



Industrie Service

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Verification Report

VS-3291301

Verification of the Greenhouse Gas Declaration

Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang

according to

ISO 14064 Part 2

and

**Austrian 'Kraftstoffverordnung'
dated 24/June/2020**

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

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This Document consists of
26 Pages.
Page 1 of 26

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The test results refer exclusively to the units under test.



Table of contents

1. Abbreviations.....	3
2. Scope of the verification	4
3. Project details.....	4
4. Verification approach.....	5
4.1. Contract review	5
4.2. Assessment team.....	5
4.3. Preparation of the assessment.....	6
5. Means of Verification	8
5.1. Document review.....	8
5.2. Remote audits	8
5.3. Onsite visit.....	8
5.4. Sampling	8
5.5. Follow-up of revisions.....	8
5.6. Technical review.....	8
6. Observations and findings	9
6.1. General information.....	9
6.2. Legal requirements.....	9
6.3. Data quality	9
6.4. Baseline scenario and additionality	9
6.5. Monitoring procedures.....	9
6.6. Social and environmental issues	10
6.7. Findings	10
6.8. Recommendations for improvements	10
7. Verification decision.....	10
Annex.....	I
A. Checklist of the verification assessment plan	I
B. List of findings	IX
C. Document list.....	X
D. List of interviewed persons.....	XII
E. Accreditation certificate of Verification Body	XIII



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1. Abbreviations

CDM	Clean Development Mechanism
CO ₂	Carbon Dioxide
DAKKS	German Accreditation Body (Deutsche Akkreditierungsstelle)
DIN	German Institute for Standardization (Deutsches Institut für Normung)
EIA	Environmental Impact Assessment
EN	European Norm
FQD	Fuel Quality Directive
GHG	Greenhouse Gas
ISO	International Standard Organisation
KVO	Kraftstoffverordnung
LNG	Liquefied Natural Gas
NGL	Natural Gas Liquids
PDD	Project Design Document
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UER	Upstream Emission Reduction



2. Scope of the verification

TÜV SÜD Industrie Service GmbH (in the following referred to as TÜV SÜD) is an accredited verification body according to German Institute for Standardization (DIN) European Norm (EN) International Standard Organisation (ISO) 14065 for the validation and verification of greenhouse gas assertions according to ISO 14064 Part 1 and ISO 14064 Part 2. TÜV SÜD performed a verification of the Greenhouse Gas (GHG) Declaration for the project: Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang in order to confirm compliance of the GHG Declaration with the requirements of ISO 14064 Part 2 Austrian Kraftstoffverordnung (KVO) dated 24/June/2020 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.

TÜV SÜD included all tasks and aspects as specified in § 19b of KVO and provides all required information through this verification report. The main objective of this activity is the use of the verification report by the client when applying for crediting of certified upstream emission reductions of his project activity at the Austrian authority.

TÜV SÜD nominated a verification team fulfilling the internal qualification criteria based on ISO 14064 Part 3, ISO 14065 and ISO 14066. The specification of the competence criteria according to IAF MD14:2014 is applied here. The verification process involved an in-depth review of the original set of documentation and records as well as background research regarding applied technologies, legislation and benchmarks. The verification process follows the requirements of the accreditation ordinance 2018/2067 (formerly 600/2012). Following a strategic analysis and the determination of assessment risks a detailed audit plan has been developed. Due to travel restrictions in the COVID-19 crisis the verification included two remote audits and further meetings, including all required project participants via Microsoft Teams. Moreover, a site visit was conducted by a local expert.

Following the audits, a list with required documents and open points was provided to the client who subsequently revised the documentation and clarified open points. The revised documentation underwent a further review before issuing this final verification report. The final verification report itself has undergone an independent review by a technical reviewer (another TÜV SÜD lead auditor), who has not been part of the verification for final approval of the report.

The verification statement provides a reasonable level of assurance. When verifying baseline data, a 2 % materiality threshold has been applied in analogy to the validation assessment of the project.

The verification has been carried out in the period from 13th July 2020 until 18th August 2020.

3. Project details

The project Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang consists of:

The project reduces GHG emissions through recovery and treatment of associate gas produced in the production process of SHB 1 oil & gas separation station, to avoid flaring of the associated gas. Annually 120,000,000 Nm³ associated gas is recovered and treated, and the expected emission reduction is 226,993 tCO_{2e} in the first year. A complete set of associated gas recovery scheme was designed for the project. The associate gas after metering, separation and pressurization, desulfurization and decarbonization, dehydration, is made into dry gas as well as some mixed liquid material is separated during the process which is supplied to users as Natural Gas Liquids (NGL). The dry gas enters a liquefaction unit to produce qualified Liquefied Natural Gas



(LNG) after mercury removal. The project is relying on captive power with 13 sets of gas generators fired with produced dry gas for meeting its own electricity demand.

