



Alaska Department of Environmental Conservation

Division of Water

Cruise Ship Program

# 2015 Season Report

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## Ocean Ranger

3/30/2016



This report is a serial monograph. It is a standalone document and, at the same time, is the sixth in a series of seasonal reports going back to 2008. The report explains the efforts and results of the department's Ocean Ranger program and provides comparisons to previous years.

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## 1. INTRODUCTION

- a. The Commercial Passenger Vessel Environmental Compliance (Cruise Ship) Program, in the Department of Environmental Conservation (DEC) Division of Water, manages the Ocean Ranger program. Ocean Rangers are deployed on large commercial passenger vessels (cruise ships) as independent observers to monitor state and federal requirements for marine discharge and pollution, and to insure protection for passengers, crew, and residents at Alaskan ports from improper sanitation, health, and safety practices<sup>1</sup>. This is a report of Ocean Ranger activities for 2015.
- b. In August 2006, Alaskans passed Ballot Measure 2<sup>2</sup> into law. The law contained provisions for taxation, gambling, the sale of shore-side excursions, commercial passenger vessels environmental practices, and the Ocean Ranger program. The Cruise Ship Program implemented an Ocean Ranger pilot program in 2007, and has managed a full-scale program since 2008.



Figure 1: Ocean Ranger checking locked garbage chute (CMS Photo)

## 2. OCEAN RANGER PROGRAM OPERATIONS

- a. CONTRACT. In late 2011, DEC awarded a multi-year contract to Crowley Maritime Services (CMS) to implement the on-board Ocean Ranger program. The 2015 cruise ship season was the fourth and final season of operations under this contract.
- b. DEPLOYMENT SCHEDULE. The Cruise Ship Program approved the CMS deployment schedule for Ocean Rangers in November 2014. CMS and the Cruise Ship Program scheduled deployment to get the best prices and guaranteed cabins for Ocean Rangers.

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<sup>1</sup> See Alaska Statute AS 46.03.476 Ocean Rangers

<sup>2</sup> See [http://www.dec.state.ak.us/water/cruise\\_ships/Law\\_and\\_Regs/index.htm](http://www.dec.state.ak.us/water/cruise_ships/Law_and_Regs/index.htm)

- (1) **Deployment Types.** The deployment schedule contained three types of deployments. Ocean Rangers:
  - A. boarded cruise ships in Seattle or Vancouver and rode the cruise ship for the entire round trip voyage;;
  - B. boarded in Alaska and departed in Alaska on a partial voyage, or
  - C. conducted in-port inspections.
- (2) **Selection Factors.** The Cruise Ship Program and CMS considered the following factors in deciding whether to have an Ocean Ranger conduct an in-port deployment versus a full voyage deployment:
  - A. a ship's permitted wastewater discharge status in Alaska,
  - B. a ship's compliance history,
  - C. a ship's itinerary (e.g., few days in Alaska),
  - D. availability of Ocean Rangers, and/or
  - E. daily cabin costs.
- (3) **Duty Rotation.** After one to four weeks, Ocean Rangers changed ships. This allowed them enough time to become familiar with each ship, yet not become complacent.

c. RECRUIT AND HIRE.

- (1) **General.** Nationally, the pool of applicants was sufficient to fill the ranks. CMS hired applicants that held one of two qualifications.
  - A. U.S. Coast Guard license as a Marine Engineer; or
  - B. a degree in marine safety and environmental protection, or an equivalent course of study approved by the department, from an accredited maritime educational institution.
- (2) **Alaska Recruitment.** Four Alaskans became Ocean Rangers in 2015. This was the same number as 2014. This compares to one in 2008, four in 2009, five in both 2010 and 2011, seven in 2012, and five in 2013. Qualified Alaskan applicants had hiring and deployment preference over non-Alaskan applicants. CMS actively sought and recruited qualified Alaskan candidates; however, few marine engineers reside in Alaska, and many engineers work worldwide, not regionally. The Ocean Ranger program competes with other maritime industries across the globe for the few Alaskan applicants available. Recruiting activities included:
  - A. distribution of Ocean Ranger job packages to the State Legislature and other entities such as Chambers of Commerce to attract Alaskan candidates,

