DEC Cruise Ship Program

Ocean Ranger 2008 Alaska Season Report

February 2009

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1. EXCECUTIVE SUMMARY

In August 2006, Alaskans approved Ballot Measure 2 (a.k.a. “Cruise Ship Initiative”). One of the environmental provisions of the initiative required DEC to place observers - Ocean Rangers - onboard large cruise ships to monitor compliance with state and federal environmental requirements and to insure that passengers, crew, and residents of ports are protected from improper sanitation, health, and safety practices (A.S. 46.03.476).

There are no other Ocean Ranger programs in the country. Therefore, DEC implemented a pilot Ocean Ranger Observer program in 2007 using a mix of licensed marine engineers and environmental specialists. DEC used data gathered in 2007 to assist in developing the Ocean Ranger training and implementing a full Ocean Ranger program.

The 2008 cruise season was the first season that the Ocean Ranger Program was fully implemented. DEC retained Crowley Marine Services to recruit, hire, train and place Ocean Rangers aboard vessels. The program was funded through the collection of Ocean Ranger fees ($4 per berth) from the cruise industry. DEC collects approximately $4 million dollars a year for the Ocean Ranger program. The cost of the Ocean Ranger contract with Crowley Marine Services was approximately $ 3.9 million for the 2008 cruise season.

Crowley hired a total of 32 Ocean Rangers. Despite the efforts to hire Alaskans, only one Alaskan was hired as an Ocean Ranger. In addition, the front line Ocean Ranger manager was an Alaskan. Crowley and DEC will make additional efforts to recruit Alaskan Ocean Rangers for the 2009 season.

In 2008, Ocean Rangers were on board 456 out of 516 large cruise ship voyages (88%). The remaining 60 voyages (12%) were scheduled for in-port inspections. Ocean Rangers submitted a total of 2,180 Daily Reports. Daily Reports contain different checklist that cover wastewater, oil handling, waste, and sanitation. The Ocean Ranger would select a different section of the checklist to complete for each day they were in Alaska waters. Any potentially non-compliant items were expedited to DEC Cruise Ship Program for review.

Ocean Rangers reported a total of 74 petroleum related items, 19 wastewater items, 13 health items, 8 waste items, 7 safety items, and 5 boiler water blown down items. Most of the potentially non-compliant items were immediately resolved by the vessels. Other

items were either addressed by the DEC Cruise Ship Program or referred to the appropriate agencies [e.g. DEC Spill Prevention and Response (SPAR), US Coast Guard].

None of the items discovered by Ocean Rangers warranted enforcement. Ocean Rangers did, however, provide useful additional information to DEC regarding enforcement actions taken by the agency based upon wastewater items that were self-reported by the cruise lines and through independent opacity (air) readings. Ocean Rangers also assisted the US Coast Guard and DEC-SPAR in answering questions about potential compliance items.

All the vessels and operators were generally cooperative. However in the beginning of the season, Ocean Rangers reported insufficient access on two cruise lines to observe and to verify environmental compliance. Different interpretations of the law and miscommunications between the vessel managers and the vessels may have contributed to these incidents. By the beginning of July 2008, the access issue was completely resolved.

The 2008 cruise season was a successful season for the Ocean Ranger Program. DEC has renewed the contract with Crowley Marine Services for the 2009 season. They are currently working on scheduling, outfitting, hiring, and training Ocean Rangers as well as reserving berths.

2. BACKGROUND

In August 2006, the Alaska Public passed Ballot Measure 2[1] (a.k.a."Cruise Ship Initiative"). The initiative contained provisions pertaining to taxation, gambling, and sale of shore-side excursions and environmental practices of commercial passenger vessels.

The Department of Environmental Conservation's (DEC) Commercial Passenger Vessel Environmental Compliance Program ("Cruise Ship Program") is responsible for implementing the changes in the environmental statutes. As a result the Department must:

- Issue permits to large cruise ships that choose to discharge in Alaska (A.S. 46.03.462)[2] ;
- Collect hourly vessel positional tracking data and monthly discharge logs (A.S. 46.03.465); and
- Place U.S. Coast Guard licensed engineers ("Ocean Rangers") onboard large cruise ships[3] to act as independent observers for the purpose of monitoring state and federal requirements pertaining to marine discharge and pollution requirements and to insure that passengers, crew, and residents at ports are protected from improper sanitation, health, and safety practices. (A.S. 46.03.476).

In 2007, DEC implemented a pilot Ocean Ranger Observer program, which was a precursor to the fully implemented Ocean Ranger program. DEC placed environmental observers and USCG licensed engineers on board cruise ships beginning in May 2007. These Observers rode one port-to-port leg of the first voyage for each cruise ship operating in Alaska in 2007. They collected detailed information of the ships on which they rode, and verified environmental compliance. This information was used for the full implementation of the Ocean Ranger program in 2008. The final 2007 Ocean Ranger Report can be found at the DEC Cruise Ship Program website at the following location:

http://www.dec.state.ak.us/water/cruise_ships/pdfs/Ocean_Ranger_FinalReport_March_2008.pdf

[1] See http://www.dec.state.ak.us/water/cruise_ships/Law_and_Regs/index.htm

[2] This subject will be included in a separate 2008 DEC Cruise Program Report.

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

This report focuses on the 2008 cruise ship season in which the full Ocean Ranger program was implemented.

3. 2008 CONTRACTOR SELECTION

DEC requested contractor assistance with implementing the Ocean Ranger program in 2008, with an option for two additional contract renewals. The Contractor is responsible for recruiting, hiring, and training US Coast Guard licensed marine engineers to serve as Ocean rangers. The Contractor also outfits the Ocean Rangers, managed their travel and logistics, and provided daily observation reports (Ocean Ranger Daily Reports)[4] to DEC for compliance review. After a formal procurement process was completed, the $3.9 million dollar contract was awarded to Crowley Marine Services, Inc. (Crowley). Crowley and their sub-contractor Faststream Recruitment Inc., recruited, screened, and interviewed the licensed engineers. Crowley and the America Maritime Officers Union (AMO) developed the training course and trained the Ocean Rangers at the AMO's STAR Training Center facilities in Florida.

4. OCEAN RANGER RECRUITMENT AND TRAINING

Recruitment

The Contract required that the Crowley must give hiring preference to qualified Alaskans. Crowley hired an Alaskan Ocean Ranger front line manager and administrative support assistant. A local Southeast Alaska field office in was set up in Petersburg, Alaska.

Crowley and their partners actively tried to recruit qualified Alaskan Ocean Ranger candidates. Advertisements and internet web postings were made. Faststream received seventy five (75) inquires and applications from Alaskans in response of the internet postings. Three (3) of the applications were found to have the minimum qualifications to be an Ocean Ranger. However, all three candidates withdrew due to wages, and the seasonal nature of the job. Faststream also scanned the American Maritime Officers union (AMO) registration records, and found that eight (8) current members were Alaska residents. Of the eight (8) Alaskan members, there were four (4) deck officers who did not qualify, three (3) of the members submitted resumes and started the application

[4] For more information and a copy of a sample report, see http://www.dec.state.ak.us/water/cruise_ships/ocean_ranger_reports.html

process but ended up taking jobs on other ships, one of these eight members also responded to the internet advertisement, but did not qualify.

One Alaskan candidate qualified and worked as Ocean Ranger during the 2008 season. DEC encourages qualified Alaskan engineers to apply for employment during the 2009 season and beyond. DEC and Crowley are discussing additional strategies for the 2009 season to intensify the recruiting process in order to increase the number of Alaskan Ocean Rangers.

Please see the following DEC web site for information on the minimum requirements for becoming an Ocean Ranger:
http://www.dec.state.ak.us/water/cruise_ships/ocean_ranger.htm

Training

Two training sessions for potential Ocean Rangers candidates were held in the AMO-STAR Training Center in Dania Beach, Florida. The training consisted of five eight hour classes and a one day site visit on a cruise vessel in Fort Lauderdale. The training sessions were intensive. The first training was held on April 14, 2008. DEC staff attended, taught portions of this training session, and met and evaluated the Ocean Ranger candidates. Industry representatives from Carnival Cruise Lines, and Royal Caribbean Cruise Lines provided presentations. Mr. Chris Hewitt of the Holland America Line attended the training as an observer. The training sessions included the following subjects / items:

- Regulations and Laws
- Typical cruise ship operations in Alaska
- Reporting / Communication Tools (Tilt-phone) / E-mail
- Safety
- Professional Code of Ocean Ranger Conduct
- Wastewater sampling techniques and sample Quality Assurance / Quality Control procedures
- Oil / Stack opacity / Solid waste / Sanitation / Health topics
- Waste water technologies / Waste water systems
- On board site visit and
- Home work and examination at the end of the training.

On May 12, 2008 a second week long training session was held at the AMO STAR Training center. DEC staff and an Ocean Ranger that had already had on-the-job

experience participated in this training session through video and teleconference presentations. This Ocean Ranger provided first hand feedback and discussed his experiences with the Ocean Ranger trainees. The first and second training class also included a site visit on a large cruise ship that was docked at Port Everglades, Florida. However, not all the all Ocean Rangers in the first training class were allowed to visit a large cruise ship, because of the Port Security concerns.

The first training session included 28 candidates, 24 of which were selected as Ocean Rangers. The second training included 17 candidates, 7 of these were selected as Ocean Rangers. In both classes, there were no Alaska residents candidates.

An individual training session was held in the first week of August for a qualified Alaskan candidate. This included a one day training from an experienced Ocean Ranger on board the Celebrity *Infinity* while it was docked in the Port of Juneau. This Alaskan worked in August and September as an Ocean Ranger.

