



Industrie Service

**Add value.  
Inspire trust.**

# Verification Report

**VS-3745159-1**

## Verification of the Greenhouse Gas Declaration

### Energy efficiency improvement of the Nimr produced water disposal system

according to

**ISO 14064 Part 2**

and

**Austrian 'Kraftstoffverordnung'  
dated 08/March/2023**

implementing

**COUNCIL DIRECTIVE (EU) 2015/652 of 25 April 2015 laying down  
calculation methods and reporting requirements pursuant to Di-  
rective 98/70/EC of the European Parliament and of the Council re-  
lating to the quality of petrol and diesel fuels**

Date: 2023-September-18

Our reference:  
IS-UVS-RGB

Report No. VS-3745159-1

This Document consists of  
38 Pages.  
Page 1 of 38

Excerpts from this document  
may only be reproduced and  
used for advertising purposes  
with the express written approval  
of  
TÜV SÜD Industrie Service  
GmbH.

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.....	6
4.3. Preparation of the assessment.....	6
5. Means of Verification .....	7
5.1. Document review.....	7
5.2. Remote audits .....	7
5.3. Onsite audit .....	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.....	10
6.6. Social and environmental issues .....	10
6.7. Findings .....	10
6.8. Recommendations for improvements .....	10
7. Verification decision.....	10
Annex.....	12
A. Checklist of the verification assessment plan.....	12
B. List of findings.....	17
C. Document list.....	28
D. List of participants.....	31
E. Accreditation certificate of Verification Body .....	32



Industrie Service

## 1. Abbreviations

CDM	Clean Development Mechanism
CO <sub>2</sub>	Carbon Dioxide
DAKKS	German Accreditation Body (Deutsche Akkreditierungsstelle)
EIA	Environmental Impact Assessment
EN	European Norm
FQD	Fuel Quality Directive
GHG	Greenhouse Gas
ISO	International Standard Organisation
KVO	Kraftstoffverordnung
LNG	Liquified Natural Gas
NGL	Natural Gas Liquids
PDD	Project Design Document
PDO	Petroleum Development Oman
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 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: Energy efficiency improvement of the Nimr produced water disposal system in order to confirm compliance of the GHG Declaration with the requirements of ISO 14064 Part 2 and Austrian Kraftstoffverordnung (KVO) dated 08/March/2023 implementing COUNCIL DIRECTIVE (EU) 2015/652 of 25 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 this 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. The verification included a first remote audits, an on-site audit, and a follow-up audit, including all required project participants.

Following the audits and on-site audit, 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 2<sup>nd</sup> Jan 2023 until 08<sup>th</sup> Mar 2023.

## 3. Project details

The project “Energy efficiency improvement of the Nimr produced water disposal system” follows the aim to improve the energy efficiency of the Nimr produced water disposal system by implementing a GHG project located at Oman. The project, an ecological wetland facility solution, allows to treat up to 115,000 m<sup>3</sup>/day (design maximum) from the Nimr production in an energy efficient and environmentally friendly manner.



The produced water is moved through three different process stages (oil separation, reed beds and evaporation ponds) by gravity, using the vertical gradient of the local topography, for final disposal - without external energy. And the expected emission reduction is 122,124 tCO<sub>2</sub>e annually.

The project is situated at: N 18.666667°, E 55.759722°

The project applicant\* is: OMV Downstream GmbH  
Trabrennstraße 6-8  
1020 Vienna  
Austria

VAT number: ATU48359903

Company registration  
number:

FN 185462 p

\* To avoid confusion of double counting, it is clarified that there are two applicants for this project. Thus, the below listed total upstream emission reductions of 98,341 tCO<sub>2</sub>e for the considered monitoring period are divided into two batches with their respective verification report and UER batch ID:

Report No VS- 3745159-1: 85,341 tCO<sub>2</sub>e ([reported here](#), projects applicant OMV Downstream GmbH)

UER Batch 1: 5159\_TUVS\_20120710\_2022\_18.666667N, 55.759722E\_ 00000.85341

Report No VS- 3745159-2: 13,000 tCO<sub>2</sub>e (project applicant in Malta)

UER Batch 2: 5159\_TUVS\_20120710\_2022\_18.666667N, 55.759722E\_ 00000.13000

The project proponent is: Bauer Nimr LLC

Contact person: Dennis Alexandersen  
phone: +973 38860006  
email: dennis.alexandersen@bauer.de

Final version of the project documentation:

Monitoring report, version 3.0, 05/February/2023

MR6\_Nimr\_phase1and2\_05022023.pdf

Emission reduction calculation, version 3.0, 05/February/2023

MR6\_UER\_calculation\_Nimr\_phase1and2\_05022023.xlsx

Applied Clean Development Mechanism (CDM) methodology: AM0020 Version 2.

Total upstream emission reductions: 98,341 tCO<sub>2</sub>e

## 4. Verification approach

### 4.1. Contract review

There is a framework agreement between the client Bauer Nimr LLC and TÜV SÜD Industrie Service GmbH for the verification services for an upstream emission reduction project. 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 3) 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:

Diego Alvarez Florez Scopes: 1, 2, 3, 5, 10, 11, 12

## 4.3. Preparation of the assessment

The project proponent has been requested to submit the project documentation and scanned copies of relevant evidence before starting the remote audits. 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 Oman specifics on energy generation, its environmental legislation, legislation and common practise regarding 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 proponent for ensuring appropriate arrangements in anticipation of the audit.

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 <sub>2</sub> ) 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
Correctness of underlying data	Use of inappropriate measuring devices or not calibrated and analysis methods	Check of devices datasheets and calibration certificates
Baseline scenarios	Data of pre-project scenario	Audit



Area of concern	Risk	Assessment method
	Life-time of pre-project equipment Remaining evidences Description of alternative scenario as given by the project design document (PDD)	Interviews and review of supporting documentation
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
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

The audit team, in agreement with the project participants, decided to have two remote audits via Microsoft Teams and one on-site audit by a local expert. The first remote audit was conducted on January 10, 2023, and the second remote audit on January 23, 2023.

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, are listed in Annex C.

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

### **5.3. Onsite audit**

An initial onsite audit took place on 17 January 2023. During this audit, Mr Hassan Farrouh, a local expert from TÜV SÜD Middle East Ltd, visited the Bauer Nimr LLC project site to hold discussions with key operational staff and inspect the facilities.

