



Separate volume

Environmental Data 2023

NHK SPRING REPORT 2023

Manufacturing Derived from Springs. ————— Technology to Change & Unchanged Reliance



Progress in Environmental Activities

	Progress by NHK Spring	Progress by domestic Group companies	Trends in society
FY2003	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
FY2004	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
FY2005	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
FY2006	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
FY2007	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
FY2008	Jun.: 11th Revised Environmental Voluntary Action Plan Jun.: 14th Global Environment Forum held	Jun.: Group Company Environmental Liaison Committee announced	G8 Toyako Summit (Hokkaido)
FY2009	Feb.: Installed a solar electric generator panel at Yokohama site Jun.: 15th Global Environment Forum held		G8 L'Aquila Summit (Italy)
FY2010	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
FY2011	Jun.: 17th Global Environment Forum held		Implementation of Amended Water Pollution Control Act (Storage Facilities)
FY2012	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
FY2013	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)
FY2014	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
FY2015	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 Nipatsu, 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
FY2016	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 Nipatsu, 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)
FY2017	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 Nipatsu, 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
FY2018	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 Nipatsu, 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
FY2019	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 Nipatsu, 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
FY2020	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
FY2021	Sep.: NHK Spring Group declared their Environmental Challenges(Carbon Neutrality on 2039, Zero Industrial Waste) Nov.: 31st Global Environment Forum held Dec.: Yokohama Site received Yokohama City recognition of excellence 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.
FY2022	Nov.: 32st Global Environment Forum held Dec.: Held a training course for Group environmental internal auditors Dec.: Carbon Neutral Contribution Award presented	Apr.: Sumihatsu , Nippon Shaft and NHK Precision recognized as S-class conservation method service providers. Nov.: Photovoltaic panels installed at the Nippon Shaft Komagane Plant	Mar.: Ministry of the Environment and Ministry of Economy, Trade and Industry publish carbon footprint guidelines May.: Law Concerning the Rational Use of Energy and Conversion to Non-Fossil Energy, etc. (Revised Energy Conservation Law) is enacted.

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.

Contents of Environmental Education (FY2022 results)

Level-separate education		
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 and 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.	



Internal Environmental Auditor training courses (environmental education, when held in FY2019)
*Courses cancelled during FY2020 and FY2021 due to the COVID-19 pandemic, but have been held remotely since FY2022 via Microsoft Teams etc.

Number of Staff with Environmental Qualifications (as of May 2023)

Qualification	Classification		Number of qualification holders
Pollution Control Manager	Air	First grade	4
		Other	26
	Water	First grade	6
		Other	28
	Noise		34
	Vibration		35
Dioxins		1	
Environmental Management System Auditor	Assistant Auditor		1
Working Environment Measurement Expert	First grade	Dust	2
		Special chemicals	1
		Metals	1
		Organic solvents	2
	Second grade		3
Certified Environmental Measurer	Concentration-related		1
Specially Controlled Industrial Waste Manager			42
Qualified Energy Manager			29
Energy Managers for Second grade Designated Energy Management Factories			17
Total (including persons with multiple qualifications)			233

Environment-related qualification holders



(including persons with multiple qualifications)

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.



ISO14001 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 FY2022, 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 Division	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 ISO14001 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 Nipatsu 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

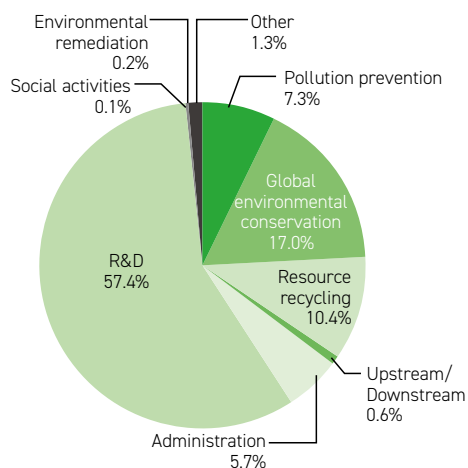
We identify the costs and effects of our environmental conservation activities in environmental accounting and utilize this information in running the company.

FY2022 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 FY2022 amounted to JPY 1,847.5 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 carbon neutral.

Other costs were more or less in line with the previous year.



