

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	01.01.2021 – 31.12.2021
Verified UERs	60 609 495 455 gCO _{2,eq}
Unique identifier	0936_TUEV_20140501_2021_009.8559E,031.4061N_117408.178017

Report Title	Verification Report of the UER Project “OMV South Tunisia Gas Valorisation project” for the verification period from 01.01.2021 until 31.12.2021
Report ID	21255970
Version	1.0
Date of Issue	05.07.2022
Prepared by Verification Body	TÜV Rheinland Energy GmbH
Contact	Am Grauen Stein, 51105 Cologne, Germany www.tuv.com/carbon
Approved by	Florencia.Tamanini@de.tuv.com (Technical Reviewer)
Work carried out by	Denitsa.Gaydarova-ltrib@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 second monitoring period 01.01.2021 – 31.12.2021 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 Hungary’s Decree No. 17/2017 Annex 5 Part I & Annex 6 Part II, 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 3 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 2.3), 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) and the verification report “Verification Report of the UER Project “OMV South Tunisia Gas Valorisation project” for the verification period from 01.01.2021 until 31.12.2021”.

The Verification Team identified 1 (one) corrective action request (CAR) and 4 (four) 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 01.01.2021 – 31.12.2021 GHG emission reduction of 60 609 495 455 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	Verification Team	10
1.13	Level of Assurance	10
1.14	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	15
2.4	On-Site Audit	16
2.5	Resolution of Findings	16
2.6	Forward Action Requests	17
3	Verification Findings	18
3.1	Implementation Status	18
3.2	Accuracy of Upstream Emission Reduction Calculations	19
3.3	Quality of Evidence to Determine GHG Emissions, GHG Emission Reductions and GHG Removal Enhancements	21
4	Verification conclusion	23

5	VERIFICATION STATEMENT.....	24
	APPENDIX I	25
	APPENDIX II	35
	APPENDIX III	36

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 /doc 6/ dated 12.12.2018, the verified Monitoring Report v1.1 /doc 7/ dated 14.11.2019 and the verified Monitoring Report v2.0 /doc 8/ dated 15.07.2021.

1.3 Verification of monitoring period

01.01.2021 – 31.12.2021

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 30.03.2022.

The Audit Plan for the verification period 01.01.2021 – 31.12.2021 of the project activity was submitted to the Project Proponent on 20.05.2022.

1.5 Date of the Verification Audit

24.05.2022 - remote verification audit (see chapter 2.4 and APPENDIX III)

1.6 Upstream Emission Reduction

60 609 495 455 gCO_{2,eq} for the verification period from 01.01.2021 to 31.12.2021.

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_{2eq}/ MJ of feedstock produced.

The Verification Team confirms that the reported GHG intensity is properly calculated based on oil production of Waha oil field /doc 21/ and baseline GHG emissions to the “OMV South Tunisia Gas Valorisation project” for the period from 01.01.2021 to 31.12.2021, resulting in:

- 3.3309 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.

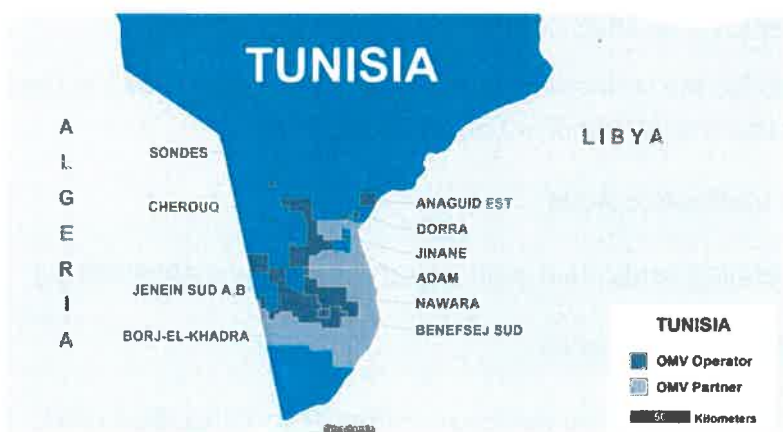


Figure 1: Oil fields in the south of Tunisia. (Source: <https://www.omv.com/en/our-business/upstream/portfolio-and-locations>)

