

Environmental Risk Management

Komatsu is committed to thoroughly implementing measures that mitigate and prevent pollution, in strict compliance with the legal requirements of national and local authorities, to minimize the environmental risks that accompany manufacturing activities.

Promoting Compliance and Pollution Mitigation and Prevention

Komatsu Group companies are responsible for periodically reporting and archiving environmental measurement results, in strict compliance with applicable laws and regulations of national and local authorities. In FY2010, the Komatsu Group experienced a single minor environmental infraction in Japan and corrective measures have been completed for this case. The Group had no major accidents where the environment was polluted in Japan.

Addressing Soil and Groundwater Contamination

Komatsu has established guidelines in Japan for testing soil and groundwater, and performs investigations according to applicable laws and regulations at business units that are to be sold, closed, or demolished. If pollution is found, the Company takes appropriate measures under the supervision of local authorities. Komatsu has also performed voluntary investigations at currently operating business units, to check for contamination from volatile organic compounds (VOCs), which had been used in previous years in cleaning solvents and in other applications. Komatsu has been surveying soil and groundwater for VOC contamination at Group business units in Japan since 2005. All business units where contamination was detected have implemented countermeasures. The Company chose methods that would clean up the sites in as short a time as possible. Work at the Oyama Plant was completed in FY2009. With the demolition and removal of the former Development Center at the Osaka Plant in FY2010, an investigation was carried out according to the Soil Contamination Countermeasures Act and the results were reported to public authorities. The site was declared a so-called "designated lot subject to notification in case of changes", because the levels of lead and other substances exceeded standard values. The notification prescribed by the law was issued, and the required countermeasures have been completed. The history of the detected substances cannot be ascertained, and it is not clear what caused these substances to exceed the standard. Komatsu will continue to take reliable clean-up measures and maintain its monitoring of site boundaries to ensure that groundwater that does not meet environmental standards is contained within the premises.

Status of Soil and Groundwater Cleanup in Japan

Business unit	Presence of contamination	Cleanup method	Cleanup status
Awazu Plant	Yes	Excavation and removal, soil vapor extraction, groundwater withdrawal and aeration, bioremediation	In process
Komatsu Plant (formerly)	Yes	Excavation and removal, groundwater withdrawal and aeration, bioremediation	In process
Osaka Plant	Yes	Soil vapor extraction, air sparging, groundwater withdrawal and aeration, bioremediation	In process
Shonan Plant	Yes	Excavation and removal, groundwater withdrawal and aeration	In process
Tochigi Plant	Yes	Excavation and removal, bioremediation	In process

*Surveys revealed no contamination for the Koriyama Plant, Research Division in Hiratsuka, Techno Center in Izu and Field Testing Department in Oita.

Managing PCB Waste

Komatsu conducts appropriate storage and management of PCB waste, such as transformers and capacitors in accordance with Japan's Law Concerning Special Measures Against PCB Waste and its Waste Disposal and Public Cleansing Law. In FY2008, Komatsu began entrusting PCB disposal to the Japan Environmental Safety Corporation (JESCO). A total of 95 PCB-containing capacitors had been disposed of by FY2009. Another 69 capacitors were disposed of in FY2010. When JESCO started its ballast disposal operations at its Kyushu facility, Komatsu re-examined the PCB-containing lamp ballasts, which include fluorescent lamps, used at all its facilities. The investigation revealed that there were approximately 3,300 PCB-containing lamp ballasts in use. These disposal efforts are scheduled to continue in 2011.



Transformers being removed from the Osaka Plant for disposal

Number of PCB-containing Transformers and Capacitors in Storage

Company	Site	Number of disposal in FY2010	Number of storage	
			High density	Low density
Komatsu Ltd.	Head office	0	0	7
	Awazu Plant	0	67	112
	Osaka Plant	52	59	59
	Oyama Plant	0	309	6
	Mooka Plant	0	0	5
	Shonan Plant	0	2	1
	Field Testing Department	0	0	3
	Construction & Mining Equipment Marketing Division	0	4	0
Subtotal of Komatsu		52	441	193
Komatsu Utility Co., Ltd.		15	20	11
Komatsu Castex Ltd.		0	0	20
Komatsu NTC Ltd.		0	31	0
Komatsu Cabtec Co., Ltd.		0	2	12
Komatsu House Ltd.		0	1	4
Komatsu Construction Equipment Sales and Service Japan Ltd.		2	18	19
Komatsu Rental Ltd.		0	0	1
Total of Komatsu group		17	72	67
Total		69	513	260

*The Komatsu Plant's share has been transferred to the Awazu Plant.
 High-concentration waste from Osaka Plant will be disposed of within 2011.
 *The former Kawagoe Plant's share is included in the Head office.

