

# Environmental Report 2014



  
 Environmental Report **2014****1 Environmental Policy**

Basic policy on the environment ..... **1**

**2 Environmental Management**

Environmental management system ..... **2**

Environmental targets and results ..... **3**

Environmental accounting for FY2013 ..... **4**

**3 Environmental protection activities**

Environmental impact associated with business activities **6**

Changes in environmental performance ..... **7**

Management of chemical substances ..... **9**

# 1 Environmental Policy



## Basic Policy on the Environment

### Management philosophy

### Visionary Technology, Reliable Quality, and Meticulous Service

Making use of our greatest strength — our ability to develop our core technology — with interface treatment related to electronics, we will expand our global business activities to help create a rich and wonderful society with the principles of Visionary Technology, Reliable Quality, and Meticulous Service

Corporate  
Motto:

**“Enjoy your work”**

1. Let's always aim to achieve new targets without fear of failure
2. Let's make improvements with an insatiable curiosity
3. Let's carry out work with our combined power and a feeling of gratitude and cooperation
4. Let's make a fun workplace where people pay attention to health and safety
5. Let's contribute to society

Based on the above-mentioned management policy, we have established the following environmental policies to guide us in taking our environmental protection activities. In accordance with this policy, we are making efforts to protect the environment and conserve resources and energy, and we will continue to contribute to the creation of a sustainable and rich society in harmony with the global environment.

### Environmental policy

**In accordance with the environmental management system in compliance with ISO14001, we are promoting environmental protection.**

1. Recognizing the environmental aspects in our activities, we will comply with environmental laws and regulations and other requirements, while at the same time striving to continuously improve our environmental management system and increase the management level.
2. In order to make efficient use of resources and prevent environmental pollution, we will carry out the following:
  - Measures to save energy
  - Reduction of waste, promotion of recycling
  - Provision of products that were manufactured while considering the product life cycle
  - Implementation of chemical management
3. We will make this environmental policy well known to all those who work in our company, and also disclose it to the general public.

April 1, 2014  
Kazuo Maeda, President & CEO  
MEC COMPANY LTD.

# 2 Environmental Management



## Environmental Management System

### Acquisition of ISO14001

The Company has established an environmental management system (EMS) that conforms to ISO14001 in order to promote ongoing environmental protection activities. We have obtained ISO14001 certification in all our places in Japan. In September 2000 we obtained this certification in Nagaoka Factory and Nishinomiya Factory, and in July 2006, we obtained it in Headquarters, R&D Center, and Tokyo Sales Office. We will continue working on improvement activities for our environmental management system and improve the management level.

