Progress in environmental activities

Environmental education

ISO14001

Environmental accounting

Managing and reducing pollutants

Plant site data

Separate volume

NHK SPRING REPORT 2022

Environmental Data

Manufacturing Derived from Springs.

—— Technology to Change & Unchanged Reliance

NHK

NHK SPRING CO.,LTD.

Progress in Environmental Activities

	Progress by NHK Spring	Progress by domestic Group companies	Trends in society
2002	Jan.: Recycling Center completed at Yokohama site Feb.: 6th Revised Environmental Voluntary Action Plan May: 8th Global Environment Forum held Jun.: Received 10th Yokohama Environmental Conservation Work Award Dec.: Yokohama Site received Fiscal 2002 Kanagawa Global Environment Award	Mar.: NHK Teleflex Corporation (now NHK MEC Corporation) gained ISO 14001 certification Apr.: Tokuhatsu gained ISO 14001 certification Oct.: NHK Sales Company gained ISO 14001 certification Oct.: NHK Spring Mutsumi-kai Technical Committee Global Environmental Issues Subcommittee launched	Soil Contamination Countermeasures Law announced Automobile Recycling Law announced Japan ratified the Kyoto Protocol
2003	Feb.: 7th Revised Environmental Voluntary Action Plan Mar.: Zero emissions achieved at Yokohama site Jun.: 9th Global Environment Forum held	May: NHK Spring Mutsumi-kai Technical Committee Global Environmental Issues Subcommittee meeting Jul.: NHK Transport gained ISO 14001 certification Oct.: Sumihatsu gained ISO 14001 certification Oct.: Uniflex (now NHK FLEX Company) gained ISO 14001 certification Nov.: Nippon Shaft gained ISO 14001 certification	Automobile Recycling Law enacted Soil Contamination Countermeasures Law enacted Amended Law Concerning the Rational Use of Energy enacted
2004	Feb.: 8th Revised Environmental Voluntary Action Plan Jun.: 10th Global Environment Forum held Dec.: Atsugi Plant received Fiscal 2004 Kanagawa Global Environment Award	Jul.: NHK Spring Mutsumi-kai Technical Committee Global Environmental Issues Subcommittee meeting Sep.: Tohoku Nippatsu gained ISO 14001 certification	Amended Air Pollution Control Law announced
2005	Jan.: Yokohama Site received Commendation at PRTR Awards Feb.: 9th Revised Environmental Voluntary Action Plan May: 11th Global Environment Forum held	Mar.: SNIC gained ISO 14001 certification Mar.: Faurecia-NHK Kyushu gained ISO 14001 certification	Amended Automobile Recycling Law enacted Kyoto Protocol came into force
2006	Feb.: 10th Revised Environmental Voluntary Action Plan Jun.: 12th Global Environment Forum held Dec.: Isehara Plant received Fiscal 2006 Kanagawa Global Environment Award	Feb.: NHK Precision gained ISO 14001 certification Mar.: Ayase Seimitsu gained ISO 14001 certification	Amended Law Concerning the Rational Use of Energy enacted Amended Law Concerning the Promotion of Measures to Cope with Global Warming enacted
2007	Jun.: 13th Global Environment Forum held	May: Ites gained ISO 14001 certification May: Sindai gained ISO 14001 certification	Amended Law Concerning the Recovery and Destruction of Fluorocarbons enacted
2008	Jun.: 11th Revised Environmental Voluntary Action Plan Jun.: 14th Global Environment Forum held	Jun.: Group Company Environmental Liaison Committee announced	G8 Toyako Summit (Hokkaido)
2009	Feb.: Installed a solar electric generator panel at Yokohama site Jun.: 15th Global Environment Forum held		G8 L'Aquila Summit (Italy)
2010	Jun.: 16th Global Environment Forum held	Feb.: NHK Transport gained Green Management certification Mar.: Domestic Group companies achieved zero emissions	Tenth Conference of the Parties to the Convention on Biological Diversity (COP10) Implementation of Amended Soil Contamination Countermeasures Act
2011	Jun.: 17th Global Environment Forum held		Implementation of Amended Water Pollution Control Act (Storage Facilities)
2012	Jun.: 18th Global Environment Forum held Nov.: Yokohama Site recognized as an Excellent Sitein 3R (Let's Reduce, Reuse and Recycle!) by Yokohama City		Implementation of Amended Water Pollution Control Act (Facilities using Hazardous Substances) First commitment period under Kyoto Agreement ended
2013	Feb.: Yokohama Site won the Energy Saving Award of Kanagawa Global Environment Prize Nov.: 24th NHK Spring Forum held (merged with the 19th Global Environmental Forum) Nov.: Yokohama Site received Yokohama City recognition for excellence in the 3Rs (Let's Reduce, Reuse and Recycle!) (two years in a row)	Dec.: Tokuhatsu Sanda Plant completed and solar generation panels installed on plant roof	Start of the Kyoto Protocol second commitment period (2013 - 2020)
2014	Apr.: Starting Clean-up Activity of NHK Spring Mitsuzawa Football Stadium by Volunteers Oct.: Yokohama Site received energy efficiency field visit from the Ministry of Economy, Trade and Industry Nov.: 25th Global Environment Forum Nov.: Yokohama Site received Yokohama City recognition for excellence in the 3Rs (Let's Reduce, Reuse and Recycle!) (three years in a row)	Nov.: NHK Spring Production Company received climate change field survey based on the Kanagawa Prefecture ordinance Dec.: Tokuhatsu Sanda Plant received ISO 14001 certification (expanded authentication)	United Nations Climate Change Summit held Publication of the IPCC Fifth Assessment Report Act on Rational Use and Proper Management of Fluorocarbons enacted
2015	Oct.: 26th Global Environment Forum held Nov.: Komagane Plant (Industrial Machinery & Equipment) receiving on-site GHG countermeasure survey based on regulations of Nagano Prefecture Nov.: Yokohama Site received Yokohama City recognition for excellence in the 3Rs (Let's Reduce, Reuse and Recycle!) (four years in a row)	Jun.: Tohoku Nippatsu, Nippon Shaft and Sumihatsu recognized as S-Class energy conservation method service providers	United Nations Framework Convention on Climate Change (COP21) Adoption of Paris Agreement
2016	Nov.: 27th Global Environment Forum held Nov.: Yokohama Site received Yokohama City recognition for excellence in the 3Rs (Let's Reduce, Reuse and Recycle!) (five years in a row)	Jun.: Tohoku Nippatsu, Nippon Shaft and NHK Precision recognized as S-Class energy conservation method service providers	Minamata Convention on Mercury enacted The enactment of law to prevent mercury pollution Amendments to the Stockholm Convention on Persistent Organic Pollutants (POPs Convention)
2017	Aug.: NHK Spring Group started energy conservation diagnostics Nov.: 28th Global Environment Forum held Dec.: Yokohama Site received Yokohama City recognition for excellence in the 3Rs (Let's Reduce, Reuse and Recycle!) (six years in a row)	Jun.: Tohoku Nippatsu, Nippon Shaft, NHK Precision, and Topura recognized as S-Class energy conservation method service providers Sep.: NHK Spring Group started energy conservation diagnostics	Issuance of the Chemical Substances Control Law Chinese Waste Import Controls: Restricts imports of some solid wastes
2018	NHK Spring recognized as an S-Class energy conservation method service provider Nov.: 29th Global Environment Forum held Dec.: Yokohama Site received Yokohama City recognition for excellence in the 3R (Let's Reduce, Reuse and Recycle!) (seven years in a row)	Jun.: Tohoku Nippatsu, Nippon Shaft and NHK Precision recognized as S-Class energy conservation method service providers Oct.: Each NHK Spring plant that had acquired ISO 14001 certification has completed its update to the 2015 version of the standard	The 24th United Nations Framework Convention on Climate Change (COP24) was held The particulars (implementation policy) of the Paris Agreement were determined
2019	Jun.: Yokohama Site received the Yokohama Global Warming Countermeasures Prize Sep.: NHK Spring Group implemented energy conservation diagnostics Nov.: 30th Global Environment Forum held Dec.: Yokohama Site received Yokohama City recognition for excellence in the 3Rs (Let's Reduce, Reuse and Recycle!) (eight years in a row)	Jun.: Tohoku Nippatsu, Nippon Shaft, NHK Precision, and Topura recognized as S-Class energy conservation method service providers	The 25th United Nations Framework Convention on Climate Change (COP25) was held Decision on market mechanisms for the Paris Agreement The United States officially notifies the United Nations of its withdrawal from the Paris Agreement The Japanese government formulates an action plan on countermeasures for ocean plastic waste
2020	Apr.: NHK Spring recognized as an S-Class energy conservation method service provider Dec.: Yokohama Site received Yokohama City recognition for excellence in the 3Rs (Let's Reduce, Reuse and Recycle!) (nine years in a row)	Jun.: Nippon Shaft recognized as S-Class energy conservation method service provider	Initial year of the Paris Agreement Fee charged for store shopping bags in Japan Japanese Government Declares Goal of Achieving Carbon Neutrality by 2050
2021	Sep NHK Spring Group declared their Environmental Challenges(Carbon Neutrality on 2039, Zero Industrial Waste) Dec.. Yokohama Site received Yokohama City recognition of rexcellence in the 3Rs (Let's Redue, Reuse and Recycle!) (Ten years in a row)	Jun. Horikiri, Nippon Shaft and NHK Precision recognized asa S-Class conservation method service providers	Act on Promotion of Resource Recycling of Plastics, went into effect.