FY2022 - Environmental Conservation Costs

(Unit: JPY million/year)

Cost classification	Main elements	Value in FY2021*	Value in FY2022*
① Pollution 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	116.7	135.1
② Global environmental conservation	Costs for control of fluorocarbons and other gas emissions, energy saving measures, global warming prevention, etc.	233.7	314.9
③ Resource recycling	Waste treatment, zero emissions measures, in-house recycling, PCB waste treatment, etc.	189.9	191.6
④ Upstream/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.)	12.2	12.0
⑤ Administration	Waste manifest management, ISO 14001 maintenance and renewal inspections and ISO 14001 office personnel costs, reporting to administrative authorities, etc.	106.7	105.0
⑥ R&D	Research to reduce environmental loads, and development of products that will contribute to reducing environmental loads	939.8	1060.0
⑦ Social activities	Implementation of social contribution activities (cleaning of local areas and rivers)	1.5	2.0
⑧ Environmental remediation	Remediating environmental damage in local areas	5.8	3.0
⑨ Other	Costs incurred in environmental remediation activities other than the above (including costs for PCB waste management)	12.3	24.0
Total		1618.7	1847.5

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



FY2022 Environmental conservation cost JPY 1,847.5 million

Classifications and Performance of Investment Effect in FY2022

Results for FY2021 are shown in the table below.

Unit energy consumption and unit CO₂ emissions decreased significantly from the previous year due to improved production efficiency and sales, CO₂ reduction measures, and a decrease in unit electricity CO₂ emissions.

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, decreased by 1.0 tons in FY2022 compared to the previous fiscal year. The amount of recycled waste increased by 3,100 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.

FY2022 Investment Effects and Performance

	Material effects *1			Economic effects *3			Assessment
	FY2021 results	FY2022 results	Effects	FY2021 results	FY2022 results	Effects	
Unit energy use (GJ/JPY million) *3	10.02	8.87	△ 1.15	—	—	—	○
Unit CO ₂ emissions (ton-CO ₂ /JPY 100 million) *3	47.5	33.5	△ 14.0	—	—	—	○
Landfilled wastes (tons/year)	6.74	5.72	△ 1.02	—	—	—	○
Recycled wastes (tons/year)	25,784	28,898	3,114	—	—	—	○
Unit energy and water costs (JPY/JPY 1,000) *3	—	—	—	17.6	23.3	5.7	△
Gain on sales from recycling (JPY million)	—	—	—	1,111	1,272.0	161.0	○

*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 FY2022 Survey of Releases and Transfers of Environmentally Hazardous Substances (April 2022-March 2023)

■ NHK Spring

(Unit: tons/year)

PRTR Substance No.	Target 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)	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
20	2-Aminoethanol	2.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.3
53	Ethyl benzene	6.8	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6
80	Xylene	19.9	17.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4
232	N,N-dimethylformamide	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
298	Toluene diisocyanate (TDI)	741.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
300	Toluene	79.8	58	0.0	0.0	0.0	0.0	0.0	0.0	3.2
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	6.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	5.4
410	Polyoxyethylene nonyl phenyl ether	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0
412	Manganese and its compounds	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
448	Methylenebis (4.1-Phenylene) = Diisocyanate (MDI)	124.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
594	Butylcellosolve	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
629	Cyclohexane	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
691	Trimethylbenzene	2.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total volume of PRTR substances		997.9	92.9	0.0	0.0	0.0	0.0	0.0	0.3	13.4

■ Domestic Group companies

(Unit: tons/year)

PRTR Substance No.	Target 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)	13.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	9.0
20	2-aminoethanol	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
29	Bisphenol A	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
53	Ethyl benzene	30.3	27.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5
66	1,2-Epoxybutane	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	Xylene	61.8	55.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8
185	HCFC-225	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
232	N,N-dimethylformamide	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300	Toluene	110.6	107.1	0.0	0.0	0.0	0.0	0.0	0.0	1.8
302	Naphthalene	0.1	0.1	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	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
354	Bis (n-butyl) phthalate	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
384	1-Bromopropane	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
392	Hexane	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
412	Manganese and its compounds	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)	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
594	Butylcellosolve	4.2	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
629	Cyclohexane	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1
691	Trimethylbenzene	6.9	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total volume of PRTR substances		234.2	198.2	8.0	0.0	0.0	0.0	0.0	0.2	14.7

*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.

