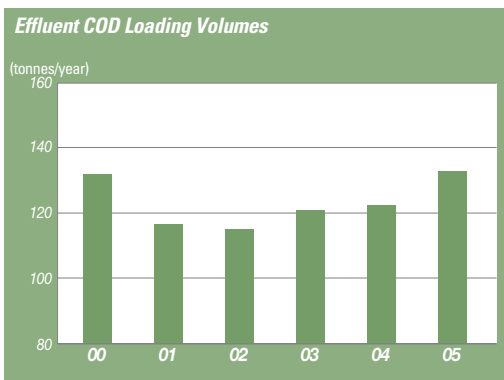


Water Pollution Countermeasures

Refineries discharge coolant water and effluents used in all processes. After a check for pollutants, coolant water is discharged into the sea. Processed effluents that require treatment are cleaned through chemical treatment using oil separator flocculating agents, activated sludge treatment, or activated charcoal treatment. All effluents must be confirmed to pass chemical oxygen demand (COD)*1 environmental regulation values, including oil content values.



*1 COD (chemical oxygen demand): an index that shows the degree of water pollution by the amount of oxygen required to degrade organic materials, such as sludge, in water. (See Site Information on page 66 for the COD regulation values and actual measured values for each oil refinery.)

*Among the factors accounting for the increase since 2003 is the construction of new electricity supply plants.

Countermeasures Against Pollution of the Sea: Switching to Double-Hull Non-Japanese Flag Tankers

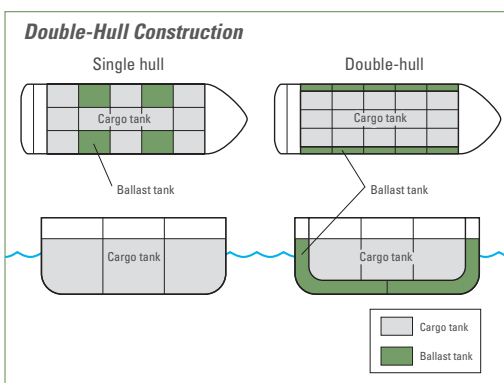
In 1989 the Exxon Valdez, carrying 53,094,510 gallons of crude oil, ran aground on the coast of Alaska. This disaster gave rise to international agreements to build double-hull oil tankers with saltwater ballast tanks down the sides and bottom of the vessels.

A double-hull construction ensures that if the skin of the ship is penetrated in a collision or grounding, even if the outer hull is ruptured, the inner hull can contain the cargo of crude oil or fuel and prevent a spill into the sea.

The Showa Shell Group is moving forward with switching completely to double-hull very large crude carriers (VLCC). In fiscal 2005, all ten of its regular-charter VLCCs were double-hull vessels.

The group is also giving precedence to the double-hull design in its spot charters of oil tankers. The law now requires that separate ballast tanks be built into oil tankers,

which means that seawater is never pumped into oil tanks, thereby eliminating the problem with dirty ballast in vessels used by Showa Shell.



Oil Spill Response (OSR) Equipment Stockpiles

The Petroleum Association of Japan has six OSR equipment stockpiles in Japan and five outside Japan, in the Middle East, Southeast Asia, and other locations, positioned to ensure a swift response to major oil spills. Showa Shell contributes part of its site at the Niigata Petroleum Product Import Terminal for an OSR equipment stockpile (Base Number 4), and cooperates in the operation of the stockpile.

This stockpile contains oil spill recovery equipment, oil fences, beach cleaners, and other supplies, including large, high-tech machinery and equipment. The company selects the manager of the stockpile and conducts training in the use of the equipment.



OSR Equipment Stockpile Number 4, Niigata Petroleum Product Import Terminal.