However, this audit was not accepted by the Austrian Federal Environmental Agency as its contribution did not formally meet the requirements of the KVO. A new onsite audit was requested, which has now been carried out.

This new onsite audit took place on 13 September 2023. As part of this audit, our lead auditor, Mr. Diego Alvarez Florez, visited the project site of Bauer Nimr LLC to conduct interviews with key operational personnel, inspect the facilities and generated a new onsite audit report.

In consequence, a new version of the verification report (this report) was issued, replacing the verification report generated in March.

### **5.4. Sampling**

All supporting documents were completely assessed. The raw data from the flow meters of the produced water, daily production reports and monthly production reports have been completely assessed.

### **5.5. Follow-up of revisions**

After the delivery of requested further evidence and the revision of the project documentation addressing the identified non-compliances, an additional round of desk reviews took place, assessing these submissions. The final assessments regarding the closure of findings are 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 assessment team. The main focus of this process is the assessment of the completeness and traceability of the verification carried out on the basis of the internal and external verification report. If necessary, the assessment 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 in the project document and cover the injection pumps connected with the deep-water wells for final disposal connected to the PDO power grid (baseline scenario) and the wetland facility phase 1 and 2 (controlled and directly attributable to the project). Instead of using energy to dispose water in deep geological layers, the oil-contaminated water is treated by a wetland solution in an energy-efficient manner (gravitational flow of water and biological purification through reed beds). It 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 on taxes or fines regarding the intensive use of energy to dispose of water in deep geological layers.

### **6.3. Data quality**

The data used to calculate the emission reductions and to set the ex-ante parameters have been verified throughout this verification. All required data is considered accurate and complete. The calculation is based on reproducible data.

The requirement on conservativeness is achieved by using approved standards and tools, which ensure a transparent assessment of information provided.

The project owner calibrated the flow meters per calibration procedures and data is stored electronically for a period of 5 years after submission of the verification report on a monthly aggregated basis. A clear procedure is established that ensure responsibility and accountability for all parameters that are required to be monitored, measured, and reported.

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

### **6.4. Baseline scenario and additionality**

The PDD correctly describes the baseline scenario. The continuation of the recent practice of continuously using intensive energy to dispose water in deep geological layers, is the most likely scenario in the absence of the project activity.

The relevant pumping and auxiliary equipment would operate without need for refurbishment beyond 2022 and the wastewater production will not significantly decrease, hence they will continue to treat oil-contaminated water 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 using intensive energy to dispose water in deep geological layers, which is still applied for any excess produced water. The treatment 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 respective 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.

No stakeholder interaction has been required beside the communication with the authorising authorities.

## **6.7. Findings**

A detailed finding list is provided as Annex B to this report.

During this monitoring period, the amount of GHG emission reductions achieved is 98,341 tCO<sub>2</sub>e. All findings have been closed before finalising the verification.

The PDD version 1.1 from 02/08/2019 was submitted at the beginning of the verification process. The project is implemented according to the project design and no change and deviations have been made during this monitoring period.

## **6.8. Recommendations for improvements**

For the next verification, the information provided by the PDO (fuel consumption, power demand and power generation) must be submitted in more detail.

Quality checks should be implemented in the process of calculating and reporting the GHG emissions to avoid errors, misrepresentations, or omissions.

## **7. Verification decision**

TÜV SÜD has undertaken the verification of the GHG declarations of the project “energy efficiency improvement of the Nimr produced water disposal system”, implemented by the project proponent Bauer Nimr LLC, 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.



Industrie Service

The baseline scenario encompassed the electricity consumption of pumps used by the deep well disposal scheme of Nimr oil field in Oman. Instead, the project reduces GHG emissions by treating the oil-contaminated water in a unique wetland solution with the vertical gradient of the local topography, allowing the water to flow by gravity, avoiding any electricity consumption.

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 considering the specific requirements of the KVO.

Through the verification process, the verification team identified different findings and missing documents. The project proponents have taken actions to address these findings and submitted to TÜV SÜD: the revised GHG declaration (Monitoring report) version 3.0 dated 05/February/2023 in combination with the emission reduction calculation version 3.0 dated 05/February/2023 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: Energy efficiency improvement of the Nimr produced water disposal system 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

**85,341\* tCO<sub>2</sub>e**

in the period from

**01/January/2022 to 31/December/2022**

and will contribute to the sustainable development of the host country. Therefore, TÜV SÜD hereby confirms that the GHG declaration (Monitoring report) version 3.0 dated 05/February/2023, of the proposed upstream emission reduction project Energy efficiency improvement of the Nimr produced water disposal system of the project proponent Bauer Nimr LLC is in accordance with the above stated requirements.

---

Lead Auditor

Digitally signed by Johann Schmidt  
Date: 2023-09-29 08:57:41+02:00

---

Verification body

Norbert ANDREAS Kraus

Digitally signed by Norbert ANDREAS Kraus  
Date: 2023-09-29 09:40:03+02:00

---

Technical Reviewer

\* To avoid double-counting and misuse, the verification team declares that the verified upstream emission reductions of 85,341 tCO<sub>2</sub>e is part of the total emission reductions of 98,341 tCO<sub>2</sub>e achieved by the project "Energy efficiency improvement of the Nimr produced water disposal system" in the 6th monitoring period from 01/Jan/2022 to 31/Dec/2022.



## Annex

### A. Checklist of the verification assessment plan

<b>Verification of UER Project</b>	<b>3745159</b>
------------------------------------	----------------

<b>Document check - contents of the GHG declaration according to EN ISO 14064-2</b>
---

Subject / context	Content - in keywords	Audit result
identify the intended use and intended user of the GHG report;	Authority designated by a member state for fuel quality directive upstream emission reductions calculation and reporting - The GHG report will be used in Malta and Austria, according to monitoring report "MR6_Nimr_phase1and2_05022023.pdf"	ok
use a format and include content consistent with the needs of the intended user;	Yes, the monitoring report was written accordingly and complemented with an Excel-sheet with the emission reduction calculations	ok
1) The GHG report contains the name of the project proponent.	Energy efficiency improvement of the Nimr produced water disposal system	ok
2) a brief description of the GHG project, including size, location, duration and types of activities	The project purpose is to improve the energy efficiency of the Nimr produced water disposal system by implementing an ecological wetland facility solution (= GHG project) located at Oman. The project, an ecological wetland facility solution, allows to treat up to 115,000 m <sup>3</sup> /day (design maximum) from the Nimr production in an energy efficient and environmentally friendly manner. And the expected emission reduction is 122,124 tCO <sub>2</sub> e annually. The project was implemented in two phases, where under phase 1 all process stages were established and under phase	ok



