

Independent Assurance Report

Mr. Shunichi Kito
Representative Director, President and Chief Executive Officer
Idemitsu Kosan Co., Ltd.

We, SOCOTEC Certification Japan (hereafter "SOCOTEC"), have performed a limited assurance engagement, in response to the entrustment from Idemitsu Kosan Co., Ltd. (hereafter "the Company") in order to provide an opinion as to whether the subject matter information ("FY 2022 GHG Emissions and Environmental Performance Data" and "FY 2022 Social Performance Data" (period: 1 April 2022 to 31 March 2023), and "2022 Safety Performance Data" (period: 1 January 2022 to 31 December 2022)) of the Company meets the criteria in all material respects.

1 Subject Matter Information and Criteria

The subject matter information for our assurance is "a report on GHG Emissions, Environmental, Social and Safety Performance Data (shown in APPENDIX)" covering the operations and activities of domestic bases and domestic and overseas group companies subject to consolidation of the Company described in "FY 2022 GHG Emissions and Environmental Performance Data" and "FY 2022 Social Performance Data" (period: 1 April 2022 to 31 March 2023), and "2022 Safety Performance Data" (period: 1 January 2022 to 31 December 2022).

The criteria for preparing subject matter information are "Environmental Performance Data Calculation Rules (FY2022)" and "Scope3 Data Calculation Rules (FY2022)" and "Social and Safety Performance Data Calculation Procedures".

2 Management Responsibility

"FY 2022 GHG Emissions and Environmental Performance Data" and "FY 2022 Social Performance Data" (period: 1 April 2022 to 31 March 2023), and "2022 Safety Performance Data" (period: 1 January 2022 to 31 December 2022) were prepared by the management of the Company, who is responsible for the integrity of the assertions, statements, and claims made therein (including the assertions over which we have been engaged to provide limited assurance), the collection, quantification and presentation of all data and information in the report, and applied criteria, analysis and publication.

The management of the Company is responsible for maintaining adequate records and internal controls that are designed to support the reporting process and ensure that "FY 2022 GHG Emissions and Environmental Performance Data" and "FY 2022 Social Performance Data" (period: 1 April 2022 to 31 March 2023), and "2022 Safety Performance Data" (period: 1 January 2022 to 31 December 2022) are free from material misstatement whether due to fraud or error.

3 Assurance Practitioner's Responsibility

The responsibility of SOCOTEC is to express a limited assurance conclusion as to whether the subject matter information has been prepared in compliance with the criteria in all material respects.

SOCOTEC performed limited assurance engagement in accordance with the verification procedures stipulated by SOCOTEC and "ISO14064-3: Specification with guidance for the verification and validation of greenhouse gas statements" as well as the International Standard on Assurance Engagements (ISAE) 3410 "Assurance Engagements on Greenhouse Gas Statements" and ISAE3000 (Revised), "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" of International Auditing and Assurance Standards Board (IAASB).

The procedures implemented in the limited assurance engagement are limited in their type, timing and scope as compared to the procedures implemented in the reasonable assurance engagement. As a result, our limited assurance engagement does not provide as high assurance as reasonable assurance engagement.

Our procedures performed depend on the assurance professional practitioner's judgement, including the risk of material misstatement, whether due to fraud or error. Our conclusion was not designed to provide assurance on internal controls. We believe that we have obtained the evidence to provide a basis for the conclusion for limited assurance.

4 Assurance Procedures

The procedures that SOCOTEC has conducted are based on professional judgment and include, but are not limited to:

- Evaluation of policies and procedures created by the Company in relation to subject matter information
- Questions to the Company personnel to understand the above policies and procedures
- Verification that the target project meets eligibility requirements
- Matching with the basis data by trial calculation and recalculation
- Obtaining and collating material for important assumptions and other data
- We visited the Head Office and SHOWA YOKKAICHI SEKIYU CO., LTD. as verification sites in order to confirm the calculation structure and procedures, data collection and implementation status of record control.

5 Statement of Our Independence, Quality Control and Competence

SOCOTEC has introduced and maintained a comprehensive management system that conforms to the accreditation requirements of "ISO17021 Conformity assessment -- Requirements for bodies providing audit and certification of management systems". In addition, we have also established a management system according to "ISO14065 Greenhouse gases -- Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition". These meet the requirements of International Standard on Quality Control 1 by the International Auditing and Assurance Standards Board and Code of Ethics for Professional Accountants by International Ethics Standards Board for Accountants. We maintain a comprehensive quality control system that includes ethical rules, professional standards and documented policies and procedures for compliance with applicable laws and regulations.