Reducing amount of PRTR-related substances and VOC released

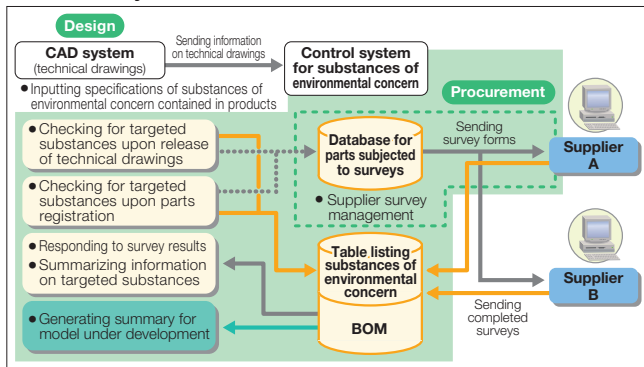
Most of released PRTR-related substances and VOC are VOC used in paint. In FY2010, the amount of such substances released increased as production increased. Komatsu is making efforts to reduce the amount by (1) shifting to high solid paint and (2) improving coating efficiency. (See figures and tables in P26.)

Reducing the Use of Substances of Environmental Concern and Complying with the EU REACH Regulation

Responding to the increase in environmental conservation awareness around the world, Komatsu has been making efforts from an early stage to reduce the use of asbestos, lead, and other substances of environmental concern. In FY1999, Komatsu stipulated its own list of banned substances and substances approved for use only in limited circumstances (see chart right), using as its base the chemical substances banned under Japan's Law Concerning the Examination and Regulation of Manufacture of Chemical Substances Control¹, as well as other regulations in individual countries. At the same time, Komatsu began comprehensive control of substances of environmental concern. The company has already reduced its dependence on substances approved for limited use, in keeping with its medium- and long-term targets for developing environmental technology.

In response to the enactment of the EU regulation addressing Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)² in 2007, Komatsu reviewed the list of substances approved for limited use and revised the designation of certain substances to "reduced" or "banned," as appropriate. Through cooperation with suppliers, the company has initiated a system to strengthen control of substances of environmental concern in products. This system has been deployed by the corporations in Japan 2009, in Europe 2010, and is planned to be deployed in the U.S.A. 2011.

Control System for Substances of Environmental Concern



Names of Class I Designated Chemical Substances and the Amounts Released and Transferred by Group Manufacturing Facilities in Japan (handling 1 ton or more)

Number under the PRTR Law	Name	Amount handled	Amount released				Amount transferred		Chemically transformed or eliminated	Amount contained in products
			Air	Water	Soil	Buried	Sewerage	Waste		
412	Manganese and its compounds	656.5	1.1	—	—	—	—	12.9	—	642.5
80	Xylene	377.1	263.0	—	—	—	—	27.8	83.8	2.5
53	Ethylbenzene	220.7	189.0	—	—	—	—	14.1	17.1	0.5
87	Chromium and chromium (III) compounds	185.0	0.0	—	—	—	—	3.2	—	181.7
300	Toluene	135.8	103.0	—	—	—	—	20.1	9.0	3.7
438	Methylnaphthalene	72.0	—	—	—	—	—	—	72.0	—
453	Molybdenum and its compounds	59.6	0.0	—	—	—	—	0.0	—	59.6
448	Methylenebis(4,1 phenylene)=diisocyanate	38.9	0.0	—	—	—	—	0.0	8.7	30.2
308	Nickel	27.7	—	—	—	—	—	0.5	—	27.3
296	1,2,4-trimethylbenzene	27.0	2.4	—	—	—	—	0.3	24.4	—
88	Chromium (VI) compounds ^{1,2}	25.1	0.0	—	—	—	—	6.2	—	—
321	Vanadium compounds	21.2	—	—	—	—	—	—	—	21.2
297	1,3,5-trimethylbenzene	9.8	4.2	—	—	—	—	0.7	4.8	—
277	Triethylamine	9.3	1.1	—	—	—	—	0.0	8.2	0.0
132	Cobalt and its compounds	8.5	—	—	—	—	—	0.5	—	8.0
258	Hexamethylenetetramine	8.1	—	—	—	—	—	—	8.1	—
188	N,N-dicyclohexylamine	8.1	0.5	0.0	—	—	—	7.1	0.3	0.2
349	Phenol ³	5.7	0.0	—	—	—	—	0.0	5.6	0.1
392	Hexane	5.6	5.6	—	—	—	—	0.0	0.0	—
405	Boron compounds	4.7	—	—	—	—	—	0.2	4.6	—
207	2,6-Di-tert-butyl-4-methylphenol	2.0	—	0.0	—	—	—	1.0	0.0	1.0
71	Ferric chloride	1.2	—	—	—	—	—	1.2	—	—
407	Poly(oxyethylene) = Alkyl ether(Limited to Alkyl carbon numbers 12 to 15 and their compounds)	1.1	—	0.0	—	—	—	0.4	0.8	—
400	Benzene ²	0.7	0.0	—	—	—	—	—	0.4	0.3