	2 the reed bed area was extended from 234 ha to 351 ha. The phase 1 was completed on the 15/01/2011 and phase 2 on the 07/10/2012, respectively.	
3) a GHG statement(s), including a statement of GHG emission reductions and removal enhancements stated in units of CO <sub>2</sub> e, e.g. tonnes of CO <sub>2</sub> e	Amount of GHG emission reductions achieved during this monitoring period: 98,341 t CO <sub>2</sub>	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. Last verification report by TÜV SÜD in 2021 is available.	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	see chapter 2.1 (Description of the implemented GHG project) of the monitoring report which also covers the boundaries. Further description of the baseline and project boundaries in Project Design Document (UER_Nimr_phase1_2_PDD_02082019)	ok
6) a statement of the aggregate GHG emissions and/or removals by GHG SSRs for the GHG project that are controlled by the project proponent, stated in unit of CO <sub>2</sub> e, e.g. tonnes of CO <sub>2</sub> e, for the relevant time period (e.g. annual, cumulative to date, total)	There is no aggregate GHG emissions and/or removals by GHG SSR for the project, see chapter 4 and 7 from the Project Design Document (UER_Nimr_phase1_2_PDD_02082019) UER_Nimr_phase1_2_PDD_02082019	ok
7) a statement of the aggregate GHG emissions and/or removals by GHG SSRs for the GHG baseline, stated in units of CO <sub>2</sub> e, e.g. tonnes of CO <sub>2</sub> e, for the relevant time period	There is no aggregate GHG emissions and/or removals by GHG SSR for the baseline, see chapter 4 and 7 from the Project Design Document (UER_Nimr_phase1_2_PDD_02082019)	ok
8) a description of the GHG baseline and demonstration that the GHG emission reductions or removal enhancements are not over-estimated	See chapter 4.2 (Data and parameters not monitored (fixed ex-ante) of Monitoring Report for details on quantification. Baseline calculation follows AM0020 UNFCCC CDM methodology AM0020/version 2 "Baseline methodology for water pumping	ok



	efficiency improvements” and the associated UNFCCC CDM tools:Tool 05 V3, Tool 07v7.	
9) a general description of the criteria, procedures or good practice guidance used as a basis for the calculation of project GHG emission reductions and removal enhancements	See chapter 4.2 (Data and parameters not monitored (fixed ex-ante) of Monitoring Report for details on quantification. Baseline calculation follows AM0020 UNFCCC CDM methodology AM0020/version 2 “Baseline methodology for water pumping efficiency improvements” and the associated UNFCCC CDM tools:Tool 05 V3, Tool 07v7.	ok
10) a statement on uncertainty, how it affects the GHG statement and how it has been addressed to minimize misrepresentation	See chapter 1.13 of the monitoring report: Uncertainty in the quantification of the GHG reductions.  Additionally, The project owner calibrated the flow meters at per calibration procedures and data is stored electronically. A clear procedure is established that ensure responsibility and accountability for all parameters that are required to be monitored, measured and reported. Thus, there is a low risk of inappropriate data quality and missing reproducibility.	ok
11) the date of the report and the time period covered	date: 05/02/2023 time period: 01/01/2022 00:00 to 31/12/2022 24:00	ok
12) as applicable, an assessment of permanence	Not applicable. The emission reductions produced by this project cannot be reversed as this project does not use any GHG sinks or reservoirs, that are under risk to have a short longevity.	ok
13) an evidence of the appointment of the authorized representative on behalf of the project proponent, if different from the proponent	only Bauer Nimr LLC (Mr. Dennis Alexandersen)	ok



14) if applicable, the GHG programme(s) to which the GHG project subscribes	CDM methodology AM0020v2 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	Not applicable	ok

**Monitoring the GHG project - The monitoring plan shall include the following, as applicable:**

<b>Subject / context</b>	<b>Content - in keywords</b>	<b>Audit result</b>
a) purpose of monitoring;	See chapter 3 of monitoring report and chapter 11 of the Project Design Document (UER_Nimr_phase1_2_PDD_02082019)	ok
b) list of parameters being measured and monitored;	Waterflow to wetland phase 1 and phase 2	ok
c) types of data and information to be reported, including units of measurement;	m3 of water	ok
d) origin of the data;	Krohne meter readings	ok
e) monitoring methodologies, including estimation, modelling, measurement, calculation approaches and uncertainty;	Krohne flowmeter Optiflux 2000	ok
f) monitoring frequency, considering the needs of intended users;	Hourly, Daily and monthly data reports are generated	ok
g) monitoring roles and responsibilities, including procedures for authorizing, approving and documenting changes to recorded data;	The actual procedure was sent with the required information, see 3-13.220327_BNO-89000076-PRO-001 Rev 02 Upstream Emission Reduction Procedure	ok
h) controls that include internal data check for input, transformation and	The actual procedure was sent with the required information, see 3-13.220327_BNO-89000076-PRO-001 Rev	ok



output, and procedures for corrective actions;	02 Upstream Emission Reduction Procedure	
i) GHG information management systems, including the location and retention of stored data and data management that includes a procedure for transfers of data between different forms of systems or documentation.	The actual procedure was sent with the required information, see 3-13.220327_BNO-89000076-PRO-001 Rev 02 Upstream Emission Reduction Procedure	ok

<b>Documentation from other sources</b>		
<b>Checklist</b>	<b>Content - in keywords</b>	<b>Audit result</b>
Is misuse of the GHG declaration and the val./ver. confirmation excluded?	See confirmation statement: 221205_Confirmation Statement	ok
Plant not in EU-ETS	Project in Oman	ok
Project not financially supported in Germany	Project in Oman	ok
official approval of the plants: are there any requirements for emission reduction or project measures?	EIA was approved by Sultanate of Oman	ok
Changes with respect to previous periods	No changes, operation as in the Project Design Document (UER_Nimr_phase1_2_PDD_02082019)	ok
significant regulatory changes	No changes, operation as in the Project Design Document (UER_Nimr_phase1_2_PDD_02082019)	ok
significant economic changes with effects on GHG declaration	No changes, operation as in the Project Design Document (UER_Nimr_phase1_2_PDD_02082019)	ok
Additionality guaranteed	Yes, first-of-its-kind plant	ok
No double use of the emission reductions	See confirmation statement "221205_Confirmation Statement.pdf" and the letter of assurance and authorization obtained by the NDC authority in Oman "Letter of Assurance and Authorization.pdf"	ok





