Approved By:	ADEC - Approval Date

SHIP INFORMATION:

Cruise Line		Ranger Report No.	
Ship Code Name		Date	
Advanced Water System?		Type:	
Date of Boarding			

OCEAN RANGER INFORMATION:

Name:	

PRE-INSPECTION:

1) Did ship discharge waste water in Alaska waters today? (If yes - fill out form as discharge ship)		5) Reviewed Non-hazardous Solid Waste Offloading and Disposal Plan	
2) Reviewed any outstanding non-compliant or open items from previous ocean ranger (pick up vessel specific notebook from environmental engineer)		6) Reviewed Hazardous Waste and Substance Offloading Plan	
3) Confirmed that there is no recent history of norovirus outbreaks - check on http://wwwn.cdc.gov/InspectionQueryTool/InspectionSearch.aspx		7) Reviewed Discharge Permit	
4) Reviewed ship Vessel Specific Sampling Plan (VSSP)			

Notes:

MEET WITH SHIP'S STAFF

	Met With Staff Member?	Name
Environmental Officer		
Captain		
Chief Engineer		

Staff Captain		
Staff Chief Engineer		
1st Engineer		
Environmental Engineer		
Others		

Notes:

SECURITY

Vessel Security Plan Briefing / Awareness briefing (house rules, briefing for contractors)		Any current security threats?	
		Select current MARSEC level	

Notes:

SHIP TOUR

1. Garbage handling and recycling		12. On board wastewater sampling, if any	
2. Hazardous waste and tank storage / container strategy		13. General condition of sample valves	
3. Sewage and graywater treatment and discharge, including tank storage (ship) systems note: request that AWWTS operator accompany observer during observation / tracing of the system. (dischargers only) For non dischargers, review the tank storage plan and valve locking and discharge regime.		14. Spot check records related to these programs including discharge logs and SMS	
4. Observe overboard valve operation and crossover piping regime (if applicable)		15. Check records for refrigerant usage.	
5. Waste incineration		16. No direct gas turbine	

and sludge handling (including biosolids)		washdown within 3 NM / collected in separate system. Record date/volumes/discharges/ in notes. (Does NOT apply to turbochargers)	
6. Sanitation in food preparation areas		17. Was boiler wash water discharged in port?	
7. Oily water separator (OWS)		18. Was boiler wash water discharged underway in Alaska waters?	
8. Stack emissions minimization and monitoring		19. Was boiler blowdown water discharged in port?	
9. Ballast discharge, if any.		20.Was boiler blowdown water discharged underway in Alaska waters?	
10. Overboard piping, valves, and overboard valve monitoring systems		21. Are seawater piping Biofouling preventive systems used? If yes describe type and biological agent used in notes: (copper ions, chlorine, chemicals, ultrasonic)	
11. Boiler blow down and chemical treated cooling water handling if applicable.		22. What efforts are made to minimize usage of anti biofouling system in port. (VGP EPA item 2.2.20)	
		23. Does ship have any suspected cases of influenza like illness?	

Notes:

DAILY CHECKS AT SEA

Vessel Location:

1. Accompany the environmental officer on daily rounds		6. Accompany any engineer on his/her maintenance round to witness service and maintenance of MSD systems	

2. Observing the daily wastewater lab analysis (if applicable)		7. For ships that are not authorized to discharge wastewater in Alaska, overboard wastewater discharge valves verified closed and sealed in Alaska waters.	
3. Cross checking automated overboard discharge alarm records against log entries made in the Oil Discharge Record Book and the State of Alaska Blackwater and Graywater Discharge Record book.		8. Observe tank levels of head tanks for "Oil to Sea Interface" areas (stern tubes, bow and stern thruster seals, fin stabilizer seals, etc.) Look for any significant level changes. *OR* observed for traces of oil in water during maneuvering.	
4. Check to ensure that wastewater outflow quality monitors, if installed, are functioning properly. (Effluent monitors, usually turbidity monitors, at pre-set detection readings, will stop over board discharge and redirect the effluent to a tank or back through the wastewater treatment system.)		9. Check ship daily logs and reports for any discharges, maintenance, repairs, or addition of oil to "oil to sea interface" head tanks. • Discharge report: ballast water, solid waste, black water, gray water, other • Machinery reports AWP, MSD, OWS, Incinerator, Commutator, Compactor, other	
5. Observe any non-routine or non-automatic discharges (oily water separator discharge, ballast , or any discharges through valves that are usually locked)		10. Air Emissions meet 18AAC50 - Opacity monitoring system (recorders and alarms working)	

Notes for Daily at Sea Checks:

DAILY CHECKS IN PORT

Vessel Location

1. Waste management and waste offload and condition of the off load pallets and other carriers. Review manifests and pickup arrangements.		5. Observe repairs, maintenance, cleaning and other operations that may affect the wastewater treatment plant effluent quality. (example - back flush cleaning with chemicals)	
2. Observed initial lifeboat (or lifeboat/tender) lowering and operations.		6. Observe special actions to prevent spills, overflows of tanks, etc.	

3. Potable water hookups. Are they according to procedures for ship and the supplier.		7. Observe discharge of wastewater to shore connection (volume/procedures) (Normally only done at the South Franklin Dock in Juneau for Graywater)	
4. Observe wastewater sampling by contractor (if done this port). If no, skip to 5		8. Deck wash down / hull cleaning (above waterline) Minimize debris and residues/ minimize paint, rust and materials entering water during maintenance / non toxic cleaners (VGP EPA item)	
4a. Was a sampling event conducted by vessel operators, contractors, ADEC, or Coast Guard		9. Anchor chain washdown (VGP EPA item)	
4b. Was Ocean Ranger present during the sampling event?		10. Fire main discharge only in emergencies and anchor wash down. (VGP EPA item)	

Comments on Sampling Event

11. Was there a hazardous waste offload event?	
12. Was there a non-hazardous waste offload event? (If 11 and 12 are answered NO then skip 13 to 20)	
13. The harbors, landfills, or other offloading or disposal facilities in the state used: and whether the off-load was compatible with the non-hazardous solid waste offloading and disposal plan filed as required by 18ACC69.035	
14, The harbors, landfills, or other offloading or disposal facilities in the state used: and whether the off-load was compatible with the hazardous waste and substance offloading plan filed as required by 18ACC69.040	
15, Name and address of each contractor used for offloading / vessel name (if applicable)	
16. Estimate of volume of each waste type	
17. Offloading or disposal method	
18. Describe the controlled storage, processing, or disposal facilities or treatment used	
19. Describe the vessel crew training in offloading procedures	
20. Number on the provided material safety data sheet (MSDS) if applicable	

Notes for Daily in Port Checks:

DISCHARGE SHIPS – *vessels actively discharging waste water under the Alaska General Permit while in Alaska waters.*

At Sea Checks

1. Number of Passengers and Crew currently onboard	
2. The daily estimated volume of discharge overboard by type; (black, gray, or mixed)	
3. Description of how the daily volume by discharge type was estimated	
4. Time/date expressed in a 24-hour clock format at the beginning and end of each vessel route	

In Port Checks

5. The daily estimated volume of discharge by type; (Gray & Black water)	
6. Description of how the daily volume by discharge type was estimated	
7. Time/date expressed in a 24-hour clock format at the beginning and end of port call	
8. Estimate average flow rate for (Gray & Black) water	

Notes for Discharge Ships

NON DISCHARGE SHIPS - *vessels not discharging in Alaska waters - whether they have been issued an Alaska General Permit or not.*

At Sea Checks

1. Number of Passengers and Crew currently onboard		2. Was there a wastewater discharge at sea today? If no – skip to 13	
3. Date discharge started – (outside Alaska waters)		4. Time discharge started (2400)	
5. Date discharge ended – (outside Alaska waters)		6. Time discharge ended (2400)	

7. Latitude and Longitude at start of discharge – (from log)	
8. Latitude and Longitude at end of discharge – (from log)	
9. Overboard Discharge Valves Used	
10. Type of discharge: (treated black, gray, or mixed waste water or untreated) - outside Alaska waters	
11. Volume and average discharge rate for each overboard discharge valve	
12. Individual in charge of discharge operations – if more than one discharge event today, enter data in the "notes for non discharge ships" section	

In Port Checks

Was there a wastewater discharge today?	

Both at Sea and In Port

13. Total volume (M3) of waste water in holding tanks	
14. Time when tank volumes were taken	
15. Percent of holding capacity being used (current volume compared to total holding capacity from VSSP)	
16. Is there sufficient waste water holding capacity until the next scheduled discharge (outside Alaska waters)?	
17. Include the holding tank regime (which tanks are used / capacity / type / tank notation)	

Notes for Non Discharge Ships

LOG OF OCEAN RANGER EVENTS OF THE DAY

Was ship in Alaska waters for 24 hours?

Times that ship exited or entered Alaska waters on this day.

Daily Log of Events

SEASONAL INFORMATION REVIEW -

(Information that is checked once per cruise season - and recorded in the Ship Specific Notebook)

Agency Reports and Inspection Records

Review ADEC inspection reports (if any)	
Review ADEC sampling audit reports (if any)	
Checked authorization to discharge (ADEC letter and USCG letter if applicable)	

Comments:

Plans and Permits

1. Current Pollution Prevention Records	
Checked International Oil Pollution Prevention Certificate Expiration Date	
Checked Person-in -charge (certificated/licensed)	

Comments:

2. Shipboard Oil Pollution Emergency Plan	
Checked approval by Administration (class society)	
Checked that document is updated and current	
Checked that document is in English and working language of crew	
Checked that contact numbers for National and Local Authorities are correct (Port Authorities for ports visited not every COTP)	
Checked the immediate Actions List	
Checked the Non Mandatory Provisions (if listed in SOPEP). Spill kits located and inspected	
3. MARPOL Annex V (Garbage)	
Checked Record book	
4. Does vessel have an International Air Pollution Prevention (IAPP) or Engine International Air Pollution Prevention (EIAPP) certificate for diesel engines above 130KW?	
5. Checked General Discharge Permit (AS 46.03.462 issued by ADEC)	
6. Checked the Approved Vessel Specific Sampling Plan (18 AAC 69.030)	
7. Checked the Approved Non-Hazardous Solid Waste Offloading and Disposal Plan (AS 46.03.47(e)(1) and 18 AAC 69.035)	
8. Checked the Hazardous Waste and Substance Offloading Plan (HWSOP) (18 AAC 69.040(b))	

9. Checked the current Alaska vessel registration and notarization papers	
10. Checked the approved Hazardous Waste and Substance Offloading Plan (few, if any, ships discharge waste in Alaska. There may not be a plan but a letter to ADEC stating as such)	
11. Checked certification from antifouling paint supplier that TBT-free coatings have been applied to the vessel.	
12. Checked the Garbage Management Plan	

Comments:

Black and Gray water systems

13. Number of Gray Water Tanks (from VSSP for discharge vessels)	
14. Total tank capacity M3 (from VSSP for discharge vessels)	
15. Volume Produced M3/day (from VSSP for discharge vessels)	
16. Maximum number of days in port without discharging (from VSSP for discharge vessels)	
17. Checked that Quality Assurance / Quality Control Plan is available	

18. Checked MSD Nameplate (should be designed to resist efforts of removal or efforts to alter the information)	
19. Checked MSD Certificate of Type Test. For Foreign Flag Vessels in U. S. Waters A foreign flag vessel that has a "Certificate of Type Test" under MARPOL Annex IV indicating that its sewage treatment plant meets the test requirements of Resolution MEPC.2 (VI) of the International Maritime Organization (IMO) will be accepted by the Coast Guard as being in compliance with 33 CFR 159.7(b) or (c). The Certificate of Type Test must be issued by or on behalf of a government that is a party to the MARPOL convention. Such a plant will be considered as fully equivalent to a Coast Guard certified Type II MSD as long as the unit is in operable condition. However, the unit may not be labeled as USCG certified. U.S. registered vessels will continue to be required to have Coast Guard certified MSDs per 33 CFR 159.	
Checked MSD Placard is present	

Oil Pollution Handling

20. Checked that oil Pollution placard posted	
21. Checked Oil Transfer Procedures (cruise ships do not normally take on any fuel in Alaska)	
Checked that procedures are Posted / available in crew's language	
Checked number of persons required on duty	

Check means of communication	
Check description of transfer system including a line diagram of piping system	
Check procedure to report oil spills	
Checked bunkering stations, if applicable. Bunkering manifolds are usually co-located with the sewage pump out manifold.	

Non - Hazardous Waste

22. Checked that Garbage Pollution Placards Posted	
23. Check for procedures to minimize amount of potential garbage	
Check if vessel is encouraging ship suppliers to consider alternate means of packing, use of other than plastics? Observe stores being loaded.	
Check if vessel is using reusable packing? Examine stockpiles for use	
Check if waste generated while in port disposed to shore reception facility prior to sailing? Observe waste being offloaded.	
24. Recycling - Checked that ships crew is following policy for recycling. Interview crewpersons in varied work areas, casino, galley, housekeeping, etc. with recycling responsibilities for procedures used.	

DOCUMENT REVIEW - SECTION A

Plans and Permits

1. Current Pollution Prevention Records	
Checked declaration of inspection (available and retained for at least one month)	
Checked PMS records for required maintenance for the selected waste stream for verification	
Checked SMS incorporates PMS activities and logs for all Waste Streams	
Checked Logs to track oil usage in systems having oil to sea interfaces (if applicable)	
Checked deck maintenance logs – materials used and processes used other than routine cleaning.	

