

2012 Environmental Data



	Appli
Applicable Period	From through *Some activitie included with
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Where to find information corresponding to the text of the Ministry of the Environment's Environmental 02 Reporting Guidelines (2012 version)	
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Environmental Data The Environmental Data compendium pro	esents environmental

Applicable Period

2011

From April 1,2011 through March 31,2012

*Some activities that are likely to continue are included with activities for 2012.



01 2012 Environmental Data

Compendium

Inquiries regarding

Environmental Data

The Environmental Data compendium presents environmental information such as statistical data and descriptions of programs and initiatives that were omitted from the CSR Report 2012 due to space restrictions.

CMK CORPORATION Environmental Promotion Department 236 Imai, Shiba-machi, Isesaki-shi Gunma 372-0825, Japan TEL:+81-270-32-9855 FAX:+81-270-32-2613 E-mail: kankyou@cmk.co.jp Where to find information corresponding to the text of the Ministry of the Environment's Environmental Reporting Guidelines (2012 version)

	Environmental Report Entries	Corresponding page(s) in CSR Report 2012	Corresponding page(s) in Environmental Data 2012
1. Ke	y Requirements for the Environmental Report		
1	Key Requirements for the Environmental Report		
(1)	Scope of Applicable Organizations and Applicable Period	1	1
(2)	Capture Rate for Target Range and Differences in Applicable Periods	1	1
(3)	Reporting Policy	8,12,30	-
(4)	Publication Media Policy	1,30	-
2	Foreword by Management	2	-
3	Overview of environmental reporting		
(1)	Outline of Environmental Management	3	-
(2)	List of KPI in Chronological Order	4,17	4,5,9,11
(3)	Material Balance	-	3
4	Overview of Individual Environmental Issues	12	—
2. Inf	ormation and Indicators for Environmental Management		
1	Environmental Policy, Vision and Business Strategies		
(1)	Environmental Policy	11, 16	-
(2)	Important Issues, Vision and Business Strategies	-	-
2	Organizational Structure and Governance		
(1)	Organizational Structure of Environmental Management	13	-
(2)	Structure of Environmental Risk Management	14	-
(3)	Compliance with environmental regulations	14	10
3	Responses to Stakeholders		
(1)	Responses to Stakeholders	15	11
(2)	Community environmental initiatives	17,18,28	10
4	Environmental Initiatives in the Value Chain	15.10	
(1)	Environmental Policies and Strategies in the Value Chain	15,16	-
(2)	Green purchasing or procurement	_	9
(3)	Products and services that help minimize environmental impact	_	3
(4)	New Environmental Technologies and R&D	_	-
(5)	Environmental Peceurce and Peel estate development Investment	_	9
(7)	Environmental disposal of refuse and recycle	10.17	5
	Environmental disposar of refuse and recycle	10,11	
<u> </u>	Posourcos and Enorgy Input	act of business	Activities
(1)	Total energy input and strategies for reduction	17	4
(2)	Total material input and strategies for reduction	12	_
(3)	Water consumption and strategies for reduction	_	5
2	Recycling of Resources	_	_
3	Products/ Productions and Emissions of Environmental Impact		
(1)	Total Production and Sales Volumes	-	-
(2)	Amount of greenhouse gas emissions and reduction measures	17	4,7,8
(3)	Total liquid emissions and strategies for reduction	12	6
(4)	Air pollution, its environmental impact on the living environment, and reduction measures	12	6
(5)	Amount of release and transfer of chemical substances and reduction measures	12,17	6
(6)	Total waste output and final waste disposal volumes and strategies for reduction	10,12,17	5
(7)	The amount of leakage and preventive measures, such as a toxic substance	14	-
4	Biodiversity Protection and Use of Sustainable Biological Resources	18	10
4. Inf	ormation and Indicators for Economic and Social Aspects of Environme	ntal Managem	ent
1	Economic Aspects of Environmental Management		
(1)	Economic Aspects for Business Operators	13	-
(2)	Economic Aspects for Society	-	-
2	Social Aspects of Environmental Management	10,28	—
5. Ot	her Entries		
1	Subsequent Events	-	-
2	Third Party Review of Environmental Information	Anothe	er paper

 \bigcirc

FY 2011 Performance and Targets for Next Fiscal Year

At CMK, we have formulated the CMK Group Environmental Protection Activity Program, which outlines the targets for annual environmental activities, based on the Environmental Policy and the General Environmental Policy. The entire Group tackles environmental activities in accordance with this Activity Program.

Results of Main Activities in FY 2011 and Targets for FY 2012

Explanation of evaluation symbols : Target reached : Target nearly reached : Target partially unaccomplished × : Not included

