



KPMG Professional Services

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Commercial Registration No 1010425494

Headquarters in Riyadh

كي بي إم جي للاستشارات المهنية

واجهة الرياض، طريق المطار
صندوق بريد ٩٢٨٧٦
الرياض ١١٦٦٣
المملكة العربية السعودية
سجل تجاري رقم ١٠١٠٤٢٥٤٩٤
المركز الرئيسي في الرياض

Independent limited assurance report to Saudi Arabian Oil Company on the statement of greenhouse gases (“GHG”) emissions

To the Management of the Saudi Arabian Oil Company

We have been engaged by the Management of Saudi Arabian Oil Company (“the Company”, “Saudi Aramco”) to carry out a limited assurance engagement in order to state whether anything has come to our attention that causes us to believe that the subject matter information detailed below (“Subject Matter”), has not been prepared, in all material respects, in accordance with the applicable criteria (“Applicable Criteria”) as set out below.

Subject Matter

The Subject Matter for our limited assurance engagement is related to the Company’s GHG emissions statement for the year ended 31 December 2022, as prepared by the Company and attached in Annex A of this report. The GHG emissions statement provides disclosure of the quantity of Scope 1, Scope 2 and total GHG emissions produced, location based and market based, from the operational boundary of the Company which is comprised of the following:

- The wholly owned and operated assets of the Company within the Kingdom of Saudi Arabia as defined in Section 1 of Annex B of this report.
- The affiliates of the Company under operational control as defined in Section 2 of Annex B of this report.
- All assets in the operational boundary of the Company (i.e. sum of emissions from points A and B above).

The emissions mentioned above have been disclosed in relation to each GHG gas comprising of CO₂, CH₄, CH₄ (CO₂e), N₂O and N₂O (CO₂e), cumulatively which represent the total carbon dioxide equivalent (total CO₂e).

Applicable Criteria

The Applicable Criteria for this limited assurance engagement is the Company’s *GHG Emissions Basis of Preparation (2021 version)*.

Saudi Arabian Oil Company’s responsibility

The management of the Company is responsible for preparing and presenting the Subject Matter information that is free from material misstatement in accordance with the Applicable Criteria and for the information contained therein.

This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and presentation of the Subject Matter information that is free from material misstatement, whether due to fraud or error. It also includes developing the Applicable Criteria as the criteria against which to evaluate the Subject Matter information.

The management of the Company is also responsible for preventing and detecting fraud and for identifying and ensuring that the Company complies with laws and regulations applicable to its activities. The management of the Company is responsible for ensuring that staff involved with the preparation of the Subject Matter information are properly trained, systems are properly updated and that any changes in reporting encompass all significant business units.



Independent limited assurance report

Our responsibility

Our responsibility is to examine the Subject Matter information prepared by the Company and to report thereon in the form of an independent limited assurance conclusion based on the procedures we have performed and the evidence obtained. We conducted our engagement in accordance with the International Standard on Assurance Engagements ("ISAE") 3000 (Revised) *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* and ISAE 3410 *Assurance Engagements On Greenhouse Gas Statements* as endorsed in the Kingdom of Saudi Arabia and the terms and conditions for this engagement as agreed with the Company's management. ISAE 3000 (Revised) and ISAE 3410 require that we plan and perform the engagement to obtain limited assurance about whether the Subject Matter information has been properly prepared, in all material respects, in accordance with the Applicable Criteria.

Our firm applies the International Standard on Quality Management 1, which requires the firm to 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.

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) that is endorsed in the Kingdom of Saudi Arabia, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

The procedures selected depend on our understanding of the Subject Matter and other engagement circumstances, and our consideration of areas where material misstatements are likely to arise.

In obtaining an understanding of the Subject Matter information and other engagement circumstances, we have considered the process used to prepare the Subject Matter information in order to design assurance procedures that are appropriate in the circumstances, but not for the purposes of expressing a conclusion as to the effectiveness of the Company's internal control over the preparation and presentation of the Subject Matter information. A limited assurance engagement in accordance with ISAE 3000 (Revised) and ISAE 3410 involves assessing the risks of material misstatement of the Subject Matter information, whether due to fraud or error, responding to the assessed risks as necessary in the circumstances of the engagement and evaluating the overall presentation of the Subject Matter information.

Our engagement also included: assessing the appropriateness of the Subject Matter, the suitability of the criteria used by the Company in preparing the Subject Matter information in the circumstances of the engagement, evaluating the appropriateness of the procedures used in the preparation of the Subject Matter information and the reasonableness of estimates made by the Company.

Limited assurance is less than absolute assurance and reasonable assurance. The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

As part of this engagement, we have not performed any procedures by way of audit, review or verification of the Subject Matter information nor of the underlying records or other sources from which the Subject Matter information was extracted.