FY2022 and FY2023 Initiatives

Environmental Challenge Initiatives

To achieve the Environmental Challenge, we check the plans and progress of the entire group, and for effective reduction measures, we present the Carbon Neutral Contribution Award to encourage horizontal development within the group. In addition to reducing CO₂ emissions, we also focus on reducing waste.

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. Since FY2022, we have included environmental challenge items in the evaluation items of the check sheet to monitor progress.

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 a part of the tabulated results in the NHK Spring Report. We also promote risk assessment of chemical substances and 5S activities to protect workers, and appropriately manage chemical substances used in products in accordance with the Green Procurement Guideline.

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

Substance	Equipment	Regulated value	Results
NOx	Hot water boiler	A	0.041
		B	0.025
		C	0.025
	Chilled and hot water generator	A	0.029
		B	0.018
		C	0.024
Dust	Hot water boiler	A	0.050
		B	0.050
		C	0.050
	Chilled and hot water generator	A	0.050
		B	0.050
		C	0.050

NOx Unit: Nm³/h Dust Unit: g/Nm³

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

Item	Regulated value	Results		
		Maximum	Minimum	Average
ph	5 ~ 9	7.8	7.3	---
Oil	5	2.6	<0.5	1.0
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	2.3	<0.3	0.9

Unit: mg/L

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

Item	Regulated value	Results		
		Maximum	Minimum	Average
ph	5 ~ 9	7.5	7.1	---
Oil	5	4.7	<0.5	1.3
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	<0.2	<0.2
Cu	1	<0.1	<0.1	<0.1
NH ₄ ⁺	380	2.7	1.5	1.9

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:
Yasuyuki Ueki

Environmental Outlook and Policies

Under the slogan of "manufacturing springs that are friendly to the global environment," our plant engages in "reduction of CO₂ emissions" to achieve carbon neutrality by 2039 and "reduction of industrial waste" with the goal of reducing the amount of thermal recycling by 2030. 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.

FY2022 and FY2023 Initiatives

Reduction in CO₂ emissions (absolute value)

We aim to become a "gas to electrification" and "from heating to non-heating treatment" model plant that considers environmental loads. All our employees are pulling together with high environmental awareness and conducting activities geared to achieving our FY2023 CO₂ emissions reduction goal of 12,126 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 (non-thermal recycling: material/chemical cycle) with a view to conducting environmentally aware recycling.

Environmental conservation activities

We continue to conduct cleanup activities around our offices as part of our contribution to the local community.

Other

To improve the humid environment that affects quality, energy-saving air conditioners were installed to achieve both stable quality and environmental measures.

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

Substance	Equipment	Regulated value	Results
NOx	Metal heating furnace	A	0.128
		B	0.110
		C	0.212
		D	0.169
		E	0.119
	Metal tempering furnace	A	0.202
		B	0.123
		C	0.104
		D	0.085
		E	0.059
Dust	Metal heating furnace	A	0.1
		B	0.1
		C	0.1
		D	0.1
		E	0.1
	Metal tempering furnace	A	0.1
		B	0.1
		C	0.1
		D	0.1
		E	0.1

NOx Unit: Nm³/h Dust Unit: g/Nm³

Water quality (Regulated values: Yokohama City Ordinance)

Item	Regulated value	Results		
		Maximum	Minimum	Average
ph	5 ~ 9	7.1	6.5	---
Oil	Animal and vegetable oils	30	7.9	1.2
	Mineral oils	5	1.1	<0.5
Fe	3	<0.3	<0.3	<0.3
Zn	1	<0.1	<0.1	<0.1
Ni	1	0.3	0.1	0.2
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	120	59	15	41
Total phosphorous	16	<1.0	<1.0	<1.0
NH ₄ ⁺	380	47	13	34

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:
Satoshi Banno

Environmental Outlook and Policies

We will continue all employees' participation in environmental preservation, which is one of our plant STPM activities, and actively promote "environmentally friendly spring manufacturing". In addition, we will accelerate productivity improvement and facility renovation, and aim to achieve our environmental challenge target by reducing CO₂ emissions and converting waste into valuable resources and recycling.