- B. job postings on the Alaska Job Network,
  - C. direct calling and mailing,
  - D. career fair presentations,
  - E. establishment of a recruiting information website,
  - F. notice of the job openings on DEC websites, and
  - G. a toll free telephone number.
- d. **TRAINING.** Because marine engineers work on a wide variety of vessel types and sizes, it is unlikely that each trainee would have developed expertise or maintained currency in every Ocean Ranger monitoring category. Additionally, Ocean Rangers must learn state and contractor requirements.
- (1) **Training Development and Refinement.** The Cruise Ship Program, CMS, and the American Maritime Officer's Union (AMO) cooperatively developed, refined, and delivered an Ocean Ranger training course. Refinement from previous years included
    - A. clear objectives for each training module,
    - B. new lesson plans and presentations,
    - C. a reorganized syllabus, and
    - D. revised guidance documents.
  - (2) **Training Delivered in 2015.** Between April 6 and April 10, CMS conducted an Ocean Ranger training course at the AMO Simulation, Training, Assessment & Research (STAR) Center in Dania Beach, Florida. The 5-day course included multiple training modules. A one-day ship visit on April 11 onboard a Royal Caribbean cruise ship moored in nearby Fort Lauderdale was provided for new Ocean Rangers. Three Cruise Ship Program staff members instructed training modules and evaluated the training. Representatives from wastewater treatment manufacturers Rochem and Total Marine Solutions delivered presentations. DEC Certified all 22 trainees and 19 deployed as Ocean Rangers.
  - (3) **On-the-job Training and Evaluations.** In 2015, CMS continued on-the-job training and evaluation of Ocean Rangers in Alaska. The CMS program manager and an experienced Ocean Ranger conducted the training and evaluations while in port. This provided a valuable opportunity for Ocean Rangers, particularly new Ocean Rangers.
- e. **OUTFITTING.** CMS outfitted Ocean Rangers between certification and initial deployment. Ocean Ranger outfit included personal gear, communications devices, guidance documents, and sampling kits.

- (1) **Personal Gear.** A uniform, coveralls, hand lamp, and safety gear.
- (2) **Communications.** Communication gear included a mobile phone and tablet computer. These devices had an installed camera; and stored guidance documents, reference material, and ship specific information.

### 3. MONITORING

- a. GENERAL. Ocean Rangers monitor for compliance with state and federal environmental laws and regulations. Guidance documents produced by DEC and training provided the basis for monitoring. Ocean Rangers recorded their observations on reports described in 3.c, below.
- b. GUIDANCE DOCUMENTS. The Cruise Ship Program and CMS created and maintained documents that gave Ocean Rangers standard and consistent guidance. Changes from prior years included adding background information and regulatory citations, removing monitoring with no federal or state regulatory citation, moving items from the daily to the seasonal report, and removing items based only on international standards or voluntary agreement.
  - (1) **Guidebook.** The Guidebook has detailed instructions, monitoring requirements, system operations, laws and regulations.
  - (2) **Daily Report Job-Aid.** The Job-Aid briefly lists each activity or piece of equipment that Ocean Rangers monitor.
- c. REPORTS TO DEC. Ocean Rangers submitted reports to the CMS project manager for review and submission to the Cruise Ship Program. The CMS project manager submitted reports flagged with potentially non-compliant conditions immediately and non-flagged reports within three days of monitoring. Report types submitted by Ocean Rangers included:
  - (1) **Daily Report.** Ocean Rangers submitted a Daily Report for each day onboard a cruise ship in Alaskan waters, whether underway or in port.
  - (2) **General Report.** Ocean Rangers submitted General Reports to inform the Cruise Ship Program about issues that did not fit into another report type or to ask questions to DEC. The General Reports often contained detailed information, conditions that might have evolved into non-compliance if not corrected, questions to the Cruise Ship Program, or recommend program improvements.
  - (3) **Seasonal Report.** Ocean Rangers completed the Seasonal Report during the first Ocean Ranger voyage of the season. It included items that were unlikely to change during the season.
  - (4) **Oil Spill Report.** The DEC Spill Prevention and Response Division (SPAR) created the Oil Spill report so that Ocean Rangers can report spills and sheens in a complete and consistent format.