Classification of activity		Activity theme	Results of activities in FY 2011	Evaluation	Target for FY 2012
		Construction of environmental management system	Maintenance and administration through ISO 14001 renewal inspections; periodic inspections	O	ISO 14001 maintenance and management; performance improvements.
		Implementation of environmental accounting	• Aggregate FY2011 data on the CMK Group in Japan	0	 Implement environmental accounting for the domestic Group and study ways to improve accuracy.
	Man	Abidance by environmental laws	 Monthly rollout of revised information Survey compliance with clean production standards in China 	O	 Horizontal deployment of government survey results (monthly). Survey overseas laws and regulations, obtain information, horizontal deployment.
1	ageme	Implementation of environmental audit	Conduct CMK Group EHS management audits at 2 locations based on the annual plan Continue internal audits	0	 Implementation of audits based on Group EHS Management Auditing Annual Plan. Continuous implementation of internal audits at ISO14001 certified sites. Implement energy conservation management audits at domestic production facilities
	ent activity	Implementation of environmental education	 Holding of internship environmental training / Environmental training for new employees / Holding of training for EHS management auditors Publish environmental news on a monthly basis, raise environmental awareness among employees 	O	 Holding of training for Environmental training for new employees, internship environmental training, Environmental training.
		Implementation of environmental risk management	Implement Environmental Risk Management Program	\bigcirc	·Build framework for auditing environmental risk management systems.
	Initiatives to Protect Biodiversity		Establish the Gunma District Biodiversity Committee Eliminated invasive species (bur cucumber etc.)	0	 Engage with social contribution activities (voluntary activities) such as participation in planning regional biodiversity protection activities.
	Environm applicat	Discontinuation of use of environmental hazardous substances in products	Issuance of certificate confirming non- use of specified substances (430cases) Response to surveys related to environmental hazardous substances (1,109 cases) • Auditing of the EHS management of business partners Standardize independent analysis and carry out analysis (549)	Ø	 Environmental quality guarantee for customers. Response to EHS surveys by customers. Survey green procurement at suppliers and implement EHS management audits. Equipment Renewal of ICP analysis data.
2	ental meas ble to prod	Proposal of " E-spec" eco-products	Production volumes: 238,284m ² (Production volume for previous year: 315,186 m ²) Continue to use E-spec (halogen-free materials) certification system for purchased products E-spec products introduced using panel displays	0	 Understanding of monthly production volume and sales Continue to use E-spec (halogen-free materials) certification system for purchased products Introduction of E-spec products at trade shows(JPCA show, INTERNEPCON JAPAN)
	sure uct	Response to REACH regulations	 Ascertaining additional SVHC substances →Not included 	\bigcirc	 Ascertain additional SVHC substances, study use in raw materials and control use in products
	_	Management of chemical substances	 Understand and report consumption, emission and transfer volumes for substances subject to the PRTR Law. Implement MSDS updates. Amendment of CMK Group PRTR Data Calculation Steps. 	O	 Understanding of quantities of substances consumed, discharged, and transferred, and management of VOC. Continue maintenance and administration of MSDS, promotion of chemical substance controls in accordance
3	Environmentally conscious office acti	Saving energy and Prevention of global warming	 CO2-emission basic units Domestic: 1.69t-CO2/million yen (6.6% reduction YOY) Overseas: 3.32t-CO2/million yen (4.8% reduction YOY) Publish guidelines for calculating energy consumption rates. Responding to Law Concerning the Rational Use of Energy. Consider joining CO2 reduction program by industry body → participation postponed Improved tracking management of sales fleet and other company vehicles, including total number of vehicles and fuel consumption Distribution. Carbon-dioxide emissions reductions through control of in-house shipments (1.8% reduction YOY) 	0	 Improve energy consumption rates by at least 1% Introduce targets and management techniques that conform to their industries Improved tracking management of transportation volumes in accordance with the Law Concerning the Rational Use of Energy and the Global Warming Countermeasures Law Survey trends in domestic emissions trading (regulation trends)
	production process vity	Waste reduction	 Zero emissions rate Domestic: 99.8% (0.2% fall YOY) Overseas: 92.8% (6.4% Improvement YOY) Resource consumption volume Water→Domestic: 7,129,000 mf (4.9% reduction YOY) Overseas : 4,580,000 mf (7.2% increase YOY) Copy Paper →Domestic: 7,344,000 sheets (7.1% increase YOY) Overseas : 3,185,000 sheets (25% reduction YOY) 	Δ	 Maintenance and improvement of zero-emissions activities Understanding of resource usage (water, copy paper)
	/	Promotion of green purchasing	 Expand scope of tally as of this fiscal year (all production facilities in Japan) Green purchasing rate : 78.8% (previous year: 83.9%) 	\bigtriangleup	 Promotion of purchasing of products with eco labels at domestic sites, the head office, and branch offices
Δ	Enviror	Disclosure of environmental activity information	 Issue of CSR Report, Environment Date Compendium Introduce CSR reporting at all production facilities Distribute to visitors 	Ø	 Issue CSR report that complies with ISO26000 (social responsibility) Distribution of the CSR Report to customers, business partners, and local communities
4	Imer	Participation in local activities	Conduct environmental accounting bookkeeping (186 persons)	\bigtriangleup	 We aim to increase the number of participants in household environmental accounting
	ntal tion	Participation in citizen's movements	 Participate in cleanup activities and events sponsored by local communities 	\bigcirc	 Exhibit at and participate in environmental events sponsored by local communities

Prevention of Global Warming



With energy consumption accounting for mostly of CO_2 emissions at CMK production facilities in Japan, conserving energy is an important activity for reducing CO_2 .

The CMK Group promotes energy conservation in every facet of business activities at its production facilities, offices, another workplaces to reduce CO₂, a major cause of global warming.

In the 2011 fiscal year, CO_2 emissions by Group companies in Japan totaled 96,773t- CO_2 (a reduction of 12.2% from levels in the previous year) and 77,214t- CO_2 for overseas Group companies (a reduction of 14.8% from levels in the previous year).







New formula for converting electrical energy to CO₂

From FY 2006, CMK switched from an industry group's carbon dioxide emissions coefficient to that used by Japan's Ministry of the Environment. A default value of 0.000555t-CO₂/KWh is used for overseas data. At the Thai factory alone, the value is recalculated by

converting to the coefficient (0.000197 t-CO₂/KWh) for power generation at the industrial park.

Calorific value of city gas (13A)

In FY 2008, CMK changed the calorific value of city gas from 46 (GJ/1,000 m³) used in FY 2007 to42 (GJ/1,000 m³).

