# Activities of Affiliated Companies

## Domestic Companies

### **Domestic Affiliated Company Subcommittee**

FHI periodically convenes an Environmental Problems Meeting with seven of our affiliated companies<sup>\*1</sup> (excluding Subaru dealers) that have significant environmental impacts in their manufacturing or transport businesses as the Domestic Affiliated Company Subcommittee in the



Production Environment Committee, one of the subcommittees in the FHI Corporate Environment Committee. We guide and support establishment of each company's environmental management system to reduce the environmental impact, which has brought results such as waste reduction and energy saving.



Environmental Problems Meeting held at Kiryu Industrial Co., Ltd. (February 2004)



Greeting by Mr. Arasawa, executive vice president and chairman of Corporate Environment Committee

These meetings have been held in the respective affiliated companies. The employees of other companies can learn from each other through presentations about each company's environmental preservation activities and see their plants. Meetings were held at Fuji Robin Industries Ltd. in June 2003; Subaru Physical Distribution Company and Subaru K.D. Logistic Co., Ltd., in September; Yusoki Kogyo K.K. in November; and Kiryu Industrial Co., Ltd., in February 2004, which means that the meetings have been held in all participating companies.

In April 2004, FHI had a liaison meeting with four relatively large affiliated companies, which were not related to manufacturing, and started working on environmental preservation activities as a group.



Meeting held in Yusoki Kogyo K.K. (November 2003)



Plant tour in Yusoki Kogyo K.K.

Acquiring ISO 14001 Certification

In fiscal 2003, Subaru Physical Distribution Company and Ichitan Co., Ltd., acquired ISO 14001 certification. This means four out of seven companies in the Domestic Affiliated Company Subcommittee have already obtained ISO 14001 certification and the rest of the companies are working to acquire ISO 14001 in fiscal 2004.

#### An Example of Activities by Affiliated Companies (Ichitan Co., Ltd.)

Ichitan Co., Ltd., is a forging manufacturer whose processing field includes hot forging, cold forging, hot-cold forging, and machine processing. In order to respond to increasing public concern for environmental issues, the company decided to



Ichitan Co., Ltd.

play an active role in global environmental conservation and improvement of the environment in plants in October 2001.

The company acquired ISO 14001 certification in March 2004 and is now working on continuous improvement of environmental conservation activities including energy savings and zero emissions through four section meetings. The plant uses a huge amount of energy to heat steel products to about 1,250 degrees Celsius in the hot forging process. Heat consumption per production goals were set up for each press line, and all employees are working on energy saving activities. In the largest 4,500-ton press line, the company



reduced the amount of electricity use by 10% compared with the previous year by reviewing heating conditions and by reducing facility shutdown due to problems. This is almost equivalent to the amount of electricity used in 200 homes

Ex-waste station transformed into green space

#### every month.

Also, the company changed the location of the waste station, which used to be in the back of plants, and set up waste carriages that were directly linked to each workplace. This enabled easier transportation of waste and created green space, eventually contributing to environmental conservation. Based on the net navigation system possessed by the membership of professional institutions, the new environmental management system of Ichitan Co., Ltd., is rational and effective, including environmental education on the Net.

\*1. Seven affiliated companies related to manufacturing and transportation Yusoki Kogyo K.K.: Manufacture and sales of trailers, crane trucks, construction materials, and automobile parts Fuji Robin Industries Ltd.: Manufacture, service, and sales of agricultural/forestry equipment, engines, and fire pumps Fuji Machinery Co., Ltd.: Manufacture and sales of automobile parts, industrial machinery, and agricultural transmissions Ichitan Co., Ltd.: Manufacture and sales of forged parts for automobiles and industrial machinery Kiryu Industrial Co., Ltd.: Manufacture of Subaru specially equipped automobiles and logistics control of Subaru automobile parts Subaru Physical Distribution Company: Shipping and land freight for automobiles and their parts Subaru K.D. Logistic Co., Ltd.: Packaging and delivery of production machinery and parts for overseas

