

2024 Environmental Report

KIOXIA Corporation
Yokkaichi Plant

Yokkaichi Plant Overview

Address	800 Yamanoisshiki-cho, Yokkaichi-shi, Mie Prefecture, Japan
Site area	694,000 m ² (excluding parking space)
Foundation	January 1992
General manager	Kazuhiro Shimizu
Employees	Approx. 7,200 (as of March 31, 2024)
Main products	Semiconductor memory products (BiCS FLASH™, NAND flash memory, etc.)

Products

Personal Products

- SSD
- microSD Memory Card
- SD Memory Card
- USB Flash Drive

Business Products

- 3D Flash Memory “BiCS FLASH™”
- UFS & e-MMC
- SLC NAND Flash Memory
- XL-FLASH Storage Class Memory (SCM)
- Enterprise SSD
- Data Center SSD
- Client SSD

Key Features of KIOXIA BiCS FLASH™ 3D Flash Memory Technology

- Higher monolithic NAND flash memory die density
- Higher Read/Write speed performance
- High reliability by reducing interference effects between adjacent memory cells
- High Energy Consumption Efficiency



SSD	SSD stands for Solid State Drive which uses flash memory as the storage medium.
UFS	UFS stands for Universal Flash Storage, which means general-purpose flash storage, and is used in various products such as smartphones as a faster embedded storage than e-MMC.
e-MMC	e-MMC stands for embedded Multi Media Card, which is used for embedded storage in products such as smartphones.
SLC	SLC stands for Single Level Cell, which can store one bit of information per cell and has excellent accuracy, reliability, and endurance.
XL-FLASH	XL-FLASH is one of the flash memory products that meet the various needs of data centers, cloud providers, and enterprises. It provides a storage class memory solution with lower latency, higher performance, and higher reliability than our conventional products.



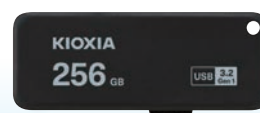
NVMe™ SSD



microSD Memory Card



SD Memory Card



USB Flash Drive



Enterprise SSD



Data Center SSD



Client SSD

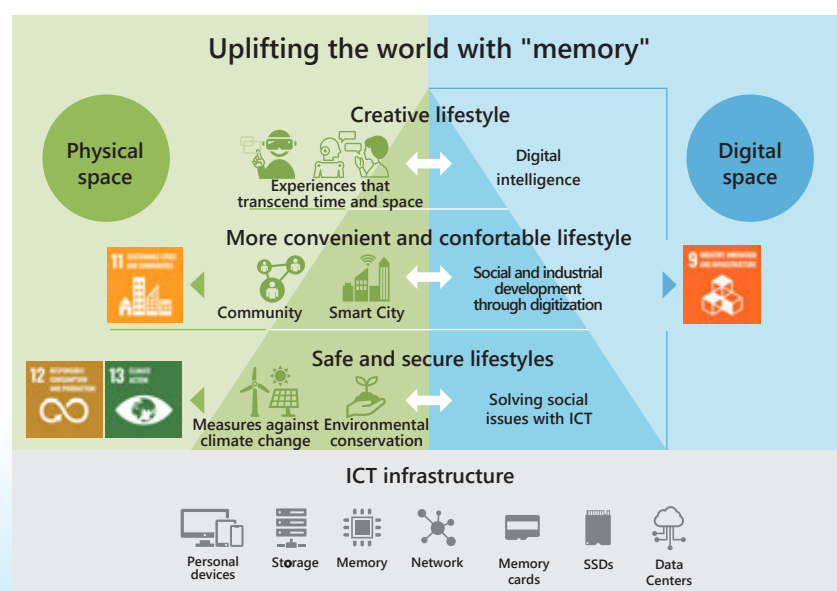


Contribution to the Solving of Social Issues through our Business

The 17 Sustainable Development Goals (SDGs) set out in the 2030 Agenda for Sustainable Development, adopted at the UN Summit in September 2015, officially came into force on 1 January 2016. Based on the SDGs, which are universally applicable to all people until 2030, countries are joining their forces to end poverty in all its forms, fight inequality and address climate change while leaving no one behind. The SDGs aim to end poverty in all its forms and call on all countries - poor, rich and middle-income - to protect the planet while pursuing prosperity.

The name "KIOXIA" reflects our strong determination to change the world by storing "memories" ("kioku" in Japanese) created by society and using them to create new "value" ("axia" in Greek). Our mission is to uplift the world with "memory."

The KIOXIA Group, which provides the value of "memory" to society through products such as flash memory and solid state drives (SSDs), will continue to develop a sustainable society by contributing to the SDGs through its business. Relevant SDG icons are shown for each environmental activity.



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■ Message from the General Manager

Yokkaichi plant was established in 1992 as semiconductor memory manufacturing facilities. The plant initially manufactured DRAMs, then in 2002 it commenced the production of NAND flash memory.

It currently manufactures mainly 3D flash memory. The site continues to expand as the market grows, and is now one of the largest flash memory plants in the world, with seven manufacturing facilities.

We have also strengthened the research and development of next-generation semiconductor devices, with the Memory R&D Center commencing operations in 2018. We continue to evolve with the aim of becoming the world's most advanced semiconductor memory plant, where research, development and production work together.

In October 2019, we changed our company name to "KIOXIA", and restated our mission as "Uplifting the World with Memory." We hope that our flash memory will play an important role in storing ever-increasing amounts of information and that this information will thereby be passed on to future generations.

NAND flash memories are used for data storage in various products, including USB sticks and other portable storage media, smartphones, tablets, PCs, digital cameras, games, smart watches, and data centers. NAND flash memory is also being increasingly used in fields that handle big data, such as cloud computing.

At the same time, the expectations and demands of society for our plant are steadily increasing, as we contribute to the

Kazuhiro Shimizu

General Manager of
Yokkaichi Plant



reduction of greenhouse gas emissions as agreed in the Paris Agreement and participate in the Sustainable Development Goals (SDGs) adopted by the United Nations. In order to meet these expectations, we will not only comply with laws and regulations and social norms, but also strive to contribute to solving social issues through our business.

We will continue to prioritize environmental protection and social initiatives, thus fulfilling expectations regarding our corporate responsibility. We will endeavor to help realize a better global environment and contribute to the development of sustainable society. Our aim is to make Yokkaichi Plant a facility that is admired and trusted by everyone. We look forward to your continued understanding and support.





KIOXIA Group's Environmental Policy

- Mission -

KIOXIA Group's Environmental Policy ensures we conduct business in a way that enhances and preserves the environment. Through purposeful, sustainable actions, we're prioritizing being responsible stewards of the environment to do our part in maintaining our planet's health for years to come.

- Policy -

In addition to complying with environmental laws and regulations in the regions in which it operates, KIOXIA Group considers environmental stewardship to be one of our primary responsibilities. We take actions to limit our environmental impact throughout our supply chain of memory, applied and related software products that support information infrastructure. From taking systematic and globally accredited steps to reduce our pollution and greenhouse gas emissions from our manufacturing processes, to regularly auditing and reviewing our activities to constantly improve our environmental management system, KIOXIA Group takes deliberate action to ensure efficient and effective operations.

- Implementation -

- 1) We strive to make sustainable memory, applied, and related software products by using high-capacity, miniaturized and power-saving technologies. We also perform ongoing environmental assessments of our products and manufacturing processes, as well as a targeted effort to reduce our overall raw material usage.
- 2) We are doing our part to help prevent global warming through initiatives that directly reduce greenhouse gas emissions. This includes the development of energy-saving technologies – especially within power systems and manufacturing machinery – productivity improvements, and introducing clean energies.
- 3) We purposefully take actions aligned with the “three Rs” – reduce, reuse, recycle. Specifically, we focus on developing resource-saving technologies and implementing productivity efficiencies, as well as limiting the use of water resources around our plant sites and returning water used in production to the environment after effective purification treatment.
- 4) We limit environmental risk in our operations by being conscious of the chemicals we use in production and developing technologies that reduce our use of certain chemicals. Through responsible handling and management of production-related chemicals, we also strive to prevent associated pollution.
- 5) We strive to reduce the impact of our business activities on biodiversity, and pursue activities that aim to preserve biodiversity in order to help conserve the environment.
- 6) We regularly disclose information and updates on our sustainability efforts – including new energy-saving technologies – through environmental advertising, exhibitions, media, and collaboration with various stakeholders including the local communities in which we operate.
- 7) We underscore the importance of environmental stewardship with our employees, who promise to keep sustainability top-of-mind in all business activities.

This Environmental Policy is core to KIOXIA Group's operations - it is available internally to global employees of KIOXIA Group and externally to customers, media, and the general public. We are committed to pursuing corporate activities that are in line with this policy.

President and Chief Executive Officer
KIOXIA Holdings Corporation

Topics

Installation of Solar Power Generation Systems

In April 2023, Kioxia Group announced that by FY2050, the company aims to achieve net-zero Scope1 greenhouse gas emissions (direct emissions from our business sites) and Scope2 emissions (indirect emissions resulting from our use of purchased energy) across our global operations. We have additionally set a target of procuring 100% of our energy from renewable sources by FY2040.

To achieve this goal, we have installed abatement equipment in 100% of our targeted facilities since 2011, aiming to eliminate during manufacturing the emission of PFCs with high global warming potential.

In addition, we will introduce energy-efficient manufacturing equipment and power equipment, install solar power generation systems, and procure renewable energy certificates.

A solar power generation system was installed on the rooftop of the Fab 6 and began operation in June 2023. The same system was also installed on the rooftop of the Fab 5 and began operation in July 2024.



