CROWLEY
People Who Know

Consolidated Additional Observations

This questionnaire combines all standard Additional Observation Questions in one condensed questionnaire.
1. SOx Emissions Controls
2. Ballast Water Project
3. Combustion Source Project
4. Food Waste Project
5. Sea Intake Project

Findings can be reported in the spaces provided for each item; feel free to use additional space for notes and information. Sketches, diagrams, photos of handwritten notes, or copies of schematics are welcome.

Several questions are checks on previous Additional Observations, check these against the previous observations. If a ship is required to have an additional observation project on a section below, skip the section below. For example if a combustion source project is required leave the section in this project blank.

A: General Information

Report Start Date:	Jun 8, 2018
Ocean Ranger starting report:	thomas.guiney
Ship Name:	Regent/Oceania Regatta
Ship Code:	GRE
Is this a revision of a previous report (Y/N)?	No

1: SOx Emissions Controls

1.1 Describe the SECA compliance plan.	The vessel complies with the Compliance Regulation 14 of Annex VI to Marpol 73/78; requires ships to use a sulfur content not to exceed, that is stipulated in Regulations 14.1 or 14.4. The vessel follows Parameters for Emissions by only consuming a low sulfur (MGO) fuel distillate product in all combustion inventory equipment onboard.
1.1 Completed by:	Tom Guiney (thomas.guiney)
1.2 How does the vessel control SOX emissions in the ECA? Provide description. If the vessel used low sulfur fuels in AK describe the fuel switches and which combustion sources are operated on low fuel sulfur, and when.	The vessel uses low sulfur (MGO) fuel in all equipment in the combustion inventory onboard the vessel.
1.2 Completed by:	Tom Guiney (thomas.guiney)
1.3 Is the vessel operating or installing an exhaust gas scrubber system in the 2018 Alaska Cruise Season? If yes, complete section 1A. Otherwise skip to section 2.	No

1.a: SOx Emissions Controls

1.4 Which combustion sources are coupled with the EGCS system?	N/A

2: Ballast Water

2.1 Check the previous Additional Observation Reports (section 1.1) list of tanks used for Ballast Water storage. Including volumes and locations. List any changes.	1. Forepeak Tank 6021 – 195.4 m3 – Location – Forward 2. Deep Tank 6002 – 35.6 m3 - Location – Forward 3. Tank 6103 – 31.4 m3 – Location – Mid ship 4. Tank 6203 – 31.4 m3 – Location – Mid ship 5. Tank 6124 – 87.3 m3 – Location – Port Wing Aft 6. Tank 6224 – 85.1 m3 – Location – Starboard Wing Aft 7. Tank 6134 – 71.3 m3 – Location – Aft Port

	8. Tank 6234 – 71.3 m3 – Location – Aft Starboard
2.1 Completed by:	Casey Cooper (casey.cooper)
2.2 Are ballast water tanks used for wastewater storage?	All above tanks are used for storage of Waste water.
2.2 Completed by:	Casey Cooper (casey.cooper)
2.3 Ballast Water system: brief description of the combined piping system if tanks used for both.	The main ships' ballast system consists of eight (8) tanks with a total capacity of 508.8 m3 . There is one(1) main ballast pump with a 137m3 pump capacity. The treated grey water system can be cross connected and pumped into any of the eight tanks as needed for storage and stability purposes as directed by the watch officer on the bridge and carried out by engineers on watch in the ECR. A new ballast water treatment system system has recently been installed and is awaiting final approval by the Classification society (Lloyds). The ships' employs a system of triple flushing ballast water tanks when going back from grey water storage into clean ballast water. This includes all affected tanks and pipelines and is conducted outside of 12 nautical miles from land. Treated grey water being pumped from the ballast tanks normally would be reprocessed back thru the AWTS and discharged overboard.
2.3 Completed by:	Casey Cooper (casey.cooper)
2.4 Ballast Water treatment installation? If yes, describe operation/system specifics.	The Alfa Laval manufactured PureBallast System is an integral part of the vessel's ballast water system located on the discharge side of the vessel's ballast water pump. During ballast operation, the water is led through the filter which removes larger particles and organisms and then to the UV reactor where the water is treated with UV light. During deballast, the water is led the same way, but the filter is bypassed. Flow is monitored by the flow meter and regulated by the control valve. Note that full treatment would require treatment both during ballast and deballast.
2.4 Completed by:	Casey Cooper (casey.cooper)
2.5 Ballast Water operations in AK waters (overboard intake/discharge, etc.)? Include the last date of ballast water discharges. Typically in the ballast water logs.	No Ballast Operations in Alaska
2.5 Completed by:	Tim Nelick (tim.nelick)