The project is situated at: N 40.5885°, E 82.8821°

The project applicants are: OMV Downstream GmbH
Trabrennstraße 6-8
A-1020 Wien

The project proponents are: Shaya Saipu Energy Co., Ltd

Contact person: Tobias Danz
phone: +43 1 40440-23735
email: tobias.danz@omv.com

Final version of the project documentation:

Monitoring report, version 02, 16/August/2020
(MR_Shaya Saipu AG project_0817_clear.pdf)
Emission reduction calculation, version 02, 17/August/2020
(ER_(for MR) Shaya Saipu Energy AG projec....xls)

Applied Clean Development Mechanism (CDM) methodology: AM0009 Version 07.0

Verified upstream emission reductions: 95,855 tCO₂e

4. Verification approach

4.1. Contract review

There is a framework agreement between the client OMV Downstream GmbH and TÜV SÜD Industrie Service GmbH for validation and verification services for upstream emission reduction projects. The framework agreement is based on a time expenditure calculation which ensures that the necessary personnel and time resources are available for the work. The scope of accreditation of TÜV SÜD as accredited validation and verification body covers all relevant scopes (for this project CDM scopes 1 and 10) of this project activity and TÜV SÜD has access to auditors covering the required competences in the sectors related to this activity. The client confirmed the independence of the verification team members and TÜV SÜD in writing.

4.2. Assessment team

The assessment team consists of the following team members:

Lead auditor:
Julia Schuler Scopes: 1, 3, 7, 10

Further auditor:
Johann Schmidt Scopes: 1, 3, 4, 5, 7, 8, 9, 10, 11, 12, 16

Expert:
Meng Shen

The expertise of Scope 10 was covered by the auditing team.



4.3. Preparation of the assessment

The project developer has been requested to submit the project documentation and scanned copies of relevant evidences before starting the remote audit. By reviewing and evaluating these documents a strategic and risk analysis has been performed.

The audit team assessed the likely nature, scale and complexity of the verification tasks. The audit team considered all preliminary information on the project, such as project boundaries, sources and sinks and the required materiality threshold. It identified and analysed the inherent risks and control risks to develop an assessment plan which allows to reduce all assessment risks and to enable a statement at a reasonable level of assurance that the project complies with the requirement of the referenced standards and regulations. In addition, background information has been collected by internet research and consulting a local expert seeking information regarding China specifics on energy generation, its environmental legislation, legislation and common practise regarding flaring, benchmarks, information regarding the project proponents' activities as well as on the project.

The following table presents the areas of concerns, where needs for further investigation beyond the document review have been identified, the associated risks which might result in non-compliance and the initially selected assessment methods. This list has been prepared before drafting a detailed schedule for the first remote audit, which was finally shared with the project proponents and their contracted partners for ensuring appropriate arrangements with regard to the auditing.

Area of concern	Risk	Assessment method
Applicability / boundaries	The project could have been implemented to meet legal requirements Potential physical losses of associated gas (non-CO ₂) to be considered within boundaries	Discussion and review of legal requirements
Start date of the project activity	Non-compliance with Fuel Quality Directive (FQD), i.e. project start before 2011	Type plates, interviews and document review
Project lifetime; expected reductions	Inappropriate forecasts	Interviews and document review
Double-counting issues / leakage	Measuring of gas quantities at the wrong positions, so that a too high a quantity is counted.	On-site inspection and document review
Correctness of underlying data	Use of inappropriate measuring devices and analysis methods	On-site inspection and document review
Baseline scenario	Data of pre-project scenario Life-time of pre-project equipment Remaining evidences Description of alternative scenario as given by the project design document (PDD)	Audit Interviews
Calculations	Mistakes in calculation approach, default values or in excel sheets for calculation	Comparison with requirements and review of the calculations
Emission reduction forecast	Appropriate consideration of the associated amount of gas and the oil production activities	Interviews and comparison with empirical values



Area of concern	Risk	Assessment method
Environmental impacts	Compliance with national legislation	Interview and consultation of local expert
Inclusion of legal requirements	Project is mandatory according to local legal requirements	Interview and consultation of local expert
Inclusion in national climate change policy	Double-counting	Interviews and document review
Monitoring plan	Completeness: procedures, measurements, sampling, quality assurance, data storage	Document review
Quality assurance / quality control	Data quality of baseline and project emissions Risk of data losses by monitoring approach	Interviews and document review

For further preparation of the audits the verification checklist of ISO14064 Part 2 activities has been amended by FQD-specific aspects. The checklist is filled with information collected and verified during document reviews as well as audits and indicates any findings. It is attached to this report as Annex A.



5. Means of Verification

5.1. Document review

In the course of the verification, the documents mentioned in the checklist for the individual topics were reviewed and evaluated. The list of documents is compiled in annex C.

5.2. Remote audits

Due to the Covid-19 crisis a travel of the lead auditor to the location was not possible. For that reason, the audit team in agreement with the project participants decided to have two remote audits via Microsoft Teams and an on-site audit by a local expert. The two remote audits took place on the 15th July and 28th July 2020.

At the end of the remote audits a list with needed evidence documents and open points was provided to the project proponents indicating the need for further clarifications, additional proofs or identified non-compliances which require the revision of documents and calculations.

The proofs (records, databases, documents) that have been checked during the strategic analysis, during and after remote audits and are listed in Annex C.

Annex D to this report provides a list of persons that took place during the remote audits and in additional meetings.

5.3. Onsite visit

The on-site audit took place on the 22nd July 2020. During the audits the project site of the Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang was visited to run interviews and inspections.

5.4. Sampling

All supporting documents were completely assessed. The monthly gas analysis from January to May 2020 were completely assessed as well as the raw data from the flow meters of the gas.

5.5. Follow-up of revisions

After the delivery of requested further evidences and the revision of the project documentation addressing the identified non-compliances, a further round of desk reviews has taken place, assessing these submissions. The final assessments regarding the closure of findings is documented under the finding list, attached as Annex B to this report.

