	LARGE COMMERCIAL PASSENGER VESSEL PERMITTED / WASTEWATER DISCHARGE UNDERWAY INSPECTION REPORT Alaska Department of Environmental Conservation Division of Water	Form: AK-LCPV-D Last Updated 4/21/2025

1: General Information

Inspection Date: 7/23/25-7/24/25		Vessel Name: Ruby Princess
GP Auth # 2013DB0004-0005	Registration # 2025-CS-0046 v1.0	IMO #.: 9378462
Inspection: ☒ Announced ☐ Unannounced Type: ☒Routine ☐Other: Describe		Location: (Port City/Dock): Ketchikan, AK/Dock 4 to Haines, AK/CHL Dock
Arrival Time (at vessel): 7/23/25 10:40	Inspection Start Date and Time: 7/23/25 10:50	Inspection End Date and Time: 7/24/25 13:00

Comments Regarding Access (if any): None.

Opening Meeting: The opening meeting was attended by the Staff Captain and Environmental Officer. The inspector presented their credentials and informed them that the Department was performing a routine inspection assessing permit compliance and discussed the scope and objectives of the inspection. The inspector informed them that they would need access to machinery spaces, the engine control room and possibly other secure areas that may be necessary to complete inspection and determine compliance. The inspector informed them that photos would be taken, and records may be requested during and/or after the inspection if necessary to confirm compliance. The consent was granted to the inspector to perform inspection.

☒ Compliance Follow-Up (list if applicable):

Notices of violation were issued for the following events

6/12/25 AE 37935 High BOD 79 mg/L (daily and monthly exceedance)

5/30/25 unauthorized discharge of 42 m^3 chlorinated pool water

Enforcement Tracking Numbers: 25-R0254-40-0001, 25-R0312-40-0001, 25-R0260-40-0001

DEC Compliance Inspector

Name: Annie Goodenough

Credential #: 353741

Vessel Representatives	Primary Shoreside Contact
Vessel Master: Dariusz Balana Email: rudcapt1@princesscruises.com Environmental Officer: Nataliia Polishchuk Email: rudeof1@princesscruises.com	Name: Patrick McGuire Title: VP Environmental Operations and Policy Company: Princess Cruise Line, Ltd. Phone: 206-225-6328 Email: pmcguire@princesscruises.com

2: Wastewater Discharge Documentation and Record Keeping
Passengers onboard (during this voyage): not checked, max guest capacity 3575, crew capacity 1201
☒ Quality Assurance Project Plan (QAPP): Approved copy onboard?
☒ Vessel Specific Sampling Plan (VSSP): Approved copy onboard?
☒ DEC WW GP 2013DB-0004: Copy onboard? Authorized to discharge: ☒ Underway, ☒ Stationary, ☐ Skagway Additional Terms and Conditions, if any (Authorization Section 5, GP 4.3.2), (e.g., only GW in port, etc.): Authorized to discharge treated GW while stationary and treated BW&GW while underway.
☒ USCG Discharge Authorization Copy onboard? Date and location of most recent USCG inspection: July 16, 2025, in Ketchikan, AK
Other Documents Reviewed: Oil record book, ballast water record book, garbage record book.
Wastewater Discharge Logs
☒ WW Discharge Logs for previous 3 years available onboard? Type of Record Book: ☒ Electronic, ☐ Individual Pages, ☐ Bound Book Electronic logs approved by flag state/class ☐YES ☐NO ☒N/A If individual pages are used, are measures taken to ensure the records are tamper-proof? ☐YES ☐NO ☒N/A Describe: NAPA logs ☐ The vessel's name and official number are listed on the front cover and at the top of each page? ☒ Each entry of a discharge is recorded without delay, signed and dated, with each completed page, and signed by the Master of the ship? List any emergency discharges, unauthorized discharges or otherwise exceptional discharges and any non-compliance with Sewage and Graywater Discharge record keeping requirements: Unauthorized discharge of 42m^3 chlorinated pool water on 5/30/25 due to a valve issue. An NOV was issued on 6/23/25.

