

VERIFICATION REPORT

Document Prepared By

TÜV Rheinland Energy GmbH

Accreditation number D-VS-11120-01-00

Project Title	OMV South Tunisia Gas Valorisation project
Project Proponent	OMV (Tunesien) Production GmbH Waterside Building– Impasse du Lac Turcana, Les Berges du Lac, 1053 Tunis, Tunisia

Verification period	01.01.2022 – 31.12.2022
Verified UERs	71,230,723,976 gCO _{2,eq}
Unique identifier	0936_TUEV_20140501_2022_009.8559E,031.4061N_178017.249247

Report Title	Verification Report of the UER Project “OMV South Tunisia Gas Valorisation project” for the verification period from 01.01.2022 until 31.12.2022
Report ID	21257977
Version	1.0
Date of Issue	15.05.2023
Prepared by Verification Body	TÜV Rheinland Energy GmbH
Contact	Am Grauen Stein, 51105 Cologne, Germany www.tuv.com/carbon
Approved by	Denitsa.Gaydarova-ltrib@de.tuv.com (Technical Reviewer)
Work carried out by	Florencia.Tamanini@de.tuv.com (Team Leader and Verifier) Julius.Averkorn@de.tuv.com (Trainee)

Summary:

TÜV Rheinland Energy GmbH was assigned to perform verification of the monitoring period 01.01.2022 – 31.12.2022 for the upstream emission reduction project “OMV South Tunisia Gas Valorisation project” against the verification criteria set under the Council Directive (EU) 2015/652 of 20 April 2015 and the Guidance Note of the Council Directive (EU) 2015/652 on approaches to quantify, verify, validate, monitor and report upstream emission reductions as well as on the Austria’s “Kraftstoffverordnung” (KVO) and in accordance with the ISO 14064-3:2019 and all other relevant requirements, considering the reasonable materiality threshold of 5%.

The UER project activity was implemented in order to recover and utilize the associated gas from four concession areas (Cherouq, Anaguid, Jinane and Durra) in south Tunisia, which had been flared before the project was implemented.

The verification was performed in 4 main steps, namely

- Desk review – covering all provided documents, i.e. current monitoring report, validated PD, validation report, monitoring report on previous monitoring period and the corresponding verification report, ER calculations, records on volume of recovered associated gas (AG), records on NCV of the recovered AG, records on physical parameters and gas composition of the recovered AG, manuals, etc. (listed in section 2.2)
- Verification audit (described in section 2.4) – confirming the correctness of the monitoring report, interviews with the project proponent (PP), stakeholders and the UER consultant (see Section 0), observation of data processing and storage, confirmation of metering devices, plausibility checks.
- Issuance of verification protocol (see APPENDIX I), a list of corrective action requests and clarifications (see APPENDIX II)
- Issuance of the verification report “Verification Report of the UER Project “OMV South Tunisia Gas Valorisation project” for the verification period from 01.01.2022 until 31.12.2022”.

The Verification Team identified 1 (one) corrective action request (CAR) and 10 (ten) clarification requests (CLs), which were accordingly closed before the issuance of this final Verification Report.

Finally based on the provided documentation and site inspection, TÜV Rheinland Energy GmbH issues a positive verification opinion on the UER project activity “OMV South Tunisia Gas Valorisation project”, confirming that for the monitoring period 01.01.2022 – 31.12.2022 GHG emission reduction of 71,230,723,976 gCO_{2,eq} are realised from the aforementioned project activity.

Table of Content

1	Introduction	5
1.1	Project Name.....	5
1.2	Project Proponent	5
1.3	Verification of monitoring period	5
1.4	Period during which Verification was carried out.....	5
1.5	Date of the Verification Audit	5
1.6	Upstream Emission Reduction	5
1.7	GHG Intensity	6
1.8	Methodology	6
1.9	Summary Description of the Project.....	6
1.10	Objective	8
1.11	Scope and Criteria	8
1.12	Materiality.....	9
1.13	Verification Team	10
1.14	Level of Assurance.....	10
1.15	Summary Result of the Verification Process.....	10
2	Verification Process	12
2.1	Method and Criteria.....	12
2.2	Document Review	13
2.3	Interviews.....	14
2.4	Site inspection	14
2.5	Resolution of Findings.....	16
2.6	Forward Action Requests	16
3	Verification Findings	17
3.1	Implementation Status.....	17
3.2	Accuracy of Upstream Emission Reduction Calculations.....	18
3.3	Quality of Evidence to Determine GHG Emissions, GHG Emission Reductions and GHG Removal Enhancements.....	20

3.4	Findings and Non-Conformities.....	22
4	Verification conclusion.....	23
5	VERIFICATION STATEMENT.....	24
	APPENDIX I	25
	APPENDIX II	35

1 Introduction

1.1 Project Name

OMV South Tunisia Gas Valorisation project

1.2 Project Proponent

OMV (Tunesien) Production GmbH

Waterside Building– Impasse du Lac Turcana,
Les Berges du Lac,
1053 Tunis, Tunisia

The above mentioned entity is referred to as the project proponent of the project activity “OMV South Tunisia Gas Valorisation project” as indicated in the validated PD v1.2 dated 12.12.2018, the verified Monitoring Report v1.1 dated 14.11.2019, the verified Monitoring Report v2.0 dated 15.07.2021 and the verified Monitoring Report v2 dated 15.06.2022.

1.3 Verification of monitoring period

01.01.2022 – 31.12.2022

1.4 Period during which Verification was carried out

The Verification Body TÜV Rheinland Energy GmbH was commissioned to perform the verification of the project activity in question for the above mentioned verification period by the OMV Downstream GmbH (identified as project participant and contracting entity for the verification services) on 27.02.2023.

The Audit Plan for the verification period 01.01.2022 – 31.12.2022 of the project activity was submitted to the Project Proponent on 02.03.2023.

1.5 Date of the Verification Audit

09.03.2023 on-site verification audit.

1.6 Upstream Emission Reduction

71,230,723,976 gCO_{2,eq} for the verification period from 01.01.2022 to 31.12.2022.

1.7 GHG Intensity

As stated in the Council Directive (EU) 2015/652, the lead partner is obliged to report the baseline annual emissions prior to installation of reduction measures and annual emissions after the reduction measures have been implemented in g CO_{2,eq}/ MJ of feedstock produced.

The Verification Team confirms that the reported GHG intensity is properly calculated based on oil production of Waha oil field and baseline GHG emissions to the “OMV South Tunisia Gas Valorisation project” for the period from 01.01.2022 to 31.12.2022, resulting in:

- 3.7877 gCO_{2,eq}/MJ - Baseline annual emissions prior to installation of reduction measures, and
- 0.0000 gCO_{2,eq}/MJ - Annual emissions after the reduction measures.

The calculation could be proven as being correct.

1.8 Methodology

The upstream emission reductions achieved by the proposed project activity are quantified based on the approved CDM large-scale methodology AM0009 “Recovery and utilization of gas from oil fields that would otherwise be flared or vented” v07.0.

1.9 Summary Description of the Project

The project activity “OMV South Tunisia Gas Valorisation project” is located in the south of Tunisia. The four concession well-sites involved in the project are Durra, Anaguid, Jinane and Cherouq (see Figure 1), where the Gas Valorisation Plant (GVP) is within the last one.