Independent limited assurance report

Procedures performed

Our limited assurance engagement on the Subject Matter information consisted of making enquiries, primarily of persons responsible for the preparation of the Subject Matter information, and applying analytical and other procedures, as appropriate. These procedures were based on our professional judgement and included the following, amongst others, for the year ended 31 December 2022:

- Performing an analysis of the external environment and obtaining an understanding of GHG accounting at Saudi Aramco;
- Obtaining an understanding of the reporting processes for Saudi Aramco, including obtaining an understanding of internal controls, systems and processes relevant to the preparation of the Subject Matter;
- Interviewing management and other relevant staff / personnel at corporate level responsible for data collection, data management, and data analysis pertaining to GHG accounting;
- Reviewing the appropriateness of any adjustments / proxies made by the Company, where applicable, to determine the total CO₂e emissions for the year ended 31 December 2022;
- Reviewing management documentation and Company data reporting tools to the extent they underpin the preparation of the Subject Matter;
- Assessing the appropriateness of the emissions factors applied by the Company in arriving at total CO₂e amounts;
- Obtaining GHG emissions inventory data for Scope 1 and Scope 2 and agreeing the amounts with the amounts detailed in the Subject Matter for the in-scope assets / activities in the operational boundary;
- Conducting a sample of site visits and performing the following for each site selected from the GHG emissions inventory data of the Company:
 - agreeing the GHG emissions information from system records to the Subject Matter;
 - Performing analytical reviews / trend analysis;
 - Obtaining supporting evidence, underlying records, or reports for selected data points to reconcile site level information;
 - Checking completion / aggregation of emissions data to include all facilities and emission sources for the site for the appropriate time period and equipment;
 - Performing recalculation of total CO₂e emissions by facility and emission sources for each site based on site level activity data obtained from system outputs, reports and other relevant records, and the Company's emissions factors; and
 - Comparing recalculated total CO₂e emissions above with corporate emissions inventory data for anomalies and variances. Where variances are noted, reviewing the rationale for the variances.
- Reviewing data management protocols, including rules related to data conditioning.



Independent limited assurance report

Characteristics and limitations

Due to the inherent limitations of any internal control structure, it is possible that errors or irregularities in the information presented in the Subject Matter may occur and not be detected. The assurance relies on documentation furnished by the Company and interactions with relevant personnel within the Company to validate the self-assessment. Our engagement is not designed to detect all weaknesses in the internal controls over the preparation of the Subject Matter information as the procedures performed were undertaken on a test basis. Moreover, we assume correctness of third-party information, where applicable, as well as publicly disclosed information to reach our conclusion.

Our engagement was not designed to test, verify or audit the completeness and accuracy of system outputs from Saudi Aramco's Emission Management Dashboard ("EMD") and data collecting systems.

In performing our limited assurance engagement, we have performed procedures to ascertain whether the Subject Matter has been prepared in accordance with the Applicable Criteria only to the extent pertaining to the calculation of GHG emissions from the operational boundary and thus our engagement was not designed to verify the Company's wider compliance with any other requirements set out either in the Applicable Criteria and or related guidelines.

The Subject Matter discloses GHG emissions comprising of CO₂, CH₄, CH₄ (CO_{2e}), N₂O and N₂O (CO_{2e}) only, cumulatively which represent the total carbon dioxide equivalent (total CO_{2e}). We have not performed any procedures by way of either verifying or assessing the appropriateness of any GHG emissions that may have been excluded by the Company in preparing the Subject Matter on materiality grounds.

Limited assurance conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the Subject Matter information is not prepared, in all material respects, in accordance with the Applicable Criteria.

Restriction of use of our report

Our report should not be regarded as suitable to be used or relied on by any party wishing to acquire rights against us other than the Company, for any purpose or in any context. Any party other than the Company who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk. To the fullest extent permitted by law, we accept or assume no responsibility and deny any liability to any party other than the Company for our work, for this independent limited assurance report, or for the conclusions we have reached.

Our report is released to the Company on the basis that it shall not be copied, referred to or disclosed, in whole (save for the Company's own internal purposes) or in part, without our prior written consent.

KPMG Professional Services



Fahad Mubark Aldossari
License no: 469



Riyadh, 2 March 2023
Corresponding to: 10 Shaban 1444H

Annex A: GHG emissions statement for the year ended 31 December 2022

Location based						
Type	CO ₂	CH ₄	CO ₂ e (CH ₄)	N ₂ O	CO ₂ e (N ₂ O)	Total CO ₂ e
Units	million tonnes	thousand tonnes	million tonnes	thousand tonnes	million tonnes	million tonnes
A: GHG Emissions for wholly owned and operated assets within the Kingdom of Saudi Arabia						
Scope 1	46.27	37.17	0.93	0.79	0.24	47.44
Scope 2	14.04	0.37	0.01	0.28	0.08	14.14
Total	60.31	37.54	0.94	1.07	0.32	61.57
B: GHG Emissions for the three operationally controlled entities						
Scope 1	8.19	1.68	0.04	0.10	0.03	8.27
Scope 2	1.95	0.08	0.00	0.04	0.01	2.00
Total	10.14	1.76	0.04	0.14	0.04	10.26
GHG Emissions of all the assets in the operational boundary of Saudi Aramco (A+B)						
Scope 1	54.46	38.85	0.97	0.89	0.27	55.70
Scope 2	15.99	0.45	0.01	0.32	0.09	16.13
Grand Total	70.46	39.30	0.98	1.21	0.36	71.84