3: Wastewater System
AWTS (maker information): Hamworthy MBR 16

Number of permitted units onboard: 3 units

Are there any non-permitted units? (units not intended for use in Alaska) ☐ YES ☒ NO

Rated Design Capacity per unit (m^3/day): 342.5 m^3/day per unit

☒ All monitoring operable/in-use

☒ AWTS Maintenance planning and spare parts covered by approved vessel maintenance plan

☒ Checked for operational alarms indicated on the unit's local control panel

General Notes regarding AWTS. Describe overall condition, any maintenance or operational changes, if any that affect system performance including deferred maintenance:

The AWTS system components were observed to be operational with no indications of system faults or alarms on the control panel. Piping and system components were observed to be free of visible corrosion and in good repair. The area around MBR 1 had noticeable odors, while the area around MBRs 2 & 3 had no noticeable odors. MBR 1 is designated for treating a mix of black and gray water. MBR 2 and 3 are designated for GW only.

Engineers described daily, weekly, and monthly cleaning procedures:

On a daily basis a self-cleaning operation is performed on the MBRs. During this cleaning, the interstage filter is vibrated. This operation is set to occur automatically but can also be manually performed. The interstage filter is replaced every 7-10 days.

On a weekly basis, the membranes are cleaned with a chlorine backwash. The backwash is a manual process. To backwash the system, the membranes must be isolated. When asked about the concentration of the chlorine used, the Staff Engineer said that the concentration depends on the planned contact time. He explained that according to the Wartsila manual, the concentration should be 500 ppm chlorine for 4 hours of circulating contact time. The backwash is recirculated through the bioreactor and discharged outside 12 nm. The tank volume for the backwash is approximately 800-900 liters. According to the work order in the AMOS system, "2-4 liters of Sodium Hypochlorite" are added to the cleaning tank and the cleaning pump is run for half an hour. According to the Advance Wastewater Treatment System (AWWTS) Ruby Princess Operational Guidance handbook, "The required solution strength for disinfecting membranes and permeate system is around 20ppm or 20 mg/l of available chlorine." The handbook also stated, "Dedicated disinfection of the permeate system and tanks with Hypochlorite. This is the sure way to ensure the permeate side of the system is free of bacteria and contaminants and is highly recommended. Especially prior to any official sampling of the permeate will take place."

Monthly, there is a backwash sanitation with a 2-step chemical system. The simplex filter is replaced monthly. If the pressure is high, the membranes are mechanically cleaned to remove clogs as-needed. The Staff Engineer also said that the bioreactor is fully cleaned every 6 months or within a few weeks of arrival in sensitive areas, for example, at the beginning of every Alaska season

Wastewater Discharge Planning and Procedures

Describe the vessel's environmental operations voyage planning:

A meeting is held with the navigation officers, engineers and environmental operations departments prior to sailing. Department stakeholders determine a rough outline of the locations and times to perform various environmental operations and develop a schedule to conduct the planned operations.

What guidance (documents or otherwise) does the crew use when discharging?

One Ocean is used as the primary means to determine the legality of various environmental operations in different areas.

☒ MARPOL publications available for reference.

One Ocean references MARPOL and other regulations

Vessel Environmental Voyage Plan available? ☒YES ☐NO

If YES, which operations are included in the plan:

EGCS operations, incinerator, greywater discharges, food waste, biosludge, ballast, brine, soot blowing, etc.

Prevention of Spills, Unintended or Unauthorized Discharge

☐ Lock or tamper-proof tag used to secure wastewater discharge valves

☒ Remotely operated valves have controlled access

☒ Controlled access to keys

☒ Overflow alarm system in place, which is regularly tested (log entry)

Tank Level Indicators (TLIs) used to determine tank volumes? ☒YES ☐NO

Are manual soundings required for any WW holding tanks? ☐YES ☒NO

Are ballast water tanks used to hold wastewater? ☐YES ☒NO

Rarely

If YES, where are internal transfers of wastewater logged?

Not checked

Bio-Residue (sludge) Handling

☒ Discharged to sea outside of 3NM from baseline (Sewage and Graywater Discharge Log)

Outside 12

Capacity of holding tank(s): 60 m^3

Number of days between required discharges: discharges occur approximately once per week

Sufficient holding capacity for current itinerary? ☐YES ☐NO

Is any bio residue discharged to shore facilities or incinerated (Garbage Record Book)? ☐YES ☐NO

Not checked

Untreated Wastewater Streams

Check the following waste streams that are discharged to the sea without treatment:

☒ Galley Graywater

Holding capacity: 764 m^3 (330 m^3 +85 m^3 additional storage as needed)

☒ Food pulper (biodigesters)

Holding Capacity: (not checked)

☒ Laundry Graywater

Holding capacity: not checked

☒ Recreational (Pool, Spa). Discharged inside of 3 NM? ☐YES ☒NO.