Fab 6



Fab 5

Environmental Internship Program

Every year, we accept students from Mie University for an environmental internship program. In September 2023, five students participated in an environmental internship at our plant. Through the experience of environmental work, including environmental management systems, environmental measurements and waste management, they had the opportunity to think about their future jobs and careers.



Environmental Analysis



Presentation

Impressions from Students

- It was a great motivation for me to find a job.
- I was able to learn about semiconductors and became interested in them.
- I was impressed by the thorough environmental measures and numerous social contribution activities.

Support for Owl Conservation Activities

We are working to conserve biodiversity in order to understand the impact of our business activities on biodiversity, to reduce the impact on biodiversity, and to promote social contribution activities.

In March 2018, our plant signed the "Mie Biodiversity Partnership Agreement" with the Mie Prefectural Yokkaichi West High School Nature Study Group to promote the "Owl Conservation Project". As part of this activity, we support equipments to observe owls from laying eggs to fledging of chicks in order to pass on the rich natural environment of the region to the next generation.

As a result, we were able to capture video of the nesting process for five consecutive years starting in 2019.

In addition, we are facilitating this activity through four-party consultations*.

* Mie Prefecture, Yokkaichi Nishi High School, Kuwana High School, and our plant



Nesting Chicks



Fledging of Chicks

Year	Main Activities and Future Plans
2018	<ul style="list-style-type: none"> ● Signed a "Mie Biodiversity Partnership Agreement" ● Determined specifications of the observation devices ● Installed and adjusted the observation devices ● Started to promote the project within and outside the company
2019	<ul style="list-style-type: none"> ● Tripartite discussion on the results of activities in FY2018 and the activity plans for FY2019 ● Improved the observation devices (Solar panels, Batteries, Cameras, and Hard-disk video recorder)
2020	<ul style="list-style-type: none"> ● Tripartite discussion on the results of activities in FY2019 and the activity plans for FY2020 ● Improved the observation devices (Replacement of hard disk, inverter, and router)
2021	<ul style="list-style-type: none"> ● Re-enter into the agreement (automatically renewed annually thereafter) ● Tripartite discussion on the results of activities in FY2020 and the activity plans for FY2021 ● Support for observation equipment ● Review of agreement (Kuwana High School added)
2022	<ul style="list-style-type: none"> ● Four-party discussions on the results of activities in FY2021 and the activity plan for FY2022 ● Support for observation equipment
2023	<ul style="list-style-type: none"> ● Four-party discussions on the results of activities in FY2022 and the activity plan for FY2023 ● Support for observation equipment
2024	<ul style="list-style-type: none"> ● Four-party discussions on the results of activities in FY2023 and the activity plan for FY2024 ● Support for observation equipment



Environmental Education for Children

We have been conducting environmental lectures at elementary schools in the neighborhood since 2009. In addition, we have been conducting children's environmental lectures at the Yokkaichi Pollution and Environmental Miraikan since 2018. Elementary and junior high school students and their parents participated in the lecture, where they learned about global warming through experiments and other activities and considered environmentally friendly ways of living. The event also provided an opportunity to get to know our plant through a virtual reality tour of its clean room. In August 2023, we also gave the first environmental lecture at a school children's facility in Asahi Town. A total of about 3,200 children have taken the course since 2009.



Yokkaichi Pollution and Environmental Miraikan



Virtual Reality Experience



Elementary School in Yokkaichi city



School facility in Asahi town

Environmentally Conscious Living Conceived by Children

- Unnecessary lights are turned off
- Replaced with energy-efficient appliances
- Installation of solar panels on rooftop
- Use things with care
- Water is not left running when bathing or brushing teeth
- No leftovers
- Early to bed and early to rise

Received Letters of Appreciation

We received letters of appreciation from the Yokkaichi City Council of Social Welfare for our food drive activities and for the donation of calendars and notebooks.



Food Drive (June 2024)



Calendars and Notebooks
(January 2024)

Achieved Platinum Status following RBA Audit

In August 2023, Yokkaichi Plant has been certified as achieving 'Platinum Status' by the Responsible Business Alliance (RBA), an organization supporting the rights and well-being of workers and communities affected by global supply chains around the world. Platinum Status is the highest level of certification under the program. Conducted by a third-party company commissioned by the RBA, the audit certified the plant's labor and safety standards as well as its environmental protection measures; it further confirmed that the management and operation of the facility observed the highest ethical standards.

About the Responsible Business Alliance

The Responsible Business Alliance is a non-profit coalition of leading companies dedicated to improving social, environmental and ethical conditions in their global supply chains. The RBA has a Code of Conduct that includes social, environmental, and ethical industry standards and a range of programs, training and assessment tools to support continual improvement. The organization has a global footprint, with offices in North America, Europe and Asia. The RBA and its Responsible Minerals, Labor and Factory Initiatives have more than 500 members with combined annual revenues of more than \$7.7 trillion, directly employing over 21.5 million people, with products manufactured in more than 120 countries.



Letter of Recognition

Beach Cleanup Activity

In June 2024, about 140 employees and family members participated in the beach cleanup activity. Yoshizaki beach, located in Yokkaichi City, is a beach that sea turtles came to in the past to spawn. This cleanup activity is run by the local community and aims to encourage sea turtles to return there.



Environmental lecture at Yokkaichi University

In June 2024, 38 students and 3 working adults participated in an environmental lecture at Yokkaichi University. The main contents of the lecture were plant overview, compliance, SDGs initiatives, and Reduction activities of environmental impact. It was also a good opportunity for them to understand our plant through a virtual reality experience in the clean room and by viewing wafers.



Social Contribution Activities

Social Contribution Activities through Resource Recovery

All employees, including those of resident companies on the premises, are involved in a variety of social contribution activities.



1. Calendars and Notebooks Collection (since 2007)

We collect calendars and notebooks that have become surplus in our plant, and donate them to the Yokkaichi City Council of Social Welfare. The calendars and notebooks are reused at nursing homes and facilities for the elderly, and the notebooks are used to communicate with the hearing impaired.
(2023 results : 1,5043 calendars and 434 notebooks)

2. Bottle Caps Collection (since 2008)

Plastic bottle caps are collected and the proceeds from their sale are used to support polio prevention in developing countries through the Japan Committee for Vaccines for the World's Children, an authorized NPO.
(2023 result : 415,000 pieces, equivalent to 890 vaccines)

3. Charity Eco-Bazaar (since 2012)

We have been holding an in-house bazaar where employees bring in unwanted items from their homes and sell them to employees. Through the bazaar, we are contributing to the greening of Yokkaichi City by donating the proceeds to the Yokkaichi City Greening Fund, in addition to the effective use (reduce and reuse) of unnecessary items.
(2023 results: approximately 38,900 yen donated)

4. Miswritten Postcard Collection (since 2014)

Our plant is cooperating with the World Terakoya Movement* (U NESCO Association of Japan), which supports education in developing countries by collecting miswritten postcards.
(2023 result : 102 sheets, equivalent 5,665 Yen)

*There are approximately 244 million children in the world who are unable to go to school and 700 million adults (15 years of age and older) who cannot read or write. Launched in 1989, the UNESCO World Terakoya Movement supports free learning opportunities so that all people, regardless of age, religion, or gender, can have a fair chance at education as a basic human right. As part of our efforts to achieve the Sustainable Development Goals (SDGs), we will contribute to the creation of self-reliant and sustainable societies by fostering human resources.

5. Used Stamp Collection (since 2015)

We collect used stamps, and donate them to a non-profit organization "Live with Friends on the Earth (LIFE)". The proceeds are used to support agriculture in India and Indonesia.
(2023 result : 2,875 sheets)

6. Down Products Collection (since 2016)

Our plant is cooperating with the "Down Project", in which we collect used down products and donate the sale proceeds to the Mie Community Chest of Japan. The proceeds are used to support local contribution activities in Yokkaichi City and Asahi Town.
(FY2023 result : 3 down jackets)

7. Disposable Contact Lens Case Collection (since 2016)

Our plant is cooperating with the "Eye City eco project," a campaign to recycle the empty cases of disposable contact lenses run by HOYA Corporation, which operates the "Eye City" contact lens specialty store. Collected used contact lens cases are recycled as polypropylene, and part of the proceeds from their sale are donated to the Eye Bank Association.
(2023 result : 29,410 pieces)

8. Aluminum Can Collection (since 2016)

In order to support the independence of the disabled, employees of the plant bring aluminum cans from their homes and donate them to the "Asake Works", a facility to support the independence of people with disabilities. At the "Asake Works", the disabled crush the aluminum cans using a machine, which is then sold to a recycling company, and the proceeds are used to supplement their salaries.
(2023 result: 1,897 cans, equivalent to 2,468Yen)



9.Used Book Collection (since 2018)

We cooperate with "Charibon (Value Books Co., Ltd.)," which supports NPOs through books that are no longer read. We donate proceed from the sale of used books to the "Kodomo no Mirai Secondhand Book Donation" operated by the Secretariat of the National Campaign for Supporting Children's Future. Donations are used to support NPOs and other organizations that work with children and young people living and working in poverty and conduct grassroots activities such as children's cafeterias and learning support (2023 result : 5 books)

10.Mask Collection (2020*)

We collected about 2,600 unneeded masks from the households of our plant employees and donated them to the Yokkaichi City Council of Social Welfare through the Next Step Research Association. These masks are now being used at welfare facilities.

