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Verification Report

Lease Enterprise "Coal Mine named after O.F. Zasyadko"

5th Periodic Verification of the JI Project

"Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko"

UNFCCC UA2000004

Monitoring period 5: 01-10-2009 to 31-01-2010

Report No. **600500450**

14 May 2010

TÜV SÜD Industrie Service GmbH
Carbon Management Service
Westendstrasse 199 - 80686 Munich - GERMANY

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Report No.	Date of first issue	Version No.:	Revision date	No. of pages
600500450	07 of April, 2010	3	14th of May 2010	18
Subject:			5th Periodic JI Verification	
Executing Operational Unit:				
TÜV SÜD Industrie Service GmbH, Carbon Management Service Westendstrasse 199 - 80686 Munich, Federal Republic of Germany				
Project Participant (client):				
Lease Enterprise "Coal Mine named after O.F. Zasyadko" Prospekt Zasyadko, Donetsk, 83054, Ukraine				
Registration number / Project Title			Project UA2000004: "Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko"	
Monitoring period:			01-10-2009 to 31-12-2009 and 01-01-2010 to 31-01-2010 (total from 01-10-2009 to 31-01-2010)	
First Monitoring Report (version/date)			Version 1.0 / 01-02-2010	
Final Monitoring Report (version/date)			Version 2.2 / 11-05-2010	

Summary:
TÜV SÜD Industrie Service GmbH has performed the 5th periodic verification of the determinated JI project (Track 2): "Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko" Ukraine".
The project comprises the use of CMM for the following purposes:
- the production of electricity for mine works and the public grid (if there is a surplus);
- the replacement of heat currently produced by coal- and gas-fired boilers;
- the use as vehicle fuel.

The management of Lease Enterprise "Coal Mine named after O.F. Zasyadko" is responsible for the preparation of the GHG emission data and the reported GHG emission reductions.
A document review, followed by a site visit was conducted to verify the information submitted by the project participant regarding the present verification period. Based on the assessment carried out, the verifier confirms the following:

- the project has been implemented and operated in accordance with the description given in the determinated and final PDD (Version 4.4, 27-03-2008), registration date 25-08-2008);
- the project is completely implemented as described in the determinated and final PDD;
- the monitoring has been carried out in accordance with the monitoring plan as defined in the determinated and final PDD. There are no deviations to the previous period.
- the installed equipment essential for generating emission reductions runs reliably and the meters are calibrated appropriately; the project is generating emission reductions.

The verifier can confirm that the GHG emission reductions are calculated without material misstatements. Our opinion refers to the project GHG emissions and resulting GHG emission reductions reported, determined using the valid and determinated project baseline, its monitoring plan and its associated documents.
Based on the information we have seen and evaluated, we confirm that the implementation of the project resulted in total of 222,816 t CO_{2e} (**163,523 t CO_{2e}** of emission reductions during the verification period 01/10/2009 to 31/12/2009 and **59,293 t CO_{2e}** in the period 01/01/2010 to 31/01/2010).

Assessment Team Leader: Thomas Kleiser **Assessment Team Members:** Dr. Albert Geiger Dr. Volodymyr Ilchenko	**Veto Person:** Javier Castro **Certification Body responsible:** Rachel Zhang

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Abbreviations

ACM	Approved Consolidated Methodology
AIE	Accredited Independent Entity
BM	Build Margin
CAR	Corrective Action Request
CM	Combined Margin
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
CO_{2e}	Carbon dioxide equivalent
CAR	Corrective action request
CR	Clarification Request
DFP	Designated Focal Point
EF	Emission Factor
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
EUR	Emission Reduction Units
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	Greenhouse Gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
JI	Joint Implementation
KP	Kyoto Protocol
MP	Monitoring Plan
MR	Monitoring Report
NGO	Non-Governmental Organisation
OM	Operational Margin
PDD	Project Design Document
PP	Project Participant
QA/QC	Quality assurance/quality control
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
DVM	Determination and Verification Manual

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Main Documents (referred to in this report)

Methodology (name / version)	ACM0008, Version 03	
Scope	8,10	
Technical Area	8.1; 10.3	
Determinated PDD:	Version 4.4, date 27-03-2008	
Revised Monitoring Plan:	n.a.	
	Version	Date
Published Monitoring Report	01	01-02-2010
Revised Monitoring Report	2.2	11-05-2010
Project documentation link:	http://ji.unfccc.int/JIITLProject/DB/YHHOHQSI5XVHYM0337REG7SH8JE1B9/details	

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1 INTRODUCTION

1.1 Objective

Lease Enterprise "Coal Mine named after O.F. Zasyadko" has commissioned (contract from 02.11.2006) an independent verification by TÜV SÜD Industrie Service GmbH (TÜV SÜD) of its determinated JI project:

"Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko".