### Internal audit

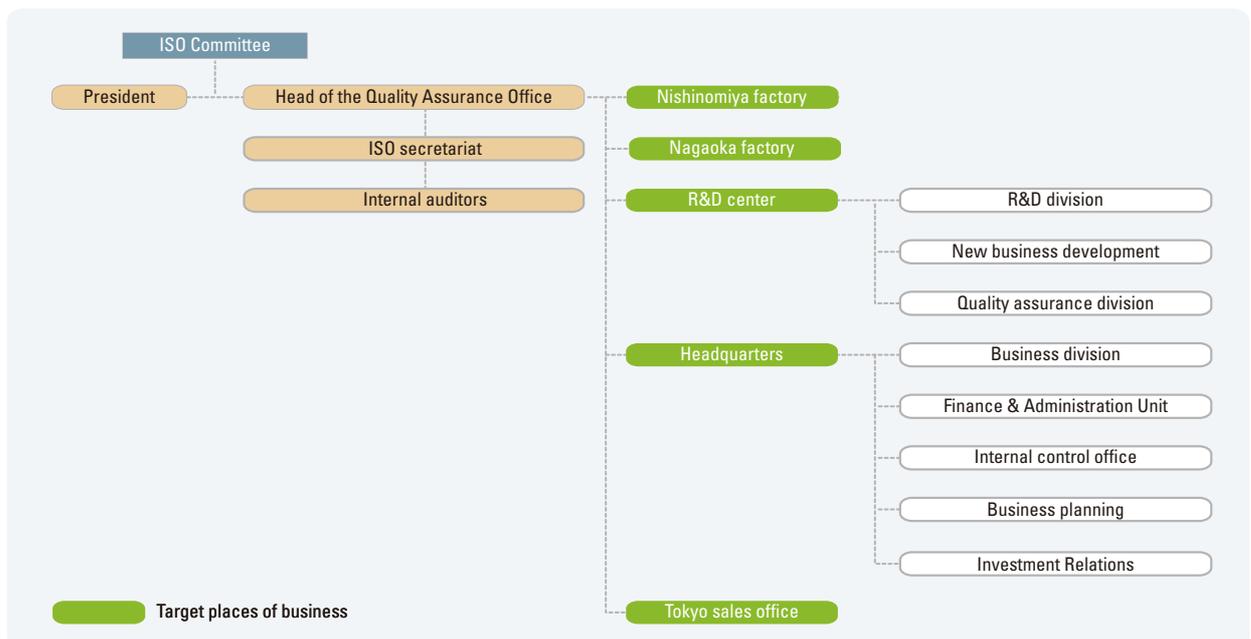
We conducted an internal audit between October and November for FY2013. In addition to an audit that focused mainly on the progress of improvement activities and operational status of EMS, we confirmed the status of complying with laws, regulations and other requirements and also the status of preventing the recurrence of non-conformities that had been pointed out in the previous internal audit and external audit. There were two cases of non-conformity, but we have completed correcting them. Moreover, with regards to observations and opportunities for improvement, we are working to improve them according to their degree of importance. We plan to check the status of such improvement in the internal audit of FY2014.

There was one case of noncompliance pointed out in the external audit of February 2014 but we have completed correcting it and maintained EMS certification.

Two people who received predetermined education were certified as new internal environmental auditors in FY2013, and so currently we have 45 people who have been certified as internal environmental auditors.

### Environmental promotion

In our Company, the Head of the Quality Assurance Office is appointed as the Environmental Management Representative. And with the ISO Committee — consisting of committee members elected at the ISO Secretariat and each office, including the persons responsible at the business locations — we are taking firm control of the status of progress of various activities at each office and progress of improvement targets, and advancing them. We are making environmental efforts under the following organization (as of April 2014).





## Environmental Targets and Results

The following shows the results of our efforts to achieve major environmental targets for FY2013.

### Environmental targets for FY2013 and results

Environmental objectives	Environmental objectives for FY2013	Results for FY2013	Evaluation
Carry out green activities	Ecocap Movement: Reduce CO <sub>2</sub> emissions by 50 kg, vaccine for 8 people (Headquarters)	CO <sub>2</sub> emissions reduced by 99.6 kg Vaccines for 15.8 people	○
	Reduction of power consumption: Down 10% compared with FY2010 (Headquarters)	Down 11.1%	○
Reduce the amount of waste	Reduce the waste cost in raw materials due to expiry (reduce amount of waste):50% or less compared with FY2012 (Nishinomiya Factory)	57.7% compared with FY2012 (down 42.3%)	×
Sell and promote products that help to improve the environment	Contribute to the environmental improvement of key customers :Proposals for 30% of the corresponding number of items, up 2% year-on-year (8 items) (Tokyo Sales Office, Nagaoka Factory (Sales Division))	Proposals for 36% of the corresponding number of items, up 3.7% year-on-year	○
Appropriately manage amount of chemicals	Have the level of management of toxic substances in reagents improved : (R&D Center)	Made it possible to operate the PC used to manage toxic substances of the reagent storage place on the internal network, and made it possible to always manage these substances in their latest state. Unified the file for managing purchasing work and inventory management work and eliminated the need to perform multiple tasks	○
Improve the level of management of waste water	Have the level of management of waste water improved : (R&D Center)	We have established a procedure manual and acceptance criteria for waste water analysis, and clarified the competence required of analysts. In the new standard, we approved two qualified persons.	○
Adhere to voluntary drainage standards	Reduce to one or less the number of items that deviate from voluntary drainage standards : (Nishinomiya Factory)	There were two cases of noncompliance with the standard levels. We reported to the Nishinomiya City, approved measures to handle the cases, and implemented such measures.	×
	Reduce to one or less the number of items deviate from voluntary drainage standers : (Nagaoka Factory (Production Department))	There is one case of noncompliance with the standard level. We reported to the Nagaoka City, approved measures to handle the case, and implemented such measures. There are four cases of noncompliance with the voluntary standards. No problem with legal compliance.	×
other	Reduce the unnecessary work related to creating multiple documents : Unify the creation of sales orders and shipping documents (Headquarters)	We built a system that makes it possible to use information that is entered in the sales orders when making shipping documents. We made it possible to link tasks and make shipping documents. Document creation time: Reduce down to 10% (reduction of 90%) per month	○