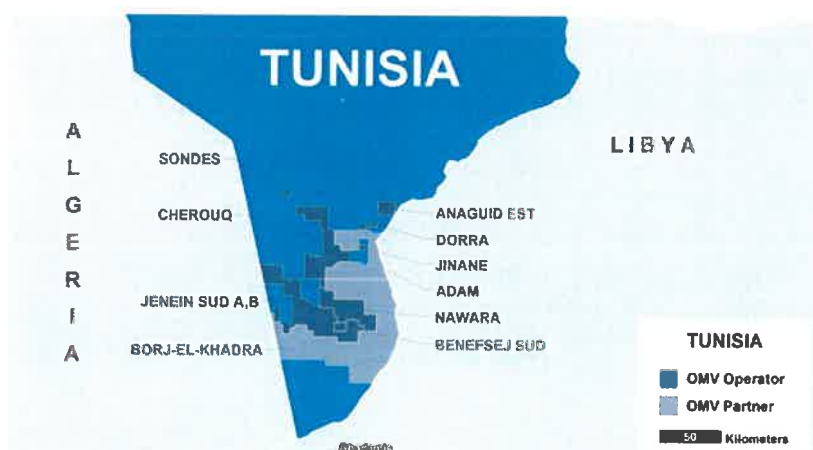


Figure 1: Oil fields in the south of Tunisia. (Source: <https://www.omv.com/en/our-business/upstream/portfolio-and-locations>)

The geographic coordinates of the project site (9°51'21.376" East; 31°24'22.234" North), which are indicated in the final Monitoring Report of monitoring period 01.01.2022 – 31.12.2022,

correspond to the one given in the validated PD and are verified by the Verification Team via Google Earth as accurate (see Figure 2).

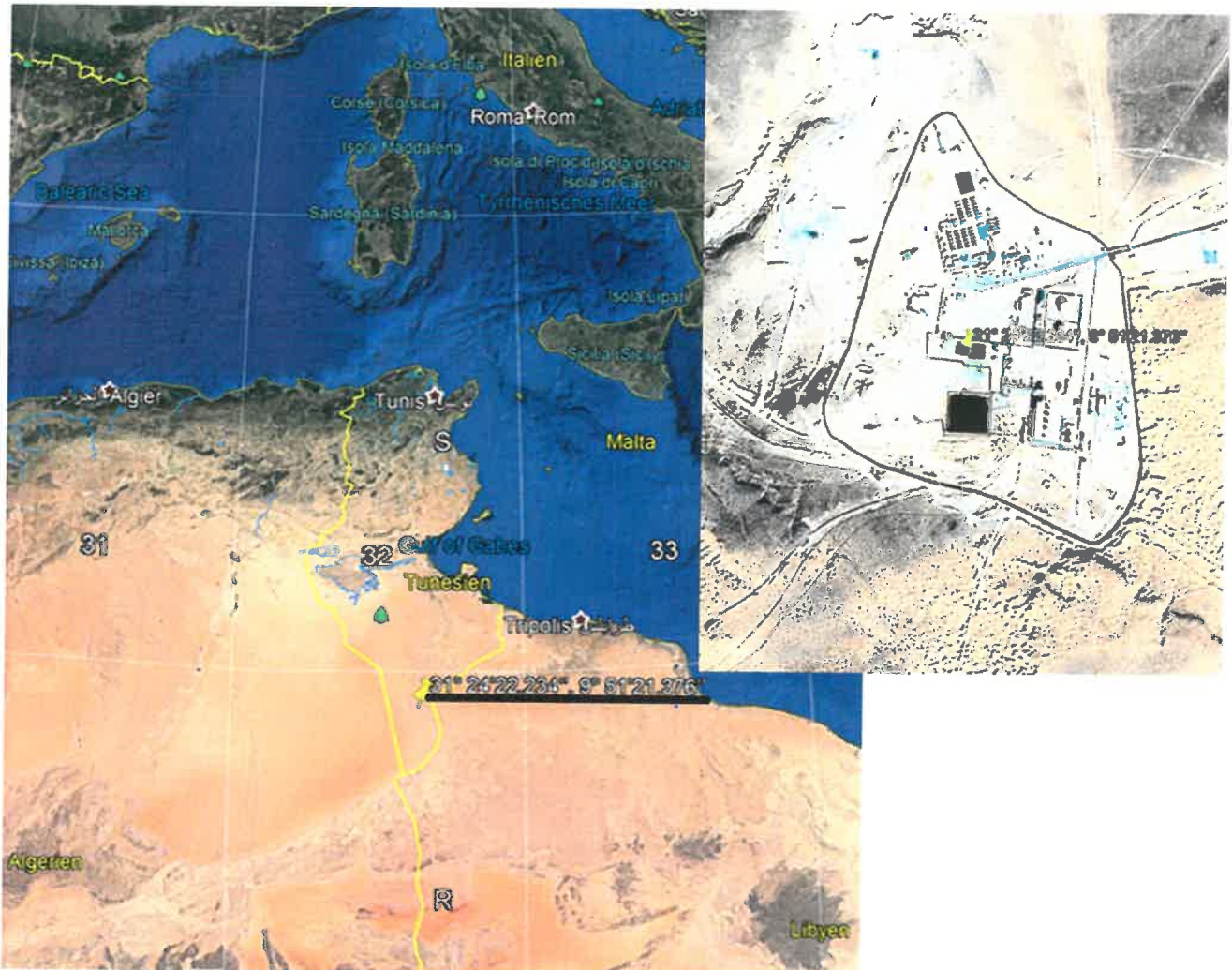


Figure 2: Map depicting the location of the project activity (Source: Google Earth)

“OMV South Tunisia Gas Valorisation project” is a flaring reduction GHG emission mitigation project, where associated gas from oil fields that has been flared, before project implementation, is recovered and utilized. The Project was implemented in 2 phases, where Phase 1 was completed in May 2014 and Phase 2 in August 2021. During the verification audit, it was mentioned that a JT chilling unit was installed in March 2022 in order to comply with the requirements of a new gas-export pipeline (Nawara pipeline) and it was verified that it was used on three occasions during 2022 for a total of nine days.

The project comprises of 2 gas valorisation compressors (GVCs), 1 triethylen glycol (TEG) dehydration unit and 2 vapour recovery units (VRUs); all these installations consolidated as gas valorisation plant (GVP).

In December 2018, the project activity was validated to be compliant with the requirements of ISO 14064 Part 2 and Austria's 'Kraftstoffverordnung' dated 30 Apr 2018 implementing COUNCIL DIRECTIVE (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC of the European Parliament and of the Council relating to the quality of petrol and diesel fuels.

1.10 Objective

The purpose of verification is to review the monitoring results and to verify that monitoring was completed in accordance to the validated monitoring plan, as well as to confirm that the claimed reductions in anthropogenic emissions is sufficient, definitive and presented in a concise and transparent manner.

Therefore, the objective of this verification was

- to confirm that the project has been implemented as documented in the validated PD,
- to confirm that the project has been implemented in line with the Council Directive (EU) 2015/652 and
- to provide qualitative and quantitative evaluation of the upstream emission reductions, reported for the "OMV South Tunisia Gas Valorisation project" for the monitoring period from 01.01.2022 to 31.12.2022 (both days included).

1.11 Scope and Criteria

The verification implies a review of the Monitoring Report over the monitoring period from 01.01.2022 to 31.12.2022 against the Council Directive (EU) 2015/652 and associated interpretation and in accordance with the ISO 14064-3. The verification is based on the validated Project Documentation and Monitoring plan (PD) v1.2 dated 12.12.2018; in particular considering the sections related to baseline- and project emission reductions calculations, parameters to be monitored, monitoring plan and monitoring methodology. In addition, the PP provided the verification report for the previous monitoring periods 01.01.2019 – 31.10.2019, 01.01.2020 – 31.12.2020 and 01.01.2021 - 31.12.2021, as well as further relevant documents and supplementary information to assist the verification process.

The main steps in the verification process are:

- Desk review – covers the evaluation of all provided documents, i.e. current monitoring report, validated PD, validation report, monitoring report on previous monitoring periods and the corresponding verification reports, ER calculations, records on volume of recovered associated gas (AG), records on NCV of the recovered AG, records on physical parameters and gas composition of the recovered AG, calibration reports, as well as manuals and records.