Comments:

2. Oil Record Book	
Checked each operation signed by person-in-charge	
Checked each complete page signed by master	
Checked that book maintained for 3 years	

Checked for use of proper codes and version for vessel	
Checked that transfer receipts/manifest match oil record book entries	
Checked that OWS rates not exceeding design criteria	
Checked that incinerator rates not exceeding design criteria	
Checked for consistent bilge water management patterns	
Checked comparison of oil record book entries to vessel's daily tank sounding book	

Comments:

3. MARPOL Annex V (Garbage)	
Checked Record book	
Checked garbage management plan	
4. Safety Management System - checked the relevant parts of the Safety management System (SMS) which describes the operation and maintenance of the various pollution control devices.	
5. Checked tank plan and tank operation plan and records (matrix)	
6. Checked the overboard valve "opening plans" discharge procedure. (matrix)	
7. Checked the procedure to notify agencies for non-conformities, etc.	
8. Checked the non-tank vessel spill plans, both Alaska and US	
9. Checked the recycling policy – Plans, Logs, and Records	
10. Checked the Ballast Water Report Form 33CFR151.2045	

Comments:

Ships Reports, Logs and Procedures

Discharge reporting – Checked Garbage Record Book / status	
Checked alarm records report (example: Wastewater, opacity, stack emissions)	
Last sludge/oily bilge discharge (date/ location / volume / port) – from logs books when outside of Alaska waters.	
Last oily water separator discharge (date / location / volume / port)– from logs books when outside of Alaska waters.	
Last Bunkers (date / location / volume) – from logs books when outside of Alaska waters.	
Checked key control procedures for overboard discharge valve locks.	
Checked for proper disposal of pool water and records of direct discharge in Alaska waters including concentration of Halogens/ Chlorine/ Bromine. List volumes and locations where discharges occurred in notes below. (VGP EPA item)	
Checked latest 3rd party wastewater testing results	

Comments:

BLACK AND GRAY WATER SYSTEMS – SECTION B

Gray Water System

1. Checked that Ships Discharge Log book - up to date and complete	
2. Checked that prohibited sources [hazardous materials, bilges, photo shop & print shop (if hazardous wastes are commingled) or medical waste (e.g. syringes, blood soaked gauze, human tissue, etc.)] do not enter graywater system.	
3. Checked for evidence of other drained fluids into scuppers or other entry points (photo lab, hospital, specialty spaces)	
4. Checked drains from spaces containing machinery (from fan rooms, hotel equipment, elevator pits, effluent/condensate, etc.) are oil free before entering waste water systems(s) or is sent to the bilges/ oil water separation system	
5. Checked connections to the Black Water System (if permitted in MSD Operation Manual, if so, is MSD capacity sufficient?)	
6. Checked that reverse osmosis /distillers/water makers – the brine or reject water shall not contain hazardous waste (VGP EPA item)	
7. Checked connections to Ballast Water System	
8. Checked current capacity sufficient for persons on board and time in port?	
9. Checked vessel's gray water handling procedures (SMS)	
10. Is Gray water processed and discharged?	
11 Gray water disposal procedures. Shore and at Sea (company policy)	
12. Checked vessel's sampling procedures (if any)	
13. Types of test performed, equipment, and useable testing supplies readily available	
14. Check how often do they take samples? Review samples record book	
15. Checked state, federal and local regulations for gray water discharge	
16. Responsible crew interviewed	
17. Checked disposal Records	
Checked Shore (receipts available)	
Checked at sea (logs maintained)	
Checked sampling/Testing (logs maintained)	
Checked how "de-watering" of wastes (food waste etc.) are handled.	

Notes on gray water

Black Water System

18. Checked sources of black water	
Toilets, Urinals, scuppers	
Checked drainage from medical premises (U.S. restriction)	
Checked that black water system installed, maintained and operated in accordance with approved plans and manufacturers specifications.	
Checked Tank Capacity and Volume produced	
Checked Current volume in tanks	
Checked that Modifications are documented	
19. Operations and Treatment	
Checked Chemical/Biological treatment & protective equipment	
Checked Chemical Treatment level	
Checked for sufficient chemicals, additives, approved cleaning materials onboard (enzymes, "Gamazyme" chlorine)	
Checked that compressors operating, inlet filters maintained	
Checked that vacuum system operable, if applicable	
Checked that flow indicators clear - indicating flow	
Checked when the last system cleaning occurred	
Checked the macerator operating maintenance	
Checked on methods to dilute discharge	
Checked operating instructions / SMS procedures	
20. U.S. Marine Sanitation Device Requirements	
MSD Type	
Checked Proper operation (macerators, treatment chemicals) and structural integrity, no leaks	
21. Maintenance	
Check maintenance Records / Logs	
Checked one line diagram of operation	
Checked if there are any modifications to system	
Checked that routine testing done and logged	
Check any work in progress	
Check test results within required limits	
22. Sampling / Testing	
Check Lab analysis of fecal coliform / total suspended solids in effluent	
Check results of residual chlorine content in effluent testing	
Checked calibration records for dosing pump / proportioner	
23. Discharges	
Vessel has an advanced System - continuous discharge?	
If vessel has an advanced waste treatment system, does vessel discharge only when under way?	
Discharge Locations	
Checked sampling of effluent during discharge operations	

Notes/Findings on Blackwater

OIL POLUTION HANDLING – SECTION C

Plans and Permits

1. Oily Water Separator (OWS)	
Checked bilge piping, no modifications & matches approved diagram (direct to OWS, to holding tank, etc.)	
Check that system has no blanked flanges, pipe caps, or dead-ended valves, or tees on inlet or outlet piping	
Checked that there is no evidence of bolting/unbolting of associated piping segments	
Checked for recent paint on pipe segments	
Checked general housekeeping and cleanliness	
Checked OWS operation if in use, evaluate operator competency. System operating in published ranges	
Observe that unit is processing contaminated source.	
Checked for similar readings of oil content meters (units with multiple oil content meters)	
Ensure sample analyzed by meter is OWS output (trace sample line for presence of unacceptable clean water connection)	
Observe if there are obvious electrical bypasses, jumpers, extra switches on unit or meter control panel.	
Observe system has automatic re-circulate (3-way valve) or shuts down when >15ppm. Observe proper operation of valve if in use.	
Observe for proper operation of system backflush or oil purge cycle if in use.	
Visually observe processed water for gross contamination (sheen or visible oil)	
Checked comparison of ship's operational maintenance routine with actual preventative maintenance conducted.	
Checked meter calibration records	
Check strip charts if fitted	
Checked other machinery space overboard piping for unusual connections	
Checked records pertaining to OWS system repairs	
Check that oil record book corresponds to volume of bilge water, oil waste and sludge remaining onboard and with bilge waste transfer log.	
2. Checked standard discharge connection	
3. Checked Fuel / Lube sludge oil fill, vent & overflow discharge containment	
Checked Size (<1600GT 1/2bbl, >1600GT 1 bbl)	
Checked Fixed Containment (if ship was built after 30Jun74)	
Checked Drains	
Checked Scupper Closures	
4. Checked oil or hazardous material is not carried in a forepeak tank or a tank forward of the collision bulkhead	
5. Checked lighting at each transfer operations work area	
Checked lighting is adequate	
Checked lighting located / shielded to not interfere with navigation	
6. Checked Bilge Water Management	
Checked machinery space bilges	
Checked contamination / oil residues in bilges on bulkheads, piping,	

structures, within rose boxes	
Checked for leakage from systems and engines into machinery spaces (may not be seen during port operations)	
Checked engine oil usage, quantities, where lost, consumed or in bilges	
Checked for evidence of detergent usage in oily water separator / related equipment or used to remove appearance of sheen (VGP EPA item)	
Checked for hoses, fittings, and connections in areas - usage unknown	
Checked for unlocked overboard valves on bilge, bilge & ballast, salt water service	
Checked that seal management program is used	
Checked that lifeboat / security / tender vessel engineering systems leak free	
Checked oil and grease from topside equipment (winches, motors, etc.)	
Checked ship specific bilge water management manual	
Checked that Lifeboat / security / tender vessel bilges clean	
7. Checked Waste / Sludge oil incineration	
Checked results of past tests and inspections	
Checked record keeping	
Checked for clean / dirty furnace, evidence of use	
Check air emissions (if incinerator is in use)	
Check that estimated quantities of sludge produced - normal or excessive (fuel sludge production can exceed 2% of total fuel used)	
Check that transfer pump connected to sludge system, ashore, incinerator settler only	
8. Check systems with Oil to Sea Interfaces	
Checked oil lubricated stern tubes, bow and stern thruster seals, fin stabilizer seals, Azipod, etc.	
Made exterior examination in way of systems for evidence of leaking seals - (some operators use oil that sinks)	
Checked for presence of barrels, drums, hoses, pumps, and other equipment/supplies/arrangements necessary to refill systems at equipment	
Check consumption records if SMS or environmental compliance programs require such records (Oil to Sea Interface Log)	

Notes/Findings on Oil Pollution Handling

HAZARDOUS AND NON-HAZARDOUS WASTE – SECTION D

Hazardous Waste

1. Checked that records maintained and manifests completed for potential hazardous waste streams:	
Checked Silver Bearing Photo Processing Waste (developers, wash water, Silver Recovery Units)	

Checked X-Ray equipment waste	
Checked Print Shop Waste (inks, dyes, cleaning solvents)	
Check waste from used Solvents, Paints & Thinners	
Check on waste from fluorescent/Mercury Vapor Bulbs	
Checked on waste from batteries (universal wastes): Nickel Cadmium (Nicad); Lead Acid; Lithium; Alkaline	
Checked on waste from Pharmaceuticals/Narcotics	
Checked Dry Cleaning Waste (PERC, lint, sludge, filters, condensate water)	
Checked waste from Cleaning Solutions (de-scalers, acids, bases, other corrosives)	
Checked waste from expired pyrotechnics (from safety equipment and entertainment use)	
Checked waste from rags contaminated with hazardous wastes (also - in approved storage containers?)	
Checked waste from incinerator ash if contaminated with toxic/hazardous substances (plastics containing heavy metals)	
2. Review hazardous waste procedures	
Checked Hazardous Waste and Substance Offloading Plan (HWSOP)	
Checked Shipboard policies	
3. Checked that responsible personnel received initial and refresher training	
4. Check if there any evidence (e.g. lack of disposal records) of hazardous material being discharged overboard	
5. Check if hazardous wastes being properly stored, maintained, labeled, and placarded.	
6. Check that proper storage devices available	
7. Check that waste is not commingled	
8. Checked that quantities on board consistent with receipt/disposal documentation	
9. Checked that the crew has ready access to spill control and decontamination equipment	
10. Checked that records reflect reasonable accumulations of waste with respect to the capacity of the vessel, its age, technologies onboard, and amounts of repair/maintenance	
11. Checked that used lead acid batteries are not mixed with other waste and are kept dry	
12. Checked records of hazardous consumables are kept updated “Used” and “Unused”	
13. Checked hazardous waste processing including pesticides, photo labs, and dry cleaning	
14. Checked disposal of incinerator ash / residue and method of handling.	
15. Checked disposal of bio sludges, etc. and method of handling.	

Hazardous Waste Notes:

Non - Hazardous Waste

16. Shipboard Garbage Management Plan	
Checked that shipboard garbage properly handled in accordance with Garbage Management Plan	
Checked Garbage Record Book entries	
Checked Type, amount, location, date/time for garbage entries	
Checked garbage Receipts	
Checked that each entry signed by Officer-in-Charge and each page by Master	
Checked for any reports of alleged inadequacy of port reception facilities for garbage on file	
Check that there is a designated Person-in-Charge	
Check there are no plastics or synthetics discharged overboard	
Check that waste sorted to prevent hazardous waste entering non-hazardous waste stream or incinerated. Separate defined storage areas for hazardous/non-hazardous – no commingled waste.	
Check that garbage plan is in working language of crew and in English, French or Spanish	
Check that incinerator ash if discharged overboard free of plastic residue (clinkers) or free of unburned food wastes if landed ashore.	
Checked that trash chutes clean, free from oil residue (No oil stains on decks, side of hull adjacent to trash chutes)	
Check that Foreign Food Wastes handled per APHIS regulations	
Checked that Medical Wastes-incinerated or manifested as Bio-Hazardous Waste.	
Checked that non hazardous waste is discharged outside of special areas only (when special area restrictions are in effect)	
Checked incinerator operation (observed if in operation)	
17. Checked Maintenance and repair conducted on equipment	
Checked Incinerator	
Checked Grinders	
Checked Valves and flappers on chutes	
18. Checked Human Factors	
Checked that master and crew familiar with essential shipboard garbage handling procedures.	
Checked that personal protective equipment available, functioning and in place (ILO 134).	
Checked that sanitation, from a health standpoint, being maintained (ILO 147).	

Non Hazardous Waste Notes:

SANITATION – SECTION E

HEALTH AND HYGIENE ISSUES	
Checked for disease reporting records for food workers	
Checked that food workers not working with observable infected wound, communicable disease or persistent sneezing, runny nose, coughing, vomiting, diarrhea or jaundice	
Checked medical facilities and bio hazard waste handling	
Checked production and handling of potable water	
FOOD SAFETY	
Checked that food workers are not handling ready-to-eat foods with bare hands	
Checked that food is protected during receiving, storage, preparation, display Foods must be protected to prevent environmental contamination. Food and food equipment must be stored at least 6 inches off the ground.	
Checked that thermometers conspicuous and used	
Checked that after being served or sold to a customer, food is not re-served	
Checked that shellfish tags are maintained	
EQUIPMENT	
Checked that food equipment to maintain product temperature cold holding foods at a food temperature of 41°F or less and at 140°F or higher for any foods that are hot holding	
Checked that food contact surfaces are properly washed, rinsed and sanitized Minimum manual warewashing wash solution temperature of 110°F Minimum manual hot water sanitization temperature of 171°F Minimum mechanical warewashing wash temperature in accordance with manufacturer's instruction Minimum mechanical warewash hot water sanitizing temperature of 180°F so that utensil surface temperature reaches 160°F	
TOILET AND HANDWASHING FACILITIES	
Checked that facilities are convenient, accessible, cleaned and stocked	
Checked that toilet rooms are ventilated with self-closing door	
FACILITY / STRUCTURE	
Checked that there is complete separation of food and food equipment / utensils from living quarters, laundry	
Checked that floor, walls, and ceilings are clean	
Checked that lighting is shielded or shatterproof when needed	
Checked that phosphate free detergents and non-toxic degreasers are used in sculleries and galleys. (VGP EPA item)	
SWIMMING POOL	
Checked that water is filtered in re-circulated swimming pool	
Checked that free residual halogen of ≥ 1.0 and ≤5.0 mg/L (ppm) shall be maintained in re-circulated swimming pools.	
Checked that a halogen test kit is provided and used	
Checked that swimming pools are maintained	
Checked that safety signs and equipment are provided	

Checked that first aid kit, rescue tube, Sheppard's crook or non-telescopic pole at least 12 feet long and a rope or floating lifeline separating shallow area from deep area at the 5 foot area. Depth markings, pool rules and warning signs where chemicals are stored.	
Checked that residual halogen logs measured and recorded every 4 hours during operation	
SPA	
Checked that water is filtered in whirlpool	
Checked that whirlpool spa water maintained with a pH between 7.2 and 7.8	
Checked that whirlpool spas are maintained with free residual chlorine of ≥ 3.0 mg/L (ppm) and ≤ 10.0 mg/L (ppm); or free residual bromine of ≥ 4.0 mg/L (ppm) and ≤ 10.0 mg/L (ppm).	
Checked that whirlpool spa water changed daily	
Checked how pool/spa water is handled / sampled (VGP EPA item)	
Is pool/spa water discharged in Alaska waters?	
Checked that spa is maintained	
Checked that safety signs and equipment provided	
Checked that residual halogen logs measured and recorded hourly during operation	
BARBER / HAIRDRESSER	
Checked that barber or beautician free of any observable communicable disease	
Checked that no barber shop shall be operated in any premises where food or drink is served, prepared, or stored, unless fully separated by a partition extending from floor to ceiling	
Checked that hair brushes, combs, razors, scissors, clippers, rollers, clips, pins and other instruments of the trade maintained in a clean and sanitary condition	
Checked that items are sanitized:	

Sanitation Notes

Photo 1		Photo 2	
Date and Time of Photo		Date and Time of Photo	

Caption 1		Caption 2	

Photo3		Photo 4	
Date and Time of Photo		Date and Time of Photo	
Caption 3		Caption 4	