*Single year activity

11.Food Drive (since 2021)

A food drive is an activity in which households bring in surplus food and donate it to people in need. We are cooperating with the efforts of the Yokkaichi City Council of Social Welfare to help those who are receiving public assistance to get out of poverty and live on their own income (2023 result :474 items)

12.Wheelchair Collection (2021*)

Our plant donated wheelchairs to the Yokkaichi City Council of Social Welfare to replace wheelchairs that had been in use for 10 years. The donated wheelchairs are used for lending to people living in the city.

*Single year activity

Communication with Local Communities

Environmental Liaison Meeting

We hold regular liaison meetings with the local community association to report on the status of environmental conservation efforts that lead to the safety and security of the community, including environmental measurement data on water quality, air quality, etc., and the status of emergency response training.

We will continue to communicate with the local community association so that we can promote corporate activities closely linked to the local community.



Environmental Liaison Meeting in November 2023

Environmental Report

We have been publishing an environmental report (site report) since FY2003 to promote understanding of the environmental efforts of our plant to as many people as possible. This is the 22nd edition. We have also prepared an English version of this report, which is available on our website. We will continue to publish this report with the aim of making it an easy-to-read environmental report.

In addition, we publish an environmental pamphlet for children to help them understand.



Environmental Report



Environmental Pamphlet for Children

Environmental Exhibition

Since 2008, we have participated in annual environmental events organized by Yokkaichi City, Mie Prefecture, and others. In addition to introducing our environmental activities and our memory products, we have set up an area where visitors can take a virtual reality tour of the clean room to communicate with the local community.



Yokkaichi City Environmental Fair Exhibition in December 2023



Environmental Panel Exhibition in July 2023

Education and Training

Environmental Education

We provide environmental education to all employees working in the Yokkaichi Plant premises, including those who work on the premises once a year. The educational textbook includes not only global warming prevention and compliance, but also matters of global interest such as the Paris Agreement, SDGs and ESG investment.

Each division also prepares its own educational textbooks on environmental activities that require independent efforts by each department, providing an opportunity for employees to become actively involved in environmental activities. In addition to specific employee training for those engaged in tasks with the potential to have a large impact on the environment, we also provide environmental education for department managers, newly assigned employees, internal environmental auditors, and other employees at different levels.

	Course	Theme
Stratified education	For department managers	Responsibilities and authority
	For all employees	Environmental management system revisions, Environmental policy, Environmental objectives and targets, etc.
	For newly assigned employees	Global environmental issues, Environmental management systems, Environmental policy, etc.
Functional education	For specific employees	Compliance with environmental laws and regulations, Statement of work standards for specific operations, Environmental impact of deviations from procedures, etc.
	For environmental auditors	Roles and responsibilities, Revisions to environmental laws

Monthly Events

To raise environmental awareness among employees, we hold employee-participation events every year during Environment Month in June, 3Rs* Promotion Month in October, and Energy Conservation Month in February.

*3Rs: Reduce, Reuse and Recycle

1. Tour of External Environmental Facilities

We conducted tours of facilities closely related to the environment, such as the Yokkaichi Clean Center (October 2023) and the solar power generation system on the rooftop of the fab 6 (February 2024). Through the tour, participants deepened their understanding of effective use of resources and energy conservation.

2. 3Rs Master Certification

We conducted its own 3Rs Master certification test in October 2023, 26 employees were certified as 3Rs Master and are working to promote the 3Rs as key persons in their respective departments. (The total number of meisters is 196.)

3. Charity Eco-Bazaar

We held an in-house bazaar in October 2023. Employees brought in unwanted household items and sold them to employees. Through the bazaar, we contribute to the effective use of unwanted items (reduce and reuse) and also contribute to the greening of Yokkaichi City by donating the proceeds to the Yokkaichi City Greening Fund. (2023 results: 38,900Yen)

4. Road Cleaning around the Plant

Our plant employees, including the general manager, clean up the roads around the plant every year during Environment Month and 3Rs Promotion Month. 110 employees participated in a cleanup activity in June 2024 and collected 20 kg of trash.

5. Raising Environmental Awareness through Quizzes

The "3R Quiz," "Energy Saving Quiz," and "eco Quiz" were held during the 3R Promotion Month in October 2023, Energy Saving Month in February 2024, and Environment Month in June 2024, respectively. Many employees participated in the quiz, raising environmental awareness.



Solar Power Generation System on the Looftop of the Fab 6



Yokkaichi Clean Center



3Rs Master Certification



Road Cleaning around the Plant



Charity Eco-Bazaar



■ Greening Activities on Site

Since June 2017, we have been planting flowers around each of our buildings to raise environmental awareness, enhance the image of our plant, and create a relaxing space for our

employees. A replanting event was held in June 2024, with many employees participating.



■ Publication of Energy-saving Wall Newspapers and Environmental Information "Eco Time"

Since April 2014, we have been publishing the "Energy-saving wall newspaper" which introduces topics on energy conservation activities at our plant, interviews with energy conservation personnel in each department, and energy conservation trends in Japan and overseas.

In addition, to further raise environmental awareness among employees, we have been publishing "Eco Time," an environmental information publication since May 2017 that introduces topics on environmental activities at our plant, environmental activities unique to each department, eco-friendly initiatives that can be taken at home, and environmental trends in Japan and overseas. Recently, we have been striving to disseminate information that the world is paying attention to, such as various initiatives to prevent global warming, trends in renewable energy, laws and regulations in various countries related to the environment, SDGs, and ESG investment.



Energy-saving wall newspaper published in May 2024



"Eco Time" newsletter published in June 2024

■ Evaluation from External Parties

■ Energy Conservation Merit Award (FY2023)

Two employees of our plant received the Energy Conservation Center Tokai Branch Manager's Award for Distinguished Contributions to Energy Conservation, which is given to individuals who have contributed to energy conservation in a variety of fields, including energy management and education on energy conservation.



Recipient of the Energy Conservation Promotion Merit Award

■ Received Letters of Appreciation (FY2023)

We received letters of appreciation from the Yokkaichi City Council of Social Welfare for our food drive activities and for the donation of calendars and notebooks.



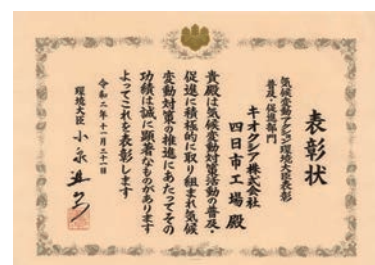
Food Drive Activities



Donation of Calendars and Notebooks

■ Climate Change Action Minister of the Environment Award (FY2020)

KIOXIA's Yokkaichi Plant received "Climate Change Action Minister of the Environment Award (Mitigation field in the Dissemination/Promotion category)" in November 2020. This award constitutes part of the promotion of measures tackling climate change issues, and recognizes individuals or groups who have made remarkable contributions towards the prevention of global warming. The Yokkaichi Plant was recognized for its cross-organizational energy-saving activities and community-based efforts to mitigate climate change.



Reduction of Greenhouse Gases



Efforts to Reduce PFCs Emissions

Large amount and variety of PFCs, types of greenhouse gases, are used in the P-CVD (plasma CVD) process for forming thin films on wafers, the Metal-CVD process, the Hot process, and the DRY (dry etching) process for microfabricating wiring and contact holes. We are focusing on reducing PFCs emissions in the manufacturing process from source to discharge as a pillar of our global warming countermeasures. In 2023, we implemented the following measures to reduce PFCs emissions:

- (1) Installation of abatement equipments that breaks down PFCs into gases with low global warming potential and discharges them,
- (2) Installation of high-efficiency plasma equipments,
- (3) Optimization of reaction chamber cleaning time,

and

- (4) Optimization of reaction chamber cleaning frequency.

In particular, (1) has always maintained a 100% installation rate, reducing emissions by 92% compared to the case without installation. We are also working to reduce PFCs emissions by developing measures to reduce the use of PFCs linked to manufacturing.



PFCs Abatement Equipment

No.	Measure	Process	Target Gas	Remark
(1)	100% installation of abatement equipments	P-CVD, DRY, Metal	CF ₄ , C ₄ F ₈ , CHF ₃ , SF ₆ , NF ₃ , CH ₂ F ₂ , CH ₃ F, CH ₄ , N ₂ O	Continued installation in newly installed facilities
(2)	Installation of high-efficiency plasma equipments	CVD, Metal	NF ₃	Continued implementation
(3)	Optimization of reaction chamber cleaning time	Metal	NF ₃	Continued implementation
(4)	Optimization of reaction chamber cleaning frequency	CVD	NF ₃	Continuous improvements to other processes

Reduction of Energy-derived CO₂

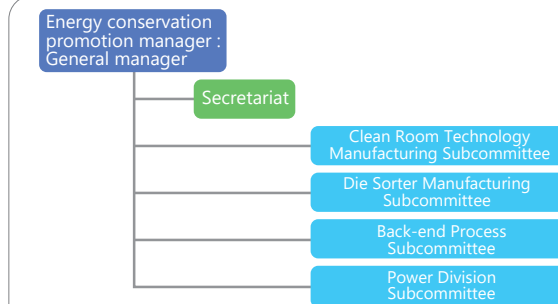


Efforts to Reduce CO₂ Emissions

The production technology, manufacturing, and facilities divisions of our plant have organized an Energy Conservation Committee to work across the organization to reduce energy-derived CO₂ emissions, and have formed specialized subcommittees (Clean Room Technology Manufacturing Subcommittee, Die Sorter Manufacturing Subcommittee, Back-end Process Subcommittee, and Power Division Subcommittee) as subordinate organizations.

