

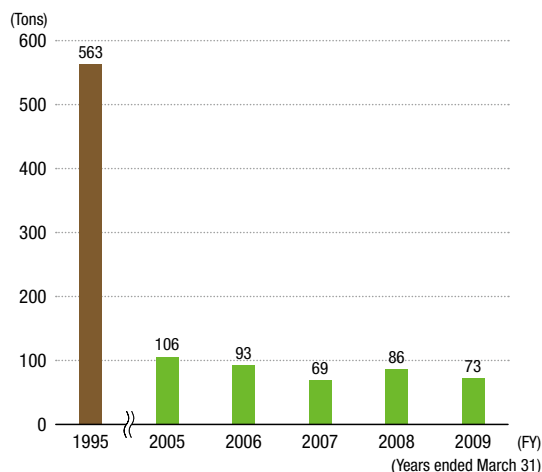
1 Reducing Our Chemical Substance Footprint

Environmental performance data in this section is in accordance with the scope defined in the editorial policy on page 3.

Since 1990, the Nippon Kayaku Group has strived to eliminate or reduce the use of solvents that create an excessive impact on the environment by replacing these solvents or modifying our production processes. Also, in 1995, we began monitoring and reducing footprint of certain chemical substances as part of the movement to reduce substances identified in the Japan Chemical Industry Association led PRTR regulation*1. As a result, we successfully reduced our chemical substance footprint, which totaled 563 tons in fiscal 1995, to less than 100 tons in fiscal 2006. This figure totaled 73 tons in fiscal 2009, indicating that our chemical substance footprint have ranged near the same level since fiscal 2006.

*1 PRTR: Pollutant Release and Transfer Register. The PRTR regulation is designed to prevent occurrences of environmental safety incidents by encouraging businesses to improve their own chemical substance management.

Chemical Substance Footprint

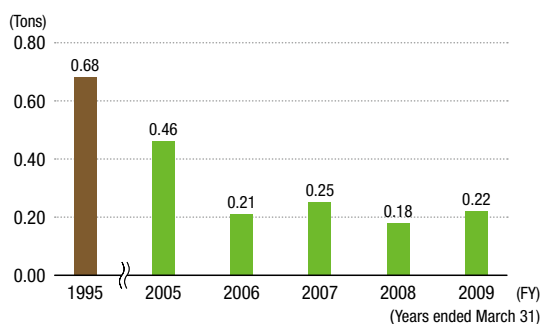


Harmful Air Pollutants

Under the initiative of the Japan Chemical Industry Association, the industry is taking action to voluntarily manage and reduce emissions of 12 control substance*2 that are deemed to be harmful air pollutants. Of these 12 control substances, we still use five, but stopped the use of benzene in 1995. Emissions of chloroform, ethylene oxide and dichloromethane, on the other hand, have been cut to zero since fiscal 2007. Of the 12 control substances, today we only emit formaldehyde, with total emissions at 0.22 tons in fiscal 2009. We continue to actively engage in efforts to cut our use of formaldehyde as a means to reducing our formaldehyde emissions going forward.

*2 12 substances subject to voluntary controls: acrylonitrile, acetaldehyde, vinyl chloride monomer, chloroform, 1,2-dichloroethane, dichloromethane, tetrachloroethylene, trichloroethylene, 1,3-butadiene, benzene, formaldehyde, and ethylene oxide.

