



# ENVIRONMENTAL REPORT

# 2017





# ENVIRONMENTAL REPORT 2017

## ENVIRONMENTAL POLICY

BASIC POLICY ON THE ENVIRONMENT .....	①
---------------------------------------	---

## ENVIRONMENTAL MANAGEMENT

ENVIRONMENTAL MANAGEMENT SYSTEM .....	②
ENVIRONMENTAL TARGETS AND RESULTS .....	③
ENVIRONMENTAL ACCOUNTING FOR FY2016 .....	④

## ENVIRONMENTAL CONSERVATION

ENVIRONMENTAL IMPACT ASSOCIATED WITH BUSINESS ACTIVITIES ..	⑥
CHANGES IN ENVIRONMENTAL PERFORMANCE .....	⑦
MANAGEMENT OF CHEMICAL SUBSTANCES .....	⑨

## BASIC POLICY ON THE ENVIRONMENT

### Management philosophy

Visionary Technology

Reliable Quality

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.

#### COMPANY MOTTO

Enjoy your work

#### COMPANY RULES

1. Let's always aim to achieve new targets without fear of failure.  
Repeatedly try new ideas and improvements with unyielding curiosity.
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, prevent pollution and protect the environment, we will:
  - Measures to save energy
  - Reduction of waste, promotion of recycling
  - Provide of products that were manufactured while considering the product life cycle
  - Implement 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, 2015  
Kazuo Maeda, President & CEO  
MEC COMPANY Ltd.

## ENVIRONMENTAL MANAGEMENT SYSTEM

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. We will continue working.