Industrie Service

## B. List of findings

Documentation Audit closure	
<b>Reporting period</b>	<b>01.01.2022 - 31.12.2022</b>
Company	BAUER NIMR LLC
Date of the audit	10.01.2023 (remote audit), 23.01.2023 (remote audit), 13.09.2023 (onsite audit)
Basis of audit / Standard	DIN EN ISO 14064-2, EN ISO 14064-3, EN ISO 14065, Austrian Kraftstoffverordnung 2012, CDM AM0020
TÜV SÜD Order number (ITAS):	3745159
Lead Auditor	Diego Alvarez Florez
Independent reviewer	Norbert Kraus
External observer (DAkkS)	--
<b>Reporting period</b>	<b>01.01.2022 - 31.12.2022</b>

Nr.	Audit result/determination	Date	Classification	Planned/appropriate corrective action documents to be submitted.	Responsibility	Date	Compliance	Materiality	Correction done
1	Correction/updates on the Monitoring Report: · Section 1.4: time period needs to be updated · Section 1.5: please specify the actual intended countries · Section 3: name of monitoring	10.01.2023	M	A new version of the monitoring report will be submitted with the updates and corrections highlighted during the first audit	BAUER NIMR	05.02.2023	Yes	Yes	The monitoring report was corrected and updated accordingly, see file "MR6_Nimr_phase1and2_05022023.pdf".  Finding closed



Industrie Service

	procedure to be updated - Update on the calculations and total GHG emission reductions								
2	<p>Information about the operation and maintenance of the wetlands phases 1 and 2 were requested. Including information regarding removal of accumulated residues (i.e. salts, minerals, etc.), harvest of the reeds, and maintenance of the separation unit.</p> <p>Why is the energy associated with these activities not considered in the calculation of the project's GHG emissions?</p>	10.01.2023	CR	<p>It was explained during the audit that the oil being treated had a low concentration of salts, thus the accumulation of salts in the reedbeds and evaporation ponds has not been an issue so far. Therefore, removal of residues had not been carried out.</p> <p>The harvest of the reeds occurs approximately every 10 years using a diesel tractor.</p> <p>For the reasons above, no GHG emissions are considered for these activities during this period.</p>	BAUER NIMR	14.09.2023	Yes	No	<p>During the onsite audit it was observed a diesel tractor, which has been used for harvesting the reed beds. No other heavy equipment associated to the operation and maintenance of the wetlands was observed. See onsite report "BAUER Nimr - Onsite Audit Report.pdf" - This confirms that there is no relevant GHG emissions associated to the maintenance of the wetlands. Which agrees with the methodology AM0020.</p> <p>Finding closed</p>
3	<p>The project is a wetland facility that allows to treat up to 115,000 m<sup>3</sup>/day (design maximum) from the Nimr production in an energy efficient and environmentally friendly manner see PDD "UER_Nimr_phase1_2_PDD_020 82019.pdf". This is achieved by moving the water through three different process stages, oil separation; reed beds; evaporation ponds by gravity, using the verti-</p>	10.01.2023	Docu	<p>This will be verified during the onsite audit</p>	BAUER NIMR	14.09.2023	Yes	No	<p>During the onsite audit it was confirmed that the water moves by gravity through the wetlands without external energy See onsite report "BAUER Nimr - Onsite Audit Report.pdf". Additionally, the photos sent on the 19.01.2023 (folder named "Photos") show in more detail how the produced water flows by gravity through the separation unit (equalizer tank, hydrocyclones and distribution channels).</p>



Industrie Service

	cal gradient of the local topography, for final disposal - without external energy.								Finding closed
4	<p>Most of the residual crude oil is separated from the produced water at the turnover point, which includes the oil/water separation unit and distribution channels. Further explanation on those two systems was requested.</p> <p>It was mentioned during the audit that the separated oil is returned to the production site, how is this done?          If there are GHG emissions generated, why are they not included in the project emissions?</p>	10.01 .2023	CR	<p>It was explained that the oil/water separation unit works without the use of external power - the oil is separated based on the gravity differences between the oil and water using hydrocyclones. In the distribution channels, any remaining free oil is allowed to float to the surface where it is also recovered using floating oil skimmers and pumped into the crude oil holding tank. Permanent pumps are installed at the holding tank to transfer the oil to the PDO Nimr Asset for injection into the common carriage oil pipeline. (see folder "10.Environmental Impact reports 2022"). This will be verified during the onsite audit.</p> <p>The argument provided by the project proponent to justify why the energy required to separate the oil is not considered in project emissions was that, in the baseline scenario, produced water was sent to deep well water and not oil recovery occurred. therefore, these activities are not included in the project boundary. TÜV SÜD considers this argumentation valid.</p> <p>Recovered oil is returned to the PDO facility using pumps (PDO is responsible for this activity), the above argument also</p>	BAUER NIMR	14.09 .2023	Yes	Yes	<p>During the onsite audit it was observed that the floating oil skimmers are operated by compressors and the separated oil is then pumped to the crude oil holding tank, as explained during the first audit. See on-site report "BAUER Nimr - Onsite Audit Report.pdf"</p> <p>The folder "Hydrocyclone photos and technical sheet" contain photos of the hydrocyclones and the instruction manual of the hydrocyclones - These documents show clearly how the hydrocyclones function - no external energy is required to separate the oil from the produced water.</p> <p>Finding closed</p>