5.6. Technical review

Before the report was approved, an internal review had been conducted by a lead auditor assigned to it by the verification body who was not himself a member of the review team. The main focus of this process is the assessment of the completeness and traceability of the validation carried out on the basis of the internal and external verification report. If necessary, the verification team will be asked to catch up on missing test steps or to correct or supplement the test report to increase transparency.

For this project the technical review has been conducted by:

Norbert Kraus

Scopes: 1, 3, 4, 5, 7, 8, 9, 10, 11, 12, 16



6. Observations and findings

6.1. General information

All information regarding the project proponent and involved partners, organisational arrangements, the facility, the authorisation and technical features have been proven to be correct. All information in the final version is complete.

The project boundaries are clearly defined within the project document and cover the oil wells and the project site with the processing plant and the generators for the plant's power supply as given in the PDD. As the avoidance of flaring or venting of associated gas is clearly related to upstream activities, the project qualifies in principle as upstream emission reduction project.

6.2. Legal requirements

The project itself is in compliance with the host country's legislation. All licenses have been given by the host country environmental authority on the basis of the application which also covered an environmental impact assessment (EIA). There are no specific regulations about taxes or fines with regard to flaring of associated gas.

6.3. Data quality

Data used to calculate the emission reductions and to fix ex-ante parameter has been verified along this verification. All required data is considered being accurate and complete. The requirement on conservativeness is achieved by assuming a 100% flare efficiency in the baseline scenario. The calculation is based on reproducible data.

Flow meters undergo an annually calibration procedures and data is stored electronically. Furthermore, the gas quality parameters are determined by an accredited laboratory according to ISO 17025:2005.

Thus, there is a low risk of inappropriate data quality and missing reproducibility.

6.4. Baseline scenario and additionality

The PDD describes correctly the baseline scenario. The continuation of the recent practice of continued flaring of associated gas is the most likely scenario in the absence of the project activity. The flaring equipment would operate without need for refurbishment beyond 2020 and the oil production activities will not decrease, hence they will continue to produce associated gas in a similar amount as in the baseline. Thus, the forecasts are deemed reasonable.

The most likely reference case without the implementation of the project (as per the requirement of the KVO) is flaring, which is still applied for any excess gas.

The prices for products and changes to technologies have not changed to the baseline scenario assumed at validation.

6.5. Monitoring procedures

The monitoring procedures are in compliance with the applied CDM methodologies and enable delivering data at a quality comparable to the requirements under the European Emission Trading Scheme. Where applicable, the requirements of the Monitoring Regulation 2018/2066 (formerly

601/2012) are met. All data which require metering are clearly identified and according arrangements have been made.

6.6. Social and environmental issues

A health, safety and environmental impact assessment has been conducted and provided to the audit team. The assessment concluded that all potential risks associated with the project can be controlled or reduced to non-significant levels. The EIA has been approved by the respective authority.

A stakeholder survey has been conducted for the project and provided to the audit team. There is no negative opinion on the project activity.

6.7. Findings

A detailed finding list is provided as Annex B to this report. Most of the issues were related to the data monitoring / analysis and the emission calculation.

All findings have been closed before finalising the verification.

The PDD version 1.1 from 17/06/2020 was submitted at the beginning of the verification process. During the verification the calculation approach of the emission reduction was changed. For that reason, chapter B.7.1 of the PDD contains the former version of the calculation approach.

6.8. Recommendations for improvements

The calculation of project emission uses calculation approach B of tool 03 'project leakage and fuel emission' instead of A. Calculation approach A is to be preferred according to AM0009. Using calculation approach B instead of A results in a maximum 0.3% higher monthly emission reduction. To comply better with the CDM methodology AM0009 a change to calculation approach A is recommended for the next verification period.

Using calculation approach B instead of A results in a maximum 0.3% higher monthly emission reduction.

The water content of the recovered gas is analysed in the laboratory and calculated by the water dew point and free water content. The procedure was confirmed in this way during validation. For more precise results it is recommended to change the location for measuring the amount of recovered gas and sampling after water separation from the gas.

Chapter B.7.1 of the PDD version 1.1 contains the former version of the calculation approach. It is recommended to update the PDD.

7. Verification decision

TÜV SÜD has undertaken the verification of the GHG declaration the project Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang to be implemented by the project proponent Shaya Saipu Energy Co., Ltd based on the requirements of ISO 14064-2 "Specification with guidance at the project level for quantification, monitoring and reporting of GHG emissions reductions or removal enhancements" and the KVO.

The project encompasses recovery and treatment of associate gas produced in the production process of SHB 1 oil & gas separation station, to avoid flaring of the associated gas. The project is relying on captive power with 13 sets of gas generators fired with produced dry gas for meeting its own electricity demand.



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To arrive at the final verification conclusions and opinion, TÜV SÜD carried out desk reviews, background investigations, two remote audits and one on-site audit taking into account the specific requirements of the KVO.

Through the verification process, the verification team identified different clarification requests and two corrective action requests. The project proponents have taken actions to address these findings and submitted to TÜV SÜD the revised GHG declaration, (Monitoring report) version 02 dated 16/August/2020 in combination with the emission reduction calculation version 02 dated 17/August/2020 and any other supporting evidence. All findings have been appropriately closed before the issuance of this verification report.