Environmental Education

We conduct a variety of environmental education and consciousness-raising activities to ensure that all our employees carry out their regular jobs with knowledge of the environment and a high level of awareness of the issues.

Environmental Education

Raising the environmental consciousness of individual employees is important in carrying environmental work forward. Our Group has an excellent in-house training system to extend awareness of environmental issues, including a range of environmental education programs, training for internal environmental auditors, and encouragement to acquire external qualifications.

At NHK Spring, we offer different levels of education for all employees, as well as specialist training for staff with particular environmental responsibilities. General environmental education at different levels is included in our staff training programs and is repeatedly implemented with every promotion. Specialist education is provided when staff begin new positions, and regular skill upgrading is also provided.

Furthermore, abstracts of relevant domestic environmental laws have been periodically distributed to Group companies since FY2014 to share information.

Contents of Environmental Education (FY2021 results)

Trainings by employees level		
Target trainees	**Content of education**	
Training for new employees	Description of initiatives by NHK Spring Group regarding global environmental issues, environmental management systems, environmental laws & regulations, and other requirements by stakeholders.	
Training for new assistant managers		
Training for new supervisors		
Training for new managers		
Education for specialized personnel		
Target trainees	**Content of education**	
Internal Environmental Auditors (ISO revision compliant)	Education to become an auditor	Internal Environmental Auditor training courses
	Skills upgrading training	Workshops for Chief Environmental Auditors
Overseas assignees (expatriates)	Environmental management system, overseas environmental laws and regulations, NHK Spring Group environmental requirements, etc.	

Environment-related qualification holders

221 people

(including persons with multiple qualifications)

Internal Environmental Auditor training courses (environmental education, FY2019)
*Courses cancelled during FY2020 and FY2021 due to the COVID-19 pandemic.

Number of Staff with Environmental Qualifications (as of May 2022)

Qualification	Classification		Number of qualification holders
Pollution Control Manager	Air	First grade	4
		Other	25
	Water	First grade	5
		Other	29
	Noise		31
	Vibration		32
	Dioxins		0
Environmental Management System Auditor	Assistant Auditor		1
Working Environment Measurement Expert	First grade	Dust	3
		Special chemicals	2
		Metals	1
		Organic solvents	3
	Second grade		4
Certified Environmental Measurer	Concentration-related		2
Specially Controlled Industrial Waste Manager			37
Qualified Energy Manager			28
Energy Managers for Second grade Designated Energy Management Factories			14
Total (including persons with multiple qualifications)			221

ISO14001 Initiatives

In order to systematically address environmental preservation, we have obtained ISO 14001 certification, the international standard for environmental management systems.

NHK Spring Certification Status

We began preparations to acquire ISO 14001 certification in 1996 and acquired the certification at our Yokohama Plant (Suspension Springs) in January 1997 before our competitors in the same industry. This was followed by the acquisition of ISO 14001 at three plants every year until the final plant was certified in April 2001, thereby resulting in the acquisition of certification at all our 11 plants in Japan. Each NHK Spring plant with ISO 14001 certification has, as of October 2018, completed its update to ISO 14001:2015. There are now 12 plants that have acquired certification, including the Miyada Plant, which acquired it in September 2021. We will continue our efforts to maintain this status in future.

ISO 14001 certification **12** plants (Japan)

Certification Status of Group Companies

● Domestic Group companies

In Mutsumi-kai, the party of domestic NHK Group companies, all 17 of the companies belonging to the Engineering Subcommittee of NHK Spring have acquired ISO 14001 certification. As of October 2018, all domestic Group companies with ISO 14001 certification have completed updating to ISO 14001:2015. We will strive to keep this status.

● Overseas Group companies

We are also progressing with the acquisition of ISO 14001 certification at our overseas Group companies. As of FY2021, 16 companies have acquired certification, and more companies will be certified in the future.