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APPENDIX F

Ocean Ranger - Water Quality Incidents Individual Reports 2008 - 2010

2008 Ocean Ranger - Water Quality Incidents Report

Item #	Ship	OR Report Date	DEC Description	OASIS Comment	Risk Category			
					A	B	C	D
1	Mercury	9/16/2008	Pool water accidental discharge (113 m3), water was unchlorinated.			1		
2	Oosterdam	6/30/2008	Lido deck shower runoff overboard.					1
3	Oosterdam	8/25/2008	Blackwater internal overflow, blackwater stored in garbage cans.				1	
4	Ryndam	8/15/2008	Vessel specific sampling plan tank information incorrect, new VSSP submitted.			1		
5	Veendam	N/A	5/5/08 Unpermitted WW discharge (240 m3) OR not notified.	Ship should have notified OR for inclusion in report.	1			
6	Veendam	N/A	5/12/08 Unpermitted WW discharge (170 m3), OR not notified.	Ship should have notified OR for inclusion in report.	1			
7	Veendam	N/A	6/9/08-6/10/2008 Unpermitted WW discharge (458 m3 stored treated permeate and 19 m3 untreated graywater).	Ship should have notified OR for inclusion in report.	1			
8	Volendam	9/2/2008	Pool water accidental discharge (300 L), water was unchlorinated.			1		
9	Westerdam	6/6/2008	Vessel specific sampling plan tank not identified.			1		
10	Pearl	5/9/2008	5/9/2008 unpermitted wastewater discharge.		1			
11	Star	5/14/2008	5/14/2008 unpermitted discharge of wastewater in Skagway.		1			
12	Coral	8/8/2008	MSD valve is secured but not locked, was fixed by ship crew.				1	
13	Diamond	5/15/2008	AWWTS shut down due to high fecal sample, failed membranes.	Unclear if Compliance Sample or Process Sample. Categorized as Process Sample.			1	
14	Diamond	6/14/2008	Foam on water, possibly from fish processing or local treatment plant.	Excluded from count since ship likely not cause.				
15	Island	8/29/2008	High fecal sample, stop check valve may have failed.	Weekly testing done by EO			1	
16	Sapphire	7/9/2008	Minor deviation from VSSP testing, closed.			1		
17	Star Princess	5/13/2008	Additional tanks used, not in VSSP, closed.			1		
18	Rhapsody	N/A	No OR on board, unauthorized graywater release in Chatham Strait.	Reported to OR in subsequent week.	1			
19	Silver Shadow	8/30/2008	pH meter limits set incorrectly, VSSP missed a tank, both issues corrected.			1	1	
				Sub Total	**6**	**7**	**5**	**1**

2008 Total - 19 Water Quality Incidents

2009 Ocean Ranger - Water Quality Incidents Report

Item #	Ship	OR Report Date	DEC Description	OASIS Comment	Risk Category			
					A	B	C	D
1	Carnival Spirit		OR noticed missing Tanks.			1		
2	Statendam		OR noticed missing Tanks.			1		
3	Statendam		OR noted expired AWWTS certification.					1
4	Veendam		OR noted several tanks not in VSSP DEC addressed.			1		
5	Statendam		OR noted that change was made to BW collection system. Piping changes not documented yet.			1		
6	Volendam		OR noted tanks used not in VSSP.			1		
7	Diamond Princess		OR notes tanks used not in VSSP.			1		
8	Volendam		OR noted tanks not used in VSSP (re-peat of 6 12 09) different tks?			1		
9	Statendam		OR 6 25 09 questions 6 Masko Zoll Filter AWTS system.	Excluded. On 6/29/10 HAL states filters are present.				
10	Statendam		OR 7 21 09 questions VSSP sample valves (two) UV and OB.			1		
11	Veendam		OR 9 1 09 notes 4 obd valves in VSSP but 7 in Disch Record Book, EO/CE say will submit correction to ADEC listing 3 more valves.			1		
12	Pacific Princess		7 31 09 OR IR Report of white foam KDK from fish plant?	Excluded. Ship not likely cause.				
13	Mercury		6 18 09 Crowley notified DEC. DEC notified USCG. Ship is a non-discharger. Only think that ww log book state and fed regs apply to discharges in AK waters.	Excluded. USCG requirements for ww log book don't require tankage. So inaccurate tankage not violation.				
14	Westerdam		6 24 09 OR Reports ORB not updated by prevoius Captain (signatures).	Excluded. Oil not ww issue.				
15	Serenade	5/21/2009	pH discrepancy between ship and samplers was 0.6.	Excluded. Both values within permit limits. Not clear whose meter was proven correct.				
16	Sapphire	5/23/2009	OR reported MBR# failed fecal tests, overboard test OK.	Process sample of 1 MBR failed fecal but combined overboard				1
17	Volendam		Cl Exceedance, OR stated office notified.	Could not find report to gather further information. Assumed to be a Process Sample.			1	
18	Mercury		6 16 09 OR logbook discharges.	Excluded. Same as item #13.				
19	Statendam		Biomass discharge offshore distance disputed.					1
20	Pacific Princess		On 8 24 09 Ranger indicated that ship was treating untreated GW on 8 16 09 but George Danner noticed that lat and long were in AK.	Discharge log was unclear about GW discharge location (in or out of AK waters?).		1		
21	Diamond Princess		8 27 09 OR report states that poolwater was discharged.			1		
			Items that OASIS added to Water Quality Incidents Report.					
	Sea Princess	5/19/2009	Ruptured shore-side graywater connection hose. GW spill.		1			
	Sea Princess	6/092009	Chlorinated pool water pumped overboard.	DEC categorized with EPA items.		1		
	Island Princess	6/10/2009	Chlorinated pool water pumped overboard.	DEC categorized with EPA items.		1		
	Sapphire Princess	6/17/2009	Chlorinated pool water pumped overboard.	Cat A b/c second time per season for this ship.	1			
	Volendam	6/29/2009	Spa pool discharge.	DEC categorized with EPA items.		1		
	Rhapsody of the Seas	8/25/2009	Pool water discharge.	DEC categorized with EPA items.		1		
	Serenade	5/10/2009	pH below permit limit for Compliance Samples.			1		
				Sub Total	**2**	**16**	**1**	**3**

2009 Total - 22 Water Quality Incidents

2010 Ocean Ranger - Water Quality Incidents Report

Item #	Ship	OR Report Date	DEC Description	OASIS Comment	Risk Category			
					A	B	C	D
1	Zuiderdam	5/11/2010	Zuiderdam had a discharge valve that was closed but not locked.				1	
2	Rotterdam	5/17/2010	OR report showed inland discharge, was an incorrect entry from a hard-to-read log.			1		
3	Millennium	5/22/2010	Overboard valves closed but not locked.				1	
4	Diamond Princess	5/26/2010	Poolwater discharge, some in Skagway- 70 cubic meters.			1		
5	Zuiderdam	5/25/2010	Rochem systems solids overflow, pumped to tank.					1
6	Ryndam	6/15/2010	Dis Pool Spa Jacuzzi.			1		
7	Island Princess	6/11/2010	Logbook WW correction clarification vessel HQ.			1		
8	Coral Princess	6/9/2010	Sample Event actions bottles cap questions Princess.					1
9	Mercury	6/17/2010	WW discharge log volumes corrected after OR checks.			1		
10	Royal Princess	6/24/2010	6 24 10 OR report CL high during field sampling while underway.			1		
11	Statendam	6/24/2010	6 24 10 OR report with (sampling regulatory) NH3? High.	Two issues: VSSP incorrect and process sample above limits.		1	1	
12	Sapphire Princess	5/19/2010	5 19 10 OR Report Ph meters VSSP DB tks missing magic tanks.	pH meter not required. VSSP issue is Category B.		1		
13	Zaandam	6/23/2010	6 23 10 OR report turbidity meters broken.	Excluded. Couldn't find report. Perhaps verbal notification?				
14	Statendam	6/15/2010	6 15 10 OR Report salinity testing?	Excluded. No compliance related item.				
15	Celebrity Infinity	7/14/2010	7 14 10 OR report "lost WW volumes "shortage."				1	
16	Radiance of the Seas	7/23/2010	7 23 10 OR Report Ballast water notifications discharge logs.					1
17	Statendam	7/23/2010	7 23 10 OR follow up questions HAL SR event.	Accidental WW discharge. OR checking up on behalf of DEC on 7/29/10.	1			
18	Island Princess	7/30/2010	7 30 10 samplers missed discharge opportunity sample event canceled.					1
19	Sea Princess	8/7/2010	OR Reported possible non-recorded discharge of pool and spa waters, latter solved.	Categorized as documentation issue.				1
20	Celebrity Infinity	8/9/2010	8 9 10 OR and pilot report of foamy discharge	Unlike foam reports in 2008 and 2009, this could have originated from ship.				1
21	Millennium	7/26/2010	7 26 10 fecal exceedance, wrong AK GW parameters- closed ship, no discharge.	Fecal exceedance but ship not discharging.				1
22	Statendam	8/18/2010	8 18 10 Discharge Event Haines.		1			
23	Royal Princess	7/7/2010	Turbidity meter not working.	Ship not discharging.				1
24	Millennium	5/18/2010	Fecal spike, but no disinfection of sample port- QAQC and USCG item, not a discharger.	Error with sampling methods.				1
25	Norwegian Pearl	8/18/2010	8 18 10 Fecal exceedance reported by OR, recirculation sample.					1
26	Zuiderdam	9/8/2010	OR Reported multiple sampling failures for fecal- was not discharging.					1
27	Volendam	9/11/2010	OR reported SKG discharge of buffer overflow tank- pool.			1		
28	Statendam	NA	OR training- OR disagreed with VSSP. ADEC asked for check.	Excluded since there was no associated report				
29	Oosterdam	5/17/2010	OR identified tanks (2) not identified in VSSP being used for GW.			1		
30	Volendam	5/17/2010	pH meter broken- for bioractor not permate.	4th Engineer pH testing records showed several entries < 6.5. Ship is a discharger.			1	
31	Diamond Princess	5/17/2010	VSSP missing tanks, Log book issues etc.			1		
32	Zaandam	5/17/2010	5 17 19 30 10 VSSP missing tanks 2 (two) events / 24 31 repeats.			1		
				No DEC entry for number 33.				
34	Coral Princess	6/1/2010	VSSP missing 6 tanks.			1		
35	Coral Princess	6/21/2010	WW equipment listed but not used anymore clarification.	Classified as VSSP item.		1		
36	Statendam	6/24/2010	6 24 10 OR report tanks notations magic tanks review needed.	Classified as VSSP item.		1		
37	Seven Seas Navigator	6/21/2010	TSS sensor item- deviation from VSSP.			1		
38	Golden Princess	7/7/2010	7 7 10 OR questions dis ports etc.	Classified as VSSP item.		1		
39	Ryndam	7/11/2010	7 11 10 OR Report chlorine test kit.	VSSP states that Cl testing is done but it is not tested. Classified as VSSP item.		1		
40	Island Princess		VSSP error port name page 6.			1		
41	Millennium	7/27/2010	7 27 10 OR Report not accurate AK WQ limits in AWTS man.	Classified as documentation item.				1
42	Diamond Princess	6/2/2010	6 2 10 OR Report has photo of sampler without proper safety gear.	Excluded. This is a safety item.				
			Items that OASIS added to Water Quality Incidents.					
	Sapphire Princess	5/27/2010		Discharge valve not open during compliance sampling. Sampling error.				1
	Seven Seas Navigator	7/4/2010		Incorrect WW log entry + WW log		1		
				Sub Total	**2**	**20**	**5**	**13**