The SOCOTEC Group is a comprehensive third-party organisation in inspection, testing and certification operations, and conducts management system certification services and training services related to quality, environment, labour and information security in countries around the world. Engaged in performance data and sustainability report assurance of environmental and social information, SOCOTEC affirms that it is independent of the organisation that has ordered the assurance engagement, its affiliated companies, and stakeholders, and that there is no possibility of impairing impartiality or conflict of interest.

We assure that the team engaged in the assurance is selected based on knowledge, experience in the relevant industry, and the competence requirements for this assurance engagement.

6 Use of Report

Our responsibility in performing our limited assurance activities is to the management of the company only in accordance with the terms for this engagement as agreed with the Company. We do not therefore assume any responsibility for any other purpose or to any other person or organisation.

7 Our Conclusion

On the basis of our procedures performed and evidence obtained nothing has come to our attention that causes us to believe that the subject matter information is not, in all material respects, prepared and reported in accordance with the stated criteria.

SOCOTEC Certification Japan



Seigo Futaba
Managing Director
29 September 2023

GHG Emissions, Environmental and Social and Safety Performance Data

Table 1-1 GHG Emissions by Scope

Item	Figure	Unit
Scope 1	13,479	thousand t-CO ₂
	10,480	t-CH ₄
	0.294	t-HFC
	392	t-N ₂ O
	0.003	t-SF ₆
	13,858	thousand t-CO ₂ e
Scope 2	553	thousand t-CO ₂
Scope 3 ^{*1} (Category 11: Use of sold products)	122,324	thousand t-CO ₂
Scope 1 + 2	14,032	thousand t-CO ₂
	14,411	thousand t-CO ₂ e
Scope 1 + 2 + 3	136,356	thousand t-CO ₂
	136,735	thousand t-CO ₂ e

*1 The scope of reporting is Idemitsu Kosan and consolidated group companies. Scope3 category 11 emissions calculated based on Coal/Natural gas production and fuel/LPG production at refineries and complexes.

Table 1-2 CO₂ Emissions and CO₂ Reduction Rate^{*2}

Item	Figure	Unit
Scope 1 + 2	14,207	thousand t-CO ₂
CO ₂ reduction rate (compared to 2013)	10.5	%

*2 The total emissions and the reduction rate that are the basis for calculating CO₂ (Scope 1+2) reductions target for FY2030: 46% reduction compared to FY2013.

Table 1-3 Idemitsu Kosan Scope3 Emissions^{*3}

Item	Figure	Unit
Category 1: Purchased goods and services	15,726	thousand t-CO ₂
Category 3: Fuel- and energy-related activities (not included in Scope 1 or 2)	2,714	thousand t-CO ₂
Category 4: Upstream transportation and distribution	2,648	thousand t-CO ₂
Category 11: Use of sold products ^{*4}	127,134	thousand t-CO ₂
Category 12: End-of-life treatment of sold products	5,789	thousand t-CO ₂

^{*3} The scope of reporting is Idemitsu Kosan non-consolidated.

^{*4} Scope3 category 11 emissions calculated based on the volume of products sold by Idemitsu Kosan Co., Ltd..

Table 1-4 GHG Emissions per Unit of Production

Item	Figure	Unit
Natural gas production	0.029	t-CO ₂ e/boe
Coal production	0.061	t-CO ₂ e/t
Oil refining	0.036	t-CO ₂ e/bbl
Petrochemical plants	0.896	t-CO ₂ e/t

Table 1-5 Energy Consumption

Item	Figure	Unit
Heat quantity equivalent	213	PJ
Crude oil equivalent	5,482	thousand KL
Unit energy consumption (Refinery)	8.60	L/ KL
Unit energy consumption (Petrochemical plant)	0.428	KL/t

Table 1-6 Amount of Water Resources Intake and Wastewater

Item	Figure	Unit
Seawater intake	1,351,396	thousand t
Industrial water intake	87,649	thousand t
Tap water intake	2,493	thousand t
Underground water intake	15,799	thousand t
Total water intake	1,457,336	thousand t
Wastewater	1,440,195	thousand t
Water recycling rate	92	%

Table 1-7 Water Withdrawal Rate

Item	Figure	Unit
Natural gas production	0.568	t/boe
Coal production	0.474	t/t
Oil refining	3.224	t/bbl
Petrochemical plants	157	t/t