For the 2008 season, a total of 32 working Ocean Rangers were hired.

5. PURCHASE OF CRUISE CABINS

DEC booked the first 136 cabins for the 2008 season in December 2007 before the contract with Crowley was signed. There were indications from the cruise lines that late bookings might be costly and the availability of lower cost cabins on certain voyages or vessels might not be guaranteed. The cabins had to be booked for an entire voyage – partial payment of a cabin for only the days that the vessel would be in Alaska was not possible. The cost of the cabins included the gratuities, fuel surcharges, and taxes. Single occupancy was usually as expensive as double occupancy. Most cruise lines did not provide a volume discount. Norwegian Cruise Lines did include a discount. All cruise lines matched the prices available to the general public through common on-line travel agents (e.g. Travelocity and Expedia). The cruise lines also provided much more lenient (money saving) name change and cancelation policies to the State than what would be available to the general public. The average cost of the cabin was approximately $1,800 based on an average of 7 day-voyages.

Crowley purchased the remainder of the cabins once the contract was effective in February 2008. They received similar pricing and name change and cancellation policies. The state paid over $830,000 for cabins for the Ocean Ranger program.

6. OCEAN RANGER MANAGEMENT

DEC and Crowley developed an Ocean Ranger deployment schedule. This schedule was developed to comply with the Ocean Ranger law and to stay within the $4.0 million dollar budget appropriated by the Legislature to DEC. The Ocean Ranger Program is funded by the Ocean Ranger fees of $4.00 per berth of each voyage by a vessel. In 2008 DEC collected approximately $4 million dollars.

The deployment schedule contained two types of deployments. Ocean Rangers either boarded vessels in Seattle or Vancouver and rode the vessel until it left Alaska waters or they conducted in port inspections. In this way, an optimum coverage of cruise ships by Ocean Rangers was achieved within the existing budget. Out of 516 voyages, Ocean Rangers rode a total of 456 voyages (88%). In-port inspections were used to provide Ocean Ranger coverage for the 60 remaining voyages (12%).

Factors that were taken into consideration when deciding whether to have an Ocean Ranger conduct an in-port inspection versus a full voyage deployment included: 1) the vessel's wastewater discharge status in Alaska, 2) the vessel's good compliance history; 3) short length of the vessel's itinerary (e.g. for few days in Alaska); and/or 4) the vessels with very high daily cabin costs. For example, the *Seven Seas Mariner* and *Silver Shadow* are luxury vessels with very high priced cabins, so these vessels were scheduled only to receive Ocean Ranger in port visits. The *Clipper Pacific* and *Nippon Maru* had only one port call each scheduled in Alaska. Therefore, these vessels were scheduled for in port visits while in Alaska. The *Clipper Pacific* made an unscheduled additional stop in Juneau; unfortunately the Ocean Ranger could not visit the vessel because of the short notice. One vessel that was not permitted to discharge in Alaska self-reported an unpermitted discharge of wastewater (the *Rhapsody of the Seas*). Unfortunately at the time of the incident there was no Ocean Ranger on board. After the reported discharge Ocean Rangers were scheduled onboard for the remainder of the season.

The deployment schedule also rotated the Ocean Ranger after an average of three weeks of duty time on a vessel. This rotation schedule ensured that Ocean Rangers had sufficient time to become familiar with the complex workings of the cruise ship but maintained objectivity. Please see attached the deployment schedule Appendix 1.

Crowley set up a local office in Petersburg (AK) where the front-line Ocean Ranger Manager was located. From there, Crowley coordinated Ocean Ranger Alaskan operations. Crowley had an additional manager available to assist in the day to day

operations and coordinated the operations in the Seattle and Vancouver (BC) Canada region.

Crowley conducted day to day communications with the Ocean Rangers via e-mail. In some occasions, DEC staff communicated with Ocean Rangers directly. Crowley and DEC established communication procedures and contacts list so that 24/7 contact with Crowley and DEC staff members was possible.

In addition, Crowley's front line Ocean Ranger manager held meetings in the DEC Juneau office in June and August to discuss Ocean Ranger issues with DEC staff and to meet with the Ocean Rangers. During the June visit, it was discovered that Ocean Rangers had concerns about insufficient access on the cruise ships that they were monitoring. These issues were resolved with the cruise ship industry by early July. For more information please see Section 10 "Environmental Compliance Verification" and the program's access report at:
http://www.dec.state.ak.us/water/cruise_ships/docs/Access_Survey_Report.pdf

7. OCEAN RANGER OUTFITTING, COMMUNICATION TOOLS, AND REFERENCE DOCUMENTS

Crowley outfitted the Ocean Rangers with personal gear. This included a simple uniform, overall, hand lamp, safety shoes, ear mufflers and other personal protection gear. The Ocean Ranger also received a manual (Ocean Ranger General Information Handbook) that included copies of regulations.

Crowley provided the Ocean Rangers with a state of the art mobile phone (e.g. tilt phone type). The Rangers used this phone to communicate, to take pictures, and to send their reports. Every Ocean Ranger received one tilt phone. Crowley had spare phones available in case of loss, damage, or phone problems. The phones were maintained by Crowley and spare phones were available for emergencies in the DEC office in Juneau, and at Crowley offices.

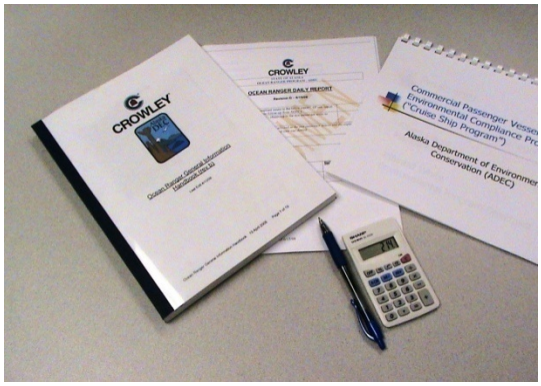
Ocean Rangers used templates that were loaded on the tilt phone to complete their required reports. Crowley established updated procedures to ensure that the Ocean Rangers provided their reports using the most up to date templates. Any change in these forms and templates required approval by DEC.

Crowley established a procedure where Ocean Rangers could submit their reports in hard copy in cases when the tilt phone was not operable. At the start of the 2008 season, some Ocean Rangers could not transmit their reports and we lost a few daily reports. Crowley and DEC are reviewing and preparing for system solutions to make the tilt phone more user friendly during the 2009 season. In general however, the tilt phones were a cost effective and fast communication and reporting tool.

The following communication tools and reference materials were available to the Ocean Ranger:

- Tilt –phone (communication recording tool): This portable pocket tool includes the mobile phone options, a digital camera, and includes pre-programmed "Ocean Ranger Daily Report" (checklist) templates. This check list can be filled in on the phone screen by touch pen. After the check list is completed and signed, it can be sent via internet to Crowley or DEC. All the completed reports were sent to Crowley first and then immediately forwarded to DEC for final approval. The "Ocean Ranger Daily Report" is discussed further in Section 8 Ocean Ranger Report Types.

- Vessel Specific Notebook: This book contains specific data about the vessel. Ocean Ranger notes, suggestions, etc. were included in these notebooks, which remained on board during the entire season. If the Ocean Ranger was not able (e.g. due to scheduling) to share vessel information during the transfer with the next Ocean Ranger, this information could be documented in the notebook. At the end of the season, the notebooks were retrieved and filed at DEC. Some vessel notebooks include ample additional ship specific information that the Ocean Rangers collected during the season; some vessel notebooks only contain copies of the DEC documentation placed in the notebook at the beginning of the season. Overall this notebook was a very useful tool, which was augmented by the Ocean Rangers during the season for the benefit of other Ocean Rangers and DEC.



- Ocean Ranger Guidebook: Each Ocean Ranger received an Ocean Ranger Guidebook during the training. This guidebook included regulations, policies, and other information needed to perform the Ocean Ranger duties properly.

- Emergency wastewater sample kit: These kits were placed aboard large cruise ships for use by the Ocean Rangers if necessary. These kits included sample instructions and chain of custody forms. In case of spills, emergencies, or other waste water concerns, DEC could direct the Ocean Rangers to sample the effluent. A procedure for chain of custody of these samples and laboratory analysis was in place. In 2008, there were no events that warranted the use of these emergency kits. The kits were returned at the end of the season to DEC for re-use during the 2009 season.

8. OCEAN RANGER REPORT TYPES

The goal of the Ocean Ranger program is to verify environmental compliance. In order to document their findings, Ocean Rangers submit a variety of reports. Note that these reports are only completed for the days that the Ocean Ranger is on board and the vessel is in Alaskan waters.

Below is an overview of the reports submitted by the Ocean Rangers.

Ocean Ranger Daily Report: The Ocean Ranger completes this report every day that the vessel is in Alaskan waters. A Daily Report is also completed when the Ocean Ranger performs an in port visit. These reports are signed by Ocean Ranger and forwarded to Crowley for approval. Crowley approval process includes a completeness review, formatting review, and identification (if any) of flagged items. Crowley then posts these reports to a secure online portal for DEC for review and approval. Normally there was a lag of two to three days between the time that the Ocean Ranger completed a report and the time that the reports were available on the portal for DEC approval and

download. Crowley sent reports with potentially non compliant items to DEC immediately.[5]

The Daily Report consists of the following elements or questions:

- Are there any potentially non-compliant issues in this report?;
- Did you have sufficient time today to accurately complete the checklist? (question prompted by access concerns);
- General vessel information including whether or not the vessel discharged wastewater in Alaska;
- Section A: Document Review;
- Section B: Black and Gray Water Systems;
- Section C: Oil Pollution Handling;
- Section D: Hazardous and Non-Hazardous Waste; and
- Section E: Sanitation.