FY2022 and FY2023 Initiatives

Reduction in CO₂ emissions (absolute value)

In FY2022, in addition to ongoing energy-saving activities such as air leak inspections and shutting off control panel power breakers, we changed the fuel for the boiler in the large bathroom in the welfare building to city gas and promoted electrification of the heating system in order to eliminate the use of fossil fuel, kerosene. In FY2023, we will continue our energy-saving activities and, to further reduce CO₂ emissions, we will consolidate production lines, electrify the tempering process for hollow stabilizers, and eliminate city gas heat-treatment furnaces.

Waste reduction and recycling

We will continue to recycle resources by thoroughly separating valuable materials through monthly waste separation patrols, converting waste work clothes into recycled rags, and recycling waste thinner using solvent recycling equipment.

Environmental conservation activities

Since our plant is situated close to Lake Biwa, it is vital that we strive to maintain the quality of wastewater. Therefore, we will contribute to global environmental preservation by thoroughly maintaining and continuously improving wastewater treatment facilities and improving water quality when discharging wastewater.

In addition to the monthly cleanup of the plant's perimeter, we will continue to participate in local cleanup activities such as "Lake Biwa Day Cleanup" and "Sawarabi Workplace Cleanup at Welfare Facilities".

Atmosphere (Regulated values: Air Pollution Control Act)

Substance	Equipment	Regulated value	Results
NOx	Metal heating furnace	A	180
		B	180
		C	180
		D	180
Dust	Metal tempering furnace	E	180
			50
Dust	Metal heating furnace	A	0.20
		B	0.20
		C	0.20
		D	0.20
		E	0.20
	Metal tempering furnace	E	0.20

NOx Unit: ppm Dust Unit: g/Nm³

Water quality (Regulated values: Minakuchicho Agreement)

Item	Regulated value	Results		
		Maximum	Minimum	Average
pH	6 ~ 8.5	7.6	7.1	—
BOD	30	1	<1	<1
COD	30	4	<1	1.3
SS	70	4	<1	<1
Oil	5	2.2	<0.5	0.8
Total nitrogen	12*	9.9	<1.0	3.2
Total phosphorous	1.2*	0.1	<0.1	<0.1
Fluorine	8*	<0.8	<0.8	<0.8
Boron	10*	<1.0	<1.0	<1.0
Zn	1*	0.1	<0.1	<0.1

Unit: mg/L

*Shiga Prefecture Ordinance

Seating Division

Gunma Plant



Location: (Ojima Area) Ota City, Gunma
 Products: Automotive seats
 Commenced operations: December 1986
 (Ota Area) Ota City, Gunma
 Automotive interior
 July 1969



Plant Manager:
Junichi Oka

Environmental Outlook and Policies

The plant will promote activities to achieve carbon neutrality in its production activities by strictly adhering to the principles of NHK's own concept of "Eliminate, Reduce, and Change". We will also promote activities from the three directions of "pursuit of technology," "community-based operations," and "cooperation with society," aiming to be the "best plant in the region" that leads to the enrichment of society as a whole.

FY2022 and FY2023 Initiatives

Reduction in CO₂ emissions (absolute value)

In FY2022, we have promoted plans such as replacing the cooling water tower with a small chiller and converting to electric forklift trucks. As a result of the plan, we reduced annual CO₂ emissions by approximately 236 tons.

Waste reduction and recycling

We are engaged in activities to reduce industrial waste throughout its life cycle. We will continue to achieve a 100% recycling rate through thorough waste separation and promotion of valuable resources with the participation of all employees.

Environmental conservation activities

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

Other

In FY2023, we plan to install additional solar power generation systems and convert LP gas to natural gas (LNG) as carbon neutral activities.

Atmosphere: Ojima area (Voluntary values for unregulated equipment)

Substance	Equipment	Regulated value	Results
NOx	Generator	950	274
	Boiler	300	71
Dust	Generator	0.1	0.03
	Boiler	0.2	<0.002

NOx Unit: Nm³/h Dust Unit: g/Nm³

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

Item	Regulated value	Results		
		Maximum	Minimum	Average
pH	5.8 ~ 8.6	7.5	7.1	—
BOD	25	6	1	2
COD	25	12	6	8
SS	50	4	2	2

Unit: mg/L

Water quality: Ota area (Voluntary regulatory values)

Item	Regulated value	Results		
		Maximum	Minimum	Average
pH	5.8 ~ 8.6	7.9	7.4	—
BOD	60	2	1	1
COD	60	7	1	3
SS	70	16	2	3

Unit: mg/L

Yokohama Plant (Seating)



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



Plant Manager:
Takehiro Watanabe

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 CO₂ 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.