Formaldehyde

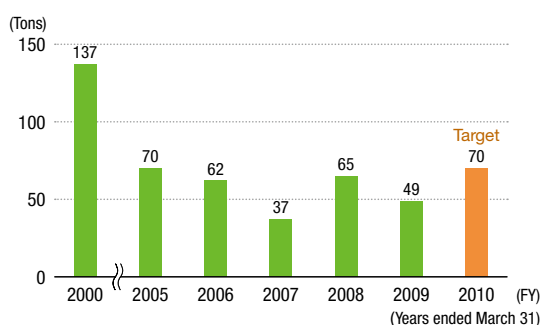


Addressing the VOC Regulation*3

The 2004 revision to the Air Pollution Control Act marked the start of emissions controls for volatile organic compounds (VOC). Nippon Kayaku, which possesses a single facility subject to the VOC emissions controls, has been moving forward with VOC reduction activities aimed at achieving the target set in its Corporate Master Plan for the Environment to cut emissions of VOC into the atmosphere by 50% of fiscal 2000 levels to less than 70 tons in fiscal 2010. Although VOC emissions increased to 65 tons in fiscal 2008 due to the stoppage of emissions gas treatment equipment in certain plants, efforts made by VOC emissions reduction projects set up at each plant helped reduce this figure to 49 tons in fiscal 2009. As of the date of this report, our VOC emissions have been reduced by 64% of fiscal 2000 levels, clearing our target in the Corporate Master Plan for the Environment. Nevertheless, we are committed to further reducing VOC emissions further through company-wide efforts going forward.

*3 VOC regulation: A new regulation enacted in the May 2004 revision to the Air Pollution Control Act. VOC (Volatile Organic Compounds) are highly volatile chemical substances that easily evaporate into the atmosphere. VOC are regulated because they are known to be one of the causes of photochemical smog when they break down in the atmosphere. The regulation's goal is to reduce total emissions in 2010 by 30% of 2000 levels.

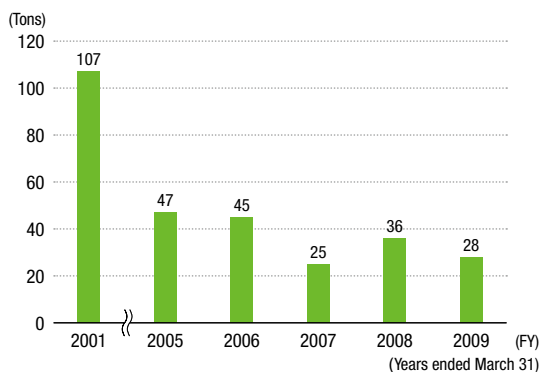
VOC Emissions



PRTR Initiatives

Since 1995, the Nippon Kayaku Group has participated in the Japan Chemical Industry Association led initiative to reduce compounds identified in the PRTR regulation, working to reduce its emissions of PRTR controlled compounds into the environment. In fiscal 2009, our emissions of PRTR controlled substances totaled 28.0 tons. The stoppage of emission gas processing equipment at certain plants lead to a year-on-year increase, but our fiscal 2009 emissions reduction initiatives, including improving our carbon scrubber regenerative treatment methods, helped to decrease emissions of PRTR controlled compounds by 21% over the previous year. Toluene represents the largest source of PRTR controlled compound emissions, accounting for 21.8 tons in fiscal 2009 or 78% of the total.

Emissions of PRTR Controlled Substances



Preventing Air Pollution

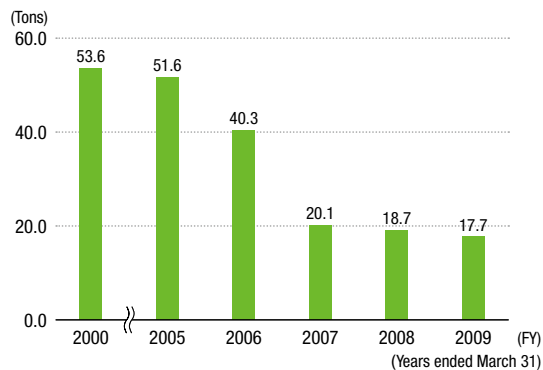
Air pollutants sulfur oxide (SOx)^{*4} and nitrogen oxide (NOx)^{*5} are emitted during boiler operations. To date, the Nippon Kayaku Group has gradually shifted the fuel for its boilers from Bunker C heavy oil with high sulfur content to other lower sulfur content fuels such as Bunker A as well as LPG and natural gas, which are sulfur free. We are continuing this transition in fiscal 2009 as well. In fiscal 2008, we successfully made significant reductions in our SOx emissions, while in fiscal 2009, we continued to change boilers over to gas types in certain plants and expanded dust^{*6} collecting equipment which cut our dust emissions by nearly 50% compared to the previous fiscal year. The Nippon Kayaku Groups is firmly committed to reducing its air pollutant emissions further through proper maintenance practices as well as regular inspections and upkeep.