The verification team is of the opinion that the GHG declaration of the project: Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang with verified revision is in accordance with all the relevant GHG program requirements as well as the host country's national requirements and achieved the verified upstream emission reduction of

95,855 tCO₂e

in the period from

01/01/2020 to 31/05/2020

and will contribute to the sustainable development of the host country. Therefore, TÜV SÜD hereby certifies that the GHG declaration (Monitoring report) version 02 dated 16/August/2020, of the proposed upstream emission reduction project Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang of the project proponent Shaya Saipu Energy Co., Ltd is in accordance with the above stated requirements.

Lead Auditor

Technical Reviewer

Verification body





Annex

A. Checklist of the verification assessment plan

Verification of UER Project	3291301
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Document check - contents of the GHG declaration according to 14064-2
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Subject / context	Content - in keywords	Audit result
1) The GHG report contains the name of the project proponent.	Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang	ok
2) A brief description of the GHG project, including size, location, duration and types of activities	The project of Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang is located in Shaya County, Aksu Region, Xinjiang, people's Republic of China. The project is initiated by Shaya Saipu Energy Co., Ltd. Annually 120,000,000 Nm ³ associated gas is recovered and treated, and the expected emission reduction is 226,993 tCO ₂ e in the first year.	ok
3) A GHG statement(s), including a statement of GHG emission reductions and removal enhancements stated in units of CO ₂ e, e.g. tonnes of CO ₂ e	Amount of emission reductions achieved during this monitoring period 95,855 tCO ₂ e.	ok
4) A statement describing whether the GHG statement has been verified and/or validated, including the type of verification or validation and level of assurance achieved.	The validation report is available. Verification will be done by TÜV SÜD naming the level of assurance with 2 %.	ok
5) A list of all relevant GHG sources and sinks controlled by the project, as well as those related to or affected by the project, including the defined criteria for their selection for inclusion in quantification.	The associate gas for the project comes from 17 oil wells. The 17 oil wells involved in the proposed project are connected with the SHB 1 oil and gas station.	ok
6) A statement of the aggregate GHG emissions and/or removals of GHG for the GHG project that are controlled by the project proponent, stated in unit of CO ₂ e, e.g. tonnes of CO ₂ e, for the relevant time period (e.g. annual, cumulative to date, total)	Amount of GHG emission reductions achieved during this monitoring period 95,855 tCO ₂ e.	ok



7) A statement of the aggregate GHG emissions and/or removals by GHG quality assurance system for the GHG baseline scenario, stated in units of CO ₂ e, e.g. tonnes of CO ₂ e, for the relevant time period.	Baseline GHG emissions: 111,039 tCO ₂ e	ok
8) A description of the GHG baseline scenario and demonstration that the GHG emission re-ductions or re-moval enhancements are not over-estimated.	The baseline scenario of the project is the same as the scenario existing prior to the start of implementation of the project. In the absence of the project, all the associated gas recovered by the project will be flared and the existing oil and gas infrastructure at the oil field in Shaya County will continue operation without processing of any recovered associated gas and without any other significant changes.	ok
9) A general description of the criteria, procedures or good practice guidance used as a basis for the calculation of project GHG emission re-ductions and removal enhance-ments.	Baseline: CO ₂ emission factor for methane calculated in line with procedures and data presented in ISO 6976. Project emission: volume of gas is measured; net calorific value comes from chemical analysis of dry gas samples and CO ₂ emission factor of combusted dry gas is calculated from chemical analysis by C content.	ok
10) A statement on uncertainty, how it affects the GHG statement and how it has been addressed to minimize misrepresentation.	The project proponent calibrates the flow-meters every year. The accuracy of the meter is class 1.0. Recovered gas samples have been collected monthly in the recovery and process station. The chemical analysis test report of gas samples is done by a third-party laboratory which is accredited according to ISO17025.	ok
11) The date of the report and the time period covered	16/08/2020, 01/01/2020-31/05/2020	ok
12) As applicable, an assessment of permanence	The project is planned for 10 years.	ok
13) An evidence of the appointment of the authorized representative on behalf of the project proponent, if different from the proponent.	OMV Downstream GmbH	ok
14) If applicable, the GHG programme(s) to which the GHG project subscribes.	CDM methodology AM0009 and Austrian Kraftstoffverordnung 2012	ok
15) If required by intended users, changes to the project or monitoring system from the project plan and assessment of its conformity to criteria, applicability of methodologies and any other requirements.	Nothing determined	ok
Checklist Verification of UER Project		



Project documentation	Result of the verification	Audit result
Is the project objective clearly defined?	The project of Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang is located in Shaya County, Aksu Region, Xinjiang, people's Republic of China. The project is initiated by Shaya Saipu Energy Co., Ltd. Annually 120,000,000 Nm ³ associated gas is recovered and treated, and the expected emission reduction is 226,993 tCO _{2e} in the first year.	ok
Is the method to be used appropriate for the project?	CDM methodology AM0009, ISO 14064-2 and Austrian Kraftstoffverordnung 2012	ok
Are there any requirements differing from the level of security?	No	ok
Is misuse of the GHG declaration and the val./ver. confirmation excluded?	The monitoring report with final verification report will be submitted to authorities.	ok
Is the plant not part of the European emission trading scheme?	No, the project of Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang is located in Shaya County, Aksu Region, Xinjiang, people's Republic of China.	ok
Does the project get no financially support in Germany?	According to validation report no.	ok
Are the project boundaries clear?	The associate gas for the project comes from 17 oil wells. The 17 oil wells involved in the proposed project are connected with the SHB 1 oil and gas station.	ok
Periods of practical project implementation	01/01/2020-31/05/2020	ok
Unique location reference (4 digits)	The geographical location of the project is N40.5885°, E82.8821°.	ok
Is public funding, if so to what extent, used for the project?	According to validation report no.	ok
Are public subsidies for financing used?	According to validation report no.	ok
Is public funding for investment safeguards used?	According to validation report no.	ok
Does the working environment and site conditions give rise to risks? Are management systems installed at the operator's organization?	For risks see risk analysis. Management systems are according to monitoring report and PDD.	ok
Have control procedures been installed? Is there information on successful external or internal inspections and audits?	Cross checks for gas volume	ok
Is there a conflict between validation/verification depending on the	Validation was doen by Verico.	ok