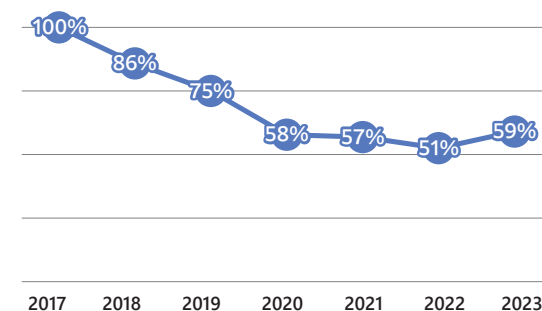
Each subcommittee sets energy-derived CO₂ reduction targets every year, and implements energy-saving measures for manufacturing and power equipment. The intensity* of energy-derived CO₂ emissions in 2023 improved by 41% compared to 2017.

* CO₂ emissions per production memory capacity is used as an indicator that can be used to evaluate efforts.



Energy Conservation Committee Organization

Subcommittee	Measure
Clean Room Technology Manufacturing Subcommittee	133 measures including throughput improvement, reduction of city gas and hot pure water consumption, chiller-less
Die Sorter Manufacturing Subcommittee	5 measures including installation of energy saving equipments
Back-end Process Subcommittee	12 measures including introduction of high-efficiency testers and improvement of processing capacity
Power Division Subcommittee	146 measures including optimization of power equipment operation operation



Changes in the Intensity of Energy-derived CO₂ Emissions



■ Reduction of Wastes



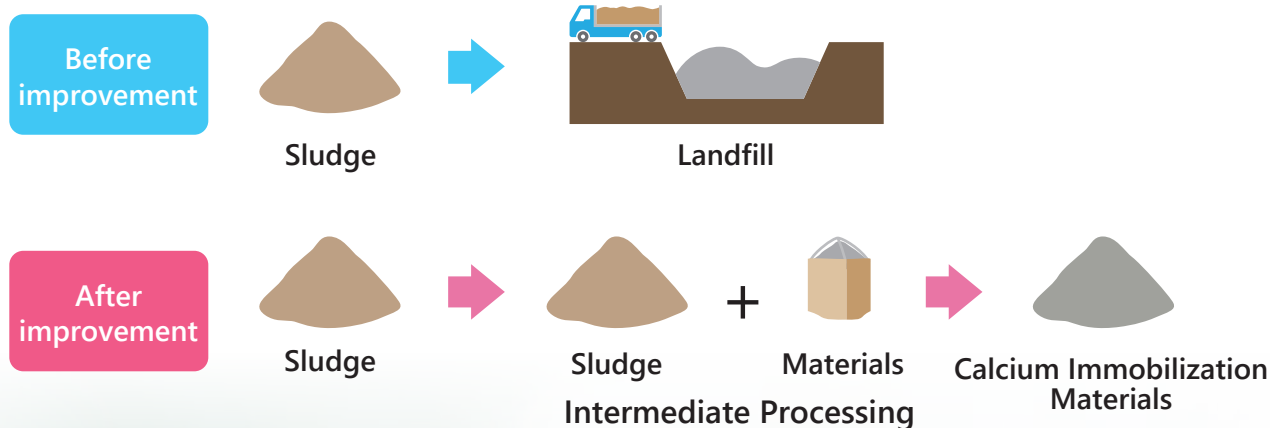
Although the amount of waste generated is on the rise as the scale of our plants expands, we are striving to make effective use of resources with the aim of reducing the environmental impact throughout the supply chain. In addition to recovering and recycling waste generated in the manufacturing process, we are actively working to reduce the use of chemicals and gases by improving the manufacturing process.

■ Reduction of Final Disposal of Sludge

Previously, sludge was disposed of in landfills, but now it can be recycled by utilizing it as a material for calcium immobilization materials* used in final disposal sites. The reduction effect is 1,800 tons/year.

*Applications of Calcium Immobilization Materials

At final disposal sites, calcium ions in leachate cause scaling and blockages in water collection pipes. Calcium-immobilizing materials inhibit the generation of scale, leading to stable operation over a long period of time.



Management of Chemical Substances

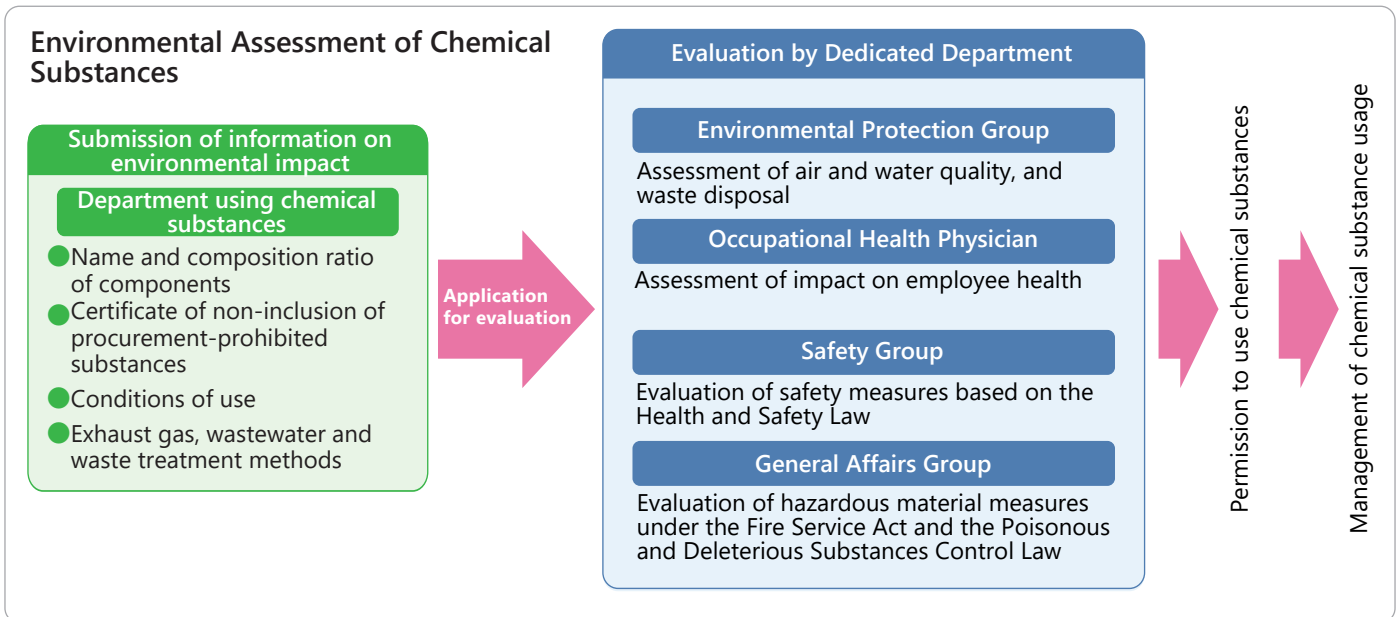


We manage chemical substances based on the principles of "using as few chemical substances as possible," "striving to reduce or substitute chemical substances whenever possible," and "managing chemical substances appropriately when they are used."

Before starting the use of new chemical substances, we conduct environmental assessments to confirm whether or

not they contain any of the regulated substances specified by our company and how to properly dispose of them, in order to reduce the environmental impact.

After starting the use of new chemical substances, we manage fluctuations in chemical substance usage every month with an online tabulation system.



Reduction of Chemical Substances

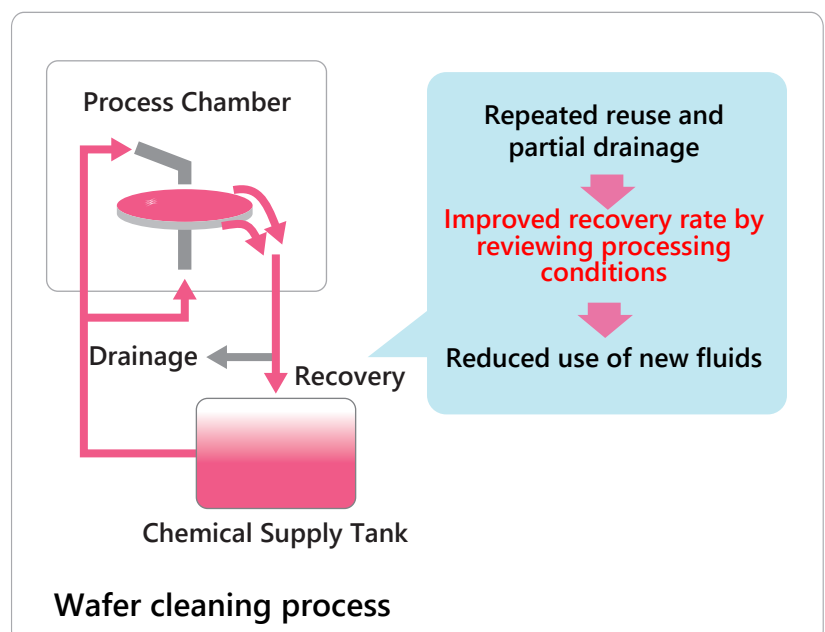


Example of Reduced Chemical Substance Emissions

We evaluate the existence of legal restrictions on the use of chemical substances and the risks associated with the leakage of such substances, and identify chemical substances that should be reduced in environmental impact. We are also striving to reduce the use of these substances and to use alternatives.

As part of our efforts to reduce emissions of chemical substances, by reviewing the processing conditions of the wafer cleaning process, the chemical solution that had been drained was recovered, and the amount used per wafer in the process was reduced by approximately half.

We will continue to develop technologies with the 3Rs (Reduce, Reuse and Recycle) in mind to reduce environmental impact.