The Ocean Ranger is encouraged to randomly select a different section(s) to complete during each day of the voyage. After a few days into a voyage, the Ocean Ranger daily reports contain the observation of multiple areas and systems.

An example of the Ocean Ranger Daily Report can be found in Appendix 2.

Incident Report: An Ocean Ranger completes this report when a potentially non-compliant item such as an oil sheen or other item is observed. In some cases the Ocean Rangers did not use the Incident Report format, and reported the incident in the Ocean Ranger Daily Report, or identified the incident separately. Crowley immediately forwarded these reports via e-mail to DEC followed up on these reports and/or shared them with other appropriate agencies (e.g. U.S. Coast Guard (USCG), DEC Spill Prevention and Response (SPAR), Centers for Disease Control (CDC)) as appropriate.

The Daily Report would make reference to the incident report for that specific date and incident. The Incident Report includes space for the reporting of the incident and has space in the document to include digital photos. An example of an Incident Report can be found in Appendix 3.

[5] In some areas in Alaska, there is a gap in cell phone coverage. In these cases, DEC received reports with potential non-compliance items the day after the report was completed. Potential non-compliance items are sometimes also identified as flagged items.

Departure Report: This report is submitted by the Ocean Ranger when he/she departs from the vessel. The report provides information on the vessels operations that may be helpful for the next Ocean Ranger. This report was not mandatory and a departure report was not always completed. Some Ocean Rangers left notes behind in the vessel specific note book instead.

An Example of the Departure Report that is used by the Ocean Ranger can be found in Appendix 4.

9. OCEAN RANGER REPORT STATISTICS

During the 2008 season, DEC staff monitored the management of the Ocean Rangers. DEC expected that "unforeseen situations" such as vessel delays, or Ocean Ranger turn over would affect the Ocean Ranger program. This did not happen. Overall the Ocean Ranger deployment schedule worked well and a minimum of downtime was recorded.

One metric of the Ocean Ranger performance is the quantity of Ocean Ranger reports produced. Table 1 includes a brief overview of the number of Ocean Ranger daily reports. The "2008 Ocean Ranger Daily Report List" (Appendix 5) includes more details on the number of daily reports.

Table 1

Ocean Ranger Report Statistics

2008 Season

Ocean Ranger Report Type	Total Number of Reports
Ocean Ranger Daily Reports	Completed by Ocean Ranger during a voyage : 2039 Completed by Ocean Ranger during in port visit : 141 **Total Number Ocean Ranger Daily Reports** **2180**
Incident Reports	100[6]
Departure Reports	131

[6] The Incident Reports in this Table do not include some potentially non-compliant incidents that were reported separately or through the Ocean Daily Reports.

Missed Ocean Ranger Daily Reports	Scheduling / Itinerary issue	: 18
	Technical / Communication issue	: 19
	Misc.	: 2
	Total Number Missed Ocean Ranger Daily Reports	**39**

In the beginning of the 2008 season, a few daily reports were lost due to communication problems with the tilt phones.

There were also 18 instances where an Ocean Ranger missed a scheduled in port visit due to time constraints or vessel delays. In certain cases there was insufficient time for the Ocean Ranger to complete daily report on his vessel and also conduct an “in-port visit” on another vessel. These problems were quickly resolved.

During the 2009 season, DEC plans to allow more time for the in-port visits and may have a dedicated Ocean Ranger available in-port when possible.

The deployment table in Appendix 1 lists the Ocean Rangers reporting status for each vessel / day in Alaska waters. The Ocean Ranger Report status is color coded. Missing Ocean Ranger Daily Reports are identified for that day / vessel in orange. There were a total of 39 missed daily reports in 2008. The percentage of the missed reports compared to the total number of the received voyage reports is only 1.8 % (39 of 2,180). See Table 1 and Appendix 5 for details.

10. ENVIRONMENTAL COMPLIANCE VERIFICATION

If an Ocean Ranger discovers a potentially non-compliant item while going through their checklist, the Ocean Ranger first contacts the appropriate vessel staff to attempt to immediately correct the problem. The Ocean Ranger then checks if the vessel has contacted the appropriate federal and state agencies. DEC and the Ocean Ranger manager are then informed either through an Incident Report or direct email communication. Information about the item and a description of actions taken is included in the Daily Report.

DEC Cruise Ship Program used the Ocean Ranger reports to verify environmental compliance. All reports were reviewed by DEC. If a potentially non-compliant item is detected, DEC takes immediate action. This may include notification of other agencies and immediately contacting the vessel to obtain an update. The Ocean Ranger is also immediately informed about the status, directly or through the Ocean Ranger manager.

The approved Ocean Ranger Daily Reports and Incident Reports included non-compliance items related to:

- Oil (petroleum products);
- Wastewater
- Health
- Other Wastes
- Safety
- Boiler Blow-down (a wastewater stream)

Appendix 6 provides a summary table of potential compliance issues.

General DEC Procedures:

When non-compliance items are brought to DEC's attention, they are also immediately brought to the vessel's attention, Ocean Ranger and Ocean Ranger manager's attention, and to the appropriate federal and state agencies for further action.

Some potentially non-compliant issues were outside the jurisdiction of the Cruise Ship Program (like oil pollution, safety items, and health items). These items are immediately referred to the appropriate federal and state agencies. Non- compliance items and potentially non-compliant items related to oil were forwarded to DEC SPAR and US Coast Guard Sector Juneau. Safety and potentially non-compliant items regarding safety were forwarded to the US Coast Guard Sector Juneau. Health and Sanitation potentially non-compliant items were forwarded to US Center for Disease Control (CDC), and the appropriate State of Alaska health agencies.

Oil Pollution 2008 Items: The Ocean Ranger Daily Report section C includes items regarding oil handling on board. The most numerous category of potentially non-compliant items that were reported in 2008 related to oil pollution. A total of 74 cases were reported in 2008. However, not all the reported cases were directly related to cruise ships. DEC divided the 2008 reported oil pollution related items into 6 separate groups:

1) Oil from Vessel:
   Ocean Rangers reported a total of 11 oil from vessel items. These are the oil pollution cases where the petroleum products were coming from the vessel itself and either leaked or spilled into the water. Vessels are required by law to report pollution events of this nature immediately to DEC SPAR and the USCG. Notifying DEC SPAR and the USCG via the Ocean Rangers does not satisfy the legal reporting requirements of the cruise line. In the beginning of the summer

the vessels in some cases did not involve the Ocean Ranger immediately when spills of this nature occurred. Later in the season it appears that the vessel immediately involved and notified the Ocean Ranger as well.

The 11 cases of petroleum leaking from vessels were caused by faulty propulsion equipment. The Ocean Rangers reported that some vessels appeared to be losing a grease-like product from closed systems. Ocean Rangers closely monitored the product levels in tanks, and the water surrounding the vessels for oil sheens, marking their findings on the checklist in Section C of their daily reports. While docked in port, both the vessels and the Ocean Rangers reported small droplets of sheen that appeared to come from the vessel.

Vessels suspected of having leaking propulsion equipment had regular diver inspections while in port to establish the location of the leak. One vessel performed temporary under water repairs in an Alaskan port. Several others altered their standard maintenance operations to correct a leaking seal. USCG Sector Juneau, DEC SPAR and DEC Cruise Ship Program were kept informed and updated regarding this monitoring and vessel status.

2) Port Oil Sheen:
There were a total of 31 non-traceable pollution incidents, or mystery sheens reported by Ocean Rangers. These are oil pollution incidents that the Ocean Ranger noticed but could not "trace back" directly to a cruise ship. Vessels are not required, by Alaska law, to report pollution not believed to originate from them, although in some cases they do. Many of these sheens would have likely remained unreported without the Ocean Rangers. In some cases the vessel did not immediately notify the Ocean Rangers as well. DEC SPAR, Cruise Program, and USCG staff worked closely with the Ocean Rangers to ascertain the source of marine mystery sheens when possible. During the 2008 season, all marine mystery sheens reported to the DEC Cruise Ship Program were immediately forwarded to DEC SPAR and USCG Sector Juneau. DEC SPAR is working closely with the Cruise Ship Program to develop additional Ocean Ranger forms which would be sent directly to DEC SPAR for more immediate response to marine mystery sheens.

3) Internal Oil leak:
A total of 16 cases were reported where oil (including fuel) is not leaking or spilled into the water. Some vessels had oil in bilges (which was corrected immediately), leaking fuel pipe to combustion equipment, and internal fuel spills. These items may not be a non-compliance item, although they may develop into a safety (fire) or health hazard (fumes) item. Propulsion equipment also had internal leaks; and some vessels changed oil on regular basis because water was "seeping" into the propulsion lubrication system. All the reported cases were immediately reported to DEC SPAR and USCG Sector Juneau by DEC Cruise Ship Program.

4) Scrubber Oil Leak: One vessel obtained approval from DEC to operate an exhaust gas scrubber in Alaska waters for the remainder of the 2008 season. The exhaust gas scrubber project is an experimental project that utilizes pumped

sea-water to clean (scrub) exhaust gases from a Diesel Electric Generator, by removing particles, and sulfur oxides from the exhaust. This project was started in 2007. The vessel planned on operating the scrubber to gather additional scrubber process information, including effluent sampling. DEC and the vessel informed the Ocean Ranger regarding the 'in and outs' of the project. Unfortunately during the Ketchikan and Skagway scrubber operations small oil sheens were noticed in the discharge of the scrubber. The vessel immediately terminated the scrubber operations, and deployed a motorboat to recover the oil product. DEC witnessed the Skagway scrubber operations, and clean up. The vendor of the scrubber equipment is reviewing data and investigating the cause of these scrubber installation oil mini-spills. Operation of the scrubber was immediately terminated for the season. The Ocean Ranger and vessel self-reported both cases the incident to the appropriate agencies. The cases were immediately forwarded to DEC SPAR and USCG Sector Juneau by DEC Cruise Ship Program.