Group companies with ISO 14001 certification

17 companies (Japan), **16** companies (Overseas)

●Dates of ISO 14001 Certification Acquisition in NHK Spring

Division	Plant	Acquisition date
Suspension Spring Divisions	Yokohama Plant (Suspension Springs)	January 1997
	Shiga Plant	March 1998
Seating Division	Gunma Plant	March 1998
	Yokohama Plant (Seating)	May 1999
	Toyota Plant	March 1999
Precision Spring & Components Division	Ina Plant	June 1999
	Atsugi Plant	November 2000
DDS (Disk Drive Suspension) Division	Komagane Plant (DDS)	June 2000
Industrial Machinery & Equipment Division	Isehara Plant	April 2001
	Miyada Plant	September 2021
	Komagane Plant (Industrial Machinery & Equipment)	November 1998
	Yasu Plant	August 2000

●Dates of ISO 14001 Certification Acquisition by Group Companies

Region	Company name	Acquisition date
Japan	NHK Sales, Co., Ltd.	October 2002
	NHK Spring Production Company	August 2001
	Sumihatsu Co., Ltd.	October 2003
	Horikiri, Inc.	May 2001
	Tohoku Nippatsu Co., Ltd.	September 2004
	Ites Co., Ltd.	May 2007
	Faurecia-NHK Kyushu Co., Ltd.	March 2005
	Sindai Co., Ltd.	May 2007
	NHK FLEX Co., Ltd.	October 2003
	Ayase Seimitsu Co., Ltd.	March 2006
	Tokuhatsu Co., Ltd.	April 2002
	NHK Precision Co., Ltd.	February 2006
	NHK MEC Corporation	March 2002
	Nippon Shaft Co., Ltd.	November 2003
	Topura Co., Ltd.	November 2001
	Yokohama Kiko Co., Ltd.	August 2001
	NHK Seating Mizushima Co., Ltd.	June 2001
North and South America	New Mather Metals, Inc.	July 2003
	NHK of America Suspension Components Inc.	January 2003
	NHK Seating of America Inc.	September 2004
	Rassini-NHK Autopecas Ltda.	May 2002
Asia	NHK Spring (Thailand) Co., Ltd.	June 2000
	NHK Precision (Thailand) Co., Ltd.	January 2005
	Autrans (Thailand) Co., Ltd.	May 2004
	NHK Manufacturing (Malaysia) SDN. BHD.	August 2001
	NHK-Uni Spring (Guangzhou) Co., Ltd.	March 2005
	NHK Spring Precision (Guangzhou) Co., Ltd.	January 2006
	NAT Peripheral (Dong Guan) Co., Ltd.	October 2005
	Uni Auto Parts Manufacture Co., Ltd.	March 2006
	NHK Spring India Ltd.	October 2003
	NHK Spring Philippines, Inc.	October 2014
	NHK Automotive Components India Private Limited	January 2010
Europe	Iberica de Suspensiones, S.L.	December 2003

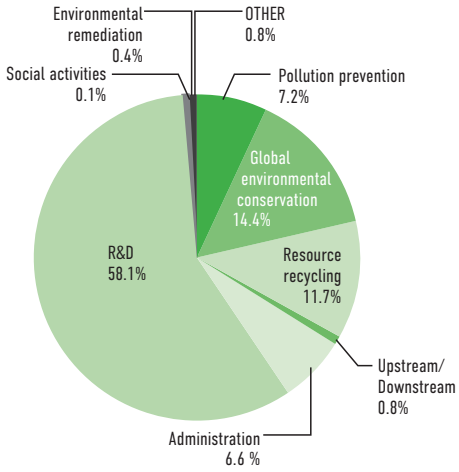
Environmental Accounting

We identify the costs and effects of our environmental conservation activities in environmental accounting and utilize this information in running the company.

FY2021 Environmental Accounts - Classifications and Results

We introduced environmental accounting in FY2000 in accordance with the Environmental Accounting Guidelines (2005 edition) issued by the Ministry of the Environment while collecting data for the nine categories listed in the table on the right.

Using fixed criteria set by us, total environmental expenditures in FY2021 amounted to JPY 1,618.7 million. The breakdown is shown in the table below. R&D costs increased due to investment in development of electric vehicle components, while global environmental conservation costs increased due to investments related to CO_2 reduction. Pollution prevention costs declined because there were no new investments related to wastewater treatment facilities. Other costs were more or less in line with the previous year.



FY2021 - Environmental Conservation Costs

(Unit: JPY million/year)

Cost classification	Main elements	Value in FY2020*	Value in FY2021*
①Pollution prevention	Maintenance costs for wastewater treatment facilities and dust collectors Costs for measuring and monitoring air, water, noise, etc. Other costs required for pollution prevention	263.8	116.7
②Global environmental conservation	Costs for control of fluorocarbons and other gas emissions, energy saving measures, global warming prevention, etc.	202.8	233.7
③Resource recycling	Waste treatment, zero emissions measures, in-house recycling, PCB waste treatment, etc.	206.3	189.9
④Upstream/Downstream	Expenses to reduce the environmental impact generated by our production activities at suppliers, customers, etc. (green purchasing, product recycling, packaging material reduction costs, etc.)	14.0	12.2
⑤Administration	Waste manifest management, ISO 14001 maintenance and renewal inspections and ISO 14001 office personnel costs, reporting to administrative authorities, etc.	109.0	106.7
⑥R&D	Research to reduce environmental loads, and development of products that will contribute to reducing environmental loads	826.0	939.8
⑦Social activities	Implementation of social contribution activities (cleaning of local areas and rivers)	1.0	1.5
⑧Environmental remediation	Remediating environmental damage in local areas	2.0	5.8
⑨Other	Costs incurred in environmental remediation activities other than the above (including costs for PCB waste management)	6.6	12.3
Total		1631.5	1618.7

*Value: Totals of "Environmental Investments" and "Environmental Conservation"

FY2021 Environmental conservation cost JPY1,618.7 million

Classifications and Performance of Investment Effect in FY2021

Results for FY2021 are shown in the table below.

Unit energy consumption and unit CO_2 emissions decreased slightly from the previous year. The amount of landfilled waste, which had remained at a low level since FY2010 due to the promotion of waste recycling and conversion to valuable resources, increased by 1.2 tons in FY2021 compared to the previous fiscal year. The amount of recycled waste increased by 3,200 tons over the previous year, partly due to an increase in valuable resources. Unit energy and water costs increased due to higher unit costs and usage. We will continue to make improvements through more efficient use of energy and water.

FY2021 Investment Effects and Performance

	Material effects *1			Economic effects *2			Assessment
	FY2020 results	FY2021 results	Effects	FY2020 results	FY2021 results	Effects	
Unit energy use (GJ/JPY million) *3	10.2	10.0	△ 0.2	—	—	—	○
Unit CO_2 emissions (ton-CO_2/JPY 100 million) *3	48.1	47.5	△ 0.6	—	—	—	○
Landfilled wastes (tons/year)	3.0	4.2	1.2	—	—	—	△
Recycled wastes (tons/year)	22,538	25,784	3,246	—	—	—	○
Unit energy and water costs (JPY/JPY 1,000) *3	—	—	—	14.5	17.6	3.1	×
Gain on sales from recycling (JPY million)	—	—	—	520	1,111	591	○

*1 Material effects: Reduction in environmentally hazardous substances, etc. *2 Economic effects: Energy and waste-related cost reductions, etc. *3 Unit: Value to sales

Management and Reduction of Environmentally Hazardous Substances

We strive to properly manage and reduce environmentally hazardous substances according to related legislation, the rules of organizations to which we are affiliated, our own in-house standards and so on.

Pollutant Release and Transfer Register (PRTR) Surveys

Since FY1997, we have taken part in voluntary PRTR surveys organized by Nippon Keidanren (Japan Business Federation), in an effort to establish the amount of environmentally hazardous substances handled, released, and transferred.