## Actual Achievements of Seven Affiliated Companies in Fiscal 2003

#### **Environmental Accounting and Environmental Performances**

As for waste reduction, energy savings and reduction of CO<sub>2</sub> emissions, the environmental costs were reduced by about 10% compared to the previous year, and the environmental impact was also steadily reduced, which we believe is a good trend. The environmental costs were reduced

by about 4% including prevention of pollution costs throughout the entire production stage. The amount of PRTR chemical substances used increased mainly due to increase in the amount of paints used for the growing production of trailers (51% increase compared with the previous year) at Yusoki Kogyo K.K. We are going to make efforts to reduce these substances. (Actual achievements in fiscal 2003, from April 2003 to March 2004, were calculated based on the FHI's Environmental Accounting Guidelines. See

p. 13–14 regarding FHI's environmental accounting.)

Environmental costs				Economic effects			Environmental performance (quantitative effects)					
Cost category Text in the [ ] is a cost category in		Amount (¥million) Fiscal Fi <u>scal</u>		Details	Amount ( Fiscal	¥million) Fiscal	Category	Unit	Fiscal	Fiscal		
"Guidelines by Ministry of Environment"*1		2003	2002		2003	2002			2003	2002		
sts for reducing environmental impacts (production stage	Waste treatment and recycling, waste	100	140	Reduced costs through waste control and	100	00	Total amount generated	ton	12,787	14,692		
	[1]-3]	129	140	the sales of materials obtained from recycling	132	96	Amount of waste generated	ton	914 374	1,307		
	Energy conservation CO. emissions						Amount of energy used (crude oil equivalent)	KL	17,857	18,562		
	reduction [① -2]	33	37	Reduced energy costs	9	29	Energy consumption per production	KL/ ¥100 million	36.91	43.48		
							CO₂ emissions	ton	30,271	31,548		
	Pollution control such as wastewater and exhaust gas treatment	85	79	Reduced costs from replacing cleaning agents (chemical agents)	0	0	PRTR chemicals*2					
							Amount handled	ton	150	131		
	[[]-1]						Amount released and transferred	ton	89	70		
Investment costs 00	I otal costs to reduce environmental impacts	247	256	I otal savings from environmental impact reduction effects	141	125	*1. Cost categories in "Guidelines by Ministry of Environment"					
	Education, ISO 14001 related matters, investigation, and others [③]	61	64	_	-	-	Business area costs     -1 Pollution control cost     -2 Global environmental conservation cost     -3 Resource circulation cost					
	Product research and development $[\textcircled{4}]$	110	112									
	Total investment costs	171	176	(Total investment effects) N/A for the time being	0	0	<ul> <li>② Upstream and downstream cost</li> </ul>					
Other costs	Cost increment for material changes, measures for end-of-life products, social contribution, environmental measures, and others [②⑤⑥⑦]	18	41	Reduced costs by changing raw materials Virgin material procurement costs reduced by using recycled materials	0	0	<ul> <li>③ Management activity cost</li> <li>④ Research and development cost</li> <li>⑤ Social activity cost</li> <li>⑥ Environmental damage cost</li> <li>⑦ Other costs</li> <li>*2. PRTR chemical: Only amounts exceeding one to</li> </ul>					
Total other costs		18	41		0	0	year were calculated (exceeding 0.5 tons a year for					
Total cost		436	472	Total other effects	141	125	opconieu Glass i Designateu Grieffildal Subsi					



#### **O**PRTR

Substances marked with \* are Specified Class 1 Designated Chemical Substances. (Unit: Tons per year)

Codo		Namo	Fiscal 2003			
Coue	CAS NO.	Iname	Amount handled	Amount released	Amount transferred	
40	100-41-4	Ethylbenzene	6.39	3.53	0.07	
63	1330-20-7	Xylene	61.89	35.64	0.92	
68	103-23-1	Chromium(III) compounds	3.21	0.64	2.57	
69*	none	Chromium(VI) compounds	4.45	0	0	
227	108-88-3	Toluene	72.89	44.28	1.27	
299*	71-43-2	Benzene	0.93	0	0	
	Total		149.76	84.09	4.83	



Note: Only amounts handled in each company subject to the PRTR Law and exceeding one ton a year were calculated (exceeding 0.5 tons a year for Specified Class 1 Designated Chemical Substances).