FY2022 and FY2023 Initiatives

Reduction in CO₂ emissions (absolute value)

In FY2022, we worked on preventing the dissipation of thermal energy; in FY2023, we will systematically proceed with the accompanying projects to completely shut down the wastewater treatment facility.

Waste reduction and recycling

In FY2022, we succeeded in converting wooden pallets to corrugated cardboard, and we also found a processor that converts a huge amount of packaging materials (foamed PE) for overseas procured goods into valuable resources for final disposal, which has drastically reduced disposal costs since May. In FY2023, we will work to make this packaging material completely valuable.

Environmental conservation activities

We will comply with environmental laws and regulations and manage our operations so as not to have a detrimental impact outside of our site boundaries.

Other

Along with efforts to visualize the amount of electricity consumed, we are promoting initiatives where we can (e.g., installing inverter compressors and energy-saving air conditioning equipment).

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

Substance	Equipment	Regulated value	Results
NOx	Boiler	0.064	0.036
Dust	Boiler	0.05	<0.005

NOx Unit: Nm³/h Dust Unit: g/Nm³

Water quality (Regulated values: Yokohama City Ordinance)

Item	Regulated value	Results		
		Maximum	Minimum	Average
pH	5 ~ 9	8.1	7.1	—
Oil	Animal and vegetable oils	30	3.0	<0.5
	Mineral oils	5	0.8	<0.5
NH ₄ ⁺	380	1.8	<0.3	1.1

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 CO₂ 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.

FY2022 and FY2023 Initiatives

Reduction in CO₂ emissions (absolute value)

In FY2022, we were able to reduce CO₂ emissions by 22.8 tons through power-saving measures, such as updating aging air conditioners, and energy conversion to city gas by eliminating LPG used as fuel for the kitchen and air conditioners in the welfare building.

In FY2023, we will reduce power consumption, switch energy sources for forklifts and production equipment, and eliminate the use of diesel oil and LPG in order to reduce CO₂ emissions."

Waste reduction and recycling

In FY2022, we were able to reduce the amount of thermal recycling by approximately 20% compared to FY2021, and in FY2023 we will continue to promote waste reduction activities, such as examining ways to reduce the amount of thermal recycling and investigating alternative processing methods, and work to maintain a 100% recycling rate.

Environmental conservation activities

We will work 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.

Water quality (Regulated values: Sewerage Service Act)

Item	Regulated value	Results		
		Maximum	Minimum	Average
pH	5 ~ 9	7.6	6.6	—
Oil	5	3.5	<0.5	1.3

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:
Yoichi Ueda

Environmental Outlook and Policies

The plant produces motor cores, which are driving parts for earth-friendly electric vehicles. Currently, the Atsugi Plant is constructing a new building and introducing new equipment in order to increase orders for motor cores. We aim to become the No. 1 eco-friendly plant, aiming for a clean earth through the popularization of electric vehicles.

FY2022 and FY2023 Initiatives

Reduction in CO₂ emissions (absolute value)

Our plant has introduced an electricity monitoring system for demand management. In this fiscal year, we will expand the number of measurement points, monitor power demand, and disseminate power information in a timely manner in order to reduce power consumption. In addition, in order to achieve carbon neutrality, a new Challenge CN Committee will be formed this term, and each employee will fly an environmental banner with their thoughts and feelings, and the entire factory will work together to save energy.

Waste reduction and recycling

The plant has maintained a 100% recycling rate. Furthermore, to achieve the goal of reducing industrial waste, which is one of the objectives of the Nippon Environmental Challenge Declaration, we are actively working to convert waste into valuable resources.

Environmental conservation activities

The plant actively participates in clean-up campaigns organized by local coalitions and other organizations, aiming to contribute to the local community.

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	Regulated value	Results			
		Maximum	Minimum	Average	
pH	5 ~ 9	7.4	7.0	—	
BOD	600	170	3	34	
COD	—	89	12	28	
SS	600	29	1	11	
Oil	Animal and vegetable oils	30	11.4	<0.5	1.9
	Mineral oils	5	2.6	<0.5	0.6
Fe	10	1.9	<1.0	<1.0	
Total nitrogen	380	21.5	5.1	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.