We have been reporting data to the Ministry of Economy, Trade and Industry under the PRTR Law since June 2001, and we have set up our own survey criteria to monitor the handling of chemical substances used in all of our divisions.

Furthermore, since FY2005, our domestic Group companies have conducted the same voluntary PRTR surveys in an effort to reduce the release of such substances.

The table below lists each of the substances of which we handle a total of at least 0.1 tons per year.

Since FY2011, we have continuously managed not only substances of very high concern under the European REACH regulation, but also chemical substances that are expected to be regulated in the future so as not to use them during manufacturing.

Results of FY2021 Survey of Releases and Transfers of Environmentally Hazardous Substances (April 2021-March 2022)

■ NHK Spring

(Unit: tons/year)

PRTR Substance No.	Target substance	Type of designated chemical substance	Amount handled yearly	Amount emitted						Amount transferred	
				Air	Water quality	Soil	In-house landfill at plants			Industrial Waste (subcontracted)	Waste (subcontracted)
							Stable	Managed	Isolated		
1	Zinc compounds (water-soluble)	Class I	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
20	2-Aminoethanol	Class I	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	Linear alkylbenzene sulfonate	Class I	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
53	Ethyl benzene	Class I	6.1	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.4
71	Ferric chloride (solution)	Class I	117.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	113.2
80	Xylene	Class I	20.7	17.7	0.0	0.0	0.0	0.0	0.0	0.0	0.5
82	Silver and its water-soluble compounds	Class I	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
296	1,2,4-trimethylbenzene	Class I	2.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
297	1,3,5-trimethylbenzene	Class I	6.1	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
298	Toluene diisocyanate (TDI)	Class I	690.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300	Toluene	Class I	76.0	50.9	0.0	0.0	0.0	0.0	0.0	0.0	2.9
302	Naphthalene	Class I	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
309	Nickel compounds	Special Class I	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
384	1-Bromopropane	Class I	13.1	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
400	Benzene	Class I	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
405	Boron compound	Class I	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
410	Polyoxyethylene nonyl phenyl ether	Class I	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0
412	Manganese and its compounds	Class I	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
448	Methylenebis (4.1-Phenylene) = Diisocyanate (MDI)	Class I	138.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
455	Morpholine	Class I	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
	Total volume of PRTR substances		1079.3	96.6	0.0	0.0	0.0	0.0	0.0	0.6	119.0

■ Domestic Group companies

(Unit: tons/year)

PRTR Substance No.	Target substance	Type of designated chemical substance	Amount handled yearly	Amount emitted						Amount transferred	
				Air	Water quality	Soil	In-house landfill at plants			Industrial Waste (subcontracted)	Waste (subcontracted)
							Stable	Managed	Isolated		
1	Zinc compounds (water-soluble)	Class I	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	8.5
20	2-aminoethanol	Class I	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
29	Bisphenol A	Class I	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
30	Linear alkylbenzene sulfonate	Class I	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Ethyl benzene	Class I	27.2	26.8	0.0	0.0	0.0	0.0	0.0	0.0	0.4
66	1,2-Epoxybutane	Class I	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
69	2,3-Epoxypropyl phenyl ether	Class I	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	Xylene	Class I	60.6	59.6	0.0	0.0	0.0	0.0	0.0	0.0	1.0
132	Cobalt and cobalt compounds	Class I	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
232	N,N-dimethylformamide	Class I	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
296	1,2,4-trimethylbenzene	Class I	7.9	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
297	1,3,5-trimethylbenzene	Class I	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300	Toluene	Class I	102.3	101.8	0.0	0.0	0.0	0.0	0.0	0.0	0.5
304	Lead and lead compounds	Class I	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
309	Nickel compounds	Special Class I	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
321	Vanadium compounds	Class I	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
354	Bis (n-butyl) phthalate	Class I	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
384	1-Bromopropane	Class I	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2
412	Manganese and its compounds	Class I	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
448	Methylenebis (4.1-phenylene) = Diisocyanate (MDI)	Class I	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	Total volume of PRTR substances		216.5	197.8	0.0	0.0	0.0	0.0	0.0	0.2	13.5

*Industrial wastes include wastes that are recycled for a charge and those that are recycled for no charge. However, wastes that are sold are excluded. *Discharges into the public sewage system are included in the category of Amounts Transferred.

Head Office

Research and Development Division, Engineering Division

Location: Kanazawa-ku, Yokohama
Business contents: Planning, Management, R&D
Commenced operations: February 1991

Outline of Initiatives

The Head Office is located in the Yokohama Site with the Suspension Spring and Seating Divisions. In cooperation with each production division, we engage in business activities while taking into consideration the local community. We take care to respond dutifully in cooperation with the local government, especially regarding wastewater, air, noise, and waste.

Environmental Outlook and Policies

As Head Office functions, we develop new products and new equipment related to energy saving and renewable energy use, and we conduct various environmental education and training courses. We also lead environmental activities in the entire Group by compiling internal examples of good practices.

FY2021 and FY2022 Initiatives

Various risk management initiatives

To support our risk response for various issues pertaining to the new requirements of ISO 14001:2015, we check the operation of our various environmental facilities using self-audit check sheets to ascertain compliance with environmental laws and regulations. Also, we are making improvements where our response is inadequate. We will continue our efforts to address a wider range of risks, including global warming.

Management of chemical substances

We tabulate the chemical substances used at domestic plants (including those of Group companies) every year according to our own standards and disclose the results in the NHK Spring Report. We also promote risk assessment of chemical substances and 5S activities so that our operators engage in safe operations within our plants. We appropriately manage the chemical substances used in products in accordance with the Green Procurement Guidelines.

Management of wastes

In FY2021, as a result of promoting the separation and recycling of wastes, Head Office (including the Research and Development Division) achieved its targets for recycling and waste reduction. In FY2022, we will strive to maintain this recycling performance (resource recycling rate of 100%) while striving to reduce the volume of wastes by moving forward with a higher quality of recycling.

●Atmosphere (Regulated values: Air Pollution Control Act, Yokohama City Guidelines)

Substance	Equipment		Regulated value	Results
NOx	Hot water boiler	A	0.041	0.004
		B	0.025	0.009
		C	0.025	0.012
	Chilled and hot water generator	A	0.029	0.004
		B	0.018	0.006
		C	0.024	0.002
Dust	Hot water boiler	A	0.050	<0.003
		B	0.050	<0.003
		C	0.050	<0.003
	Chilled and hot water generator	A	0.050	<0.005
		B	0.050	<0.003
		C	0.050	<0.004

NOx Unit: m^3N/h Dust Unit: g/m^3N

●Water quality: Main Building (Regulated values: Yokohama City Sewerage Ordinance)

Item	Regulated value	Results		
		Maximum	Minimum	Average
pH	5 ~ 9	7.7	7.1	—
Oil	5	3.7	<0.5	1.6
Fe	3	<0.3	<0.3	<0.3
Zn	1	<0.1	<0.1	<0.1
Ni	1	<0.1	<0.1	<0.1
Total-Cr	2	<0.2	<0.1	<0.2
Fluorine	8	<0.8	<0.8	<0.8
Phenols	0.5	<0.05	<0.05	<0.05
NH_4	380	19.0	<0.3	4.8