*4 SOx (sulfur oxide): SOx is emitted when fossil fuels that include sulfur are burned. SOx reacts with water in the atmosphere to form sulfuric acid and sulfurous acid, which are causes of air pollution and acid rain.

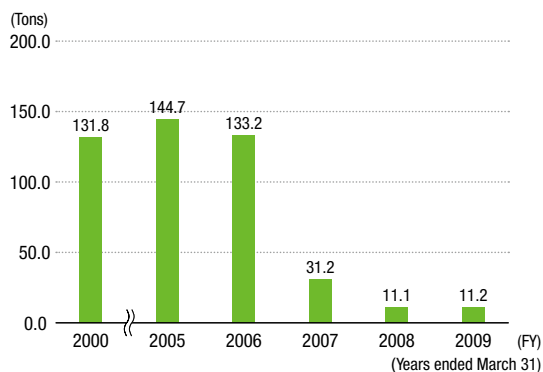
*5 NOx (nitrogen oxide): NOx is produced when burned chemical substances react to nitrogen in the air and when fuels and chemical substances that include nitrogen compounds such as coal are burned. Not only a major cause of air pollution including photochemical smog and acid rain, but NOx have a harmful effect on the human respiratory system. In addition, NOx is also known to include the greenhouse gas dinitrogen monoxide.

*6 Dust: Dust mainly refers to fine particular soot found in dust smoke produced when burning fossil fuels. In addition to a major cause of air pollution, humans can contract pneumoconiosis or other harmful health effects when breathing dust in high concentrations.

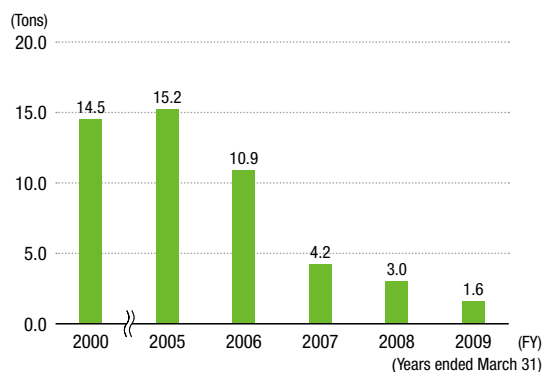
NOx Emissions



SOx Emissions



Dust Emissions



Regenerative Thermal Oxidizer (Asa Plant)

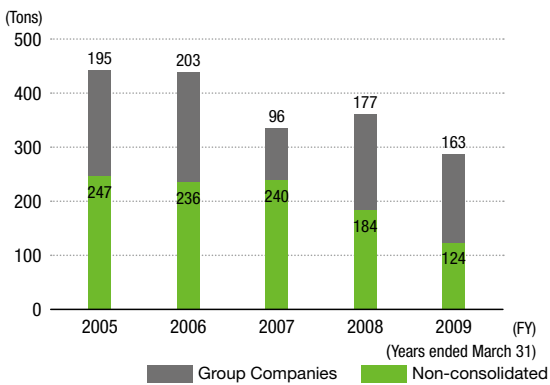
Preventing Water Pollution

Removal of COD

The Nippon Kayaku Group has made efforts to reduce its COD*1 emissions by employing activated sludge treatment equipment at plants high levels of COD emissions. On a non-consolidated basis, COD emissions during fiscal 2009 were reduced to 124 tons thanks to the effects of installing and updating new waste liquid treatment equipment. This represented a 33% fall over fiscal 2008. COD emissions from Group companies totaled 163 tons in fiscal 2009, which marked an 8% reduction compared to fiscal 2008. Fiscal 2009 also marked the first time that COD emissions from Group companies exceeded Nippon Kayaku.