FY2022 and FY2023 Initiatives

Reduction in CO₂ emissions (absolute value)

Continued replacement of high CO₂ emitting kerosene engine air conditioners and kerosene heaters with electric air conditioners, continued replacement of exhaust gas combustion equipment at production facilities from LPG to electrification, continued replacement of exhaust gas combustion equipment at production facilities from LPG to electrification, continued replacement with LED lighting, and other efforts.

Waste reduction and recycling

Although we have already achieved a recycling rate of more than 99%, we are working to reduce wastes by further promoting the dismantling and sorting of complex materials, including the aforementioned reduction of waste through the use of LED lighting and material recycling of plastic waste.

Environmental conservation activities

We patrol the perimeter of the plant to ensure that there is no environmental impact on the area surrounding the plant. Also, we are directing resources to promoting greening on the plant premises.

Atmosphere (Regulated values: Air Pollution Control Act)

Substance	Equipment	Regulated value		Results
		Maximum	Minimum	
NOx	Heating boiler	A	250	65
		B	250	55
		C	250	57
Dust	Heating boiler	A	0.3	<0.005
		B	0.3	<0.005
		C	0.3	<0.005
SOx	Heating boiler	A	—	<0.001
		B	—	<0.001
		C	—	<0.001

NOx Unit: ppm Dust Unit: g/Nm³ SOx Unit: Nm³/h

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

Item	Regulated value	Results		
		Maximum	Minimum	Average
pH	5.7 ~ 8.7	8.3	6.4	—
BOD	600	19	<1	9
COD	—	37	2	17
SS	600	28	2	11
Oil	5	2.7	<0.5	0.9
Fe	10	<1.0	<1.0	<1.0
Cu	3	<0.3	<0.3	<0.3
Total nitrogen	380	93	3	43

Unit: mg/L

DDS (Disk Drive Suspension) Division

Komagane Plant



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



Plant Manager:
Masaru Inoue

Environmental Outlook and Policies

Led by the promotion members, DDS Komagane is promoting plant-wide efforts to reduce CO₂ emissions in order to achieve carbon neutrality, the plant will continue to aim to be an environmentally friendly manufacturing plant so that the future generations can inherit our beautiful natural environment in a healthy state.

FY2022 and FY2023 Initiatives

Reduction in CO₂ emissions (absolute value)

In order to eliminate the use of kerosene for washing cafeteria dishes, a solar hot water system has been installed as a first step. This is expected to reduce the use of kerosene in the welfare building by 50-70%. We will continue to study ways to eliminate the use of kerosene.

Waste reduction and recycling

By continuing to sort wastes, we have maintained a 100% recycling rate. In FY2023, we will continue our efforts to maintain 100% recycling, while also working to reduce the volume of waste.

Environmental conservation activities

In accordance with the transition of COVID-19 to Category 5, a litter pickup activity was held for the first time in 4 years by neighboring companies. 55 employees and their family members participated in the activity. In the second half of the fiscal year, we would like to conduct the same beautification activities around the plant as last year.

Water quality (Regulated values: Nagano Prefecture Ordinance)

Item	Regulated value	Results		
		Maximum	Minimum	Average
pH	5.8 ~ 8.6	8.1	7.5	—
BOD	20	4	<1	1
COD	20	6	<1	3
SS	30	2	<1	1
Oil	5	0.9	<0.5	0.5
Total phosphorous	16	2.1	<1.0	<1.0
Total nitrogen	100	2.2	1.2	1.7

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 CO₂ emissions, and reduction of waste and environmentally hazardous substances that impart environmental impact.

FY2022 and FY2023 Initiatives

Reduction in CO₂ emissions (absolute value)

CO₂ emissions in FY2021 were 4,266 tons, and in FY2022 they were 4,364 tons compared to the target of 5,233 tons, an increase of 98 tons (2.2%) despite a 4.5% increase in in-house sales. The first factory's efforts to reduce CO₂ emissions were realized by improving the good product rate and direct delivery rate of thermal sprayed products and productivity of machined products, and the second factory by suspending compressor reservations, managing air conditioning use, and eliminating diesel forklifts.

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 continuing to reduce the volume of cutting dalicos and waste plastics. In addition, to reduce waste oil, we are planning to separate water from water-soluble cutting oil.