Unit: mg/ℓ

●Water quality: R&D Building (Regulated values: Yokohama City Sewerage Ordinance)

Item	Regulated value	Results		
		Maximum	Minimum	Average
pH	5 ~ 9	7.5	6.8	—
Oil	5	2.5	<0.5	1.1
Fe	3	0.5	<0.3	0.4
Zn	1	0.2	<0.1	0.1
Ni	1	<0.1	<0.1	<0.1
Total-Cr	2	<0.2	<0.2	<0.2
Cu	1	<0.1	<0.1	<0.1
NH_4	380	27	<0.3	7.6

Unit: mg/ℓ

Suspension Spring Division

Yokohama Plant (Suspension Springs)

Location: Kanazawa-ku, Yokohama
Products: Coil springs, Leaf springs, Metal bellows
Commenced operations: November 1987

Plant Manager:
Yoshio Suzuki

Environmental Outlook and Policies

Under the slogan of "manufacturing springs that are friendly to the global environment," our plant engages in improvement activities to "reduce CO_2 emissions" and "reduce industrial waste".

Also, we "promote continuous improvement of the environmental management system with the participation of all employees" to "preserve the global environment and prevent global warming" and contribute to the creation of the environment that we will hand down to the next generation.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

We aim to become a "gas to electrification" model plant that considers environmental loads. All our employees are pulling together with high environmental awareness and conducting activities geared to achieving our FY2022 CO_2 emissions reduction goal of 738 tons in pursuit of carbon neutrality.

Waste reduction and recycling

In addition to activities for reducing the absolute quantity of wastes, we are reviewing our waste treatment methods (thermal recycling reduction) with a view to conducting environmentally aware recycling.

Environmental conservation activities

Following a period of discontinuance due to the COVID-19 pandemic, we resumed cleaning activities in the local area as part of our local community contribution initiatives.

Other

In FY2021, as part of our efforts to improve the environment inside plants, we implemented heat countermeasures comprising the installation of air conditioners and heat exhaust.

●Atmosphere (Regulated values: Air Pollution Control Act, Yokohama City Guidelines)

Substance	Equipment		Regulated value	Results
NOx	Metal heating furnace	A	0.128	0.035
		B	0.110	0.014
		C	0.212	0.041
		D	0.169	0.066
		E	0.119	0.017
	Metal tempering furnace	A	0.202	0.006
		B	0.123	0.002
		C	0.104	0.053
		D	0.085	0.024
		E	0.059	0.005
Dust	Metal heating furnace	A	0.1	<0.002
		B	0.1	<0.006
		C	0.1	<0.002
		D	0.1	<0.003
		E	0.1	<0.003
	Metal tempering furnace	A	0.1	<0.003
		B	0.1	<0.002
		C	0.1	<0.004
		D	0.1	<0.004
		E	0.1	<0.003

NOx Unit: m^3N/h Dust Unit: g/m^3N

●Water quality (Regulated values: Yokohama City Sewerage Ordinance)

Item		Regulated value	Results		
			Maximum	Minimum	Average
pH		5 ~ 9	7.3	6.5	—
Oil	Animal and vegetable oils	30	13.6	0.6	4.6
	Mineral oils	5	2.7	<0.5	0.8
Fe		3	<0.3	<0.3	<0.3
Zn		1	0.2	<0.1	<0.1
Zn		1	0.9	<0.1	0.3
Mn		1	<0.1	<0.1	<0.1
Fluorine		8	0.8	<0.8	<0.8
Boron		10	<1.0	<1.0	<1.0
Total nitrogen		240	66	23	44
Total phosphorous		32	<1.0	<1.0	<1.0
NH_4		380	55	20	36

Unit: mg/ℓ

Suspension Spring Division

Shiga Plant

Location: Koka-shi, Shiga
Products: Coil springs, Stabilizer bars, Torsion bars
Commenced operations: November 1973

Plant Manager:
Akitoshi Hamamoto

Environmental Outlook and Policies

Environmental conservation is one of the six core elements of the STPM (Strategy for Total Power Management) conducted at our plant, and we take practical steps to allow all personnel to engine in it. We are working hard towards making environmentally-friendly springs.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

In FY2021, we continued to conduct activities, including air leak inspections and shutting down of control panel power breakers, and we reduced electricity consumption by optimizing control based on renewal of compressors.

In FY2022, we will continue to implement energy saving activities and further reduce CO_2 emissions by replacing LNG-fired tempering furnaces with electric tempering furnaces and converting outdoor lighting on the plant premises to LED lighting and so on.

Waste reduction and recycling

Concerning recycling activities, we have strengthened the separation of valuable resources through monthly sorting patrols. Other activities include the making rags from waste work clothes, and the recycling of waste thinner using solvent regeneration apparatus.

Environmental conservation activities

Since our plant is situated close to Lake Biwa, it is vital that we strive to maintain the quality of wastewater. Accordingly, we have been working to strengthen the management of wastewater treatment facilities and continually improve them as we strive toward global environmental conservation.

Moreover, by participating in local cleaning activities including Lake Biwa Day, prefecture-wide cleaning days, and cleaning of the Sawarabi workshop for disabled persons, and conducting cleaning activities around the plant every month, we strive to preserve a clean environment both inside and outside of the plant.

Atmosphere (Regulated values: Air Pollution Control Act)

Substance	Equipment		Regulated value	Results
NOx	Metal heating furnace	A	180	65
		B	180	36
		C	180	36
		D	180	56
		E	180	78
Dust	Metal heating furnace	A	0.25	0.007
		B	0.20	<0.004
		C	0.20	<0.004
		D	0.20	<0.004
		E	0.20	<0.038

NOx Unit: ppm Dust Unit: g/m3N

Water quality (Regulated values: Minakuchicho Agreement)

Item	Expected value	Results		
		Maximum	Minimum	Average
pH	6 ～ 8.5	7.6	6.9	—
BOD	30	6.0	<1.0	1.6
COD	30	3.0	<1.0	1.9
SS	70	3.0	<1.0	1.6
Oil	5	1.8	<0.5	1.1
Total nitrogen	12※	9.2	2.3	4.8
Total phosphorous	1.2※	0.3	<0.1	0.2
Fluorine	8※	<0.8	<0.8	<0.8
Boron	10※	<1.0	<1.0	<1.0
Zinc	1※	<0.1	<0.1	0.1

Unit: mg/ ℓ

*Shiga Prefecture Ordinance

Seating Division

Gunma Plant

(Ojima Area)
Location: Ota City, Gunma
Products: Automotive seats
Commenced operations: December 1986

(Ota Area)
Location: Ota City, Gunma
Products: Automotive interior materials and sewn products
Commenced operations: July 1969

Plant Manager:
Junichi Oka

Environmental Outlook and Policies

At this plant, we engage in production activities that unify the entire process of making automotive seats and automotive interior parts that are safe and friendly to people and the environment, from development and design to manufacturing and shipment. In this way, we contribute to the development of the automotive society. We are aware of having been given the mission of handing down to the next generation "an abundant, beautiful Earth". In implementing safe, people-friendly production with consideration for environmental conservation, we promote volunteer and clean-up activities that are rooted in the local community.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

In FY2021, we advanced energy saving activities by conducting electrification of LP gas (fossil fuel)-burning boilers and so on. As a result, we reduced annual CO_2 emissions by approximately 273.4 t-CO_2.