- Verification audit (on-site inspection) – confirms that the project has been implemented as described in the PD and that all data and information provided in the monitoring report are correct. It has been carried out on 09.03.2023.
- Issuance of verification protocol and list of CARs & CLs.
- Issuance of final verification report for the monitoring period in question - gives a conclusion whether the reported data are accurate, complete, consistent, and transparent, with a high level of assurance and free of material error or misstatement.

The correct application of

- the approved CDM large-scale methodology AM0009 "Recovery and utilization of gas from oil fields that would otherwise be flared or vented" v07.0;
- referred methodological tools and guidelines as well as;
- criteria given to provide for consistency in project operations, monitoring and reporting;

was already validated and summarized within the Validation Report VE-UER-004 dated 22.12.2018.

The verification considers both quantitative and qualitative information on emission reductions. The verification is not meant to provide any consultancy towards the client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the monitoring activities.

1.12 Materiality

As per the ISO 14064-3: 2019, materiality is defined as "concept that individual misstatements or the aggregation of misstatements could influence the intended users' decisions." It refers to error in value in the GHG statement, such as misstatements, incomplete inventories, misclassified GHG emissions or misapplication of calculations

The objective of the project verification is to provide assurance to OMV Downstream GmbH that GHG assertions truly reflect the emission reductions achieved. A material discrepancy is, according to ISO 14064-3, characterized by the possibility that the intended user of the GHG assertions will be influenced by such a discrepancy.

However, no quantitative threshold is defined by the ISO 14064-3 standard. The verification team set the materiality threshold to 5% of the overall GHG project emission reductions and mutually communicated the value to the client.

1.13 Verification Team

Verification Body	TÜV Rheinland Energy GmbH
Address	Am Grauen Stein 51105 Cologne, Germany
Accreditation Number	D-VS-11120-01-00

Team Leader and Verifier	Florencia Tamanini
Email	florencia.tamanini@de.tuv.com
Phone number	+49 221 806 3553

Trainee	Julius Averkorn
Email	julius.averkorn@de.tuv.com
Phone number	+49 221 806 3287

Technical Reviewer	Denitsa Gaydarova-Itrib
Email	denitsa.gaydarova-itrib@de.tuv.com
Phone number	+49 221 806 5756

1.14 Level of Assurance

TÜV Rheinland has focused on providing a reasonable level of assurance that the emission reduction calculation methodology is appropriate and correctly applied, as well as that Upstream Emission Reductions have been accurately monitored. During the course of verification all primary data at the data source shall be examined in order to verify the UER assertions.

1.15 Summary Result of the Verification Process

TÜV Rheinland came to the conclusion that based on the provided documentation and the remote verification audit, GHG assertion was made in accordance with

- The Council Directive (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC (Fuel quality directive),
- The Guidance Note of the Council Directive (EU) 2015/652 on approaches to quantify, verify, validate, monitor and report upstream emission reductions as well as

- The Austria's Fuel Decree "Kraftstoffverordnung" (KVO)

and was material correct and fairly represented the GHG emissions data and information without material discrepancies.

Therefore, TÜV Rheinland Energy GmbH issues a positive verification opinion on the project "OMV South Tunisia Gas Valorisation project", confirming that for the monitoring period 01.01.2022 – 31.12.2022, GHG upstream emission reduction of 71,230,723,976 gCO_{2,eq} are realised from the aforementioned project activity.

2 Verification Process

As stipulated in Council Directive (EU) 2015/652 Annex I part 1 (3) d ii “the UERs and baseline emissions are to be monitored, reported and verified in accordance with ISO 14064 and providing results of equivalent confidence of Commission Regulation (EU) No 600/2012 (6) and Commission Regulation (EU) No 601/2012 (7). The verification of methods for estimating UERs must be done in accordance with ISO 14064-3: 2019 and the organisation verifying this must be accredited in accordance with ISO 14065”.

The above mentioned general principles and key requirements of verifiers and the verification process, as indicated in Commission Regulation (EU) No 600/2012, are:

- The process of verifying emission reports shall be an effective and reliable tool in support of quality assurance and quality control procedures (Article 6).
- The verifier must carry out verification in the public interest and with an attitude of professional scepticism of the claims being verified (Article 7).
- The verifier shall conduct substantive testing using analytical procedures, including verifying data and checking the monitoring methodology, and shall conduct site visits (Article 14-21).
- All verification reports shall be independently reviewed (Article 25).
- All verification personnel (Article 35) and independent reviewers (Article 38) shall be competent.
- Verifiers shall be impartial and independent from an operator (Article 42).
- All verifiers shall be accredited for the scope of activities being verified (Article 43-44).

The Verification Team confirms that the verification process of the project “OMV South Tunisia Gas Valorisation project” for the monitoring period 01.01.2022 – 31.12.2022 is accomplished in compliance with the above listed principles and key requirements.

2.1 Method and Criteria

The verification of the UER project “OMV South Tunisia Gas Valorisation project” has been performed in accordance to the internal procedures of TÜV Rheinland Energy GmbH for the verification of UER projects, which strictly follow ISO 14064-3: 2019.

TÜV Rheinland did not deploy a risk-based approach but applied a 100% coverage of all data used for UER calculations tracked back to its original source.

2.2 Document Review

The desk review phase is characterised by the assessment of the monitoring report and emission reduction workbooks substantiated by additional supportive documents, all of which have been provided to the Verification Team in a digital form. The following table outlines the documents reviewed as part of the verification process:

Nr	Title	Date of submission
1	COUNCIL DIRECTIVE (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC of the European Parliament and of the Council relating to the quality of petrol and diesel fuels, dated 25.04.2015	
2	GUIDANCE NOTE on approaches to quantify, verify, validate, monitor and report upstream emission reductions	
3	Approved CDM large-scale methodology AM0009 "Recovery and utilization of gas from oil fields that would otherwise be flared or vented" v07.0	
4	Validation statement VE-UER-004, dated 22.12.2018	
5	Verification Report VE-UER-004 VER#1 for the period 01.01.2019 – 31.10.2019, v03 dated 20.01.2020	
6	PDD_Waha-GVP_v1.2	18/03/2021
7	UER Waha GVP_MR 2022_Monitoring report_v1_20230223	23/02/2023
8	UER Waha GVP_MR 2022_Quantification-of-emissions_v1_20230223	23/02/2023
9	Waha_GHG intensity 2022	23/02/2023
10	UER Waha GVP_MR 2022_Quartely-Calibrations_ Reports	23/02/2023
11	12 UER Waha GVP_MR 2022_MECl reports	23/02/2023
12	GVC&GLC ppt (flow line diagram)	09/03/2023
13	EPR-1218-Environmental Data Reporting - ENG	09/03/2023
14	Annex 2 - Reporting of environmental data (SUPPORTS GST-0316-HSSE Reporting - ENG)	09/03/2023
15	Accréditation et portée COFRAC 3-1458 R6	09/03/2023
16	mail confirmation GHG	09/03/2023
17	4 scan PV agreement	09/03/2023
18	Scan training evidence	09/03/2023
19	Contract tranport du Gaz provenant des Concessions Cherouq-Durr	09/03/2023
20	UER Waha GVP_MR 2021_Monitoring report_v2	17/03/2023
21	UER Waha GVP_MR 2021_Quantification-of-emissions_v2	17/03/2023
22	Waha_GHG intensity 2022_v2	17/03/2023
23	email proofing cycle justification	24/03/2023
24	MON 006 - Vérification sur site d'un chromatographe	24/03/2023
25	MON 018 - Vérif d'un voludéprimomètre pour mesurage des volumes de gaz	24/03/2023

2.3 Interviews

The interview process was conducted during the on-site audit with OMV Tunisia personnel. The relevancy of methodology and requirement of standard had been discussed during the validation process. Therefore, the discussion was focused on monitoring plan and procedure to maintain GHG data and information for baseline scenario and project emission is complete, verifiable, no misstatement and misapplication of calculation.

