

Environmental Risk Management

To minimize environmental risks accompanying manufacturing activities, Komatsu is committed to acting in strict compliance with the legal requirements of national and local authorities. In addition to thoroughly implementing pollution mitigation and prevention measures, Komatsu is reducing the volume of chemical substances that it handles and uses.

Compliance and Pollution Mitigation and Prevention

Komatsu Group companies are responsible for reporting environmental measurement results periodically and archiving them in strict compliance with applicable laws and regulations of national and local authorities.

In FY2007, the Komatsu Group experienced no environmental infractions or accidents in Japan.

■ PCB Waste Management

Komatsu conducts proper storage and management of PCB wastes from transformers and other such items in accordance with Japan's Law Concerning Special Measures Against PCB Waste and Waste Disposal and Public Cleansing Law. As of March 2008, the Komatsu Group as a whole was in possession of approximately 630 drums of PCB wastes.

In Japan, the Kitakyushu Office of the Japan Environmental Safety Corporation (JESCO) started PCB waste treatment in December 2004. Komatsu now plans to arrange for early treatment of PCB wastes, first from the Head Office in FY2008 and then from its regional facilities.

■ Soil Contamination Countermeasures

The Earth Environment Committee has established guidelines for the investigation of soil contamination in Japan. Komatsu investigates the condition of soil contamination at business units that are planned to be sold, closed, or demolished and, if necessary, takes suitable measures under the supervision of the local authority concerned. Komatsu conducted voluntary soil investigations at business units currently in operation to check for contamination by organic chlorine-based chemical compounds (VOCs), which had in previous years been used in cleaning solvents and otherwise.

Since 2005, in Japan Komatsu has been surveying VOC contamination of soil at the Group manufacturing facilities and also its Research Division and other non-manufacturing facilities. As of FY2007 all investigations have been concluded except at one affiliate.

In FY2007 surveys were completed at the Komatsu and Osaka Plants and the Komatsu Utility Tochigi Plant. Thus far soil contamination has been detected at a total of six business units. In each case, the company submitted a report to local authorities and launched remedial measures to clean up the sites in as short a timeframe as possible. Komatsu will pursue reliable cleanup measures and maintain monitoring of site boundaries.

Status of Soil Cleanup in Japan

Business unit	Date survey concluded	Cleanup method	Cleanup status
Komatsu Ltd. Awazu Plant	January 2007	Excavation and removal, soil vapor extraction, groundwater withdrawal and aeration, bioremediation	In process
Komatsu Ltd. Komatsu Plant	September 2007	Excavation and removal, groundwater withdrawal and aeration, bioremediation	In process
Komatsu Ltd. Osaka Plant	November 2007	Soil vapor extraction, air sparging, groundwater withdrawal and aeration, bioremediation	In process
Komatsu Ltd. Oyama Plant	November 2005	Excavation and removal, bioremediation	In process
Construction Equipment Electronics Division in Hiratsuka	February 2006	Groundwater withdrawal and aeration	In process
Komatsu Utility Tochigi Plant	July 2007	Excavation and removal, bioremediation	In preparation

Surveys revealed no contamination for the following business units in Japan: Komatsu Ltd. Mooka and Koriyama Plants, Research Division in Hiratsuka, Techno Center in Izu, Field Testing Department in Matsuda and Nozu, Komatsu Utility Kawagoe Plant, and No.1 Plant of Komatsu Castex.

Chemical Substance Control

The enforcement of the Pollutant Release and Transfer Register (PRTR) Law*1 of Japan obligates industrial plants to, on an annual basis, keep track of the amounts of Class I specific chemical substances (for substances handled in quantities of 1 ton or more) released and transferred and file notice with the authorities. Komatsu supervises the management of all relevant substances, even when quantities handled are less than 1 ton.

■ Reducing PRTR-related Substances

Among chemical substances subject to the PRTR, toluene, xylene, and ethylbenzene are the three substances making up almost 99% of the volume emitted by Komatsu and Komatsu Group manufacturing facilities in Japan. A breakdown of those emissions shows that most are released into the air. For some of these substances, Komatsu has been able to reduce its emissions volume by changing the constituent parts to those with less impact on human health. However, due to an increase in the usage volume of paints as a result of substantially greater production volume, emissions volume has continued to increase.

The Komatsu Group will continue to execute initiatives to reduce the amount of environmental impact through improvements towards the proper control of such substances, mainly through the reduction of VOC*2 releases.

■ Komatsu Guidelines for the Control of Chemical Substances

To develop products that take the environment into account and reduce environmental risk, Komatsu is implementing comprehensive controls in keeping with the *Komatsu Guidelines for the Control of Chemical Substances*. Based on established criteria for risk assessment, Komatsu has classified chemical substances subject to supervision into the three ranked categories of prohibited substances (1,399 types), substances to be reduced (2,824 types), and substances to be controlled properly (1,280 types). The company is controlling the amounts of release and transfer of each individual chemical substance.

At the end of FY2003, Komatsu introduced a Chemical Substance Management System across the company including its affiliated companies to facilitate the execution of these guidelines. By incorporating this system into its EMS, in FY2004 Komatsu improved the degree to which it can prevent environmental pollution by assessing and addressing environmental impacts in advance. In the context of future increases in manufacturing volume, how to achieve reductions in the volume of chemical substances handled and released will certainly be a critical issue.

■ Reducing VOC Releases

VOCs found in paints account for over 90% of the volume of chemical substances released by Komatsu. In FY2007 the company achieved reductions in VOC releases per unit of manufacturing value compared with FY2006. This was realized through partial changes to the painting system at the Awazu Plant from a base coat/top coat dual-coat method to a method using paints that deliver the same performance through a single application. Improvements in coating efficiency at each manufacturing facility also contributed to the overall reduction.

However, VOC releases have continued to rise due to the significant increase in manufacturing volume. To control this rise, Komatsu reformulated the target and revised the plan based on concrete strategies coordinated with its action plan. The new target is to achieve reductions in VOC releases per unit of manufacturing value of over 20% and 50% by FY2008 and FY2010, respectively, compared with the FY2005 level. In future years the company will be thoroughly implementing revisions such as (1) converting to high-solid type paints (to reduce the amount of VOCs contained therein), (2) increasing coating efficiency, (3) converting to water-based paints, and (4) converting to powder coatings.

*1 Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management

*2 Volatile Organic Compounds: primarily paint solvents