

Background:

Carnival Cruise Lines (CCL) provided on January 14, 2001 the Annual SRE 2009 Report. CCL operates one vessel in 2008 and 2009 in Alaska waters (Carnival Spirit). This vessel is equipped with AWTS system of the Reverse Osmosis / Ultra filtration Rochem system.

The Carnival Spirit operated / discharged only treated Graw water; this was done trough the GW section of the AWTS system. In 2009 the vessel discharge performance was excellent and well below the interim limits.

Discussion:

The SRE annual report is concise and to the point. Carnival includes in detail water consumption data and compliance data of the effluent. The compliance data was already on file at ADEC.

Below are the items discussed which are included in the annual report:

SRE does not contain a plan / time line for submittal of future reports.

- Water from accommodations, and whirl pool are treated and discharged. The GW from galley, pulper, laundry and remaining accommodation water is discharged outside Ak waters.
- Water consumption: CCL include detailed overview o f the produced potable water on board. This consisted in 2009 of: 1) Water produced by Evaporator System 2) Water produced by Reverse Osmosis (RO) System 3) Bunkered water. In 2009 was no water produced by RO-process.
The information compared the monthly consumptions including some month of 2009 that the vessel was not in Alaska. From the data is appears that the water production was in the month May, June, July, Aug, during the summer pretty constant.
A complete water record location, produced, date time and volume was for the 2009 season included.
- Sample data for the 2009 voyages in Alaska were included.
- Copies form the vessel piping plans including the material spec sheets and velocity parameters were included. Also general accepted engineering values for medium velocities are included.
- Bunker lines (from main deck receiving point) to the storage tanks are made of galvanized steel.
- In general sheet are include potable water "pH plus controls". For water conditioning?

Ocean Ranger Additional Observation:

This project was started after the ADEC CPVEC NWCA meeting on August 14, 2009 (8/14/2009). During that meeting it was identified that ADEC CPVEC and the Ocean Rangers would conduct a "Source Reduction Plan Survey" on board of the vessels.

Rev: 0

The Ocean Rangers provided feedback regarding their impressions on board what was done regarding the Source Reduction Plans. Below are (concise / nutshell form), listed the "general" SRE findings made by the Ocean Rangers on the Carnival Spirit Vessel in 2009 season.

The Carnival Spirit completed the SRE and could comply with the effluent limits. Crew had heard of the SRE plans, and chemical use that could affect the waste water quality was restricted. Overall impression was good.

Conclusion:

Carnival provided mainly information regarding the potable water and sample results. The overview was relatively concise because the vessel was well below the interim limits.

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