If YES, describe treatment and testing to meet effluent standard:

Holding Capacity: not checked

Where are rec water discharges recorded?

NAPA

Regulatory Effluent Sampling

WW sample taken during this inspection? ☐YES ☒NO

Was sample event viewed by inspector? ☐YES ☐NO ☒N/A

General Observations: n/a

Vessel Process (Effluent) Sampling:

Does the vessel conduct process sampling? ☒YES ☐NO

If YES, check parameters that apply

☒ pH ☒ FC ☒ TSS ☒ BOD ☒ COD

Frequency of testing:

Every 3 days

4: Invasive Species Prevention and VGP Compliance

Ballast Water

☒ EPA/USCG-approved Ballast Water Treatment System

☐ IMO approved only,

Does the vessel conduct ballast water discharges in Alaska waters? ☐YES ☒NO

☒ Approved Ballast Water Management Plan

The inspector viewed the Ballast water record book. The logs from earlier this year are in paper, but as of 7/16/25, the vessel transitioned the logs to the NAPA electronic logbook.

Hull Husbandry

☒ Approved Bio Fouling Management Plan on board

Date of last inspection of the hull or niche areas (rudder, propellers): 4/30/2025 Seattle, WA

Date of last drydocking: September 2023

☒ Photographic report from most recent underwater hull inspection/survey available

Cathodic protection/Impressed Current system ☒YES ☐NO

Is underwater hull cleaning to be conducted, planned to occur in AK waters? ☐YES ☒NO

Location (port) where cleanings are planned: Next planned cleaning will be in November, outside Alaska waters.

Waste Handling

☒ Garbage Record Book reviewed

During the last offload in San Francisco on 7/20/25 the ship offloaded 3 m^3 plastics, 44 m^3 food waste, 9 m^3 dry waste, 9 m^3 glass, 1 m^3 aluminum, 3 m^3 cardboard, 2 m^3 tin cans, 11 m^3 USDA, and 2 m^3 broken crockery.

☒ Waste offload receipts correlate to record book entries

☒ Marine Growth in Sea-Strainers/piping landed as solid waste to shoreside facility

Collected in drums, landed shoreside

Is the vessel fitted with Garbage Incinerators? ☒YES ☐NO

Does the vessel regularly utilize incineration to manage waste? ☒YES ☐NO

If YES, are units functional and operating properly? ☒YES ☐NO

☒ Ash disposal recorded in Garbage Record Book

4 m^3 of incinerator ash listed as offloaded in garbage record book on 7/20/25 in San Francisco

Describe what types of wastes are incinerated and where/when incinerator operations are used:

Paper, cardboard, etc.

Describe food waste processes:

The ship has 9 biodigestors, a dehydrator, and a biogrinder. Food waste is discharged outside 12 nm.

Photoshop onboard? ☒YES ☐NO

☒ If yes, verified silver recovery process?

Notes on additional waste:

Medallions are recycled.

Exhaust Gas Scrubber Systems

Exhaust Gas Scrubber System used? ☒YES ☐NO

If YES, verify the following:

System type: ☒ Open loop ☐ Closed loop ☐ Hybrid

☒ Current endorsed Class annual EGCS survey available for all units

☒ Annual wash water effluent discharge test report available

☒ All continuous monitoring probes calibrated (required at least annually)

☒ Technical Manual available for EGCS (certified documentation provided by the EGCS manufacturer.)

*EGCS malfunction that lasts more than one hour or repetitive malfunctions should be reported to the flag and port State's Administration along with an explanation of the steps the ship operator is taking to address the failure MEPC.1Circ. 883

☒ Annual EPA report (previous calendar year) reviewed?
How many days did the vessel report exceedances on the 2024 EPA Annual Report?
16 days of intermittent short-term exceedances associated with EGCS start.

How many days per voyage does the vessel operate scrubbers in Alaska waters?
Nearly every day

☐ Viewed/collected a portion of Neptune (or other) EGCS monitoring data for further inspection
The vessel/company denied access to Neptune EGCS monitoring data on this inspection.