The interviews took place on 9th of March 2023 and was conducted by Ms. Florencia Tamanini at Waha facilities. Beside the auditor from TÜV Rheinland the following additional persons participated in the interviews (Table 2):

Name	Organisation / Function
Neslihan Kumcu	OMV Downstream GmbH/ Biofuels Compliance & UER Mgmt.
Oliver Percl	Energy Changes Projektentwicklung GmbH / Project manager (UER- consultant)
Dogmani Housseem	OMV (Tunesien) Production GmbH / HSSE Manager
Mohamed Mzoughi	WAHA field Manager
Faycal Nasri	WAHA Maintenance Superintendent
Zamir Kamel	TL Operation WAHA

2.4 Site inspection

The objective of the site inspection is to acquire details on project management and operation, prove validity and authenticity of delivered supporting documents, and to assess the situation on the ground against the description in the documents. The audit was carried out by means of interviews with the persons indicated in section 2.3, assessment of the presented supportive documentation and personal observations.

The verification audit of the project activity “OMV South Tunisia Gas Valorisation project” for the monitoring period 01.01.2022 – 31.12.2022 took place on 09.03.2023 in Waha, Tunisia.

The verification audit investigates whether the statements given in the project document are complete, technically feasible and plausible, and lead to real and measurable emission reductions or removals. Areas of special interests are project description, baseline methodology and calculation, environmental impact and monitoring plan. The assessment was also devoted for a better understanding of the operations, the data gathering processes and links to data systems, management controls, and overall information systems. This included a review of the baseline, project and potential leakage emissions at the facilities, achieved through interviews with appointed personnel and reviews of the process flow and data flow diagrams. Subsequently, a review of metering and data management processes was discussed with the control room operation staff, including a review of meter calibration and QA/QC procedures.

The physical features and points of monitoring for the measured parameters have been confirmed to be in line with the description in the validated PD and illustrated as below:

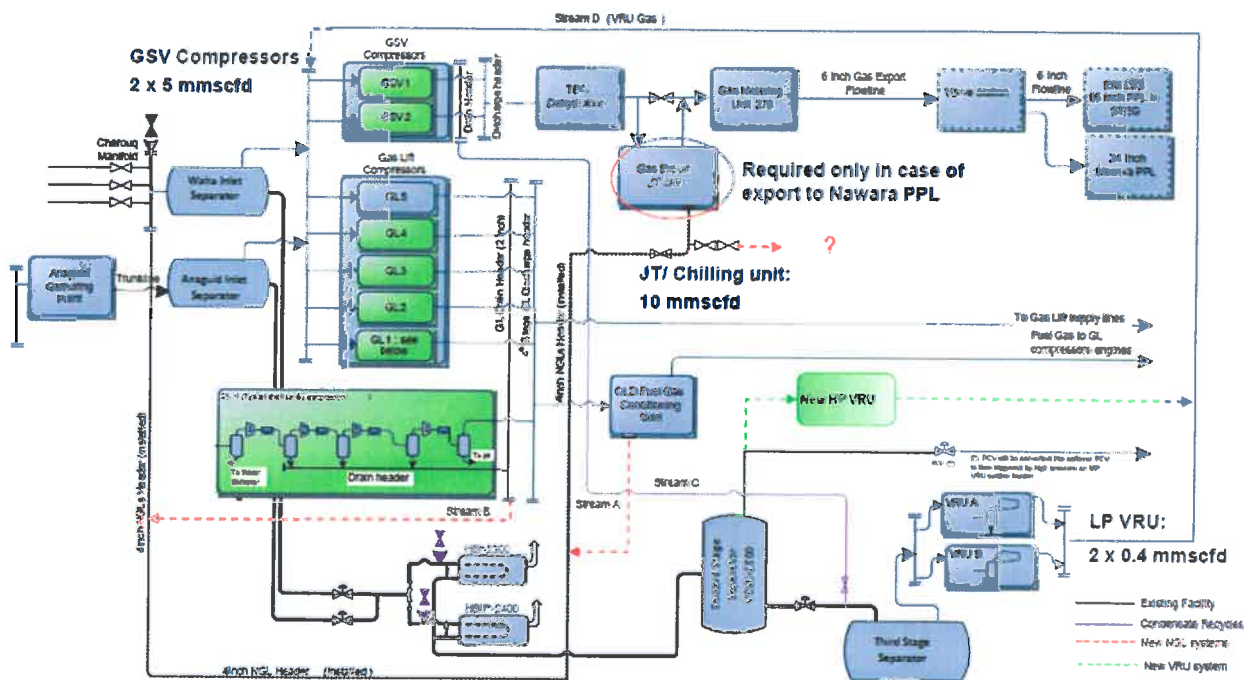


Figure 3: Flow line diagram

Eventually, the conducted Verification Audit for the monitoring period 01.01.2022 – 31.12.2022, confirms that the monitoring and reporting of the achieved upstream emission reductions for the period in question, is carried out in line with the verification principles and criteria postulated by the ISO 14064-3:2019 and the EU 2015/652 and is in accordance with the monitoring plan specified in the validated PD.

2.5 Resolution of Findings

The objective of this phase of the verification is to resolve any outstanding issues which have to be clarified prior to final verifier's conclusions on the project implementation, monitoring practices and achieved emission reductions. In order to ensure transparency a verification protocol (APPENDIX I) is completed for the project activity. The protocol shows in transparent manner the verification criteria (requirements) as given by the EU 2015/652 and ISO 14064-2:2019, means of verification and their results against the identified criteria, including findings. The last can be issued either as a non-fulfilment of the applied ER quantification methodology and EU 2015/652 requirements, or where a risk to the fulfilment of project objectives is identified.

In addition to and as a complement to the verification protocol, APPENDIX II List of correction action requests (CARs) and clarification requests (CLs) is issued, keeping records of all findings identified in the verification process and how those have been solved. Corrective action requests (CAR) are issued where mistakes have been made with a direct influence on project result; whereas clarifications (CL) - where additional information is needed to fully clarify an issue.

In the course of the verification of "OMV South Tunisia Gas Valorisation project" for the monitoring period 01.01.2022 – 31.12.2022, the Verification Team identified and issued 1 (one) corrective action request (CAR) and 10 (ten) clarification requests (CLs), which are transparently organised in APPENDIX II.

The Verification Report is issued upon closing all above mentioned findings.

2.6 Forward Action Requests

Within this verification no forward action requests have been issued.

3 Verification Findings

The outcomes of the verification of project activity “OMV South Tunisia Gas Valorisation project” for the monitoring period 01.01.2022 – 31.12.2022 performed by TÜV Rheinland Energy GmbH are explicitly discussed in the following sections.

3.1 Implementation Status

The Verification Team witnessed that the project activity “OMV South Tunisia Gas Valorisation project” was implemented and operated as described in the validated PD.

OMV South Tunisia Gas Valorisation project has been planned to be implemented in 2 phases. The Phase 1, delivery and treatment of associated gas from 4 oil fields (fields Durra, Anaguid, Jinane and Cherouq) to the newly installed Gas Valorisation Plant (GVP) at the Waha central production field (CPF), was completed in May 2014 (first export of recovered associated gas), before the validation of the UER Project. The Phase 2, installation of 2nd gas compressor was planned to implement in 2018, but it was finally taken into operation in 2021. Originally a planned upgrade under phase 2 was the installation of an HP vapour recovery unit to recover associated gas from the 2nd stage separator. This plan was discarded and changed to a different setup with a bypass of the 2nd stage separator and recovery of more gas through the VRUs after the 3rd stage separator.

During the verification audit, it was confirmed that Phase 2 has been completed. The installation of the JT/Chilling unit fulfilling the requirements in case of export to Nawara pipeline has been confirmed and it was verified that the project activity continues to be flare reduction.

The WAHA Plant Manager, confirmed that the GVP was fully and continuously operational during the monitoring period 01.01.2022 – 31.12.2022, and that the JT/ chilling unit was operated only 3 times during 2022.