Management of Chemical Substances in Products



Regulations on chemical substances in products are being tightened every year. In addition to the EU's RoHS Directive, the Packaging Materials Directive and the REACH Regulation have been enforced. Outside the EU, laws and regulations similar to the EU's RoHS Directive are in place in countries around the world. In order to comply with these regulations, "Procurement-prohibited substances" and "Procurement controlled substances" are selected and substances that must not be included in products

or must be controlled are defined. We conduct product environmental assessments at the product development stage to check information on new raw materials and chemical substances contained in our products. Through these efforts, we are striving to select materials with lower environmental impact to minimize the use of hazardous substances in our products and manufacturing processes to the extent possible.

Category	Definition
Procurement-Prohibited Substances^{*1}	"Procurement-Prohibited Substances" mean group of substances that are prohibited to be included in Deliverables procured by KIOXIA. Except for the exempted applications specified in the guidelines, no intentional addition shall be approved to deliverables of any applications. If there is a restrict value, the impurity concentration must be less than the restrict value. Notwithstanding the above, intentional addition and the impurity concentration must be less than the Restrict Value for the applications where the prohibition of intentional addition is not specified in the regulations.
Procurement-Controlled Substances^{*2}	"Procurement-Controlled Substances" mean group substances that is subject to control for contain/inclusion in deliverables procured by KIOXIA. Unlike procurement-prohibited substances, procurement-controlled substances do not restrict intentional addition in deliverables, and instead refer to substances for which the presence/absence and concentration value should be fully grasped. Suppliers are required to disclose information on the presence/absence and concentration values of substances that correspond to procurement-controlled substances that were intentionally added to deliverables or included as known impurities.

^{*1} Lead and its compounds, Mercury and its compounds, Cadmium and its compounds, Hexavalent Chromium compounds, Polybrominated Biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs including DecaBDE), Specific Substances of Phthalic acid esters, Asbestos, Certain Azo dyes and Azo pigment that may generate certain Amines, Ozone depleting substances (CFCs, HCFCs, HBFCs, carbon tetrachloride, etc.), Polychlorinated Biphenyls (PCBs), and Polychlorinated Terphenyls (PCTs), Polychlorinated naphthalene (with 1 or more chlorine atoms), Radioactive substances, Short-chained Paraffin Chloride (Carbon chain length 10-13), Tributyltin (TBT), Triphenyltin (TPT), and other substances in the 70 categories specified by KIOXIA.

^{*2} Antimony and its compounds, Arsenic and its compounds, Bismuth and its compounds, Polycyclic Aromatic Hydrocarbons (PAHs), Bromine and its compounds, Nickel and its compounds, Selenium and its compounds, Zinc and its compounds, Chlorinated paraffin, Trivalent Chromium compounds, Cobalt and its compounds, Cyanogen and its compounds, Perfluorocarbons (PFCs), Hydrofluorocarbons (HFC), Chlorine and its compounds, Manganese and its compounds, Organic tin compounds, Sulfur hexafluoride (SF₆), PFASs (except PFOS and its affinity compounds, Perfluorooctanoic Acid (PFOA), its salts and PFOA-related substances) and other substances in the 27 categories specified by KIOXIA.

Green Procurement



In addition to complying with environmental laws and regulations in the regions in which it operates, KIOXIA considers environmental stewardship to be one of our primary responsibilities. We take actions to limit our environmental impact throughout our supply chain of memory, applied, and related software products that support information infrastructure. From taking systematic and globally accredited steps to reduce our pollution and greenhouse gas emissions from our manufacturing processes, KIOXIA takes deliberate action to ensure efficient and effective operations. As globalization in business progresses, the social demands of each company, including our own, to realize a sustainable society are steadily increasing. This includes contributing to the reduction of greenhouse gas emissions agreed under the Paris Agreement and the Sustainable Development Goals (SDGs) adopted by the United Nations. To meet these demands, we strive not only to comply with laws and social norms, but also to contribute to solving social issues through our business. KIOXIA has selected "Respect for human rights", "Sustainable supply chains", "Climate change", "Environmental consideration" and "Health and safety", etc. as Sustainability Materiality (Priority Areas for the Group's Medium- to Longterm Growth) and is working together as a Group to further these actions. KIOXIA will continue to promote Green Procurement activities in the future as one such initiatives. Green Procurement activities ("Green Procurement") are the procurement of products, parts, and materials, etc. that have a reduced negative impact on the environment by encouraging our suppliers to actively promote environmental protections. Coordinating activities across our supply chain are critical in order to conduct business activities while taking into consideration the reduction of environmental impacts and risks due to hazardous chemical substances, etc., and the cooperation of our suppliers is essential.

We evaluate the environmental impacts of our products as well as the substances used in parts and materials related to our products in advance during the development and design stages. We strive to select products, parts, and materials with lower environmental impacts to minimize the use of hazardous substances in our products and in the manufacturing processes of our products.

Promotion of Environmental Protections by Our Suppliers

We request all of our suppliers to establish a management system for environmental conservation, including management of chemical substances contained in their products. We also encourage our suppliers to obtain the latest versions of the international standards ISO14001 and ISO9001.

Management of Chemical Substances Contained in Deliverables

For any items delivered to KIOXIA ("Deliverables"), in order to manage contained chemical substances, we ask for the thorough implementation of the following:

- (1) Establishment of management system for chemical substances contained in deliverables
- (2) Green procurement of parts and materials with low environmental impacts, such as reducing hazardous chemical substances
- (3) Measures to prevent the transfer and transition of chemical substances to deliverables through contact and so on
- (4) Responses to various surveys requested by KIOXIA, including surveys on chemical substances content



Green Procurement Guidelines

ISO14001

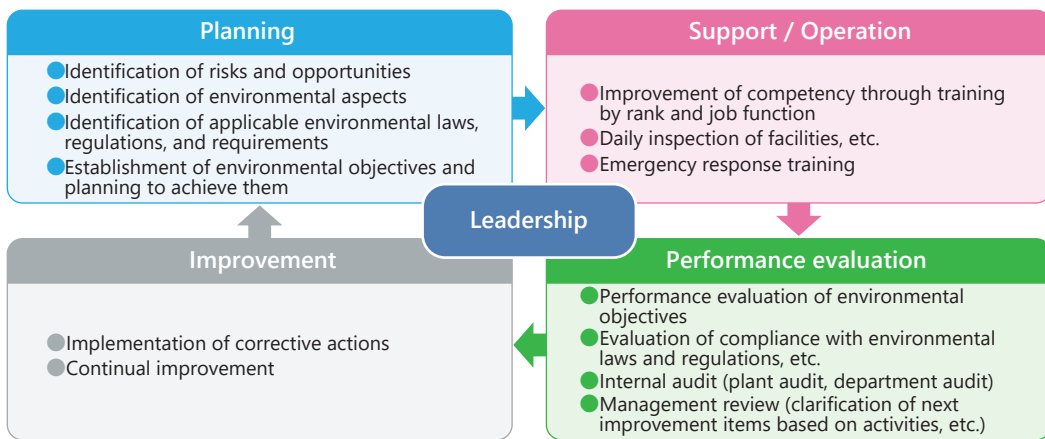


We have established an environmental management system (EMS) in accordance with the international standard ISO14001 and are committed to continuous improvement and enhancement. We evaluate the environmental impact of our business activities, products, and services, including biodiversity, and develop proactive environmental measures by setting environmental objectives and targets related to reducing environmental impact, preventing pollution, and creating products that promote measures to reduce environmental impacts.

The main initiatives for 2023 are as follows;
 (1) Improvement of environmental impact basic unit through measures to prevent global warming and effective use of resources, etc.
 (2) Expand installation of solar power generation systems
 (3) Promote initiatives to achieve net-zero greenhouse gas emissions
 (4) ISO 14001 renewal audits, environmental facility audits, GHG/LCA* third-party verification, customer audits