Responses to the Revised Act on the Rational Use of Energy, the Revised Act on Promotion of Global warning Countermeasures, and Ordinances to Prevent Global Warming

CMK regularly convenes a Working Group on CO₂ reduction to examine ways of dealing with CO₂ reduction and changes in the laws.

With regard to the revised Act on the Rational Use of Energy, we have decided on the reporting structure, energy supervisor and energy planner at CMK and at the domestic Group companies, and we are now making preparations for legal reporting requirements.

With regard to local government ordinances for the prevention of global warming including those of the Metropolitan Tokyo government, we are planning our response by scrutinizing the ordinance requirements and the targeted business sites.

Situation with Regard to Local Government Global Warming Countermeasure Ordinances							
Factory	Prefecture	Situation					
Head Office	Tokyo	Specified business operator					
SE Center	Saitama	Automotive global warming planning operator					
CMK PRODUCTS CORPORATION	Kanagawa	Specified large-scale business operator					
G Station Factory、KIBAN Center Factory	Gunma	Specified emissions operator					
YAMANASHI SANKO CO.,LTD	Yamanashi	Specified business operator					



Waste Reduction, Resource Recycling and Resource-saving Activities

Total waste and valuable resources generated in the 2011 fiscal year by CMK Group companies in Japan was 23,386tons. The zero-emissions rate during this period was 99.8%, an deterioration of 0.2 percentage points from the previous fiscal year. Total waste and valuable resources generated by overseas CMK Group companies was 10,769tons.

The zero-emissions rate was 92.8%, an increase of 6.4 percentage points from the previous fiscal year.

The domestic Group was unable to maintain the 100% zero emissions rate due to the impact of the Great East Japan Earthquake. At our overseas facilities, CMKC (DONG GUAN) LTD. achieved zero emissions. The overseas factories are actively promoting activities intended to achieve zero emissions although the activities depend to some extent on national or regional factors in the countries where they operate.



Resource-saving Activities

Based on the concept that waste can be reduced effectively by making the most of limited resources, the CMK Group is energetically pursuing a range of resource-saving activities.







Quantity consumed

36.4%

Breakdown of quantities of PRTR

substances handled by CMK

FY2011

3,447t

Quantity recycled 60.7%

Transferred out of

Unit:t

Unit:t

business sites

2.7%

Emissions

0.1%

Compliance with the PRTR Law

Since 1998, CMK has been collecting and disclosing data on quantities of chemicals discharged and transferred based on the PRTR method. In FY2011, CMK conducted a study on PRTR (into public water areas) substances after the law was revised, and submitted a report on the quantities of 11 chemicals that are transferred and discharged.



FY 2011 Data by Substance Subject to the PRTR Law

	Chemical substance	Quantity	Emission volume		Quantity transferred		Quantity Quantity			
PRIR NO.		handled	Into air	Into public water areas	Into soil	Into sewerage	Out of business site	recycled	consumed	Main uses
16	2-aminoethanol	1.2	0.0	0.0	0.0	0.0	0.9	0.0	0.4	Used in copper-plating process
71	ferric chloride	2,363.0	0.0	0.0	0.0	0.0	0.0	1,463.3	899.7	Used in etching and nickel plating processes
300	toluene	2.3	1.4	0.0	0.0	0.0	0.9	0.0	0.0	Thinner for use in surface finishing (for resin preflux)
309	nickel compounds	1.3	0.0	0.8	0.0	0.0	0.0	0.0	0.5	Component of nickel plating (base for gold plating) fluid
272	copper salts (water-soluble, except complex salts)	800.8	0.0	3.0	0.0	0.0	42.2	618.6	137.0	Generated during copper etching
291	1,3,5-tris (2,3-epoxypropyl) -1,3,5-triazine-2,4,6 (1H,3H,5H) -trione	2.8	0.0	0.0	0.0	0.0	1.5	0.0	1.3	Hardener for resist inks
304	lead	17.6	0.0	0.0	0.0	0.0	0.1	10.1	7.4	Solder precoat
412	manganese and its compounds	1.6	0.0	0.2	0.0	0.0	0.1	0.0	1.3	Water treatment (iron removal)
395	water-soluble salts of peroxodisulfuric acid	215.5	0.0	0.0	0.0	0.0	45.7	0.0	169.8	Used in plating pretreatment process
411	formaldehyde	34.7	0.4	0.3	0.0	0.0	2.6	0.0	31.4	Component of copper plating fluid
438	methylnaphthalene	16.5	0.1	0.0	0.0	0.0	0.0	0.0	16.4	A component of A-Heavy Oil
	Total	3.457.3	1.9	4.2	0.0	0.1	94.0	2.092.1	1.265.2	

