

#### To: Customers

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## Fuji Electric Exhaust Gas Cleaning System (EGCS)

# Bubbles of discharging water from SOx scrubber during berthing

We would like to express our deepest appreciation to you for your continued support for our ship exhaust gas cleaning systems (EGCS).

We would like to report on the phenomenon that bubbles are generated on the sea surface near the SOx scrubber during EGCS operation during cargo handling and berthing at some ports on other vessels and do not disappear for a long time.

### 1. SOx scrubber discharging water

In accordance with the EGCS guidelines, we constantly monitor the three specified water qualities (pH, turbidity, PAH) with a water quality meter during EGCS operation. In addition, if the water quality exceeds the guideline standard value due to soot, oil, etc., an abnormality in the wastewater component is detected and an alarm is issued.

When bubbles were found on the surface of the sea, no warning was issued, so it is probable that there was no abnormality in the quality of the discharging water.

#### 2. Consideration about bubbles

It is presumed that the bubbles are due to the bubbles contained in the scrubber discharging water. Also, it is presumed that the bubbles appear black because suspended solids in seawater are floating around the bubbles depending on the bubbles. Depending on the sea area, the bubbles may appear white and the color may differ depending on the suspension in the seawater.