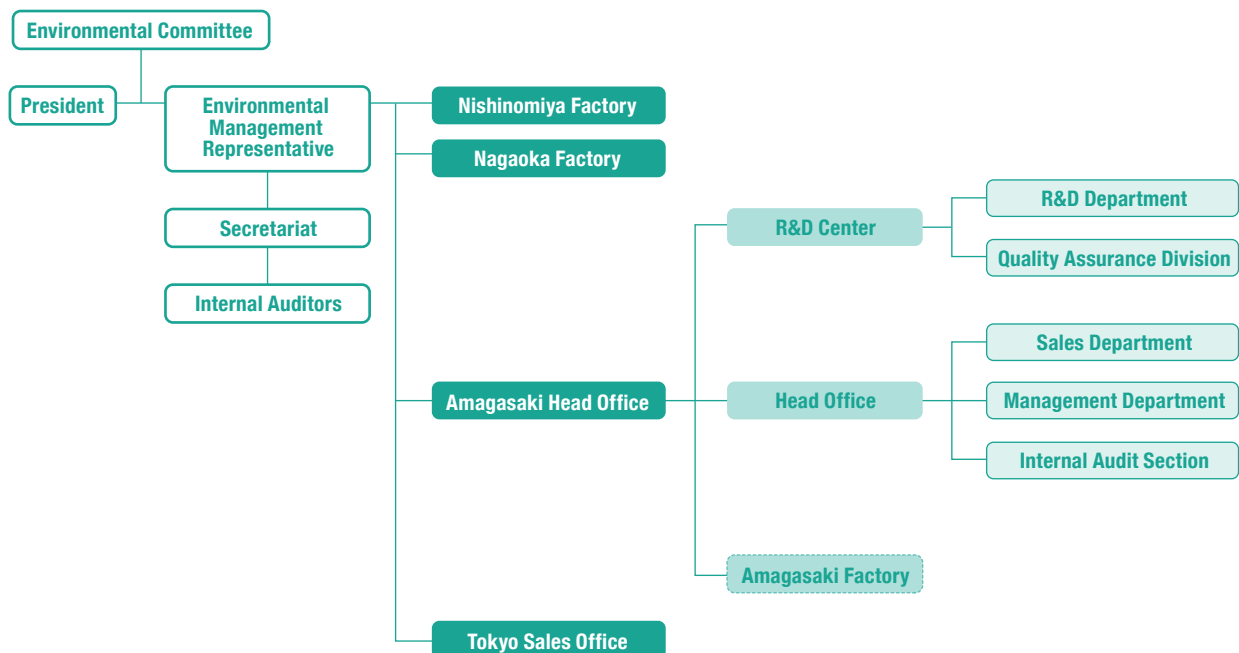
### Implementation of internal audit

We conducted the FY2016 internal audit in November 2016. Mainly, we checked the progress of the operational status of our environmental management system and improvement activities. And in addition, we checked the status of compliance with laws, regulations and other requirements, and the status of correcting the matters pointed out in the previous external audit and internal audit. No nonconformity was found as a result. With regards to observations and opportunities for improvement pointed out in the audit, we are working to improve them according to their degree of importance. We plan to check the improvement situation in the FY2017 internal audit. The external audit of May 2017 found one case of noncompliance, but we corrected it and maintained the EMS certification. In FY2016, four people became newly certified internal environmental auditors, bringing the total number of internal auditors to 54 as of March 2017.

### Environmental promotion

The Company assigns the Head of the Business Planning Office as an Environmental Management Officer and positions the Committee, composed of persons with responsibility at the offices, Secretariat, and committee members who are elected from each office, at the center of environmental activities. The Company is grasping and pushing forward with various activities and aiming to achieve goals at each office.

We are making efforts to protect the environment, under the following organizational structure. (as of April 2017)



## ENVIRONMENTAL TARGETS AND RESULTS

The outcomes of the main environmental activities to achieve goals in FY2016 are described below.

**Table Environmental targets for FY2016**

No.	Environmental objective	Environmental objective for FY2016	Outcome in FY2016	Evaluation
1	<b>Compliance with wastewater discharge standards</b>	One case: Exceeding the voluntary regulation for wastewater discharge [Nishinomiya Factory]	Two cases: Exceeding the voluntary regulation for wastewater discharge Legal standards for wastewater discharge were met.	×
2	<b>Compliance with environmental laws and regulations</b>	Development of systems to monitor odor released into the atmosphere [Nagaoka Factory]	Small scrubbers were installed, and Operational Procedures were prepared to keep track of exiting odor.	△
3	<b>Assist clients in the effort to become more environmentally friendly</b>	More than 30 suggestions made to use more environmentally friendly chemicals [Head Office]	24 suggestions made	○
		The adoption of 11 proposals to reduce environmental loads for important clients [Tokyo Sales Office]	Four cases adopted	×
4	<b>Optimization of the amount of paper documents in storage</b>	Disposal of 50% of paper documents [R&D Center]	The storage of paper documents was reevaluated, and 50% of them were disposed of.	○
5	<b>Implementation of environmentally friendly activities</b>	Office goods reuse project activity (The same amount of contribution as in FY2015) [Head Office]	86% (compared to FY2015)	○

## ENVIRONMENTAL ACCOUNTING FOR FY2016

Environmental accounting consists of the environmental conservation cost and environmental conservation effect (amount). The environmental conservation cost in FY2016 was 192,349,000 yen. Research and development cost, the cost to research and develop products with lower environmental burden, accounts for 75% of the cost. The upstream and downstream costs account for 2%. We collect empty containers such as 20-liter plastic containers and 200-liter plastic drums after using chemicals and outsource container cleaning operations so they can be reused as products.

### Development standards

- **Data gathering period** : April 1, 2016 to March 31, 2017
- **Range of data gathered** : MEC Co., Ltd. (Nishinomiya Factory, Nagaoka Factory, former R&D Center (Higashi Hatsushima), former Head Office, Head Office/Amagasaki Office, and Tokyo Sales Office)  
Note: The data for the former Head Office were gathered from April 2016 to December 2016, the former R&D Center from April 2016 to March 2017, and the Head Office/Amagasaki Office from October 2016 to March 2017.
- Environmental conservation cost only targets costs whose objectives are clearly related to environmental conservation activities.
- For the research and development cost, costs which can be categorized into themes are individually processed, while costs which cannot be directly categorized are distributed in proportion based on theme-specific work hours. The amount of the
- cost includes depreciation costs and maintenance and management costs of facilities, as well as labor costs which are used for the purpose of environmental conservation.