Three cases of a deviation from voluntary drainage standards occurred, but we properly reported them and carried out measures to correct them. Thereafter, the same problem did not occur again. We consider that the measures we took were effective.

We will continue working to carry out appropriate monitoring in the future.

## 2 Environmental Management



### Environmental Accounting for FY2013

Environmental accounting is made up environmental conservation costs (expenses) and conservation effects (quantitative).

In FY2013, our environmental conservation costs amounted to 66,545 thousand yen. Of those costs, 43% were research and development costs that were associated with developing products with a low environmental impact.

We are actively engaged in collecting the empty containers after chemicals have been used and our upstream and downstream costs account for 8% of expenses. The main costs are associated with collecting empty containers for 20L plastic containers or 200L plastic drums and outsource container cleaning work (outsource recycling work) for reuse.

[ Basis of preparation ]

- Data collection period: April 1, 2013 to March 31, 2014
- Scope of data collection: MEC Co., Ltd. only (excluding subsidiaries) (Nishinomiya Factory, Nagaoka Factory, R&D Center, Headquarters and Tokyo Sales Office)
- Environmental costs are only considered if it can be determined that they are clearly related to conservation activities.
- With regards to research and development costs, individual items that can be calculated by each theme are aggregated, and items that cannot be directly calculated are prorated based on the working hours of each theme.
- Costs include depreciation of equipment used for the purpose of environmental conservation, maintenance costs, and personnel costs.

#### Environmental conservation costs for FY2013

(thousand yen)

Classification	Contents of major initiatives	Amount of investment	Amount of costs	
(1) Cost in the business area		0	26,351	
Breakdown	(1)-1 Cost of pollution prevention	Maintenance of equipment for wastewater treatment, water pollution prevention, etc.	0	7,549
	(1)-2 Global environmental conservation costs	Measures to save labor and energy	0	0
	(1)-3 Resource recycling costs	Cost of outsourcing the processing of industrial waste	0	18,801
(2) Upstream and downstream costs	Costs for outsourcing the recovery of containers and re-commodifying them	0	5,336	
(3) Management costs	Costs for maintaining and operating the environmental management system, cost of greening around the places of business	0	5,091	
(4) Research and development costs	Costs of research and development of products with a low environmental impact	0	28,730	
(5) Cost of social activities	Activities to protect the local environment	0	1,036	
(6) Environmental remediation costs	N/A	0	0	
<b>Total</b>			<b>66,545</b>	

(thousand yen)

Item	Amount
Total investment amount in the corresponding period	171,088
Total research and development expenses in the corresponding period	762,253
Proceeds from sales of valuable items pertaining to (1)-3	729
Proceeds from sales of valuable items pertaining to (2)	0