Market based						
Type	CO ₂	CH ₄	CO ₂ e (CH ₄)	N ₂ O	CO ₂ e (N ₂ O)	Total CO ₂ e
Units	million tonnes	thousand tonnes	million tonnes	thousand tonnes	million tonnes	million tonnes
A: GHG Emissions for wholly owned and operated assets within the Kingdom of Saudi Arabia						
Scope 1	46.27	37.17	0.93	0.79	0.24	47.44
Scope 2	8.25	0.20	0.01	0.25	0.08	8.33
Total	54.51	37.37	0.93	1.04	0.31	55.76
B: GHG Emissions for the three operationally controlled entities						
Scope 1	8.19	1.68	0.04	0.10	0.03	8.27
Scope 2	1.95	0.08	0.00	0.04	0.01	2.00
Total	10.14	1.76	0.04	0.14	0.04	10.26
GHG Emissions of all the assets in the operational boundary of Saudi Aramco (A+B)						
Scope 1	54.46	38.85	0.97	0.89	0.27	55.70
Scope 2	10.19	0.28	0.01	0.29	0.09	10.32
Grand Total	64.66	39.13	0.98	1.18	0.35	66.02

Annex B

Section 1: List of wholly owned operated assets of the Company within the Kingdom of Saudi Arabia

Operational Area	Related Admin Area
Abq Plants Operations Department (APOD)	Southern Area Oil Operations (SAOO)
Aviation Department	Industrial Services
Berri Gas Plant Department (BGPLD)	Northern Area Gas Operations (NAGO)
Central Region Distribution Department (CRDD)	PD&T (Distribution)
Community Services	Community Services
East West Pipeline Department (EWPD)	PD&T (Pipelines)
Eastern Region Distribution Department (ERDD)	PD&T (Distribution)
Eastern Region Terminal Department (ERTD)	PD&T (Terminals)
Haradh Gas Plant Department (HdGPD)	Southern Area Gas Operations (SAGO)
Hawiyah Gas Plant Department (HGPD)	Southern Area Gas Operations (SAGO)
Hawiyah NGL Department (HNGLD)	Southern Area Gas Operations (SAGO)
Juaymah NGL Department (JNGLD)	Global Manufacturing
Khurais Producing Department (KhPD)	Southern Area Oil Operations (SAOO)
Khursaniyah Gas Plant Department (KGPD)	Northern Area Gas Operations (NAGO)
Manifa Producing Department (MPD)	Northern Area Oil Operations (NAOO)
Marine Department	Industrial Services
NA Gas Producing Department (NAGPD)	Northern Area Oil Operations (NAOO)
NA Pipelines Department (NAPD)	PD&T (Pipelines)
North Ghawar Producing Department (NGPD)	Southern Area Oil Operations (SAOO)
Ras Tanura Refinery (RTR)	Global Manufacturing
Ras Tanura Producing Department (RTPD)	Northern Area Oil Operations (NAOO)
Riyadh Refinery Department (RRD)	Global Manufacturing
Safaniyah Offshore Producing Department (SOFPD)	Northern Area Oil Operations (NAOO)
Safaniyah Onshore Producing Department (SONPD)	Northern Area Oil Operations (NAOO)
Sea Water Injection Department (SWID)	Southern Area Oil Operations (SAOO)
Shaybah NGL Recovery Plant Department (SyNGL)	Northern Area Gas Operations (NAGO)
Shaybah Producing Department (SyPD)	Southern Area Oil Operations (NAOO)
Shedgum Gas Plant Department (ShGPD)	Southern Area Gas Operations (SAGO)
South Ghawar Producing Department (SGPD)	Southern Area Oil Operations (SAOO)
Southern Area Pipeline Department (SAPD)	PD&T (Pipelines)
Transportation Department	Industrial Services
Uthmaniyah Gas Plant Department (UGPD)	Southern Area Gas Operations (SAGO)
Wasit Gas Plant Department (WGP)	Northern Area Gas Operations (NAGO)
Western Region Distribution Department (WRDD)	PD&T (Distribution)
Western Region Terminal Department (WRTD)	PD&T (Terminals)
Yanbu NGL Department (YNGLD)	Global Manufacturing
Yanbu Refinery Department (YRD)	Global Manufacturing
Fadhili Gas Plant Department (FGPD)	Northern Area Gas Operations (NAGO)
North Ghawar Gas Producing Department (NGGPD)	Southern Area Oil Operations (SAOO)
South Ghawar Gas Producing Department (SGGPD)	Southern Area Oil Operations (SAOO)

Annex B (continued)

Section 2: List of the affiliates of the Company under operational control

Saudi Aramco Jubail Refinery Company ("SASREF")	1 refinery in KSA
Motiva Enterprises	1 refinery and 1 petrochemical facilities in USA
Arlanxeo Holding B.V.	16 petrochemical facilities spread across Europe, Americas and Asia