### Table Environmental conservation cost in FY2016

Category		Main activities	Cost [thousand yen]
<b>(1) Cost within business areas</b>			32,102
Breakdown	<b>1. Cost of preventing pollution</b>	Maintenance and management of wastewater treatment facilities, prevention of water contamination, etc.	10,200
	<b>2. Cost of protecting the global environment</b>	Energy conservation measures	0
	<b>3. Resource recycling cost</b>	Cost of outsourcing the disposal of industrial wastes	21,902
<b>(2) Upstream and downstream costs</b>		Cost of outsourcing the collection of containers to reuse them as products	4,363
<b>(3) Management activity cost</b>		Cost of maintaining and operating environmental management systems, cost of planting plants around business sites	8,959
<b>(4) Research and development cost</b>		Research and development of products with lower environmental load	145,162
<b>(5) Cost of social activities</b>		Global environment conservation activities, etc.	1,763
<b>(6) Cost of responding to environmental damage</b>		Not applicable	0

Item	Amount [thousand yen]
<b>Total amount of investment during the applicable period</b>	1,884,367
<b>Total cost of research and development during the applicable period</b>	902,517
<b>The monetary amount of valuable goods sold in regards to (1)-3</b>	490
<b>The monetary amount of valuable goods sold in regards to (2)</b>	0