- (5) **Additional Observations and Verification Project Report.** Ocean Ranger Verification Projects were designed to obtain information for environmental systems, ambiguous conditions, and environmental compliance.
- d. CRUISE SHIP PROGRAM ACTIONS ON FINDINGS. When Ocean Rangers reported potentially non-compliant conditions, the Cruise Ship Program performed the following actions.
- (1) **Operator Notification.** In all cases, the Cruise Ship Program immediately reported the non-compliance to the cruise ship owner or operator. Standard procedure required Ocean Rangers to inform a cruise ship's crew of potentially non-compliant conditions. In the case of an actual non-compliant condition, the Cruise Ship Program worked with the owner or operator to stop or correct the condition.
  - (2) **Notification of Other Agencies.** The Cruise Ship Program promptly notified appropriate state and federal agencies for potentially non-compliant conditions that fell outside of the jurisdiction of the Cruise Ship Program. The Cruise Ship Program reported potentially non-compliant findings to:
    - A. Safety. U.S. Coast Guard Sector Juneau;
    - B. Health and Sanitation. U.S. Centers for Disease Control and Prevention, and the appropriate State of Alaska and local health agencies;
    - C. Vessel General Permit (VGP). U.S. Environmental Protection Agency (EPA).
  - (3) **Regulation Research.** The Cruise Ship Program researched the laws, regulations, permits, and required plan terms and conditions in the context of an Ocean Ranger finding to determine compliance; decided the appropriate compliance assistance, administrative, or compliance action; and then proceeded as appropriate.
  - (4) **Oil Pollution Reporting.** Because of the time-critical nature of oil pollution cases, Ocean Rangers submitted Oil Reports directly to SPAR and copied the Cruise Ship Program and CMS project manager.
- e. FINDINGS. In 2015, Ocean Rangers reported a variety of findings, most of which involved minor items such as paperwork errors or items that, if left unattended, could eventually result in a safety problem or spill. Ocean Rangers reported on or verified several wastewater and small oil spills into Alaska waters. Some items reported would fit multiple categories, but are only reported once in Table 1. In 2016, the Cruise Ship program will continue to improve training, documentation, and communications as a result of lessons learned in 2015. Table 1 shows the number of findings in each area and a comparison to previous years.

**Table 1. Types and Number of Ocean Ranger Findings from 2008 until 2015**

Finding Type	2015	2014	2013	2012	2011	2010	2009	2008
Oil Pollution	35	16	6	13	32	62	87	74
Safety	26	54	21	35	12	25	20	7
Health	8	11	3	10	15	31	36	13
Wastewater	33	27	36	22	16	42	22	19
Other Waste	4	13	8	11	14	19	12	8
Air Pollution	40	13	10	13	7	34	27	N/A
EPA Vessel General Permit	14	9	5	7	10	8	26	N/A
Boiler Blow-down	0	0	0	0	0	2	4	5
<b>TOTAL</b>	<b>160</b>	<b>143</b>	<b>89</b>	<b>111</b>	<b>106</b>	<b>223</b>	<b>234</b>	<b>126</b>