Industrie Service

				answers why emissions associated with oil return are not considered in the project emissions.					
5	BAUER NIMR takes water samples on a monthly basis to measure the oil concentration of the produced water before entering in the wetlands and at the end in the evaporation ponds. These documents were not available during the first audit.	10.01 .2023	Docu	<p>It was requested 3 samples of the oil concentration analysis on the water before entering the wetland and at the evaporation ponds (in Jan, Jun and Dec 2022) -&gt; A summary sheet was submitted, see file "Oil In Water Sample Analysis.pdf". But official reports were not provided.</p> <p>However, a third party company (Wimpey Laboratory LLC) conducts water analysis at the inlet and outlet of the wetlands on a quarterly basis; the reports of 2022 were requested.</p>	BAUER NIMR	24.01 .2023	Yes	No	<p>The 2022 water analysis reports were submitted, see folder "Water sample analysis". The reports show that oil concentrations are drastically reduced, from values over 700 ppm at the inlet to values lower than 0,5 ppm at the outlet of the wetlands.</p> <p>Finding closed</p>
6	<p>It was asked during the audit about the possibility of methane generation, due to the biochemical processes that occur in the reed beds - BAUER NIRM has not carried out any studies on the methane generation or measured methane concentrations in the wetlands.</p> <p>BAUER NIMR has conducted a research, introducing new plant species in the reed beds, to reduce the biomass litter which is a potential source of methane generation.</p>	10.01 .2023	Docu	<p>Research document will be submitted.</p> <p>The use of new plant species in the reed beds will be verified during the onsite audit.</p>	BAUER NIMR	14.09 .2023	Yes	No	<p>The validation of the project and the environmental assessment report from 2022 do not indicate generation of methane in the wetlands, see files "Final Bauer P1&amp;2_VAL-20191029_v5_TR.pdf" and folder "10.Environmental Impact reports 2022"</p> <p>Research document: Integrated Produced Water Management in a Desert Oilfield Using Wetland Technology and Innovative Re-use Practices, see file "9.Reed-bed Species.pdf".</p> <p>According to the onsite audit,</p>

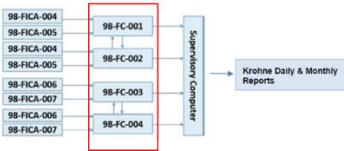


Industrie Service

									BAUER NIMR is experimenting with new species of plants for the reed beds. See onsite report "BAUER Nimr - Onsite Audit Report.pdf"
									Finding closed
7	The environmental impact assessments provided, see files "3.5OES_Bauer_3035_EIA.Final.Rev.i NWTP, Phase 1.pdf" and "3.5OES_Bauer_3035_EIA.Final.Rev.i NWTP, Phase 2.pdf" are from 2009 and 2011 respectively and include the construction activities and assumptions regarding the impact of the operation and maintenance of the wetlands facilities. During the first audit, it was mentioned that BAUER NIMR has also an Environmental Report being done quarterly every year.	10.01 .2023	Docu	The environmental reports from the first three quarters of 2022 were requested for further review.	BAUER NIMR	11.01 .2023	Yes	No	Documents submitted, see folder "10.Environmental Impact reports 2022"  Finding closed
8	There are two metering points and each point consist of a Metering Skid, each metering skid is equipped with two calibrated flowmeters with integrated flow computer - The respective flowmeter in conjunction with the integrated flowmeter computer measures and records the produced water flow and submit the measurement data to the supervisory computer	10.01 .2023	Docu	The missing report will be provided and unsigned reports will be resubmitted with the respective approval.	BAUER NIMR	11.01 .2023	Yes	Yes	The documents were provided, please see folder "5.Signed monthly reports"  Finding closed



Industrie Service

	<p>system. The software of the supervisory control computer system allows to analyse and report the measured values on an hourly, daily and monthly basis and to generate appropriate reports in pdf format. The monthly report is approved by the NWTP plant manager, who sends the monthly report to the UER Project manager.</p> <p>The monthly report from November was missing and the reports from January, March and December were not approved as described above.</p>								
9	<p>The monthly and daily reports from the flowmeter were cross-checked during the audit and no inconsistencies were found. However, those reports are only linked to the flow computer (see red rectangle in the figure below) and not to the actual flowmeter's tags, the source of the primary data.</p>  <p>Further explanation is required.</p>	10.01 .2023	Docu / CR	<p>It was explained that each calibrated flowmeters with integrated flow computer. The flow computers record the information from the flowmeters and generates the monthly and daily reports see folders "Monthly Monitoring data" and "5.Signed monthly reports". In those reports, the flowmeters are identified as stream 1 and stream 2, which is how they are identify in the on-site monitoring system. See on-site report "BAUER Nimr - Onsite Audit Report.pdf"</p> <p>During the follow-up audit, the monthly reports for September, October and November, when the duty flowmeters (stream 1) were being calibrated, were checked and found to be consistent. The</p>	BAUER NIMR	14.09 .2023	Yes	Yes	<p>Document updated as it was requested, please see "INSTRUMENTS CALIBRATION REGISTER 2023.pdf" sent on 24.01.2023.</p> <p>Additionally, a photo of the overview of the monitoring system was provided, see folder "Metering system".</p> <p>Finding closed</p>



Industrie Service

				<p>backup flowmeters (stream 2) were the ones that measured the produced water. Same exercise was done during the on-site audit daily reports from June, September and December, see folder "Daily Monitoring Reports"</p> <p>It was requested to identify the flowmeters with their respective stream in the "Instrument calibration register".</p>					
10	The list of monitoring devices and the calibration schedule is included in the document "INSTRUMENTS CALIBRATION REGISTER 2023" - the flowmeter 98-FICA-007 (A1166024) was not included.	10.01 .2023	M	The correction will be made, and the document will be sent again	BAUER NIMR	24.01 .2023	Yes	No	<p>Please see "INSTRUMENTS CALIBRATION REGISTER 2023.pdf" sent on 24.01.2023.</p> <p>Finding closed</p>
11	In order to crosscheck the flowmeter readings from BAUER NIMR with the billed values issued by PDO, the invoice for the months January, June and December 2022 were requested. However, it was noticed that the volumes issued were ranges of volumes see "Invoice Samples". Further explanation was asked during the first audit.	10.01 .2023	CR	It was explained that the operator of the oil field PDO and Bauer Nimr agreed on a range of produced water that PDO must pay for. The monthly volumes reported by BAUER NIMR were within the ranges stated in the invoices.	BAUER NIMR	10.01 .2023	Yes	No	Finding closed
12	The management of the project proponent has the overall responsibility for daily operations and reporting. An assigned UER manager of the project proponent is	10.01 .2023	Docu	It was shown during the first audit a training matrix of the BAUER NIMR team involved in the monitoring of the UER project as well as operation and maintenance of the wetlands.	BAUER NIMR	11.01 .2023	Yes	No	<p>See file "6.Training Matrix people involved in O&amp;M of wetlands.xls"</p> <p>Finding closed</p>