2010 Total - 40 Water Quality Incidents

APPENDIX G

Ocean Ranger – Oil Incidents Individual Reports 2008 – 2010

2008 Ocean Ranger - Oil Incidents Report

					External Leaks									
Company	**Ship**	**OR Report Date**	**Status**	**Location**	**Cat B (Cruise Ship)**	**Cat B (Tender)**	**Cat B (Shore or Excursion Boat)**	**Cat B (Oil Record Book)**	**Cat C Bilge**	**Cat C OWS**	**Cat C Oil/Sea Interface**	**Cat D Mystery**	**Cat D Other**	**Notes**
Carnival	Spirit	5/23/2008	SPAR/USCG Notified	AK							1			Oil seal leak on azipod, no signs of external leak
Carnival	Spirit	6/20/2008	SPAR/USCG Notified	KTN								1		Oil sheen seen in Ketchikan harbor
Carnival	Spirit	7/11/2008	SPAR/USCG Notified	KTN								1		Oil sheen seen in Ketchikan harbor
Carnival	Spirit	7/12/2008	SPAR/USCG Notified	JNU								1		Oil sheen seen in Juneau harbor
Carnival	Spirit	8/8/2008	SPAR/USCG Notified	SIT								1		Oil sheen in Sitka harbor
Carnival	Spirit	8/24/2008	SPAR/USCG Notified	JNU								1		Small oil sheen Juneau harbor
Carnival	Spirit	8/25/2008	SPAR/USCG Notified	KTN								1		Oil sheen in Ketchikan harbor
Celebrity	Mercury	7/22/2008	ADEC verified with SPAR	KTN									1	OR question about bunkering (fueling) procedures in Ketchikan
Celebrity	Mercury	8/5/2008	SPAR/USCG Notified	KTN								1		Oil sheen in Ketchikan harbor
Celebrity	Millennium	5/14/2008	SPAR/USCG Notified	SIT	1									Oil added to main propulsion bearings, trace of oil seen by OR in water
Celebrity	Millennium	6/17/2008	SPAR/USCG Notified	SKG	1									Oil sheen seen near Statendam in harbor
Holland America	Amsterdam	8/12/2008	SPAR/USCG Notified	SIT			1							Oil sheen from shore excursion boat
Holland America	Amsterdam	9/2/2008	SPAR/USCG Notified	SIT			1							Oil sheen from shore excursion boat
Holland America	Oosterdam	8/20/2008	SPAR/USCG Notified	SIT										Oil sheen, possibly from azipods
Holland America	Ryndam	6/7/2008	SPAR/USCG Notified	SKG	1									Oil seals in stabilizers potential leak
Holland America	Ryndam	6/7/2008	SPAR/USCG Notified	SKG				1						OR questions about oil records onboard
Holland America	Ryndam	6/15/2008	Closed	GB				1						Possible oil in water tank (see 6/21/08 report also)
Holland America	Veendam	8/13/2008	SPAR/USCG Notified	SIT									1	Excess oil in bilge
Holland America	Veendam	8/18/2008	SPAR/USCG Notified	SKG					1					Excess oil in bilge
Holland America	Veendam	8/25/2008	SPAR/USCG Notified	HNS					1					Incinerator fuel line internal leak
Holland America	Veendam	8/25/2008	SPAR/USCG Notified	HNS						1				Oil Water Separator flow meter has no tamperproof tape, issue eventually fixed
Holland America	Veendam	8/28/2008	SPAR/USCG Notified	Hubbard							1			Starboard shaft oil leak, probable all internal
Holland America	Volendam	5/22/2008	SPAR/USCG Notified	SKG	1									Possible issue with oil seal on bow thruster
Holland America	Volendam	5/27/2008	SPAR/USCG Notified	GB		1								Oil sheen from tender
Holland America	Volendam	6/17/2008	SPAR/USCG Notified	KTN								1		Oil sheen in Ketchikan small boat harbor reported
Holland America	Volendam	8/12/2008	SPAR/USCG Notified	KTN								1		Oil sheen in Ketchikan harbor
Holland America	Statendam	5/29/2008	SPAR/USCG Notified	AK							1			Oily water drained from stern tube tanks, oily bilges
Holland America	Statendam	6/5/2008	SPAR/USCG Notified	AK						1				Oily bilges, OWS hose question
Holland America	Statendam	6/10/2008	SPAR/USCG Notified	JNU								1		Oil sheen in harbor (6/9/2008)
Holland America	Statendam	6/10/2008	SPAR/USCG Notified	KTN								1		Oil sheen in Ketchikan harbor
Holland America	Statendam	6/17/2008	SPAR/USCG Notified	SKG								1		Oil sheen in Skagway, possible from piling
Holland America	Statendam	6/19/2008	SPAR/USCG Notified	KTN								1		Oil sheen under pier
Holland America	Statendam	6/30/2008	SPAR/USCG Notified	JNU								1		Oil sheen under pier
Holland America	Statendam	7/1/2008	SPAR/USCG Notified	SKG								1		Oil sheen in harbor
Holland America	Statendam	7/16/2008	SPAR/USCG Notified	GB							1			Shaft seal internal oil leak, low oil alarms
Holland America	Statendam	9/1/2008	SPAR/USCG Notified	JNU								1		Oil sheen near dock from bus parking lot
Holland America	Westerdam	5/15/2008	SPAR/USCG Notified	SIT								1		Oil sheen near vessel, unknown cause
Holland America	Westerdam	5/16/2008	SPAR/USCG Notified	KTN	1									Oil at stern, possible azipod issue
Holland America	Westerdam	5/29/2008	SPAR/USCG Notified	SIT			1							Oil sheen possibly from shore side tender
Holland America	Westerdam	6/18/2008	Closed	AK				1						Oil records not signed by master, fixed 6/20/08
Holland America	Westerdam	7/23/2008	SPAR/USCG Notified	JNU	1									Oil droplets seen in water next to vessel
Holland America	Westerdam	8/7/2008	SPAR/USCG Notified	SIT	1									Oil sheen at stern, azipod header tanks oil level had dropped
Holland America	Westerdam	8/13/2008	SPAR/USCG Notified	JNU	1									Oil spots and sheens, STBD azipod
Holland America	Westerdam	8/15/2008	SPAR/USCG Notified	KTN	1									Oil droplets, STBD azipod
Holland America	Westerdam	8/21/2008	SPAR/USCG Notified	SIT								1		Oil slicks in harbor on arrival
Holland America	Westerdam	8/27/2008	SPAR/USCG Notified	JNU	1									Oil sheen near stern, possible port azipod
Holland America	Zaandam	7/13/2008	SPAR/USCG Notified	SEW	1							1		Internal fuel overflow, about 20m3, public complaints of fumes
Holland America	Zaandam	9/2/2008	SPAR/USCG Notified	KTN	1									Oily sheen from sea scrubber test
Holland America	Zaandam	9/4/2008	SPAR/USCG Notified	SKG	1									Oily sheen from sea scrubber test
Norwegian	Sun	7/15/2008	SPAR/USCG Notified	KTN								1		Oil sheen spotted in harbor
Norwegian	Sun	7/29/2008	SPAR/USCG Notified	KTN								1		Oil sheen spotted in harbor ahead of bow
Norwegian	Sun	8/5/2008	SPAR/USCG Notified	KTN								1		Oil sheen spotted under pier
Norwegian	Sun	8/26/2008	SPAR/USCG Notified	KTN								1		Oil sheen
Princess	Dawn	6/1/2008	Closed, no external seen	SKG							1			Internal oil leak, port stern tube
Princess	Dawn	6/10/2008	Closed, no external seen	JNU							1			Internal oil leak, port stern tube
Princess	Dawn	6/21/2008	Closed, no external seen	SKG							1			Internal oil leak, port stern tube
Princess	Diamond	7/15/2008	EPA Bold was investigati	SKG								1		Oily sheen on water in harbor
Princess	Diamond	7/29/2008	Closed, confined to pool	SKG									1	Oil heater in pool failed, vegetable oil

2008 Ocean Ranger - Oil Incidents Report (contd.)

					External Leaks									
Company	**Ship**	**OR Report Date**	**Status**	**Location**	**Cat B (Cruise Ship)**	**Cat B (Tender)**	**Cat B (Shore or Excursion Boat)**	**Cat B (Oil Record Book)**	**Cat C Bilge**	**Cat C OWS**	**Cat C Oil/Sea Interface**	**Cat D Mystery**	**Cat D Other**	**Notes**
Princess	Golden	7/28/2008	Closed	AK							1			Oil records didn't show oil recovered from stabilizer storage tanks overflow
Princess	Golden	9/22/2008	SPAR/USCG Notified	JNU								1		Oil sheen near dock complaint, probably from nearby oil dock
Princess	Island	8/22/2008	Vessel notified USCG	JNU							1			Leaky stabilizer seal, no sign of external sheens
Princess	Island	9/10/2008	Closed	KTN								1		Small oil patch near dock, didn't appear to be from vessel
Princess	Star Princess	8/5/2008	SPAR/USCG Notified	KTN								1		Oil sheen in small boat harbor
Princess	Sun Princess	8/17/2008	SPAR/USCG Notified	JNU							1			Internal oil leak shaft seal
Princess	Tahitian	7/21/2008	SPAR/USCG Notified	SIT								1		Oil sheen seen STBD side
Princess	Tahitian	8/13/2008	SPAR/USCG Notified	VDZ								1		Oil on water near pier
Princess	Tahitian	8/18/2008	SPAR/USCG Notified	SIT								1		Passed through large oil sheen
Princess	Tahitian	8/23/2008	SPAR/USCG Notified	KTN	1									Three spots of oil STBD side
Princess	Tahitian	8/27/2008	SPAR/USCG Notified	VDZ								1		Oil spots STBD side
Princess	Tahitian	9/1/2008	SPAR/USCG Notified	SIT								1		Passed through large oil sheen
Royal Caribbean	Rhapsody	8/5/2008	USCG Notified CPVEC	SKG							1			Potential oil leakage, stabilizer
Royal Caribbean	Serenade	6/9/2008	USCG notified by vessel	PTS								1		Oil sheen from fishing boat
Royal Caribbean	Serenade	7/10/2008	SPAR/USCG Notified	JNU								1		Oil sheen in harbor
Royal Caribbean	Serenade	9/11/2008	SPAR/USCG Notified	JNU								1		Oil sheen, possibly from fish processing
			Totals for each Category		**14**	**1**	**3**	**2**	**2**	**2**	**11**	**34**	**5**	
			Grand Total											***74***

2009 Ocean Ranger - Oil Incidents Report

					External Leaks									
Company	**Ship**	**OR Report Date**	**Source**	**Location**	**Cat B (Cruise Ship)**	**Cat B (Tender)**	**Cat B (Shore or Excursion Boat)**	**Cat B (Oil Record Book)**	**Cat C Bilge**	**Cat C OWS**	**Cat C Oil/Sea Interface**	**Cat D Mystery**	**Cat D Other**	**Notes**
Celebrity	Celebrity Mercury	5/6/2009	Tender	SIT		1								OR Reported sheen from ship tender
NA	Tender Tatiana	5/9/2009	Other	SIT			1							OR reported shhen from Allen marine Tender
NA	Skookum Yarder	5/11/2009	Other	JNU			1							OR Reported sheen form garbage hauler
NA	Westerdam	5/13/2009	Harbor	JNU								1		OR reported sheen under dock by Westerdam
Holland America	Zuiderdam	5/13/2009	Misc	GB	1									OR reported 10 L potential loss of oil 5 20 09 OR report diver in VAN BC
Carnival	Carnival Spirt	5/16/2009	Harbor	JNU								1		OR Reported mystery sheen at shipo hull side
Holland America	Statendam	5/14/2009	Misc										1	OR Report information White Box valve and spill prevention lifeboat space
Celebrity	Celebrity Mercury	5/22/2009	Tender			1								OR reported oil sheen from tenders
Carnival	Carnival Spirt	5/21/2009	Internal								1			OR reported Oil consumption stablizers no sheen
Norwegian	Norwegian Sun	5/26/2009	Other	KTN								1		OR reported oil sheen in Ketchikan. RP unknown. OR called Ktch SPAR
Carnival	Carnival Spirit	5/25/2009	Harbor									1		OR reported that vessel reported in KTN mystery sheen USCG notified
Norwegian	Norwegian Sun	5/26/2009	Other	KTN								1		OR report mystery sheen KTN berth 4
Holland America	Statendam	5/26/2009	Harbor									1		OR reported oil sheen before Statendam docked
RCI	Radiance of the Seas	6/2/2009	Vessel	PTS	1									OR Report (spill notification) Icy Straits oil from aft SB tender platform lose hydraulic hose
Celebrity	Celebrity Mercury	5/28/2009	Vessel		1									OR filled out incident report on broken hydraulic hose. Est 1 cup oil leaked. SPAR n
RCI	Rhapsody	5/17/2009	Internal								1			Leaking port stabilizer seal, not being used
Holland America	Ryndam	6/1/2009	Other	SKG								1		Dock Hamilton Lifter burst hose not vessel
Carnival	Carnival Spirit	6/1/2009	Harbor	SIT								1		anchorage sheen other vessel tnedes?
Princess	Star Princess	5/26/2009	Other	KTN			1							oil sheen from excursion vessel
Holland America	Statendam	6/3/2009	Harbor	HNS								1		Statendam non vessel oil sheen Fairweather?
Celebrity	Millenium	6/2/2009	Harbor	SKG									1	Port OR Zuiderdam notified vessel; did paint maintenance not direct to vessel
Celebrity	Mercury	6/9/2009	Tender	SIT		1								Oil sheen tenders
NA	St Eugene	6/9/2009	Other	SIT			1							Oil sheen shore based tender St Eugene SIT / Mercury
Celebrity	Millenium	6/10/2009	Harbor	KTN								1		Oil sheen harbor
Holland America	Westerdam	6/2/2009	Misc								1			Oil PS Azipod fill ups higher than SB Azipod Pot issue
Carnival	Carnival Spirit	6/15/2009	Tender	SIT		1								Carnival Spirit tender in Sitka
NA	Tender Tatiana	6/15/2009	Other	SIT			1							Sitka sheen from shoreside tender St. Tatiana
RCI	Radiance of the Seas	6/12/2009	Harbor	SWD								1		Seward sheen under dock, possibly from buses
NA	Tender Tatiana	6/19/2009	Other	SIT			1							Sitka sheen from shoreside tender St. Tatiana
Norwegian	Norwegian Star	6/22/2009	Harbor	KTN								1		Ketchikan sheen. Unknown source and volume.
Holland America	Statendam	6/23/2009	Harbor	KTN								1		Ketchikan sheen under dock. Possible shoreside source
NA	Michliff	6/26/2009	Other	KTN								1		sheen from Michliff OR on board Mercury
NA	AK 4819	6/26/2009	Other	KTN								1		sheen from AK 4819 OR on board Mercury
NA	Tender Tatiana	6/29/2009	Other	SIT			1							sheen from Tatiana on board Carnival Spirit
Celebrity	Mercury	6/30/2009	Vessel	SIT	1									Mercury- broken hydulic line on tender platform
Celebrity	Mercury	6/30/2009	Tender	SIT		1								Mercury tenders
NA	GMT Bus	6/30/2009	Other	JNU								1		MGT OR George
NA	Mystery Sheen	6/30/2009	Other	KTN								1		OR KTN Mystery Sheen Berth 3
NA	Mystery sheen	6/30/2009	Harbor	SIT								1		harbor sheen
NA	Mystery Sheen	7/7/2009	Harbor	KTN								1		Mystery sheen from Norwegain Sun
NA	Mystery Sheen	7/7/2009	Harbor	KTN								1		Mystery Sheen from Mercury
NA	Mystery Sheen	7/7/2009	Harbor	KTN								1		Mystery Sheen from Norwegian Sun No 4
NA	Mystery Sheen	7/7/2009	Harbor	KTN								1		from Star Princess No 3
Celebrity	Mercury	7/2/2009	Harbor	JNU							1			Mercury concerns oil leakage thruster OR report JNU
Holland America	Ryndam	7/12/2009	Other	SKG	1									OR Report angry customer tossed paint can in water body (Taiya Inlet)
NA	St. Michael	7/13/2009	Other	SIT			1							Tender St. Michael leaking oil SITKA
Norwegian	North Star	6/29/2009	Harbor	KTN								1		NCL Star, not vessel- small boat harbor
Carnival	Carnival Spirit	7/21/2009	Harbor	SIT		1								Crowley forwarded report for 7 17 09. Potentially a tender
NA	Emerald Sea	7/13/2009	Harbor	WHT								1		OR WHT mystery sheen Emerald Sea? From Island Princess
Carnival	Carnival Spirit	7/17/2009	Internal	SIT							1			leaking bow thruster, oil loss increased
NA	Mystery Sheen	7/16/2009	Harbor	KTN								1		seen near bow of Diamond Princess
NA	Mystery Sheen	7/16/2009	Harbor	JNU								1		sheen from the Mercury
Holland America	Westerdam tender	7/22/2008	Internal			1								OR reported Westerdam Oil tender leak, occurred 6 26 09
Carnival	Carnival Spirit	7/27/2009	Vessel		1									Carn Spirit azipod leak, USCG report on file
NA	Mystery Sheen	7/20/2009	Harbor	KTN								1		Mystery sheen on board Carnival Spirit
NA	Mystery Sheen	7/11/2009	Harbor	JNU								1		Mystery Sheen on board Carnival Spirit (fuel dock?)
NA	Mystery Sheen	7/30/2009	Harbor	JNU								1		Mystery Sheen Siver Spray on board Golden Princess
NA	Veendam	8/2/2009	Harbor	SWD								1		RR dock west side MS on board Veendam
NA	Mystery Sheen	7/31/2009	Harbor	SIT								1		anchorage on board Carnival Spirti