state and implementation of the Upstream Emission Reduction (UER) Directive?		
Approvals / Management systems	Result of the verification	Audit result
Legal basis UER to be considered: national regulation in the country of submission	Austrian Kraftstoffverordnung 2012	ok
Official approval of the plants: are there any requirements for emission reduction or project measures?	According to validation report no.	ok
Have other environmental impacts been considered and described?	Analysis of environmental impacts in PDD	ok
Are there expert reports available on the environmental impacts of the project or parts of the project?	Report was submitted ('12 EIA report _Translated.pdf' and '07 EIA approval _Translated.pdf')	ok
Expert opinion on EIA	Report was submitted ('06 Authority approval _Translated.pdf')	ok
Documents on public participation in the approval process	Part of the validation report ('2.Validation report Saipu_Final.pdf')	ok
Classification and perception of validation or verification by interested parties	Part of the validation report ('2.Validation report Saipu_Final.pdf')	ok
Project documentation	Result of the verification	Audit result
Site plan, system diagram, process sequence	'1.PDD Saipu_Final.pdf'; 'Ev_doc 03a Project site technical layout_translated.pdf' and '05 Technical flow diagram in English.jpg'	ok
technical documentation of the plants	'Ev_doc 03a Project site technical layout_translated.pdf' and '05 Technical flow diagram in English.jpg'	ok
Forecast data on input quantities and production quantities	Annually 120,000,000 Nm ³ associated gas is recovered and treated, and the expected emission reduction is 226,993 tCO _{2e} in the first year.	ok
Do the current operating conditions reflect the assumptions, constraints, procedures and uncertainties of the project plan?	Confirmed at site visit	ok
Comparisons with known or industrial benchmarks	The prices for products and changes to technologies are not different to the baseline scenario assumed at validation.	ok
Data availability of the basic data calculations	'ER_(for MR) Shaya Saipu Energy AG projec....xls' 1. The net calorific value for iso-butane and iso-pentane is not correct in the calculation of the EF. With the correction of the values the EF stays unchanged though. 2. The calculation of project emission uses approach B (NCV x EF)	ok



	instead of A (w x p x 44/12). Approach A is to be preferred according to AM0009. Using calculation approach B instead of A results in a maximum 0.3% higher monthly emission reduction. 3. Calculation of baseline emission uses default value for methane. Resulting in a smaller emission reduction than using calculation approach A for baseline emissions. Thus, the overall emission reduction is conservative. 4. The water content is analysed in the laboratory and calculated by the water dew point and free water content.	
GHG emissions: intentional and unintentional omissions of potentially significant emission sources	List of oil associated oil wells was sent. No lift-gas gas is used. No double counting, no use of other fossil fuels or electricity in the project. Produced products are like described in the PDD. Everything was confirmed by local expert during site visit.	ok
GHG emissions: significant emissions outside the operations of the responsible entity	No	ok
Significant regulatory changes	It is confirmed by the local expert that there are no legal requirements concerning flaring, no fines or fees apply.	ok
Significant economic changes with effects on GHG declaration	The prices for products and changes to technologies are not different to the baseline scenario assumed at validation.	ok
Project Methodology	Result of the verification	Audit result
Ist he description of the project activity complete?	The project of Shaya Saipu Energy associate gas recovery and utilization from oil-field project in Xinjiang is located in Shaya County, Aksu Region, Xinjiang, people's Republic of China. The project is initiated by Shaya Saipu Energy Co., Ltd. Annually 120,000,000 Nm ³ associated gas is recovered and treated, and the expected emission reduction is 226,993 tCO ₂ e in the first year.	ok
Planned credit period	01/01/2020 - 31/05/2020	ok
Calculation method defined and applicable	'ER_(for MR) Shaya Saipu Energy AG projec....xls' 1. The net calorific value for iso-butane and iso-pentane is not correct in the calculation of the EF. With the correction of the values the EF stays unchanged though. 2. The calculation of project emission uses approach B (NCV x EF) instead of A (w x p x 44/12). Approach A is to be preferred according to AM0009.	ok



