



Pollution Prevention

Concept of Pollution Prevention

To reduce the environmental impact of our business, we not only comply with environment-related laws but also autonomously take preventive measures in accordance with our internal rules (Basic Essential Points on Health Safety Security and Environment (HSSE)). Furthermore, in addition to preventing environmental pollution arising from our business operations, we seek to contribute to society as a whole in terms of the prevention of pollution. To this end, we become a member of the committees of the Ministry of the Environment and Keidanren (Japan Business Federation) that review the application of the Water Pollution Control Law and the Soil Contamination Countermeasures Law to offer the Idemitsu Group's knowledge and experience. We are also developing research and analysis methods while striving to reduce environmental impact by assiduously preventing emissions of pollutants.

Measures to Prevent Air Pollution

Air pollutants discharged through our business operations include sulfur oxides (SOx), nitrogen oxides (NOx), and soot/dust emitted from boilers and furnaces as well as volatile organic compounds (VOCs) from crude oil or petroleum product storage tanks and tanker truck loading facilities. Thus, our refineries and complexes carry out operational management to ensure compliance with emission standards under laws and regulations as well as with emission limits prescribed by regional pollution prevention agreements.

Air pollutant emissions

	FY2019	(Unit: t)
SOx	12,315	
NOx	17,286	
Soot/dust	232	

Note: Scope of calculation: Idemitsu Kosan Co., Ltd. and its consolidated subsidiaries

Measures against Soil Contamination

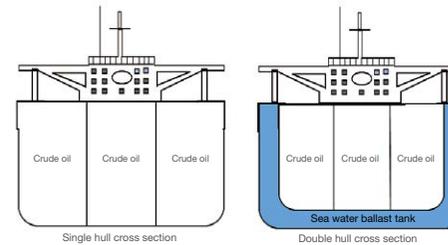
We are aware of the risks of ground contamination due to oil leakage from underground pipes and other oil-handling facilities in operation at our refineries, complexes, plants, and service stations. To address these risks, we have been implementing autonomous surveys of ground and groundwater pollution and undertaking purification measures where needed. In particular, when the closure or rebuilding of a facility causes changes in the character of its site, we implement proper management to prevent pollution, including the resurvey of ground pollution, in compliance with the Soil Contamination Countermeasures Law.

Note: In FY2019, there were no oil leakages that constituted environment-related compliance violations as defined on P. 17.

Measures to Prevent Water and Marine Pollution

Offshore oil development inevitably generates effluent water containing oil from the test drilling phase onward. To prevent marine pollution, we use a separator to treat the effluent water and transport the extracted oil content to land-based facilities for processing. After further treatment to meet effluent water standards, the oil-free water is returned to the sea. In addition, we always consult an expert who conducts an environmental impact assessment prior to test drilling and development to ensure that the impact is at an acceptable level. In case of a marine oil spillage, we promptly deploy an oil containment boom to restrict its spread and recover the spilled oil in accordance with our "Oil Pollution Contingency Plan."

During transport by ocean-going tankers, we take measures covering aspects of both equipment and personnel to maintain a record of zero oil spillage. In the area of equipment, each of our very large crude carriers (VLCCs) in operation is double-hulled (to prevent oil spillage due to a minor damage), thereby reducing the risk of oil spills. In terms of personnel, we provide regular training, including onboard emergency response drills and safety and environmental education, for all crew members.



In addition, we continually aim to provide safe and stable energy and materials, as well as to contribute to the creation of a sustainable society by proactively engaging in environmental protection activities, including those aimed at solving the problem of marine plastics. In September 2019, the Idemitsu Group joined the "Clean Ocean Material Alliance (CLOMA)" which aims to solve the problem of marine plastics.



Clean Ocean Material Alliance