Environmental Objectives and Status of Achievement

To promote environmental initiatives, as of the fiscal year ended December 2018 the target-setting cycle for the Nissha environmental objectives has been revised from three years to six years for the Nissha Group in Japan. The results of initiatives are collected and assessed each year and progress managed with the aim of achieving the environmental targets of the Nissha Group in Japan through achieving the environmental targets of each relevant business base and division.

New Environmental Objectives from Fiscal Year Ended December 2018

We have defined a set of environmental objectives for the Nissha Group applicable between the fiscal years ended December 2018 and ending December 2023. Whereas our previous set of environmental objectives covered a three-year period, the new set covers a six-year period with the aim of carrying out activities over the longer term.

Nissha Group Environmental Objectives

[FY2018.12–FY2023.12]
Scope: Nissha Group in Japan ISO14001 certification sites (“certification sites”)

1. Prevention of pollution
(1) Maintain zero environmental accidents (accidents that affect areas outside the factory)
(2) For environmental risks classified as significant environmental aspects on the hazard assessment list, implement measures and reduce the possibility of occurrence by one level by December 31, 2023

* The degree of severity may not change after measures are implemented
* For items classified as “maintain,” follow the designated procedure and strive to prevent environmental accidents
* Risk levels in the environmental hazard assessment list are given separately in the Safety and Health Management Manual

2. Attention to climate change
(1) Reduce CO_2 emissions rate (basic unit) by 6% or more by the fiscal year ending December 2023
(2) Reduce CO_2 emissions rate (basic unit) by 1% or more compared to the previous year
Baseline: Results in fiscal year ended December 2017

* Each organization may set KPI or quality targets as environmental targets
* Companies classified as “specific business operator” in the Act on the Rational Use of Energy use the basic unit reported under the act
* Use the default value (0.555 kg-CO_2/kWh) as emission factor

<Sample initiatives>
In the area of fixed energy consumption, upgrade energy-saving facilities and equipment In the area of variable energy consumption, improve production efficiency, quality, and work processes Make effective use of space, e.g., through solar power generation, outdoor greening, and energy-saving design

3. Reduction of waste
(1) Reduce waste generation rate (basic unit) by 6% or more by the fiscal year ending December 2023
(2) Reduce waste generation rate (basic unit) by 1% or more compared to the previous year
(3) Maintain zero emissions (recycling and resource reuse rate of 99.5% or more)
(4) Reduce cost of waste treatment
Baseline: Results in fiscal year ended December 2017

---

* Each organization may set KPI or quality targets as environmental targets
* Indexes need not be the same as the CO_2 emissions rate basic unit (production volume may be substituted with number of items produced)
<Sample initiatives>
Promote multi-sourcing and resource reuse
Control the amount of waste generated, e.g., by reducing use of raw materials

4. Reduce use of water
Reduce use of water by improving production efficiency and saving water (Certification sites set individual targets)

5. Reduce use of chemical substances
Certification sites reduce usage rate of chemical substances (Certification sites set individual targets)

6. Environment-conscious design
(1) Introduce the viewpoint of energy saving, resource saving, durability, recycling, and so on in product design and development
(2) Design environment-conscious processes and reduce the environmental impact of production

---

<Sample initiatives>
Assess positive risks
Design and develop products that do not contain substances prohibited in the Nissha Control Criteria for Chemical Substances in Purchased Products

7. Enhance environmental performance in supply chain / value chain
Enhance environmental performance based on customer requirements and the RBA code of conduct (applicable sites only)

Note 1: Nissha Group environmental objectives, as a rule, cover a six-year period
Note 2: Nissha Group environmental objectives are to be reviewed in line with changes in internal (e.g., medium-term business plan) and external circumstances
Note 3: Each site selects applicable items from Nissha Group environmental objectives

Status of Achievement in Fiscal Year ended December 2018

1. Prevention of pollution

Target: (1) Maintain zero environmental accidents (accidents that affect areas outside the factory)
(2) For environmental risks classified as significant environmental aspects on the hazard assessment list, implement measures and reduce the possibility of occurrence by one level by December 31, 2023

Assessment	Satisfactory
Results	Factories with ISO14001 certification, the primary production bases for the Nissha Group, are working on reducing environmental risk through the use of

	environmental risk management. These activities are designed to drop the risk of environmental accidents by one level through the implementation of risk mitigation measures. Training for emergency situations, such as evacuations and substance leakage, was carried out in the fiscal year ended December 2018 on top of making continuous efforts in rainwater management. As a result, the Nissha Group in Japan maintained zero environmental accidents in the fiscal year ended December 2018.

2. Attention to climate change

Target: (1) Reduce CO_2 emissions rate (basic unit) by 6% or more by the fiscal year ending December 2023
(2) Reduce CO_2 emissions rate (basic unit) by 1% or more compared to the previous year

Baseline: Results in fiscal year ended December 2017

Assessment	Poor
Results	Starting in the fiscal year ended December 2018, we changed the name of our initiative from "Prevention of global warming" to "Adaptation to climate change." This will allow target business locations to carry out a wider range of activities as measures to mitigate or adapt to climate change. The major Nissha Group bases in Japan are working on reducing the basic unit of CO_2 emissions by at least 1% annually, or 6% over six years. Specifically, reducing and making more efficient the amount of energy consumed in conjunction with quality management in all target factories, saving energy in production equipment at the Nitec Precision and Technologies, Inc. (NPT) Himeji Factory, improving boiler control at the Nitec Industries, Inc. (NII) Koka Factory, and other improvements to equipment that lead to reduced energy consumption. As a result, targets were achieved for Nissha Global Headquarters, NII Koka Factory, and Nissha Printing Communications, Inc. (NPC) Kyoto Factory, but there was a large impact from changes in demand from the devices business, preventing NPT, which is responsible for the production of these devices, from achieving its target. This means that the company-wide environmental objectives were not met.

3. Reduction of waste

Target: (1) Reduce waste generation rate (basic unit) by 6% or more by the fiscal year ending December 2023
(2) Reduce waste generation rate (basic unit) by 1% or more compared to the previous year
(3) Maintain zero emissions (recycling and resource reuse rate of 99.5% or more)
(4) Reduce cost of waste treatment

Baseline: Results in fiscal year ended December 2017

Assessment	Poor
Results	We are working on reducing the waste generation rate at major Nissha Group factories in Japan, with a goal of at least 1% reduction annually, or 6% over six years. The waste generation rate can be reduced by boosting the rate of quality items through improved quality management, or reducing the amount of wasted materials by improving the efficiency of materials investment. Improvements have been made thanks to quality management company-wide, but NPT failed to achieve its objectives due to the large influence of changes in demand in the Devices business, which means that the company-wide environmental objectives were not met. However, we were able to achieve zero waste emissions (recycling and resource reuse rate of 99.5% or more).

4. Reduce use of water

Target: Reduce use of water by improving production efficiency and saving water

Assessment	Unsatisfactory
Results	We managed to reduce the amount of industrial water used at the NPT Tsu Factory and the amount of water used in the gardens of the NPT Himeji Factory. However, at the NPT Kaga Factory, the impact of production for large orders in the fiscal year ended December 2017 meant that more water than ever had to be used.

5. Reduce use of chemical substances

Target: Certification sites reduce usage rate of chemical substances

Assessment	Satisfactory
Results	We tackled reducing the ratio of chemical products used in plants with ISO14001 certification. The NPT Himeji Factory has reduced PRTR-designated substances through changing the chemicals used in wastewater processing. In addition, the NPT Tsu Factory has reduced the amount of cleaning solvents used in its processes, while the NPT Kaga Factory has reduced the use of organic solvents, both successfully.

6. Environment-conscious design

Target: (1) Introduce the viewpoint of energy saving, resource saving, durability, recycling, and so on in product design and development
(2) Design environment-conscious processes and reduce the environmental impact of production

Assessment	Satisfactory
Results	The Industrial Materials business unit uses environmentally-friendly design at the product planning stage through initiatives to assess positive risk in the Devices business unit. The development of Nissha FIS’s Handy Gas Chromatograph and their hydrogen detector that complies with ISO26262 used environmentally-friendly design, helping with the company’s business activities. At NPT, designing a production process that complied with company standards set out for managing chemical substances has created a process that considers health and safety as well as reduced environmental impacts.

7. Enhance environmental performance in supply chain / value chain

Target: Enhance environmental performance based on customer requirements and the RBA code of conduct

Assessment	Satisfactory
Results	Focused on the business unit procurement division, we are working on surveying and improving environmental impacts in the supply chain through efforts such as distributing CSR questionnaires and local supervision.