



**LARGE COMMERCIAL PASSENGER VESSEL
PERMITTED / WASTEWATER DISCHARGE
UNDERWAY INSPECTION REPORT**
Alaska Department of Environmental Conservation
Division of Water

Form:
AK-LCPV-D-U

Last Updated
4.23.2024

SECTION 1: GENERAL

Inspection Date(s): 6/12/24 - 6/13/2024		Vessel Name: Eurodam	
GP Auth #: 2013DB0004-0025 (Issue Date) 4/18/2022		IMO No.: 9378448	
Inspection: <input checked="" type="checkbox"/> Announced <input type="checkbox"/> Unannounced.		Port of Departure	Sitka
DEC Registration #: 2024-CS-0014		Port of Arrival	Ketchikan
Arrival Time (at vessel): 1200	Inspection Start Date:6/12/2024 Time 1300	Inspection End Date: 6/13/2024 Time: 0900	
Additional Information (e.g., access issues): No issues joining the vessel. The staff were expecting the inspector.			
Inspection Focus The inspection focuses on compliance with general permit requirements.			
Past Compliance Follow-up Items: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
ADEC Inspector(s)			
Inspector(s): Mark Chrissy		Credentials Presented: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
Vessel Contacts			
Name (Onboard): Neil Maitland Title: Environmental Officer Vessel: Eurodam Email: eudm-environmental_officer@hollandamerica.com		Main Office: [primary contact in EDMS] Konstantin Konstantinov Director of Environmental Operations and Policy Holland American Line 661-210-6296 kkonstantinov@hagroup.com	

SECTION 2: DOCUMENTATION
Passengers onboard (during this inspection): 2,256 pax and 831 crew
Quality Assurance Project Plan (QAPP): Copy onboard? <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> CLIA QAPP USED
Vessel Specific Sampling Plan (VSSP): Copy onboard? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
ADEC WW GP 2013DB-0004 : Copy onboard? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
USCG Discharge Authorization Copy onboard? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Other Documents Reviewed: Environmental Schedule (One Ocean, a proprietary system that has environmental policies outlined for the company).
LV WW Discharge General Permit (GP) – 2013DB-0004
If applicable
<input checked="" type="checkbox"/> Underway <input type="checkbox"/> Stationary <input type="checkbox"/> Skagway
Additional Terms and Conditions (Authorization Section 5, GP 4.3.2) (e.g., only GW in port, etc.): The Vessel only discharges underway (greater than 6 knots)
Wastewater Discharge Logs
WW Discharge Logs for previous 12 months available onboard? Yes.
Any unauthorized discharges, spills, or non-compliance items? None.
Is a Vessel environmental Voyage Plan available? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
If so: which elements are included in this plan? Wastewater discharges, fuel changeover, EGCS operations, incinerator operations, boiler blowdowns, food waste discharges.

SECTION 3: WASTEWATER SYSTEM
Current status of the AWTs system: Operable
AWTS Details: Hamworthy MBR
Capacity of each unit (s): per manufacturer. 2 units total capacity of 720 M ³ /day
All equipment operable/ in-use. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
All monitoring operable/ in-use <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
General Notes regarding AWTs: The Wastewater treatment plant was observed to be operational with no indications of alarms or faults on the local control panel.
Any maintenance or operational changes that may impact treatment capacity? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Chemical Additives used as component of AWTs: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Bio sludge Handling – Liquid biomass is stored in a dedicated tank and is discharged outside of 12NM. The vessel discharges about twice weekly.