Was a visible residue, sheen, film or carried over particulate observed in wash water discharge?
☐YES ☒NO

EGCS units installed and corresponding combustion sources.
There are 6 DGs.
DG 2, DG 3, DG 5, and DG 6 all have the ability to change-over between HFO and MGO.

Dedicated combustion sources to MGO?
DG 1 and DG 4 MGO only

Dock-Side Observations
Potable Water bunkering: ☐YES ☒NO
WW Discharge observed? ☐YES ☒NO ☐ Pump Truck ☐ City Sewer ☐ Overboard
Sheens/Discolorations observed? ☐YES ☒NO Agency Notified: ☐USCG ☐DEC-SPAR If yes, Weather conditions (Wind/Tides):
Any exterior activity (painting/deck wash etc.)? N/A

SECTION 5: OVERVIEW

Inspection Observations/Summary

The inspector met with the Environmental Officer (EO) in her office to go over some paperwork and discuss unauthorized discharges. At 11:15, the Engine Control Room (ECR) was visited to view the tracker box system, calculate holding capacities for various streams of wastewater, and discuss the MBR arrangement. At 11:30, the inspector visited the machinery spaces, inspected the MBRs, and visited the sampling point and overboard discharge pipes.

At 12:00, the inspector and the EO visited the garbage and recycling area and discussed the vessel's waste management needs. The vessel offloads some waste in San Francisco and some in Victoria.

Following a break for lunch, the inspector met with the EO again at 14:00. Earlier in the day the inspector and EO had discussed taking a sample from the EGCS during the voyage to sample the washwater that was being discharged into Alaska waters. After speaking with shoreside representatives from Princess Cruise Lines, the EO informed the inspector that they would not allow EGCS samples to be taken.

At 14:40, the inspector and EO toured the outer decks. The inspector inquired about the discharge seen in Photo 06 & 07 and the EO identified the discharge to be EGCS washwater. The discharge appeared to have a significant volume. As the ship got underway, the inspector continued to view the water on the starboard side while the ship was maneuvering. No sheens were observed.

At 15:15 the inspector reviewed garbage receipts and logs. Shortly after, the Staff Engineer arrived to answer questions about routine MBR maintenance. The Staff Engineer was able to provide a detailed explanation of the maintenance and cleaning involved with the MBR system.

The EO showed the inspector a MBR operations guidebook (Photo 08 & 09), and the Staff Engineer showed the AMOS logs for the MBR (Photo 11).

At 16:45, the inspector visited the bridge to meet with Staff Captain and reviewed the ballast water record book (Photo 12) and hull inspection reports.

During the evening and following morning, the inspector toured the exterior decks and looked for sheens, films, and discoloration in the water.

The inspector departed the ship at 13:00 to inspect another vessel in port. The inspector officially disembarked Ruby Princess at 18:00.

Additional Comments:

None.

SECTION 6: FOLLOW-UP
Compliance Assistance Items
A meeting was held between Princess Cruise Lines and the Department on August 14, 2025 to discuss inspections. The meeting was attended by Patrick McGuire (VP of environmental compliance), Nikolay Nedyalkov (environmental manger), and Eric Chamberlain (VP of fleet governance and DPA) from Princess Cruise Lines and Annie Goodenough (environmental program specialist III), Ben Eisenstein (cruise ship program manager), Nicole Warner (compliance program manager), and Gene McCabe (director of division of water) from the DEC. Both the EGCS sampling and Neptune data were discussed during this meeting.

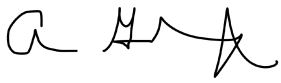
Signature	
Inspector – Annie Goodenough Credential Number: 353741 Phone: (907) 465-5276 E-mail: annie.goodenough@alaska.gov	 Date: 8/21/2025
Reviewed By – Ben Eisenstein Credential Number: R-598 Phone: (907) 465-5161 E-mail: ben.eisenstein@alaska.gov	 Date: 8/21/2025