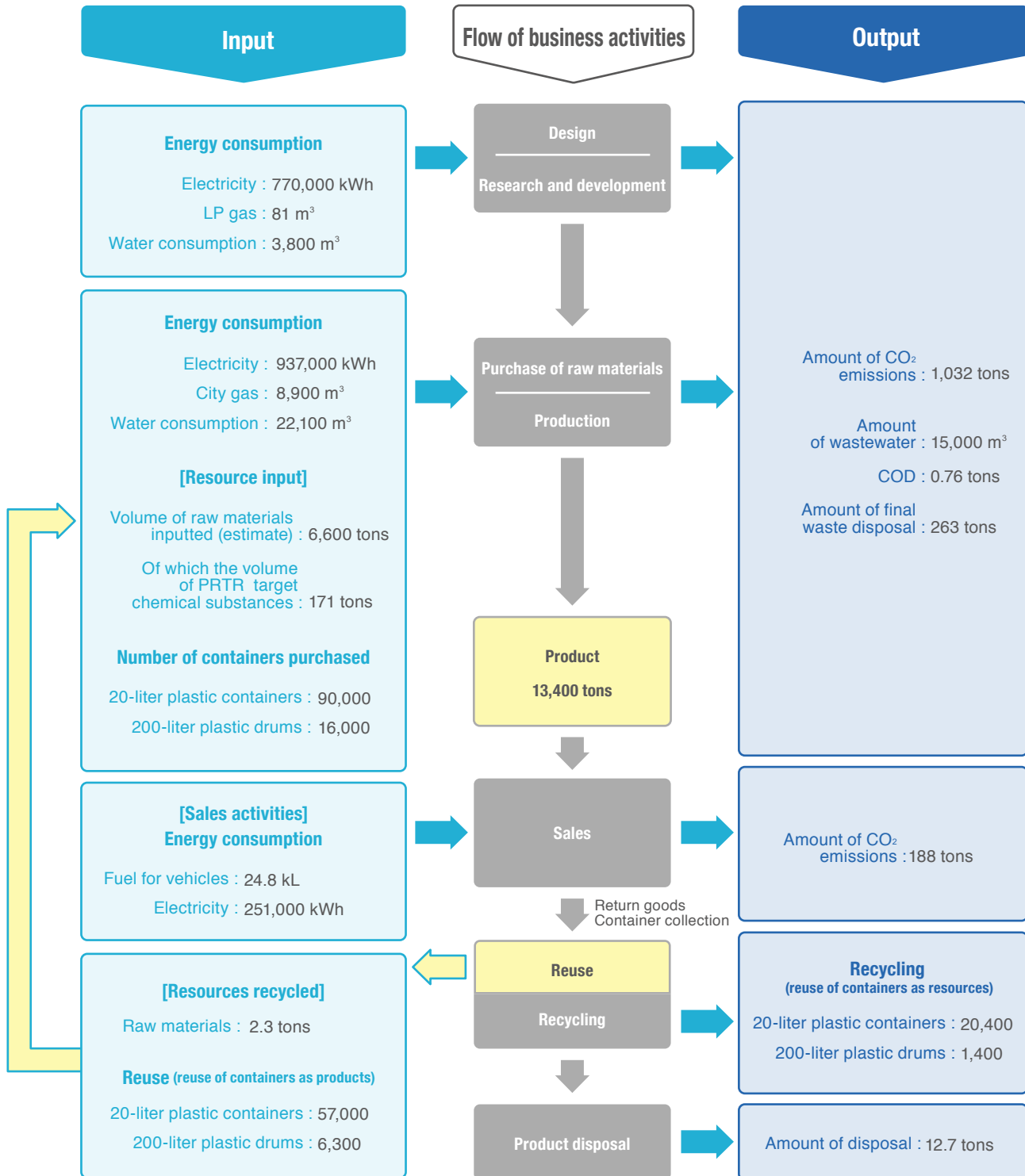
**Total 192,349**

The environmental conservation effect is expressed based on the change in the absolute amount from the previous year (FY2015). Primary units (the amount per ton of production) are also used for some indexes.

**Table Environmental conservation effects in FY2016**

Category of environmental conservation effects				Environmental performance index			
				Value of the index (amount)	Comparison from the last year	Value of the index (intensity)	Comparison from the last year
<b>(1) Environmental conservation effects in response to costs within the business areas</b>	<b>Environmental conservation effects in regards to the input of resources into business activities</b>	Amount of electricity input		1,958 [thousand kWh]	399 [thousand kWh]	146 [kWh/t]	25.6 [%]
		Amount of city gas input		8.9 [thousand m <sup>3</sup> ]	0.7 [thousand m <sup>3</sup> ]	0.7 [m <sup>3</sup> /t]	8.1 [%]
		Amount of water input		25.9 [thousand m <sup>3</sup> ]	(2.4) [thousand m <sup>3</sup> ]	1.9 [m <sup>3</sup> /t]	(8.3) [%]
	<b>Environmental conservation effects in regards to the environmental load of business activities and associated wastes</b>	Amount of CO <sub>2</sub> emissions		1,220 [t-CO <sub>2</sub> ]	223 [t-CO <sub>2</sub> ]	91 [kg-CO <sub>2</sub> /t]	22.4 [%]
		Amount of COD emissions		0.8 [t]	(0.2) [t]		
		Total amount of industrial waste emissions		333 [t]	83 [t]		
<b>(2) Environmental conservation effects corresponding to the upstream and downstream costs</b>	<b>Environmental conservation effects in regards to assets and services produced from business activities</b>	Quantity of reused containers (cumulative quantity)	Plastic container	56.7 [thousand units]	(4.2) [thousand units]		
			Plastic drums	6.3 [thousand units]	(0.6) [thousand units]		

## ENVIRONMENTAL IMPACT ASSOCIATED WITH BUSINESS ACTIVITIES



The diagram above describes the entire amount of the relationship between our business activities in FY2016 and the environment.

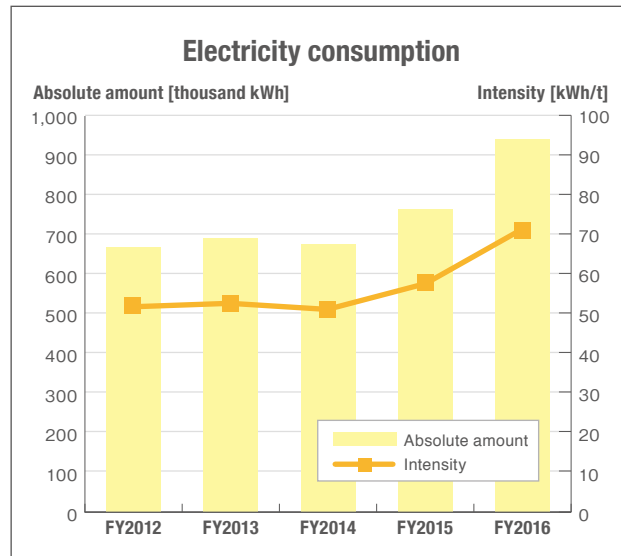


## CHANGES IN ENVIRONMENTAL PERFORMANCE

### Electricity consumption

In FY2016, factories consumed 937,000 kWh of electricity, a 182,000 kWh or 24.1% increase from FY2015. The energy consumption intensity increased by 26%.