<p>UNTREATED WW – Galley and Laundry have their own dedicated graywater tanks. The tanks are discharged outside of 12 NM.</p> <p>Untreated and treated graywater can be discharged to shoreside facilities.</p>
<p><input type="checkbox"/> Separate GW & Mix WW discharges <input type="checkbox"/> More than one permeate outfall</p> <p>Describe switchover procedure: NA</p> <p>2 units have one permeate outfall combined</p>
<p>Discharge procedures</p>
<p>Describe vessel's WW discharge procedures:</p> <p>A voyage overview meeting takes place. All Environmental operations are discussed and planned in advance. When a planned discharge occurs, the bridge will notify the engineers that they are in the correct position and are given permission to discharge. Traffic lite system is in place. The light is illuminated green when discharges are permitted and red when they are not.</p> <p>How does the vessel ensure valves are closed while in non discharge status?</p> <p>The overboard discharge valves are manually operated. The monitoring system indicates whether a valve is in the open or closed position.</p> <p>What guidance (documents or otherwise) does the crew use when discharging?</p> <p>Environmental schedule and the One Ocean Program (Proprietary software that outlines environmental policies by location)</p>
<p>How does vessel calculate discharge volumes: The permeate volumes are flow metered for discharge. All other volumes are calculated based on change in tank level and elapsed time.</p>
<p>Electronic Logs: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>NAPA electronic logs are used</p>
<p>MSD Maintenance Log: The wastewater treatment plant has planned and unplanned maintenance events recorded in the AMOS maintenance database. A spare parts inventory is maintained as well.</p>
<p>How are GW streams (pulper, galley, laundry, etc.) handled that are not treated by AWTS: Galley and laundry are untreated and discharged outside of 12 NM. Bio digester water is untreated and discharged outside of 12 NM.</p>
<p>Regulatory Effluent Sampling</p>
<p>GW=Greywater and BW=Blackwater (i.e., sewage)</p>

WW sample taken during this inspection? YES NO

Was sample event viewed by inspector? YES NO

General observations: N/A, no samples were taken during the inspection. However, samples were taken on the 6/12/24 by Admiralty Environmental (conventional sample) prior to the inspector's arrival. The following are the results of the sample:

Parameter	Result	Units	Limit
pH	7.46	SU	6-9
Free Chlorine	<0.1	mg/L	N/A
Total Chlorine	<0.1	mg/L	0.1
Biological Oxygen Demand (BOD)	14	mg/L	60
Total Suspended Solids (TSS)	<4.0	mg/L	150
Fecal Coliform (FC)	<2.0	FC/100mL	40

Lab Report Attachment

Vessel Process (Effluent) Sampling:

Does the vessel conduct process sampling? YES NO

Notes: Sampling onboard is conducted every 3 days. pH, Chlorine, COD BOD, TSS FC

SECTION 4: ADDITIONAL OBSERVATIONS

EPA VGP (Alaska signed off onto the 2013 EPA VGP)

Ballast Water / Invasive Species

Does the vessel engage in Ballast Water Operations while in AK waters? YES NO

The vessel has a US approved ballast water treatment system. A calibration event took place in Juneau on 3 June 2024

Ballast Water Management – The vessel has an approved ballast water management plan.

Are Ballast Water tankage used for the storage of Wastewater? YES NO

There are 18 dual purpose (ballast water and wastewater storage) tanks onboard.

Internal biofouling -

Ultrasound Transducers YES NO

Cathodic Protection YES NO

Hull Husbandry

Is underwater hull cleaning to be conducted in AK waters? YES NO

When was the last underwater hull cleaning performed? <input checked="" type="checkbox"/> Drydock <input type="checkbox"/> Underwater
The vessel was drydocked in 5/2023 in Freeport Bahamas
WW Stream / Other Items
Incinerator – one incinerator onboard. Currently functioning. The vessel’s policy is to only burn paper and medical waste.
Solid Waste Management – all waste collected and separated and reduced in volume by compaction or grinding and palletized and landed ashore outside of Alaska.
Haz-Mat Management – Haz mat waste is segregated and landed ashore to contracted service outside of Alaska.
Food Waste Management – Food waste is bio digested and stored in dedicated tanks and discharged outside of 12 NM. Food waste is logged with garbage. Hard food is crushed/ground and dehydrated and landed ashore as solid waste.
Marine Growth/Screening (Sea Strainers/Chests, etc) – The contents that is scraped and cleaned from sea strainers and piping is landed ashore with solid waste and recorded in the garbage log.
Boiler Blowdown – outside of 12 NM
Rec Water Management – Pool water is monitored for chlorine and discharged outside of 12 NM
Photo shop onboard: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Exhaust Gas Scrubber System
Exhaust Gas Scrubber System used? (VGP 2.2.26): <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO System: <input type="checkbox"/> HYBRID <input checked="" type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
EGCS units installed and corresponding Combustion sources. Dedicated combustion sources to MGO (LSMGO)? All engines are equipped with EGCS. All engines operate on MGO and HFO.
Operational plan for EGCS use in AK Waters? (i.e., Where are scrubbers used during AK season, if using closed loop, describe bleed off discharges?): The EGCS are open loop systems. The plan for the use of EGCS (for arrival in to Ketchikan on this voyage) was to maneuver on HFO in open loop until the vessel was alongside and then to switch all loads over to engines running on MGO.