- (1) **Oil Pollution Findings.** Ocean Rangers reported 35 oil pollution related findings. Only 15 of these findings were potentially non-compliant conditions found on the cruise ships. The remaining 20 findings were either not attributable to the cruise ships or were conditions that, if left unattended, may have evolved into non-compliant conditions. Only Ocean Ranger reported findings were included in this report. SPAR may have received additional reports from non-Ocean Ranger sources since cruise ships must report their spills to SPAR and the U.S. Coast Guard. Notifying the Ocean Rangers does not satisfy the legal reporting requirements. State law does not require cruise ships to report pollution incidents not caused by them, although they often do.
- A. Oil from Vessel. Ocean Rangers reported eleven cases where the petroleum products or byproducts (soot) from a cruise ship entered Alaskan waters. Faulty propulsion equipment, leaking seals, exhaust gas scrubbers, or ruptured hydraulic lines caused these conditions.
  - B. Miscellaneous Oil. Ocean Ranger reported four findings for non-pollution oil related matters. These findings included oil record, equipment, and operation of oil water separators.
  - C. Internal Oil Leak. Ocean Rangers reported 16 cases where oil was leaking internally on the ship, but not into Alaskan waters. Some cruise ships had oil in bilges, oil lost from tanks or machinery and not recovered, leaking fuel pipes to combustion equipment, and oil spilled on decks. These items were not compliance items, but may have developed into a safety, health or pollution hazards if left unattended.
  - D. Harbor Oil Sheens Ocean Rangers reported three non-traceable pollution incidents, or “mystery” sheens. These were oil pollution incidents that an Ocean Ranger observed but could not be attributed to a source. Some of these sheens may have remained unreported without the Ocean Rangers, particularly in remote locations.



- E. Port Operations Oil. Ocean Ranger reported one oil pollution cases related to port operations, but not attributable to a cruise ship. This category includes cases from ship tenders or equipment supporting vessel operators on the dock.
- (2) **Safety Findings**. Ocean Rangers reported 26 potential safety findings. Findings included ship safety gear, internal fuel and oil leaks or drips, exposed electrical cables or boxes, and blocked access to safety and damage control gear.
  - (3) **Health Findings**. Ocean Rangers reported 8 potential health findings. Findings related to potable water connections between the cruise ship and public water supplies (hose and connector sanitation items).
  - (4) **Wastewater Findings**. Ocean Ranger reported 33 wastewater findings. Several wastewater discharge logs did not meet state of Alaska regulatory requirements. Ocean Rangers reported several vessel specific sampling plan (VSSP) inaccuracies such as storage tank identification. Inaccurate tank identification did not appear to compromise effluent quality however tank identification discrepancies may have been a contributing factor for accidental discharges in prior seasons. Inaccurate storage tank identification was a recurring problem from previous years. Ocean Rangers also identified potential sampling issues regarding determining representative effluent.
  - (5) **Other Waste Findings**. Ocean Rangers reported 4 potential other-waste findings involving solid waste and hazardous materials. These included objects dropped into the water and recordkeeping issues.
  - (6) **Air Pollution Findings**. Ocean Rangers reported 40 air pollution or opacity findings. Ocean Rangers also assisted the Cruise Ship Program with researching cruise ship self-reported opacity events. Ocean Rangers are not certified EPA Reference Method 9 opacity readers and could not perform valid opacity readings. However, marine engineers understand “excessive smoke” conditions and receive training on opacity regulatory requirements. The Cruise Ship Program has EPA Method 9 certified contractors and staff. Vessel self-reporting and ultimately compliance may improve with Ocean Rangers helping to identify and report heavy smoke that may otherwise go unnoticed by cruise ship crews.
  - (7) **EPA Vessel General Permit Findings**. Ocean Rangers reported 14 EPA Vessel General Permit findings that are not listed under state oil or wastewater citations. The VGP contains federal terms and conditions that apply to cruise ships. Ocean Rangers reported a accidental discharge of pool and spa water in Alaskan waters in 2015. Concerns about the release of pool water and spa water into Alaskan waters included a possible exceedance of Alaskan water quality standards (such as pH and chlorine) and the potential release of pathogens into surrounding waters without proper disinfection.