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 01.01.2021 – 31.12.2021,

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

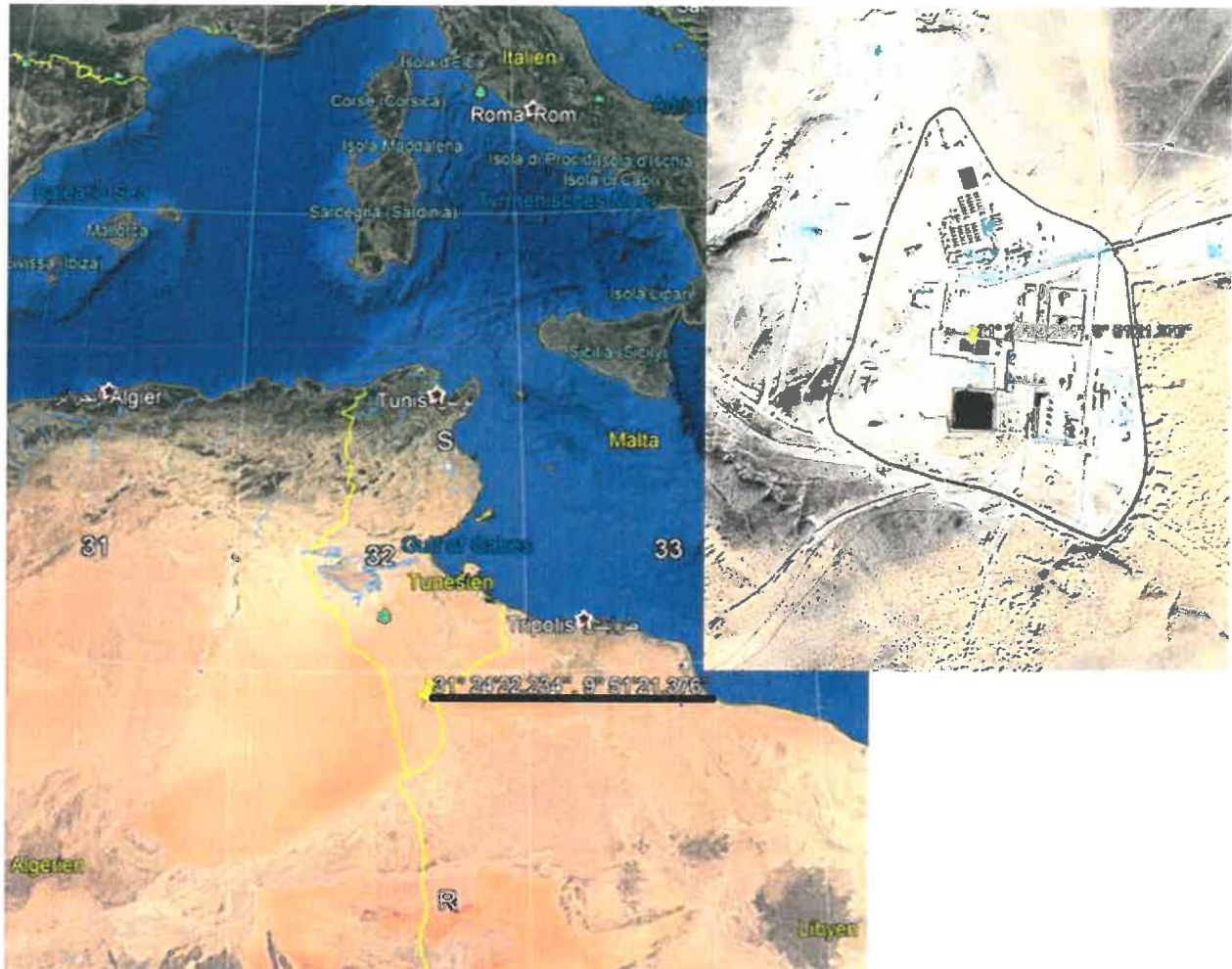


Figure 2: Map depicting the location of the project activity (Source: Google Earth)

“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 was scheduled to be finalised in August 2019. During the verification audit, the WAHA field manager stated that due to COVID-19 Pandemic, the completion of Phase 2 is further postponed to 2024. In addition, it was mentioned that a chilling unit was installed in March 2022 in order to maintain the requirements of a new gas-export pipeline (Nawara pipeline).

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 /doc 6/,
- to confirm that the project has been implemented in line with the Council Directive (EU) 2015/652 /doc 1/ 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 01.01.2021 to 31.12.2021 (both days included).

1.11 Scope and Criteria

The verification implies a review of the Monitoring Report over the monitoring period from 01.01.2021 to 31.12.2021 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 /doc 6/ 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 and 01.01.2020 – 31.12.2020, 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 – 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. Due to the current travel obstacles (COVID-19 pandemic) the verification audit for the monitoring period in question could not be performed on-site. Therefore, an alternative remote verification audit, based on Teams/video conferences, telephone interviews, online real time screen sharing, images, etc., has been carried out.
- 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 /doc 5/ 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 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	Denitsa Gaydarova-Itrib
Email	denitsa.gaydarova-trib@de.tuv.com
Phone number	+49 221 806 5756

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

Technical Reviewer	Florencia Tamanini
Email	florencia.tamanini@de.tuv.com
Phone number	+49 221 806 3553

1.13 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.

1.14 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
- The Hungary's Decree No. 17/2017 Annex 5 Part I & Annex 6 Part II

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 01.01.2021 – 31.12.2021, GHG upstream emission reduction of 60 609 495 455 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 01.01.2021 – 31.12.2021 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:

No.	Description
/doc 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
/doc 2/	GUIDANCE NOTE on approaches to quantify, verify, validate, monitor and report upstream emission reductions
/doc 3/	HU_Dec 17-2017_hungarian.pdf (translation: HU_Dec 17-2017_eng.pdf)
/doc 4/	Approved CDM large-scale methodology AM0009 "Recovery and utilization of gas from oil fields that would otherwise be flared or vented" v07.0
/doc 5/	Validation statement VE-UER-004, dated 22.12.2018 <i>VE-UER-004 OMV Waha GUP - Validation Report 2018-12-22_TR_signed.pdf</i>
/doc 6/	Project Documentation and Monitoring Plan v1.2, dated 12.12.2018 <i>PDD_Waha-GVP_v1.2.pdf</i>
/doc 7/	UER Project Monitoring Report for the period 01.01.2019 – 31.10.2019, v1.1 dated 14.11.2019 <i>UER Waha GVP_MR 2019_1_Monitoring report_v1.1_20191114.pdf</i>
/doc 8/	UER Project Monitoring Report for the period 01.01.2020 - 31.12.2020, v2.0 dated 15.07.2021 <i>UER Waha GVP_MR 2020_Monitoring report_v2_20210715_clean.pdf</i>
/doc 9/	Verification Report VE-UER-004 VER#1 for the period 01.01.2019 – 31.10.2019, v03 dated 20.01.2020 <i>2020-01-21 VER-UER-004-Verification Report_final.pdf</i>
/doc 10/	Monthly gas chromatograph reports for the months January 2021 – December 2021, including among other the ID of the measurement device, volume, density and composition of recovered AG. <i>Monthly Report MONTH 2021.pdf</i>
/doc 11/	Calibration Reports

No.	Description
	<p><i>MECI report April 2021.pdf</i> <i>MECI report June 2021.pdf</i> <i>MECI report Sept 2021.pdf</i> <i>MECI report Nov 2021.pdf</i></p>
/doc 12/	<p>Initial UER Monitoring Report for the monitoring period 01.01.2021 – 31.12.2021, dated 17.05.2022 <i>UER Waha GVP_MR 2021_Monitoring report_v1_20220517.docx</i></p>
/doc 13/	<p>Final UER Monitoring Report for the monitoring period 01.01.2021 – 31.12.2021, dated 15.06.2022 <i>UER Waha GVP_MR 2021_Monitoring report_v2_20220615_clean.pdf</i></p>
/doc 14/	<p>Initial UER Quantification Workbook for the monitoring period 01.01.2021 – 31.12.2021, dated 17.05.2022 <i>UER Waha GVP_MR 2021_Quantification-of-emissions_v1_20220517.xlsx</i></p>
/doc 15/	<p>Final UER Quantification Workbook for the monitoring period 01.01.2021 – 31.12.2021, dated 15.06.2022 <i>UER Waha GVP_MR 2021_Quantification-of-emissions_v1_20220615.xlsx</i></p>
/doc 16/	<p>ENI Tunesia B.V – OMV (Tunesia) Production GmbH contract on transportation of gas dated 29.06.2021 <i>Eni-OMV Contract.jpg</i></p>
/doc 17/	<p>Extract of ENI Tunesia B.V – OMV (Tunisia) Production GmbH contract on transportation of gas dated 29.06.2021 <i>15.4 clause OMV-ENI.jpg</i></p>
/doc 18/	<p>Evidence on reduced volumes of recovered associated gas in July 2021 <i>July stoppage sales gas evidence .pdf</i></p>
/doc 19/	<p>Evidence on reduced volumes of recovered associated gas in September and October 2021 <i>September stoppage sales gas evidence .pdf</i> <i>October stoppage sales gas evidence .pdf</i></p>
/doc 20/	<p>Gas sales volume estimation during the periodic metering calibration dated 14.05.2021 <i>OMV-ENI Gas Sales PV N2 14-05-2022.pdf</i></p>
/doc 21/	<p>Waha monthly crude oil head production for the period 01.01.2021 – 31.12.2021 <i>UER Waha GVP_MR 2021_Waha Crude Oil 2020-2021.xlsx</i></p>

No.	Description
/doc 22/	Calculation table of the GHG intensity for the project activity for the monitoring period 01.01.2021 – 31.12.2021, dated 17.05.2022 <i>Waha_GHG intensity 2021_20220517.xlsx</i>
/doc 23/	Video recording the MECI data extraction process <i>IMG_2488.MOV</i>
/doc 24/	Flow diagram <i>WAZE Project Diagram.png</i>
/doc 25/	Position Descriptions <i>Position Description_Operator I&E_Waha_20220101.pdf</i> <i>Position Description_Operator Production Waha_20211201.pdf</i>

2.3 Interviews

Name	Organisation / Function	Topic
Neslihan Kumcu	OMV Downstream GmbH/ Biofuels Compliance & UER Mgmt.	<ul style="list-style-type: none"> • Description of the project activity and its operation over the current monitoring period • General information on Monitoring Procedures; Organisational management, structure and responsibilities • UER Project Monitoring according to Monitoring Plan
Oliver Percl	Energy Changes Projektentwicklung GmbH / Project manager (UER- consultant)	<ul style="list-style-type: none"> • UER calculation • Monitoring plan • Legal requirements • General performance of the project activity • UER Monitoring Report
Nizar Frikha	OMV (Tunesien) Production GmbH / HSSE Manager	<ul style="list-style-type: none"> • Project description • Operation of the project over the monitoring period • Deviation from the PD
Mohamed Mzoughi/ Slim Dridi	WAHA field Manager	<ul style="list-style-type: none"> • Monitoring procedures • Data collection, recording, processing • Monitoring in case of emergencies • Monitoring system (Metering devices; Calibration procedures; gas analysis)

Ammar Ben Salah	Project Manager for WAHA O-Emissions	<ul style="list-style-type: none"> • Project description • Project follow-up and update • Monitoring procedures • UER Monitoring responsibilities • Monitoring data on monthly basis • Monitoring system (Metering devices; calibration procedures; gas analysis) • Monitoring system (Metering devices; calibration procedures; gas analysis)
Meissa Boughattas	OMV (Tunesien) Production GmbH / UER Key focal Point	
Faycal Nasri	WAHA Maintenance Superintendent	
Jameleddine Chihaoui	Senior Maintenance Expert	

2.4 On-Site Audit

The objective of the verification audit 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.

Due to the worldwide COVID-19 spread (Corona pandemic) and the severe travel restrictions enacted by Tunisia and Germany, travelling to Tunisia for an on-site assessment in May 2022 was highly restricted.

The verification audit of the project activity “OMV South Tunisia Gas Valorisation project” for the monitoring period 01.01.2021 – 31.12.2021 took place on 24.05.2022 via video conference. For the purpose of transparency the Audit Plan, together with a gap-analysis of this remote audit against a standard on-site audit, is included as an APPENDIX III in this verification report.

Eventually, the conducted Verification Audit for the monitoring period 01.01.2021 – 31.12.2021, 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 and the EU 2015/652 and is in accordance with the monitoring plan specified in the validated PD. It was clearly assessed (see APPENDIX III) that the remote audit shows no gap on information against a regular on-site assessment.

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 01.01.2021 – 31.12.2021, the Verification Team identified and issued 1 (one) corrective action request (CAR) and 4 (four) 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 01.01.2021 – 31.12.2021 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 /doc 6/.

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 and a high-pressure vapour recovery unit (HP VRU) was planned for December 2018. During the verification audit, it was stated that Phase 2 has been only partially completed so far. Full completion of Phase 2 is expected in 2024. The WAHA field managers, Mr Dridi and Mr Mzoughi, affirmed that the projects implementation status for the current monitoring period has not changed since the previous one.

The WAHA Plant Manager, confirmed that the GVP was fully and continuously operational during the monitoring period 01.01.2021 – 31.12.2021, except for:

- Multiple export-stop-slots in July due to technical issues and repair works at client’s facilities.
- Export stop due to triennial shutdown of the client’s facilities for maintenance.

The Verification Team proved the correctness of this statement by checking the e-mail exchange between PO and the client in July, September and October 2021 /doc 18/ /doc 19/.

The Verification Team approved that the elaborated monitoring plan, which follows the selected approved CDM Methodology AM0009 v07.0 /doc 4/ and is an essential part of the PDD, 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

- $EF_{CO_2, RG, y}$ - 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.

Verification team confirms that the project "OMV South Tunisia Gas Valorisation project" has been erected and is operating as described in the validated PD /doc 6/ and the final Monitoring Report /doc 13/ for the current verification period 01.01.2021 – 31.12.2021. 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. 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 /doc 15/. 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 gas chromatograph type HGC-Pac at metering point F. In the course of the desk review and the 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 Mr Danz, and since 2022 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 MECl system /doc 10/, as well as calibration certificates of the metering unit, incl. the gas chromatograph /doc 11/.

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 deemed to be correctly applied for the estimation of upstream emission reductions within the final UER calculation workbook /doc 15/ for the verification period in question and accordingly referenced in the final monitoring report /doc 13/.

Eventually, Verification Team attests that the upstream emission reductions realised by the project activity “OMV South Tunisia Gas Valorisation project” for the monitoring period 01.01.2021 – 31.12.2021 are calculated correctly and in accordance with the approved CDM methodology AM0009 v07.0, resulting in

$$UER_{01.01.2021 - 31.12.2021} = BE - PE - LE = 60\,609\,495\,455 \text{ gCO}_{2,eq}$$

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, Mr. Frikha explained that as per agreement between OMV (Tunesien) Production GmbH and ENI pipeline operator /doc 16/, 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 /doc 17/. Furthermore, Mr Frikha pointed out that 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 /doc 16/ is implemented.

Verification team perceived that for each period of interrupted data recording due to calibration, a gas sales report /doc 20/ 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 01.01.2021 to 31.12.2021. 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, 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 /doc 13/. 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 /doc 11/, Verification Team witnessed that over the monitoring period 01.01.2021 – 31.12.2021, the MECI monitoring system was calibrated on 01.04.2021, 23. & 24.04.2021, 20.09.2021 and 28.11.2021.

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.

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), the Hungary’s Decree No. 17/2017 Annex 5 Part I & Annex 6 Part II and ISO 14064, 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 /doc 13/ for the monitoring period 01.01.2021 – 31.12.2021, dated 15.06.2022, 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 01.01.2021 until 31.12.2021, with report ID **21255970** issued on 05.07.2022.

TÜV Rheinland, therefore issues a positive verification opinion, confirming that the upstream emission reductions claimed for the monitoring period 01.01.2021 – 31.12.2021 are verified to be 60 609 495 455 gCO₂,eq.

5 VERIFICATION STATEMENT

OMV (Tunesien) Production GmbH

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

05.07.2022

RE: OMV South Tunisia Gas Valorisation project

Monitoring Period: 01.01.2021 – 31.12.2021

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 01.01.2021 to 31.12.2021 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), the Austria's Fuel Decree "Kraftstoffverordnung" (KVO) and the Hungary's Decree No. 17/2017 Annex 5 Part I & Annex 6 Part II.

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 **21255970** "Verification Report of the UER Project "OMV South Tunisia Gas Valorisation project" for the verification period from 01.01.2021 until 31.12.2021" delivered on 05.07.2022, includes all relevant information and evidence acquired during the verification process.

Based on the verification audit 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 01.01.2021 – 31.12.2021, are verified to be 60 609 495 455 gCO_{2,eq}

Cologne, 05.07.2022



Denitsa Gaydarova-Itrib, TL and Verifier



Florencia Tamanini, 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) and Hungary's Decree No. 17/2017 Annex 5 Part I & Annex 6 Part II implementing the reporting requirements under the Fuel Quality Directive (FQD).

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>The Project activity has been implemented as described in the validated PD.</p> <p>The associated gas from Anaguid - Durra-, Jinane- well sites are gathered and moved to WAHA CPF, where it is treated, compressed and transported for sale.</p> <p>- Phase 1: 2014: installation of the GVP, incl. 1 GVC & dehydration unit + 2 VRUs</p> <p>- Phase 2: planned for 2018 (as per PD); implemented in August 2019 (as per MR and verification report from the period 01.01.2019 - 31.10.2019); installation of 2nd GVC</p> <p><u>CL_1</u> is issued: Please clarify the status of phase 2.</p>	<p>CL1 is closed.</p> <p>PP confirmed that during the current monitoring period the Phase 2 was not completed yet, i.e. the installed equipment was still the same as during the previous monitoring period. The completion of Phase 2 is delayed until 2024.</p>	CL 1	OK
1.2 Has the project activity been operated in accordance with the project scenario described in the validated PD and relevant guidance?	x	x	x	<p>The MR indicate that the project activity operates as described in the PD.</p>	<p>During the Verification Audit, it was confirmed that the project has been operated in accordance with the project scenario described in the PD, beside the delay in Phase 2 (as described above).</p>	ok	OK

Checklist question	MoV			Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
1.3. Does the project activity deviates from the documents underlying the approval/validated PD?	x	x	x	See 1.2 (above).	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?				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 project activity constitutes of different components (GVC+ dehydration unit at the GVP and 2 VRUs after the 3rd stage separator). <u>CL 2</u> : Please confirm that "No further project components have been installed after the previous verification".	CL2 is closed. PP confirmed that no new equipment was installed during the monitoring period in question. (see CL1)	CL 2	OK
2. Monitoring methodology							
2.1 Is the monitoring plan established in accordance with the monitoring methodology?				AM0009 v07.0	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.		OK
3. Monitoring plan							

Checklist question	MoV		Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
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)	x	x	<p>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</p> <p>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.</p> <p>Yes, see the explanation above.</p>	The monitoring of the UERs for the period 01.01.2021 - 31.12.2021 has been performed in full compliance with the validated monitoring plan.		OK
3.2 Are all baseline emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	x	x		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.		OK
3.3 Are all project emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	x	x	The validated PD indicate that the project does not generate any project emissions; Thus PE = 0 tCO ₂ ,eq.	No PE parameters have been monitored.		OK

Checklist question	MoV			Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
3.4 Are all leakage emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	x	x	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.	No LE parameters have been monitored.		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	x	The parameters have been recorded continuously (on 5 min intervals) and aggregated automatically on monthly basis as indicated in the validated PD.	The monitored parameters have been recorded by the approved monitoring devices, as per the approved procedure and on the approved frequency.		OK
3.5 Was the monitoring equipment for baseline-, project- and leakage emission parameters calibrated in accordance with QA&QC procedures described in the validated monitoring plan?	x	x	x	In 2021, calibrations of the MECI system have been conducted on a quarterly basis. The latest calibration was conducted on 28/11/2021.	The calibration reports have been submitted and positively verified.		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?	x	x	x	All monitoring reports were available and verifiable. <u>CL 3</u> : Please clarify the low volumes of recovered gas for the months July, September and October 2021.	CL3 is closed. During the Verification Audit, it was explained that the low gas volumes of recovered gas for the months July, September and October 2021 was due to capacity restrictions in the client's facilities further down the gas pipeline (outside project boundary). Evidence has been provided and verified (July/September/October stoppage sales gas evidence.pdf).	CL 3	OK
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?				N.A.			

Checklist question	MoV	Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
3.7 Was management and operation system established and operated in accordance with the monitoring plan?	x x x	See above.	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).		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> <i>Indication: V_{REV}</i> <i>Unit: Sm³</i> <i>Estimated value: 75,039,643 Sm³</i> <i>Measured value: 27,638,326 Sm³ (for the vintage 2021)</i>	x x x	The amount of recovered gas in July, September and October 2021 is considerably below the other months. Due to the fact that phase 2 is not completed, the volume of associated gas which is recovered in monitoring period is lower than the estimated value as per validated PD. See CL 3.	CL3 is closed. See above.	CL 3	OK

Checklist question	MoV	Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
<p>4.1 Monitored Parameter 2 <u>Title: Monthly average net calorific values of the recovered gas entering the gas export pipeline in the monitoring period y</u> <u>Indication: NCV_{RG,Y}</u> <u>Unit: MJ/Sm³</u> <u>Estimated value: 50.13 MJ/Sm³</u> <u>Measured value: 44.73 MJ/Sm³ (average)</u></p>	<p>x</p> <p>x</p> <p>x</p>	<p>CAR1: Please revise the calculations for the EF to cover the entire monitoring period.</p>	<p>CAR1 is closed. ER calculation was accordingly corrected, accounting for the entire monitoring period. The ER calculation excel document version 2 has been submitted (UER Waha GVP_MR 2021_Quantification-of-emissions_v2_20220615.xlsx).</p>	CAR 1	OK
<p>4.1 Monitored Parameter 3 <u>Title: Monthly average emission factors of the recovered gas entering the gas export pipeline in the monitoring period y</u> <u>Indication: EF_{CO2,RG,Y}</u> <u>Unit: gCO₂/MJ</u> <u>Estimated value: 49.131</u> <u>Measured value: 49.131 gCO₂/MJ</u></p>		<p>CAR1: Please revise the calculations for the EF to cover the entire monitoring period.</p>	<p>CAR1 is closed. See above.</p>	CAR 1	OK

Checklist question	MoV	Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
4.2 Default Parameter 1 <u>Title:</u> <u>Indication:</u> <u>Unit:</u> <u>Default/used value:</u>	x				
5. Calculations					
5.1 Have all the calculations related to the baseline emissions been carried out according to the formulae and methods described in the validated PD and applied methodology?	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
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				

Checklist question	MoV		Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
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 emissions after been calculated and provided?	x	x	CL4: Please provide substantiation for the crude oil volume in the year 2021.	CL4 is closed. The data for the crude oil production in 2021 has been provided by the PP. Crude oil volume for the monitoring period has been verified to be correct.	CL 4	OK

APPENDIX II

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

CAR/CL	Observation	Reference	Summary of project owner response	TÜV comment
CL1	Please clarify the status of phase 2.	MIR	By the end of the monitoring period, the installed equipment was still the same as in the end of 2020. New installations (chilling unit) have been added in March 2022 and it is currently expected that the first gas recovery through the final HP VRU will happen in Early 2023	Status of phase 2 clarified. CL1 is closed.
CL2	Please confirm that "No further project components have been installed after the previous verification"	MIR	No new equipment was installed during the monitoring period.	CL2 is closed.
CL3	Please clarify the low volumes of recovered gas for the months July, September and October 2021.	ER calculations	Gas export and recovery was reduced due to capacity restrictions in the client's facilities further down the gas pipeline (STEG). Please see evidence documents July, September and October "stoppage sales gas evidence.pdf".	Evidence documents have been checked and low volumes of recovered gas are verified. - July stoppage sales gas evidence .pdf - September stoppage sales gas evidence .pdf - October stoppage sales gas evidence .pdf CL3 is closed.
CAR1	Please revise the calculations for the EF to cover the entire monitoring period.	ER calculations	The ER calculation excel as well as the monitoring report have been revised. Please see version 2 of these documents.	ER calculation was accordingly corrected, accounting for the entire monitoring period. The ER calculation excel document version 2 has been submitted (UER Waha GVP_MR 2021_Quantification-of-emissions_v2_20220615.xlsx).
CL4	Please provide substantiation for the crude oil volume in the year 2021.	WAHA_GHG intensity 2021_20220517.xlsx	The data for the crude oil production has been directly provided by OMV Tunisia. See attached file "UER Waha GVP_MR 2021_Waha Crude Oil 2020-2021.xlsx"	Crude oil volume has been reviewed and verified. CL4 is closed.

APPENDIX III

Audit Plan for OMV South Tunisia Gas Valorisation project

Time (in Tunis)	Duration	Agenda / Topic	Required stakeholders	Requested documents	Procedure of remote assessment for verification	Risk for lack of information against on-site assessment
Start of Audit – 24.5.2022						
08:00	15 min	Adjustment of technical problems with video connection, if needed. Welcoming of all participants and short introduction, Introduction of audit procedure and method.	All audit participants		Video conference with the following stakeholders involved in the project activity: WAHA (UER Contact Person, plus 1-2 site experts, if needed) OMV Focal Point (Ms. Neslihan Kumcu) UER-consultant TÜV Rheinland auditors	No risk. Stakeholders will introduce themselves by live video.
Project implementation						
08:15	30 min	Description of the project activity and its operation over the current monitoring period.	Appointed WAHA experts for the topic; OMV;	Pictures and/or Videos	Explain the physical configuration and operation setup of the project activity upon pictures and/or videos. Technical sketches might be used in addition.	No risk. Interviews will be undertaken by live video and

Time (in Tunis)	Duration	Agenda / Topic	Required stakeholders	Requested documents	Procedure of remote assessment for verification	Risk for lack of information against on-site assessment
		Interruption of operation due to failure/ malfunctions /etc.			Interviews about the operation of the installation during the monitoring period.	documents will be shared on screen.
15 – 20 minutes Break						
Monitoring Procedure						
09:00	30 min	Organisational management structure and responsibilities.	See above	Screen shot of the data management program. Records on personnel training.	Explain exactly how the monitoring process is followed, including focal points of the different departments), review of the monitored results/data, QC/QA and personnel training (who is recording, processing and managing the data).	No risk. Interviews will be undertaken by live video and documents will be shared on screen.
		Data processing and frequency of data recording.	See above	Data flow diagram including measuring devices.	Explain how the data are processed from the primary source to the monitoring report. Clarify the operation and monitoring of the equipment.	

Time (in Tunis)	Duration	Agenda / Topic	Required stakeholders	Requested documents	Procedure of remote assessment for verification	Risk for lack of information against on-site assessment
		Monitoring in case of emergency	See above		Explain the procedures in case of loss of information or emergency situation and provide related documents, if available.	
Monitoring System						
09:30	30 min	Measuring devices	See above	Pictures of equipment for monitoring parameters incl. location and calibration seal.	Explain the procedure to control and calibrate the different devices.	No risk. Interviews will be undertaken by live video and documents will be shared on screen.
		Calibration of measurement devices	See above	Calibration Reports Recommendations of technology provider	Explain the calibration procedures.	
		Gas analysis	See above	Gas samples analysis	Explain the measurement procedure. Gas chronograph	
UER calculations						

Time (in Tunis)	Duration	Agenda / Topic	Required stakeholders	Requested documents	Procedure of remote assessment for verification	Risk for lack of information against on-site assessment
10:00	20 min	Spreadsheets	See above	UER calculations	The UER consultant should explain the source of the applied data and clarify the calculations.	No risk. Interviews will be undertaken by live video and documents will be shared on screen.
		Use of ex-ante (fixed during the validation) parameters	See above			
		Monitored parameters Primary data	See above			
Monitoring Report						
10:20	10 min	Outstanding issues	See above	MP_02 and draft VP with TÜV comments	The UER consultant should clarify TÜV comments regarding the draft VP	No risk. See above
Q&A						
10:30	30 min	Q&As and final discussion	All participants		Discussion	
11:00	End of Audit					

