Water Pollution Management

Water is a major factor for the existence of life. It is the source of many aquatic creatures and plants, and water also has important uses in farming, households and industry, and the company has to use water in its production processes. Therefore, reducing water pollution is a major issue that the company must take responsibility for to minimize impacts to natural water sources.

The company manages water pollution through the use of a highly effective water treatment system to ensure that the quality of wastewater released from the company's plants exceeds legal standards. In addition, the company applies the 3Rs principle to reduce wastewater by reusing treated water in production processes to reduce use of natural resources and minimize impacts on the environment and communities around the refineries. The refinery wastewater treatment processes are divided into 3 parts as follows:

1. **Physicochemical treatment process** to reduce contamination by oil and heavy metals.
2. **Biological treatment process** to reduce contamination by dissolved organic substances.
3. **Tertiary treatment process** to filter out small and hard particles and absorb remaining organic substances dissolved in the water to ensure appropriate water quality before entering the recycle system.

The company has an internal control system to control the quality of wastewater in the wastewater treatment unit to ensure that values remain within the company's controlled values, and the company analyzes the quality of water after treatment on a regular basis at the company's analysis laboratory covering pH testing and dissolved oxygen value to ensure that the wastewater treatment system works effectively. Furthermore, the company has installed online COD equipment capable of measuring COD values and sending results real-time to government agencies and communities surrounding the refineries, whereby the pollution management results are compiled and presented for consideration of improvement through work groups on every level from the operational level to the executive level. For additional details, see the topic "Bangchak and Sustainability". Accordingly, the company heeds the opinions of every stakeholder, especially communities surrounding the refineries and government agencies that give importance to these issues, through multiple channels such as opinion hearings during community activities and meetings with the relevant government agencies. For additional details, see "Treatment of Stakeholders."

In addition to controlling the wastewater quality of Bangchak's oil refineries, the company also pays attention to the environment and surrounding society and communities. In 2022, the company operated the "Khlong Suai Nam Sai" project in collaboration with the Phra Khanong District Office, Bang Na District Office and Phra Khanong Police Station to restore the environment and quality of the canals around Bangchak's oil refinery area such as Bang Chak Canal and Bang Oh Canal by improving the scenery of the area along the entire length of the canals and restoring the canals to ensure their cleanliness and improve the wellbeing of the communities living near the canals and the ecosystem.

Water recycling target for year 2022 = 162,768 cubic meters
(counting only RO recycled from the wastewater treatment system)

RO Recycle Unit from the wastewater treatment system was able to recycle water by 203,167 cubic meters.

The amount of the water recycled by the company year 2022 = 1,470,528 cubic meters
(including every process unit)

The amount of water released by the company to outside year 2022 = 827,875 cubic meters
including Wastewater Reservoirs No. 1 and No. 3