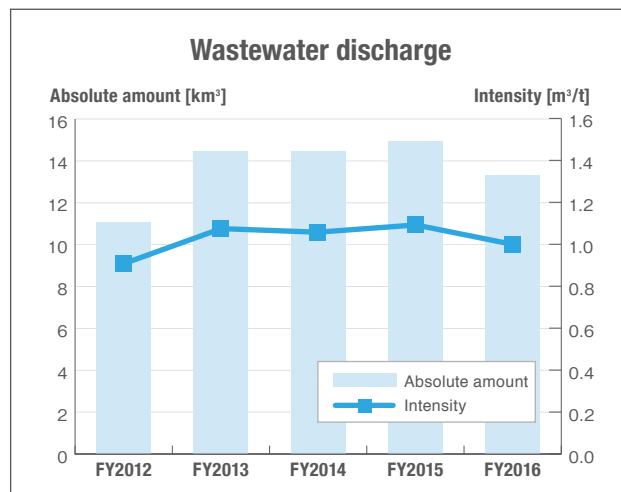
Amagasaki factory has been using electricity since October 2016 in preparation to start operations and thus pushed the total energy consumption up.



### Amount of wastewater

Factories are using water as part of raw materials. Other than that, a lot of water is used for activities such as cleaning production equipment. Also in order to promote the effective use of water resources, we have been working to enhance manufacturing operations, equipment cleaning methods, etc.

The amount of wastewater in FY2016 was 13.5 km<sup>3</sup>, a slight decrease of 1.1 km<sup>3</sup> compared with FY2015, and it can be said that there was no change in this area.



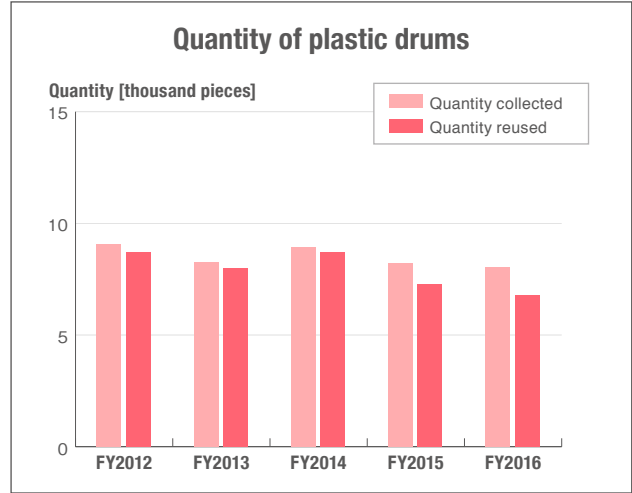
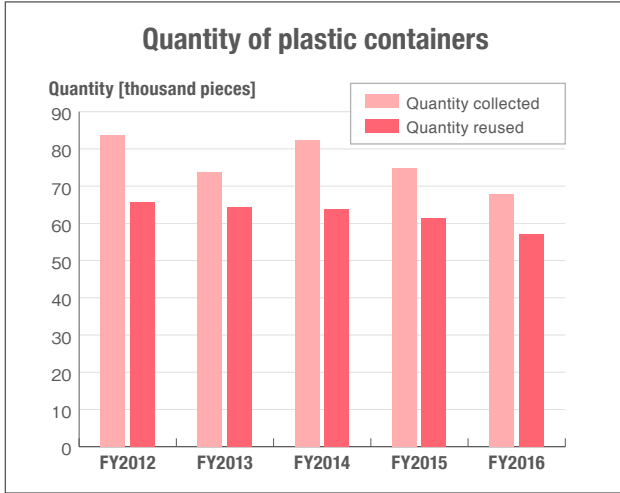
## Activities related to the reuse of containers

We are reusing containers as products to eliminate waste and effectively use resources.

The main containers in our products include 20-liter plastic containers and 200-liter plastic drums. We outsource the collection of empty containers after customers use them. We then sort usable containers from the collected containers. Among the reusable containers, plastic containers are washed at our company, and plastic drums at contractors and our company so they can be reused.

The graph describes the number of plastic containers and plastic drums collected and the number of reused containers.

The collection rates of the plastic containers and plastic drums were 46.8% and 34.5%, respectively, in FY2016, a decrease of 5.9% and 4.1% from FY2015.