*GHG : Green House Gas
 LCA : Life Cycle Assessment

Environmental Management System



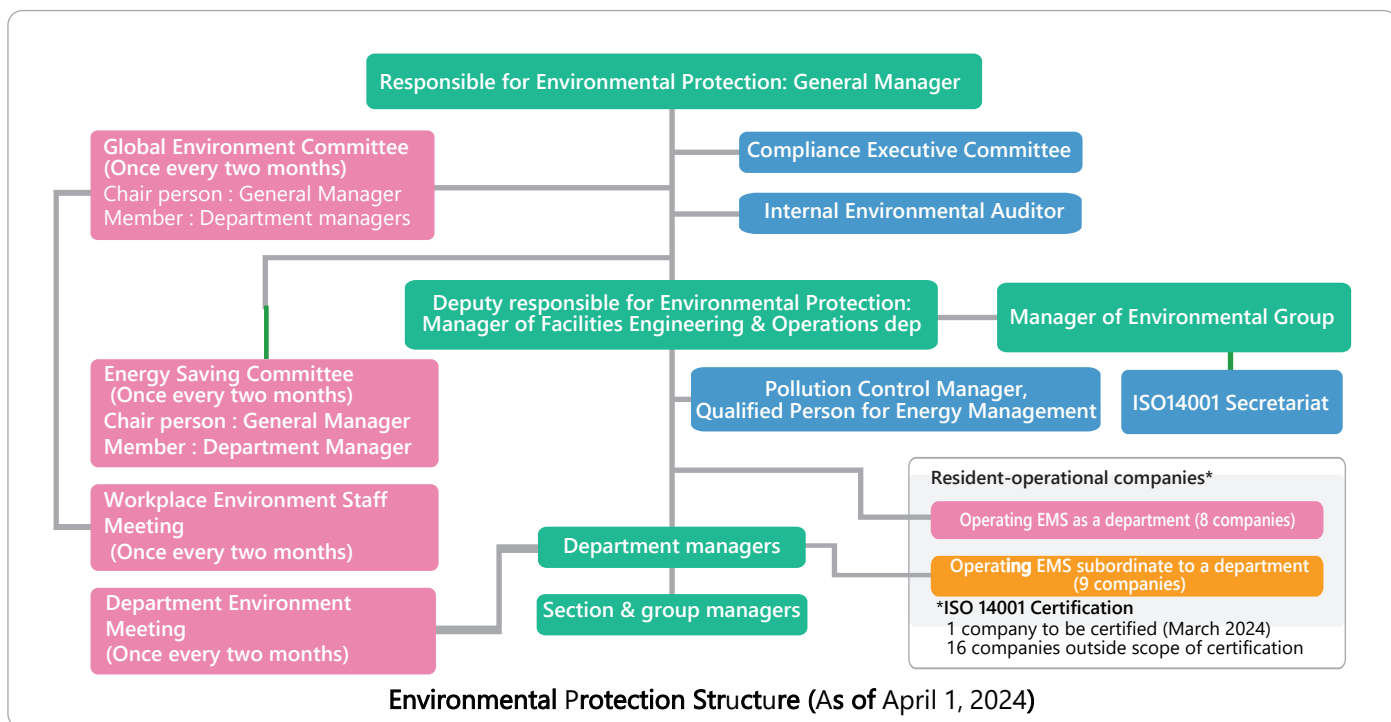
ISO 14001 Certificate

Environmental Protection Structure



In order to promote environmental protection activities continuously and effectively, we have established an environmental protection system headed by the general manager to clearly define responsibilities and authority, and have established the Global Environment Committee as the highest deliberative body for environmental protection, where EMS, environmental objectives, and implementation plans are

discussed. We have also established a Compliance Executive Committee to oversee compliance with laws and regulations. In addition, all employees, including those who work on site, are actively involved in activities to reduce the environmental impact of our business activities and contribute to society through the environment.



Environmental Protection Structure (As of April 1, 2024)



Environmental Target

Environmental targets are set annually, reflecting the results of environmental impact assessments of the previous year's achievement of environmental targets and performance, requirements for our plant, and changes in environmental

conditions. In 2023, we were able to achieve our goals through a variety of measures.

Environmental Targets and Results in 2023

Environmental objective	Environmental target	Target value	Result
1	Creating products that consider environmental impact	3 measures	3 measures
2	Preventing global warming	Improving the intensity* of energy-derived CO ₂ emissions (2017 Basis)	58.5%
3		Improving the intensity* of greenhouse gas emissions (2017 Basis)	53.7%
4		Started operation of solar power generation system on Feb 6: June	Started operation: June
5		Introduction of renewable energy	Under construction (Progress : 80%)
6	Efficient use of resources	Improving the intensity* of total waste generation (including valuable materials) (2017 Basis)	45.3%
7		Improving the intensity* of industrial waste (2017 Basis)	54.5%
8		Improving the intensity* of water received (2017 Basis)	61.6%
9	Reducing environmental risks	Improving the intensity* of chemical emissions (2017 Basis)	27.8%
10	On-site greening	Creating a healing space for employees and improving the image of our company to customers and others (Planting of flower beds in each building)	Replanting and maintenance in each building
11	Promoting social contribution activities and environmental communication	Exhibiting at external environmental events	- Environmental Panel Exhibition (July 2023) - Yokkaichi City Environmental Fair Exhibition (Dec. 2023)
12		Holding environmental liaison meetings with the local community association	Held a liaison meeting (Nov. 2023)
13		Environmental lecture at Yokkaichi University	Held an environmental lecture (June 2023)
14		Publication of environmental reports	-Japanese version (Aug. 2023) -English version (Dec. 2023)
15		Environmental Education for Children at Yokkaichi Pollution and Environmental Miraikan and a neighborhood elementary school	-Yokkaichi Pollution and Environmental Museum (Aug. 2023) -School children's facility in Asahi Town (Aug. 2023) -Neighboring elementary school (Dec. 2023)
16		Accepting an Environmental Internship from Mie University	Accepted 5 students (Sep. 2023)
17		Food drive (Support for families living in poverty)	474 foods
18		Collection of disposable contact lens cases (Support for corneal transplant awareness and dissemination)	29,410 cases
19		Collection of down products (Support for Social Contribution activities in Yokkaichi City and Asahi Town)	3 Down jackets
20		Collection of used stamps (Agricultural support in India and Indonesia)	2,875 stamps
21		Collection of miswritten postcards (Supporting Education in Developing Countries)	102 postcards
22		Charity eco bazaar (Support for greening by Yokkaichi City)	Donated 38,900 yen (Oct. 2023)
23		Collection of plastic bottle caps (Supporting Polio Prevention in Developing Countries)	415,000 caps (Equivalent to 330 vaccines)
24		Collection of surplus calendars and notebooks (Utilized in nursing homes, kindergartens, nursery schools, etc.)	1,504 calendars and 426 notebooks
25	Increasing environmental awareness	Environmental emphasis month (Environment Month, 3R Promotion Month, Energy Conservation Month)	Three times
26		Publication of the environmental information magazine "Eco Time" and "Energy-saving Wall Newspaper"	12 times
27	Biodiversity Conservation	Support for owl conservation activities (Mie Biodiversity Partnership Agreement)	-Hatching of 2 birds (Apr. 2023) -Leaving the nest (May 2023) -Four-party talks (Sep. 2023), Donation (Dec. 2023)
28		Coastal Cleanup (Support for improvement of sea turtle spawning environment)	Coastal Cleanup (June and Nov. 2023)

* Volume-based memory capacity is used as an indicator for basic-unit goals that allows appropriate assessment.

Monitoring System



In order to preserve the environment of the atmosphere, rivers, and the sea, we have established voluntary control standards that are stricter than legal requirements. In addition, employees are stationed 24 hours a day to monitor the situation.

Items subject to regulation

Nitrogen Oxides (NO_x), Sulfur Oxides (SO_x), Total Nitrogen (T-N), Total Phosphorus (T-P), Chemical Oxygen Demand (COD), Suspended Solids (SS), Fluorine (F), and Hydrogen Ion Index (pH) are automatically monitored continuously for 24 hours. Other items are monitored by sampling.

Items not subject to regulation

To strengthen control, items not subject to regulation are also voluntarily monitored by sampling.

Analysis Center

The analysis center is located within our plant and analyzes approximately 45,000 samples per year.



Automatic Wastewater Analyzer



Water Treatment Facility Monitoring System



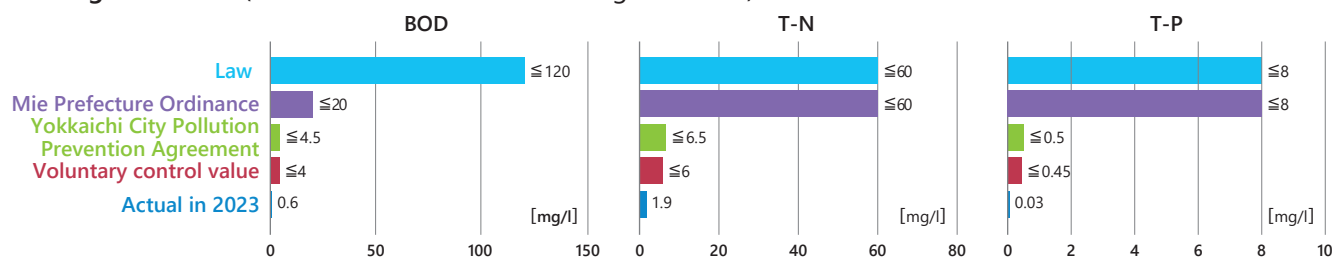
Analysis Center

Air and Water Quality Management

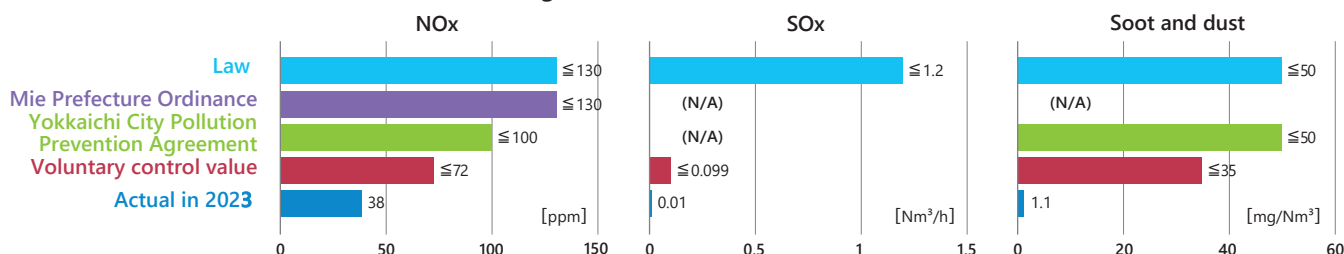


To ensure compliance with laws, regulations, ordinances, and agreements, we set voluntary control values (about 40 items) and manage them on a daily basis. Below is the status of drainage (BOD, T-N, T-P) and exhaust gas (NO_x, SO_x, Soot and dust) management.

Drainage into river (Actual measured value is averages in 2023)



Exhaust Gas (Actual measured value is averages in 2023)





Environment-related Facilities



For environmental facilities such as wastewater treatment facilities, we have established our own guidelines, "Environmental Structure Guidelines," to prevent contamination and to reduce the risks posed by chemical substances.