Waste reduction and recycling

Our plant has maintained a 100% recycling rate by converting wastes into valuable resources. We will continue to focus on activities to reduce the amount of waste in FY2022.

Environmental conservation activities

We will continue our community-based activities by cleaning up around the plant and participating in local cleanup events.

Other

In FY2022, we will implement immediately-effective energy saving activities starting with upgrading to LED lighting in the urethane plant building. We also intend to take our first steps towards realizing carbon neutrality by replacing fossil fuels.

Atmosphere: Ojima area (Voluntary values for unregulated equipment)

Substance	Equipment	Regulated value	Results
NOx	Generator	950	277
	Boiler	300	41
Dust	Generator	0.1	0.04
	Boiler	0.2	<0.002

NOx Unit: ppm Dust Unit: g/m3N

Water quality: Ojima area (Regulated values: Agreement with Ojima Town)

Item		Expected value	Results		
			Maximum	Minimum	Average
pH		6 ～ 8	7.4	6.2	—
BOD		10	7.0	<1.0	2.5
SS		10	5.0	<1.0	1.0
Oil	Animal and vegetable oils	3	1.2	<0.3	0.6
	Mineral oils	3	0.6	<0.3	0.4

Unit: mg/ ℓ

Water quality: Ota area (Voluntary regulatory values)

Item	Expected value	Results		
		Maximum	Minimum	Average
pH	5.8 ～ 8.6	7.8	7.3	—
BOD	40	3.0	<1.0	1.6
COD	40	4.0	<1.0	2.3
SS	50	3.0	<1.0	1.5
Oil	5	3.5	<0.5	1.2

Unit: mg/ ℓ

Seating Division

Yokohama Plant (Seating)

Location: Kanazawa-ku, Yokohama
Products: Automotive seats and interior products
Commenced operations: April 1990

Plant Manager:
Yoshitaka Sasaki

Environmental Outlook and Policies

While properly understanding the impact of our plant's business activities on the global environment, we will go further in implementing energy saving measures and conducting activities for reducing industrial wastes with a view to achieving the Company-wide target of carbon neutrality by 2039. Based on thorough-going enforcement of NHK's own concept of "Eliminate, Reduce, and Change", we will limit CO_2 emissions and industrial waste discharges. We will promote sustainable business activities by working on reduction of environmental loads, prevention of environmental pollution, and protection of the environment.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

In FY2021, we worked on preventing dissipation of thermal energy. In FY2022, we will systematically advance measures for totally eliminating CO_2 emissions from combustion of fossil fuels.

Waste reduction and recycling

Whereas we previously used wood pallets that could only be burned, we have now adopted corrugated cardboard pallets that can be recycled into paper. Similarly, we previously burned huge quantities of Miramat packaging materials (foamed PE) derived from supplies procured overseas, however, last year we found a treatment contractor that recycles such materials as valuable resources in the final disposal process, and we commenced recycling in May. In FY2022, we will further advance measures to reduce waste volumes and thereby reduce transportation trips.

Environmental conservation activities

The plant now has only one air conditioning unit that uses CFC R22, and this will be replaced in FY2022.

Other

Since we do not fully grasp all electric power monitoring devices and still sometimes have difficulty analyzing electric energy results, we plan on further advancing "visualization".

Atmosphere (Regulated values: Air Pollution Control Act, Yokohama City Guidelines)

Substance	Equipment	Regulated value	Results
NOx	Boiler	0.064	0.031
Dust	Boiler	0.05	<0.003

NOx Unit: m^3N/h Dust Unit: g/m^3N

Water quality (Regulated values: Yokohama City Sewerage Ordinance)

Item		Expected value	Results		
			Maximum	Minimum	Average
pH		5 ~ 9	7.5	7.0	—
Oil	Animal and vegetable oils	30	3.4	<0.5	1.5
	Mineral oils	5	3.2	<0.5	<0.5

Unit: mg/ℓ

Toyota Plant

Location: Toyota-shi, Aichi
Products: Automotive seats and interior products
Commenced operations: June 1961

Plant Manager:
Tsuyoshi Furukawa

Environmental Outlook and Policies

Our plant performs unified design, manufacture and shipment of finished automotive seating products, frames and component parts. In addition to examining a form of plant management that is geared to achieving carbon neutrality, we will actively pursue energy saving and CO_2 emissions reduction activities. Also, while flexibly responding to changes in the external environment and conducting manufacturing based on state-of-the-art technologies and automation, we will take initiatives for contributing to realization of a sustainable society.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

In FY2021, we replaced aging air conditioners and compressors, repaired air leaks, and thereby reduced compressor power consumption by 13% compared to FY2020.

In FY2022, we will steadily implement measures geared to achieving carbon neutrality by 2050, investigate measures for the next term, and advance preparations for their implementation.

Waste reduction and recycling

We will take initiatives geared to reducing environmental loads and wastes, including examining measures to reduce thermal recycling, which is an "Environmental Challenge" goal, and reviewing our waste disposal contractors.

Environmental conservation activities

We will make efforts to preserve and protect the local environment through conducting cleaning activities around the plant and implementing beautification activities such as flower planting and so on.

Other

We plan to implement works for transferring our scrap disposal yard and for laying LNG pipes. We will conduct the works in consideration of local residents by monitoring vibration and noise levels.

Water quality (Regulated values: Sewerage Service Act)

Item	Expected value	Results		
		Maximum	Minimum	Average
pH	5 ~ 9	7.5	6.8	—
Oil	5	4.5	0.9	2.4

Unit: mg/ℓ

Precision Spring & Components Division

Atsugi Plant

Location: Aikawa-machi, Aiko-gun, Kanagawa
Products: Thin leaf springs, Precision stamped products, Assemblies
Commenced operations: November 1970

Plant Manager:
Tsuyoshi Nakamura

Environmental Outlook and Policies

At this plant, we produce highly efficient drive train parts for electric vehicles that are friendly to the Earth. All personnel at the plant are pulling together to establish a production system that is geared to further expanding our share of EV components from now on. With production expected to increase, rather than focusing solely on the production side, we aim to become the most Earth-friendly plant by implementing environmental protection activities and complying with laws and ordinances.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

Our plant has introduced an electricity monitoring system for demand management. This year, we will upgrade the electricity monitoring system and strive to reduce power usage by monitoring demand and promptly transmitting power data to the plant.

We will also work on energy conservation from a familiar perspective through small group activities, making improvements without overlooking even the smallest of details.

Waste reduction and recycling

In addition to achieving a recycling rate of 99%, our plant is actively working to reduce emissions by shifting waste to valuable resources.

We will also continue to manage waste properly by utilizing an electronic manifest system and inspecting disposal sites.

