Independent Assurance Report

Mr. Shunichi Kito
Representative Director, President and Chief Exective 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 ("FY2021 GHG Emissions and Environmental Performance Data" and "FY2021 Social Performance Data" (period: 1 April 2021 to 31 March 2022), and "2021 Safety Performance Data" (period: 1 January 2021 to 31 December 2021)) 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 and Social 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 "FY2021 GHG Emissions and Environmental Performance Data" and "FY2021 Social Performance Data" (period: 1 April 2021 to 31 March 2022), and "2021 Safety Performance Data" (period: 1 January 2021 to 31 December 2021).

The criteria for preparing subject matter information are "Environmental Performance Data Calculation Rules (revised on 27 August 2021)" and "Social and Safety Performance Data Calculation Procedures".

2 Management Responsibility

"FY2021 GHG Emissions and Environmental Performance Data" and "FY2021 Social Performance Data" (period: 1 April 2021 to 31 March 2022), and "2021 Safety Performance Data" (period: 1 January 2021 to 31 December 2021) 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 "FY2021 GHG Emissions and Environmental Performance Data" and "FY2021 Social Performance Data" (period: 1 April 2021 to 31 March 2022), and "2021 Safety Performance Data" (period: 1 January 2021 to 31 December 2021) 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 Chiba Complex of the Company 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

S. Futaba

Seigo Futaba
Managing Director
8 December 2022

GHG Emissions, Environmental and Social Performance Data

Table 1-1 GHG Emissions by Scope*1

Item	Figure	Unit
Scope 1	12,474	thousand tCO_2
	20,905	tCH_4
	0.298	tHFC
	431	tN_2O
	0.002	tSF_6
	13,126	thousand tCO_2e
Scope 2	630	thousand tCO_2
Scope 3 (Category 11: Sold products consumption)	107,179	thousand tCO_2
Scope 1 + 2	13,105	thousand tCO_2
	13,756	thousand tCO_2e
Scope 1 + 2 + 3	120,283	thousand tCO_2
	120,935	thousand tCO_2e

*1 The sum of Scope 1 and Scope 2, and/or Scope 1, Scope 2 and Scope 3 may not be consistent with the total of disclosed figures since it is the sum of the individual values including the decimal point values.

Table 1-2 GHG emissions per unit of production

Item	Figure	Unit
Crude oil production	0.007	tCO_2e/bbl
Coal production	0.079	tCO_2e/t
Oil refining	0.039	tCO_2e/bbl
Petrochemical plants	0.897	tCO_2e/t

Table 1-3 Energy Consumption

Item	Figure	Unit
Heat quantity equivalent	194	PJ
Crude oil equivalent	4,999	thousand KL
Unit energy consumption (Refinery)	8.35	L/ KL
Unit energy consumption (Petrochemical plant)	0.415	KL/t

Table 1-4 Amount of Water Resources Intake and Wastewater

Item	Figure	Unit
Seawater intake	1,343,739	thousand t
Industrial water intake	82,208	thousand t
Tap water intake	2,586	thousand t
Underground water intake	14,055	thousand t
Total water intake	1,442,588	thousand t
Wastewater	1,420,177	thousand t
Water recycling rate	92	%

Table 1-5 Water withdrawal rate

Item	Figure	Unit
Crude oil production	0.482	t/bbl
Coal production	0.386	t/t
Oil refining	3.744	t/bbl
Petrochemical plants	156	t/t

Table 1-6 Water Pollution Effects

Item	Figure	Unit
COD	205	t
Total nitrogen	211	t
Total phosphorus	3.6	t

Table 1-7 Air Pollutant Emissions

Item	Figure	Unit
SOx	8,263	t
NOx	19,719	t
Soot/dust	194	t
VOC	6,265	t

Table 1-8 Waste

Item	Figure	Unit
Total waste	236,317	t
Reduced by intermediate treatment	104,888	t
Recycled	128,506	t
Final disposal	82	t
Final disposal rate	0.035	%

Table 2-1 Status of Employees

Item		Figure	Unit
Number of employees*2		5,112	People
	Men	4,460	People
	Women	652	People
	Percentage of women	12.8	%
Number of employees in managerial positions (Including managers, general managers, and executive officers)*2		975	People
	Men	950	People
	Women	25	People
	Percentage of women	2.6	%
Average age*2		42.1	years old
	Men	42.4	years old
	Women	40.1	years old
Average years employed *2		18.6	years
	Men	19.0	years
	Women	16.1	years
Status of employees with disabilities *3	-	2.35	%
New graduate retention rate (Average for newly hired employees between 2017 and 2019)	-	89.6	%
Turnover rate of new graduates	-	7.9	%

*2 As of March 31, 2022

*3 As of June 1, 2022

Table 2-2 Status of Recruitment

Item		Figure	Unit
Recruitment of new graduates*4		131	People
	Men	107	People
	Women	24	People
	Percentage of women	18.3	%
	Foreign nationals	1	People
	Percentage of foreign nationals	0.8	%
Career recruitment*5		62	People

*4 Hired in April 2022
*5 Hired in FY2021

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

Item		Figure	Unit
Maternity leave	Women	30	People
Childcare leave		108	People
	Men	49	People
	Women	59	People
Nursing care leave		5	People
	Men	3	People
	Women	2	People
Reduced working hours for parenting		62	People
	Men	0	People
	Women	62	People
Leave to care for sick/injured child		226	People
	Men	133	People
	Women	93	People
Family care leave		43	People
	Men	35	People
	Women	8	People
Telecommuting		4,581	People
	Men	3,976	People
	Women	605	People
Self-development leave of absence		0	People
	Men	0	People
	Women	0	People

Table 2-4 Overtime Work and Annual Paid Leave

Item	Figure	Unit
Average overtime work hours per employee	20.8	hours/month
Average annual paid leave taken by an employee	15.3	Days
Average usage rate of annual paid leave per employee	75.3	%

Table 2-5 Training Results

Item		Figure	Unit
Training hours	Total	81,653	Hours
	Per person	15.6	Hours
Amount of investment in training	Total	235,400	thousand yen
	Per person	45	thousand yen

Table 2-6 Occupational Accident Results*6

Item		Figure	Unit
Occupational accidents frequency rate	Employees	0.74	-
	Employees of partner companies	0.41	-
Fatalities due to occupational accidents	Employees	0	People
	Employees of partner companies	1	People
TRIFR (Total Recordable Injury Frequency Rate)	Employees	2.51	-
	Employees of partner companies	2.41	-
LTIFR (Lost Time Incident Frequency Rate)	Employees	0.74	-
	Employees of partner companies	0.41	-
Severity rate	Employees	0.01	-
	Employees of partner companies	0.52	-
Serious accidents	Employees	0	Cases
	Employees of partner companies	0	Cases

*6 January 2021 to December 2021