Industrie Service

	<p>responsible for the monitoring process, including the follow-up of operations, review of the monitored results/data, quality assurance of measurements in cooperation with the UER team. The UER team executes the monitoring, which includes inter alia: data recording and archiving, quality assurance and quality control of the data, equipment calibration, scheduled and unscheduled maintenance, and adoption of corrective actions if needed. Evidence of the conducted trainings were requested</p>			<p>This document will be submitted.</p>					
13	<p>the Climate Affairs License of the project was submitted in Arabic language "221203_azd_Climate Affairs License.pdf", for further analysis the translation of the document was requested.</p>	10.01 .2023	Docu	<p>The translation of this document will be submitted in English for further review.</p>	BAUER NIMR	11.01 .2023	Yes	No	<p>Document submitted, see file "7. Climate Affair License - English.pdf". During the onsite audit, the information in this document was verified and found to be consistent with the situation onsite.</p> <p>Finding closed</p>





Industrie Service

14	<p>During the first audit, it was not clear if BAUER NIRM is using chemical for the operation and maintenance of the wetlands.</p> <p>On the other hand, it was explained that fishes were being used to combat some pests present in the reed beds - this information was confirmed during on-site audit.</p>	10.01 .2023	Docu	<p>Bauer Nimr Confirmed that no chemicals are being used in the operation and maintenance of the wetlands.</p>	BAUER NIRM	14.09 .2023	Yes	No	<p>During the onsite audit, the workshops and storage rooms were inspected and no chemicals were observed.</p> <p>Additionally, in the environmental impact reports, see folder "10.Environmental Impact reports 2022", no chemicals are mentioned for the operation and maintenance of the wetlands.</p> <p>Finding closed</p>
15	<p>One parameter for the calculation of the UER is <math>EF_{grid,y}=Efy</math> = grid emission factor in year y - "y" corresponds to the year of the monitoring period, in this case 2022. It was noticed that in the calculations a fixed ex-ante value from (y=2015-2017) was used.</p> <p>According to the PDD and monitoring report, the grid emission factor should be calculated following the UNFCCC Methodological tool "Tool to calculate the emission factor for an electricity system Version 07.0" <a href="http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf">http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf</a>, which specifies that for power plants, the calculation of the grid emission factor should use a 3-year generation-weighted</p>	10.01 .2023	M / Docu	<p>A recalculation of the grid emission factor was requested using the PDO data from 2020, 2021 and 2022 and the methodology specified in the PDD.</p> $EF_{grid,OM-ave,y} = \frac{\sum_i FC_{i,y} \times NCV_{i,y} \times EF_{CO2,i,y}}{EG_y}$	BAUER NIRM	05.02 .2023	Yes	Yes	<p>The requested information from the PDO was provided, please see "EXT RE Requirements for Carbon Credit verification audit" sent on 03.02.2023.</p> <p>The recalculation of the grid emission factor was made using the right methodology, the values provided by the PDO and the reference values taken from the 2006 IPCC Guidelines on National GHG Inventories, see excel sheet "MR6_UER_calculation_Nimr_phase1and2_05022023.xlsx". As a result of the recalculation the grid emission (<math>EF_{grid,y}</math>) factor changed from "0,615 tCO2/MWh (y=2015-2017)" to "0,617 tCO2/MWh (y=2020-2022)".</p> <p>Finding closed</p>



Industrie Service

	average, based on the most recent data available.		Re	For the next verification, the information provided by the PDO (fuel consumption, power demand and power generation) must be submitted in more detail.	BAUER NIMR	03.02 .2023			
16	During the first remote audit, it was asked if the PDO network was connected to the national network of Oman. Since this could be relevant for the calculation of the grid emission factor (EF <sub>grid,y</sub> ). BAUER NIMR will clarify this information with the PDO.	10.01 .2023	CR / Docu	A statement from the PDO will be provided indicating whether or not their network is connected to the national grid of Oman.	BAUER NIMR	03.02 .2023	Yes	Yes	The PDO confirmed that the PDO grid is connected to the national grid of Oman from North and South, see "EXT RE Requirements for Carbon Credit verification audit" sent on 01.02.2023. Additionally, the table shared in "EXT RE Requirements for Carbon Credit verification audit" sent on 03.02.2023, shows that in the years 2020, 2021 and 2022 the PDO power generation was higher than the power demand. Therefore, the balance with the Oman national grid is negative and it can be concluded that the grid emission factor depends only on the power sources of PDO grid.  Finding closed



Industrie Service

17	Excel sheet "MR6_UER_calculation_Nimr_phase1and2_04012023.xlsx" - tab "electr.consum. project Kwhy" needs to be updated to 2022 - in the tab "produced water Jan&Dec" a correction in the values from January and December were corrected but not applied in the calculation of the total produced water in 2022, tab "produced water volume summary" - that needs to be corrected - The hourly reports used for the corrections were not provided - EF needs to be recalculated	10.01 .2023	M	An updated version of the Excel sheet with the indicated amendments will be submitted.  Hourly reports used in the excel sheet - tab "produced water Jan&Dec" will be provided.	BAUER NIMR	05.02 .2023	Yes	Yes	An updated version of the Excel sheet was sent, with the corrections made, see file "MR6_UER_calculation_Nimr_phase1and2_05022023.xlsx". As a result the produced water increased from "23.808.432 m3" to "27.811.738 m3"  Hourly reports used in the excel sheet - tab "produced water Jan&Dec" provided, see "Combined Daily Report Phase I and II_20220101_100000" and "Combined Daily Report Phase I and II_20230101_100000"
		10.01 .2023	Re	Quality checks should be implemented in the process of calculating and reporting the GHG emissions to avoid errors, misrepresentations, or omissions.	BAUER NIMR				Finding closed

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)
CR	Clarification request



## C. Document list

### Monitoring reports:

1	MR6_Nimr_phase1and2_04012023.pdf
2	MR6_Nimr_phase1and2_03022023.pdf
3	MR6_Nimr_phase1and2_05022023.pdf

### Emission reduction calculation:

4	MR6_UER_calculation_Nimr_phase1and2_04012023.xlsx
5	MR6_UER_calculation_Nimr_phase1and2_03022023.xlsx
6	MR6_UER_calculation_Nimr_phase1and2_05022023.xlsx