Table 1-8 Water Pollution Effects

Item	Figure	Unit
COD	206	t
Total nitrogen	251	t
Total phosphorus	4.2	t

Table 1-9 Air Pollutant Emissions

Item	Figure	Unit
SOx	10,528	t
NOx	18,800	t
Soot/dust	257	t
VOC	7,235	t

Table 1-10 Waste

Item		Figure	Unit
Waste	Total waste	225,375	t
	Reduced by intermediate treatment	82,554	t
	Recycled	106,908	t
	Final disposal	25	t
	Final disposal rate	0.011	%
Hazardous Waste	Total waste	6,970	t
	Reduced by intermediate treatment	1,693	t
	Recycled	5,277	t
	Final disposal	0	t
Non-Hazardous Waste	Total waste	218,405	t
	Reduced by intermediate treatment	80,861	t
	Recycled	101,632	t
	Final disposal	25	t

Table 2-1 Status of Employees

Item		Figure	Unit
Number of employees* ⁵ (combined number of members and employees in managerial positions)		4,981	People
	Men	4,316	People
	Women	665	People
	Percentage of women	13.4	%
Number of employees in managerial positions* ⁵ (Including managers, general managers)		952	People
	Men	919	People
	Women	33	People
	Percentage of women	3.5	%
Average age* ⁵		42.2	years old
	Men	42.5	years old
	Women	40.5	years old
Average years employed * ⁵		18.5	years
	Men	18.9	years
	Women	16.1	years
Percentage of employees with disabilities * ⁶	-	2.50	%
New graduate retention rate (Average for newly hired employees between 2018 and 2020)	-	89.3	%
Turnover rate of new graduates (Average for newly hired employees between 2018 and 2020)	-	10.0	%

*⁵ As of March 31, 2023

*⁶ As of June 1, 2023

Table 2-2 Status of Recruitment

Item		Figure	Unit
Recruitment of new graduates* ⁷		87	People
	Men	70	People
	Women	17	People
	Percentage of women	19.5	%
	Foreign nationals	1	People
	Percentage of foreign nationals	1.1	%
Recruitment of new graduates (college graduate or higher)* ⁷		48	People
	Men	32	People
	Women	16	People
	Percentage of women	33.3	%
	Foreign nationals	1	People
	Percentage of foreign nationals	2.1	%
Career recruitment* ⁸		33	People

*⁷ Hired in April 2023

*⁸ Hired in FY2022

Table 2-3 Work-Life Balance Support Systems and Usage Numbers

Item		Figure	Unit
Maternity leave	Women	31	People
Childcare leave		168	People
	Men	142	People
	Women	26	People
Rate of employees taking childcare leave		86	%
	Men	84	%
	Women	96	%
Rate of employees returning to work after childcare leave		100	%
	Men	100	%
	Women	100	%
Nursing care leave		8	People
	Men	7	People
	Women	1	People
Reduced working hours for parenting		50	People
	Men	3	People
	Women	47	People
Leave to care for sick/injured child		228	People
	Men	121	People
	Women	107	People
Family care leave		56	People
	Men	44	People
	Women	12	People
Telecommuting		4,592	People
	Men	4,033	People
	Women	559	People
Self-development leave of absence		3	People
	Men	1	People
	Women	2	People

Table 2-4 Overtime Work and Annual Paid Leave

Item	Figure	Unit
Average overtime work hours per employee	20.5	hours/month
Average annual paid leave taken by an employee	16.9	Days
Average usage rate of annual paid leave per employee	83	%

Table 2-5 Training Results

Item	Figure	Unit
Training hours	Total	74,722
	Per person	12.8
Amount of investment in training	Total	247,810
	Per person	43

Table 2-6 Occupational Accident Results*9

Item	Figure	Unit
Occupational accidents frequency rate	Employees	0.15
	Employees of partner companies	0.46
Fatalities due to occupational accidents	Employees	0
	Employees of partner companies	0
TRIFR (Total Recordable Injury Frequency Rate)	Employees	1.62
	Employees of partner companies	2.66
LTIFR (Lost Time Incident Frequency Rate)	Employees	0.15
	Employees of partner companies	0.46
Severity rate	Employees	0.00
	Employees of partner companies	0.02
Serious accidents	-	0
	Of which, partner companies	0

*9 January 2022 to December 2022