## Proper disposal of wastes

The amount of waste generated in FY2016 was 333 tons, up 33% compared with FY2015(250t). The main causes include the increased amount of wastes due to the relocation to Amagasaki Head Office and the disposal of samples at factories.

We are reusing containers as products to eliminate waste and effectively use resources.

In addition, plastic containers, plastic drums, pallets, etc. that can no longer be reused in the factories have been recycled as plastic since FY2008. In ways like this, we are making efforts to reduce the amount of waste we treat.

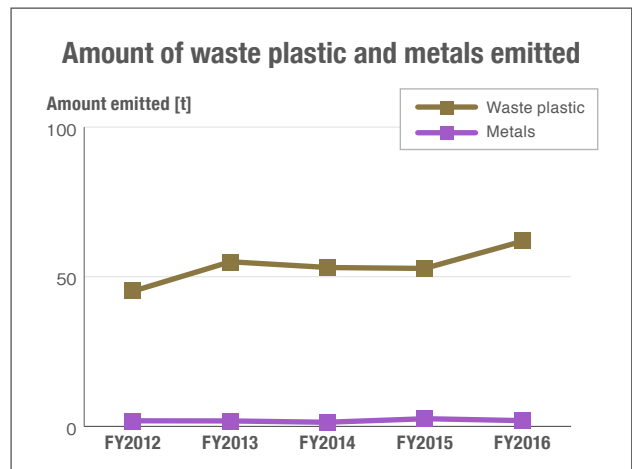
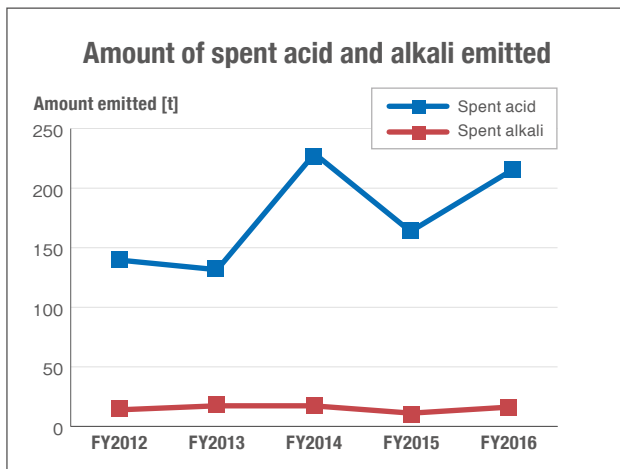
In addition, we are making efforts to separate metals and sell them as a valuable resource.

Of the amount of waste generated, the amount of recyclable waste in FY2016 was 70 tons, a 30% increase(54t) from FY2015. A main cause is the increased disposal of waste plastics at factories.

Other than this, the waste from individual offices is separated based on the separation rules of each office.

The final volume of waste disposed of in FY2016 was 263 tons, up 34 % compared with FY2015(196t). More wastes were generated from R&D Center and factories, and this directly resulted in the increased disposal of wastes.

We will continue making efforts to reduce the amount of waste, while aiming to thoroughly sort any waste generated. We will also strengthen efforts for further recycling and strive to reduce the volume of waste disposed of.



## MANAGEMENT OF CHEMICAL SUBSTANCES

### Management of chemicals in products

We have established a system to manage chemicals in products covering from the purchase of raw materials to the shipment of products to prevent products from being unintentionally contaminated with prohibited chemicals. We will improve the operations of the system by revising the Management Standard for Chemicals in Products in January 2017. We are striving to reinforce the system so that we can further improve the management of chemicals in products by having plants and suppliers involved in this area.

### The PRTR System \*Handling of target substances

Among the chemicals we used in FY2016, 18 chemicals and 189 tons of them were PRTR target substances. We are using them while properly managing them at factories and R&D Center.

**The PRTR System\*** : A system for the authorities to identify, organize, and release data on the amount of chemical substances released into the environment and the amount transported out of businesses as a part of wastes based on reports and estimates submitted from businesses



We are continuing to be actively involved  
in environmental conservation activities based  
on the recognition that one of our important missions  
is to reduce environmental loads.



<http://www.mec-co.com>