2009 Ocean Ranger - Oil Incidents Report (contd.)

					External Leaks									
Company	**Ship**	**OR Report Date**	**Source**	**Location**	**Cat B (Cruise Ship)**	**Cat B (Tender)**	**Cat B (Shore or Excursion Boat)**	**Cat B (Oil Record Book)**	**Cat C Bilge**	**Cat C OWS**	**Cat C Oil/Sea Interface**	**Cat D Mystery**	**Cat D Other**	**Notes**
NA	Mystery Sheen	8/3/2009	Harbor	JNU								1		Port on board Golden Princess (no pics)
NA	Mystery Sheen	8/4/2009	Harbor	SIT								1		anchorage on baord Mercury
NA	Mystery Sheen SIT	8/4/2009	Harbor	KTN								1		Pier 4 Mystery Sheen on board Norwegian Sun
NA	Mystery Sheen KTN	8/18/2009	Harbor	KTN								1		Myrstery sheen. OR reported from Statendam
NA	Mystery Sheen KTN	8/14/2009	Harbor	SIT								1		Mystery sheen, no oil report- OR contacted SPAR
Celebrity	Mystery sheen SIT	8/18/2009	Vessel	SIT							1			OR reports to Crowley that hydraulic hose failed for one of it's side doors. SIT
Princess	Sea Princess	8/15/2009	Internal								1			Internal Leak. Ocean Ranger reports mention 200 L of oil in port stern tube.
Princess	Star Princess	8/25/2009	Harbor	KTN								1		smal Harbour Mystery Sheen
NA	Tender Tatiana	8/25/2009	Other	SIT			1							tender sheen, small, in Sitka
NA	Mystery Sheen	8/27/2009	Harbor	KTN								1		Berth 1 Mystery Sheen form Golden Princess
NA	Mystery Sheen	8/29/2009	Harbor	WHT								1		Mystery Sheen from Sapphire Princess
NA	Mystery Sheen	8/28/2009	Other	KTN								1		Mystery Sheen from seven Seas Mariner
Celebrity	Mercury	9/1/2009	Misc	SIT							1			OR report with hydraulic hose / fitting problem "near miss"
Princess	Star Princess	9/8/2009	Harbor	KTN								1		OR report Mystery Sheen from Star Princess
Holland America	Veendam	9/3/2009	Vessel	JNU		1								OR Oil spill few drops form lifeboat landing JNU (Received 9 12 09)
Celebrity	Mercury	9/8/2009	Vessel								1			Oil from hydraulic hose connectors. (OR Grose warned earlier)
Celebrity	Mercury	8/6/2009	Harbor									1		Oil Mystery Sheen form Mercury (not know before of after hydraulics use)
Princess	Sapphire Princess	9/12/2009	Harbor	WHT								1		Mystery Sheen from Sapphire Princess
Holland America	Amsterdam	9/16/2009	Tender	STK		1								anchorage vessel tender oil leak / sheen
Royal Caribbean	Serenade of the Seas	9/22/2009	Harbor	STK								1		anchorage mystery sheen form Serenade of the Seas
Celebrity	Infinity	9/21/2009	Harbor	TA								1		OR verbal Report regarding Mystery Sheen TA from Infinity
Holland America	Westerdam	9/23/2009	Harbor	JNU								1		Mystery Sheen JNU from Westerdam disappeard
Celebrity	Mercury	9/1/2009	Tender	SIT		1								Sheen in water when launching tender, sent out with hydallic failure
Totals for each Category					**6**	**10**	**9**	**0**	**0**	**0**	**9**	**46**	**2**	
Grand Total														***82***

2010 Ocean Ranger - Oil Incidents Report

					External Leaks									
Company	**Ship**	**OR Report Date**	**Source**	**Location**	**Cat B (Cruise Ship)**	**Cat B (Tender)**	**Cat B (Shore or Excursion Boat)**	**Cat B (Oil Record Book)**	**Cat C Bilge**	**Cat C OWS**	**Cat C Oil/Sea Interface**	**Cat D Mystery**	**Cat D Other**	**Notes**
Holland America	Amsterdam	5/7/2010	Related	SIT		1								Tender Sheen reported 5 7 10 SIT
Celebrity	Millennium	5/13/2010	Port		1									Light sheen thruster possible, 5/13/10
Holland America	Volendam	5/16/2010	Internal								1			Shaft seal leaks, oil added regularly. No report of sheens. 5 16 10.
Holland America	Rotterdam	5/17/2010	Misc								1			Vessel added oil to the STBD Stern Tube 5 17 10. Requested OR check.
Holland America	Ryndam	5/26/2010	Port									1		Sheen by vessel 5 26 10
Holland America	Volendam	5/29/2010	Internal										1	Lifeboat hyd line rupture and clean up, 5/29/10
Princess	Diamond Princess	5/29/2010	Internal										1	Lifeboat hydr leak, item marked as not for use by vessel 5/29/10
Carnival	carnival Spirit	6/3/2010	Vessel		1									Sheen from vessel 6 3 10, potentially azipod
Holland America	Rotterdam	6/9/2010	Vessel	SIT	1									6 9 10 HAL Spill Report filed SIT oil sterntube
Holland America	Rotterdam	6/16/2010	Vessel		1									HAL reported on 6 16 10 EPA (Cindi Godsey)
Holland America	Volendam	5/22/2010	Misc					1						late entries at 5 22 10 appears to be fixed (OR discussed on board (CE)
Carnival	Carnival Spirit	6/11/2010	Vessel		1									6 11 10 Report appears inspection 6 6 10 diver for potential leak
Allen Marine	St. Michael	6/17/2010	Other	SIT			1							6 17 10 SIT OR reported sheen form shore tender. Reported to SAR etc.
Princess	Sea Princess	6/16/2010	Port	PTS	1									6 16 10 Icy Strait Point Possible leak from thruster
Carnival	Carnival Spirit	6/19/2010	Port	JNU								1		6 19 10 Spill Notification Carnival Spirit Franklin Dock JNU
Holland America	Rotterdam	6/14/2010	Vessel	JNU	1									6 14 10 HAL Spill Report filed JNU droplets of oil
Holland America	Zaandam	5/30/2010	Internal								1			5 30 10 OR report internal leak of PS shaft seal bio oil used.
Princess	Coral Princess	6/22/2010	Other			1								6 22 10 OR notification oil sheen form small vessel bunkering
Norwegian	Norwegian Pearl	6/22/2010	Port	JNU								1		6 22 10 Karol notified OR claed from plane trip North JNU (Auk Bay) large sheen.
Princess	Golden Princess	5/18/2010	Misc								1			5 18 10 OR report add oil in stabilizer system internal leak so far not used in AK
Holland America	Ryndam	7/2/2010	Other									1		7 2 10 OR incident Report KTN Port fish waste foamy stuff
Princess	Diamond Princess	7/1/2010	Internal								1			7 1 10 OR Report oil consumption in STB stabilizer gravity tank
Celebrity	Millennium	7/13/2010	Related			1								7 13 10 OR Oil report life boat oil sheen SKG Port
Allen Marine	St. Michael	7/14/2010	Other	SIT			1							7 14 10 OR Spill report pics
Celebrity	Mercury	7/13/2010	Related									1		7 13 10 OR spill reports pics
Holland America	Volendam	6/26/2010	Internal										1	6 26 10 OR Report internal leak of seals / also ingress water in gravity tanks
Royal Caribbean	Radiance of the Sea	7/19/2010	Vessel		1									7 19 10 NRC report, failed to notify SPAR
Royal Caribbean	Radiance of the Sea	6/28/2010	Vessel		1									6 28 10 OR report was first seen with the 7 19 10 OR report
Allen Marine	St. Michael	7/21/2010	Other	SIT			1							7 21 10 OR Report sheen on tender vessel. Habitual polluter (2nd time) / Rotterdam
Holland America	Oosterdam	7/23/2010	Port									1		7 23 10 reported through CLAA by Oosterdam OR Rep possible follow, rain runoff
Holland America	Oosterdam	7/30/2010	Internal										1	7 30 10 OR Report very small grease drip not in water
Regent	Seven Seas Navigator	7/31/2010	Misc										1	7 31 10 OR Report listed on SE AK oil response agreement
Holland America	Statendam	7/28/2010	Port	JNU								1		7 28 10 1030 OR spill report OR on board of the Statendam oil sheen JNU
Princess	Diamond Princess	7/28/2010	Other	JNU								1		7 28 10 1130 OR spill report OR on board of the Diamond Princess oil sheen JNU
Holland America	Oosterdam	7/28/2010	Port	JNU								1		7 28 10 0520 OR spill report OR on board Oosterdam oil sheen JNU
Holland America	Oosterdam	7/29/2010	Other	SIT								1		7 29 10 0942 OR Spill report OR on board Oosterdam SIT
Celebrity	Mercury	7/29/2010	Other	JNU								1		7 29 10 OR fish waste sheen JNU Port F/V Crane
Royal Caribbean	Radiance of the Sea	8/2/2010	Vessel	HNH									1	8 2 10 OR spill report SB hydraulic hose burst tender platform Hoonah (HNH)
Celebrity	Millennium	8/5/2010	Misc										1	8 5 10 OR report OWS blind flange piping
Holland America	Rotterdam	8/4/2010	Vessel		1									8 4 10 OR Spill report. Minute drops. From hydraulic door
Princess	Diamond Princess	6/23/2010	Other									1		6 23 10 OR report mentions fuel at dock from bus. Seeking oil sheen report and photos
Norwegian	Norwegian Pearl	8/4/2010	Vessel			1								8 4 10 OR spill report. Hydraulic hose lifeboat 16
Princess	Coral Princess	8/10/2010	Port	JNU								1		8 10 10 OR spill report Port JNU oil tank farm area Non vessel
Holland America	Rotterdam	8/11/2010	Vessel			1								8 11 10 OR report with spill sheens life boat / platform related? Was reported by vessel
Norwegian	Norwegian Star	8/11/2010	Port	SKG								1		8 11 10 OR spill report mystery sheen SKG Port
Princess	Diamond Princess	8/7/2010	Misc							1				8 7 10 OR report about bilge oil manual little bit vague
Celebrity	Celebrity Millennium	8/13/2010	Other	SWD								1		8 13 10 1830 OR Spill Report oil shore mon crane SWD
Princess	Royal Princess	8/9/2010	Port	SWD								1		8 9 10 0630 OR Spill Report oil SB SWD RR dock
Celebrity	Infinity	7/13/2010	Related			1								7 13 10 1050 OR spill Report oil sheen tender
Princess	Golden Princess	7/1/2010	Port	KTN								1		7 1 10 Oil spill report KTN small boat harbor
Holland America	Zuiderdam	8/23/2010	Port									1		8 23 10 Oil spill report
Holland America	Zaandam	8/22/2010	Internal								1			8 22 10 Oil shaft seal inner
Royal Caribbean	Radiance of the Sea	9/4/2010	Vessel	SWD	1									9 4 10 OR report oil droplets port side steering gear Seward, tried to report to SPAR but no response
Holland America	Ryndam	9/8/2010	Related									1		9 8 10 Oil spill report
Allen Marine	St. Michael	9/9/2010	Other	SIT			1							9 9 10 oil spill report
Norwegian	Norwegian Star	8/9/2010	Port	KTN								1		8 9 10 0900 OR spill report Norwegian Star Berth 3 sheen mystery
Holland America	Zaandam	9/14/2010	Vessel	SIT	1									9 14 10 1426 OR spill from oil leak hydraulic ram SIT
Holland America	Zaandam	8/2/2010	Internal										1	8 2 10 OR report indentified INNER seal leakage water oil mix SEE 5 30 10 events
Norwegian	Norwegian Star	8/11/2010	Misc										1	8 11 10 OR report describes air pump bilge well transfer to GW collecting tk AWTS (oil)
Royal Caribbean	Radiance of the Seas	8/4/2010	Vessel	SKG	1									8 4 10 OR report indentified thruster oil droplet in water while maneuvering SKG
Holland America	Zaandam	8/2/2010	Internal								1			8 2 10 / 8 15 10 OR report shaft seal inner leakage shaft seal status [See 5 30 10]
Norwegian	Norwegian Star	8/11/2010	Port									1		8 11 10 OR report and OR spill notification
				Totals for each Category	**13**	**6**	**4**	**1**	**0**	**1**	**7**	**21**	**9**	
				Grand Total										***62***

APPENDIX H

Ocean Ranger - Health Incidents Individual Reports 2008 – 2010

2008 Ocean Ranger - Health Incidents Report

Ship	OR Report Date	DEC Description	Oasis Comment	Risk Category			
				A	B	C	D
Spirit	7/5/2008	Potential Norovirus mentioned in daily report, no further information on latter reports.			1		
Veendam	6/16/2008	Vessel on Norovirus alert, see CDC report.			1		
Veendam	6/23/2008	Potential Norovirus, below reporting limit, see CDC report.			1		
Statendam	7/16/2008	Potential Norovirus 7/5 to 7/12, below reporting limits, was reported to CDC by vessel.			1		
Westerdam	8/28/2008	"Vomit incident" in pool, cleaned up	Vessel took immediate action to sanitize.				1
Coral Princess	8/9/2008	Uncooked food handled without gloves. Closed.	Two (2) galley food handlers not wearing protective gloves while preparing raw food for consumption.			1	
Diamond	7/22/2008	Norovirus mention, below reporting limits.			1		
Island	7/31/2008	Potable water hoses not off the ground, notified city and checked state regulations. Fixed.				1	
Sapphire	8/3/2008	Vomit incident in pool, cleaned and discharged outside AK waters	Appropriate action taken.				1
Serenade	5/21/2008	Potential Norovirus, notified CDC.			1		
Serenade	5/21/2008	Potential Norovirus, notified CDC.			1		
Serenade	6/9/2008	Potential Norovirus, notified CDC.			1		
Seven Seas Ma	5/24/2008	Water hose split, waste handling questions, corrected.				1	
			Totals for each Category	**0**	**8**	**3**	**2**

Norovirus/GI Incidents - 8

Potable Water Incidents - 2

Grand Total ***13***

2009 Ocean Ranger - Health Incidents Report

Ship	OR Report Date	DEC Description	OASIS Comment	Risk Category			
				A	B	C	D
Serenade of the Seas		Potential crew with swine flu, outside AK but will arrive JNU.			1		
Serenade of the Seas		OR reports involvement Swine Flu kept in loop by vessel.			1		
Coral Princess		OR reports - Possible norovirus. Ship reported to CDC. DK reported to Dept of Health.			1		
Rhapsody of the Seas		pH out of range for whirlpool, immediately corrected.					1
Norwegian Pearl		Ice scoop in ice, not hanging. Immediately fixed.	Considered de minimus.				1
Norwegian Pearl		Potable water hose touching dock.				1	
Coral Princess		Report State confirmed flu / waiting for OR report (assessed 5 28 09)			1		
Zuiderdam		Sat 5/30/09 OR e-mail indicated that there may be GI problem. DK forwarded to Health on 6/1/09.			1		
Zaandam		E-mail OR 6 5 09 about communication flue case. Informed after leaving AK			1		
Millennium		6 6 09 OR Report Chickenpox CDC by vessel notified.			1		
Veendam		6 3 09 OR Report water hose not capped / flushed.				1	
Diamond Princess		6 9 09 OR notification DK about Noro on Diamond Princess. See also 6 10 09 filed.			1		
Ryndam		6 9 09 OR notification DK about Noro on Ryndam.			1		
Veendam		6 7 09 OR Report water hose not capped / flushed				1	
Mercury		6 9 09 OR Report Gastrointestinal stuff.			1		
Volendam		6 12 09 OR Hose Potable water stored on deck (vessel).				1	
Pacific Princess		DEC. DEC tells Health. All happened on 6/17/09.			1		
Pacific Princess		At Ktchn Berth #3 leaky potable water hose. DK contacted Princess 6 18 09.				1	
Millennium		6 9 09 OR reports norovirus. Crowley reports to DEC on 6 11 09. DK reports to Health (late) on 6 18 09.			1		
Diamond Princess		6 26 09 OR reports 40 cases of Swine Flu.			1		
Volendam		6 20 09 OR report water hose item 6 24 09 vessel replaced hose.				1	
Diamond Princess		6 28 09 OR reports 28 cases of swine flu; Princess notifies DEC about 8 cases.			1		
Star Princess		7/15 to 7/22 OR reports swine flu, reached 50 cases on 7/22			1		
Veendam		8 5 09 DEC receives Ranger report from 8 3 09. 7 cases GI.			1		
Island Princess		8 1 09 DEC receives Ranger report from 7 29 09 re: possible swine flu.			1		
			Categorized as food item. Probably not.				
Rhapsody of the Seas		8 4 09 Ranger noted chickens spilled on decks. Chkns. washed and cooked.				1	