The Verification Team approved that the elaborated monitoring plan, which follows the selected approved CDM Methodology AM0009 v07.0 and is an essential part of the PD, is accurately implemented for the monitoring period in question. All 3 parameters that are subject to monitoring have been monitored in full accordance with the measurement methods and procedures, monitoring frequency and quality assessment specified in the PD, namely

- $V_{RG,y}$ - Volume of total recovered gas entering the gas export pipeline at point F in the monitoring period y
- $NCV_{RG,y}$ - Monthly average net calorific values of the recovered gas entering the gas export pipeline in the monitoring period y, and

- **EF_{CO2,RG,y}** - Monthly average emission factors of the recovered gas entering the gas export pipeline in the monitoring period *y*.

Furthermore, the Verification Team attests that the OMV South Tunisia Gas Valorisation project was validated in December 2018 as upstream emission reduction (UER) project to comply with the requirements of ISO 14064 Part 2 and Austria's Fuel Ordinance¹ dated 30 Apr 2018 implementing COUNCIL DIRECTIVE (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC of the European Parliament and of the Council relating to the quality of petrol and diesel fuels.

In January 2020, the UERs generated by the project over the monitoring period 01.01.2019 – 31.10.2019 have been verified for intended usage under the Renewable Transport Fuels and Greenhouse Gas Emissions Regulations 2018 of the United Kingdom of Great Britain and Northern Ireland.

In August 2021, the UERs generated by the project over the monitoring period 01.01.2020 – 31.12.2020 have been verified for intended usage under the Austria's Fuel Decree "Kraftstoffverordnung" (KVO) and the Hungary's Decree No. 17/2017 Annex 5 Part I & Annex 6 Part II, as well as in July 2022, the UERs generated by the project over the monitoring period 01.01.2021 – 31.12.2021 have been verified for intended usage under the same decrees.

Verification team confirms that the project "OMV South Tunisia Gas Valorisation project" has been erected and is operating as described in the validated PD and the final Monitoring Report for the current verification period 01.01.2022 – 31.12.2022. The monitoring of the generated GHG emissions has been implemented in compliance with the monitoring plan contained in the validated PD, fulfilling all requirements related to data acquisition and storage.

3.2 Accuracy of Upstream Emission Reduction Calculations

The Project Proponent, OMV (Tunesien) Production GmbH, claims the reduction of upstream GHG emission by recovery of associated gas from the oil fields Durra, Anaguid, Jinane and Cherouq in the GVP of WAHA central production field (CPF) and providing the former to the 3rd party gas pipeline for further utilization (ENI pipeline), except when there is extra gas to export to Nawara pipeline as well as per the selected approved Methodology AM0009 v07.0 and in accordance with the ISO 14064-2, the net GHG emission reductions generated by the project activity are determined as difference between baseline emissions, project emissions and leakage for the monitoring period, i.e.

$$ER_y = BE_y - PE_y - LE_y$$

¹ § 19b of the 'Kraftstoffverordnung'

Where

- baseline emissions (BE) are determined by multiplying volume, net calorific value and carbon emission factor of the recovered associated gas measured at the metering point F, i.e.

$$BE_y = V_{RG,y} * NCV_{RG,y} * EF_{CO2,RG,y}$$

- project emissions (PE) are determined to be 0 tCO_{2,eq./year}, because the energy demand “for the recovery, pre-treatment, transportation, and, if applicable, compression of the recovered gas up to the point F in Figure 2” is covered by recovered associated gas, before the metering point F. This volume of recovered associated gas is not recorded at metering point F, i.e.

$$PE_y = 0 \text{ tCO}_{2,eq.}$$

- leakage emissions (LE) need not to be considered as per AM0009 v07.0.

$$LE_y = 0 \text{ tCO}_{2,eq.}$$

The applied methodology suggests that the LE shall be accounted “for project activities where the recovered gas is transported to a processing plant where it is processed into hydrocarbon products (e.g. dry gas, LPG and condensates) and the dry gas is compressed to CNG first, then transported by trailers/trucks/carriers and then decompressed again, before it finally enters the gas pipeline”.

The abovementioned formula are clearly referred to within the monitoring report and used for the calculation of the generated UER within the final calculation workbook. Therefore, the Verification Team confirms that the claimed UERs are calculated as per the selected approved CDM methodology and as specified in the monitoring plan within the validated PD.

The quantification of generated GHG emission reductions is based on 3 parameters (V_{RG} , NCV_{RG} and $EF_{CO2,RG}$), which have been specified in section 3.1 of this report. As per AM0009 v07.0, those parameters are subject to periodic monitoring. During the verification audit, the Verification Team witnessed that all 3 parameters are measured accordingly by MECI gas chromatograph type HGC-Pac at metering point F. In the course of the desk review and the on-site audit following observation with regard to the above mentioned parameters were made:

- Metering point F is located at the export gas pipeline, just before the gas outlet to the 3rd party (ENI or Nawara) pipeline.
- The gas chromatograph is part of the Société ‘MECI’ natural gas measurement system type CDN16 with metering cabinet number: 270-MEQ- 2000B.
- All data are measured continuously and processed automatically to the MECI measurement system. Extract reports on hourly, daily and/or monthly basis can be generated upon request. Daily and 3-hour report are provided to the gas pipeline operator.

- The monthly reports are provided to Ms Boughattas and to Ms Kumcu.

For the desk review, the Verification Team was provided with all primary data on volume, NCV and emission factor of recovered gas, namely monthly records on volume and gross calorific value (GCV) of the exported gas extracted from the MECI system, as well as calibration certificates of the metering unit, incl. the gas chromatograph.

All primary data were provided to the Verification Team in a digital form for the desk review phase of the verification process and were explicitly presented and examined in the course of the verification audit. Assessment of data collection and processing procedure as well as data quality is subject of the following section 3.3. Nevertheless, the applied values for the aforementioned monitoring parameters have been scrutinised by the Verification Team and deem to be correctly applied for the estimation of upstream emission reductions within the final UER calculation workbook for the verification period in question and accordingly referenced in the final monitoring report.

Eventually, Verification Team attests that the upstream emission reductions realised by the project activity “OMV South Tunisia Gas Valorisation project” for the monitoring period 01.01.2022 – 31.12.2022 are calculated correctly and in accordance with the approved CDM methodology AM0009 v07.0, resulting in

$$UER_{01.01.2022 - 31.12.2022} = BE - PE - LE = 71,230,723,976 \text{ gCO}_{2,eq}$$

3.3 Quality of Evidence to Determine GHG Emissions, GHG Emission Reductions and GHG Removal Enhancements

As part of the verification process, TÜV Rheinland Energy GmbH assesses the sufficiency of quantity and appropriateness of quality of evidence used to determine the upstream GHG emission reductions achieved by the project activity undergoing verification.

Therefore, the Verification Team confirms that the lead partner of the OMV South Tunisia Gas Valorisation project, OMV (Tunesien) Production GmbH, developed specific internal procedures designated for the monitoring of the upstream emission of the project, which is in line with the validated monitoring plan.

During the verification audit, it was explained that as per agreement between OMV (Tunesien) Production GmbH and ENI pipeline operator, in case the metering device at point F is out of operation, the relevant parameters are estimated as the average of the measurements 4 hours before and after the incident. Furthermore, at the time of calibration, the gas chromatograph is not recording, even though the gas flow is still maintained. In this situation, the above mentioned agreement on estimation of recovered associated gas is implemented.

Verification team perceived that for each period of interrupted data recording due to calibration, a gas sales report is signed by OMV and the gas pipeline operator, affirming the estimated volume and calorific value of delivered recovered associated gas. Verification team witnessed that these estimated volumes on recovered and utilized associated gas are not recorded within the MECI system reports and thus are not considered for the UER calculations. Consequently, the exclusion of estimated volumes of recovered associated gas from the UER calculations deems conservative and consistent.