3: Combustion Sources

3.1 Are there any changes from the previous Additional Observation projects (Section 2.1) on the propulsion system question on brief description of propulsion and power systems used on board (Diesel direct/reduction gears/PTO's DE, FP, CPP Azipod, etc.)?	No changes from previous version.
3.2 Are there any changes from the previous Additional Observation projects (Section 1.1) on the list of the combustion equipment used for Power/Propulsion (make/model/output)?	No
3.2 Completed by:	James Ham (james.ham)
3.3 Are there any changes from the previous Additional Observation projects (section 3) on the incinerators make, model, fuel used, capacity?	No changes from previous version.
3.3 Completed by:	James Ham (james.ham)

3.4 Average Hotel power (kW) in port and underway?	In Port Vessel has approximately 3000KW Power . Underway Vessel has approximately 15000Kw power.
3.4 Completed by:	James Ham (james.ham)
3.5 Average fuel consumption in port and underway?	Consumption of fuel in Port is 0.8 M3\ hour . Underway (4 DG on 80% Power)= 3.8 M3\ hour.
3.5 Completed by:	James Ham (james.ham)

4: Food Waste Garbage Handling

4.1 How is food waste handled and disposed of?	Most of the waste is comminuted through the Food Waste system. Bones and other items that cannot be be comminuted will be stored in bins for offload.
4.1 Completed by:	James Ham (james.ham)
4.2 Average food waste production per day (kgs/day)?	3 / 4 M3 daily
4.2 Completed by:	James Ham (james.ham)
4.3 Is the food waste de-watered? If yes, provide dewatering volumes and handling information.	Yes. 2.5 M3 per day. All of the food waste goes through a press before being pumped into the food waste silo. Once Vessel is 12nm outside of Alaska waters food waste is then discharged overboard.
4.3 Completed by:	James Ham (james.ham)
4.4 How are glass bottles, broken crockery, and ceramics handled?	Glass bottles clear and colored are not separated. They are crushed and landed ashore in FICB bags in Seattle . Crockery, glass, Ceramics landed ashore as dry waste and if food contaminated, it goes ashore as contaminated food waste.
4.4 Completed by:	James Ham (james.ham)
4.5 How is food waste monitored and/or recorded?	Garbage Record Book and offload manifests.
4.5 Completed by:	James Ham (james.ham)

5: Sea Water Intakes

5.1 List all of the seawater intakes (chests); include the locations, frame, side (PS/SB) or compartment.	FWD Pump Room Port & Starboard AFT EVAP Room Port & Starboard
5.1 Completed by:	James Ham (james.ham)
5.2 List filtration systems for each intake. Describe how filter systems are maintained. What is the frequency of cleaning? Is this performed in Alaska?	The Sea Chest has been opened on a monthly basis for inspection and cleaning . Information is Recorded in AMOS System.
5.2 Completed by:	James Ham (james.ham)
5.3 How is debris and mud from filtration/strainers handled?	Debris from sea strainers is place in offload bags and then offloaded in Seattle.
5.3 Completed by:	James Ham (james.ham)
5.4 Marine Growth Protection Systems in the sea intakes. Description of the control systems and information on checmicals if used.	The Anfomatic System is automatic, requires minimal maintenance and is environmentally friendly. Mussels and similar marine life which are the primary cause of blockage in marine sea water cooling system are not killed by the Cupric ions given off by the Anfomatic anodes. The Environment created is hostile without being fatal and prevents the microscopic embryos from attaching to pipeline walls, settling or developing . A further benefit of the Anfomatic system is that potable water distillation plants can be operated without interruption.

	No chemicals are being used.
5.4 Completed by:	James Ham (james.ham)
5.5 Hull cleaning in place in Alaska 2018?	Propeller Polishing / Hull Survey Wellington New Zealand. On 08/02/18.
5.5 Completed by:	James Ham (james.ham)

6: General

6.1 Is vessel crew cooperative on this project?	Yes
6.1 Completed by:	James Ham (james.ham)
6.2 Do you feel the vessel has a clear understanding of compliance requirements?	Yes
6.2 Completed by:	James Ham (james.ham)
6.2 Completed by:	james.ham

Z: Signature & Submit

Ocean Rangers contributing to this report:	Tom Guiney (thomas.guiney) Tim Nelick (tim.nelick)
Ocean Ranger Signature: