



SUSTAINABILITY DATA 2024

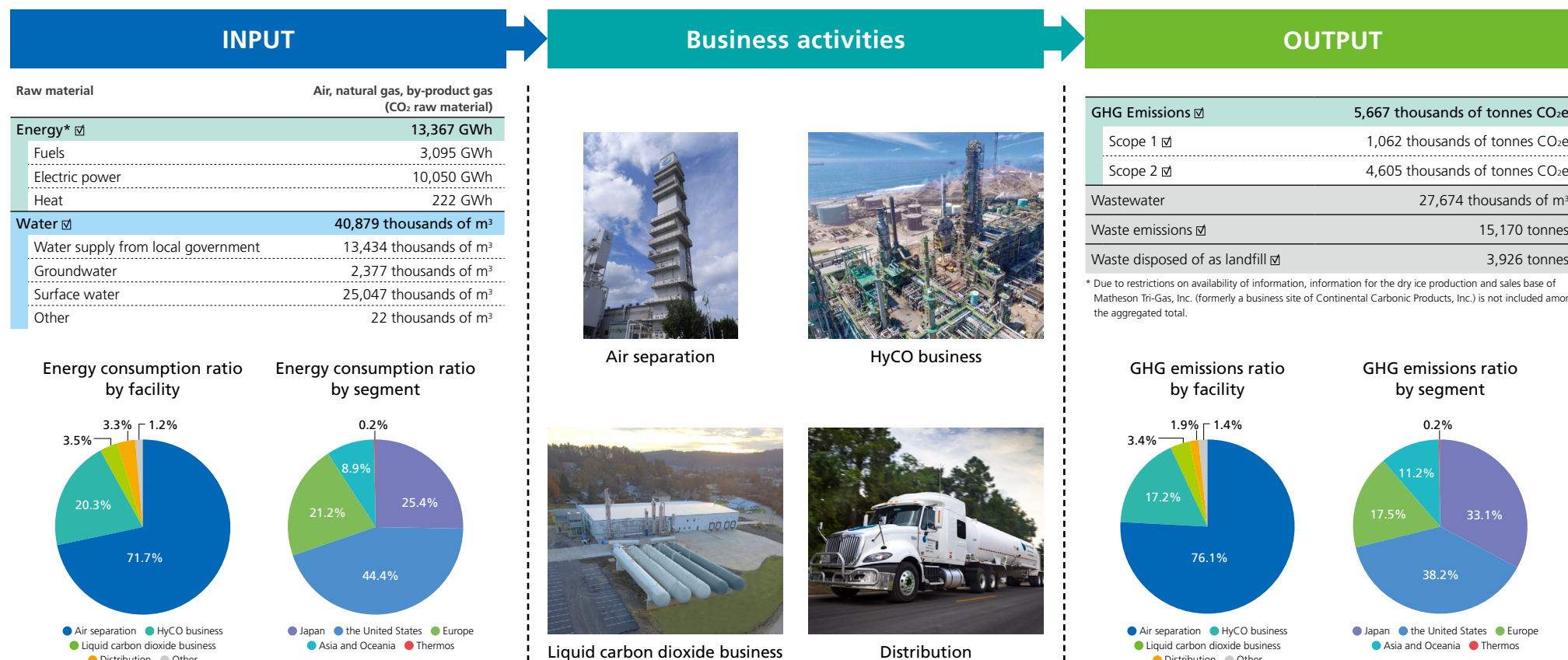
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Sustainability Data

Material Balance and Environmental Contribution of the Nippon Sanso Holdings Group

* Please refer to P2-P3 for the reporting boundary and waste amount calculation method.
Indicators with ☒ mark have been assured by KPMG AZSA Sustainability Co., Ltd. with respect to actual results for FYE2024.

Material Balance



GHG Emission Reduction Contribution

| 7,454 thousands of tonnes CO ₂ e*1 | |
|--|--|
| Products and services*2 | Industrial gases*3, *4 |
| 3,775 thousand of tonnes CO ₂ e <input checked="" type="checkbox"/> | 3,679 thousand of tonnes CO ₂ e <input checked="" type="checkbox"/> |

*1 For details on the reporting boundaries and calculation methods, please refer to P9-P10, "Calculation Methods for GHG Emission Reduction Contribution."

*2 GHG emission reduction contribution for products and services is calculated in accordance with the Guidelines for Quantifying GHG Emission Reductions of Goods or Services through Global Value Chain (Ministry of Economy, Trade and Industry).

*3 GHG emission reduction contribution from the use of industrial gases

*4 GHG emission reduction contribution through industrial gases includes the reduction contribution of consolidated subsidiaries in Japan, Europe, Asia and Oceania, and certain affiliated companies and joint operations.

Sustainability Data



Environment

| | Unit | FYE2022 | FYE2023 | FYE2024 |
|--|---------------------------------------|---------|---------|--------------|
| Greenhouse Gas (GHG) Emissions | | | | |
| GHG Emissions Scope 1 <input checked="" type="checkbox"/> | Thousands of tonnes CO ₂ e | 1,087 | 1,103 | 1,062 |
| GHG Emissions Scope 2 <input checked="" type="checkbox"/> | Thousands of tonnes CO ₂ e | 4,834 | 4,765 | 4,605 |
| GHG Emissions Scope 3—Total for the Following Categories <input checked="" type="checkbox"/> | Thousands of tonnes CO ₂ e | 3,408 | 3,341 | 3,499 |
| Category 1 Purchased goods and services | Thousands of tonnes CO ₂ e | 897 | 911 | 917 |
| Category 2 Capital goods | Thousands of tonnes CO ₂ e | 42 | 67 | 53 |
| Category 3 Fuel- and energy-related activities not included in Scope 1 and Scope 2 | Thousands of tonnes CO ₂ e | 276 | 261 | 236 |
| Category 4 Upstream transportation and distribution (Including transportation services whose cost is borne by the Company) | Thousands of tonnes CO ₂ e | 39 | 36 | 37 |
| Category 5 Waste generated in operations | Thousands of tonnes CO ₂ e | 1 | 1 | 1 |
| Category 6 Business travel | Thousands of tonnes CO ₂ e | 1 | 1 | 1 |
| Category 7 Employee commuting | Thousands of tonnes CO ₂ e | 3 | 3 | 3 |
| Category 8 Upstream leased assets | Thousands of tonnes CO ₂ e | N/A | N/A | N/A |
| Category 9 Downstream transportation and distribution | Thousands of tonnes CO ₂ e | N/A | N/A | N/A |
| Category 10 Processing of sold products | Thousands of tonnes CO ₂ e | N/A | N/A | N/A |
| Category 11 Use of sold products | Thousands of tonnes CO ₂ e | 1,466 | 1,382 | 1,391 |
| Category 12 End-of-life treatment of sold products | Thousands of tonnes CO ₂ e | N/A | N/A | N/A |
| Category 13 Downstream leased assets | Thousands of tonnes CO ₂ e | N/A | N/A | 46 |
| Category 14 Franchises | Thousands of tonnes CO ₂ e | N/A | N/A | N/A |
| Category 15 Investments | Thousands of tonnes CO ₂ e | 683 | 679 | 814 |

Reporting boundary: Scope 1 emissions and Scope 2 emissions represent Nippon Sanso Holdings and its main consolidated subsidiaries. They also include the joint operation of JFE Sanso Center Co., Ltd. For information on Scope 3 emissions aggregation, please refer to P.8.
 Scope 1 emissions: Direct emissions occurring from sources owned or controlled by the company
 Scope 2 emissions: Indirect emissions from the use of electricity, steam, and heat
 Scope 3 emissions: Indirect emissions other than Scope 2 emissions

Calculation methods: GHG emissions in Japan are calculated using emission factors provided in Japan's Act on Promotion of Global Warming Countermeasures (for electricity, the adjusted emission factors for each electricity provider; for city gas, chilled water, and hot water, substitute values from FYE2024). Scope 1 GHG emissions overseas are calculated using emission factors set forth in Japan's Act on Promotion of Global Warming Countermeasures. However, from FYE2024, Scope 1 emissions in Europe have been calculated using the DEFRA emission factors of the United Kingdom. Overseas Scope 2 emissions are calculated using country-specific emission factors published by the IEA. However, for electricity in Europe, a separate emission factor for each electricity provider is used, and emissions are calculated making reference to the Guarantee of Origin. Furthermore, emissions from electricity use at Top Thermo Manufacturing (Malaysia) Sdn. Bhd. are calculated using emissions coefficients for each electricity provider, while emissions from electricity use in the United States, China, Taiwan, and Singapore are calculated using published grid coefficients for each country. Please refer to P.8 for calculation method for Scope 3 emissions. From FYE2024, Scope 3 Category 13 has been calculated.

Indicators with ☒ mark have been assured by KPMG AZSA Sustainability Co., Ltd. for FYE2024.

| | | Unit | FYE2022 | FYE2023 | FYE2024 |
|--|---|---------------------------------------|---------|---------|---------|
| Contributions to Environmental Protection through Products | | | | | |
| GHG Emission Reduction Contribution | Products and services  | Thousands of tonnes CO ₂ e | 3,176 | 3,556 | 3,775 |
| | Industrial gases  | Thousands of tonnes CO ₂ e | 3,689 | 3,752 | 3,679 |

For information on the reporting boundary and the method of calculation, please refer to P.9–P.10.

Sustainability Data


Environment

| | Unit | FYE2022 | FYE2023 | FYE2024 |
|---------------------------------|------|---------|---------|---------------|
| Energy Usage | | | | |
| Energy Consumption [❏] | GWh | 14,273 | 13,945 | 13,367 |
| Electric power | GWh | 10,776 | 10,475 | 10,050 |
| Fuels | GWh | 3,293 | 3,269 | 3,095 |
| Heat | GWh | 204 | 201 | 222 |

Reporting boundary: Nippon Sanso Holdings and its main consolidated subsidiaries. They also include the joint operation of JFE Sanso Center Co., Ltd.
The energy of the consumed fuels are calculated based on the gross calorific values specified in Japan's Act on the Rational Use of Energy.

| | | | | |
|---|--------|-----|-----|------------|
| Environmental Impact | | | | |
| Nitrogen oxide (NOx) emissions [❏] | Tonnes | 2.0 | 2.6 | 3.2 |
| Sulfur oxide (SOx) emissions [❏] | Tonnes | 1.1 | 1.1 | 0.7 |
| Particulate emissions [❏] | Tonnes | 0.1 | 0.1 | 0.1 |
| Volatile organic compound (VOC) emissions [❏] | Tonnes | 8 | 5 | 13 |
| Releases of substances designated under the Pollutant Release and Transfer Register (PRTR) [❏] | Tonnes | 10 | 8 | 13 |

Reporting boundary: Consolidated subsidiaries in Japan, including Taiyo Nippon Sanso

| Water Usage | | | | | | |
|--|------------------------------------|-----------------|-----------------|--------|---------------|---------------|
| Water Withdrawal  | | Thousands of m³ | 45,911 | 44,988 | 40,879 | |
| Breakdown of sources of fresh water withdrawn | Water supply from local government | | Thousands of m³ | 17,589 | 18,161 | 13,434 |
| | Municipal water | | Thousands of m³ | 5,757 | 6,332 | 5,881 |
| | Industrial water | | Thousands of m³ | 11,832 | 11,829 | 7,552 |
| | Groundwater | | Thousands of m³ | 2,710 | 2,366 | 2,377 |
| | Surface water | | Thousands of m³ | 25,582 | 24,440 | 25,047 |
| | Other | | Thousands of m³ | 30 | 21 | 22 |

Reporting boundary: Gas production plants operated by consolidated subsidiaries of Nippon Sanso Holdings in Japan, business locations with facilities specified under the Water Pollution Prevention Act, and main overseas consolidated subsidiaries

| | | | | |
|--|--------|--------|----------------------|----------------------------|
| Waste | | | | |
| Waste generated* ¹ [❏] | Tonnes | 14,352 | 15,392* ⁵ | 15,170*⁵ |
| Waste disposed of as landfill* ² [❏] | Tonnes | 3,875 | 5,052* ⁵ | 3,926*⁵ |
| Hazardous waste generated* ³ [❏] | Tonnes | 2,015 | 2,000* ⁵ | 1,735*⁵ |
| Waste recycled* ⁴ | Tonnes | 7,623 | 7,975* ⁵ | 9,481*⁵ |

Reporting boundary: Nippon Sanso Holdings and its main consolidated subsidiaries

Waste generated by consolidated subsidiaries in Japan is the volume for which the Company issued a manifest.

*¹ Includes valuable materials *² Includes residue after intermediate treatment outside the Group company *³ Includes specially controlled industrial waste

*⁴ The amount of waste collected is included in the amount of resources recycled. *⁵ Due to restrictions on availability of information, information for the dry ice production and sales base of Matheson Tri-Gas, Inc. (formerly a business site of Continental Carbonic Products, Inc.) is not included among the aggregated total.

| | | | | |
|---|-----------------|---|---|----------|
| Others | | | | |
| Number of environmental violations | Incidents | 0 | 0 | 0 |
| Amount of fines paid for environmental violations | Millions of yen | 0 | 0 | 0 |

The figures for chemical oxygen demand (COD) emissions, nitrogen emissions in wastewater, and phosphorus emissions have been omitted from disclosure since the amounts of these emissions have been immaterial. The Nippon Sanso Holdings Group uses water primarily for indirect cooling, and its impacts on water quality are therefore not large. Taiyo Nippon Sanso and its Japanese subsidiaries have five business sites that are subject to restrictions on the concentration of COD, nitrogen, and phosphorus emissions in wastewater. The total amounts of COD, nitrogen, and phosphorous emissions for all five sites amount to less than one tonne each.

| | Unit | FYE2022 | FYE2023 | FYE2024 |
|------------------------------------|---------------------------------------|---------|---------|--------------|
| GHG Emissions | | | | |
| GHG Scope 1 + Scope 2 [❏] | Thousands of tonnes CO ₂ e | 5,921 | 5,868 | 5,667 |
| Japan | Thousands of tonnes CO ₂ e | 2,253 | 2,054 | 1,873 |
| United States | Thousands of tonnes CO ₂ e | 2,130 | 2,251 | 2,165 |
| Europe | Thousands of tonnes CO ₂ e | 885 | 916 | 989 |
| Asia and Oceania | Thousands of tonnes CO ₂ e | 638 | 632 | 627 |
| Thermos | Thousands of tonnes CO ₂ e | 15 | 15 | 12 |

| | | | | |
|---------------------------|-----|--------|--------|---------------|
| Energy Consumption | | | | |
| Total [❏] | GWh | 14,273 | 13,945 | 13,367 |
| Japan | GWh | 3,978 | 3,757 | 3,389 |
| United States | GWh | 5,917 | 6,106 | 5,938 |
| Europe | GWh | 3,180 | 2,889 | 2,830 |
| Asia and Oceania | GWh | 1,171 | 1,167 | 1,189 |
| Thermos | GWh | 27 | 26 | 22 |

| | | | | |
|--------------------------------|-----|--------|--------|---------------|
| Electricity Consumption | | | | |
| Total [❏] | GWh | 10,776 | 10,475 | 10,050 |
| Japan | GWh | 3,783 | 3,552 | 3,169 |
| United States | GWh | 3,114 | 3,249 | 3,242 |
| Europe | GWh | 2,762 | 2,585 | 2,538 |
| Asia and Oceania | GWh | 1,094 | 1,066 | 1,082 |
| Thermos | GWh | 23 | 23 | 19 |

| | | | | |
|-------------------------|-----------------------------|--------|--------|---------------|
| Water Withdrawal | | | | |
| Total [❏] | Thousands of m ³ | 45,911 | 44,988 | 40,879 |
| Japan | Thousands of m ³ | 7,464 | 7,445 | 3,377 |
| United States | Thousands of m ³ | 7,293 | 8,464 | 8,122 |
| Europe | Thousands of m ³ | 27,029 | 25,136 | 25,690 |
| Asia and Oceania | Thousands of m ³ | 3,929 | 3,744 | 3,523 |
| Thermos | Thousands of m ³ | 196 | 199 | 168 |

| | | | | |
|--|--------|--------|----------------------|----------------------------|
| Waste Generated (Including Valuable Materials)*¹ | | | | |
| Total [❏] | Tonnes | 14,352 | 15,392* ² | 15,170*² |
| Japan | Tonnes | 4,187 | 3,909 | 4,998 |
| United States | Tonnes | 3,486 | 5,415* ² | 4,771*² |
| Europe | Tonnes | 2,909 | 3,068 | 2,358 |
| Asia and Oceania | Tonnes | 1,399 | 602 | 1,140 |
| Thermos | Tonnes | 2,371 | 2,398 | 1,903 |

*¹ Waste generated by the consolidated subsidiaries of Nippon Sanso Holdings in Japan is the volume for which the Company issued a manifest.

*² As with the reporting boundary for "Waste" on the left, Matheson Tri-Gas, Inc.'s dry ice production and sales base (formerly a business site of Continental Carbonic Products, Inc.) is not included among the aggregated total.

Sustainability Data

Society

| | Unit | FYE2022 | FYE2023 | FYE2024 |
|---|-----------------------|---------|---------|---------------|
| Employees and Diversity (Consolidated) | | | | |
| Employees* ㊦ | Number of individuals | 19,172 | 19,541 | 19,390 |
| Japan | Number of individuals | 6,465 | 6,391 | 5,950 |
| United States | Number of individuals | 4,406 | 4,532 | 4,705 |
| Europe | Number of individuals | 2,912 | 3,013 | 3,124 |
| Asia and Oceania | Number of individuals | 4,102 | 4,267 | 4,285 |
| Thermos | Number of individuals | 1,287 | 1,338 | 1,326 |
| Employees by gender | | | | |
| Male ㊦ | Number of individuals | 15,233 | 15,651 | 15,468 |
| Female ㊦ | Number of individuals | 3,939 | 3,890 | 3,922 |
| Employees by age group (Composition ratio) | | | | |
| 20s and below | % | 16.4 | 15.7 | 15.3 |
| 30s | % | 25.0 | 25.0 | 25.3 |
| 40s | % | 30.1 | 27.0 | 26.2 |
| 50s and above | % | 28.5 | 32.4 | 33.0 |
| Years of consecutive service | | | | |
| Overall average | Years | 11.4 | 11.6 | 11.2 |
| Men | Years | 11.5 | 11.8 | 11.1 |
| Women | Years | 11.1 | 11.4 | 11.3 |
| Average age | Years | 44.2 | 44.1 | 44.1 |
| New hires | Number of individuals | 2,917 | 3,161 | 3,020 |
| Employee turnover rate | % | 7.1 | 6.9 | 4.2 |
| Female employees as a percentage of the total number of employees ㊦ | % | 20.5 | 19.9 | 20.2 |
| Female managers as a percentage of total managerial positions ㊦ | % | 14.8 | 14.5 | 15.4 |

* Aggregated from actual figures of the Nippon Sanso Holdings Group companies as of the end of each fiscal year. Due to differences in the reporting periods, part of the data includes figures as of the end of December.

| | | | | |
|---|-----------------------|------|------|-------------|
| Employees and Diversity (Non-Consolidated) | | | | |
| Employees | Number of individuals | 86* | 88* | 91* |
| Employees by gender | | | | |
| Male | Number of individuals | 71 | 72 | 72 |
| Female | Number of individuals | 15 | 16 | 19 |
| Female employees as a percentage of the total number of employees | % | 17.4 | 18.2 | 20.9 |
| Female managers as a percentage of total managerial positions | % | 3.6 | 3.6 | 3.7 |

* Includes employees working concurrently for Taiyo Nippon Sanso Corporation (FYE2022: 49 persons; FYE2023: 47 persons; FYE2024: 41 persons)

| | Unit | FYE2022 | FYE2023 | FYE2024 |
|---|-----------------------|---------|---------|---------------|
| Employees, Diversity, and Work-Life Balance (Registered Employees of Taiyo Nippon Sanso Corporation) | | | | |
| Employees | Number of individuals | 2,075 | 2,086 | 2,110 |
| Employees by gender | | | | |
| Male | Number of individuals | 1,784 | 1,780 | 1,794 |
| Female | Number of individuals | 291 | 306 | 316 |
| Employees by age group (Composition ratio) | | | | |
| 20s and below | % | 19.8 | 20.2 | 20.1 |
| 30s | % | 20.3 | 20.5 | 21.3 |
| 40s | % | 25.7 | 24.2 | 22.6 |
| 50s and above | % | 34.2 | 35.1 | 35.9 |
| Years of consecutive service | | | | |
| Overall average | Years | 17.8 | 18.7 | 18.4 |
| Men | Years | 18.6 | 19.4 | 19.3 |
| Women | Years | 13.3 | 14.0 | 13.7 |
| Average age | Years | 42.4 | 42.7 | 42.7 |
| New hires | Number of individuals | 85 | 88 | 100 |
| Employee turnover rate* ¹ | % | 3.3 | 3.7 | 4.5 |
| Companywide employee training hours* ² | | | | |
| New employee training hours | Hours | 16,320 | 27,360 | 23,680 |
| Employee training hours | Hours | 21,504 | 24,052 | 25,042 |
| Union members | Number of individuals | 1,214 | 1,232 | 1,275 |
| Union members as a percentage of the total number of employees | % | 58.5 | 59.1 | 60.4 |
| Layoffs* ³ | Number of individuals | 0 | 0 | 0 |
| Female employees as a percentage of total number of employees | % | 14.0 | 14.7 | 15.0 |
| Female managers as a percentage of total managerial positions | % | 1.5 | 1.8 | 2.4 |
| Employment ratio of persons with disabilities (as of June 1 of each fiscal year) | % | 2.5 | 2.5 | 2.5 |
| Number of employees reemployed after retirement | Number of individuals | 82 | 86 | 99 |
| Employees using childcare leave systems | Number of individuals | 19 | 39 | 46 |
| Men | Number of individuals | 6 | 21 | 28 |
| Women | Number of individuals | 13 | 18 | 18 |
| Employees using nursing care leave or long-term nursing care leave | Number of individuals | 0 | 0 | 18 |
| Usage rate for annual paid leave* ⁴ | % | 61.5 | 67.0 | 70.4 |
| Employees using volunteer leave system | Number of individuals | 0 | 0 | 0 |

*¹ Employee turnover rate is the number of employees leaving the Company during the fiscal year (including mandatory-age retirees and excluding personnel transferring to other Group companies) divided by the number of employees at the end of the fiscal year *² Reporting boundary: Training hours of Taiyo Nippon Sanso Corporation employees and Taiyo Nippon Sanso Group employees who took training held by Taiyo Nippon Sanso Corporation *³ Employees leaving the Company for reasons attributable to the Company (dismissals) *⁴ The number of new days granted in the reporting year is the denominator. The number of days used in the reporting year is the numerator. The denominator does not include the number of days carried over from the previous fiscal year.

Sustainability Data

Society

| | Unit | FYE2022 | FYE2023 | FYE2024 |
|---|-----------------|---------|---------|--------------|
| Others (Consolidated) | | | | |
| Expenditures on social contribution initiatives | Millions of yen | 84.5 | 78.3 | 103.0 |

| | | | | |
|---|-----------------------|--------------------|--------------------|--------------|
| Occupational Health and Safety | | | | |
| Lost time injury rate (Number of injuries / fatalities due to occupational accidents per million work hours) | | | | |
| Nippon Sanso Holdings Group (Including Taiyo Nippon Sanso Group) ㊦ | — | 2.19* ¹ | 1.54* ¹ | 2.09 |
| Taiyo Nippon Sanso Group ㊦ | — | 0.52 | 0.81 | 0.77 |
| Number of fatalities (Consolidated) | | 1 | 0 | 1 |
| Employees | Number of individuals | 0 | 0 | 1 |
| Contractors | Number of individuals | 1 | 0 | 0 |
| Number of participants in hazard simulation training* ² , * ³ | Number of individuals | 826 | 978 | 1,058 |

Reporting boundary: Consolidated subsidiaries with production divisions in Japan and overseas

*¹ To improve the accuracy of data aggregation, values presented in past fiscal year have been retroactively amended.

*² Hazard simulation training is experiential training conducted by the Technical Academy of Taiyo Nippon Sanso in accordance with NSHD's Occupational Safety and Health / Industrial Safety and Disaster Prevention Policy. The training is designed to eliminate occupational accidents by raising employees' safety awareness and knowledge, and their sensitivity to hazards. Employees of associates are also included in the scope of data collection.

*³ From FYE2024, values presented in past fiscal years have been retroactively amended.

Supplementary Notes Regarding the Reporting Boundary

Main consolidated subsidiaries

Consolidated subsidiaries in Japan including Taiyo Nippon Sanso Corporation; Matheson Tri-Gas, Inc.; Western International Gas & Cylinders, Inc.; Nippon Gases Euro-Holding S.L.U. and its consolidated subsidiaries; Leeden National Oxygen Ltd.; Leeden Gases Sdn. Bhd.; Nippon Sanso Ingasco, Inc.; Nippon Sanso Ingasco Philippines, Inc.; Nippon Sanso Ingasco Clark, Inc.; Nippon Sanso (Thailand) Co., Ltd.; Ayutthaya Industrial Gases Co., Ltd.; Taiyo Gases Co., Ltd.; Nippon Sanso Vietnam Joint Stock Company; Taiyo Nippon Sanso India Pvt. Ltd.; Shanghai Taiyo Nippon Sanso Gas Co., Ltd.; Suzhou Taiyo Nippon Sanso Gas Co., Ltd.; Dalian Changxing Island Taiyo Nippon Sanso Gas Co., Ltd.; Dalian Taiyo Nippon Sanso Gas Co., Ltd.; Yangzhou Taiyo Nippon Sanso Semiconductor Gases Co., Ltd.; Matheson Gas Products Korea Co., Ltd.; Nippon Sanso Taiwan, Inc.; Taiyo Nippon Sanso Engineering Taiwan, Inc.; Fu Yang Gas Co., Ltd.; Supagas Pty Ltd; Nippon Sanso Myanmar Co., Ltd.; Top Thermo Manufacturing (Malaysia) Sdn. Bhd.; Vacuumtech Philippines Inc.

* From FYE2024, data from the joint operations JFE Sanso Center Co., Ltd. and Sakai Gas Center, Inc. are not included.

Sustainability Data

Governance

| | Unit | FYE2022 | FYE2023 | FYE2024 |
|--|-----------------------|---------|---------|--------------|
| Activities of Committees | | | | |
| Management Configuration | Number of individuals | 9 | 9 | 9 |
| Internal directors | Number of individuals | 6 | 4 | 4 |
| Independent outside directors | Number of individuals | 3 | 5 | 5 |
| Directors serving concurrently as executive officers | Number of individuals | 1 | 1 | 1 |
| Percentage of directors serving concurrently as executive officers | % | 11.1 | 11.1 | 11.1 |
| Independent outside directors as a percentage of total Board of Directors' members | % | 33.3 | 55.6 | 55.6 |
| Female directors as a percentage of total Board of Directors' members | % | 11.1 | 22.2 | 22.2 |
| Term of appointment | Years | 1 | 1 | 1 |
| Frequency of Board of Directors' meetings | Times | 14 | 11 | 12 |
| Attendance at Board of Directors' meetings | % | 98.4 | 100.0 | 100.0 |
| Attendance of independent outside directors at Board of Directors' meetings | % | 100.0 | 100.0 | 100.0 |
| Number of directors attending less than 75% of Board of Directors' meetings | Number of individuals | 0 | 0 | 0 |
| Audit & Supervisory Board members | Number of individuals | 4 | 4 | 4 |
| Internal Audit & Supervisory Board members | Number of individuals | 1 | 1 | 1 |
| Independent outside Audit & Supervisory Board members | Number of individuals | 2 | 2 | 2 |
| Independent outside Audit & Supervisory Board members as a percentage of total Audit & Supervisory Board members | % | 50.0 | 50.0 | 50.0 |
| Female Audit & Supervisory Board members as a percentage of total Audit & Supervisory Board members | % | 0.0 | 0.0 | 0.0 |
| Frequency of Audit & Supervisory Board meetings | Times | 17 | 14 | 15 |
| Attendance at Audit & Supervisory Board meetings | % | 100.0 | 100.0 | 100.0 |
| Attendance of independent outside Audit & Supervisory Board members at Audit & Supervisory Board meetings | % | 100.0 | 100.0 | 100.0 |
| Number of Audit & Supervisory Board members attending less than 75% of Audit & Supervisory Board meetings | Number of individuals | 0 | 0 | 0 |
| Average age of directors and Audit & Supervisory Board members | Years | 65.8 | 66.1 | 65.2 |
| Number of executive officers | Number of individuals | 6 | 7 | 6 |
| Female executive officers as a percentage of total executive officers | % | 0.0 | 0.0 | 0.0 |

| | Unit | FYE2022 | FYE2023 | FYE2024 |
|---|-----------------------|---------|---------|--------------|
| Activities of Committees | | | | |
| Advisory Committee on Appointments and Remuneration | | | | |
| Members | Number of individuals | 5 | 6 | 6 |
| Internal directors | Number of individuals | 2 | 1 | 1 |
| Independent outside directors | Number of individuals | 3 | 5 | 5 |
| Frequency of meetings | Times | 10 | 12 | 9 |
| Attendance* ¹ | % | 100.0 | 100.0 | 100.0 |
| Management Committee | | | | |
| Members | Number of individuals | 13 | 12 | 13 |
| Frequency of meetings | Times | 11 | 12 | 15 |
| Attendance* ¹ | % | 100.0 | 100.0 | 99.5 |
| Investment Committee | | | | |
| Members* ² | Number of individuals | 15 | 15 | 15 |
| Frequency of meetings | Times | 3 | 2 | 2 |
| Attendance* ¹ | % | 93.3 | 93.3 | 96.5 |
| Global Strategy Review Committee | | | | |
| Members | Number of individuals | 17 | 17 | 16 |
| Frequency of meetings | Times | 1 | 1 | 1 |
| Attendance | % | 100.0 | 100.0 | 100.0 |
| Global Risk Management Committee | | | | |
| Members | Number of individuals | 18 | 18 | 18 |
| Frequency of meetings | Times | 1 | 1 | 1 |
| Attendance | % | 100.0 | 100.0 | 94.4 |
| Global Compliance Committee | | | | |
| Members* ² | Number of individuals | 8 | 8 | 7 |
| Frequency of meetings | Times | 1 | 1 | 1 |
| Attendance | % | 87.5 | 100.0 | 100.0 |

*1 Average attendance rate *2 Excluding additional attendees and Secretariat

Sustainability Data

Governance

| | Unit | FYE2022 | FYE2023 | FYE2024 |
|--|----------------------|--|--|---|
| Remuneration for Officers | | | | |
| Remuneration for directors (excluding outside directors) | | | | |
| Total | Millions of yen | 200 | 152 | 147 |
| Basic remuneration | Millions of yen | 141 | 102 | 91 |
| Corporate political contributions | Millions of yen | 59 | 47 | 46 |
| Non-financial KPI-linked bonuses | Millions of yen | — | 3 | 9 |
| Remuneration for Audit & Supervisory Board members (excluding independent outside members) | | | | |
| Total | Millions of yen | 28 | 28 | 28 |
| Basic remuneration | Millions of yen | 28 | 28 | 28 |
| Remuneration for independent outside directors | | | | |
| Total | Millions of yen | 108 | 129 | 135 |
| Basic remuneration | Millions of yen | 108 | 129 | 135 |
| Remuneration for independent auditors | | | | |
| Total | Millions of yen | 222 | 206 | 233 |
| Remuneration for audit services | Millions of yen | 218 | 205 | 229 |
| Other remuneration for independent auditors | Millions of yen | 4 | 1 | 4 |
| Others | | | | |
| Anti-takeover measures | — | Not adopted | Not adopted | Not adopted |
| Code of ethics | — | Adopted | Adopted | Adopted |
| Policy on transparency of tax affairs | — | Adopted (Currently disclosed on the Company website) | Adopted (Currently disclosed on the Company website) | Adopted (Currently disclosed on the Company website) |
| Corporate political contributions | Millions of yen | 0.2 | 0.0 | 0.0 |
| Violations of rules for the prevention of corruption | Number of violations | 0 | 0 | 0 |
| Monetary penalties incurred as a result of violations of guidelines for the prevention of corruption | Millions of yen | 0 | 0 | 0 |
| Rate of receiving compliance training | % | — | 99.7 | 99.4* |

* 100% completion rate as of the end of June 2024

Intellectual Property and Research and Development

| | Unit | FYE2022 | FYE2023 | FYE2024 |
|---------------------------------|-----------------|---------|---------|--------------|
| Intellectual Property | | | | |
| Registered patents | | | | |
| Total | Patents | 1,591 | 1,682 | 1,761 |
| Japan | Patents | 941 | 1,038 | 1,114 |
| Overseas | Patents | 650 | 644 | 647 |
| Research and Development | | | | |
| Research and Development | | | | |
| Total | Millions of yen | 3,569 | 3,515 | 4,466 |
| Japan | Millions of yen | 2,872 | 3,054 | 3,895 |
| United States | Millions of yen | 659 | 429 | 529 |
| Thermos | Millions of yen | 37 | 31 | 41 |

* Sum of patents at all operating companies. From FYE2023, the figure includes the consolidated subsidiaries of each operating company.

Sustainability Data

Calculation Methods for Scope 3 GHG Emissions

Referenced Guidelines

Our Scope 3 GHG emissions are calculated based on the Corporate Value Chain (Scope 3) Accounting and Reporting Standard issued by the GHG Protocol.

For emission factors, we used the emission factor database Ver. 3.4 provided in the Green Value Chain Platform, led by the Japanese government, and information from the Inventory Database for Environmental Analysis (IDEA v3.4) (IPCC 2021 without LULUCF AR6) developed by the National Institute of Advanced Industrial Science and Technology.

Reporting Boundary

Unless otherwise specified, the data covers Nippon Sanso Holdings and its consolidated subsidiaries in Japan, including Taiyo Nippon Sanso Corporation.

Calculation Method by Category

| | | | |
|---|---|---|---|
| Category 1 Purchased goods and services | Calculated by multiplying the amounts of products and services in physical or monetary units purchased by Taiyo Nippon Sanso Corporation by the respective emission factor for each type of product or service. However, emissions from transport and shipping services and from oxygen, nitrogen, and argon purchased from Taiyo Nippon Sanso Corporation's consolidated subsidiaries or affiliated companies are included in the reporting boundary of Scope 1 or 2, or Categories 4 and 15 of Scope 3, and are therefore deducted from the procured amounts used for this calculation. | Category 8 Upstream leased assets | Since the amount of applicable lease assets is negligible, emissions in this category are not calculated. |
| Category 2 Capital goods | Calculated by multiplying the amounts of capital investment during each reporting fiscal year by an emission factor per price of capital goods. | Category 9 Downstream transportation and distribution | The emissions associated with the transportation of sold products whose cost is borne by Taiyo Nippon Sanso Corporation and Nippon Ekitan Corporation fall within Category 4 as the Group basically bears the cost of transporting products. |
| Category 3 Fuel- and energy-related activities not included in Scope 1 and Scope 2 | This category includes emissions associated with the extraction, production, and transportation of purchased fuels and those consumed in the production of electricity and steam that are purchased by the Group. Fuels: Calculated by multiplying the amount purchased during the fiscal year by an emission factor for each fuel type. Electricity and steam: Calculated by multiplying the amount purchased from outside the Group by the upstream emission factor for each purchased energy reflecting electricity transmission loss. | Category 10 Processing of sold products | The Taiyo Nippon Sanso Group's main product group is gas, and since it is difficult to rationally calculate the GHG emissions associated with the processing of these products, the emissions are not calculated. |
| Category 4 Upstream transportation and distribution (Including distribution services whose cost is borne by the Group) | Calculated by subtracting the CO ₂ emissions from logistics subsidiaries, which are included in Scope 1 emissions, from the CO ₂ emissions reported for Taiyo Nippon Sanso Corporation and Nippon Ekitan Corporation as specified shippers in accordance with the Act on Promotion of Global Warming Countermeasures. CO ₂ emissions related to transportation and distribution of products for which Taiyo Nippon Sanso Corporation and Nippon Ekitan Corporation bear the transportation costs are included in this category. | Category 11 Use of sold products | The amount of CO ₂ emissions generated from the use of propane gas (LP gas), liquid carbon dioxide gas, and dry ice, and from use of electricity for the operation of its ASUs during the service life, which were sold to customers outside of the Taiyo Nippon Sanso Group. |
| Category 5 Waste generated in operations | Calculated by multiplying industrial waste output by the emission factors for each waste type (including transportation stages). | Category 12 End-of-life treatment of sold products | The Taiyo Nippon Sanso Group's primary products are gases (oxygen, nitrogen, and argon). After use, these gases return to the atmosphere and do not become waste. Furthermore, since the gas containers are loaned, and therefore the amount of waste from sold is negligible, emissions in this category are not calculated. |
| Category 6 Business travel | Calculated by multiplying the number of employees of consolidated subsidiaries in Japan, including Taiyo Nippon Sanso Corporation by the emission factor (0.13 tonnes of CO ₂ /person/year). | Category 13 Downstream leased assets | CO ₂ emissions from the use of electricity during operation of ASUs loaned to customers by Taiyo Nippon Sanso are calculated (electricity consumption is calculated by multiplying the rated electric power consumption by the average operation time). |
| Category 7 Employee commuting | Taiyo Nippon Sanso Corporation employees: For train commuters, the annual payment for commuter passes is multiplied by an emission factor per transportation expense. For car commuters, the round-trip distance is multiplied by the annual number of commuting days and an emission factor per person-kilometer for passenger car. Employees of Japanese consolidated subsidiaries: The number of employees is multiplied by the annual number of commuting days, and multiplied by the emission factor per commuting day. | Category 14 Franchises | As the Group does not have any businesses in this format, there are no emissions in this category. |
| | | Category 15 Investments | Calculated by multiplying the GHG emissions of each of the eight affiliated companies of Taiyo Nippon Sanso Corporation in Japan that produce gas by the Company's shareholding ratio (as of the fiscal year-end). The eight companies' GHG emissions are based on their actual emissions in the reporting period. |

Sustainability Data

Calculation Methods for GHG Emission Reduction Contribution

We include the following products and services sold by consolidated subsidiaries of Nippon Sanso Holdings and certain affiliated companies in the calculation of GHG emission reduction contribution. The calculation method per product or service is as follows. The CO₂ emission factors used for electricity are 0.429 t-CO₂/MWh in Japan, 0.251 t-CO₂/MWh in Europe, and the emissions factors published by the IEA for each country in the United States and Asia and Oceania.

| Environmental product offerings and applications | Calculation method for GHG emission reduction contribution | Calculation period | | |
|--|---|--------------------|--------------|-----------------------------------|
| | | FYE2022 | FYE2023 | FYE2024 |
| Products and services | Contribution to GHG emission reduction through products and services using the NSHD Group's proprietary technologies | | | |
| Combustion-type exhaust gas abatement system Reporting boundary: Consolidated subsidiaries in Japan | An average processing capacity of 0.6 L/min for nitrogen trifluoride (NF ₃) gas per one combustion-type exhaust gas abatement system was assumed, and this value was multiplied by the number of such systems that were installed from FYE2020 to FYE2024, the number of operating hours per year, and the global warming potential (GWP) of NF ₃ to calculate the GHG emission reduction contribution. The amount of CO ₂ emissions from fuel used in combustion equipment was deducted. | ○ | ○ | ○ |
| SF₆ recovery service Reporting boundary: Consolidated subsidiaries in Japan | The volume of sulfur hexafluoride (SF ₆) gas recovered in FYE2024 was multiplied by its GWP to calculate GHG emission reduction contribution. | ○ | ○ | ○ |
| SCOPE-JET® Reporting boundary: Consolidated subsidiaries in Japan | Based on actual observed values at two electric arc furnace manufacturers who had introduced SCOPE-JET®, the electricity-saving effect per volume of jet oxygen (kWh/Nm ³) was calculated. The ratio of the number of plants that have introduced SCOPE-JET® to the total number of electric arc furnace manufacturing plants was multiplied by the volume of crude steel products by electric arc furnaces in Japan in FYE2024, and the resulting number was assumed to be the production volume of crude steel contributed by the electricity saving from SCOPE-JET®. The amount of oxygen consumed by SCOPE-JET® in the production of this crude steel, and the amount of electricity saved per volume of oxygen were multiplied by the CO ₂ emission factor for electricity to calculate the GHG emission reduction contribution. The amount of the CO ₂ emissions generated during the manufacture of the oxygen was deducted. | ○ | ○ | ○ |
| MG Shield® Reporting boundary: Consolidated subsidiaries in Japan and Asia and Oceania | The amount of SF ₆ gas whose use was avoided through use of MG Shield® sold in FYE2024 was multiplied by the gas' GWP to calculate the GHG emission reduction contribution. | ○ (Japan) | ○ (Japan) | ○ (Japan and Asia and Oceania) |
| New refrigerants Reporting boundary: Consolidated subsidiaries in Europe | We calculated the amount of reduction contribution by assuming a 7% per year leakage rate of new refrigerants sold from FYE2016 to FYE2024, and multiplying leakage amount by the difference between the GWP of alternative refrigerants and the GWP of new refrigerants. The reduction contribution assumes annual leakage of 7% from equipment sold in the preceding fiscal year, continuing at the same rate in the next fiscal year. | ○ | ○ | ○ |
| Nitrogen gas supply system for laser processing (PSA) Reporting boundary: Consolidated subsidiaries in Japan | The annual power consumption of Taiyo Nippon Sanso Corporation's conventional air compressor was compared with that of the energy-saving type nitrogen gas supply system to calculate the annual electricity saving from using the energy-saving type system. The annual electricity saved was multiplied by the CO ₂ emission factor for electricity and the cumulative number of units sold from FYE2015 to FYE2024 to calculate the GHG emission reduction contribution. | ○ | ○ | ○ |
| Shuttle Chef® Reporting boundary: Consolidated subsidiaries in Japan | The amount of electric power usage saved per year from using Shuttle Chef® when cooking was multiplied by the CO ₂ emission factor for electricity and the total number of units sold over the three years from FYE2022 to FYE2024 to calculate the GHG emission reduction contribution. | ○ | ○ | ○ |
| Hydrogen station Reporting boundary: Consolidated subsidiaries in Japan | The annual CO ₂ emissions, which include emissions during the manufacture of the hydrogen, emitted by fuel cell vehicles (FCVs) filled with hydrogen at hydrogen stations sold or operated by Taiyo Nippon Sanso Corporation and operated during FYE2024 was compared with the annual CO ₂ emissions of gasoline cars to calculate the GHG emission reduction contribution. | ○ | ○ | ○ |

Sustainability Data

Calculation Methods for GHG Emission Reduction Contribution

| Environmental product offerings and applications | Calculation method for GHG emission reduction contribution | Calculation period | | |
|--|--|------------------------------------|--|--|
| | | FYE2022 | FYE2023 | FYE2024 |
| Industrial gases | Contribution to GHG emission reduction through industrial gases produced and supplied by the NSHD Group | | | |
| Oxygen-enriched combustion in blast furnaces Reporting boundary: Consolidated subsidiaries in Japan and Europe, and affiliated companies in Japan | We calculated the GHG emission reduction contribution as the difference between the amount of CO ₂ emissions in the production of crude steel using 100% coke and the production of crude steel via pulverized coal combustion based on crude steel production by the eight steel companies to whom the NSHD Group supplied oxygen in FYE2024. This calculation method is described in “The Impact of Oxygen on Reducing CO ₂ Emissions in Blast Furnace Ironmaking” (July 2011) by Dr. Michael F. Riley. We deducted the amount of CO ₂ emitted during the production of oxygen and the pumping of gas into the blast furnace. | ○ | ○ | ○ |
| Oxygen-enriched combustion in electric arc furnaces Reporting boundary: Consolidated subsidiaries in the United States, Europe, and Asia and Oceania | Based on actual observed values at two electric arc furnace manufacturers who had introduced oxygen burners, the electricity-saving effect per volume of jet oxygen (kWh/Nm ³) was calculated. The amount of the reduction was calculated by multiplying the amount of oxygen transmitted to the customer by the electricity reduction per volume of oxygen for the oxygen burner, but the CO ₂ emissions coefficient for electricity. The amount of CO ₂ emissions generated in manufacturing the oxygen has been deducted. | ○ (Europe and Asia and Oceania) | ○ (The United States, Europe, and Asia and Oceania) | ○ (The United States, Europe, and Asia and Oceania) |
| Argon (Ar) welding Reporting boundary: Consolidated subsidiaries in Europe the United States, Europe, and Asia and Oceania | We calculated the contribution to the reduction of overall CO ₂ emissions from using Ar-CO ₂ mixed gas as a welding gas, based on actual values when performing CO ₂ welding and Ar-CO ₂ mixed gas welding using welding equipment. The calculation was based on the differences in welding speed and CO ₂ emissions to the atmosphere. Specifically, we calculated the contribution as the difference in CO ₂ emissions released directly when conducting CO ₂ welding and Ar-CO ₂ mixed gas welding with regard to the CO ₂ generated in both methods, adding the reduction effect of lower electric power consumption due to increased welding speed with mixed gas welding. The impact of reduced electricity consumption was calculated by multiplying the amount of electricity consumption saved due to mixed gas welding by the CO ₂ emissions coefficient. The amount of CO ₂ emissions generated in the manufacture of Ar is deducted from the contribution to reduced CO ₂ emissions. | ○ (Europe) | ○ (The United States, Europe, and Asia and Oceania) | ○ (The United States, Europe, and Asia and Oceania) |

Sustainability Data

Independent Assurance Report

Independent Assurance Report

To the Representative Director, President CEO of Nippon Sanso Holdings Corporation

We were engaged by Nippon Sanso Holdings Corporation (the “Company”) to undertake a limited assurance engagement of the environmental and social performance indicators marked with ☑ (the “Indicators”) for the period from April 1, 2023 to March 31, 2024 included in its Sustainability Data 2024 (English version) (the “Report”) for the fiscal year ended March 31, 2024.

The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the “Company's reporting criteria”), as described in the Report.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the ‘International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information’ and the ‘ISAE 3410, Assurance Engagements on Greenhouse Gas Statements’ issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company's responsible personnel to obtain an understanding of its policy for preparing the Report and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.

- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and recalculating the Indicators.
- Visiting the Mie Plant of Taiyo Nippon Sanso JFP Corporation selected on the basis of a risk analysis.
- Evaluating the overall presentation of the Indicators.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report.

Our Independence and Quality Management

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Management 1, we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

/s/ Kazuhiko Saito

Kazuhiko Saito, Partner, Representative Director
KPMG AZSA Sustainability Co., Ltd.

Tokyo, Japan

September 12, 2024

Notes to the Reader of Independent Assurance Report:

This is a copy of the Independent Assurance Report and the original copies are kept separately by the Company and KPMG AZSA Sustainability Co., Ltd.



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