5) Other Source Oil:
Ocean Rangers reported 9 oil sheens potentially caused from cruise ship tender boats or shore operations not associated with the vessel.

The reported cases were immediately reported to DEC SPAR and USCG Sector Juneau by DEC Cruise Ship Program.

6) Miscellaneous Oil:
Ocean Ranger received questions from vessel crews about oil related matters, including records and operation of oil water separators. DEC's Cruise Ship Program responded to questions from the Ocean Rangers and forwarded these questions to DEC SPAR and USCG. A total of 5 items were identified for follow up.

A complete overview of the specific compliance items for 2008 the "Ocean Ranger Reports Compliance Items" can be found in Appendix 6.

DEC SPAR is augmenting the information and training provided to Ocean Rangers regarding reporting oil related issues for the 2009 cruise season.

Wastewater 2008 Items:

The Ocean Ranger Daily Report includes 19 items regarding wastewater. Ocean Rangers reported that tank identification systems on some of the vessels was not "in line" with the approved Vessel Specific Sampling Plan (VSSP). Vessels submitted requests for revision, and DEC issued updated 2008 VSSP documents. The effluent quality was not compromised by the incomplete tank identification. DEC received late in the season reports of additional incomplete tank identifications. DEC decided to not to re-issue these VSSP documents, for the remainder of the 2008 season. For 2009 DEC is working on the VSSP updates, the vessels are now required to include the "as built" or "as used" waste water storage tank plans. The actual description of the holding tanks needs to be included in the VSSP application.

The Ocean Ranger and vessels self-reported accidental discharges of pool water in Alaskan waters. Another vessel self reported, confirmed by Ocean Ranger, that a shower stall overflow caused shower water to run off the deck into the sea. One vessel was reported to have an internal "mini-overflow" of blackwater (sewage) that was temporarily stored in empty garbage cans. One Ocean Ranger report included a failure of the wastewater treatment system. The vessel had already self-reported to DEC and stopped discharging.

The reported wastewater items including the VSSP related items were immediately reported to USCG Sector Juneau by DEC.

Health 2008 Items:

The Ocean Ranger Daily Report Section E includes items regarding sanitation on board. Ocean Rangers reported Norovirus events onboard. The Ocean Ranger verified that the vessels took appropriate actions and that the CDC was notified. A total of 13 potential health items were reported. All the 13 cases were brought to the vessel's attention and were immediately resolved. Beside Norovirus, other issues included handling of potable water hoses, food preparation glove wearing, and pool clean-up of potentially pathogenic materials (vomit).

Other Waste 2008 Items:

The Ocean Ranger Daily Report Section D includes items regarding Hazardous and Non-Hazardous Waste. A total of 8 potential items were reported. The Ocean Rangers reported on a vessel potential "inappropriate capacity for storage of solid waste". The vessel was not able to land garbage (dry solid non-hazardous waste) and the waste storage capacity was almost running out. The vessel immediately took action and properly off-loaded the waste (garbage) when arriving at the next port. Ocean Rangers also reported refrigerant "leaks / escapes". These were technical problems in refrigeration conditioning systems that led in some cases the refrigerant escaped and after the repair the system was satisfactorily tested, and re-charged with refrigerant. Two vessels accidentally lost "steel fender plates", while anchored, they were not recovered. One Ocean Ranger report mentioned the use of a fire extinguisher and the description of the vessel procedures to dispose responsibly the fire extinguisher.

The reported waste items were immediately reported to USCG Sector Juneau by DEC Cruise Ship Program.

Safety 2008 Items:

The Ocean Ranger Daily Reports include items regarding safety on board. A total of 7 potential items were reported in 2008. All reported safety items were solved by the vessels immediately. The safety items varied from a potentially "unsafe' situations when

passengers walked under vessel maintenance sky worker (man lift), open water tight doors in engine room spaces during the voyage, small laundry room fire and boiler fire (which both were immediately brought under control by vessel crew and extinguished), and ice floes in fjords. All these cases were communicated between the Ocean Ranger and the vessel. The Ocean Rangers found and reported generally, that the vessels immediately solved / corrected the (potential) items.

The reported cases were immediately reported to USCG Sector Juneau, and if applicable, to other appropriate agencies by DEC Cruise Ship Program.

Boiler Blow-down 2008 Items:

The Ocean Ranger Daily Report includes items regarding Boiler Blow-down wastewater. Most vessels have oil fired boilers in combination with steam boilers / heat recovery systems. In these systems, chemically treated boiler water is used. Ocean Rangers reported that two vessels appear to not have direct storage capacity to store the boiler blow-down waste stream. DEC worked with Ocean Rangers to verify, and to better understand these particular vessel waste streams. The cruise ship general permit does not include conditions that include or explicitly mention 'boiler water discharges'. Based on cursory research of the potential water quality of the boiler water that is disposed of, we expect that this waste stream may have extremely high levels of metals, suspended small solids (e.g. mud), high levels of pH, and may not meet Alaska Water Quality standards.

EPA issued a NPDES vessel discharge permit on December 18, 2008[7] that includes conditions that prohibit boiler water discharges, provided that the discharge cannot meet water quality standards.

DEC will rewrite the Ocean Ranger checklist to clarify questions about boiler water blow down in the 2009 Daily Report to ensure that this source is being handled in compliance with the new EPA NPDES permit.

Miscellaneous 2008 Items:

Air Emissions 2008:

The Ocean Ranger Daily Reports include items regarding visible emissions from cruise vessels. The Ocean Rangers did report opacity incidents from the vessels. In most cases, these opacity incidents were also self-reported by the vessels. The Ocean Ranger verified location and in same case provides valuable background information of opacity incidents. The Ocean Rangers are not certified Reference Method 9 opacity

[7] EPA Vessel General Permit webpage is :http://cfpub.epa.gov/npdes/home.cfm?program_id=350

readers; therefore they cannot perform valid opacity readings. Even if Ocean Rangers were certified opacity readers, it may not be physically possible to take a reading while onboard.

Ocean Ranger Access Issues:

In the beginning of June 2008, DEC and Crowley received reports from several Ocean Rangers about problems with access on 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. Full access to most areas on a vessel is critical to the success of the Ocean Ranger program. Concern about the access issue was expressed by the public and members of the legislature.

Based on June 10th-17th meetings with Ocean Rangers, Crowley conducted a survey which included questions about access. Crowley completed an access report based on the findings of the survey on June 23, 2008. The initial report indicated that on 18 of 27 ships (67%), all rangers reported adequate access. There were mixed results on 6 of 27 ships (22%). On 3 of the 27 ships (11%), the rangers reported only negative comments on access. DEC and Crowley documented these cases in detail and identified the vessels with this problem.

This status report prompted DEC to meet with representatives of the entire Alaska cruise industry in early July. DEC also met separately with Holland America Line and Princess Cruises, which resulted in the revision of their cruise line policies on Ocean Rangers. DEC also added a question about access prominently on the Ocean Ranger Daily Report. The revised Ocean Ranger Daily Report included a check item (box) that included access and time issues. In this way, DEC could immediately identify potential access and time issues, during the daily reporting and take appropriate follow up actions.

DEC requested that Crowley conduct a follow-up survey of the ocean rangers at the end of July to determine the extent to which access had improved. Ocean rangers provided access comments on 28 ships. On 26 of 28 ships (93%), all ocean rangers indicated that they had sufficient access to do their jobs. All responses indicated there was sufficient access with the exception of two “no” responses from the same ocean ranger. The other rangers on different voyages of the same vessels had positive comments on access. It should be noted that the majority of operators and vessels were from the beginning very cooperative and supportive of the Ocean Ranger Program. A copy of this Ocean Ranger Access Report produced by Crowley for DEC is available online[8].

One vessel that had an access issue early in the season also had several potentially non compliant items. These items were brought to the attention of the vessel and appropriate agencies. Unfortunately miscommunications between the on board crew and Ocean Ranger led to the information regarding the potentially non-compliant items being communicated through DEC to the Ocean Ranger. This “triangle” communication was not efficient and did not immediately address the potentially non-compliant items.

[8] http://www.dec.state.ak.us/water/cruise_ships/docs/Access_Survey_Report.pdf

Therefore DEC requested that the operator/vessel discuss these potential compliance items first with the Ocean Ranger. In the end the vessel was in compliance, and the potential non-compliance items were fixed. As requested by DEC, the relief Ocean Ranger re-verified these earlier non compliant items, and found them in compliance.

11. CONCLUSION

The 2008 cruise season was a success for the Ocean Ranger Program. DEC obtained valuable information on the environmental operations of large cruise ships. Ocean Ranger reporting and verification show that the cruise vessels are environmentally aware, and have sound environmental systems and operational practices in place to minimize environmental impacts. However, there are areas of concern. In particular, there were numerous oil pollution concerns.

Although none of the Ocean Ranger discovered issues that warranted enforcement action, Ocean Rangers provided useful information regarding enforcement actions taken by DEC based on industry reported wastewater issues and independently obtained opacity (air) readings. Ocean Rangers also assisted the US Coast Guard and DEC-SPAR in answering questions. Ocean Rangers provided DEC with valuable information about the treatment of wastewater and solid wastes onboard large cruise ships, and verified information that cruise ships are required to submit to the Cruise Ship Program. Ocean Rangers also assisted vessel crews with understanding new State of Alaska requirements.