FY 2011 PRTR Data by Factory

			Emission volume			Quantity	transferred	Quantity	Quantity
PRIR NO.	Chemical substance	handled	Into air	Into public	Into soi	Into sewerage	Out of business site	recycled	consumed
G Station F	actory			inator a ouo					
71	ferric chloride	405.23	0	0	0	0	0	266.88	138.35
272	opper salts (water-soluble, except complex salts)	120.11	0	1.29	0	0	0.04	118.78	0
291	1,3,5-tris (2,3-epoxypropyl) -1,3,5-triazine-2,4,6 (1H,3H,5H) -trione	1.67	0	0	0	0	1.17	0	0.50
395	water-soluble salts of peroxodisulfuric acid	94.67	0	0	0	0	0	0	94.67
411	formaldehyde	14.23	0	0.08	0	0	0.15	0	14.00
412	manganese and its compounds	1.65	0	0.21	0	0	0.12	0.02	1.30
438	methylnaphthalene	11.38	0.06	0	0	0	0	0	11.32
KIBAN Cen	ter Factory								
71	ferric chloride	440.55	0	0	0	0	0	295.43	145.12
272	copper salts (water-soluble, except complex salts)	153.65	0	0.28	0	0	0	153.37	0
291	1,3,5-tris (2,3-epoxypropyl) -1,3,5-triazine-2,4,6 (1H,3H,5H) -trione	1.09	0	0	0	0	0.33	0	0.76
395	water-soluble salts of peroxodisulfuric acid	19.86	0	0	0	0	0	0	19.86
438	438 methylnaphthalene		0.03	0	0	0	0	0	5.10
Niigata Sat	ellite Factory								
71	ferric chloride	676.00	0	0	0	0	0	676.00	0
272	copper salts(water-soluble, except complex salts)	5.37	0	0	0	0	0	2.36	3.01
309	nickel compounds	1.34	0	0.80	0	0	0	0	0.54
411	formaldehyde	10.18	0.40	0	0	0	0	0	9.78
CMK PROD	UCTS CORPORATION								
71	ferric chloride	514.49	0	0	0	0	0	225.00	289.49
272	copper salts(water-soluble, except complex salts)	34.77	0	0	0	0.04	1.24	16.23	17.26
300	toluene	2.32	1.42	0	0	0	0.90	0	0
411	formaldehyde	3.00	0	0	0	0.03	2.27	0	0.70
CMK KANB	ARA ELECTRONIC CORPORATION JAPAN								
16	2-aminoethanol	1.23	0	0	0	0	0.85	0	0.38
71	ferric chloride	79.30	0	0	0	0	0	0	79.30
272	copper salts(water-soluble, except complex salts)	460.20	0	0.40	0	0	15.20	327.90	116.70
304	lead	17.60	0	0	0	0	0.10	10.10	7.40
395	water-soluble salts of peroxodisulfuric acid	88.70	0	0	0	0	45.70	0	43.00
411	formaldehyde	5.47	0	0.06	0	0	0.20	0	5.21
YAMANASH	II SANKO CO.,LTD.								
71	ferric chloride	247.47	0	0	0	0	0	0	247.47
272	copper salts(water-soluble, except complex salts)	26.69	0	1.00	0	0	25.69	0	0
395	water-soluble salts of peroxodisulfuric acid	12.25	0	0	0	0	0	0	12.25
411	formaldehyde	1.83	0	0.12	0	0	0	0	1.71

*Technical Center Factory and CMK MECHANICS CORPORATION data excluded. *There may be inconsistencies in the total amount depending on how fractions are processed.



Environmentally Conscious Production Processes and Office Activities

Examples of Activities at the Production Bases



Energy conservation case studies

Energy Conservation Initiatives at CMK PRODUCTS CORPORATION

· Conserving energy by developing an inverter for jet pumps

The company has reduced electricity consumption by developing an inverter for jet pumps.

By using the inverter to control and adjust frequencies, the company has been able to halve electricity consumption, and to reduce expenditure on electric power by 3 million yen a year $({}^{\star})$.

* Calculations are based on 343 days after deducting 22 stoppage days in the year. Installation costs are recovered in about 3 months.



Inverter control panel

· Conserve energy by controlling drying kilns with a thyristor

Aiming to control peak-time electric power, the company installed and remodeled thyristors for the drying kilns. The results are shown in Fig. 1. Using a wattmeter to compare measurements, the company found that they were able to reduce electricity consumption by approximately 193,000 yen a year.

Since they had been using a magnetic switch that had to be replaced frequently, they were also able to cut costs because it was no longer needed.







YAMANASHI SANKO CO., LTD. Conserving energy by introducing new equipment and reviewing equipment for the resist spray process

The company was able to make big reductions in electricity consumption by installing new equipment and reviewing the equipment for the resist spray process.

Previously, there were both upstream and downstream lines for the spray coating process, and each line also had a drying line. But by introducing a line with electrostatic spray, it is now possible to coat both the front and back at the same time. As a result, only one drying line is needed, which has contributed greatly to cutting back on electricity consumption.

Moving the silk printing process from the factory at the head office to the spray factory, and reviewing the equipment have also reduced electricity consumption. Replacing the conventional heating and drying furnaces with far-infrared drying furnaces has resulted in 30% energy savings.

Energy Conservation Initiatives at CMK MULTI CORPORATION

• Well water Conserve energy by pre-cooling ••• Summer use of well water used to clear snow in winter

During the winter, six pumps draw groundwater for clearing snow at CMK MULTI CORPORATION.

The water was not used at other times of the year, but by installing coils in the air ducts of the outdoor air conditioning units for summer, the company operated two air conditioning units by passing well water through the coils, cooling to 20° by pre-cooling with 15° well water. As a result, the company conserved energy and reduced gas and electricity consumption by stopping one cool-warm water generator and cold water pumps.

As a result of this initiative, the company has reduced power consumption in summer by approximately 71,000 KWh and gas consumption by approximately 55,000 Nm³.



· Conserve energy by developing inverters for ventilators and outdoor air conditioning units

When the motors for 13 ventilators and outdoor airconditioning units were inspected and air volumes were compared, it was found that utilization rates were 30 to 70%.

Air volume had been regulated with dampers due to excess supply and exhaust, but by developing an inverter, the company conserved energy by controlling appropriate levels of supply and exhaust volumes.

As a result, power consumption was reduced by approximately 740,000 KWh per year.







Inverter control panel

Office and distribution case studies



Set to

Reductions in Environmental Load Resulting from Internal Distribution

Since the production sites of the CMK Group are concentrated along the Kanetsu Expressway in Niigata, Gunma, and Saitama prefectures, we take advantage of their convenient locations by operating shuttle trucks for internal distribution.

During the 2011 fiscal year, both distances traveled and CO_2 emissions decreased year-on-year due to optimized management of in-house shipments

Compliance with relevant laws and regulations

- In FY 2003, CMK completed switching its fleet of company cars from diesel vehicles to gasoline vehicles to ensure compliance with the Automotive NOx and PM Law enacted in October 2003.
- \cdot CMK does not correspond to a designated shipper under the Revised Energy Saving Law $\,$ enacted in April 2005.

Environmental Measures for Company Cars

With the enactment of the Automobile Nox and PM Law in October 2003, use of non-compliant diesel vehicles is subject to regulation in designated regions. In response to these restrictions, CMK switched the diesel vehicles in its sales fleet to gasoline-powered vehicles (Full switch as of FY 2006).

At the same time, it worked to reduce CO_2 emissions by switching to small gasoline-powered vehicles (using engines of 1300cc or less) with high fuel efficiency and low emissions.

As a result, the company owns 75 gasoline-powered compact cars, and 33 gasoline-powered cars.





Summer Energy-saving Efforts

In accordance with governmental guidelines, during the summer, the CMK Group sets office air conditioners in areas where ambient temperatures do not affect product quality to 28°C.

This helps relieve consumption and demand at a time of the year when most air conditioners in Japan are operating at full capacity and energy demand is at a peak. Each business site regularly implements energy efficiency patrols under the guidance of the energy efficiency committees.

The annual "no-necktie" program has continued, though now under the new "cool biz" designation By promoting environmental protection programs in which all employees can readily participate, CMK seeks to raise environmental awareness among all of its employees.

Uniforms we purchase are

bottles

made of fabrics recycled from

PET (polyethylene terephthalate)

Green Purchasing Activities

CMK promotes environmentally sound procurement of office supplies through the positioning of Green Procurement.

We have also established greenpurchasing guidelines, referring to information provided by the Green Purchasing Network (GPN) and Eco Mark, recording all relevant purchase data.

FY2011, we expanded the scope of confirming green purchasing ratios to all the domestic CMK Group companies.

The green purchasing ratio for FY 2011 was 78.8%.

Green Purchasing Judgment

- Items with eco-mark or similar recognized environmental standard label
- Products advertised as eco-conscious items in catalogs,etc.
 Articles not included in ① or ② above,but judged to be exceptions by
- CMK The ordering of printed material complies with the ordering guidelines

for offset printing services(GPN-GL14)of the Green Purchasing Network(GPN).

Targeted green purchase items

Paper
 Printing items
 Office furniture
 Automobiles
 Stationery
 Computers and office automation equipment
 Other office supplies





Green Purchasing Ratio (%)

This graph illustrates the proportion of all purchased stationary accounted for by materials meeting green purchasing program standards (for example,products bearing the Eco Mark).

#Graph data is derived from CMK CORPORATION records. We made partial changes to the scope of calculations in FY 2008 and FY2011.



Observing Environmental Laws and Ordinances, Environmental Auditing and Environment Slogan, Biodiversity Conservation Activities

Observing Environmental Laws

To safeguard against environmental risks, in addition to the implementation of ISO14001 management activities and efforts at each business site, the CMK Group uses a compliance checklist to ensure an understanding of and to improve compliance status with environmental laws and regulations, as well as to rapidly disseminate information on revisions in laws and regulations, thereby ensuring maintenance and confirmation of legal compliance.

Employees with qualifications related to environmental laws and ordinances				
(Nonconsolidated CMK employees, as of Ma	rch 31,2012)			
Related license	No. of persons			
Boiler Operator (Special grade, First grade, Second grade)	39			
Cheaf Electricity Engineers (First Class, Second Class, Third Class)	7			
Qualified Energy Manager	14			
Type2 Energy Managers	2			
Air Pollution Control Manager	4			
Water Pollution Control Manager	31			
Noise Pollution Control Manager	13			
Vibration Pollution Control Manager	15			
Refrigeration Safety Manager (Class 2)	2			
Refrigeration Safety Manage (Class 3)	5			
Hazardous Materials Engineer (Class A, Class B, Class C)	220			
Fire Protection Manager	32			
Specially-Controlled Industrial Waste Control Manager	25			
Technical Manager of Waste Treatment Plant	7			
Manager for Handling of Poisonous and Deleterious Substances	16			
Health Officer	58			
Operation chief of industrial dryer	152			
Operation chief of using organic solvents	213			
Persons having completed the boiler-operation training course	29			
Operation chief of boiler operation	14			
Operation chief of using specified chemical substances	193			
Operation chief of lead danger	11			
Operation chief of press machines	36			
Total	1,138			

Environmental Auditing

Implementation of Environmental Audits by the CMK Group

The CMK Group engages in two types of environmental audits: EMS audits for the environmental management system and EHS control audits with a focus on the control of environmental hazardous substances.

Additionally, an in-house certification system has been established to train EHS control auditors to increase the number of auditors and maintain and enhance auditing skills.

Internal EMS audits were carried out at ISO14001-certified facilities to confirm effective implementation of environmental management systems and environment preservation activities.

The CMK Group also conducted periodic audits through outside auditing companies.

Number	of	Eŀ	IS n	nana	ge	ment	aı	udit	ors
	(as	of	the	end	of	Marcl	h,	20	12)

Japan

Overseas Total 54

6

60

2)	(as of the	end of March, 2012)
	Japan	219
	Overseas	74
	Total	293

Number of internal environmental auditors

Environment-related laws covered in the Environmental Law observance checklist

1	Air Pollution Control Law
2	
-	Water Pollution Control Law
3	Noise Regulation Law
4	Vibration Regulation Law
5	Offensive Odor Control Law
6	Waste Disposal and Public Cleaning Law
7	Law Concerning the Rational Use of Energy
8	Fire Laws
9	Poisonous and Deleterious Substances Control Law
10	Purification Tank Law
11	High Pressure Gas Safety Law
12	Factory Location Law
13	Sewerage Law
14	Industrial Water Law
15	Law Concerning the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures
16	Law Concerning the Promotion of Measures to Cope with Global Warming
17	Law Concerning the Recovery and Destruction of Fluorocarbons
18	Law Concerning the Improvement of Pollution Prevention Systems in Specific Factories
19	Law Concerning the Recovery and Destruction of Fluorocarbons
20	Law Concerning Recycling of Materials from Construction Work
21	Soil Contamination Countermeasures Act

Environment Slogan

Formulation of the FY 2012 environmental slogan (selected from employee entries)

Each year, CMK chooses a new Environment Slogan designed to boost awareness of the importance of environmental initiatives by each and every employee.

Selected from a field of some 1,315 entries, the FY 2012 slogan is " Eco-Activities, Bonds which connect the earth and a person . "



Biodiversity Conservation Activities

In May 2010, we included biodiversity conservation activities in our basic environmental policy and have been striving to build a society that coexists with nature by promoting preservation and sustainable use of biodiversity through internal education and educational activities, such as with explanatory sessions on green purchasing. Specifically, we established the Gunma District Biodiversity Promotion Committee in May 2011, under which we have conducted surveys on the impact of our facilities on biodiversity. As a social contribution activity, we have participated in Isesaki City' s program for registering manager-owners of red pines in order to protect these trees in the city. We will be expanding this activity to other facilities.



Information Disclosure and Customer relations

Information Disclosure

Environmental communication

We started to publish the Environmental Report in 1999 as a tool for communicating with all stakeholders. In 2000, we started to publish an English language version of the report as we made efforts to disclose information not only in Japan but also overseas.

Since 2007, we have expanded and developed the Environmental Report and published it in the form of a CSR Report with the aim of informing all stakeholders of the approach to CSR at CMK. The Environment page on the CMK website has been renamed the Society and Environment page and now features the CSR Report as well as information on environmental programs and initiatives.





Green accreditatio from customer

Customers are increasingly performing environmental quality audits to check on our development and operation of EHS management systems to comply with RoHS directives. CMK has been subject to accreditation audits by customers since November 2002. As a result, many of our production facilities and other sites have been accredited as green producers.

Certificates issued by customers



Information Disclosure



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Certificate of KTOCERA Green Supplier
Research
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Customer Inquiries The Environmental Promotion Department, which serves as a customer service center for environmental affairs, received 1,304 customer inquiries and requests in FY 2011.

(Fiscal year)								
Division	2007	2008	2009	2010	2011			
Regulated chemicals	1,688	1,607	1,196	1,315	1,109			
Acquisition of ISO14001 certification	16	14	9	6	5			
Green procurement	25	39	103	129	152			
CSR Questionnaires	3	5	5	9	9			
Others	23	31	40	46	29			



Providing Information in the Form of Material Safety Data Sheet (MSDS)

The enactment of the PRTR Law brought many requests for CMK product information to be presented in MSDS format. Because our products are not subject to mandatory MSDS disclosure by the PRTR Law, we do not issue MSDS for them. (This view is shared by the Japan Printed Circuit Association.) Nevertheless, we diligently disclose product environmental information in formats not restricted to MSDS.

Inquiries Regarding Life Cycle Assessment

With the goal of producing environmentally sensitive products, many CMK customers introduce the life-cycle assessment (LCA) method to assess their production processes and the components they purchase.

As part of these efforts, CMK is working to adopt the LCA method in production processes for its products in order to provide customers with the data they need.

p and Multilayered PWBs 2.2, 14m2/m ² 1.66mg/m ² 7.0mg/m ² 15mg/m ² 34.2 (260) (45) - 7.0mg/m ² 15mg/m ² 34.2 (200) (50)	cable equipment Cable equipmen	NUM OUX OUX <th>Coli bacillus bacillus bacillus No.of No.of (1000) (1000) (1000) (1000) (1000) (1000) (1000) 0 (1000) (1000) (1000) (1000) (1000) 0 (1000) 0 (1000) 0 (1000) (1000) (1000) (1000) (1000) 0 (1000) 0 (1000) 0 (1000) 0 (1000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 <</th> <th>Ifts n-hexane (animal/plant oi) mg//t (1(4) 1(4) 1(4)</th> <th>ement residual element residual element elemen</th> <th>y measure ss 3(30) 3(30) 3(20) 7(250) 6(30) 6(30) 5(30) 23(100) 23(100) 23(100)</th> <th>ater qualit mg/t 28 (35) 28 (35) 28 (35) 28 (35) 12 (20) 12 (20) 13 (200) 13 (200) 13 (200)</th> <th>BOD mg/l 14(20) 14(20) 8(9) 8(9) 8(9) 8(9) 23(29.5) 23(29.5) 23(50) 33(50)</th> <th>PH - - (6.0~8.4) (6.0~8.4) (6.6~8.4) (6.4-8.4) (6.4-8.4) (6.4-8.4) (6.4-8.4) (6.4-8.4) (6.4-8.4) (6.6-8.4) (6.6-8.4) (6.5-80) (6.5-80) (6.5-80) (6.5-80) (6.5-80) (6.5-80) (6.5-80) (6.6-8) (7.7-8) (6.6-9) (7.7-8) (6.6-8) (7.7-8) (6.6-9) (7.7-8) (6.6-8) (7.7-8) (6.6-9) (7.7-8) (6.6-9) (7.7-8) (6.6-9) (7.7-8)</th> <th>Construction Paper Consumption Thousands Areaning Areaning</th> <th>Resurce onstang Water onsumption on m³ of m³ a,757 1,472 6 8 8 8 8 8 8 8 8 8 8 8 8 8</th> <th>Total Total generated 1 17 3,378 5,603 5,603 5,449 80 80 81.114 114 3,255 3,952</th> <th>Waste per Zero 2.40 missions 7% 99.1% 100.0% 100.0% 100.0% 35.9% 35.9% 87.1% 87.1%</th> <th>ance Thermat energy (kt in quident energy of a grant energy of a g</th> <th>Jy perform But perform consumption consumption of kWh 25,175 25,175 25,175 32,636 32,636 10,411 10,411 10,411 10,411 10,411 10,414 41,852 41,844</th> <th>Ener CO2 emissions t-CO2</th> <th>er line : Name of business site rline : Production item or business line lation Factory up. Rigid-flex, Muttilayered PWBs nnical Center Factory arch and development facility earch and development facility and Center Factory wp. Rigid-flex and Mutilayered PWBs up. Rigid-flex and Mutilayered PWBs up. Rigid-flex and Mutilayered PWBs et a Satellite Factory et a Satellite Factory up. Rigid-flex and Mutilayered PWBs (ABARA ELECTRONIC CORPORATION manufacture of printed wiring boards (ABARA ELECTRONIC CORPORATION manufacture of printed wiring boards (ABARA ELECTRONIC CORPORATION inolds, divided molds, installation tools ilayered and Double-sided PWBs (MALAYSIA) SDN.BHD. allic Substrates ilayered and Double-sided PWBs ilayered and Double-sided PWBs</th>	Coli bacillus bacillus bacillus No.of No.of (1000) (1000) (1000) (1000) (1000) (1000) (1000) 0 (1000) (1000) (1000) (1000) (1000) 0 (1000) 0 (1000) 0 (1000) (1000) (1000) (1000) (1000) 0 (1000) 0 (1000) 0 (1000) 0 (1000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 (11000) 0 <	Ifts n-hexane (animal/plant oi) mg//t (1(4) 1(4) 1(4)	ement residual element residual element elemen	y measure ss 3(30) 3(30) 3(20) 7(250) 6(30) 6(30) 5(30) 23(100) 23(100) 23(100)	ater qualit mg/t 28 (35) 28 (35) 28 (35) 28 (35) 12 (20) 12 (20) 13 (200) 13 (200) 13 (200)	BOD mg/l 14(20) 14(20) 8(9) 8(9) 8(9) 8(9) 23(29.5) 23(29.5) 23(50) 33(50)	PH - - (6.0~8.4) (6.0~8.4) (6.6~8.4) (6.4-8.4) (6.4-8.4) (6.4-8.4) (6.4-8.4) (6.4-8.4) (6.4-8.4) (6.6-8.4) (6.6-8.4) (6.5-80) (6.5-80) (6.5-80) (6.5-80) (6.5-80) (6.5-80) (6.5-80) (6.6-8) (7.7-8) (6.6-9) (7.7-8) (6.6-8) (7.7-8) (6.6-9) (7.7-8) (6.6-8) (7.7-8) (6.6-9) (7.7-8) (6.6-9) (7.7-8) (6.6-9) (7.7-8)	Construction Paper Consumption Thousands Areaning Areaning	Resurce onstang Water onsumption on m ³ of m ³ a,757 1,472 6 8 8 8 8 8 8 8 8 8 8 8 8 8	Total Total generated 1 17 3,378 5,603 5,603 5,449 80 80 81.114 114 3,255 3,952	Waste per Zero 2.40 missions 7% 99.1% 100.0% 100.0% 100.0% 35.9% 35.9% 87.1% 87.1%	ance Thermat energy (kt in quident energy of a grant energy of a g	Jy perform But perform consumption consumption of kWh 25,175 25,175 25,175 32,636 32,636 10,411 10,411 10,411 10,411 10,411 10,414 41,852 41,844	Ener CO2 emissions t-CO2	er line : Name of business site rline : Production item or business line lation Factory up. Rigid-flex, Muttilayered PWBs nnical Center Factory arch and development facility earch and development facility and Center Factory wp. Rigid-flex and Mutilayered PWBs up. Rigid-flex and Mutilayered PWBs up. Rigid-flex and Mutilayered PWBs et a Satellite Factory et a Satellite Factory up. Rigid-flex and Mutilayered PWBs (ABARA ELECTRONIC CORPORATION manufacture of printed wiring boards (ABARA ELECTRONIC CORPORATION manufacture of printed wiring boards (ABARA ELECTRONIC CORPORATION inolds, divided molds, installation tools ilayered and Double-sided PWBs (MALAYSIA) SDN.BHD. allic Substrates ilayered and Double-sided PWBs ilayered and Double-sided PWBs
	Heating medium boiler ñ ¹ 64.7ppm 5.1mg/m ² (200) - 5.320)	Steam boiler 900/n 60.7ppm - 4.9mg/n (200) - (320)	I	I	I	8 (200)	85(750)	19(500)	7.3 (5.5-9)	1,433	2,784	3,462	85.9%	1,282	84,034	19,511	ORATION (THAILAND) CO., LTD. Utilityered and Double-sided PWBs Name of business site Production item or business line
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CTRONICS (WUXI) COLTD. 26 134 1 A/06 871% 3 952 830 897 7.56 - 46(60) 24(300 - 46(60) 24(300									(h-a)	>		1	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	- 	> 	1.1	ered and Double-sided PWBs
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DONG GUAN) LTD. 27,212 44,270 994 100.0% 3.240 891 688 7.86 - - - - No applicable equipment ried and Double-sided PWBs 27,512 41,427 994 100.0% 3.240 891 688 7.86 - - - No applicable equipment ried and Double-sided PWBs 26,32 830 877 7.56 - 47(50) - - No applicable equipment ccrRoNics (WUX) coLTD. 26,134 14.06 871% 3.952 830 897 7.56 - 47(50) - - - No applicable equipment	130.5ppm 825ppm (260) (150)	0.001ppm 0.002pm (0.2) (0.2)				, ,	,	, ,	(0.8-0.0)								Substrates
Substrates U.Wippm U.Wippm U.Wippm U.Wippm Eac. ppm			1	I	I	23(100)	130(200)	33(50)	8.4	166	74	114	35.9%	0	7,852	4,358	MALAYSIA/ SUN.BHU.
Substrates 4,358 7,852 0 35.9% 114 74 166 $(5.5-9.0)$ 33(50) 130(200) 23(100) - - 0 0.01pnm 0.005pnm 130.5pnm 825pnm 825pnm <t< th=""><td>ER AMBIENT AIR MONITORING</td><td>AIREMMISSION FOR SCRUBBE</td><td></td><td></td><td></td><td></td><td></td><td></td><td>c</td><td></td><td></td><td></td><td> </td><td></td><td> </td><td></td><td>(MALAYSIA) SDN.BHD.</td></t<>	ER AMBIENT AIR MONITORING	AIREMMISSION FOR SCRUBBE							c								(MALAYSIA) SDN.BHD.
(MALYSIA) SDN.BHD. 4.35B 7.852 0 35.9% 114 76 8.4 150 23(100)		75ppm(100) <5ppm(5) <0.005g/ (0.1)	2		(-)0.02	004)00	5 2	10.62.02	(6.5-8.0)	0.77	007	00	%0.001	- + +	a, 0 F a	0,305	ered and Double-sided PWBs
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5. divided molts, installation tols	cabla ari inmant		I	I	I	I				1	~	0	100.0%	Ţ	000	900	ECHANICS CORPORATION
CCHANICS CORPORATION 386 1.023 8.0 1 119 7 - - - - - - - - - - - No applicable equipment 44 divided molei. installitationol 3.952 9.529 14 100.0% 758 286.9.5 39 30.40 3.51.5 85 Ebara Steam boiler - -	V 28vo1ppm 0.014Nm ³ /h 0.006g/Nm ³) (80) (15.9) (0.06)	57ppm(80) - 0g/m ³ /	(1500)	r(rJ)	C (4)	(nc)n	(nc.) 04	c1 (4:)	(6-8.4)	-, 1,00	<u>0</u>	0,440 0,440	% D.DDI	700'I	30,664	10,644	ered and Double-sided PWBs
read and Double-sided PMB 044 0440 044	Gas-fired compact once-through steam boiler	Gas-fired absorption-type cool-warm water generator	530	0/06)		0000	40.7103	11/120	7.3	7 0 0	Ĺ	() 7 L	100.001	([[7 C C 7	ARA ELECTRONIC CORPORATION JAPAN
AME ETERTIONE CONFIDENTIANDARY AME ETERTIONE CONFIDENTIANDARY IN CONFIDENTIANDARY					I	(00.2) /	1	(00.7) 77	(6.0-8.4)	1,230	<u></u>	0,023	%0.001	607		4,660	ufacture of printed wiring boards
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CODICTS CORPORATION discriment wing based. 4.20 10.41 2.33 10.53 5.22 1.35 1.3	-	57ppm(58) - 0g/m ³ / (0.06)	(2500)	1(4)	U(4)	a(z))	0.1 (C.42)	<pre><23(2%.5)</pre>	(6-7.8)	ح, <i>ב</i> 40	a, r o r	500°C	23% 23%	0,293	070'11	40,000	, Multilayered PWBs
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opplie and uniformentions Using Us	Scrubber	Warm water boiler	0	6		ç	0000	000	œ	101	C	0 0 0	100 001	0	L 1 L C		Center Factory
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In and deteriorment facing 1.00 $$	cahla ani inment		96		0/10)			(111)	7.7	0 7	U	1	/00 001	C	7 0 1 0	7 7 7	al Center Factory
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Model and manual		Boiler	<100	1(4)	1(A)	3(30)	28 (3E)	11 (20)	7.8	000	1 170	3 378	100 0%	DEA	30 636	008 11	on Factory
The contract of the con			No.of bacteria/cm	∬gm	l∕gm	1/6m	¶/gm	∬gm	I	Thousands of sheets (A4 equivalent)	Thousands of m ³	÷	%	kß in crude oil equivalent	Thousands of kWh	t-CO2	: Froduction item or business line
The change in the change interval interva	NOX SOX Soot		Coli bacillus	n-hexane (animal/plant oil)	n-hexane (mineral oil)	SS	COD	BOD	Hd	Paper consumption	water consumption	quantity generated	emissions rate	energy consumption	energy consumption	CO ₂ emissions	ne : Name of business site
example transmission ending	ed facility name NOx SOx Soot	Specifie	:		_						Wotor	Total	Zero	Thermal	Electric	C	
Constraint of the field of the fi	ed facility name NOX SOX Soot	Specific NOV		ults	ement resi	y measure	ater qualit	Ŵ		ion performance	Resource consump	formance	Waste per	ance	gy perform	Ener	
A protect in the contract of the	asurement results ed facility name NOX SOX Soot	Air quality me Specifie															
A contract	asurement results ad facility name NOx SOx Soot	Air quality me Specific		١	l	l	l	L	l	l	l	l	l				

Information Disclosure