Environmental conservation activities

Our plant exchanges information through external organizations such as the Waste Management Council of the Atsugi area, collects environmental conservation and environmental information, and disseminates the information to business sites in a timely manner.

We are committed to raising the environmental awareness of each and every employee and working to protect the environment.

Other

We aim to become a flexibly responsive plant being able to notice environmental changes by thoroughly promoting 2S activities and actively implementing cleaning activities in tandem with the promotion of 5S activities in the plant.

●Water quality (Regulated values: Sewerage Service Act)

Item		Expected value	Results		
			Maximum	Minimum	Average
pH		5 ~ 9	7.5	6.9	—
BOD		600	79	9	31
COD		—	57	16	31
SS		600	92	2	18
Oil	Animal and vegetable oils	30	7.0	0.7	2.9
	Mineral oils	5	2.4	<0.5	<0.5
Fe		10	2.4	<1	<1
Total nitrogen		380	21	3	11
Fluorine		8	<0.8	<0.8	<0.8
Boron		10	<1.0	<1.0	<1.0

Unit: mg/ℓ

Ina Plant

Location: Miyada-mura, Kami Ina-gun, Nagano
Products: Wire springs, Precision machined components
Commenced operations: December 1943

Plant Manager:
Fumio Yamamoto

Environmental Outlook and Policies

Ever since this plant, situated in Southern Shinshu Valley between the Southern and Central Alps, commenced operations in 1943, we have retained a constant awareness of our beautiful, natural local environment in our production activities. Under the slogan, "Be a plant that continues to improve so that today is better than yesterday, tomorrow will be better than today, and the day after tomorrow will be better than tomorrow", we are committed to engaging in Kaizen (improvement) activities to ensure that we can attain an even higher level in terms of balancing business activities with conservation of the local and global environment.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

Among our activities, we are promoting the following: 1) Replacement of kerosene engine-based air conditioners and heaters, which emit a large amount of CO_2, with electric air conditioners; 2) Upgrading of production equipment exhaust gas combustors from the LPG-burning type to the electric type; 3) Introduction of large fans to reduce the load on air conditioners; 4) Adoption of LED lights, 5) Introduction of high-efficiency motors; and 6) Upgrading of company-owned vehicles to PHEV. We are also working to reduce the number of forklifts.

Waste reduction and recycling

Although we have already achieved a recycling rate of more than 99%, we are working to reduce wastes by adopting LED lights and promoting the further dismantling and sorting of complex materials.

Environmental conservation activities

We conduct beautification activities in and around the plant and implement patrols around the perimeter of the plant to ensure that our business activities are not exerting impacts on the local environment. Also, we are directing resources to promoting greening on the plant premises.

Other

Through 5S activities at the plant, we promote activities to beautify the plant exterior and ensure that the beautiful local landscape is not negatively impacted.

●Water quality (Regulated values: Sewerage Service Act)

Substance	Equipment		Regulated value	Results
NOx	Heating boiler	A	250	63
		B	250	55
		C	250	63
Dust	Heating boiler	A	0.3	<0.003
		B	0.3	<0.004
		C	0.3	<0.003
SOx	Heating boiler	A	—	<0.001
		B	—	<0.001
		C	—	<0.001

NOx Unit: ppm Dust Unit: g/m3N SOx Unit: m3N/h

●Water quality (Regulated values: Sewerage Service Act and Nagano Prefecture Ordinance)

Item	Expected value	Results		
		Maximum	Minimum	Average
pH	5.7 ~ 8.7	7.4	6.6	—
BOD	600	47	3	14
COD	—	39	4	16
SS	600	18	5	11
Oil	5	4.7	0.5	1.9
Fe	10	1.6	<1.0	<1.0
Cu	3	<0.3	<0.3	<0.3
Total nitrogen	380	24	2.5	6.5

Unit: mg/ℓ

DDS (Disk Drive Suspension) Division

Komagane Plant

Location: Komagane-shi, Nagano
Products: HDD suspensions
Commenced operations: November 1983

Plant Manager:
Yoichi Ikeji

Environmental Outlook and Policies

A project team for working on achievement of carbon neutrality has been established in the DDS (Disk Drive Suspension) Division, and we have commenced initiatives aimed at reducing CO_2 emissions in earnest. We aim to be an environmentally friendly plant so that future generations can inherit our beautiful natural environment in good shape.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

To abolish use of the kerosene boiler, which we have used for humidifying the cleanroom, we plan to introduce a new method of humidification that doesn't depend on fossil fuels.

Waste reduction and recycling

By continuing to sort wastes, we have maintained a 100% recycling rate. In FY2022, we will continue our efforts to maintain 100% recycling, while also working to reduce the volume of waste.

Environmental conservation activities

Due to the impact of COVID-19, we had to cancel the litter pickup activity that we normally conduct together with neighboring companies for the third consecutive year. Instead, however, we will implement litter pickup as part of the beautification initiative around the plant from June 2022.

Water quality (Regulated values: Nagano Prefecture Ordinance)

Item	Expected value	Results		
		Maximum	Minimum	Average
pH	5.8 ～ 8.6	8.2	7.3	7.5
BOD	20	13.0	<1.0	3.8
COD	20	7.0	<1.0	4.7
SS	30	4.0	<1.0	1.9
Oil	5	1.0	<0.5	0.8
Total phosphorous	16	3.0	1.2	1.7
NH_4^+	100	4.9	1.0	2.2

Unit: mg/ ℓ

Industrial Machinery &Equipment Division

Isehara Plant No. 1 and Plant No. 2

Location: Isehara City, Kanagawa
Products: Semiconductor process components, Pipe support systems, Specialized springs, Security products
Commenced operations: March 1993

Isehara Plant No.1
Plant Manager:
Naoya Kida

Isehara Plant No.2
Plant Manager:
Kenichi Akao

Environmental Outlook and Policies

At our plant, we will continue to develop and manufacture environmentally friendly and sophisticated joint technology products, TERA high-stress disc springs used in machine tools, and anti-counterfeiting products. We will work to improve environmental performance by having all of our personnel participate in 3R efforts, including conservation of resources, energy saving for cutting CO_2 emissions, and reduction of waste and environmentally hazardous substances that impart environmental impact.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

CO_2 emissions in FY2021 totaled 3,237 tons, representing an increase of 7.3% compared to FY2020 (3,015 tons) and exceeding the rate of increase in in-house production (5.9%). Emissions increased at Plant No. 1 because we had many newly-hired personnel, dispatch workers from other plants and newcomer manpower operators to respond to rapidly growing demand for semiconductor manufacturing equipment parts, and we needed to adopt longer operating times due to inability to adequately improve production efficiency with the extra personnel.

Waste reduction and recycling

We continue to reuse large quantities of liquid cleanser at Plant No. 1 and paint solvent at Plant No. 2. Also, to improve the transportation efficiency of wastes, we are reducing volumes of machining chips and waste plastics. Continuing to sort industrial wastes for recycling, we have achieved a 100% recycling rate for 15 consecutive years.

Environmental conservation activities

Isehara Plant works to improve environmental performance with all employees and stakeholders through efforts including conservation of resources, energy saving, reduction of wastes, mitigation of environmentally hazardous substances, and promotion of recycling.