The cruise industry cooperation during the 2008 season of the Ocean Ranger program was excellent from the start. However, some vessels / operators appeared to not fully understand the access expectations and access requirements of the Ocean Ranger program. As a result the Ocean Ranger program had to re-affirm the expectations. After this re-affirmation process the Ocean Rangers received good professional support to perform their jobs.

DEC is well underway in preparing for the 2009 cruise season. DEC SPAR is updating Ocean Ranger training information for better reporting of oil related items. Crowley is increasing their hiring outreach effort to find additional Alaskan Ocean Rangers. Training and information provided to Ocean Rangers is being updated to answer questions and address issues that arose during the 2008 season.

12. USEFUL WEBSITES

US Centers for Disease Control: Vessel Sanitation Program, Cruise Ship Reports

http://wwwn.cdc.gov/vsp/InspectionQueryTool/Forms/InspectionSearch.aspx

Northwest Cruise Ship Association (NWCA): Trade association that supports most of the cruise ships operating in Alaska.

http://www.nwcruiseship.org/

Alaska Cruise Association (ACA): Trade association of cruise ships in Alaska.

http://www.akcruise.org/index.cfm

Alaska Department of Environmental Conservation (DEC) Cruise Ship Home Page

http://www.dec.state.ak.us/water/cruise_ships/index.htm

Alaska Department of Environmental Conservation (DEC) Ocean Ranger Page

http://www.dec.state.ak.us/water/cruise_ships/ocean_ranger_info.html

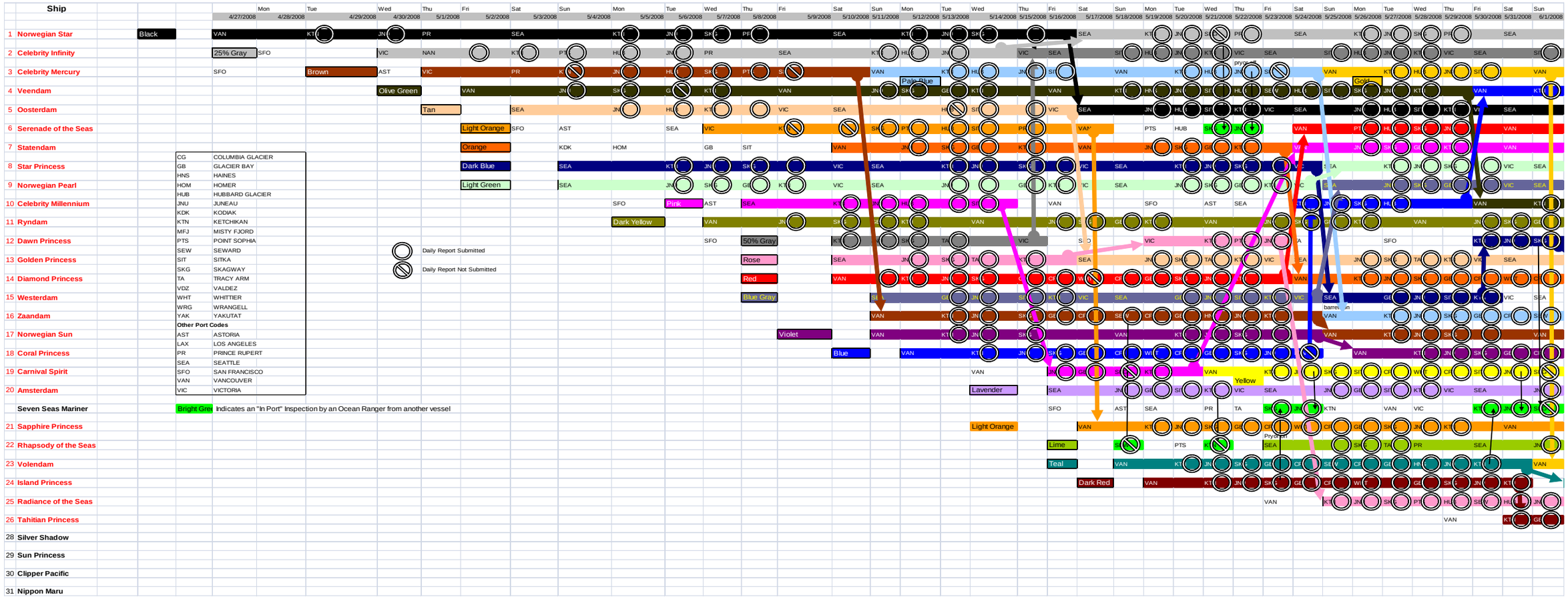
Environmental Protection Agency (EPA): Vessel Discharge Final Permit

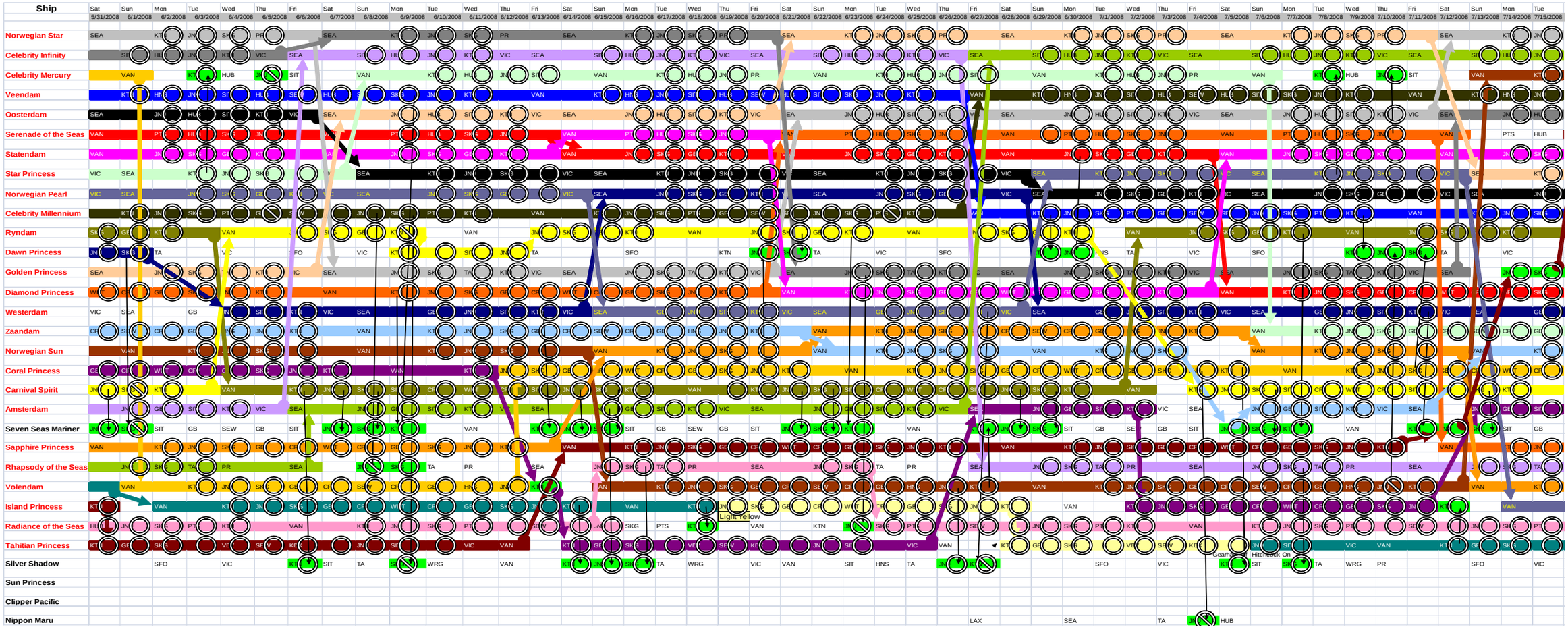
http://cfpub.epa.gov/npdes/home.cfm?program_id=350