2009 Ocean Ranger - Health Incidents Report (contd.)

Ship	Report	DEC Description	OASIS Comment	Risk Category			
				A	B	C	D
Star Princess		7 30 09 flagged OR report mentioned possible flu, issue previously addressed.			1		
Sapphire Princess		7 28 09 through 7 31 09 OR reports list suspected cases of swine flu.			1		
Norwegian Pearl		7 8 09 Hand washing stations in food prep areas overflowing with used hand towels.	Categorized as food item.			1	
Island Princess		8 14 09 DEC received OR report from 8 11 09 with possible swine flu.			1		
Statendam		8 26 09 OR report Cl dosage pump pototable water "spiking" closely monitored.				1	
Diamond Princess		OR reports 8/3/09-8/13/09 flagged for swine flu 9 4 09 OR report Swine flue case			1		
Island Princess		9 4 09 OR report swine flu case.			1		
Diamond Princess		9 6 09 OR report influenza like illness (ILI).			1		
Golden Princess		9 15 09 OR report pot bunker hose (not supported)				1	
Ryndam		Inappropriate conduct by Crew.	Could not find OR report or details. Excluded.				
Statendam		Concern about smell- passenger, OR, NPs complaints.	OR checks on pax complaint @ sewage odor per DEC request				1
Sea Princess	6/6/2009	and problem immediately fixed.	OASIS added			1	
			Total for each Category	**0**	**23**	**11**	**3**
			Grand Total				***37***

Swine Flu (ILI) Incidents - 15
Norovirus/GI Incidents - 7
Potable Water Incidents - 9
OASIS Addition or Exclusion - 2

2010 Ocean Ranger - Health Incidents Report

Ship	OR Report Date	DEC Description	OASIS Comment	Risk Category			
				A	B	C	D
Amsterdam		Death Onboard.	Included with safety statistics.				
Amsterdam	5/7/2010	Norovirus	Categorized with food issues.		1		
Amsterdam		Sanitizer in galley.				1	
Diamond Princess		Death Onboard.	Included with safety statistics.				
Amsterdam	5/14/2010	Food left thawing in corridor for hours 5 14 10				1	
Amsterdam	5/14/2010	Food service items left out, spills 5 14 10				1	
Rotterdam		One passenger with flu symptons.			1		
Millennium	5/20/2010	CDC notified ADEC of crewmember with TB 5 20 10			1		
Zuiderdam	5/25/2010	OR saw baker drop parchment paper he was using to cover bread dough onto the floor. He then picked up paper and put it on top of dough with dirty side on dough. I brought it to his attention and he got a clean paper to cover dough. Some possible communication problem as I wanted him to trim or scap the dough.				1	
Sapphire Princess	6/2/2010	OR reported a outbreak on 6 2 2010.	GI		1		
Ryndam	6/12/2010	Final dishwasher rinse water is below the required 180F standard.	Categorized with food issues.			1	
Sea Princess	6/5/2010	6 5 10 detoriated water hose will be replaced soon.				1	
Diamond Princess	6/17/2010	6 17 10 OR noticed Cook person (hat apron) (unidentified) no wash hands after WC use.				1	
Statendam	6/21/2010	<6 21 10 e-mail OR received no date yet) Somat pipe burst cabins (gunk, etc.)				1	
Mercury	6/18/2010	6 18 10 OR Report Pot hose over dock sanitation.				1	
Mercury	6/18/2010	6 18 10 OR Report (different OR) garbage back up incinerator problems (1 out).	Excluded. Didn't see record of incinerator problem in report.				
Seven Seas Navigator	6/19/2010	6 19 10 OR Report food service worker no gloves.				1	
Seven Seas	7/4/2010	7 4 10 OR Report Noro washer used for regular wash.	Excluded. This wouldn't contaminate clean items.				
Statendam	7/4/2010	7 4 10 OR IR SWD AK RR dock hose pot water facilities.					

2010 Ocean Ranger - Health Incidents Report (contd.)

Ship	OR Report Date	DEC Description	OASIS Comment	Risk Category			
				A	B	C	D
Golden Princess	7/8/2010	7 8 10 OR pool spa 72 hrs refreshed?	Excluded due to DEC Note - It was discovered that several vessels have CDC waivers to hold spawater for 72 hours.				
Seven Seas	7/26/2010	7 26 10 OR Report Norovirus.			1		
Statendam	7/23/2010	7 23 10 HAL accidental discharge in Clarence Strait notified on 7 29 10.	Excluded. Counted with WQ items.				
Oosterdam	7/29/2010	7 29 10 OR report pool refresh intervals.	Excluded. Operator showed DEC that pool was properly maintained according to CDC regulations.				
Norwegian Star	8/3/2010	8 3 10 OR Report potable hose caps / OR discusses EO 8. 9 10 notified ADEC NCL.				1	
Norwegian Star	8/4/2010	Potable water hoses dragging.	Inserted by OASIS. Same problem with potable water hoses as previous day.			1	
Sea Princess	8/7/2010	8 7 10 OR Report food chiller temps / 8 9 10 ADEC Princess Quest.	Categorized with food issues			1	
Island Princess	8/4/2010	8 4 10 OR Report potable water hose with end on deck.				1	
Norwegian Star	8/16/2010	8 16 10 OR Report chicken pox.			1		
Millennium	8/26/2010	8 26 10 OR Report 3 cases chicken pox			1		
Carnival Spirit	8/31/2010	8 31 10 Crowley email-chicken pox case.			1		
Coral Princess	8/31/2010	8 31 10 food thawing and tags.				1	
Coral Spirit	9/11/2010	9 11 10 Potable water color stateroom pax.				1	
Statendam	6/22/2010	Norovirus.	OASIS Added.		1		
			Total for each Category	**0**	**9**	**16**	**0**
			Grand Total				***25***

Swine Flu (ILI) Incidents - 1
Norovirus/GI Incidents - 3
Potable Water Incidents - 7
OASIS Addition or Exclusion - 9
Chicken Pox Incidents - 3

APPENDIX I

Ocean Ranger – Safety Incidents Individual Reports 2008 – 2010

2008 Ocean Ranger - Safety Incidents Report

Ship	OR Report Date	DEC Description	OASIS Comment	Risk Category			
				A	B	C	D
Oosterdam	5/27/2008	Crew laundry room fire.	Completely contained. DEC informed USCG.		1		
Statendam	6/9/2008	Water tight doors open with hoses running through.				1	
Statendam	6/25/2008	Fire on front of boiler lasting two minutes.	Fire was extinguished w/in minutes. Alarms functioned. Crew responded quickly.		1		
Statendam	8/29/2008	Loss of electrical power, outside of AK waters.	Ship lost all power and went dark. Three minutes later on Emergency Power.	1			
Star Princess	7/31/2008	Small galley fire, no damage.			1		
Serenade	8/19/2008	Ice damage, no hull puncture, but bent internal frames.	No immediate danger. But likely damage over $25K.	1			
Rhapsody	9/15/2008	Manlift on dock with no barriers, OR informed dock staff.				1	
			Totals for each Category	**2**	**3**	**2**	**0**
			Grand Total				***7***

2009 Ocean Ranger - Safety Incidents Report

Ship	OR Report Date	DEC Description	OASIS Comment	Risk Category			
				A	B	C	D
Ryndam	5/11/2009	OR - reported temporary loss of communications between the engine room and bridge.	Captain decided to use tugs to assist in docking.	1			
Veendam	6/2/2009		Added. Food debris on deck. Potential trip hazard.			1	
Veendam	6/4/2009	Lido deck hand pump Fire pump oil leaking? System status?					1
Veendam	6/5/2009	OR Report Hot electric wiring outside elevator panel.				1	
Veendam		6 12 09 OR report small oil leak (internal) port steering gear.					1
Westerdam	6/26/2009	OR reported hydro oil internal leak override sensors davit life boat 12.	Pressure sensor device leaking.			1	
Statendam	7/9/2009	OR report minor fuel mini leak / drip diesel engine.	Excluded. More appropriate to categorize with oil.				
Zaandam		8 3 09 Missing passenger.		1			
Norwegian Pearl		Electric frayed cord food department.				1	
Zaandam		8 3 09 Missing passenger.	Excluded. Item listed twice. See #7.				
Amsterdam		8 5 09 abnormal vibration noted STB Azipod	Reduced rpm capacity. Potential reduction in maneuvering capabilities.	1			
Statendam		8 15 09 OR E mail course deviation heeling broken glass VAN.	Excluded. Not in daily report. Unclear about nature of issue.				
Pacific Princess		Fire door not able to close, PRI notified USCG, fixed same day.				1	
Statendam		Numerous fuel and LO leaks.	Excluded. No date. Seems like oil issue.				
Amsterdam		9 3 09 OR temporarily storage of paint.	Haz mat stored in temp location that could prove dangerous.			1	

2009 Ocean Ranger - Safety Incidents Report (contd.)

Ship	OR Report Date	DEC Description	OASIS Comment	Risk Category			
				A	B	C	D
Amsterdam		9 2 09 OR possible no first aid kit at pool.				1	
Mercury		Multiple reports indicate OR concern about issue of open hatches in non-passenger spaces.				1	
Norwegian Pearl		Damage to stabilizer outside AK waters, USCG looking at it.	Potential reduction in maneuvering.	1			
Ryndam	5/30/2009	Incinerator fire, immediately put out.			1		
Radiance	6/21/2009	Burned capacitor in AC room.	Starting capacitor overheated and failed.			1	
Statendam	6/17/2009	Marine mammal safety concern.	Excluded. Not human safety item.				
			Totals for each Category	**4**	**1**	**9**	**2**

OASIS Addition or Exclusion

Grand Total ***16***

2010 Ocean Ranger - Safety Incidents Report

Ship	OR Report Date	DEC Description	OASIS Comment	Risk Category			
				A	B	C	D
Millennium		Lifeboat davit cooling fan cover missing.	Excluded. Couldn't find report.				
Amsterdam	5/14/2010	5 14 10 Engine room covers up, no railings.	Floor plates open. No Safety.			1	
Infinity	5/16/2010	Paint locker in bow of ship - collision area - 5/16/2010				1	
Amsterdam	5/26/2010	5 26 10 Paint stored in front of collision bulkhead.				1	
Ryndam	6/8/2010	6 8 10 and 6 18 10 HAZMAT storage parts etc.	Hazardous waste locker doubling as a storage room for other things.				1
Radiance of the Seas	6/21/2010	6 21 10 OR Report no protection covers tender boats 10…	Unclear is this is a safety, pollution prevention, or maintenance issue.				1
Infinity	6/21/2010	6 21 10 OR Report safety items swimming pool.	Excluded. DEC determined this not to be compliance issue.				
Millennium	5/30/2010	5 30 10 OR Report oil drip winch (not water) lifeboat 10 deck 4	Potentially better categorized w/ oil.				1
Infinity	6/21/2010	OR notes steering software glitch at dock corrected.	Excluded. Didn't see mention of this in report.				
Ryndam	6 7/16/2010	7 16 10 OR Report mislabel container Haz Mat in steering room.	Apparent mis-labeling of chemicals.			1	
Norwegian Star	9/7/2010	9 7 10 OR Report prop damage / scratches.	Unclear if reduced maneuvering capabilities or was over $25K damage. Was conservative and included in Cat A.	1			
Amsterdam	6/23/2010	Pool scarp object / foot cut / pool drained and cleaned.			1		
Coral Princess	5/25/2010	In fact general pot safety Reduced RPM STB prop damage.	Assumed that reduced rpm on prop reduced maneuvering capabilities.	1			
Ryndam	6/26/2010	OR notes STB boiler repairs / leaking downcomer tubes.	Excluded. Not clear that this is a safety issue.				

2010 Ocean Ranger - Safety Incidents Report (contd.)

Ship	OR Report Date	DEC Description	OASIS Comment	Risk Category			
				A	B	C	D
Zuiderdam	8/11/2010	OR notes loss of power Hotel burned bow thruster.	Loss of propulsion for a few minutes. Captain notified USCG.	1			
Carnival Spirit	8/22/2010	OR notes no security personnel at foot of ramp.	Identification of potential security weakness.				1
Zaandam	8/15/2010	OR notes regarding no dock security and other items.	Identification of potential security weakness.				1
Zaandam	8/23/2010	OR pool sign safety missing repeat item.					1
Zaandam	8/22/2010	OR no access (easy) safety lights spill, etc.	Excluded. Pertains more to oil. Access to oil spill response kits often blocked by other items.				
Ryndam	6/21/2010	HazMat stored in "wrong" lockers / placards.					1
Coral	6/21/2010	Welder helper no personal protection gear.				1	
Seven Seas Navigator	7/4/2010	7 4 10 OR HazMat stored with no containments / labels (laundry / eng room).					1
Millennium	8/1/2010	8 1 10 OR report mess store / bat storage	OASIS doesn't have copy of report for verification				1
Coral Princess	8/2/2010	8 2 10 OR report paint stored wrong place.	Paint (flammable) not stored.				
Sapphire Princess	7/28/2010	Whale strike 7 28 10 Stephens Passage.	Excluded. Not a human safety issue.				
Amsterdam		Death onboard.	DEC categorized with health.	1			
Diamond Princess		Death onboard.	DEC categorized with health.	1			
OASIS Addition (2) / Exclusion (5)			**Total for each Category**	**5**	**1**	**5**	**9**
			Grand Total				***20***

APPENDIX J

Completed 2014 Ocean Ranger Daily Report

Form Information

A.1:General Information

Date of Daily Report:	Dec 17, 2013
Ship:	a text answer
Ship Code:	a text answer
Trip Type:	a text answer
Ocean Ranger Name:	a text answer
Geographic Location:	a text answer
Date Boarded:	Dec 17, 2013
Number of Passengers and Crew-total number onboard (46 USC Sec 3501):	1
Time Entered AK waters (if applicable):	Dec 17, 2013 6:15:06 AM AKST
Departed AK Waters?	a text answer
Time left AK waters (if applicable):	Dec 17, 2013 6:15:06 AM AKST
New Question	

A.2: WW Information

Alaska Discharge Status	a text answer
Discharge In Alaska? (Did the vessel discharge in Alaska during the report day?)	a text answer
Enter the amount of discharged wastewater (estimated daily wastewater in Alaska)	1
Select the discharge units of measure	a text answer
How were volumes for wastewater estimated?	a text answer
Indicate the discharge port(s) used (name of port as listed in VSSP and discharge log)	a text answer
Is there sufficient holding capacity (Y/N)? (For non-dischargers, is there capacity to hold while in Alaska waters for the remaining time?-can be an estimate)	a text answer
Indicate the volume of wastewater held (volume of wastewater held in tanks at time checked)	1
Select the held units of measure	a text answer
Indicate the time and date of last discharge	Dec 17, 2013 6:15:06 AM AKST
Last Discharge - Latitude (ex. deg-min-sec dir)	a text answer
Last Discharge - Longitude (ex. deg-min-sec dir)	a text answer

A.3: WW Sample Information

Sample Taken (Y/N)- If yes, fill in the following	a text answer
Sample Observed?	a text answer
Select the type of sample taken	a text answer
What was sampled?	a text answer
Sample ID Number - This is on COC form and can be obtained from the sampler.	a text answer
Sample Date/Time	Dec 17, 2013 6:15:06 AM AKST
Was sample taken during discharge?	a text answer
Sample Remarks	a text answer

A.4: Waste Offloads Information

Waste Offloads (Y/N)- If yes, fill in the following	a text answer
Amount offloaded	a text answer
What was offloaded?	a text answer
Contractor used (name the contractor offloading waste)	a text answer

Indicate the offloading method (such as barge, forklift at dock, handheld buckets)	a text answer

A.5: Reportable Illness Information

Reportable Illness - If above 2% threshold and required to report to CDC. (Y/N) (42 CFR 71.21)	a text answer

A.6: Comments & Photos

Photo 1

Photo 1 Caption - State specific location in detail, equipment description (if applicable), and date and time photo was taken.	a text answer

Photo 2

Photo 2 Caption - State specific location in detail, equipment description (if applicable), and date and time photo was taken.	a text answer

Photo 3

Photo 3 Caption - State specific location in detail, equipment description (if applicable), and date and time photo was taken.	a text answer

Photo 4

Photo 4 Caption - State specific location in detail, equipment description (if applicable), and date and time photo was taken.	a text answer
General Observation Comments	a text answer

1.1 WW Daily Observations

1.1.a Observed?	a text answer
Remarks	a text answer
1.1.b Observed?	a text answer
Remarks	a text answer
1.1.c Observed?	a text answer
Remarks	a text answer
1.1.d Observed?	a text answer
Remarks	a text answer

1.2 General WW

1.2.a Observed?	a text answer
Remarks	a text answer
1.2.b Observed?	a text answer
Remarks	a text answer
1.2.c Observed?	a text answer
Remarks	a text answer
1.2.d Observed?	a text answer
Remarks	a text answer
1.2.e Observed?	a text answer
Remarks	a text answer
1.2.f Observed?	a text answer
Remarks	a text answer
1.2.g Observed?	a text answer
Remarks	a text answer
1.2.h Observed?	a text answer
Remarks	a text answer
1.2.i Observed?	a text answer
Remarks	a text answer
1.2.j Observed?	a text answer
Remarks	a text answer
1.2.k Observed?	a text answer
Remarks	a text answer
1.2.l Observed?	a text answer
Remarks	a text answer
1.2.m Observed?	a text answer
Remarks	a text answer

1.3 Disch Vessels, General

1.3.a Observed?	a text answer
Remarks	a text answer
1.3.b Observed?	a text answer
Remarks	a text answer
1.3.c Observed?	a text answer
Remarks	a text answer
1.3.d Observed?	a text answer
Remarks	a text answer
1.3.e Observed?	a text answer
Remarks	a text answer
1.3.f. Observed?	a text answer
Remarks	a text answer
1.3.g Observed?	a text answer
Remarks	a text answer
1.3.h Observed?	a text answer
Remarks	a text answer

1.4 Disch Vessels, in-port or stationary

1.4.a Observed?	a text answer
Remarks	a text answer

1.5 Non-Disch Vessels, at sea

1.5.a Observed?	a text answer
Remarks	a text answer
1.5.b Observed?	a text answer
Remarks	a text answer

1.6 Non-Disch Vsls in-port and Disch Vsls in no-disch areas

1.6.a Observed?	a text answer
Remarks	a text answer
1.6.b Observed?	a text answer
Remarks	a text answer
1.6.c Observed?	a text answer
Remarks	a text answer

1.7 AWTS WW Operations, General

1.7.a Observed?	a text answer
Remarks	a text answer
1.7.b Observed?	a text answer
Remarks	a text answer
1.7.c Observed?	a text answer
Remarks	a text answer
1.7.d Observed?	a text answer
Remarks	a text answer
1.7.e Observed?	a text answer
Remarks	a text answer

2.1 Solid Waste (Garbage) Daily

2.1.a Observed?	a text answer
Remarks	a text answer
2.1.b Observed?	a text answer
Remarks	a text answer
2.1.c Observed?	a text answer
Remarks	a text answer
2.1.d Observed?	a text answer

Remarks	a text answer
2.1.e Observed?	a text answer
Remarks	a text answer

2.2 General Solid Waste (Garbage)

2.2.a Observed?	a text answer
Remarks	a text answer
2.2.b Observed?	a text answer
Remarks	a text answer
2.2.c Observed?	a text answer
Remarks	a text answer
2.2.d Observed?	a text answer
Remarks	a text answer
2.2.e Observed?	a text answer
Remarks	a text answer
2.2.f. Observed?	a text answer
Remarks	a text answer
2.2.g Observed?	a text answer
Remarks	a text answer
2.2.h Observed?	a text answer
Remarks	a text answer
2.2.i Observed?	a text answer
Remarks	a text answer

3.1 Haz Waste Daily

3.1.a Observed?	a text answer
Remarks	a text answer
3.1.b Observed?	a text answer
Remarks	a text answer

3.2 General Haz Waste and Haz Materials

3.2.a Observed?	a text answer
Remarks	a text answer
3.2.b Observed?	a text answer
Remarks	a text answer
3.2.c Observed?	a text answer
Remarks	a text answer
3.2.d Observed?	a text answer
Remarks	a text answer
3.2.f Observed?	a text answer
Remarks	a text answer
3.2.g Observed?	a text answer
Remarks	a text answer
3.2.h Observed?	a text answer
Remarks	a text answer
3.2.i Observed?	a text answer
Remarks	a text answer
3.2.j Observed?	a text answer
Remarks	a text answer
3.2.k Observed?	a text answer
Remarks	a text answer

4.1: Opacity (Visible Emissions); Air Quality

4.1.a Observed?	a text answer
Remarks	a text answer

4.2.b Observed?	a text answer
Remarks	a text answer
4.1.c Observed?	a text answer
Remarks	a text answer
4.1.d Observed?	a text answer
Remarks	a text answer

5.1: Safety

5.1.a Observed?	a text answer
Remarks	a text answer
5.1.b Observed?	a text answer
Remarks	a text answer
5.1.c Observed?	a text answer
Remarks	a text answer

6.1: Potable Water (if applicable)

6.1.a Observed?	a text answer
Remarks	a text answer
6.1.b Observed?	a text answer
Remarks	a text answer
6.1.c Observed?	a text answer
Remarks	a text answer
6.1.d Observed?	a text answer
Remarks	a text answer
6.1.e Observed?	a text answer
Remarks	a text answer

6.2: Sanitation, Swimming Pools & Spas; Safety

6.2.a Observed?	a text answer
Remarks	a text answer
6.2.b Observed?	a text answer
Remarks	a text answer
6.2.c Observed?	a text answer
Remarks	a text answer
6.2.d Observed?	a text answer
Remarks	a text answer

7.1: Oil Pollution; Fuel, Daily

7.1.a Observed?	a text answer
Remarks	a text answer
7.1.b Observed?	a text answer
Remarks	a text answer
7.1.c Observed?	a text answer
Remarks	a text answer
7.1.d Observed?	a text answer
Remarks	a text answer
7.1.e Observed?	a text answer
Remarks	a text answer
7.1.f Observed?	a text answer
Remarks	a text answer
7.1.g Observed?	a text answer
Remarks	a text answer

7.2: Oil Pollution; Fuel; OWS, General

7.2.a Observed?	a text answer

Remarks	a text answer
7.2.b Observed?	a text answer
Remarks	a text answer
7.2.c Observed?	a text answer
Remarks	a text answer
7.2.d Observed?	a text answer
Remarks	a text answer
7.2.e Observed?	a text answer
Remarks	a text answer
7.2.f Observed?	a text answer
Remarks	a text answer
7.2.g Observed?	a text answer
Remarks	a text answer
7.2.h Observed?	a text answer
Remarks	a text answer
7.2.i Observed?	a text answer
Remarks	a text answer
7.2.j Observed?	a text answer
Remarks	a text answer
7.2.k Observed?	a text answer
Remarks	a text answer

7.3: Bilges

7.3.a Observed?	a text answer
Remarks	a text answer
7.3.b Observed?	a text answer
Remarks	a text answer
7.3.c Observed?	a text answer
Remarks	a text answer
7.3.d Observed?	a text answer
Remarks	a text answer
7.3.e Observed?	a text answer
Remarks	a text answer
7.3.f Observed?	a text answer
Remarks	a text answer
7.3.g Observed?	a text answer
Remarks	a text answer
7.3.h Observed?	a text answer
Remarks	a text answer

7.4: Oil Sludge Handling

7.4.a Observed?	a text answer
Remarks	a text answer
7.4.b Observed?	a text answer
Remarks	a text answer
7.4.c Observed?	a text answer
Remarks	a text answer

7.5: Lifeboats; security vessels, Tendering Boats; Deck

7.5.a Observed?	a text answer
Remarks	a text answer
7.5.b Observed?	a text answer
Remarks	a text answer
7.5.c Observed?	a text answer
Remarks	a text answer

7.6: Oil to Sea Interface

7.6.a Observed?	a text answer
Remarks	a text answer
7.6.b Observed?	a text answer
Remarks	a text answer
7.6.c Observed?	a text answer
Remarks	a text answer

7.7: Miscellaneous Oil Pollution

7.7.a Observed?	a text answer
Remarks	a text answer
7.7.b Observed?	a text answer
Remarks	a text answer

Z.1: Summary, Signature & Submit

Does this report contain an observation of interest?	a text answer

Ranger Signature

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APPENDIX K

Ocean Ranger Job Aid for 2014 Report

DEC

Ocean Ranger Job Aid

For 2014 Daily Report

November 12, 2013

ADEC CPVEC

Record of Changes (2014)

2014 RECORD OF CHANGES			
Change Number	**Date of Change**	**Date Entered**	**Entered by (name)**

Expectations of items to observe and report:

Complete the following in order of priority:

- Emergency items such as spills or marine casualties
- Daily observation checks for each section
- Additional observations requested by ADEC
- Items of opportunity/special circumstances
- WW and Oil sections
- Safety, Opacity, Waste, & Sanitation sections
- Seasonal Checklist (if not already completed)

Note: subject to change from ADEC or ADEC contractor

Regardless of the wording in the Job Aid for each monitored item, checking an item indicates only that you have monitored that item during the day, not that the item was or was not satisfactory. If an item is unsatisfactory, your written comments must describe the conditions that have made that item unsatisfactory. Be as specific as possible in your comments. Checking an item but leaving no comments indicates the item was satisfactory.

Consult the guidebook for full citations and information relating to each checked item.

Note: The following acronyms are used in this document:

- GP -The Alaska Large Commercial Passenger Vessel Waster General Permit
- VGP - EPA Vessel General Permit.
- AS - Alaska Statute
- AAC - Alaska Administrative code.
- CFR- Code of Federal Regulations.
- BW – blackwater
- GW- graywater
- WW – wastewater
- VSSP – Vessel Specific Sampling Plan
- OWS – Oil Water Separator(s)
- AWTS – Advanced Wastewater Treatment System
- IAW –in accordance with

Information Sections:

1) General Information (A.1)
   a) Date- date of daily report
   b) Ship Name
   c) Trip Type- IP= in-port inspection. VO = all inspections which are not conducted solely in-port
   d) Name- Name of Ocean Ranger completing report
   e) Location- Port name if in-port, general location if not in port (for example- Tracy Arm or "underway Gulf of Alaska")
   f) Date boarded- date boarded vessel. For in-ports this is the same date as the report.
   g) Number of passengers and crew- total number onboard (46 USC Sec 3501)
   h) Time entered AK waters - local time in 24-hr format only if vessel entered AK waters on day of report.
   i) Time left AK waters - local time in 24-hr format only if vessel entered AK waters on day of report
2) Wastewater (A.2)
   a) Discharge in Alaska on report day (Y/N)? (At time report was made)
   b) Amount discharged -estimated daily WW discharge in Alaska; include units used
   c) Discharge measurement method - (Estimated or metered?)
   d) Discharge port(s) used -name of port as listed in VSSP and discharge log
   e) Volume of WW held -volume of WW held in tanks at time checked
   f) Time and date of last discharge- date and time in 24-hr format when valve was last ended (leave blank if still discharging or vessel does not discharge in AK waters
   g) Location of last discharge – longitude and latitude
3) Sample Taken (Y/N)- If yes, fill in the following in (A.3):
   a) Type of sample- what was the purpose of the sample?
   b) Type of WW sampled-
   c) Sample ID number - Obtain this from the COC form or the sampler
   d) Sample Date and Time
   e) Sample taken while discharging - Y or N
4) Waste Offloads (Y/N)- If yes, fill in the following in (A.4):
   a. Amount offloaded – Provide volume/weight and use units reported in waste offload plan
   b. Type of waste offloaded
   c. Contractor used -Name the contract company offloading waste
   d. Offloading method (such as barge, forklift at dock, handheld buckets)
5) Reportable Illness (A.5) - If above 2% threshold and required to report to CDC in IAW 42 CFR 71.21 (Y/N)
6) General Comments and photos (if necessary)

SECTION 1; WASTEWATER

Sub-Section 1: Wastewater daily observations (if applicable)

a. Daily wastewater and related discharge logs are current, monitored and recorded IAW 18 AAC 69.050 & 33 CFR 159.315
b. Anchor chain and anchor washed down IAW 33CFR 151.2050(e)
c. Wastewater to shore discharges(such as a sewer system or trucks) are not released into regulated water body IAW AS 46.03.462
d. Check for unpermitted discharges of untreated WW, treated WW by unpermitted vessels, discharge in areas closed to discharge, or discharge of sludge or biosolids in Alaska waters IAW AS 46.03.462 and GP

Sub-section 2: General Wastewater

a. Boiler blow down water is handled IAW VGP 2.2.6
b. Chemically treated cooling water handled correctly (e.g. anti freeze etc.) IAW VGP 1.2.3.8
c. If seawater piping bio-fouling chemicals and chlorine are used, use is minimized IAW VGP 2.2.20
d. Cathodic Hull protection used IAW VGP 2.2.7
e. The brine/reject water from desalination systems shall not contain hazardous waste IAW VGP 2.2.10
f. Prohibited sources, e.g. hazardous materials from photo shop/print shops, hospital, laboratories, carpentry paint shops, upholstery shops, etc do not enter the GW, BW or bilge systems IAW VGP 2.1.2 & 5.1.1.1.4 and AS 46.03.745
g. Drains in from spaces containing machinery (e.g. fan rooms, elevator pits, effluent/condensate etc.) are oil free before entering wastewater systems or is sent to bilges or OWS IAW VGP 2.2.11 & 2.2.17
h. Gas turbine wash water discharged < 3 nm (Does not include turbo blowers / chargers on diesel engines) IAW VGP 2.2.14 and 40 CFR 110
i. Fire main discharge only in emergencies, deck wash down or secondary uses IAW VGP 2.2.12
j. Pool /spa water discharges in Alaska waters performed IAW VGP 5.1.1.2 and 5.1.2.3
k. Deck wash down / hull cleaning (above waterline) IAW VGP 2.2.1

Sub-section 3: Permitted Vessels, General (all vessels that discharge in Alaska waters, even if only discharging while underway)

a. Approved VSSP is up-to-date and available onboard IAW AS 18AAC 69.025(f) and 33 CFR 157.317(b)
b. Sampling events
    i) Follow the approved VSSP and Quality Assurance Project Plan sampling procedures IAW AS 18 AAC 69.025 & 030 and 33 CFR 159.317
    ii) Sample results (if available same day) IAW GP limits for Fecal Coliform and Total Suspended Solids in effluent
    iii) Field test results for pH and Chlorine IAW GP limits
c. Discharge log identifies daily estimated volume, date, location, and length of each stay if discharge occurs while anchored or docked. While underway between each port estimates average flow rate, dates while en route, and average speed. Flow rate recorded by type. Time / date is in 24 hrs clock format at the start (beginning) and end (stop) of each discharge IAW 18 AAC 69.050 (c) for continuous or automatic discharges only
d. Onboard records describe how the daily discharge volumes are calculated/estimated/or metered IAW 18 AAC 69.050(c)(2) for continuous or automatic discharge only
e. The daily estimated volumes of WW discharged are recorded by type IAW AS 46.03.465(a), 18 AAC 69.050 and 33 CFR 159.315(b)

f. WW discharge performed IAW GP Authorization Letter (AS 46.03.462 (a))
g. Daily volumes were calculated / estimated /or metered in IAW GP
h. WW outflow quantity monitoring is functioning properly (if installed) IAW GP
i. Food wastes and galley oils in GW IAW VGP 2.2.15

Sub-section 4: Permitted Vessels, when discharges while in-port or stationary

a. Estimated average flow for the GW, BW, Mixed WW (m3/hr) while in port is logged IAW18 AAC 69.050(c) & (d)

Sub-Section 5: Non-Discharge Vessels and Permitted Vessels in no-discharge areas

a. Vessel had no WW discharge conducted in waters subject to GP requirements? (AS 46.03.462 (a)) If discharge occurred fill out Incident Report
b. Verify that overboard valves are closed / sealed in Alaska waters (AS 46.03.463(e))
c. BW GW handling capacity is sufficient for the crew and passengers on board and the time in port (non discharge)(AS 46.03.463(e) and 33 CFR 159.309)

Sub-section 6: AWTS Wastewater Operations, Permitted Vessels

a. Sample valve and related piping is operable and IAW approved VSSP and 33CFR 159.317
b. AWTS system is capable of performing IAW approved VSSP and GP
c. Observe repairs, maintenance, cleaning and other operations that may affect the WW treatment plant effluent quality (GP)

SECTION 2: Non-Hazardous (Solid) Waste

Sub-section 1: Solid Waste (Garbage) Daily

a. Garbage logs are up to date. Include in information section if garbage offload conducted in Alaska IAW 18AAC 69.035 and 33 CFR 151.55(b)(d)
b. Garbage (if offloaded) was offloaded IAW Nonhazardous Solid Waste Plan (18 AAC 69.035)
c. Offload records are certified by the Master or person in charge of the vessel and are completed IAW 33 CFR 151.55 (d)
d. Check vessel machinery logs reports for maintenance, repairs, cleaning operations of the garbage handling equipment (33 CFR 151.63 (b))
e. Shipboard garbage is handled in accordance with Garbage (waste) Management Plans. Review manifests and pick up schedule (33 CFR 151.57(c))

Sub-section 2: General Solid Waste (Garbage)

a. Grinders IAW 33 CFR 151.75
b. Valves and flappers on chutes IAW AS 46.03.710
c. Maintenance and repair conducted on equipment IAW 33 CFR 151.63 (b(3))
d. Check there are no plastics or synthetics discharged overboard IAW 33 CFR 151.67
e. Incinerator ashes, if discharged overboard, are free of plastic residue (clinkers) or free of unburned food wastes if landed ashore IAW 33 CFR 151.67
f. Trash chutes are clean and free from oil residue that could be lost overboard (No oil stains on decks, side of hull adjacent to trash chutes) IAW 40 CFR 110.3
g. Medical Wastes are incinerated or manifested as Bio-Hazardous Waste IAW AS 46.03.296 and 46.03.745

SECTION 3: Hazardous Waste and Hazardous Materials

Sub-section 1: Hazardous Waste Daily

a. Vessel hazardous waste logs are up to date IAW 33 CFR 151.55(b) and (d). Include in information section 4
b. Hazardous waste was offloaded IAW the Alaska Hazardous Waste Offloading Plan, and volumes and waste types match the plan IAW 18 AAC 69.040
c. Records reflect reasonable accumulations of waste with respect to the capacity of the vessel, its age, technologies onboard, and amounts of repair /maintenance IAW AS 46.03.296 and AS 46.03.745

Sub-Section 2: General Hazardous Waste and Hazardous Materials

a. Records are maintained and manifests completed for potential hazardous waste streams IAW 18 AAC 69.040
b. Waste is sorted to prevent hazardous materials or wastes entering garbage waste stream. Separate defined storage areas for hazardous materials or wastes/ non hazardous wastes – no commingled waste IAW 40 CFR 265.17
c. There is a designated person-in charge; each entry is signed by Officer-in-Charge, and each page by Master IAW 33 CFR 151.55(d)
d. Shipboard garbage is properly handled in accordance with Hazardous Material Management Plan. Review manifests and pick up arrangements plan (33 CFR 151.57)
e. Check if there is any evidence of hazardous material being discharged overboard (AS 46.03.296 and AS 46.03.745)
f. Storage handling of hazardous materials and waste is IAW AS 46.03.296 AS 46.03.745 and 40 CFR 262.34
g. The following (if applicable) hazardous material or waste streams are properly handled and disposed of IAW AS 46.03.745 AS 46.03.296, VGP and 40 CFR 273:
    i. Photo processing (VGP 1.2.3.5)
    ii. X-ray equipment
    iii. Print shop waste (inks, etchers, developers etc.)

iv. Paints, solvents, thinners
v. Fluorescent or mercury vapor bulbs
vi. Dry cleaning chemicals and wastes(e.g. PERC, Tri, lint condensate water, etc.) (if applicable)
vii. Batteries (universal wastes)
viii. Pharmaceuticals / narcotics
ix. Cleaning chemicals (including evaporator cleaning, electro cleaner)
x. Pyrotechnics (expired)
xi. Oily and or chemically contaminated rags, filters etc.
xii. Incinerator wastes (ashes)
xiii. Pesticides / rodent control chemicals
xiv. AWTS chemicals (such as de-scalers)
xv. Undiluted barbercide

h. Maintenance and repair conducted on equipment involved in Hazardous Materials handling IAW 33 CFR 151.63 (b(3))

SECTION 4: VISIBLE EMISSIONS; AIR QUALITY

Sub-section 1: Opacity (Visible Emissions); Air Quality

a. Stack emissions are minimized and monitored. Operational (combustion) procedures in place IAW 18 AAC 50.070
b. Incinerator operation and procedures (observed if in operation) are IAW 18 AAC 50.050 & 070
c. Emissions IAW 18 AAC 50.110. No emissions which would immediately threaten health, property, or animal life
d. Fuel used IAW 40 CFR 1043.60

SECTION 5: SAFETY

Sub-section 1: Safety

a. Observe operations (including repairs and cleaning) that may affect safety of passengers, crew and vessel.
b. Marine casualty (grounding, significant harm to the environment, loss of life of serious injury, fire, or loss of propulsion, steering, or control system that reduced maneuverability) reported IAW 46 CFR 4.05 (a)(3)
c. Personal Protective Equipment, use, and storage recommendations contained in MSDSs for onboard chemicals are followed IAW Material Safety Data Sheets (MSDS)

SECTION 6: HEALTH; SANITATION

Sub-section 1: Potable Water (if applicable) Production / handling of potable water

a. Potable Water hook ups, IAW supplier (municipality or port), vessel procedures, 21 CFR 1240.86 and 21 CFR 1250.82
b. Potable hose is dedicated for potable water and connections are sanitized / capped before use IAW 18 AAC 80.015
c. Potable hose properly stored and used 'free of the ground' IAW 18 AAC 80.015
d. Potable water system free of cross connections or has backflow prevention IAW 18 AAC 80.025

Sub-section 2: Swimming Pools Sanitation; Spa Sanitation; Safety

a. Water is filtered in re-circulated swimming pool IAW 21 CFR 1250.89
b. Free residual halogen of > 0.4 mg/ L (ppm) and pH not less than 7.0 is maintained in re-circulated swimming pools. (21 CFR 1250.89 (b))
c. Halogen test is provided and used IAW 21 CFR 1250.89 (b)

SECTION 7: OIL POLLUTION

Sub-section 1: Oil Pollution; Fuel, Daily

a. Sheens and spills are absent IAW AS 46.03.740 and 40 CFR 110.3
b. Vessel Oil Discharge Record Book is up to date IAW 33 CFR 151.25(h). The Oil Discharge Record Book must contain entries for each discharge (including automated discharge) and offload including OWS discharge events IAW 33 CFR 151.25(d)
c. The Oil Discharge Record Book contains entries for each OWS alarm IAW 33 CFR 151.25
d. Oil Discharge Record Book contains entries for each internal transfer for cleaning or ballasting of fuel tanks IAW 33 CFR 151.25(d)
e. Head tanks levels for "oil to sea interface" indicate no oil loss into the sea (e.g. shaft seals, stabilizer systems, thrusters etc.) IAW AS 46.03.740 and 40 CFR 110.3
f. Special actions(such as bunkering of tenders) prevent spills and tank overflows, etc. IAW 40 CFR 110.3 and VGP 2.1.3

Sub-section 2: Oil Pollution; Fuel; Oil Water Separators

a. Changes to the OWS or OWS piping, make sense IAW 33 CFR 151.10
b. OWS units are processing from a contaminated source, if OWS is in use IAW 33 CFR 151.10
c. Oil content meters have similar or same readings on units with multiple oil content meters IAW 33 CFR 151.10
d. Sample analyzed by OWS meter is from OWS discharge IAW 33 CFR 155.370(a) and 33 CFR 151.10
e. Oil dispersants are not used in oil tanks or lubrication systems IAW 40 CFR 110.4 and VGP 2.2.9
f. OWS system and OWS meters are free of obvious electrical bypasses, jumpers, extra switches on unit or meter control panel IAW 33 CFR 155.370(a) and 33 CFR 151.10
g. OWS has automatic re-circulate (3 way valve) or it shuts down when > 15 ppm. Valve is operated properly IAW 33 CFR 155.370(a)(3)
h. System back flush or oil purge cycle (if used) properly operates IAW 33 CFR 155.370(a)
i. Processed water is free of gross oil contamination (sheen or visible oil) IAW AS 46.03.740 and 40 CFR 110.3
j. Vessel OWS related vessel machinery logs, reports for maintenance, repairs, cleaning operations (e.g. back flush) onboard and available IAW 33 CFR 151.10(b). Ship's operational maintenance routine matches preventative maintenance conducted. OWS repairs recorded IAW 33 CFR 151.10
k. Meter calibration is recorded IAW 33 CFR 151.10

Sub-section 3: Bilges

a. Bilge water management manual describes procedures, and lists equipment required to limit the amount of oil allowed into bilges IAW 33 CFR 155.770
b. Machinery bilge spaces free from excess contamination of oil or hazardous materials IAW 33 CFR 155.770
c. Bulkheads, piping, structures, and rose box interiors are free from excess contamination/oil residues IAW 33 CFR 155.770
d. Machinery free of excess oil leakage (e.g. boiler water blow down / wash waters) IAW 33 CFR 155.770
e. Oil and hazardous materials are not directly discharged into the bilges IAW 33 CFR 155.770

f. OWS and related equipment free from detergent used to remove appearance of sheen IAW 40 CFR 110.4 and VGP 2.2.2
g. Overboard valves on bilge, bilge ballast salt-water service are locked/controlled IAW 40 CFR 110.3
h. The ship uses a system to manage overboard valves; using seals, to control overboard discharges IAW 40 CFR 110.3

Sub-section 4: Oil Sludge Handling

a. Sludge and spent lube oils are offloaded or properly destroyed and/or recycled onboard IAW 33 CFR 151.25
b. Sludge handling and sludge waste incineration process records are properly kept IAW 40 CFR 110.3 and 33 CFR 151.25
c. Sludge is correctly handled when it is blended with fuels and blending is recorded IAW 40 CFR 1043.60 and 33 CFR 151.25

Sub-section 5: Lifeboats; Security Vessels, Tendering Boats; Deck

a. Vessel(s) mechanical and bilge systems are free of oil, grease that could enter the water IAW 40 CFR 110.3
b. Oil and grease from topside equipment is handled correctly IAW VGP 2.2.1

Sub-section 6: Oil to Sea Interface

a. Oil lubricated stern tubes, bow and stern thruster seals, fin-stabilizers, steering gear, Azipods etc. IAW VGP 2.2.9
b. Lube oil consumption, oil records and type of oil used are recorded IAW 33 CFR 151.25
c. Mechanical systems with oil to sea interface are free from unusual loss of lubricant IAW 40 CFR 110

Subsection 7: Miscellaneous Oil Pollution

a. Fore peak tank, compartments and tanks forward of the collision bulkhead are free from oil, hazardous materials, or hazardous waste IAW 33 CFR 155.470
b. Vessel has no indications of OWS bypasses or direct discharges of oil IAW 40 CFR 110.3