	Using calculation approach B instead of A results in a maximum 0.3% higher monthly emission reduction. 3. Calculation of baseline emission uses default value for methane. Resulting in a smaller emission reduction than using calculation approach A for baseline emissions. Thus, the overall emission reduction is conservative. 4. The water content is analysed in the laboratory and calculated by the water dew point and free water content.	
Sources and sinks fully identified	List of oil associated oil wells was sent. No lift-gas gas is used. No double counting, no use of other fossil fuels or electricity in the project. Produced products are like described in the PDD. Everything was confirmed by local expert during site visit.	ok
Is shift of emissions taken into account?	List of oil associated oil wells was sent. No lift-gas gas is used. No double counting, no use of other fossil fuels or electricity in the project. Produced products are like described in the PDD. Everything was confirmed by local expert during site visit.	ok
Validity of the current baseline scenario for the next crediting period: Assess compliance of the current baseline scenario with relevant mandatory national and/or sectoral policies. Assess the impact of circumstances. Assess whether the continuation of use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested. Assessment of the validity of the data and parameters.	It is confirmed by the local expert that there are no legal requirements concerning flaring, no fines or fees apply. There is also no plan for the close future of the Chinese government to restrict flaring. The prices for products and changes to technologies are not different to the baseline scenario assumed at validation.	ok
Additionality guaranteed	It is confirmed by the local expert that there are no legal requirements concerning flaring, no fines or fees apply. There is also no plan for the close future of the Chinese government to restrict flaring. The prices for products and changes to technologies are not different to the baseline scenario assumed at validation.	ok
Is the proposed project activity the first-of-its-kind?	According to validation report yes for this specific region.	ok
Identification of alternatives to the project activity is consistent with mandatory laws and regulations	Part of the validation report (2.Validation report Saipu_Final.pdf)	ok



Do the calculations correspond to the method description?	The calculation of project emission uses approach B (NCV x EF) instead of A ($w \times \rho \times 44/12$). Approach A is to be preferred according to AM0009. Using calculation approach B instead of A results in a maximum 0.3% higher monthly emission reduction. Calculation of baseline emission uses default value for methane. Resulting in a smaller emission reduction than using calculation approach A for baseline emissions. Thus, the overall emission reduction is conservative. the overall emission reduction is conservative.	ok
Commitment: no double use of the reduction	Self-commitment: no multiple use of the reduction	ok
Monitoring plan	Result of the verification	Audit result
Are sources and sinks for GHG data complete?	The associate gas for the project comes from 17 oil wells. The 17 oil wells involved in the proposed project are connected with the SHB 1 oil and gas station.	ok
Detailed levels of available documentation (proofs, evidence)	All required evidence was submitted and is consistent.	ok
Are measuring instruments described completely?	No detailed description in monitoring report. Manual, technical data and calibration certificates were submitted.	ok
Is the data acquisition described completely?	Explained during audits. Not included in detail in the monitoring report.	ok
Is the data evaluation described completely?	Yes	ok
Is the data storage described completely	Yes	ok
Is the derivation of not measured parameters complete?	The net calorific value for isobutane and isopentane is not correct in the calculation of the emission factor. With the correction of the values the emission factor stays unchanged though.	ok
Is the calculation procedure documented?	ER_(for MR) Shaya Saipu Energy AG projec....xls	ok
Are there possible sources and sinks outside the project boundary?	No	ok
Organizational structures for monitoring (responsibilities)	Baseline: CO ₂ emission factor for methane calculated in line with procedures and data presented in ISO 6976. Project emission: volume of gas is measured; net calorific value comes from chemical analysis of dry gas samples and CO ₂ emission factor of combusted dry gas is calculated from chemical analysis by C content.	ok



Industrie Service

Is a quality assurance procedure established?	Part of monitoring report (MR_Shaya Saipu AG project_0817_clear.pdf)	ok
Risk assessment of the operator	Explained during audits. Not included in detail in the monitoring report.	ok
Characteristics and performance of controls used for monitoring and reporting by the responsible body	Cross checks are implemented.	ok
Effectiveness of the control system of the responsible body, identification of errors or omissions	Data are correct.	ok
Experience, skills and qualifications of the personnel involved	Laboratory is accredited according to ISO 17025:2005.	ok
appropriate training is planned or carried out	Laboratory is accredited according to ISO 17025:2005.	ok