*1 COD: Chemical Oxygen Demand. An indication of the amount of oxygen needed to oxidize a subject compound by oxidizing subject compounds under a predetermined condition using oxidizing agents, then measuring the amount of oxidizing agents used in the process. A high COD level means that the water contains a large amount of organic chemical substances that consume oxygen. With lower oxygen content the water cannot sustain biological life, which stops the natural purification process leading to a muddied and odorous water environment.

■ COD Emissions



Treatment of Colored Wastewater

The Nippon Kayaku Group carries color material related products including dyes and ink jet printer ink among others. Our Tokyo and Fukuyama plants, where color material related products are manufactured, fully decolorize colored wastewater before it is discharged. The Fukuyama Plant treats colored waste water using activated sludge and activated carbon decolorization equipment, while the Tokyo Plant uses a proprietary microbiological decolorization system. Moving forward, we will continue to search for more effective ways of treating colored wastewater.

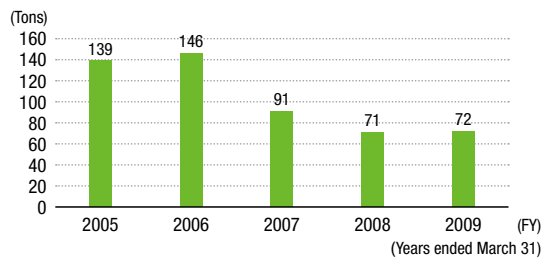


Biological decolorization scrubber (Tokyo Plant)

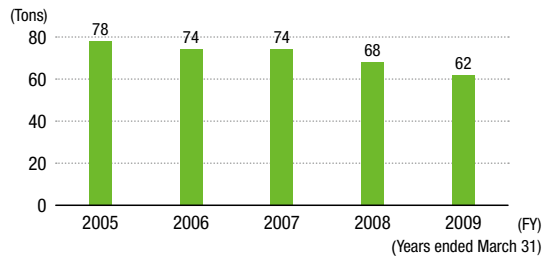
Plant Wastewater Discharge Control

The Nippon Kayaku Group has set voluntary wastewater discharge control standards that are tougher than requirements laid out in national laws and local ordinances. Only treated wastewater that clears these strict standards is discharged into the environment. The Takasaki Plant considers wastewater control one of its most important environmental protection activities because of its location on the Tone River, a source of drinking water for the greater Tokyo area. Factory wastewater is cleaned with activated sludge treatment equipment, and then passed through a storage canal with an approximate 20,000m³ holding capacity before being discharged into public waterways. In fiscal 2006, a floodgate was constructed in the middle of the storage canal to enable hydrogen ion and residual chlorine concentration to be measured at a greater number of locations. In fiscal 2007, our plant and emergency wastewater control measures were augmented with the addition of a flood gate to the east of the storage canal, while in fiscal 2009 an emergency isolation valve was also installed.

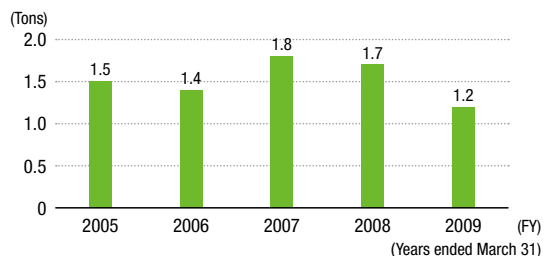
■ SS Emissions



■ Nitrogen Emissions



■ Phosphorous Emissions



Noise Prevention

We conduct our business with a conscious effort to minimize noise pollution in the areas surrounding our factories. We regularly measure noise levels around our factories, making every effort to be a positive member of the local community. As such, any feedback or requests that we receive from local residents at company-sponsored events such as community round-tables are treated with the utmost priority. We also conduct regular work environment measurements in the factory to protect our employees from excessive noise.