# Activities by Affiliated Companies — Overseas Companies -

FHI and five affiliated companies in North America (SIA, SOA, RMI, SCI, SRD)\*<sup>1</sup> established the North American Environment Committee (current chairman: Mr. Oikawa, president of SIA) under the Corporate Environment Committee and held the first meeting at SIA in June 2003 with attendance of Mr. Hanada, senior executive vice president and chairman of the Corporate Environment Committee at that time. Since then, we have had meetings in October 2003 (second meeting) and February 2004 (third meeting) and started global environmental efforts such as reporting environmental conservation activities at each company and discussing future plans. The third committee meeting was held with Mr. Arasawa, executive vice president and chairman of the Corporate Environment Committee.

RMI has endeavored to construct its environmental management system just after the establishment of the North American Environmental Committee and obtained ISO 14001 certification in November 2003.

\*1. SIA: Subaru of Indiana Automotive, Inc.
SOA: Subaru of America, Inc.
RMI: Robin Manufacturing U.S.A., Inc.
SCI: Subaru Canada, Inc.
SRD: Subaru Research and Development, Inc.
See p. 5 for locations and other information about these companies

## Activities of SIA

SIA is a production base of Subaru automobiles in the United States and acquired ISO 14001 certification in 1998.

SIA also implements activities in consideration of natural environment in its factory. In 2002, the company was designated a Wildlife Habitat by participating in the Backyard Wildlife Habitat Program<sup>\*2</sup> sponsored by the National Wildlife Federation. The federation appreciates that the environment in the SIA factory contributes to the protection of wildlife such as wild birds.

\*2. Backyard Wildlife Habitat Program: A program for households and companies promoted by the National Wildlife Federation. It encourages the environmental design of residential or business areas, which provides wildlife with places where they can feed and get water; thereby achieving an environment where human beings and wildlife can live together.



SIA (production base of Subaru automobiles)

## **Environmental Performances of SIA**

#### **Trends in Amount of Waste Landfilled**

SIA has been conducting continuous recycling activities such as separation of waste. In 2003, a large amount of waste landfill was reduced by starting the recycling of paint sludge. (See p. 49 for details of paint sludge recycling)





The third meeting of the North American Environment Committee (at SIA in February 2004)

Mr. Arasawa, executive vice president, attending the meeting of NAEC (listening to explanation of a plaque, which was presented to SIA when they got the award related to environmental activities)



#### Trends in Amount of CO<sub>2</sub> Emitted

SIA has conducted meticulous energy-saving activities such as reducing the number of lights in walkways. Furthermore, it has reduced the amount of CO<sub>2</sub> emitted by optimizing the operating hours of driers for paint sludge.





## **Activities to Reduce Waste**

#### **Paint Sludge Recycling**

Paint sludge generated in the process of painting is generally landfilled, but SIA recycles it instead of burying it in landfills. Generated paint sludge is moved to the vendor

to be dried and mixed with plastic and is then recycled as parking lot bumpers and guard rail block absorbers. Through recycling, SIA has prevented 709 tons of paint sludge from being disposed of in a landfill in 2003.



Parking lot bumpers made from recycled paint sludge

#### **Recycling of Solvent**

Solvent used in the process of painting is processed and recycled with a solvent recycling unit. This unit collects used solvent in a pot, separates the solvent from paints and foreign particulates by heating and vaporizing, and cools it into liquid to reproduce solvent ready for use. SIA

is one of the few, unique companies in the United States which own this system.