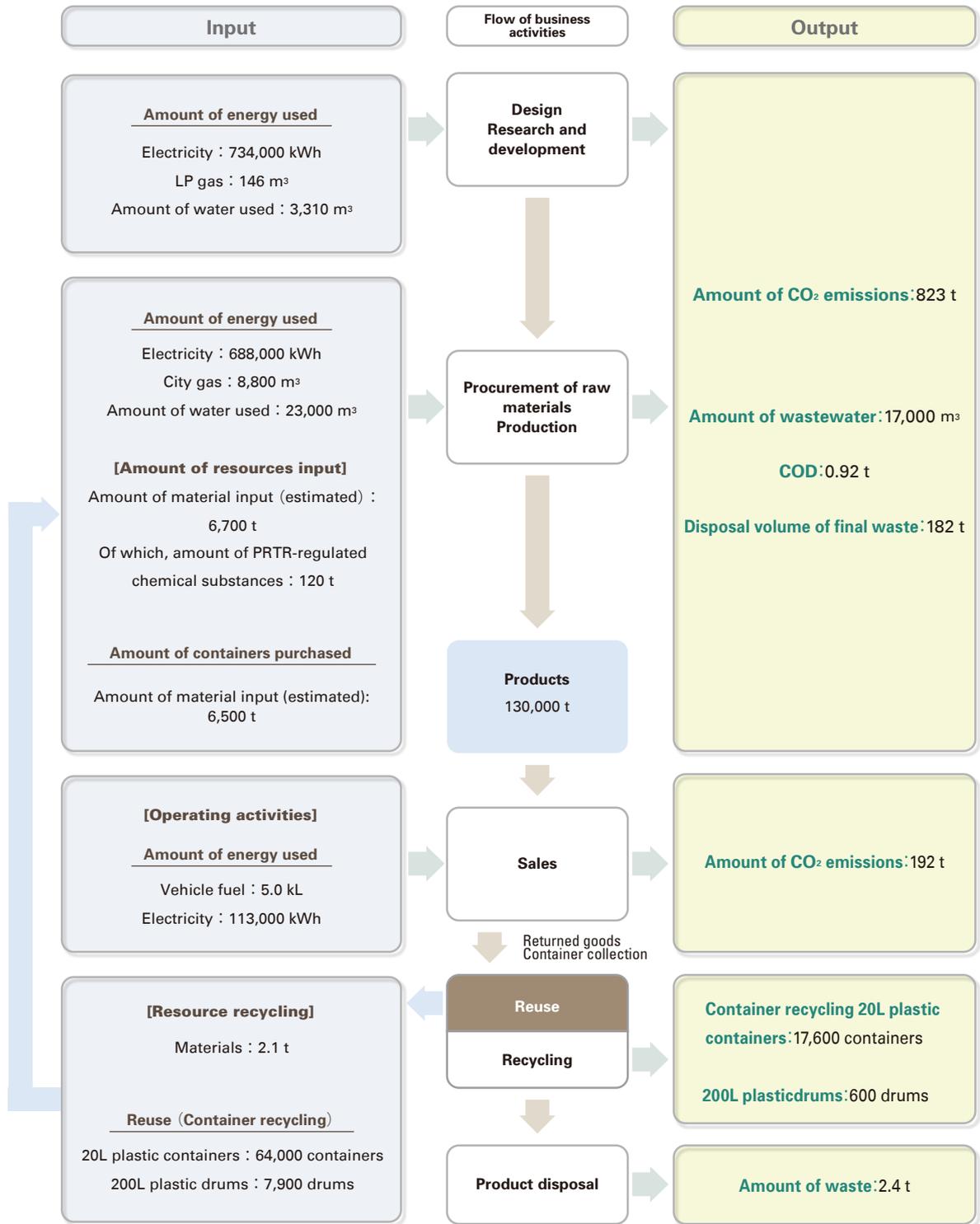
The "environmental conservation effects" are shown as an increase or decrease in absolute amount compared with the previous year (FY2012). For certain indexes, the basic unit that represents the amount for 1t of production volume is also described.

### Environmental conservation effects for FY2013

Classification the environmental conservation effect			Index the environmental conservation effect			
			Amount	Year-on-Year	Basic unit	Year-on-Year
(1) Effect that corresponds to the business area costs	Effect on resources invested in business activities	Electrical power consumption	1,535,000 [kWh]	+28,000 [kWh]	115 [kWh/t]	-0.6 [%]
		City gas consumption	8,800 [m³]	-2,100 [m³]	0.7 [m³/t]	-21.5 [%]
		Water consumption	26,400 [m³]	+1,400 [m³]	2.0 [m³/t]	+3.1 [%]
	Effect on the environmental impact and waste emissions generated by business activities	Carbon dioxide emissions	1,015 [t-CO <sub>2</sub> ]	+28 [t-CO <sub>2</sub> ]	76.0 [kg-CO <sub>2</sub> /t]	+0.4 [%]
		COD emissions	0.9 [t]	+0.2 [t]		
		Total emissions of industrial waste	242 [t]	+6 [t]		
(2) Effect corresponds to the upstream and downstream costs	Effect on the goods and services generated by business activities	Reuse of containers (total number)				
		Plastic containers	63,900 [containers]	-600 [containers]		
		Plastic drums	7,900 [drums]	-800 [drums]		

# 3 Environmental Protection Activities

## Environmental impact associated with business activities



The figures above show the entire amount with regards to the business and environmental activities of the Company for FY2013.



## Changes in Environmental Performance

### Electricity consumption

Electricity consumption in FY2013 at the plants was 688,000 kWh, which was up 27,000 kWh compared with FY2012. Since the production volume also increased, there was no change per unit of usage.

### Amount of water used

Our factories use water as one of their raw materials and also use a lot of water in activities like cleaning of production equipment. In order to promote the effective use of water resources, we are working to improve manufacturing operations and equipment cleaning methods.

The amount of wastewater emitted in FY2013 was 14.2 km<sup>3</sup>, up 2.7 km<sup>3</sup> compared with FY2012. With the increase in production volume, there was an increase in water used due to the need for hot water in winter, and an increase in cleaning water used due to the fact that we produced more items; these were factors that increased water usage, and the unit of usage also increased in FY2013.



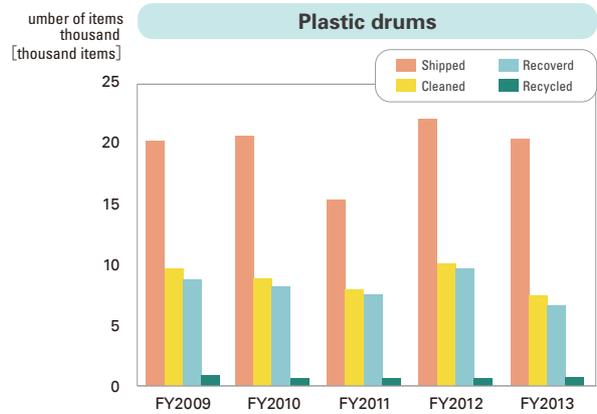
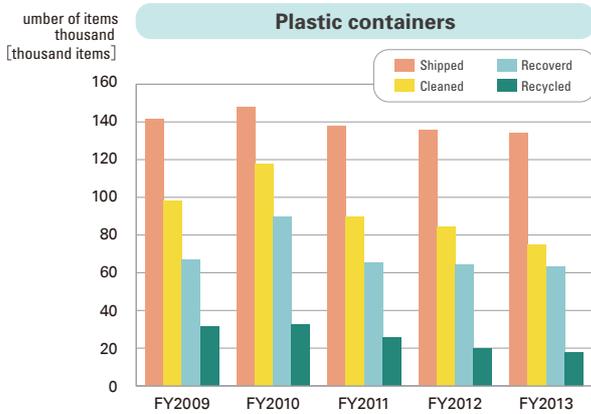
### Efforts for reusing containers

We promote the reuse of containers in order to avoid wasting resources and to make effective use of them. The main containers we use are 20L plastic containers and 200L plastic drums. We outsource work to collect empty containers after the product has been used by our customers, and we separate the recovered containers into those that can and cannot be reused at each Factory. We clean plastic containers ourselves, and we clean some of the plastic drums and outsource the cleaning work for the rest, and we recycle them.