Water quality (Regulated values: Isehara City Sewerage Ordinance)

Item		Expected value	Results		
			Maximum	Minimum	Average
pH		5.0 ～ 9.0	8.7	8.3	8.5
BOD		600	440	64	182.8
Oil	Animal and vegetable oils	30	18	1	6
	Mineral oils	5	1	1	1
Fe		3	0.11	0.01	0.06
Zn		1	0.06	0.02	0.03
Mn		1	0.02	0.02	0.02
Pb		0.1	0.01	0.01	0.01

Unit: mg/ ℓ

Industrial Machinery &Equipment Division

Miyada Plant

Location: Komagane-shi, Nagano
Products: Semiconductor process components
Commenced operations: September 2019

Plant Manager:
Toshihiko Hanamachi

Environmental Outlook and Policies

This plant was newly constructed in March 2019 on the same site as the Komagane No. 2 Plant. It serves as a mass production plant for environmentally friendly high-precision joining products produced at Isehara Plant No. 1. Incorporating the environmental management system of Komagane Plant, we will utilize IoT to reduce our environmental impact and promote a community-based recycling-oriented society with all employees, based on Global Environmental Activities Guidelines and Global Environmental Activities Plan.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

Energy use at the plant comprises 99.5% electric power and 0.5% water, thereby making us an all-electric powered plant.

We actively address reduction in CO_2 emissions by introducing electric energy saving measures, including solar power generation, saving energy in compressors (by using water circulation inverter devices and controlling the number of compressors in use), adopting top lighting, and introducing LED plant lighting, electric power monitoring, and demand control (vacuum furnace).

Waste reduction and recycling

We have maintained a 100% recycling rate in FY2021. All plant personnel are working to reduce waste volume and processing costs by converting wastes into valuable commodities.

Environmental conservation activities

In September 2021, as part of the expansion of the Industrial Machinery &Equipment Komagane Plant, we acquired ISO 14001:2015 certification. In FY2022, we are deploying environmental activities with the aim of acquiring ISO 14001 certification on Miyada Plant's own merit.

●Water quality (Regulated values: Nagano Prefecture Ordinance)

Item	Expected value	Results		
		Maximum	Minimum	Average
pH	5.8 ～ 8.6	8.0	7.4	—
BOD	20	14.0	<1.0	5.0
SS	30	30.0	<1.0	8.0
Oil	5	2.6	<0.5	1.5
Cu	3	<0.3	<0.3	<0.3
Total phosphorous	16	6.6	<1.0	3.6

単位 :mg/ℓ

Komagane Plant

Location: Komagane-shi, Nagano
Products: Specialized polyurethane foam products, Metal substrates
Commenced operations: December 1981

Plant Manager:
Kenji Obara

Environmental Outlook and Policies

Situated in a beautiful natural environment, our plant develops and produces functional urethane products and insulated metal substrates (IMS). Recognizing global environmental conservation to be a common issue, all plant personnel are engaged in promoting initiatives for realizing a recycling-oriented society and carbon neutrality.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

In FY2021 we limited CO_2 emissions to 5,620 tons, meaning that the rate of increase relative to the increase in sales was suppressed by 10.5%. [FY2020: Sales JPY 6,131 million⇒CO_2 emissions 5,371 tons, FY2021: Sales JPY 7,158 million⇒ 5,620 tons]

In FY2022, we will actively implement the following activities geared to reducing CO_2 emissions: ①limiting use of kerosene, ②discontinuing use of LPG, and ③ upgrading to energy saving equipment.

Waste reduction and recycling

FY2021 Waste reduction: 1,916 tons, Disposal index: 0.138 (achievement rate 138 % compared to the target of 0.191) [FY2020 Waste reduction: 1,823 tons, Disposal index: 0.193]

In November 2022, we started to accept charged collection of ferric chloride liquid waste, which had been an issue. 132 tons of ferric chloride liquid waste was collected for a charge. We will continue to engage in waste reduction activities.

Our recycling rate in FY2021 was 100%, and we will maintain this in FY2022.

Environmental conservation activities

As environmental conservation activities, we held a picnic for conserving the aquatic environment of Tenryu River on October 24, 2021. We intended to hold this again in spring, however, the event had to be cancelled due to the COVID-19 pandemic. We will decide on whether to hold in the fall while monitoring the situation, but in any case we will continue to engage in environmental conservation activities.

●Atmosphere (Regulated values: Air Pollution Control Act)

Substance	Equipment		Regulated value	Results
NOx	Heating boiler	A	180	45
		B	180	47
Dust	Heating boiler	A	0.3	<0.003
		B	0.3	<0.003
SOx	Heating boiler	A	—	<0.001
		B	—	<0.001

NOx Unit: ppm Dust Unit: g/m3N SOx Unit: m3N/h

●Water quality (Regulated values: Nagano Prefecture Ordinance) Factory Building 1

Item	Expected value	Results		
		Maximum	Minimum	Average
pH	5.8 ～ 8.6	8.1	7.6	—
BOD	20	1.0	<1.0	<1.0
COD	20	<1.0	<1.0	<1.0
SS	30	1.0	<1.0	<1.0
Oil	5	1.8	<0.5	0.6

Unit: mg/ ℓ

●Water quality (Regulated values: Nagano Prefecture Ordinance) Factory Building 2

Item	Expected value	Results		
		Maximum	Minimum	Average
pH	5.8 ～ 8.6	7.3	6.4	—
BOD	20	27	6	15
COD	20	20	4	11
SS	30	7	<1	1.7
Oil	5	3.0	<0.5	0.8
Fe	10	<1	<1	<1
Cu	3	1.4	<0.3	0.2
NH_4	100	3.2	1.2	1.9

Unit: mg/ ℓ

Yasu Plant

Location: Yasu-shi, Shiga
Products: Mechanical multilevel parking systems
Commenced operations: October 1996

Plant Manager:
Hiroshi Kaneko

Environmental Outlook and Policies

Our plant develops and manufactures mechanical multilevel parking systems as well as other mechanical components under the slogan of reducing environmental loads. We aim to further protect the global environment and continue improving our care for the environment to ensure that we pass on the green mountains and clear air and rivers of these superb natural surroundings around Lake Biwa to later generations.

FY2021 and FY2022 Initiatives

Reduction in CO_2 emissions (absolute value)

In FY2021, we abolished use of hydraulic motors by renewing turret punch presses and press brakes, and we reduced our far-infrared heaters by introducing heated vests in winter. As a result, we reduced CO_2 emissions by 7% over the previous year. In FY2022, as well as making routine improvements such as reviewing the operating times of compressors, we will implement activities such as abolishing LPG geared to realizing carbon neutrality.

Waste reduction and recycling

We continue to maintain a recycling rate of 100% thanks to strengthening of waste separation and education of employees. Moreover, we will continue to promote recycling of wastes into valuable resources and reduce waste treatment costs.

Environmental conservation activities

We will participate in cleanup activities organized by the local community and local authorities, while taking into consideration the situation regarding the COVID-19 pandemic.

In addition, we will continue to implement beautification activities around the plant.