B. List of findings

Verification of UER Project		3291301					
Documentation Audit closure							
Reporting period	01.01.2020 - 31.05.2020						
Company	OMV Downstream GmbH						
Address	Trabrennstraße 6, 1020 Wien						
Contact person	Tobias Danz						
Information on activities of the company	Byer of share of emission reductions						
Date of the audit	15.07.2020						
Basis of audit / Standard	DIN EN ISO 14064-2, DIN EN ISO 14064-3, Austrian Kraftstoffverordnung 2012, CDM AM009						
TUV SUD Order number (ITAS):	3291301						
Lead Auditor	Schuler						
additional examiners	Schmidt						
Independent reviewer	Kraus						
External observer (DAkkS)	Gross						
Audit result/determination	Classification	Planned/appropriate corrective action documents to be submitted.	Responsibility	Date	compliance	Materiality	effectivity (post-exam)
The net calorific value for iso-butane and isopentane is not correct in the calculation of the emission factor. With the correction of the values the emission factor stays unchanged though.	M	With the correction of the values the emission factor stays unchanged. Declaration of GHG doesn't need to be changed. Correction of the values for next verification period.	Karbon Energy Consulting Co., Ltd.	Next verification period	ok	no	Next verification period
The calculation of project emission uses approach B (NCV x EF) instead of A (w x p x 44/12). Approach A is to be preferred according to AM0009. Using calculation approach B instead of A results in a maximum 0.3% higher monthly emission reduction.	Re	Change to approach A next verification period.	Karbon Energy Consulting Co., Ltd.	Next verification period	ok	no	Next verification period
Calculation of baseline emission uses default value for methane. Resulting in a smaller emission reduction than using calculation approach A for baseline emissions. Thus, the result for the overall emission reduction is conservative.	Note	The overall emission reduction is conservative.			ok	no	
The water content of the recovered gas is analysed in the laboratory and calculated by the water dew point and free water content. No water is lost during sampling according to project proponent. The procedure was confirmed by Verico in this way during validation.	Re	Location for measuring the amount of recovered gas and sampling after water separation from the gas.	Shaya Saipu Energy Co., Ltd	Next verification period	ok	no	Next verification period
Certificate for laboratory confirms compliance with ISO 17025:2005. The accreditation for special methods does not follow from the certificate. Only on the gas analyses are the standards mentioned according to which the analysis was performed.	Note	In China the accreditation system is applied differently.			ok	no	
In the PDD the calculation approach is not updated to the current version.	Re	Update PDD.	Karbon Energy Consulting Co., Ltd.	Next verification period	ok	no	Next verification period
<p>Comments: The inspection body shall draw the operator's attention to non-conformities and request their elimination. It shall document whether the operator has remedied the non-conformity. If the operator of the installation or aircraft does not correct or eliminate the misstatement or nonconformity notified to him by the verifier before the verifier issues the verification report, the verifier shall invite the operator to explain the main causes of the nonconformity or misstatement in order to assess its impact on the reported data. The verifier shall then assess whether the non-compliance that has not been corrected has an impact on the reported data, either on its own or in combination with others, and whether it results in material misstatements. The verifier may classify misstatements as material, even if they are below the defined materiality threshold, either on their own or in combination with others, if justified by the extent and nature of the misstatements and the particular circumstances in which they occur.</p>							
Classification	NC	Non-conformity / deviation because requirement not fulfilled					
	M	Error, misrepresentation, omission					
	Re	Recommendation for improvement (proposal of the inspection body)					
	Docu	Note on documentation (e.g. missing document)					
	Note	Note (supplementary and not included in the verification report)					



C. Document list

1	AT_PDD_Saipu Project_ver.02 0615.pdf
2	PDD-UER-021 SHAYA Saipu_0623.pdf
3	1.PDD Saipu_Final.pdf
4	2.Validation report Saipu_Final.pdf
5	1. Feasibility Study Report_Saipu.pdf
6	2. Project Acceptance Opinion.pdf
7	3. Test report for dry gas.pdf
8	AV_ER- (for MR) Shaya Saipu.xls
9	Equipment specification for flowmeter (recovered gas) _Translated.pdf
10	ER- (for MR) Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang-0708.xls
11	ER Spreadsheet_Shaya Saipu Energy associate gas recovery and utilization from oilfield project_0623.xlsx
12	ER- (for MR) Shaya Saipu Energy associate gas recovery and utilization from oilfield project in Xinjiang-0726.xls
13	Ev_doc 03a Project site technical layout_translated.pdf
14	MR_Shaya Saipu Energy associate gas recovery and utilization from oilfield project_0708.pdf
15	MR_Shaya Saipu AG_0817_Track change.docx
16	MR_Shaya Saipu AG project_0817_clear.pdf
17	Primary data_daily dry gas consume volume.txt
18	Primary data_daily recovered gas volume.txt
19	UER-VER_Shaya Saipu Energy_evidence list_v1.1_20200715.docx
20	01b_ER Spreadsheet_Shaya Saipu Energy associated gas recovery and utilization from project_0623.xlsx
21	ER_(for MR) Shaya Saipu Energy AG projec....xls
22	Ev_doc 01e_ERPA OMV-BEIJING KARBON_redacted.pdf
23	Ev_doc 02a_Authority approval.pdf
24	Ev_doc 02a_EIA approval.pdf
25	Ev_doc 02a_EIA report.pdf
26	Ev_doc 02a_Feasibility Study Report.pdf
27	Ev_doc 02a_Project Acceptance Opinion.pdf
28	Ev_doc 03a_Information of involving wells.xlsx
29	Ev_doc 03a_Technical flow diagram.jpg
30	Ev_doc 04a_Equipment specification for flowmeter.pdf
31	Ev_doc 04b_Calibration Report SN-19020115_point E.pdf
32	Ev_doc 04b_Calibration Report SN-19111170_point F.pdf
33	Ev_doc 04d_Associated gas receipt notice (with oilfield).pdf
34	Ev_doc 04d_Dry gas consumption (on-site use) record.pdf
35	Ev_doc 04d_On-site energy consumption record.pdf
36	Ev_doc 04d_Recovered gas volume record.pdf
37	Ev_doc 04e_2020-01 Analysis report for dry gas.pdf
38	Ev_doc 04e_2020-01 Analysis report for recovered gas.pdf



39	Ev_doc 04e_2020-02 Analysis report for dry gas.pdf
40	Ev_doc 04e_2020-02 Analysis report for recovered gas.pdf
41	Ev_doc 04e_2020-03 Analysis report for dry gas.pdf
42	Ev_doc 04e_2020-03 Analysis report for recovered gas.pdf
43	Ev_doc 04e_2020-04 Analysis report for dry gas.pdf
44	Ev_doc 04e_2020-04 Analysis report for recovered gas.pdf
45	Ev_doc 04e_2020-05 Analysis report for dry gas.pdf
46	Ev_doc 04e_2020-05 Analysis report for recovered gas.pdf
47	2020-01 Anlysis report for dry gas_As an example.pdf
48	2020-01 Anlysis report for recovered gas _Translated as an example.pdf
49	01. Calibration report for dry gas Flowmeter_Translated.pdf
50	02. Calibration report for recovery gas Flowmeter_Translated.pdf
51	01 Recovered gas volume record _Translated.pdf
52	02 Dry gas consumption (on-site use) record _Translated.pdf
53	03 On-site energy consumption record_Translated.pdf
54	04 Associated gas receipt notice (with oilfield) _Translated.pdf
55	05 Technical flow diagram in English.jpg
56	06 Authority approval _Translated.pdf
57	07 EIA approval _Translated.pdf
58	11 Equipment specification for flowmeter _Translated.pdf
59	12 EIA report _Translated.pdf
60	Ev_doc 04b_Calibration for pressure transmitter_dry gas flowmeter.pdf
61	Ev_doc 04b_Calibration for pressure transmitter_recovery gas flowmeter.pdf
62	Ev_doc 04b_Calibration for temperature transmitter_dry gas flowmeter.pdf
63	Ev_doc 04b_Calibration for temperature transmitter_recovery gas flowmeter.pdf
64	Ev_doc 04c_Explanation for the Accreditation of third-party laboratory.pdf
65	UER-VER_Shaya Saipu Energy_evidence list_v1.1_20200803.docx



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D. List of interviewed persons

Verification of UER Project



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List of participants	
Company	OMV Downstream GmbH
Information on activities of the company	Buyer of share of emission reductions
Date of the audits and meetings	19.06.2020, 15.07.2020, 22.07.2020, 23.07.2020, 28.07.2020 and 05.08.2020
TÜV SÜD Order number (ITAS):	3291301
Lead Auditor	Schuler
additional examiners	Schmidt
The below named participants took part in different constellations in the audits and meetings.	
Name, first name	Area of responsibility / department
Danz, Tobias	Senior Expert Biofuels Compliance & UER Mgmt
Yaodong, Lu	General manager
Simon, Meng Shen	Local and technical expert
Chen, Wu	Director
Zihui, Yang	Project manager
Gross, Jochen	German Accreditation Body (DAkkS) auditor
Schmidt, Hans	Co Auditor
Schuler, Julia	Lead verifier



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E. Accreditation certificate of Verification Body



Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-VS-14153-01-00 according to DIN EN ISO 14065:2013

Period of validity: 27.01.2020 to 13.12.2023 Date of issue: 27.01.2020

Holder of certificate:

TÜV SÜD Industrie Service GmbH
Westendstraße 199, 80686 München, GERMANY

Verification of Greenhouse Gases Emissions Reports and Tonne-kilometres Reports according to DIN EN ISO 14065:2013 and Regulation (EU) No. 2018/2067, EU (NO) 601/2012 and (EU) No. 2018/2066 in the following group of activities according to Annex I of directive 2003/87/EG and other activities according to Art. 10a and Art. 24 of subject directive:

No.	Scope of Accreditation
1a	Combustion of fuels in installations, where only commercial standard fuels as defined in Regulation (EU) No. 601/2012 are used, or where natural gas is used in category A or B installations
1b	Combustion of fuels in installations, without restrictions
2	Refining of mineral oil
3	Production of coke Metal ore (including sulphide ore) roasting or sintering, including pelletisation Production of pig iron or steel (primary or secondary fusion) including continuous casting
4	Production of processing of ferrous metals (including ferroalloys) Production of secondary aluminium Production or processing of non-ferrous metals, including production of alloys
5	Production of primary aluminium (CO ₂ and PFC emissions)
6	Production of cement clinker Production of lime or calcinations of dolomite or magnesite Manufacture of glass including glass fibre Manufacture of ceramic products by firing Manufacture of mineral wool insulation material Drying or calcination of gypsum or production of plaster boards and other gypsum products



Annex to the Accreditation Certificate D-V5-14153-01-00

No.	Scope of Accreditation
7	Production of pulp from timber or other fibrous materials Production of paper or cardboard
8	Production of black carbon Production of ammonia Production of bulk organic chemicals by cracking, reforming, partial or full oxidation by similar processes Production of hydrogen (H ₂) and synthesis gas by reforming or partial oxidation Production of soda ash (Na ₂ CO ₃) and sodium bicarbonate (NaHCO ₃)
9	Production of nitric acid (CO ₂ and N ₂ O emissions) Production of adipic acid (CO ₂ and N ₂ O emissions) Production of glyoxal and glyoxylic acid (CO ₂ and N ₂ O emissions) Production of caprolactam
10	Capture of greenhouse gases from installations covered by Directive 2003/87/EC for the purpose of transport and geological storage in a storage site permitted under Directive 2009/31/EC Transport of greenhouse gases by pipelines for geological storage in a storage site permitted under Directive 2009/31/EC
11	Geological storage of greenhouse gases in a storage site permitted under Directive 2009/31/EC
12	Aviation activities (emissions and tonne-kilometre data)
98	Other activities pursuant to Article 10a of Directive 2003/87/EC

Verification and Validation according to DIN EN ISO 14065:2013 for Non-Regulated Greenhousegas Schemes according to the following standards:

EN ISO 14064-1	Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals (ISO 14064-1:2006)
EN ISO 14064-2	Greenhouse gases - Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements
EN ISO 14064-3	Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions (ISO 14064-3:2006); German and English version EN ISO 14064-3:2012



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Annex to the Accreditation Certificate D-V5-14153-01-00

Abbreviations used:

DIN	Deutsches Institut für Normung e.V.
EN	European Standard
EU	European Union
ISO	International Organization for Standardization