Examples

Waste gas scrubber



Structures and specifications for stable processing

Overhead piping



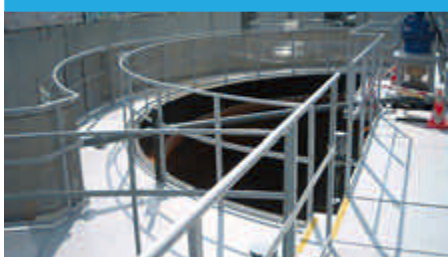
Reducing soil contamination risks

Drainage dike



Preventing wastewater from discharging into under or public water areas

Wastewater treatment



Stable processing system and preventing outflow of wastewater

Double joints in piping



Monitoring and preventing liquid leakages

Six-sided inspection



Early detection of leaks from the bottom by notches in the foundation

Seismic structure to store safely, Drainage dike, Oil level alarm

Emergency Response Training



We use a variety of chemicals in our plant. We have selected equipment and operations with high environmental risks that may be subject to emergencies due to breakdowns of the equipment that handles them or natural disasters, and we have standardized all of our response procedures.

In 2023, a total of 40 training sessions were conducted with a total of 396 employees participating, including those of the company stationed on the premises. After the training sessions, the effectiveness of the response methods was confirmed and response procedures were improved as necessary.



Response Training for a Chemical Leak

■ Compliance with Laws and Regulations



In addition to clarifying environmental laws, regulations, and other requirements applicable to our plant, we check applicable laws and regulations in the procurement of manufacturing and power equipment to ensure that there are no legal compliance issues.

■ Centralized Management of Laws and Regulations

We regularly check the content of legal amendments to ensure that we are up-to-date with constantly changing environmental laws and regulations. The content of the legal amendments applicable to our plant is incorporated into the "Legal Registration List and Compliance Evaluation Table" for centralized management.



System for conformity

Check for compliance before procuring equipment.

■ Compliance Assessment

We evaluate compliance with environmental laws and regulations applicable to our plant annually. In 2023, we had no problems with all legal requirements.

■ Compliance Checks on Equipment Investment and Procurement

At the time of equipment investment and procurement, all 10 laws and regulations, including the Water Pollution Control Act and county ordinances, are checked for compliance. For facilities that are subject to the laws and regulations, notification is made as necessary.



Visualization of Compliance Management with Stickers

■ Visualization of Compliance Management

Stickers indicating the relevant laws and regulations are placed on the subject equipment to ensure the visualization of legal management.

■ FAQ

Q Smoke from the building roof ?

A The air discharged from the cooling tower is cooled by the outside air and turns into water vapor that appears white.



Cooling Tower

Measurement Data on the Environment

Atmospheric Measurement Result

	Regulatory value	Voluntary control value	Measured value	Frequency
NOx (ppm)	130 or less *	72 or less	38	Once per year
SOx (Nm ³ /h)	1.2 or less *	0.099 or less	0.01 or less	Once per year
Soot and dust (mg/m ³)	50 or less *	35 or less	1.1	Twice per year

* Air Pollution Control Act

Measured values are averages for FY2023

Drainage Measurement Results (No.1 Drainage Outlet (Fab 1 through Fab 5): River)

	Regulatory value	Voluntary control value	Measured value	Frequency
pH	5.8 to 8.6 ^{*1}	6.5 to 8.0	6.6 to 7.7	Once per month
BOD (mg/l)	20 or less ^{*1}	4.0 or less	0.6	Once per month
COD (mg/l)	20 or less ^{*1}	4.0 or less	2.5	Once per week
SS (mg/l)	70 or less ^{*1}	3 or less	1 or less	Once per month
Nitrogen (mg/l)	60 or less ^{*2}	6.0 or less	1.9	Once per week
Phosphorus (mg/l)	8 or less ^{*2}	0.45 or less	0.03	Once per month
Fluorine (mg/l)	8 or less ^{*2}	4.5 or less	1.1	Once per week

*1 Mie Prefectural Ordinance for Living Environment Conservation

Measured values are averages for FY2023

*2 Water Pollution Prevention Act

Drainage Measurement Results (No.2 Drainage Outlet (Fab 6 and Fab 7): Sea Area)

	Regulatory value	Voluntary control value	Measured value (Fab6)	Measured value (Fab7)	Frequency
pH	5.0 to 9.0 *	6.5 to 8.0	7.1 to 7.7	7.1 to 7.6	Once per month
COD (mg/l)	120 or less *	10 or less	4.0	1.9	Once per week
SS (mg/l)	150 or less *	8 or less	1 or less	1 or less	Once per month
Nitrogen (mg/l)	60 or less *	15 or less	3.0	1.7	Once per week
Phosphorus (mg/l)	8 or less *	1 or less	0.10	0.02 or less	Once per month
Fluorine (mg/l)	15 or less *	12 or less	3.6	2.5	Once per week

* Water Pollution Prevention Act

Measured values are averages for FY2023

Sound Noise and Vibration Measurement Results (West Area)

	Measurement location: Time	Regulatory value	Voluntary control value	Measured value	Frequency
Sound noise (dB)	Site boundaries: morning and evening	N/A	55 or less *	51	Four times per year
	Site boundaries: Daytime	N/A	60 or less *	51	Four times per year
	Site boundaries: Night	N/A	55 or less *	51	Four times per year
Vibration (dB)	Site boundaries: Daytime	N/A	50 or less *	35	Once per year
	Site boundaries: Night	N/A	50 or less *	35	Once per year

* Since the regulation values for the West and East areas vary depending on the measurement point, the most stringent values are indicated.

Sound Noise and Vibration Measurement Results (East Area)

	Measurement location: Time	Regulatory value	Voluntary control value	Measured value	Frequency
Sound noise (dB)	Site boundaries: morning and evening	50 or less *	-	49	Four times per year
	Site boundaries: Daytime	55 or less *	-	54	Four times per year
	Site boundaries: Night	45 or less *	-	44	Four times per year
Vibration (dB)	Site boundaries: Daytime	60 or less *	-	<30	Once per year
	Site boundaries: Night	55 or less *	-	<30	Once per year

* Mie Prefectural Ordinance for Living Environment Conservation

Material Balance

Input

		2019	2020	2021	2022	2023
Chemicals *	t	47,173	53,905	55,262	50,806	43,490
City Water	Thousands of m ³	30	22	31	49	33
Industrial Water	Thousands of m ³	19,766	21,076	21,485	21,573	21,016

* Substances to be reduced as specified by the KIOXIA Group

Output

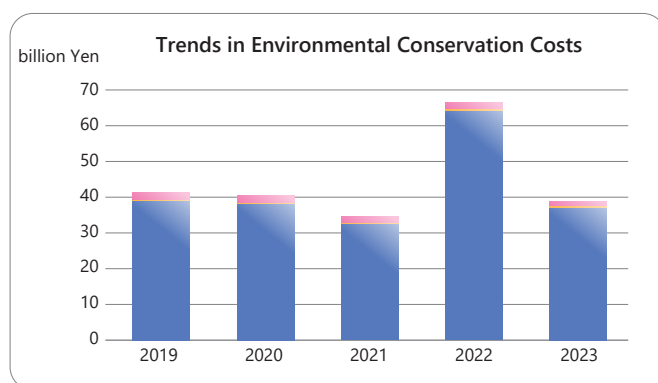
		2019	2020	2021	2022	2023
Greenhouse Gas	Thousands of t-CO ₂	2,136	2,205	2,150	1,993	1,862
Chemicals *	t	518	586	562	478	377
Waste	t	81,211	90,161	93,636	85,180	70,629
Drainage	Thousands of m ³	14,733	15,857	16,191	16,196	15,605
NOx	t	27	25	23	29	31
SOx	t	0	0	0	0	0

* Substances to be reduced as specified by the KIOXIA Group

Environmental Accounting

Costs invested in measures to reduce the environmental impact of our business activities are recorded annually in accordance with the "Environmental Accounting Guidelines 2005" set forth by the Ministry of the Environment. In FY2023, we invested 38.8 billion yen for environmental measures, including the introduction of exhaust gas and wastewater treatment facilities and their maintenance.

	Other Costs (green procurement, ISO14001 operations, and environmental education)
	Costs of resource utilization and waste reduction
	Costs of pollution protection (air and water)



Law concerning Pollutant Release and Transfer Register (PRTR)

PRTR is a system to track, compile, and disclose data on how much of a wide variety of potentially hazardous chemical substances are released into the environment (air, water area or soil) from what sources, or are carried out of business premises in waste. The PRTR Law requires reporting of emissions and transfers of Class I designated

chemical substances when the annual volume handled is 1 ton or more (0.5 tons or more for specified Class I chemical substances). The KIOXIA Group voluntarily discloses the amounts handled, consumed, removed and recycled in addition to the amounts released and transferred for each Class I designated chemical substance.