- (8) **Special Projects.** The verification projects increased the Cruise Ship Program's understanding of shipboard systems and the status of environmental operations. In 2015 verification projects focused on sampling and combustion sources. The sampling observations were to verify compliance with the Quality Assurance Project Plan. Forty one verification reports were received. The special projects resulted in informing the Cruise Ship program and sampling methods and potential issues, and combustion operations onboard large cruise ships.
- f. OCEAN RANGER ACCESS 2015 Access problems include events where Ocean Ranger monitoring is prevented, or avoidably delayed. Ocean Rangers reported problems regarding access to the areas of cruise ships where they were required to monitor. Ocean Rangers resolved most problems, with occasional CMS or Cruise Ship Program intervention. All delays cost the Cruise Ship Program, Ocean Rangers, and the vessel operator's time and effort to resolve. These issues caused Ocean Ranger down-time and reduce compliance verification monitoring, and in some cases the loss of entire monitoring days. The Cruise Ship Program will continue to inform cruise ship owners or operators of these problems in order to reduce future access problems. CMS monitored for access problems during the cruise season, and submitted an annual access report to the Cruise Ship Program. 2015 access problems included:
    - (1) Multiple boarding or disembarking delays,
    - (2) delayed return of Ocean Ranger passports or identification,
    - (3) delayed monitoring caused by cabins not being ready for occupancy,
    - (4) restricted times for access to engine rooms or to crewmembers that could answer questions or show documentation, and
    - (5) restricted times for access to other monitoring areas such as document storage locations.
  - g. MONITORING STATISTICS
    - (1) Out of 487 voyages, Ocean Rangers monitored 275 voyages (56.5%). In port inspections were used to provide Ocean Ranger or the Cruise Ship Program staff coverage for an additional 120 voyages (24.6%). Table 2 shows the numbers of the different reports that Ocean Rangers submitted to DEC, and a year-by-year comparison.

**Table 2. Ocean Ranger Report Statistics from 2008 until 2015**

Report Type	Total Number of Reports							
	2015	2014	2013	2012	2011	2010	2009	2008
Seasonal <sup>1</sup>	28	27	28	25	26	25	NR	NR
Daily ( <i>Underway + In port</i> )	1546	1,514	1,572	1,544	1,426	1,884	2,272	2,180
<i>Underway</i>	<b>1283</b>	<b>1,238</b>	<b>1,291</b>	<b>1,287</b>	<b>1,195</b>	<b>1,777</b>	<b>2,171</b>	<b>2,039</b>
<i>In port</i>	<b>263</b>	<b>276</b>	<b>281</b>	<b>257</b>	<b>231</b>	<b>107</b>	<b>101</b>	<b>141</b>
Incident	NR	NR	NR	NR	43	13 <sup>2</sup>	8	100
Oil Sheen	6	10	15	27	17	33 <sup>2</sup>	72	NR
Departure	NR	NR	NR	NR	163	100	140	131
Verification	41	29	42	12	22	101	143	NR
General <sup>3</sup>	97	141	135	33	0	NR	NR	NR
Rescheduled <sup>4</sup>	6	3	26	3	24	5	9	39

**Notes:**

<sup>1</sup>Ocean Rangers complete Seasonal Reports for cruise ships that conduct more than one Alaskan voyage. In 2008 and 2009 seasonal reports were embedded into, and indistinguishable from daily reports.

<sup>2</sup>One oil related item was reported to SPAR as an incident report.

<sup>3</sup>General Reports were implemented in 2011, however none were submitted that year. In 2012 Incident Reports were submitted as a General Report.

<sup>4</sup>In 2011 and prior years, these were missed reports. Under the current contact, missed reports are rescheduled.

NR – No Reports, the reports do not yet exist or had been discontinued.

Oil Sheen reports were implemented in 2009. Until 2009 oil sheens were reported on incident reports.

- (2) There were six Daily Reports rescheduled in 2015, this equates to only 0.4% of the Daily Reports (6 of 1546).
- (3) There was an increase in potential non-compliance items compared to 2014 (17 more items). This increase was largely due to an increased awareness of air pollution related items in 2015. Improvements in Ocean Ranger training resulted in better understanding by Ocean Rangers of what items identified would be violations of state or federal requirements.
- (4) Table 3 shows information for each cruise ship. It shows how many days each ship operated in Alaskan compared to the Ocean Ranger coverage, the number of days that an Ocean Ranger monitored the ship, and a comparison between the days monitored while the vessel was underway on a voyage and the days monitored while the vessel was moored or anchored in port.