Fuel changeover – Fuel changeover points are identified in voyage environmental operations planning when they are needed.
ECGS Monitoring – A compliance computer is in place to collect the data that is used for required EPA compliance reporting. The exhaust gas is monitored by camera and reviewed for opacity exceedances.

Dock-Side + Underway Observations
Potable Water bunkering: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
WW Discharge observed? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Pump Truck <input type="checkbox"/> City Sewer <input type="checkbox"/> Overboard
Sheens/Discolorations observed? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Agency Notified: <input type="checkbox"/> USCG <input checked="" type="checkbox"/> DEC-Water (in attendance)
Describe: At 0615 on the morning of the 13 th of June, the inspector observed a cloudy effluent which left the surface of the water with a visible film, from the starboard side of the vessel. The cloudy discharge and associated film was observed continuously for more than 10 minutes and the surface remained cloudy for several minutes (first photo at 0615 and last at 0632). See photos in the photo addendum.
Weather (Wind/Tides): At 6:15 am the winds were calm and the temperature was 50°F. There was no precipitation and the high tide was at 6:04 am.
Any exterior activity (painting / deck wash etc.)? None observed.
<u>NON-VESEL Observations:</u> (Dock-side / Underway items not relating to vessel) None

SECTION 5: OVERVIEW
Inspection Observations
The inspector met with the Environmental officer (EO) shortly after boarding and discussed an agenda for the routine inspection. At 1300 the inspector met the EO in their office and reviewed documents, records and procedures for general permit compliance. At 1540hrs the inspector toured the solid waste handling facilities and food waste handling systems until 1600 hrs. At 1845hrs the inspector met again with the EO. The inspector observed the process of discharge operations and toured the machinery plant and completed the tour and work for the day at 1930hrs. The required documents and records were in order and accessible. The wastewater treatment plant was observed to be functioning with no indications of alarms on the local control panel. Solid waste handling facilities appeared to be clean and orderly.
Additional Comments

While the inspector was waiting to disembark the vessel at 0615 on the morning of the 13th of June, he observed a cloudy effluent which left the surface of the water with a visible film. The cloudy discharge and film was observed on the starboard side of the vessel. The cloudy discharge and associated film was observed continuously for more than 10 minutes and the surface remained cloudy for several minutes after (first photo at 0615 and last at 0632). The inspector notified the Environmental Officer and began to investigate what caused the condition. The Inspector met with the Captain of the vessel at 0700. The Captain had not been notified of the reported incident. There was no log book entry made or observation to follow up on the report of an apparent pollution incident. The EO had notified the Staff Chief Engineer (which is not the lead engineering officer) who had been showering at the time of the incident's reporting. The inspector shared the photos of the incident with the vessel's master (Captain) and requested to meet with the engineering staff and investigate. The operation of the exhaust gas cleaning system (EGCS) was occurring at the time the cloudy discharge and residual surface film was observed and reported. The inspector reviewed the EGCS computer data (a required component for the use of EGCS) and observed several alarm patterns associated with DG5 around the time and during the time of the observed cloudy water with a surface film between 6:15am and 6:32am. Times are shown below in UTC. The data below was requested as part of the follow-up of the witnessed cloudy discharge and surface film. The data was not provided in chronological order. However, the system "Major Malfunction" alarms occur prior to and during the time of the witnessed cloudy water discharge with film on the surface of the water. Photographs begin at 6:15am. However, the cloudy discharge and film on the surface of the water was first observed by another person (guest) and pointed out to the inspector so the event was happening prior to the first photo for an undetermined amount of time. The photos indicate an increase in the visible cloudy discharge and film on the surface at the corresponding time of the alarms.