PRTR Substance Data in 2023

(Unit: t)

Substance number	Chemical substance name	Amount handled	Amount released					Amount transferred			Amount consumed ^{*1}	Amount removed ^{*2}	Amount recycled ^{*3}
			Air	Public water	Soil	Landfill	Total Amount	Waste	Sewerage	Total Amount			
1	Zinc compounds (water-soluble)	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40	0.00
272	Copper salts(water-soluble, except complex salts)	4.66	0.00	0.00	0.00	0.00	0.00	4.66	0.00	4.66	0.00	0.00	0.00
302	Naphthalene	2.64	0.01	0.00	0.00	0.00	0.01	2.63	0.00	2.63	0.00	0.00	0.00
374	Hydrogen fluoride and its water-soluble salts	4112.13	1.73	0.00	0.00	0.00	1.73	139.88	0.00	139.88	0.00	2893.30	1077.22
395	Water-soluble salts of peroxodisulfuric acid	25.88	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.52	0.00	25.36	0.00
405	Boron compounds	1.04	0.00	0.67	0.00	0.00	0.67	0.37	0.00	0.37	0.00	0.00	0.00
412	Manganese and its compounds	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	1.20	0.00
438	Methylnaphthalene	5.88	0.02	0.00	0.00	0.00	0.02	5.85	0.00	5.85	0.00	0.00	0.00
453	Molybdenum and its compounds	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00
565	Acrylic acid polymer	1.27	0.00	0.00	0.00	0.00	0.00	1.27	0.00	1.27	0.00	0.00	0.00
595	Ethylenediaminetetraacetic acid and its potassium and sodium salts	99.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.68	0.00
627	Diethylene glycol monobutyl ether	7.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.38
665	Cerium and its compounds	28.35	0.00	0.00	0.00	0.00	0.00	28.35	0.00	28.35	0.00	0.00	0.00
677	Tetramethylammonium Hydroxide	1022.42	0.00	2.92	0.00	0.00	2.92	140.69	0.00	140.69	0.00	14.46	864.35
708	1-Hydroxyethane-1,1-diphosphonic Acid and its potassium and sodium salt	8.35	0.00	7.07	0.00	0.00	7.07	0.25	0.00	0.25	0.00	1.04	0.00

*1 Amount consumed is the amount of a substance used in or associated with a product and shipped out of the Operations.

*2 Amount removed is the amount of a substance transformed into other substances by neutralization, decomposition or reaction treatment performed at the Operations.

*3 Difference between the amount of waste transferred and the amount recycled depends on whether waste is processed with charge or without charge. When waste disposal is outsourced with charge even for recycling purposes, the amount is considered as the amount of waste transferred.



History of Yokkaichi Plant

1992	-Established Yokkaichi Plant	2007	-Started Fab 4 operation
1993	-Started Fab 1 operation -Started production of 16Mbit DRAM	2008	-Opened Advanced Memory Development Center
1996	-Acquired ISO14001 -Started Fab 2 operation -Started production of 64Mbit DRAM -Started support for Dominion Semiconductor, L.L.C., a company established in the United States as an overseas production base of memory front-end process	2011	-Started Fab 5 phase1 operation -Achieved a cumulative production total of 10billion units of NAND flash memory (1GB conversion)
1997	-Achieved a cumulative production total of 100million units of 16Mbit DRAM	2012	-Celebrated 20th anniversary of Yokkaichi Plant
1998	-Established Yokkaichi Toshiba Electronics Corporation	2013	-Awarded "GOOD FACTORY Award for Factory Management (organized by Japan Management Association(JMA))"
1999	-Started production of NAND flash memory	2014	-Started Fab 5 (Phase2) operation
2001	-Announced the withdrawal from manufacturing and sale of commodity DRAM -Dissolved Yokkaichi Toshiba Electronics Corporation	2016	-Started mass production of 3D flash memory BiCS FLASH™ -Started New Fab 2 operation
2002	-Celebrated 10th anniversary of Yokkaichi Plant -Moved FlashVision LLC from Virginia, USA to Yokkaichi Plant -24-hour plant of technology with 24-hour line engineers support	2017	-Commenced operations as Toshiba Memory Corporation Yokkaichi plant as the memory business of Toshiba Corporation was made into a separate company. -Awarded "Gold Prize of Field Innovation Award in 2016 (The Japanese Society for Artificial Intelligence.)"
2003	-Opened Asahi Test Center -Acquired ISO9001:2000	2018	-Started Fab 6 operation -Completed construction of Memory R&D Center
2005	-Started 300mm-wafer Fab 3 operation -Achieved a cumulative production total of 1billion units of NAND flash memory (64MB conversion)	2019	-Commenced operations as KIOXIA Corporation Yokkaichi Plant due to the change in company name
		2021	-Absorbed KIOXIA Advanced Package Corporation through an absorption-type merger and strengthened memory back-end process development
		2022	-Celebrated 30th anniversary of Yokkaichi Plant -Certified as achieving 'Platinum Status' by the Responsible Business Alliance (RBA) -Completed construction of Fab 7

History of Environmental Activities

1990	-Concluded pollution control agreement with Yokkaichi City	
1991	-Concluded pollution control agreement with Yamanoisshiki-cho -Started holding Yamanoisshiki-cho local meetings	
1996	-Gained BS7750 and ISO14001:1996 environmental management system certification	
1999	-Received the prize of Recycling Promotion Council	
2000	-Received the Chubu Ministry of Economy, Trade, and Industry Minister's Award (heat category) -Achieved zero emissions of industrial waste (FY1999 results)	-Received the prize of the Chairman of Energy Conservation Center, Japan
2001	-Received the Chubu METI Minister's Award (electricity category, contribution to energy management)	
2003	-Concluded pollution control agreement with Asahi-cho -Started publishing Yokkaichi Plant's environmental report	-Received the Director-General, Agency for Natural Resources and Energy Award (heat category)
2004	-Received the Director-General, Agency for Natural Resources and Energy Award (electricity category)	
2005	-Gained ISO14001:2004 environmental management system certification	
2006	-Received Energy Saving Center's Award for outstanding performance at conference of successful cases of energy saving	
2007	-Started Kid's ISO14000 program (environmental education for children) -Gained ISO14001:2004 integrated environmental management system certification	
2008	-Received the PRTR Outstanding Performance Award (Jury's Special Award)	
2009	-Started Kid's Yokkaichi CO ₂ diet program (environmental education for children) -Received the Gold Boiler Management Establishment Award	
2010	-Received the Encouraging Prize of Kansai Eco-Office Grand Award -Started the Eco-kid's CO ₂ diet program (environmental education for children)	
2011	-Received the Technology Prize in the 49th All Japan Boiler Conference	
2012	-Received the Prize of the Chairman of ECCJ of Energy Conservation Group Prize -Received the silver prize in an international section of Green Apple Award	-Received the Prize of the Chairman of the 3R's (Reduce, Reuse, Recycle) promoter Prize
2013	-Received the Chubu METI Director's Award (energy management) -Received the Prize of the Manager of Tokai branch office ECCJ (Recognition of distinguished people in promoting energy saving) -Received the Prize of the Chairman of the 3R's (Reduce, Reuse, Recycle) promoter Prize	-Received 1st place at 2nd Mie Environmental Awards
2014	-Received the Prize of the Chairman of the 3R's (Reduce, Reuse, Recycle) promoter Prize -Received the METI Minister's Awards for Resources Recirculation Technologies and Systems	
2015	-Received the Prize of the Manager of Tokai branch office, ECCJ (Recognition of distinguished people in promoting energy saving)	
2016	-Received the Prize of the Manager of Tokai branch office, ECCJ (Recognition of distinguished people in promoting energy saving) -Received the "Recognition of distinguished people of city greening" award, Received the letter of appreciation at the 65th Mie prefecture social welfare convention	
2017	-Gained ISO14001:2015 environmental management system certification -Received the Prize of the Manager of Tokai branch office, ECCJ (Recognition of distinguished people in promoting energy saving)	
2018	-Received the "Achievement Award" from NPO "Re lifestyle" (Collecting PET bottle caps) -Received the Prize of the Manager of Tokai branch office, ECCJ (Recognition of distinguished people in promoting energy saving) -Starting an environment class at the Yokkaichi Pollution and Environmental Future Museum,	
2019	-Received the Yokkaichi City Environmental Activity Award -Received the Prize of the Manager of Tokai branch office, ECCJ (Recognition of distinguished people in promoting energy saving)	
2020	-Received the "Recognition of distinguished people of city greening" award -Received the Prize of the Manager of Tokai branch office, ECCJ (Recognition of distinguished people in promoting energy saving)	-Received "Climate Change Action Minister of the Environment Award"
2021	-Received a letter of appreciation from the Yokkaichi City Council of Social Welfare -Received a letter of appreciation from the Japan Association for UNESCO (UNESCO World Terakoya Movement)	-Received the Prize of the Manager of Tokai branch office, ECCJ (Recognition of distinguished people in promoting energy saving)
2022	-Received a letter of appreciation from the Yokkaichi City Council of Social Welfare -Received the Prize of the Manager of Tokai branch office, ECCJ (Recognition of distinguished people in promoting energy saving)	-Received a letter of appreciation from the Japan Association for UNESCO
2023	-Received a letter of appreciation from the Yokkaichi City Council of Social Welfare -Received the Prize of the Manager of Tokai branch office, ECCJ (Recognition of distinguished people in promoting energy saving)	

Editorial Policy

The purpose of this report is to help you further understand the environmental management of KIOXIA Corporation's Yokkaichi Plant (environmental management, reduction of environmental impact in business activities, etc.).

This report has been edited with reference to the Environmental Reporting Guidelines 2018 issued by the Ministry of the Environment.

■ Period covered by the report description

The activity performance data focuses on activities for fiscal year 2023 (April 1, 2023 - March 31, 2024), but includes some earlier or 2024 activities.

■ Target Organizations

Yokkaichi Plant* and Asahi Test Center, KIOXIA Corporation

* Including representative divisions and companies

Environmental information is available on our website.

KIOXIA Group Sustainability

<https://www.kioxia-holdings.com/en-jp/sustainability.html>



Yokkaichi Plant Environmental Initiatives

<https://www.kioxia.com/en-jp/about/yokkaichi/environment.html>



KIOXIA Corporation

Environmental Protection Group

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