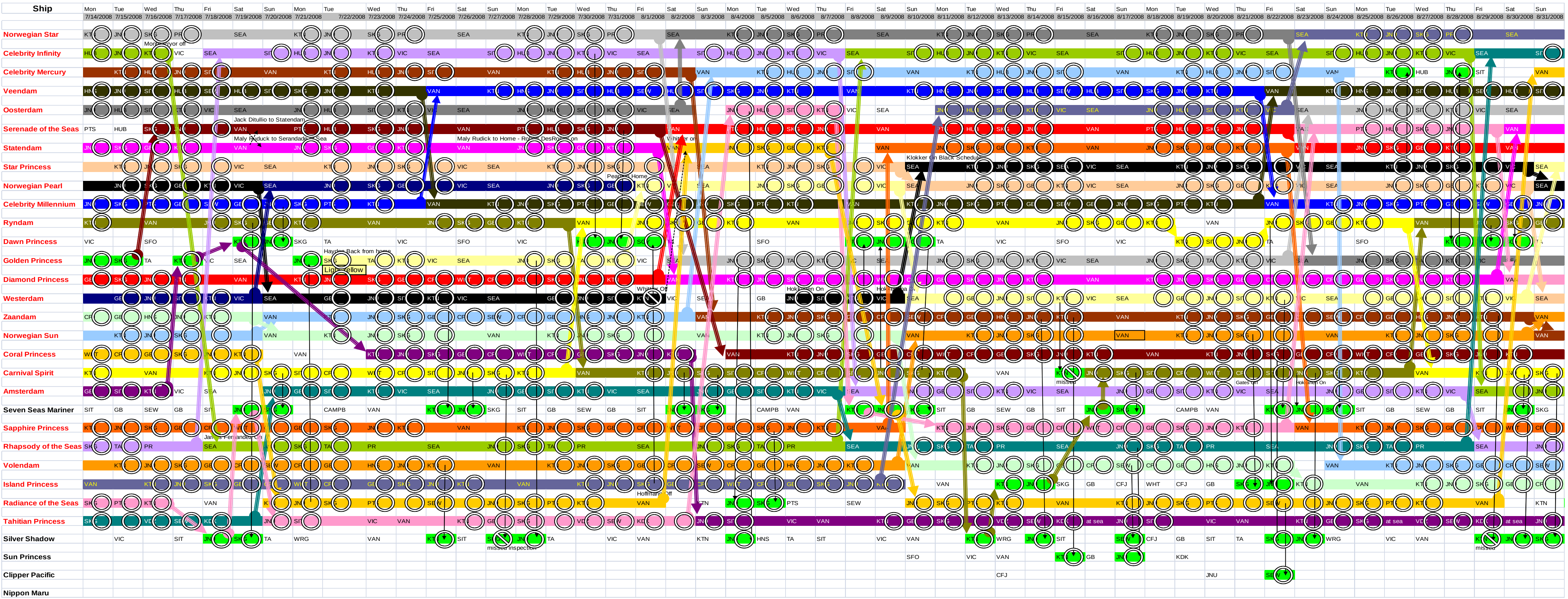
Web-sites of 2008 large cruise lines

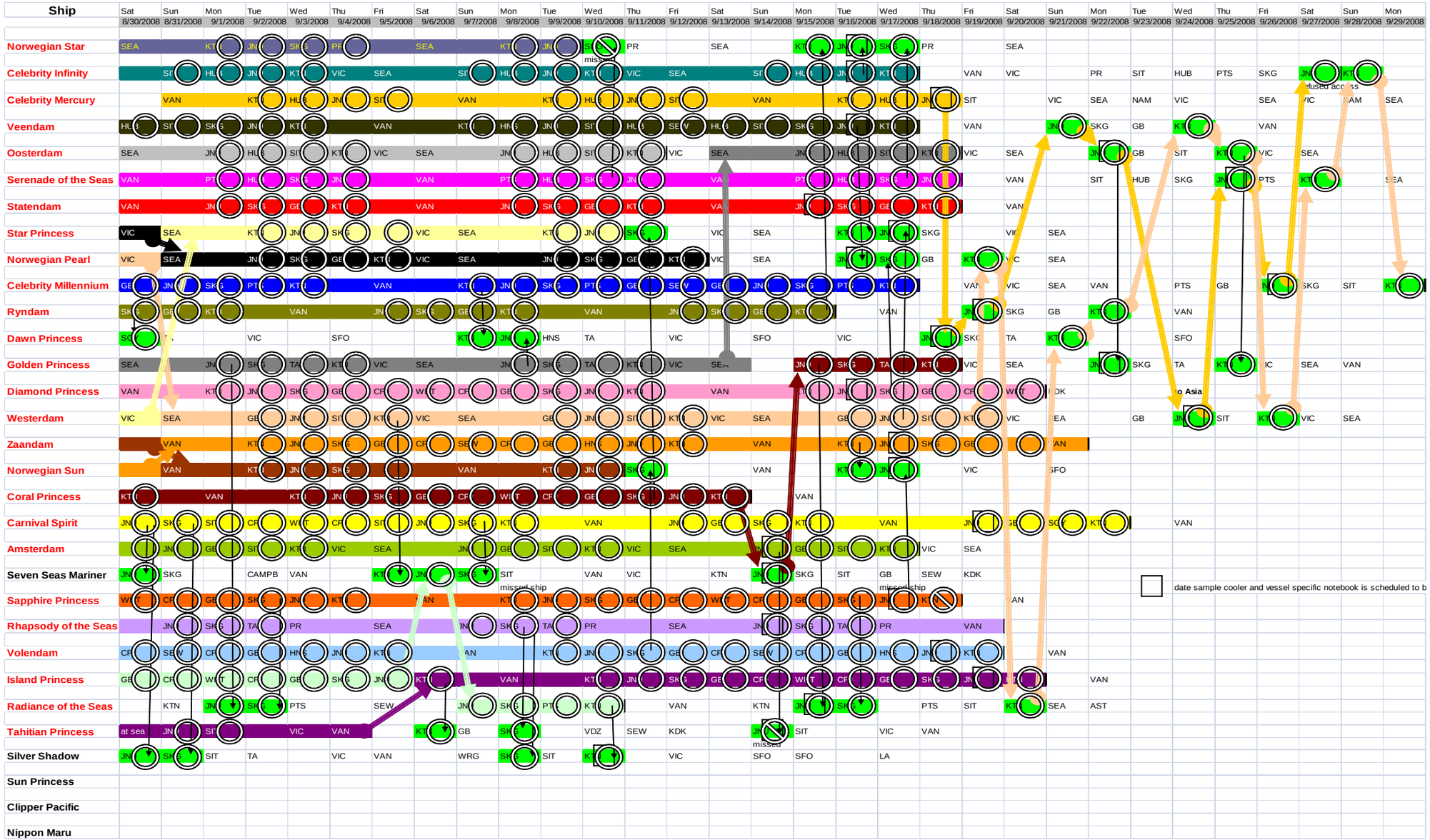
- Carnival Cruise Lines
- Celebrity Cruises
- Holland America
- Norwegian Cruise Line
- Princess Cruises
- Regent Seven Seas Cruises
- Royal Caribbean International
- SilverSea Cruises

Appendix 1: 2008 Final Deployment Schedule




Ship
Sat 5/31/2008
Sun 6/1/2008
Mon 6/2/2008
Tue 6/3/2008
Wed 6/4/2008
Thu 6/5/2008
Fri 6/6/2008
Sat 6/7/2008
Sun 6/8/2008
Mon 6/9/2008
Tue 6/10/2008
Wed 6/11/2008
Thu 6/12/2008
Fri 6/13/2008
Sat 6/14/2008
Sun 6/15/2008
Mon 6/16/2008
Tue 6/17/2008
Wed 6/18/2008
Thu 6/19/2008
Fri 6/20/2008
Sat 6/21/2008
Sun 6/22/2008
Mon 6/23/2008
Tue 6/24/2008
Wed 6/25/2008
Thu 6/26/2008
Fri 6/27/2008
Sat 6/28/2008
Sun 6/29/2008
Mon 6/30/2008
Tue 7/1/2008
Wed 7/2/2008
Thu 7/3/2008
Fri 7/4/2008
Sat 7/5/2008
Sun 7/6/2008
Mon 7/7/2008
Tue 7/8/2008
Wed 7/9/2008
Thu 7/10/2008
Fri 7/11/2008
Sat 7/12/2008
Sun 7/13/2008
Mon 7/14/2008
Tue 7/15/2008
Norwegian Star
Celebrity Infinity
Celebrity Mercury
Veendam
Oosterdam
Serenade of the Seas
Statendam
Star Princess
Norwegian Pearl
Celebrity Millennium
Ryndam
Dawn Princess
Golden Princess
Diamond Princess
Westerdam
Zaandam
Norwegian Sun
Coral Princess
Carnival Spirit
Amsterdam
Seven Seas Mariner
Sapphire Princess
Rhapsody of the Seas
Volendam
Island Princess
Radiance of the Seas
Tahitian Princess
Silver Shadow
Sun Princess
Clipper Pacific
Nippon Maru
Light Yellow
Gearhead - Hitchcock On


Ship
Norwegian Star
Celebrity Infinity
Celebrity Mercury
Veendam
Oosterdam
Serenade of the Seas
Statendam
Star Princess
Norwegian Pearl
Celebrity Millennium
Ryndam
Dawn Princess
Golden Princess
Diamond Princess
Westerdam
Zaandam
Norwegian Sun
Coral Princess
Carnival Spirit
Amsterdam
Seven Seas Mariner
Sapphire Princess
Rhapsody of the Seas
Volendam
Island Princess
Radiance of the Seas
Tahitian Princess
Silver Shadow
Sun Princess
Clipper Pacific
Nippon Maru


Ship
Sat 8/30/2008
Sun 8/31/2008
Mon 9/1/2008
Tue 9/2/2008
Wed 9/3/2008
Thu 9/4/2008
Fri 9/5/2008
Sat 9/6/2008
Sun 9/7/2008
Mon 9/8/2008
Tue 9/9/2008
Wed 9/10/2008
Thu 9/11/2008
Fri 9/12/2008
Sat 9/13/2008
Sun 9/14/2008
Mon 9/15/2008
Tue 9/16/2008
Wed 9/17/2008
Thu 9/18/2008
Fri 9/19/2008
Sat 9/20/2008
Sun 9/21/2008
Mon 9/22/2008
Tue 9/23/2008
Wed 9/24/2008
Thu 9/25/2008
Fri 9/26/2008
Sat 9/27/2008
Sun 9/28/2008
Mon 9/29/2008
Norwegian Star
Celebrity Infinity
Celebrity Mercury
Veendam
Oosterdam
Serenade of the Seas
Statendam
Star Princess
Norwegian Pearl
Celebrity Millennium
Ryndam
Dawn Princess
Golden Princess
Diamond Princess
Westerdam
Zaandam
Norwegian Sun
Coral Princess
Carnival Spirit
Amsterdam
Seven Seas Mariner
Sapphire Princess
Rhapsody of the Seas
Volendam
Island Princess
Radiance of the Seas
Tahitian Princess
Silver Shadow
Sun Princess
Clipper Pacific
Nippon Maru
missed ship
missed ship
missed
date sample cooler and vessel specific notebook is scheduled to b

