

WASTE STREAM DETAILS

TYPES OF WASTE

TREATMENT & REQUIREMENT

BILGE WATER:

Wastewater normally generated in the machinery spaces of the engine room during vessel operation.

The bilge water is processed through approved oil filtering equipment so that the oil content of the treated bilge water without dilution does not exceed 15 parts per million (ppm) as per international regulations.

On all of our ships, we have installed redundant systems that monitor treated bilge water a second time prior to discharge to ensure the treated bilge water contains less than 15ppm of oil before being discharged overboard. This voluntary and proprietary system provides additional control to prevent overboard discharges of processed bilge water that exceeds 15ppm of oil. If the system reading indicates 15ppm or greater of oil, it will sound an alarm and automatically stop the discharge, redirecting the flow to on board storage tanks.

Bilge water discharges are in strict compliance with applicable international and national laws and regulations, and often contain less than five ppm of oil.

Bilge water not meeting discharge criteria and oil residues/sludge are offloaded for shoreside disposal or recycling depending on available shoreside infrastructure.

Bilge water from Carnival Corporation & plc ships is discharged only when the ships are underway at sea and proceeding at a speed of no less than six knots.

GRAY WATER:

Wastewater from sinks, showers, galleys, laundry and some cleaning activities.

Gray water on most ships is not typically treated unless an Advanced Wastewater Purification System (AWWPS) is used. We have installed AWWPS's on more than one-third of our ships and continue to review application of AWWPS's worldwide. We control the products and supplies used on board our ships to help improve the level of the gray water quality.

Gray water from Carnival Corporation & plc ships is discharged only while the ships are underway and proceeding at a speed of not less than six knots. Gray water is not discharged in port and at a minimum not within four nautical miles from shore or such other distance provided for by local law or as agreed with the authorities that have jurisdiction, except in case of an emergency. Gray water that has been treated by an AWWPS can be discharged inside 4 nautical miles or in port based on local requirements.

BLACK WATER:

Wastewater from toilets, urinals and liquid waste from medical facilities.

Black water from our ships is treated by a sewage treatment plant called a Marine Sanitation Device (MSD) or by an Advanced Wastewater Purification System (AWWPS).

On more than one-third of our ships, black water is treated by an AWWPS that uses technologies designed to produce a higher effluent quality that meets or surpasses sewage standards for secondary and tertiary effluents, and reclaimed water.

Black water discharges from Carnival Corporation & plc ships treated by an MSD take place only when the ship is at a distance of more than 12 nautical miles from the nearest land and when the ship is traveling at a speed of not less than six knots. Discharges of treated black water by AWWPS can be discharged inside 12 nautical miles from the nearest land.

TYPES OF WASTE

REGULATED WASTE:

Includes cleaning solutions generated from operations of the ship, biomedical type waste and chemical products or paints that are non-hazardous.

FOOD WASTE:

Any uneaten spoiled or unspoiled food substances, including fruits, vegetables, dairy products, poultry, meat products and food scraps generated aboard the ship.

SOLID WASTE:

Any refuse, and other discarded materials not considered hazardous.

HAZARDOUS WASTE:

Waste that poses a risk to human health or to the environment and typically exhibit at least one of four characteristics (ignitibility, corrosivity, reactivity, or toxicity).

RECYCLED WASTE:

Materials that can be diverted from landfill or incineration and are managed through recycling processes where the material can be used again.

TREATMENT & REQUIREMENT

Carnival Corporation & plc shipboard regulated waste is generally transferred to licensed shoreside waste contractors for appropriate disposal. Some types of regulated waste can be incinerated on board.

Food waste may be processed by being comminuted/ ground so that it is able to pass through a screen with openings no greater than 25mm or left as is.

Comminuted food waste from Carnival Corporation & plc ships is discharged greater than 3 nautical miles from the nearest land and inside special areas greater than 12 nautical miles from the nearest land. Unground food wastes can be discharged at greater than 12 nautical miles from the nearest land.

Solid waste generated on board can be incinerated on board or landed ashore to be landfilled or incinerated. Carnival Corporation & plc ships are equipped with incinerators, and compactors to manage solid waste.

Carnival Corporation & plc shipboard hazardous waste disposal is transferred to licensed shoreside waste contractors for disposal according to applicable regulations.

We classify shipboard waste as hazardous based on the requirements of the jurisdiction where the waste is offloaded for disposal. Some jurisdictions classify oily sludge as hazardous waste and other do not. In jurisdictions that classify oily sludge as hazardous waste, oily sludge makes up the majority of hazardous waste of offloaded for disposal.

Recycling containers are placed throughout the ships for guest and crew to segregate items for recycling at the source. In addition, designated crew sorts trash to ensure recyclable items are not commingled with other waste streams.

After sorting, recyclable materials are crushed, baled and stored for shoreside recycling at designated ports of call where the infrastructure is in place for recycling. However, if the infrastructure is not in place recyclable items may be landed for landfill. Our standard recycled materials include plastic, glass, paper, cardboard, oily waste, used cooking oil, refrigerants, aluminum, electronic equipment, toner cartridges, batteries, fluorescent lamps, silver (recovered from photo and X-ray processing fluids) and scrap metal.

Where port reception facilities and infrastructure allows, the following additional items may be recycled: mattresses, carpets, and corks.