The accompanying graph shows changes in the number of plastic containers and plastic drums that we collected and reused.

In FY2013, the recovery rates for plastic containers and plastic drums were 55.2% and 40.1% respectively. The figure for plastic containers was down 6.9% compared to FY2012, though there was no change to the figure for plastic drums.

### 3 Environmental Protection Activities



#### Proper disposal of waste

One type of industrial waste that is discharged from our business activities is plastic containers, plastic, drums and pallets that can no longer be reused. Since FY2008, we have been promoting the recycling of plastic waste in our factories, and we are working to reduce the final disposal volume.

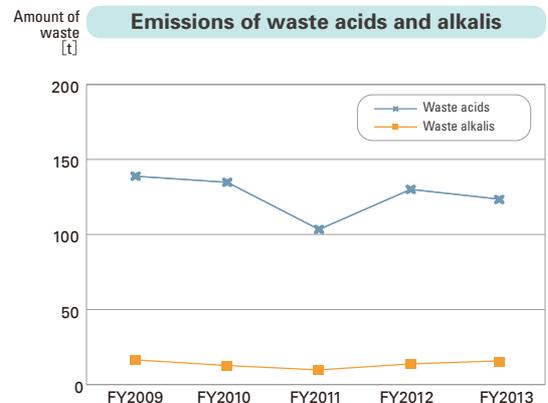
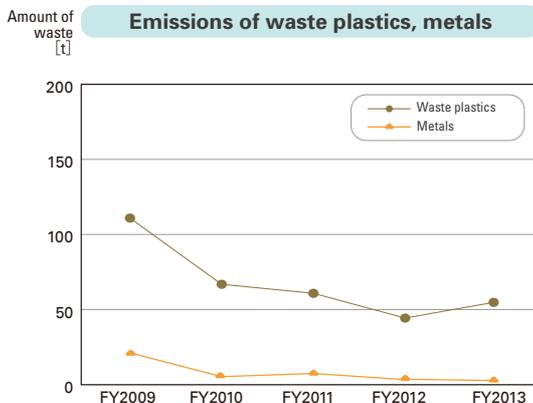
The amount of waste generated in FY2013 was 242 t, up 2.4% compared with FY2012.

The final disposal amount of waste in FY2013 was 182 t, up 8.5% compared with FY2012.

We separate metals and sell those parts that have value. For that reason, the amount of metal we dispose of has become very small.

Waste acids and alkalis are chemical waste from both Factories or waste liquid from the R&D Center. The amount of waste acid we disposed of in FY2013 was almost the same as that in FY2012. Few of our products are alkaline ones and so the amount of waste alkali does not vary much from year to year, and this waste amount does not have any impact on the amount of entire waste.

Waste from the offices is separated on the basis of the classification rules of each office and we periodically confirm the status of such separation and of maintenance. We will continue working to curb the amount of waste produced, while also striving to ensure that the waste is thoroughly separated, improve the recycling rate and reduce the final disposal amount of waste generated.





## Management of Chemical Substances

### Management of Chemical

We build a system for the management of chemical substances in order to prevent our products being contaminated by banned substances in all stages of production from the purchase of raw materials to shipment. We are using the Standards for the Management of Chemical Substances in Products that were revised in August 2013 to improve our operations. We will continue to thoroughly implement a system for managing chemical substances and continue to promote sustainable management of chemical substances in products in various locations including our suppliers and factories.

### PRTR

Of the substances which we handled in FY2013, the transaction volume of PRTR-listed substances came to 123 t for 20 substances. We always ensure that they are properly managed when using them in Factories and Reserch & Development.

**We recognize that environmental protection  
is an important issue, and we will continue  
to be actively engaged in environmental  
protection activities in the future.**



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