24/06/13 12:21:56:707	DG5_DSX_ALMAJ_MAJMAL	DeSOx System: MAJOR MALFUNCTION	VALUE	ALARM
24/06/13 12:03:36:057	DG5_DSX_GEN_ALARM	DeSOx System: General Alarm	VALUE	ALARM
24/06/13 12:03:36:058	DG5_DSX_ALMAJ_MAJMAL	DeSOx System: MAJOR MALFUNCTION	VALUE	ALARM
24/06/13 12:03:36:059	LT06068_04P_LTV_	HFO STTLNG TK04P	Lim H2	150.
24/06/13 12:03:36:059	DG5_DSX_FLOW_RACK_2_Al	Water Analyzer Rack2 LOW FLOW alarm	VALUE	ALARM
24/06/13 12:03:36:059	DG5_DSX_ALMIN_WASF	Water Analyzer Rack 2/3: FAULT	VALUE	ALARM
24/06/13 12:06:57:666	LT06068_04P_LTV_	HFO STTLNG TK04P	Lim H2	150.
24/06/13 12:22:06:963	DG5_DSX_GEN_ALARM	DeSOx System: General Alarm	VALUE	ALARM
24/06/13 12:22:11:733	DG5_DSX_GEN_ALARM	DeSOx System: General Alarm	VALUE	ALARM
24/06/13 12:22:11:734	DG5_DSX_ALMAJ_MAJMAL	DeSOx System: MAJOR MALFUNCTION	VALUE	ALARM
24/06/13 12:22:11:734	DG5_DSX_FLOW_RACK_2_Al	Water Analyzer Rack2 LOW FLOW alarm	VALUE	ALARM



Photo taken at 0615



Photo taken at 0621

SECTION 6: FOLLOW-UP

Compliance Assistance Items

Observations from the investigation of the witnessed incident of the vessel discharging cloudy effluent that left a film on the surface of the water upon arrival in Ketchikan on 6/13/24, 0615hrs:

- The incident was reported by the ADEC inspector to the ship's Environmental Officer and after that the communications of the incident went directly to the Staff Chief Engineer, who was showering at the time he was notified. The event of a cloudy discharge that left a film on the surface of the water was never communicated to anyone on the bridge or to senior officers. No observation was made by anyone other than the inspector witnessing the event and the ship's Environmental Officer. No logbook entry of the reported incident was made. The ineffective reporting of the incident and compartmentalizing of information are concerning and warrant internal follow up by the operator, the USCG and the endorser (Class Society/Flag State) of the vessel's SMC.
- The Captain, the Chief Engineer and the Environmental Officer indicated that the incident was not a first-time occurrence and happens with frequency. There seemed to be no concern that this kind of incident was notable or required specific action to rectify the occurrences. The vessel's Captain, Chief Engineer and Environmental Officer follow company issued guidelines (photos of various EGCS washwater effluent conditions that the operator deems acceptable). The guidelines were presented as a justification, though no proactive use of the guidelines (periodically checking the effluent condition against the issued guidance) was observed by the inspector. There was no correlating condition presented (none of the company issued guidance examples matched the condition observed and photographed by the inspector). The machinery is indicating major malfunction and alarming. Best management practices (BMPs) are not applied to the operation of the EGCS that proactively address washwater quality.
- The alarm data collected indicates that a major malfunction of the system described as DeSOx occurred during the time of the witnessed cloudy effluent discharge and film on the surface of the water. The alarm data observed onboard shows the same alarms at previous maneuverings (vessel docking procedure). The EGCS is required by the IMO and USEPA to meet the performance criteria it was certified to which includes the standards of washwater turbidity, metals, nitrates, PH, PAH and other criteria. The IMO Resolution MEPC 259 (68) requires that periodic surveys be completed by the issuer and endorser of the MARPOL Annex VI certificate (Class Society or Flag State) to verify continued compliance of the EGCS. As the system is required to be surveyed, maintained and verified as operational, the operator shall have a class survey conducted and a report issued indicating that the malfunctioning EGCS has been properly repaired and is functioning as required by IMO resolution MEPC 259 (68) and all other applicable MEPCs required when EGCS is used for SOx Emissions Compliance Certification (SECC).
- These violations have been forward to EPA Region 10 (regulatory body for EGCS compliance) for enforcement.



Signature	
<p>Inspector – Mark Chryss Credential Number: R-605 Phone: (907) 269-4720 E-mail: mark.chryss@alaska.gov</p> <p>Reviewed By – Ben Eisenstein Credential Number: R-598 Phone: (907) 465-5161 E-mail: ben.eisenstein@alaska.gov</p>	<p> Date: 7/10/2024</p> <p> Date: 7/10/2024</p>

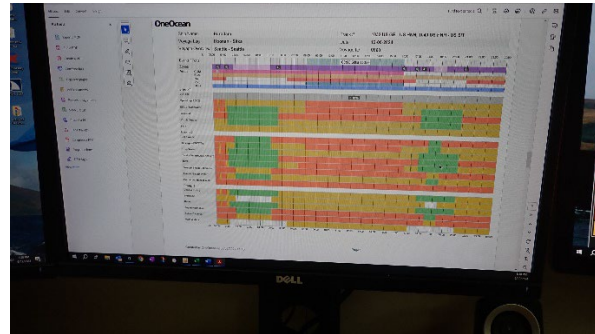
Photo Addendum

Photo 01



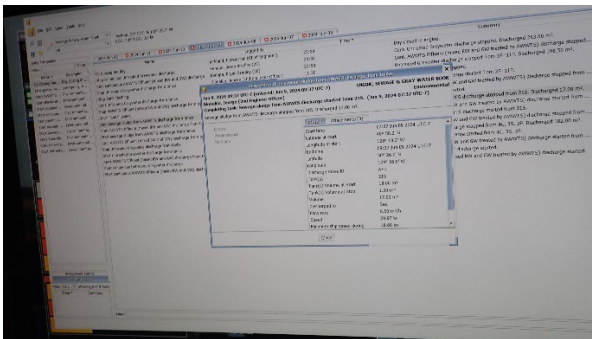
Vessel at pier in Sitka

Photo 02



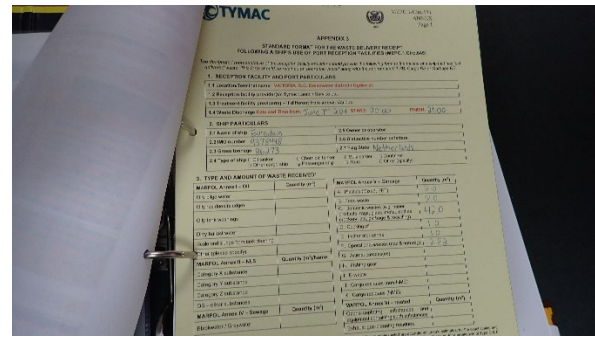
Screenshot of Voyage Plan

Photo 03



Electronic wastewater discharge record

Photo 04



Garbage offload receipt

Photo 05



Solid waste storage

Photo 06



Food waste dehydrator

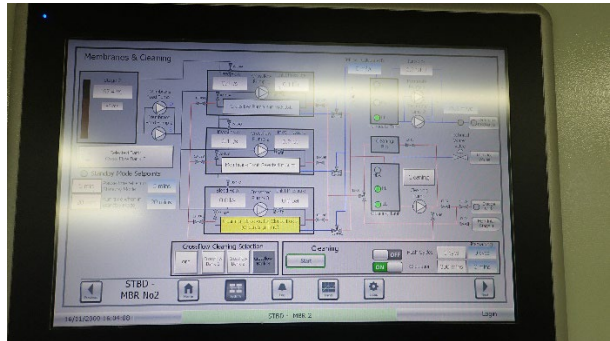
Photo Addendum

Photo 07



Wastewater treatment membrane bank

Photo 08



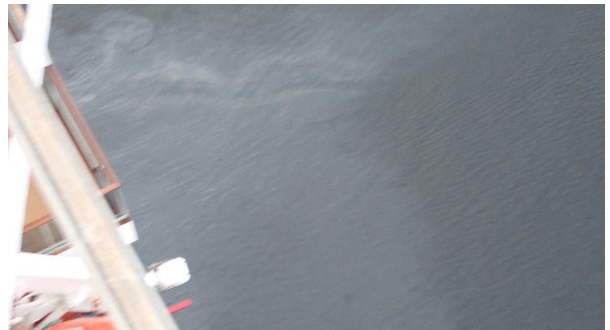
Wastewater treatment system local control panel

Photo 09



Cloudy discharge, film on water

Photo 10



Cloudy discharge, film on water

Photo 11



Cloudy discharge, film on water

Photo 12



Lingering film on water