**Table 3. 2015 Daily Report Statistics**

Vessel Name	Voyages	RD	%	DR	Daily Reports by Month					VDR	IDR
					May	Jun	Jul	Aug	Sep		
<i>Carnival Legend</i>	17	69	58%	40	8	12	10	10	0	17	23
<i>Celebrity Infinity</i>	14	67	61.2%	41	4	11	19	7	0	24	17
<i>Celebrity Millennium</i>	17	96	81.3%	78	9	24	23	22	0	77	1
<i>Celebrity Solstice</i>	20	82	73.2%	60	15	14	17	14	0	50	10
<i>Symphony</i>	1	6	16.7%	1	1	0	0	0	0	0	1
<i>Wonder</i>	15	60	78.3%	47	3	14	14	16	0	38	9
<i>L'Austral</i>	9	58	13.8%	8	0	5	3	0	0	0	8
<i>Le Boreal</i>	1	9	0%	0	0	0	0	0	0	0	0
<i>Le Soleal</i>	1	4	0%	0	0	0	0	0	0	0	0
<i>Amsterdam</i>	17	68	63.2%	43	0	15	15	13	0	38	5

Vessel Name	Voyages	RD	%	DR	Daily Reports by Month					VDR	IDR
					May	Jun	Jul	Aug	Sep		
<i>Noordam</i>	20	80	75.0%	60	12	16	16	16	0	52	8
<i>Oosterdam</i>	20	89	58.4%	52	6	14	19	13	0	41	11
<i>Statendam</i>	9	84	57.1%	48	1	11	21	15	0	45	3
<i>Volendam</i>	20	79	73.4%	58	11	17	13	17	0	52	6
<i>Westerdam</i>	21	84	73.8%	62	16	18	18	7	3	56	6
<i>Zaandam</i>	18	81	69.1%	56	9	19	16	12	0	45	11
<i>Norwegian Jewel</i>	20	83	77.1%	64	13	18	18	15	0	61	3
<i>Norwegian Pearl</i>	20	81	71.6%	58	10	17	18	13	0	46	12
<i>Norwegian Sun</i>	20	106	79.2%	84	15	24	23	22	0	81	3
<i>Asuka II</i>	1	6	16.7%	1	0	0	1	0	0	0	1
<i>Regatta</i>	12	63	31.7%	20	2	6	10	2	0	13	7
<i>Coral Princess</i>	20	104	88.5%	92	18	24	25	25	0	91	1
<i>Crown Princess</i>	18	72	76.4%	55	8	18	16	13	0	48	7
<i>Golden Princess</i>	13	58	46.6%	27	6	5	9	7	0	11	16
<i>Grand Princess</i>	18	99	86.9%	86	18	24	22	22	0	85	1
<i>Pacific Princess</i>	16	87	94.3%	82	10	22	25	25	0	80	2
<i>Ruby Princess</i>	20	72	73.6%	53	8	13	19	13	0	47	6
<i>Star Princess</i>	18	99	81.8%	81	11	24	23	23	0	78	3
<i>Seven Seas Navigator</i>	17	87	36.8%	32	1	15	11	5	0	5	27
<i>Jewel of the Seas</i>	17	51	62.7%	32	3	10	10	9	0	9	23
<i>Radiance of the Seas</i>	18	91	95.6%	87	12	23	25	25	2	82	5
<i>Silver Shadow</i>	19	105	36.2%	38	4	11	12	11	0	11	27
<b>OVERALL</b>	<b>487</b>	<b>2280</b>	<b>67.8%</b>	<b>1546</b>	<b>234</b>	<b>444</b>	<b>471</b>	<b>392</b>	<b>5</b>	<b>1283</b>	<b>263</b>

**Notes:**

RD - Reportable days are when a ship is in Alaskan waters for at least 3 hours in a day.

% - Percent coverage for 2015

DR - Daily Report

VDR - Voyage Daily Reports, Ocean Ranger onboard while underway.

IDR - In Port Daily Report

**4. DISCUSSION**

- a. Refinements in training, guidance documents, communications, and reporting continued to improve clarity and processing time. This allowed Ocean Rangers to devote more time to monitoring. The Cruise Ship Program and CMS will continue to focus Ocean Ranger activities toward high-occurrence and high consequence areas of cruise ship operations.
- b. Ocean Rangers provided timely and high quality information to the Cruise Ship Program and federal agencies for oil pollution, opacity (air emissions), wastewater treatment, municipal to ship water connections, solid waste processing, and required documentation. Ocean Rangers also assisted cruise ship crews in understanding State of Alaska requirements, including referring issues to appropriate Cruise Ship Program staff. Detailed Ocean Ranger monitoring and reporting verified that, in general, cruise ships follow sound environmental, health, and safety practices that minimize impact on the environment, vessel crews, passengers and Alaskans. However, there are still areas of concern.
- c. Verification projects in 2015 helped to support wastewater permit development by verifying and gathering information on sampling. Another verification project gathering information about combustion sources was not well received by several cruise lines. This project presented difficulty in gathering the information. In 2016,

the Cruise Ship Program will implement improvements in training and guidance for verification projects based on Ocean Ranger feedback.

- d. Intermittent communication issues persist between Ocean Rangers and vessel crews. While the issues represent a small fraction of interactions, if left unaddressed the frequency of the issues could increase or result in avoidable non-compliant conditions. The Cruise Ship Program and CMS will continue to foster a team approach with vessel crews and owners or operators.
- e. Access issues indicate that some cruise lines, whether operators or vessel crews, may remain reluctant to cooperate with Ocean Rangers. Although these incidents represent a small fraction of interactions, the cascading effect may continue to the impact the quality and quantity of Ocean Ranger monitoring. The Cruise Ship Program will address these issues with continued efforts to improve communications with owners and operators, and by reminding operators that Ocean Ranger monitoring is a legal requirement, not a voluntary activity.
- f. Ocean Rangers reported harbor sheens that, while not attributable to cruise ships, still represent concern for Alaskan water quality. The Cruise Ship Program and CMS will continue to focus Ocean Ranger efforts toward determining the source of these sheens when observed, in order to assist the appropriate agencies and responsible parties to resolving the conditions.
- g. Ocean Rangers reported several wastewater finding related to required documentation such as discharge logs. The findings tended towards improper completion of required documentation and not the absence of the documentation. While improperly kept documentation does not represent an immediate danger to water quality, it does indicate possible systemic problems with a cruise ship's wastewater management practices and reporting.
- h. Daily reporting indicated, and verification reports confirmed, that a number of cruise ships had submitted deficient or inaccurate vessel specific sampling plans (VSSP). Although the Cruise Ship Program did not find that the deficiencies or inaccuracies caused effluent quality concerns, they may have been contributing factors for wastewater spills in previous years, and may contribute to mishaps in the future.

**APPENDIX A. ACRONYMS**

AAC	Alaska Administrative Code
AS	Alaska Statutes
AWTS	Advanced Wastewater Treatment System
BW	Black Water
CFR	Code of Federal Regulations
CPVEC	Commercial Passenger Vessel Environmental Compliance Program (DEC cruise ship program)
CMS	Crowley Maritime Services
DEC	Alaska Department of Environmental Conservation
EPA	US Environmental Protection Agency
GP	Large Cruise Ship Wastewater General Permit
IMO	International Maritime Organization
GW	Gray water
IP	In-port Inspection
N/A	Not Applicable
QAPP	Quality Assurance Project Plan
PRP	Potential Responsible Party
SPAR	ADEC Division of Spill Prevention and Response
USCG	United States Coast Guard
VGP	Vessel General Permit (EPA)
VSSP	Vessel Specific Sampling Plan
WW	Wastewater