The closed loop recovery unit eliminates any chance for fugitive emissions to escape while handling and transferring the solvent. SIA began using this system in 2002 and recycled 305 tons of solvent in 2003.



Solvent recycling unit

# \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*

## SIA received the Governor's Award for Environmental Excellence in Indiana

SIA received the Governor's Award for Environmental Excellence 2003 for Recycle and Reuse from the Indiana Department of Environmental Management. The state government of Indiana appreciated the fact that SIA



contributed to a reduction in the amount of landfill by recycling about 87% of waste (55,000 tons) generated within the company from 2001 to 2002.

Mr. Kernan, governor of Indiana (center) and SIA staff responsible for the environment

## **Activities of RMI**

RMI assembles multipurpose engines, ATV engines and processes parts. RMI acquired ISO 14001 certification in November 2003.

Staff worked to acquire ISO 14001 certification (right in the second line: Mr. Toda, president of RMI)



## Energy Saving Activities by Improving Thermal Protection System on the Roof

RMI installed thermal protection layers, which is about 2 inches thick and coated white, on the thermal protection materials of the plants' roof. The thermal protection layers keep the building cool in the summer and reduce the amount of gas consumed for heaters in the winter. It is expected that this improvement will reduce 15% of gas consumed at RMI.

Installing the 2-inch thick thermal protection layers on the roof



#### Introduction of Returnable Cardboard Boxes

Cardboard boxes used for packaging of knockdown parts sent from Japan were changed into returnable boxes. Also, RMI started using returnable pallets as well as changing wall surfaces, partitions, and inner sheets of the box into reusable plastic.



Returnable pallet (wall surfaces can be used repeatedly)



### Activities of Affiliated Companies – Overseas Companies –

## Activities of SOA

SOA is a sales base for Subaru automobiles in the United States. SOA and the Subaru of America Foundation have been working on social contribution activities on environmental issues.

### Wall Painting in Camden City, New Jersey

The picture below is a mural called "I Saw a City Invincible" in Camden City, New Jersey. Cesar Viveros, a mural painter, painted it for a project of the Perkins Center for the Arts. Landscaping activities such as creating wall painting works in selected sites are conducted in Camden City every year. Another new wall painting was finished in 2003 with the financial support of the Subaru of America Foundation.



Wall Painting in Camden City

#### **Green Reach Activity**

Green Reach is an outreach program of Denver Botanic Gardens (Denver, Colorado). It encompasses three programs: Cultivation Cruiser, Growing Classroom, and Wintergreen. The Cultivation Cruiser outreach program is geared toward grades K–12 and is sponsored by SOA. The program is offered free of charge to schools in the Denver Metro area and offers hands-on learning, discussions, and planting activities to teach students a particular theme and green activities. Since its inception in February 2002, more than 500 classroom visits have been made, reaching more than 11,000 students.



Subaru automobiles for social contribution activities of the Denver Botanical Garden

# Activities of SCI

SCI is a sales base for Subaru automobiles in Canada. The company started rebuilding engines and automatic transmissions in 1996, and has promoted recycling of resources and cost reduction. Rebuilt transmissions used to be transported in wooden crates, but the crates could be used only once or twice. Then, SCI chose plastic containers which can be used twenty to twenty-five times and consequently reduced the amount of scrapped wooden crates. SCI is now developing plastic containers for rebuilt engines that will be made practicable soon.





Introduced containers for rebuilt transmissions

## Activities of SRD

SRD is a research base for Subaru automobiles in the United States. SRD set up goals of 2003 environmental activities, and worked on improvement in the recycling ratio and reduction of landfills by further separating waste, optimizing preset temperatures for air conditioners in the office, and reducing energy used by reviewing exhaust emission measuring devices. As a result, SRD successfully reduced the total amount of waste from 7.1 tons to 1.8 tons.



Mugs are used instead of paper cups to reduce waste.