Appendix 2: Daily Report Example

CROWLEY

STATE OF ALASKA
OCEAN RANGER PROGRAM - ADEC

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):	**No**
2) Did you have sufficient time today - observing in the non-passenger areas to accurately complete the checklist?	**Yes**

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: **No**	Section B: **No**	Section C: **Yes**
Section D: **No**	Section E: **No**	

Ocean Ranger Signature:

APPROVALS:

Crowley - Approved By:	----------	Crowley Approval Date	8/25/2008
ADEC - Approved By:	----------	ADEC - Approval Date	8/28/2008

SHIP INFORMATION:

Cruise Line	----------	Ranger Report No.	-----082408
Ship Code Name	----------	Date	8/24/2008
Advanced Water System?	Yes	Type:	Hamworthy
Date of Boarding	8/4/2008		

OCEAN RANGER INFORMATION:

Name:	----------	Employee Number	

PRE-INSPECTION:

1) Does ship discharge in Alaska waters?	Yes	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	**Yes**	**----------**
Chief Engineer		
Staff Captain		
Chief Officer		

Notes:

SECURITY

OR had Security Awareness Briefing		Any current security threats?	**No**
Vessel Security Plan Briefing Y/N (house rules & emer. briefing for contractors making voyage on ship)		Select current MARSEC level	**MARSEC Level I**

Notes:

SHIP TOUR

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

1. Garbage handling and recycling	**C**	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.	**C**
2. Hazardous waste processing including pesticides, photo labs, and dry cleaning	**C**	12. Stack emissions minimization and monitoring	**C**
3. Hazardous waste and tank storage / container strategy	**C**	13. Ballast discharge, if any.	**C**
4. Medical facilities and	**C**	14. Overboard piping,	**C**

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.	C	15. Boiler blow down and chemical treated cooling water handling if applicable.	C
6. Observe overboard valve operation and crossover piping regime (if applicable)	C	16. On board wastewater sampling, if any	C
7. Waste incineration and sludge handling (including biosolids)	C	17. General condition of sample valves	C
8. Sanitation in food preparation areas	C	18. Spot check records related to these programs including discharge logs and SMS	C
9. Production and handling of potable water	C	19. Oil and grease from topside equipment (winches, motors, etc.) housekeeping, pools, and lifeboat material condition.	C
10. Oily water separator (OWS)	C		

Notes:

DAILY CHECKS AT SEA

Vessel Location: **College Fjord**

1. Accompany the environmental officer on daily rounds	**Yes**	7. Accompany any engineer on his/her maintenance round to witness service and maintenance of MSD systems	**Yes**
2. Observing the daily wastewater lab analysis by the environmental officer (Princess only)	**Yes**	8. Overboard discharge valves verified closed and sealed - (includes boiler blowdown valves) Overboard valve from advanced treatment system is not sealed.	**Yes**
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.	**Yes**	9. Record tank levels of head tanks for "Oil to Sea Interface" areas (stern tubes, bow and stern thruster seals, fin stabilizer seals, etc.)	**Yes**
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.)	**Yes**	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	**Yes** **Yes** **Yes**
5. Observing any non-routine or non-automatic discharges (oily water separator discharge, ballast , or any discharges through valves that are usually locked)	**Yes**	11. Air Emissions meet 18AAC50 - Opacity monitoring system (recorders and alarms working)	**Yes**
6. Tracing-out all overboard discharge systems - from input through treatment to overboard valve - to ensure the system functions according to the manufacturers instructions.	**Yes**		

Notes for Daily at Sea Checks:

Scheduled maintenance on MSD system.

DISCHARGE SHIPS

At Sea Checks

Number of Passengers and Crew currently onboard	**2975**
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

Continuous discharge TSG overboard in port and out of Alaska Waters.
Out of Alaska waters MSD sludge and food waste discharged overboard.

LOG OF OCEAN RANGER EVENTS OF THE DAY

Meet with EO and daily rounds. EO conducting training for crew in SMS for upcoming company Audit.
Ship out of Alaska waters for 11 hours during the day.
Work on reports.
Photos attached Recycle for offload in Vancouver.
Total Treated and untreated Gray water discharged out of Alaska Waters 2359m3 by log book.
Total Food Waste discharged out of Alaska Waters 8.9m3 by log book. OWS by White Box discharged out of Alaska Waters by log book.

OIL POLUTION HANDLING – SECTION C

Plans and Permits

Oily Water Separator (OWS)	No
Checked bilge piping, no modifications & matches approved diagram (direct to OWS, to holding tank, etc.)	No
Check that system has no blanked flanges, pipe caps, or dead-ended valves, or tees on inlet or outlet piping	No
Checked that there is no evidence of bolting/unbolting of associated piping segments	No
Checked for recent paint on pipe segments	No
Checked general housekeeping and cleanliness	No
Checked OWS operation if in use, evaluate operator competency. System operating in published ranges	No
Observe that unit is processing contaminated source.	No
Checked for similar readings of oil content meters (units with multiple oil content meters)	No
Ensure sample analyzed by meter is OWS output (trace sample line for presence of unacceptable clean water connection)	No
Observe if there are obvious electrical bypasses, jumpers, extra switches on unit or meter control panel.	No
Observe system has automatic re-circulate (3-way valve) or shuts down when >15ppm. Observe proper operation of valve if in use.	No
Observe for proper operation of system backflush or oil purge cycle if in use.	No
Visually observe processed water for gross contamination (sheen or visible oil)	No
Checked comparison of ship's operational maintenance routine with	No

actual preventative maintenance conducted.	
Checked meter calibration records	**No**
Check strip charts if fitted	**No**
Checked other machinery space overboard piping for unusual connections	**No**
Checked records pertaining to OWS system repairs	**No**
Check that oil record book corresponds to volume of bilge water, oil waste and sludge remaining onboard and with bilge waste transfer log.	**No**
Checked that oil Pollution placard posted	**No**
Checked Oil Transfer Procedures (cruise ships do not normally take on any fuel in Alaska)	**No**
Checked that procedures are Posted / available in crew's language	**No**
Checked number of persons required on duty	**No**
Check means of communication	**No**
Check description of transfer system including a line diagram of piping system	**No**
Check procedure to report oil spills	**No**
Checked standard discharge connection	**No**
Checked Fuel / Lube sludge oil fill, vent & overflow discharge containment	**No**
Size (<1600GT 1/2bbl, >1600GT 1 bbl)	**Yes**
Fixed (if ship was built after 30Jun74)	**Yes**
Drains	**Yes**
Scupper Closures	**Yes**
Checked prohibited oil spaces (no oil/hazardous substances carried fwd of collision bulkhead)	**Yes**
Checked lighting at each transfer operations work area	**Yes**
Checked lighting is adequate	**Yes**
Checked lighting located / shielded to not interfere with navigation	**Yes**
Checked oil transfer hose (if vessel uses to transfer in U.S. waters	**No**
Checked condition of hose	**No**
Checked markings on hose (MAWP, Mfg. date, test date)	**No**
Checked hose assembly requirements (blanked off if not new, gas free, or in use)	**No**
Check records of tests and inspections	**No**
Checked Bilge Water Management	**Yes**
Checked machinery space bilges	**Yes**
Checked contamination / oil residues in bilges on bulkheads, piping, structures, within rose boxes	**Yes**
Checked for leakage from systems and engines into machinery spaces (may not be seen during port operations)	**Yes**
Checked engine oil usage, quantities, where lost, consumed or in bilges	**Yes**
Checked for evidence of detergent usage (note-emulsions cannot separate in gravity separator and are likely to result in discharges over 15 ppm)	**Yes**

Checked for hoses, fittings, and connections in areas - usage unknown	Yes
Checked for unlocked overboard valves on bilge, bilge & ballast, salt water service	Yes
Checked that seal management program is used	No
Checked that lifeboat / security / tender vessel engineering systems leak free	Yes
Checked ship specific bilge water management manual	Yes
Checked that Lifeboat / security / tender vessel bilges clean	Yes
Checked Waste / Sludge oil incineration	Yes
Checked results of past tests and inspections	Yes
Checked record keeping	Yes
Checked for clean / dirty furnace, evidence of use	Yes
Checked that operators capable	Yes
Check air emissions if in use	Yes
Check that estimated quantities of sludge produced - normal or excessive (fuel sludge production can exceed 2% of total fuel used)	No
Check that transfer pump connected to sludge system, ashore, incinerator settler only	Yes
Check systems with Oil to Sea Interfaces	Yes
Checked oil lubricated stern tubes, bow and stern thruster seals, fin stabilizer seals, Azipod, etc.	Yes
Made exterior examination in way of systems for evidence of leaking seals - (some operators use oil that sinks)	Yes
Checked for presence of barrels, drums, hoses, pumps, and other equipment/supplies/arrangements necessary to refill systems at equipment	Yes
Check consumption records if SMS or environmental compliance programs require such records (Oil to Sea Interface Log)	Yes

Notes/Findings on Oil Pollution Handling

Photo 1		Photo 2	
			
Date and Time of Photo	**8/24/2008**	Date and Time of Photo	**8/24/2008**
Caption 1	**Recycle crush glass for offload Vancouver**	Caption 2	**Incinerator Ash for disposal Vancouver.**

Appendix 3: Incident Report Example

INCIDENT REPORT

Ship Code	**Example**	Ocean Ranger Name	**Example**
Date of Report	**0/00/00**		
Brief Description of Incident	Suspected discharge of oil from starboard Azipod.		
Incident Starting Location	**Example**	Incident Ending Location	**Under investigation.**
Incident Start Date	**0/00/00**	Incident Ending Date	**0/00/00**
Incident Start Time	**Noted at 0750.**	Incident Ending time	**NAV at this time**
Rating of Primary Liaison		**Environmental Officer.**	
Name of Primary Liaison		**EXAMPLE**	
E-mail of Primary Liaison		**EXAMPLE**	

Detailed Report of Incident

During a routine survey of the waters surrounding the vessel during arrival, a small amount of oil was noted at the starboard side stern of the ship. It is suspected that the oil may be coming from the seal of the starboard Azipod. The ship's personnel are conducting an investigation. EXAMPLE corporate offices, US Coast Guard, National Response Center and ADEC have been advised.

Comments / Recommendations on Preventing or minimizing Future Incidents:

The investigation is ongoing. Ship's personnel are checking oil levels. Boom has been deployed around vessel.

Appendix 4: Departure Report Example

DEPARTURE REPORT - submitted when an Ocean Ranger departs a vessel.

Ship Code	*EXAMPLE*	Boarding Date	**0/00/00**
Ocean Ranger Name	*Example*	Boarding Time	**1900**
Boarding Location	*Vancouver, Canada*	Departure Date	**0/00/00**
Departure Location	*Ketchikan, Alaska*	Departure Time	**1300**
Rating of primary liaison		**Environmental Officer**	
Name of primary liaison		**EXAMPLE**	
E-mail of primary liaison		**Example**	

Narrative of events while onboard this ship

No problems while on ship. Incident report filed regarding sheen on water Ketchikan, not from ship. Good access usually went to engine control room on own. Engine personnel very cooperative.

List Practices observed that were innovative or commendatory

Good wastewater system. Ship tests daily and gets regular feedback from manufacturer. Also has good electronic and visual alarms. Ship takes oil to sea interface readings each watch and prints out opacity readings each watch. Ship has new plastic shredder and newer glass crusher. Ship uses handheld room key reader to lessen possible germ transmission from handling. Ship has suggestion program for improvements with cash rewards for crew.

Narrative of the cooperation provided from cruise ship personnel

Cooperation good.

Appendix 5 Daily Report Statistics

Alaska Department of Environmental Conservation — Revised October 31 2008

2008 Ocean Ranger Daily Report List

	Vessel Operator	Vessel Name	First In AK	Last in AK	First OR On-board	Last OR Off	Vessel Voyages [2]	Total Ocean Ranger Daily Reports	Reports Missed or Missing [1]	Reports Per Month						Voyage Reports	In-Ports
										April	May	June	July	Aug	Sept		
1	Carnival Cruise Lines	***Carnival Spirit***	5/16/08	9/22/08	5/16/08	9/22/08	18	98	4		12	23	23	24	16	98	0
2	Celebrity Cruises	***Infinity***	5/3/08	9/28/08	4/30/08	9/28/08	21	82	0		16	18	18	17	13	80	2
3	Celebrity Cruises	***Mercury***	5/4/08	9/18/08	5/1/08	9/19/08	20	69	4		15	12	16	15	11	63	6
4	Celebrity Cruises	***Millennium***	5/10/08	9/28/08	5/8/08	9/28/08	19	104	2		16	22	25	25	16	102	2
5	Holland America	***Amsterdam***	5/18/08	9/17/08	5/16/08	9/17/08	18	69	0		8	15	18	17	11	69	0
6	Holland America	***Oosterdam***	5/5/08	9/25/08	5/3/08	9/25/08	21	76	2		13	16	18	15	14	74	2
7	Holland America	***Ryndam***	5/9/08	9/22/08	5/7/08	9/22/08	20	77	2		15	16	16	19	11	75	2
8	Holland America	***Statendam***	5/4/08	9/18/08	5/10/08	9/18/08	20	76	0		12	17	19	16	12	76	0
9	Holland America	***Veendam***	5/4/08	9/24/08	5/2/08	9/25/08	21	107	1		18	23	25	25	16	105	2
10	Holland America	***Volendam***	5/20/08	9/19/08	5/18/08	9/19/08	18	102	1		13	22	24	25	18	101	1
11	Holland America	***Westerdam***	5/14/08	9/26/08	5/11/08	9/26/08	20	80	1		15	15	19	17	14	78	2
12	Holland America	***Zaandam***	5/13/08	9/19/08	5/11/08	9/21/08	19	103	0		16	24	25	23	15	103	0
13	International Shipping Partners	***Clipper Pacific***	8/20/08	8/23/08	8/22/08	8/22/08	1	1	0					1		0	1
14	Mitsui OSK	***Nippon Maru***	7/2/08	7/5/08			1	0	1				0			0	0
15	Norwegian Cruise Lines	***Norwegian Pearl***	5/6/08	9/17/08	5/4/08	9/17/08	20	74	0		16	15	15	17	11	71	3
16	Norwegian Cruise Lines	***Norwegian Star***	4/29/08	9/18/08	4/27/08	9/17/08	21	77	2	2	15	16	19	16	9	74	3
17	Norwegian Cruise Lines	***Norwegian Sun***	5/13/08	9/17/08	5/11/08	9/17/08	19	71	0		11	16	18	17	9	68	3
18	Princess Cruise Line	***Coral Princess***	5/14/08	9/13/08	5/12/08	9/13/08	18	98	1		14	24	25	24	11	98	0
19	Princess Cruise Line	***Dawn Princess***	5/10/08	9/21/08	5/10/08	9/21/08	14	38	2		9	9	6	10	4	16	22
20	Princess Cruise Line	***Diamond Princess***	5/12/08	9/21/08	5/10/08	9/20/08	20	104	1		16	24	25	22	17	104	0
21	Princess Cruise Line	***Golden Princess***	5/12/08	9/25/08	5/10/08	9/25/08	20	75	0		11	17	17	16	14	69	6
22	Princess Cruise Line	***Island Princess***	5/21/08	9/20/08	5/19/08	9/20/08	18	93	0		11	22	24	19	17	88	5
23	Princess Cruise Line	***Sapphire Princess***	5/19/08	9/18/08	5/17/08	9/18/08	18	97	1		11	23	25	25	13	97	0
24	Princess Cruise Line	***Star Princess***	5/6/08	9/18/08	5/4/08	9/17/08	20	79	0		16	16	19	19	9	76	3
25	Princess Cruise Line	***Sun Princess***	8/15/08	8/19/08	8/17/08	8/17/08	1	1	1						1	0	1
26	Princess Cruise Line	***Tahitian Princess***	5/31/08	9/15/08	5/31/08	9/8/08	8	68	1		1	22	22	20	3	66	2
27	Regent	***Seven Seas Mariner***	5/16/08	9/19/08	5/22/08	9/15/08	16	39	2		4	11	9	11	4	0	39
28	Royal Caribbean Cruises Ltd.	***Radiance of the Seas***	5/19/08	9/20/08	5/17/08	9/20/08	18	76	1		7	20	24	17	8	68	8
29	Royal Caribbean Cruises Ltd.	***Serenade of the Seas***	5/9/08	9/27/08	5/7/08	9/27/08	20	77	2		11	18	18	16	14	73	4
30	Royal Caribbean Cruises Ltd.	***Rhapsody of the Seas***	5/18/08	9/17/08	5/23/08	9/19/08	17	48	3		3	11	13	13	8	47	1
31	Silver Seas	***Silver Shadow***	6/6/08	9/10/08	6/6/08	9/10/08	11	21	4			5	6	7	3	0	21
					Totals		**516**	**2,180**	**39**	2	325	492	531	509	321	**2,039**	**141**

Notes:

[1] Reports missing due to communications (phone transmission issues), scheduling errors, or miscommunication.

[2] Voyages ranged from 4 to 14 days

Reports only made while vessel is in Alaskan waters

In Port Visits Only

Appendix 6 Daily Report Items Identified

Ocean Ranger Reports Compliance Items *

Number of Compliance Items		Oil from Vessel [1]	Port Oil sheen [2]	Internal Oil leak [3]	Scrubber Oil leak [4]	Tender boat Oil [5]	Misc Oil [6]	Comments / Status
Oil	74	20	35	9	2	4	4	All reported Oil items 1, 2, 3, 4 and 5 reported to ADEC SPAR and USCG. Item 6 questions and remarks followed up on and solved.
Safety	7							All reported safety items reported to USCG. Safety items man lift solved by vessel
Health	13							All reported Noro virus self reported to CDC (shared verified). All other items immediately resolved / corrected.
Wastewater [I]	19							All reported unpermitted waste water discharges under investigation (pending). VSSP "deviations" corrected. All other items corrected / identified.
Other Waste [II]	8							All reported items identified and resolved.
Boiler Blowdown [III]	5							All reported discharges identified / verified.
Total:	126							

* Includes the items identified in the Daily Ocean Reports submitted by the Ocean Rangers 2008 Season

Oil Notes:

1: Potential leak from propulsion system, thrusters, stabilizers, rudders etc.

2: Oil sheen noticed in Port

3: Oil in vessel bilges, equipment leaks etc. internal not outside vessel (water body)

4: Oil in scrubber effluent (test) (HAL Zaandam)

5: Shore / vessel tender boat / other non-cruise vessels

6: Questions Ocean Rangers /OWS /records etc.

Comments Status / Splitter Ranger applied on Oil items on 12 1 08

Wastewater Notes:

I: Include the items which are included in the Ocean Ranger Reports. Involves VSSP documents, water related items.

Other Waste Notes:

II: Miscellaneous items "solid waste" / refrigerants items, garbage storage items etc.

Boiler Blowdown Notes:

III: Items related to oil fired and heat recovery boiler systems wash water / water blown down / boiler system water flows.