All substantiations, which have been disclosed to the Verification Team, are listed in section 2.2 of this report. The provided primary data on volume, calorific value and chemical composition of the recovered associated gas, as discussed and referenced in the previous section 3.2, cover the entire monitoring period from 01.01.2022 to 31.12.2022. Thus, Verification Team experienced no omission of evidences for the project and monitoring period in question.

For the calculation of GHG emission reductions due to the project activity during the monitoring period, the carbon consultant used only primary data for the three monitoring parameters. In order to verify this, all data used in the UER calculation workbook were tracked back to its origin at a coverage rate of 100% using the monthly MECI reports on recovered associated gas.

In addition, Verification Team witnesses that the flow of data from its origin (metering device) to its final destination (UER calculation spreadsheet) is precisely defined within the monitoring plan. In the course of verification audit the involved parties in the monitoring process (field manager, plant manager, and UER key focal point) confirmed that they firmly follow the established and validated monitoring plan and procedures.

Waha's field manager further stated that there is a clear assignment of key responsibilities on site and that the assigned personnel have the required professional experience. The same personnel as in previous reviews are still working and properly trained. It was confirmed that the training of the personnel is in accordance with the best practices.

Furthermore, the Verification Team ascertains that all parameters, subject to monitoring as per CDM methodology AM0009 v07.0, are monitored via calibrated measurement device, gas chromatograph type HGC-Pac at metering point F, which is clearly indicated within the final monitoring report. The calibration reports for the metering system were submitted to the Verification Team for desk review. During the verification audit maintenance procedures and records on calibration were discussed. The plant manager explained that in order to maintain high data quality, the metering system incl. gas chromatograph undergoes calibration each quarter. As per the provided calibration reports, Verification Team witnessed that over the monitoring period 01.01.2022 – 31.12.2022, the MECI monitoring system was calibrated on February, May, August and November 2022.

Hence, the Verification Team attests that the lead partner established outstanding data quality through continuous and automatic data measurement, and clearly defined data reporting and assessment procedures, where the calibration frequency of the respective measuring instruments complies with the stipulations of the calculation methods AM0009 v07.0 and of the monitoring plan within the validated PD.

3.4 Findings and Non-Conformities

The verification team identified one (1) corrective action request and ten (10) clarification request. All findings have been closed including review of revisions to the monitoring report and UER calculations, before finalising the verification

4 Verification conclusion

The Verification Team of TÜV Rheinland Energy GmbH has performed the verification for the project “OMV South Tunisia Gas Valorisation project” against the Council Directive (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC (Fuel quality directive), the Austria’s Fuel Decree “Kraftstoffverordnung” (KVO) and ISO 14064-3, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The Verification Team concluded that the project activity as described in the final Monitoring Report for the monitoring period 01.01.2022 – 31.12.2022, dated 17.03.2023, meets all relevant requirements of the above-defined regulations. All relevant information and evidence acquired during the verification process are included in the current document, i.e. Verification Report of the UER Project “OMV South Tunisia Gas Valorisation project” for the verification period from 01.01.2022 until 31.12.2022, with report ID **21257977** issued on 15.05.2023.

TÜV Rheinland, therefore issues a positive verification opinion, confirming that the upstream emission reductions claimed for the monitoring period 01.01.2022 – 31.12.2022 are verified to be 71,230,723,976 gCO_{2,eq}.

5 VERIFICATION STATEMENT

OMV (Tunesien) Production GmbH

Waterside Building– Impasse du Lac Turcana,
Les Berges du Lac,
1053 Tunis, Tunisia

15.05.2023

RE: OMV South Tunisia Gas Valorisation project

Monitoring Period: 01.01.2022 – 31.12.2022

OMV (Tunesien) Production GmbH, with its registered office in Tunis/ Tunisia, has contracted TÜV Rheinland to review and verify their UER Monitoring Report covering the period from 01.01.2022 to 31.12.2022 and all assertions related to the UER project against the Council Directive (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC (Fuel quality directive), and the Austria's Fuel Decree "Kraftstoffverordnung" (KVO).

The verification of the UER project activity was conducted in accordance to the above mentioned regulations, the standard ISO 14064-3: 2019 and the approved CDM methodology AM0009 v07.0 to a reasonable level of assurance by applying a materiality threshold of 5%. The project activity "OMV South Tunisia Gas Valorisation project" is confirmed to be carried out in accordance with the validated project documentation. The monitoring report is consistent with validated monitoring plan. The calibration frequency of the respective metering devices is demonstrated to follow the stipulations of the calculation methods and of the monitoring plan. The project information is verified and the UER Verification Report ID **21257977** "Verification Report of the UER Project "OMV South Tunisia Gas Valorisation project" for the verification period from 01.01.2022 until 31.12.2022" delivered on 15.05.2023, includes all relevant information and evidence acquired during the verification process.

Based on the on-site inspection conducted on 9th March 2023 and the review of all available project documentation, the Verification Team comes to the conclusion that the assertions are made in accordance with the requirements of the formerly listed regulations and standard, and are material correct and fairly represent the required parameters without material discrepancies. The Upstream Emission Reductions, claimed for the monitoring period 01.01.2022 – 31.12.2022, are verified to be 71,230,723,976 gCO₂,eq

Cologne, 15.05.2023



Florencia Tamanini, TL and Verifier



Denitsa Gaydarova-Itrib, TR

APPENDIX I

Verification Protocol

based on ISO 14064 Part 2/3, the Council Directive (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC (Fuel quality directive) and the Guidance Note of the Council Directive (EU) 2015/652 on approaches to quantify, verify, validate, monitor and report upstream emission reductions as well as on the Austria's "Kraftstoffverordnung" (KVO).

Checklist question	MoV			Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA				
1. Implementation							
1.1 Have all physical features proposed in the validated PD been implemented at the project site?	x	x	x	<p>Yes, the Project activity has been implemented as described in the validated PD. The associated gas from Cherouq, Anaguid, Durra and Jinane well sites are gathered and moved to Waha Central Production Facility (CPF), where it is treated, compressed and transported for sale. The Gas Valorisation Plant (GVP) is located directly in the Waha CPF and includes two compressors, one dehydration unit and two vapour recovery units (VRU's). All physical features were assessed during FA and verified to be implemented at the project site as in the validated PD.</p> <p>During interviews it was explained that the project has been implemented in two phases: - within Phase 1: the production of Anaguid well sites are gathered in the Anaguid Gathering plant</p>	<p>The final MR has been submitted (Doc. 20) and section 2.1 has been upgraded. It could be proven that the installation of a GVP and VRU's in order to process APG, then transported via ENI S.p.A pipeline and sold it to Tunisian Company of Electricity and Gas (STEG) has been implemented as described in the validated PD.</p> <p>CAR1 is closed.</p> <p>The Waha CPF has been assessed during FA and the two phases of the project have been positively verified. During interviews, OMV Tunisia personnel clearly described and shown that, as already indicated in PD, in case additional gas volumes can be recovered from flaring, the capacity to export via ENI pipeline might become too small to take all gas recovered for sale. Therefore a second new tie</p>	<p>CAR1 CL1 CL2</p>	OK

Checklist question	MoV	Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
		<p>(AGP) and, as well as the production from Durra and Jinane, connected to the Waha CPF by pipeline. Then the associated gas is treated and compressed in the installed GVP, and exported. The first gas was exported in May 2014.</p> <ul style="list-style-type: none"> - within Phase 2: a second gas compressor was installed in August 2019. <p>During FA, a second pipeline was observed (Nawara pipeline) and the JT/chilling unit installed in 2022. Local OMV personnel clearly explained that the new equipment and the connection (new tie) with the Nawara pipeline has improved the capacity for additional export when needed, as well as the reduction of flaring.</p> <p>CAR1: update section 2.1 of the MR based in the observed physical features during FA and the detailed description from the local OMV personnel.</p> <p>CL1: please clarify the status of phase 2 and the reason for having a similar range of processed gas as in previous period.</p> <p>CL2: please provide the latest available flow line diagram of the project installations.</p>	<p>in connection to Nawara gas pipeline was implemented which will afford additional export capacity for future needs. It was indicated that the JT/chilling unit is needed in order to comply with the specifications to feed the Nawara pipeline (additional pre-treatment in those cases). CL1 is closed.</p> <p>A detail flow line diagram has been submitted (Doc. 12) and has been also included in the final MR (Doc. 20). CL2 is closed.</p>		
1.2 Has the project activity been operated in accordance with the project scenario described in the	x	<p>Yes, the MR indicate that the project activity operates as described in the PD. During FA, it was confirmed that the project has been operated in accordance with the project scenario described in</p>	CAR1 is closed (see above).	CAR1	OK