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	Regulated value	Results			
		Maximum	Minimum	Average	
pH	5.0 ~ 9.0	8.7	6.7	8.2	
BOD	600	370	73	204	
Oil	Animal and vegetable oils	30	24	4	10
	Mineral oils	5	1	1	1
Fe	3	0.1	<0.1	<0.1	
Zn	1	0.5	<0.1	0.1	
Mn	1	<0.1	<0.1	<0.1	
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. From FY2022, the Miyada Plant established its own environmental management system, 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.

FY2022 and FY2023 Initiatives

Reduction in CO₂ 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 CO₂ 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).

In addition, solar power generation will be increased (from the current 120kw to an additional 570kw 450kw added). The power generation system will be installed in the factory extension and is scheduled to start operation in March 2024.

Waste reduction and recycling

We have maintained a 100% recycling rate in FY2022. All plant personnel are working to reduce waste volume and processing costs by converting wastes into valuable commodities.

Environmental conservation activities

In FY2022, the Tenryu River Environmental Picnic event was cancelled due to the COVID-19 pandemic. This year, the event was held for the first time in four years (May 20), and we picked up trash around the plant. We plan to hold the event again in the fall, and will continue to engage in environmental preservation activities. (Participating in the activities of the Ina District)

Water quality (Regulated values: Nagano Prefecture Ordinance)

Item	Regulated value	Results		
		Maximum	Minimum	Average
pH	5.8 ~ 8.6	8.0	6.6	—
BOD	20	7	<1	2
SS	30	8	<1	3
Oil	5	1.9	<0.5	0.9
Cu	3	<0.3	<0.3	<0.3
Total phosphorous	16	4.0	<1.0	2.1

Unit: 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.

FY2022 and FY2023 Initiatives

Reduction in CO₂ emissions (absolute value)

In FY2022, CO₂ emissions were reduced by 6% to 5,262 tons (1% decrease in internal sales). We have completed the elimination of kerosene boilers for heating and the elimination of LPG. We will work toward the elimination of kerosene use by replacing some of the kerosene boilers used in production with electric boilers.

Waste reduction and recycling

In FY2023, we will continue our efforts to recycle resources by maintaining a 100% recycling rate. Ferric chloride waste fluid used in the process is recycled and mixed with new fluid for reuse. Initiatives will be launched to raise the system of operation methods and management of complementary materials.

Environmental conservation activities

Although the Tenryu River System Environmental Picnic was cancelled as an environmental activity, employees beautified the surrounding area on October 22 as part of the plant's neighborhood beautification activities. We will continue to hold such activities to protect the environment.

Atmosphere (Regulated values: Air Pollution Control Act)

Substance	Equipment	Regulated value	Results
NOx	Hot water boiler	180	43
Dust	Hot water boiler	0.3	0.076
SOx	Hot water boiler	—	<0.001

NOx Unit: ppm Dust Unit: g/Nm³ SOx Unit: Nm³/h

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

Item	Regulated value	Results		
		Maximum	Minimum	Average
pH	5.8 ~ 8.6	8.1	7.6	—
BOD	20	<1	<1	<1
COD	20	1	<1	<1
SS	30	7	<1	1
Oil	5	1.2	<0.5	0.5

Unit: mg/L

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

項目	規制値	Results		
		Maximum	Minimum	Average
pH	5.8 ~ 8.6	7.4	6.5	—
BOD	20	20	2	12
COD	20	14	2	8
SS	30	6	<1	3
Oil	5	1.3	<0.5	0.7
Fe	10	<1	<1	<1
Cu	3	0.4	<0.3	<0.3
NH ₄ ⁺	100	2.0	0.8	1.5

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.

FY2022 and FY2023 Initiatives

■ Reduction in CO₂ emissions (absolute value)

In FY2022, we reduced CO₂ emissions by 5.7% from the previous year through the total abolition of LPG forklifts (4 units) by electrification of forklifts, reduction of standby power for transformers by reviewing the power contract from two-part contract to one-part contract, and changing the timer schedule of compressors.

In FY2023, we will engage in activities to reduce CO₂ emissions, such as updating compressors (inverter control).

■ 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

With the relaxation of COVID-19 regulations, we will conduct community and local government-sponsored cleanup activities and environmental patrols at cooperating plants (industrial waste disposal sites).