¹: During chrome plating, chromium (VI) compounds become chromium (III) compounds. Therefore, the amount transferred and the amount contained in products are entered under "chromium and chromium (III) compounds."

²: PRTR Class 1 Specified Chemical Substances

³: Although the contained amount of those substances is so little that it is needless to register on PRTR, the amount of releasing them exceeds 1 ton, and we disclose the fact herein.

Substances of Environmental Concern Banned or to Be Reduced for Use in Products

Designation	Number of substances	Name
Banned	10	<ul style="list-style-type: none"> PCBs Asbestos Specified chlorofluorocarbons/hydro chlorofluorocarbons (HCFCs) Triethanolamine Chromium (VI) Trichloroethylene PBB/PBDE³ Cadmium
To be reduced (subject to limited use)	16	<ul style="list-style-type: none"> Lead Mercury Arsenic Selenium Hydrofluorocarbons (HFCs) Methanol Hexachlorobenzene Specified phthalate ester (DEHP/DBP/BBP⁴, DIBP⁵) HBCCD³ Specified polycyclic aromatic hydrocarbons Perfluorooctanesulfonic acid (PFOS) Specified Organotin Compounds (Tri-substituted Organotin Compounds • DBT • DOT⁶) Short chain chlorinated paraffins
Substances of Very High Concern (SVHC) under the EU REACH regulation	(46)	<p>Komatsu is currently examining whether to designate the following substances, which might be used in Komatsu products, as substances to be reduced.</p> <ul style="list-style-type: none"> Lead arsenate/ diarsenic pentoxide/ diarsenic trioxide Triethyl arsenate DEHP/DBP/BBP⁴, DIBP⁵ Short chain chlorinated paraffins Bis (tributyltin) oxide

¹: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture etc.

²: REACH(Registration, Evaluation, Authorization and Restriction of Chemicals);

EU regulations for Registration, Evaluation, Authorization and Restriction of Chemicals

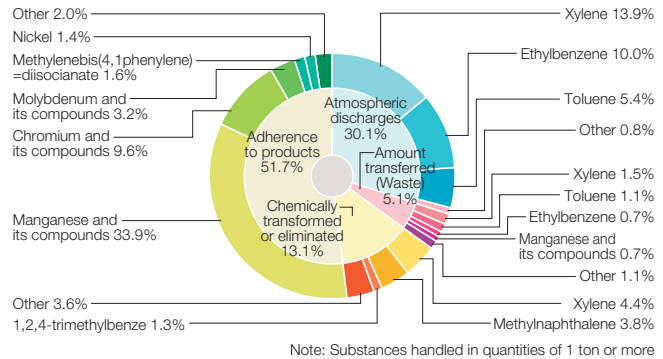
³: Specified brominated fire retardants

⁴: Diethylhexyl phthalate, dibutyl phthalate, benzyl butyl phthalate

⁵: Disobutyl phthalate

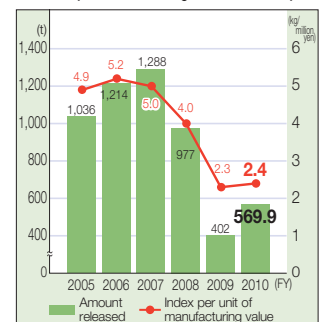
⁶: Dibutyltin compounds • Triphenyltin compounds

Breakdown of the Amount of PRTR-related Substances Released and Transferred at Komatsu Group Manufacturing Facilities in Japan



Note: Substances handled in quantities of 1 ton or more

Changes in the Amounts of PRTR-related Substances Released* at Group Manufacturing Facilities in Japan



*Substances handled in quantities of 1 ton or more

Amount of VOCs Released by Group Manufacturing Facilities in Japan