### PDD and validation report:

7	UER_Nimr_phase1_2_PDD_02082019.pdf
8	Final Bauer P1&2_VAL-20191029_v5_TR.pdf

### Last verification report:

9	Verification Report Nimr_5thMP_3595131-2_scanned.pdf
---	--

### Project documentation:

10	20220720_Ph-1_Master meter calibration Certificate_98-FICA-005_A1069402.pdf
11	20220720_Ph-2_Master meter calibration Certificate_98-FICA-007_A1166024.pdf
12	20220720_Ph-3_Master meter calibration Certificate_98-FICA-302_A18036435.pdf
13	20220914_Ph-1_Duty meter calibration Certificate_98-FICA-004_A1069403.pdf
14	20220914_Ph-2_Duty meter calibration Certificate_98-FICA-006_A1166023.pdf
15	20220914_Ph-3_Duty meter calibration Certificate_98-FICA-301_A18036436.pdf
16	110314_Nimr_Water_Treatment_Plant_Phase1_Completion_Certificate.pdf
17	120912_Nimr_Water_Treatment_Plant_Phase2_Completion Certificate.pdf
18	3.5OES_Bauer_3035_EIA.Final.Rev.i NWTP, Phase 1.pdf
19	3.5OES_Bauer_3035_EIA.Final.Rev.i NWTP, Phase 2.pdf
20	20220131_Phase-1&2 Monthly production report 31 Jan 2022.pdf
21	20220228_Phase-1&2 Monthly production report 28 Feb 2022.pdf
22	20220331_Phase-1&2 Monthly production report 31 Mar 2022.pdf
23	20220430_Phase-1&2 Monthly production report 30 Apr 2022.pdf
24	20220530_Phase-1&2 Monthly production report 31 May 2022.pdf
25	20220631_Phase1&2 Monthly production report 31 June 2022.pdf
26	20220730_Phase-1&2 Monthly production report 30 Jul 2022.pdf
27	20220831_Phase-1&2 Monthly production report 31 Aug 2022.pdf




28	20220930_Phase1&2 Monthly production report 30 Sep 2022.pdf
29	20221031_Phase-1&2 Monthly production report 31 Oct 2022.pdf
30	20230101_Phase-1&2 Monthly production report 31 Dec 2022.pdf
31	6.Projectboundary_Nimrphase1&2.pdf
32	8.technical_datasheet_optiflux_2000_r11_en_gb.pdf
33	2020 3 points - Calibration procedure Rev 2.pdf
34	191123_Instrument calibration schedule.pdf
35	220327_BNO-89000076-PRO-001 Rev 02 Upstream Emission Reduction Procedure.pdf
36	220421_giu_NWTP Environmental License 2021.pdf
37	221203_azd_Climate Affairs License.pdf
38	221205_Confirmation Statement.pdf
39	Bauer Commercial Registration.pdf
40	INSTRUMENTS CALIBRATION REGISTER_2023.pdf
41	Invoice Samples.pdf
42	list of measuring devices.pdf
43	NWTP and DWD location.jpg
44	NWTP Stakeholder Consultation Report.pdf
45	NWTP, Phase 1 - Letter of Award.PDF
46	NWTP, Phase 2 - Letter of Award.PDF
47	20220131_Phase-1&2 Monthly production report 31 Jan 2022.pdf
48	20220331_Phase-1&2 Monthly production report 31 Mar 2022.pdf
49	20221130_Phase-1&2 Monthly production report 30 Nov 2022.pdf
50	20230101_Phase-1&2 Monthly production report 31 Dec 2022.pdf
51	M16024 BNO NWTP QEPR - Q1 2022- Rev2.0.pdf
52	M16024 BNO NWTP QEPR - Q2 2022- Rev1.0.pdf
53	M16024 BNO NWTP QEPR - Q3 2022- Rev1.0.pdf
54	3-13.220327_BNO-89000076-PRO-001 Rev 02 Upstream Emission Reduction Procedure.pdf
55	4.INSTRUMENTS CALIBRATION REGISTER 2023.pdf
56	6.Training Matrix people involved in O&M of wetlands.xls
57	7. Climate Affair License - English.pdf
58	9.Reedbed Species.pdf
59	10th of September Report Phase I and II_20220911_100000.pdf
60	15th of December Report Phase I and II_20221216_100000.pdf
61	1st of June Report Phase I and II_20220602_100000.pdf
62	Photos
63	Process Flowchart Phase 1&2.pdf
64	Site Layout.pdf
65	GA 15FF and GA18plus_Technical datasheet.pdf
66	GA 5 and GA 5VSD_Technical datasheet.pdf



Industrie Service

67	TOP Cummins-C150D5 Diesel Generator Data Sheet_1.pdf
68	Oil In Water Sample Analysis.pdf
69	Plant Manager ID Card.pdf
70	Combined Daily Report Phase I and II_20220101_100000.pdf
71	Combined Daily Report Phase I and II_20230101_100000.pdf
72	6_Instruction Manual Galaxie 2002 NS 520_Vers_3_5_2010.pdf
73	IMG_1018.jpg
74	OS construction.jpg
75	11NL058-01-011 R0 (IOM)-343.pdf
76	Phase-1&2 Overview.png
77	Q1 March 2022.pdf
78	Q2 May 2022.pdf
79	Q3 Sep 2022.pdf
80	Q4 Nov 2022.pdf
81	INSTRUMENTS CALIBRATION REGISTER 2023.pdf
82	2021 power data - 25 Jan 2021 ver 3_slim.xlsx
83	EXT RE Requirements for Carbon Credit verification audit
84	Letter of Assurance and Authorization.pdf

## D. List of participants

<b>List of participants</b>		 Industrie Service
<b>Type of audit:</b>	<b>Verification of the GHG Statement</b>	
Client:	BAUER NIMR LLC	
Subject of the GHG declaration:	Nimr 6th. MR	
Date of the audits:	<b>10.01.2023 (remote audit), 23.01.2023 (remote audit), 13.09.2023 (onsite audit)</b>	
Order-Nr.:	3745159	
Lead auditor:	Diego Alvarez Florez	
Surname, Name	Responsibility / Department	
Shahad Alzakwani	UER Project Manager (BAUER NIMR LLC)	
Dennis Alexandersen	UER General Manager (BAUER NIMR LLC)	
Younis Al-Rawahi	Operations Manager (BAUER NIMR LLC)	
Kudzai M. Tibugare	Plant Manager (BAUER NIMR LLC)	
Arockia Pravin K	Lead Technical Engineer (BAUER NIMR LLC)	
Diego Alvarez Florez	Auditor (TÜV SÜD)	



Industrie Service

## **E. Accreditation certificate of Verification Body**





Industrie Service



## Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV  
Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

# Accreditation



The Deutsche Akkreditierungsstelle GmbH attests that the verification body

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

is competent under the terms of DIN EN ISO 14065:2013 for

**Verification of greenhouse gas emission reports and tonne-kilometre reports**  
according to Regulations (EU) No. 2018/2067 and (EU) No. 2018/2066 for Activities as listed in the Annex.

**Verification and Validation according to DIN EN ISO 14064-3:2020**  
for non-regulated Greenhousegas schemes according to DIN EN ISO 14064-1:2019 and DIN EN ISO 14064-2:2020.

The accreditation certificate shall only apply in connection with the notice of accreditation of 04.03.2022 with the accreditation number D-VS-14153-01-00 and is valid until 13.12.2023. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 4 pages.

Registration number of the certificate: **D-VS-14153-01-00**

Berlin,  
04.03.2022

B.Sc. Maik Kadraba  
Head of Technical Unit

Translation issued:  
04.03.2022

Head of Technical Unit

*The certificate together with the annex reflects the status as indicated by the date of issue.  
The current status of any given scope of accreditation may be found respectively in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH <https://www.dakks.de/en/consent/accredited-bodies-dakks>.*

This document is a translation. The definitive version is the original German accreditation certificate.  
See notes overleaf.



Industrie Service

## Deutsche Akkreditierungsstelle GmbH

Office Berlin  
Spittelmarkt 10  
10117 Berlin

Office Frankfurt am Main  
Europa-Allee 52  
60327 Frankfurt am Main

Office Braunschweig  
Bundesallee 100  
38116 Braunschweig

The publication of extracts of the accreditation certificate is subject to the prior written approval by Deutsche Akkreditierungsstelle GmbH (DAkkS). Exempted is the unchanged form of separate disseminations of the cover sheet by the conformity assessment body mentioned overleaf.

No impression shall be made that the accreditation also extends to fields beyond the scope of accreditation attested by DAkkS.

The accreditation was granted pursuant to the Act on the Accreditation Body (AkkStelleG) of 31 July 2009 (Federal Law Gazette I p. 2625) and the Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products (Official Journal of the European Union L 218 of 9 July 2008, p. 30). DAkkS is a signatory to the Multilateral Agreements for Mutual Recognition of the European co-operation for Accreditation (EA), International Accreditation Forum (IAF) and International Laboratory Accreditation Cooperation (ILAC). The signatories to these agreements recognise each other's accreditations.

The up-to-date state of membership can be retrieved from the following websites:

EA: [www.european-accreditation.org](http://www.european-accreditation.org)

ILAC: [www.ilac.org](http://www.ilac.org)

IAF: [www.iaf.nu](http://www.iaf.nu)



Industrie Service



## Deutsche Akkreditierungsstelle GmbH

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

Period of validity: 04.03.2022 to 13.12.2023

Date of issue: 04.03.2022

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 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 or processing of ferrous metals (including ferroalloys) Production of secondary aluminium Production or processing of non-ferrous metals, including production of alloys

*The management system requirements of DIN EN ISO 14065 are written in the language relevant to the operations of greenhouse gas validation and verification bodies. Validation and verification bodies that conform to the requirements of this standard, operate generally in accordance with the principles of DIN EN ISO 9001.*

*The certificate together with the annex reflects the status as indicated by the date of issue.  
The current status of any given scope of accreditation may be found respectively in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH <https://www.dakks.de/en/content/accredited-bodies-dakks>.*

Abbreviations used: see last page

Page 1 of 4

This document is a translation. The definitive version is the original German annex to the accreditation certificate.



**Annex to the Accreditation Certificate 14153-01-00**

No.	Scope of Accreditation
5	Production of primary aluminium (CO <sub>2</sub> 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
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 <sub>2</sub> ) and synthesis gas by reforming or partial oxidation Production of soda ash (Na <sub>2</sub> CO <sub>3</sub> ) and sodium bicarbonate (NaHCO <sub>3</sub> )
9	Production of nitric acid (CO <sub>2</sub> and N <sub>2</sub> O emissions) Production of adipic acid (CO <sub>2</sub> and N <sub>2</sub> O emissions) Production of glyoxal and glyoxylic acid (CO <sub>2</sub> and N <sub>2</sub> O emissions) Production of caprolactam
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 and DIN EN ISO 14064-3:2020 for non-regulated Greenhousegas schemes according to the following standards:

DIN EN ISO 14064-1:2019 Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals in the following sectors:

Sectors for Organization Verification according to IAF MD 14:2014 – Annex A
Power Generation and Electric Power Transaction
General Manufacturing (physical or chemical transformation of materials or substances into new products)
Oil and Gas Exploration, Extraction, Production and Refining, and pipeline distribution, including Petrochemicals

Period of validity: 03.04.2022 to 13.12.2023  
 Date of issue: 03.04.2022



**Annex to the Accreditation Certificate 14153-01-00**

<b>Sectors for Organization Verification according to IAF MD 14:2014 – Annex A</b>
Metals Production
Aluminum Production
Mining and Mineral Production
Pulp, Paper and Print
Chemical Production
Carbon Capture and Storage
Transport
Waste Handling and disposal
Agriculture, Forestry and Other Land Use
Facility Management, Operation of Buildings and related Infrastructure, etc.

DIN EN ISO 14064-2:2020 Greenhouse gases - Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements in the following sectors:

<b>Sectors for Project Validation and Verification according to IAF MD 14:2014 – Annex A</b>
Energy generation from renewable and non-renewable sources
Energy Distribution
Energy Demand
Manufacturing Industry (Cement sector, Aluminum, Iron and Steel, Refinery)
Chemical Industry
Construction
Transport
Metal Production
Fugitive Emissions from Fuels (solid, oil and gas)
Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride (Chemical process industries, GHG capture and destruction)
Solvent use in chemical process industries
Waste Handling and Disposal
Agriculture, Afforestation and Reforestation
Carbon Capture and Storage of CO <sub>2</sub> in Geological Formations

Period of validity: 03.04.2022 to 13.12.2023  
 Date of issue: 03.04.2022



Industrie Service

**Annex to the Accreditation Certificate 14153-01-00**



**Abbreviations used:**

DIN	German Institute for Standardization – DIN e.V.
EN	European Standard
EU	European Union
IAF	International Accreditation Forum
ICAO	International Civil Aviation Organization
IEC	International Electrotechnical Commission
ISO	International Standardization Organisation
MD	Mandatory Document

Period of validity: 03.04.2022 to 13.12.2023  
Date of issue: 03.04.2022

- Translation -