Photo Addendum	
Photo 01	**Photo 02**
	
Ruby Princess (from American Const. tender)	AWWTS piping route to o/b or holding

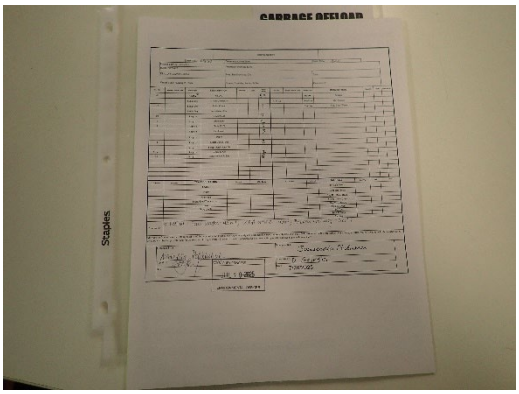
Photo 03	**Photo 04**
	
UV	Garbage offload receipt

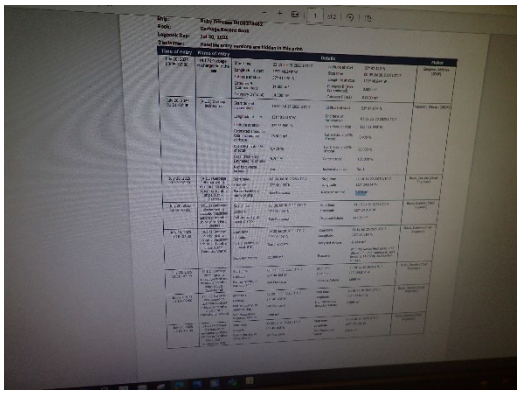
Photo 05	**Photo 06**
	
Garbage recordbook	EGCS Discharge KTN

Photo Addendum	
Photo 07	**Photo 08**
	
EGCS discharge (center) propwash (right)	Maintenance Routines book (MBR)

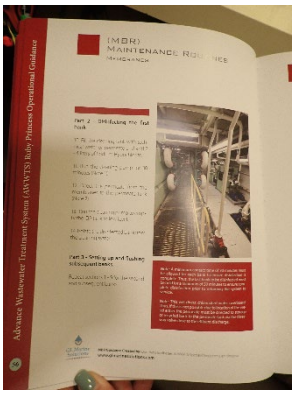
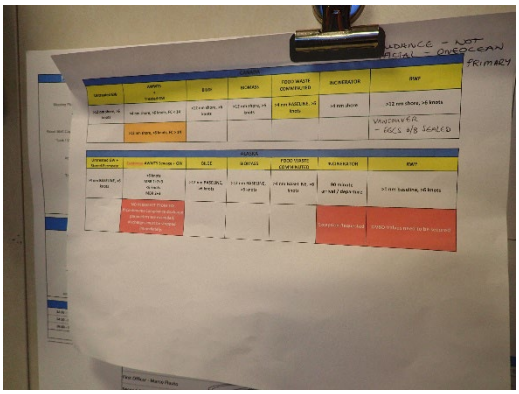
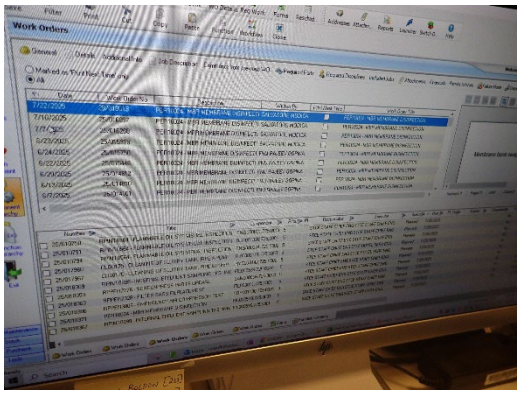
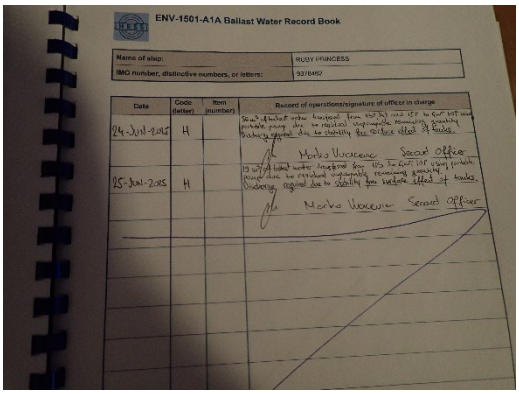
Photo 09	**Photo 10**
	
Maintenance Routines book (MBR)	Env ops cheat sheet for staff captain

Photo 11	**Photo 12**
	
AMOS work orders for MBR system	Ballast record book