Checklist question	MoV			Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
validated PD and relevant guidance?				the PD, including Phase 2 (as described above). CAR1 see above.			
1.3. Does the project activity deviates from the documents underlying the approval/validated PD?	x	x	x	No deviation of the project activity has been observed, i.e. the associated gas is processed and utilized instead of flared.		OK	OK
1.3.1 If the project activity deviates from the documents underlying the approval, what impact the deviations may have on the level of UER?	x			N.A.			
1.4 If the project activity is implemented on a number of different locations, has the Monitoring report provided the verifiable starting dates for each site?	x	x	x	The main relevant project location is the GVP, which includes the compressors, dehydration unit and VRU's, located directly in the Waha CPF with geographical coordinates: Latitude -31,4061N and Longitude -9,8559E.		OK	OK
2. Monitoring methodology							
2.1 Is the monitoring plan established in accordance with the monitoring methodology?	x	x	x	Yes, the monitoring plan was validated by another VVB as part of the project validation process as accurate and in accordance with the applied quantification & monitoring methodology AM0009 v07.0 During FA and interviews, it was confirmed that the monitoring plan ensures the appropriate obtaining, recording, compiling, and analysing of		OK	OK

Checklist question	MoV			Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
3. Monitoring plan							
3.1 Is the monitoring established in full compliance with the monitoring plan, contained in the validated PD (or new monitoring plan approved by the applicable standard)				all relevant data for quantifying and reporting GHG emissions.			
	x	x	x	Yes, the monitoring of the UERs for the period 01.01.2022 - 31.12.2022 has been performed in full compliance with the validated monitoring plan. The volume of the total recovered associated gas (V_{RG}) and the net calorific value (NCV_{RG}) are measured continuously (every 5 min) at point F. The values for the 2 parameters are aggregated by the system on monthly basis. The 3rd component of the monitoring plan, Emission Factor of the recovered gas (EF_{RG}) is calculated based on density, NCV and average mol fraction, all of the values are measured continuously and aggregated on monthly basis.		OK	OK
3.2 Are all baseline emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?			x	Yes, all parameters relevant for the estimation of BE have been monitored as per the validated PD, in accordance to the requirements given in the CDM methodology AM0009, v07.0. All information for the baseline scenario was complete, verifiable and without misstatements and /or misapplications of calculation.		OK	OK
3.3 Are all project emission parameters monitored and updated in accordance with	x			The validated PD indicate that the project does not generate any project emissions; Thus $PE = 0$ tCO ₂ ,eq.		OK	OK

Checklist question	MoV		Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
monitoring plan, monitoring methodology and relevant CDM EB decisions?						
3.4 Are all leakage emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	x		The validated PD indicate that as per CDM methodology AM0009,v07.0 the project does not lead to any leakage emissions; Thus LE = 0 tCO ₂ ,eq.		OK	OK
3.4.1 Was the monitoring equipment for baseline-, project- and leakage emission parameters controlled and monitoring results recorded as per approved frequency?	x	x	The parameters have been recorded continuously (on 5 min intervals) and aggregated automatically on monthly basis as indicated in the validated PD. During FA, it was verified that the monitored parameters have been recorded by the approved monitoring devices, as per the approved procedure and on the approved frequency.		OK	OK
3.5 Was the monitoring equipment for baseline- and leakage emission parameters calibrated in accordance with QA&QC procedures described in the validated monitoring plan?	x	x	In 2022, calibrations of the MECl system have been conducted on a quarterly basis. The latest calibration was conducted on 08/11/2022. The calibration reports have been submitted and positively verified. CL3: please clarify the reason for submitting 2 February reports. CL4: please clarify the sentence in page 8 of the MR: "For the duration of the calibration procedure monitoring parameters (volume, NCV, gas	During FA and interviews, all calibration reports has been shown and it was proven that in each calibration there are two reports. The complete calibration procedure was clearly described and it was explained that each time a calibration agreement is signed by the involved parties. The four calibration agreements corresponding to the year 2022 have been submitted and positively verified (Doc. 16 & 17). MECl has been contacted in order to clarify NON	CL3 CL4 CL5 CL6	OK

Checklist question	MoV		Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
3.6 Were all monitoring parameters available and verifiable through the whole monitoring period?			<p>composition) have not been measured, but rather estimated based on the internal procedures and in alignment with a three-party agreement".</p> <p>CL5: please provide MECI valid accreditation.</p> <p>CL6: please clarify NON results in first calibration report and reason for 2 reports.</p>	<p>results in the first stage of calibration. The calibration procedures were submitted and clearly explained (Doc. 23, 24 & 25). It could be proven that all chromatograph specifications are met before making any adjustments and that the equipment can be calibrate as many times as necessary (i.e. when external temperature cause drift.) It could be also proven that in the final calibration reports all results are 100% OK.</p> <p>CL3 and CL6 are closed.</p> <p>The MECI accreditation certificate (Doc. 15) has been submitted and proven to be valid during the monitoring period 2022.</p> <p>CL5 is closed.</p> <p>The calibration procedure has been demonstrated to fulfill the internal procedures and through the submitted OMV/ENI gas sales PV agreements (Doc. 17) it was verified the decision to consider the average of 8 hours for gas volume and PCS 4 hrs before calibration and 4 hrs. after calibration of the chromatograph.</p> <p>CL4 is closed.</p>		
	x	x	All monitoring parameters were available and verifiable through the whole monitoring period. During FA, it was verified that all data relevant for		OK	OK

Checklist question	MoV			Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
3.6.1 In case, only partial monitoring data is available and PP(s) provide estimations or assumptions for the rest of data, was it possible to verify those estimations and assumptions?				quantifying the GHG emissions are appropriate obtained, recorded and analysed. N.A.			
3.7 Was management and operation system established and operated in accordance with the monitoring plan?			x	The monitoring procedures, as given in the validated PD, have been precisely followed. All monitoring parameters have been measured and recorded, and the data processed, checked and transferred in the UER calculation files as described in the Monitoring plan (of the PD). During FA and interviews, OMV personnel demonstrated to clearly know roles and responsibilities for the daily operations following high oil & gas international standards. CL7: please provide evidence of personnel training.	During interviews it was explained that OMV has HSE mandatory training and Technical Training. Some are on-line training with tracking within OMV training system in order to fulfil the company's goals. Evidence of 2022 training has been submitted (Doc. 18) and verified to be in line with high oil & gas standards. CL7 is closed.	CL7	OK
4. Parameters							
4.1 Monitored Parameter 1 <i>Title: Volume of total recovered gas entering the gas export pipeline at point F in the monitoring period y</i>			x	Gas volumes are measured continuously every 5 minutes by the MECI system and uploaded to a flow computer. CL8: please explain the difference between estimated value and measured value for the	During FA, it could be proven that the volume of processed gas was in a lower range than for cased during validation, which is related with less crude oil production than what was planned. CL8 is closed.	CL8 CL9	OK

Checklist question	MoV			Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
<p><u>Indication:</u> $V_{RG,y}$ <u>Unit:</u> Sm^3 <u>Estimated value:</u> 75,039,643 Sm^3 <u>Measured value:</u> 32,768,085 Sm^3 (for the vintage 2022)</p>				<p>monitoring period 2022. CL9: please clarify which internal procedure is followed for the data quality assurance and control mentioned in MR.</p>	<p>It was clarified that the internal procedures for the data quality assurance mentioned in the MR refer to the OMV environmental data reporting standard. This standard was explained and evidence of the procedure has been submitted (Doc. 13 & 14). CL9 is closed.</p>		
<p>4.1 Monitored Parameter 2 <u>Title:</u> Monthly average net calorific values of the recovered gas entering the gas export pipeline in the monitoring period y <u>Indication:</u> $NCV_{RG,y}$ <u>Unit:</u> MJ/Sm^3 <u>Estimated value:</u> 50.13 MJ/Sm^3 <u>Measured value:</u> 44.36 MJ/Sm^3 (average)</p>		x	x	<p>Online measurement by MECI system gas chromatograph. The MECI system output is the GCV, therefore NCV is calculated as 90% of the GCV according to IEA standards. All calculations were proven to be correct.</p>		OK	OK
<p>4.1 Monitored Parameter 3 <u>Title:</u> Monthly average emission factors of the recovered gas entering the gas export pipeline in the monitoring period y <u>Indication:</u> $EF_{CO2,RG,y}$ <u>Unit:</u> gCO_2/MJ <u>Estimated value:</u> 48.979 gCO_2/MJ</p>		x	x	<p>Online measurement by MECI system gas chromatograph. The $EF_{CO2,RG,y}$ is calculated in MS Excel as follows: Percentage of total carbon content in gas composition x ((Molar Mass Component of CO2 [g/mol]) / Molar Mass of carbon [g/mol]) / (Net Calorific Value [MJ/Sm^3] / density [kg/Sm^3])) x 1,000</p>		OK	OK

Checklist question	MoV	Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
5. Calculations					
5.1 Have all the calculations related to the baseline emissions been carried out according to the formula and methods described in the validated PD and applied methodology?	x x x	The BE have been calculated on a monthly base as the product of monthly volume, NCV and EF _{CO2} of recovered gas. The BE have been quantified as per validated PD and in line with the applied CDM methodology AM0009, v07.0. The UER have been determined as the difference between the BE and the PE&LE. In the case of the project activity: UER = BE - 0 - 0		OK	OK
5.2 Have all the calculations related to the project emissions been carried according to the formulae and methods described in the validated PD and applied methodology?	x				
5.3 Have all the calculations related to the leakage emissions been carried according to the formulae and methods described in the validated PD and applied methodology?	x				
6.Greenhouse Gas Intensity					
6.1 Have the baseline annual emissions prior to installation of reduction measures and annual	x x x	The data for the crude oil production in 2022 has been provided by the PP. CL10: Please provide substantiation for the crude oil volume in the year 2022.	The amount of gross oil production which was verified to be correct during FA and mail communication has been also provided in order to	CL10	OK

Checklist question	MoV		Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
emissions after been calculated and provided?				confirm such amount of oil production (Doc. 16). CL10 is closed.		

APPENDIX II

List of correction action requests (CARs) and clarification requests (CLs)

CAR/CL/FAR	Observation	Reference	Summary of project owner response	TÜV comment
CAR1	Please update section 2.1 of the MR based in the observed physical features during FA and the detailed description from the local OMV personnel.	MR v1	The final MR has been submitted (Doc. 20) and section 2.1 has been upgraded.	It could be proven that the installation of a GVP and VRU's in order to process APG, then transported via ENI S.p.A pipeline and sold it to Tunisian Company of Electricity and Gas (STEG) has been implemented as described in the validated PD. CAR1 is closed.
CL1	Please clarify the status of phase 2 and the reason for having a similar range of processed gas as in previous period.	MR v1	During interviews, OMV Tunisia personnel clearly described and shown that, as already indicated in PD, in case additional gas volumes can be recovered from flaring, the capacity to export via ENI pipeline might become too small to take all gas recovered for sale. A second new tie in connection to Nawara gas pipeline was implemented which will afford additional export capacity for future needs. It was indicated that the JT/chilling unit is needed in order to comply with the specifications in order to feed the Nawara pipeline (additional pre-treatment in those cases).	The Waha CPF has been assessed during FA and the two phases of the project have been verified to be completed and fully operational during this monitoring period. It was clarified that the originally planned upgrade under phase 2 was the installation of an HP vapor recovery unit to recover associated gas from the 2nd stage separator. This plan was discarded and changed to a different setup with a bypass of the 2nd stage separator and recovery of more gas through the VRUs after the 3rd stage separator. CL1 is closed.
CL2	Please provide the latest available flow line diagram of the project installations.		A detail flow line diagram has been submitted (Doc. 12) and has been also included in the final MR (Doc. 20).	All physical features verified during FA are clearly shown in the submitted flow line diagram. CL2 is closed.

CAR/CL/FAR	Observation	Reference	Summary of project owner response	TÜV comment
CL3	Please clarify the reason for submitting 2 February reports.	MECI report February 1 and 2	The calibration procedure has been submitted and explained.	During FA and interviews, all calibration reports has been shown and it was proven that in each calibration there are two reports. The complete calibration procedure was clearly described, documents have been submitted (Doc. 17 & 19) and it was explained that each time a calibration agreement is signed by the involved parties. The four calibration agreements corresponding to the year 2022 have been positively verified. CL3 is closed.
CL4	Please clarify the sentence in page 8 of the MR: "For the duration of the calibration procedure monitoring parameters (volume, NCV, gas composition) have not been measured, but rather estimated based on the internal procedures and in alignment with a three-party agreement".	MR v1	Internal procedures have been submitted and explained (Doc. 17 & 19).	The calibration procedure has been demonstrated to fulfil the internal procedures and through the submitted OMV/ENI gas sales PV agreements (Doc. 17) it was verified the decision to consider the average of 8 hours for gas volume and PCS 4 hrs before calibration and 4 hrs. after calibration of the chromatograph. CL4 is closed.
CL5	Please provide MECI valid accreditation.		Document submitted.	The MECI accreditation certificate (Doc. 15) has been submitted and proven to be valid during the monitoring period 2022. CL5 is closed.

CAR/CL/FAR	Observation	Reference	Summary of project owner response	TÜV comment
CL6	Please clarify NON results in first calibration report and reason for 2 reports.	Calibration reports	MECI has been contacted in order to clarify NON results such in the first stage.	It was clearly explained that because of the desert conditions calibration is done in stages (generally two) in order to correctly measure the metrological values within a maximum tolerated error. It could be proven that in the final calibration reports all results are 100% OK. CL6 is closed.
CL7	Please provide evidence of personnel training		Evidence submitted.	During interviews it was explained that OMV has HSSE mandatory training and Technical Training. Some are on-line training with tracking within OMV training system in order to fulfil the company's goals. Evidence of 2022 training has been submitted (Doc. 18) and verified to be in line with high oil & gas standards. CL7 is closed.
CL8	Please explain the difference between estimated value and measured value for the monitoring period 2022.		The history of the Waha CPF and oil production has been explained.	During FA, it could be proven that the volume of processed gas was in a lower range than for cased during validation, which is related with less crude oil production than what was planned. CL8 is closed.
CL9	Please clarify which internal procedure is followed for the data quality assurance and control mentioned in MR.	MR v1	It was clarified that the internal procedures for the data quality assurance mentioned in the MR refer to the OMV environmental data reporting standard.	The OMV environmental data reporting standard was explained and evidence of the procedure has been submitted (Doc. 13 & 14). CL9 is closed.

CAR/CL/FAR	Observation	Reference	Summary of project owner response	TÜV comment
CL10	Please provide substantiation for the crude oil volume in the year 2022.		Document submitted.	The amount of gross oil production which was verified to be correct during FA and mail communication has been also provided in order to confirm such amount of oil production (Doc. 16). CL10 is closed.