This report summarizes the findings of the JI verification (Track 2) of the period October 1st, 2009, to January 31th, 2010.

The objective of the verification work is the systematic, independent and documented evaluation of a greenhouse gas assertion against JI requirements (Track 2). According to this assessment TÜV SÜD shall:

- ensure that the project activity has been implemented and operated as per the final PDD "Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko" (Version 4.4, dated 27-03-2008), and that all physical features (technology, project equipment, monitoring and metering equipment) of the project are in place,
- ensure that the published MR and other supporting documents provided are complete, verifiable and in accordance with applicable JI requirements,
- ensure that the actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan,
- evaluate the data recorded and stored.

1.2 Scope

The verification scope encompasses an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the Accredited Independent Entity.

The verification is based on the submitted monitoring report, the determination report and the previous verification reports. These documents are reviewed against the determinated project design document including its monitoring plan, the requirements of the Kyoto Protocol, the JI Guidelines as well as related rules and guidance by the CMP and JISC.

In the past - for the verification purpose - TÜV SÜD applied detailed (project/methodology(-ies) specific) protocols, which incorporated requirements of the CDM Validation and Verification Manual (VVM) issued in November, 2008 - alternatively also in JI - as no JI DVM was available at that time. In December 2009 the JI Determination and Verification Manual (DVM) in its first version was published. Although the question list of the DVM is not obligatory and the questions are already covered by the former question list to a large extent TÜV SÜD has elaborated - for transparency reasons - the issues presented in the DVM and involved them in the verification process in form of an optional DVM verification protocol. These questions are put in front – in Annex 1 – to the following meth specific question list for the verification of the respective project.

Based on the requirements in the DVM, TÜV SÜD has applied a rule-based approach for the verification of the project. The principles of accuracy, completeness, relevance, reliability and credibility were combined with a conservative approach to establish a traceable and transparent verification opinion.

The verification considers both quantitative and qualitative information on emission reductions.

The verification is not meant to provide any consultancy towards the client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the monitoring activities.

1.3 GHG Project Description

Project activity:	"Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko"
UNFCCC registration number:	UA2000004
Project Participants:	Lease Enterprise "Coal Mine named after O.F. Zasyadko" Marubeni Corporation, Japan Vema S., Switzerland Global Carbon B.V., Netherlands (withdrawn)
Location of the project:	Donetsk, Ukraine
Date of registration:	25-08-2008
Starting date of the crediting period:	01-01-2008

The purpose of this project is the avoidance of methane emissions into the atmosphere at Leasing Company "the Coal Mine named after A.F. Zasyadko", further referred to the Zasyadko mine or simply the mine.
Coal Mine Methane, drained and recovered from operating mine works, as well as methane produced by surface goaf wells at Zasyadko Mine, is used for the following purposes:

- electricity production for mine works and the public grid (if there is a surplus);
- replacement of the heat currently produced by coal- and gas-fired boilers, including municipal boilers;
- utilisation as vehicle fuel.

The implementation status of the project in the verification period is as follows:

- Production of electricity and heat at the Vostochnaya site of the mine (12 CHPs)
- Utilisation of methane as vehicle fuel (Automobile Gas Filling Compressor Plant)

The project is still not fully implemented. The implementation of the missing parts of the project is going on. Hence, it looks like that the project as validated will be fully implemented soon within the crediting period (see also annex 1).

2 METHODOLOGY

2.1 Verification Process

The verification process is based on the approach depicted in the Determination and Verification Manual.

Standard auditing techniques have been adopted for the verification process. The verification team performs first a desk review, followed by an on-site visit, which results in the completion of a protocol that includes all the findings. The next step involves the evaluation of the findings through direct communication with the PPs and the preparation of the verification report. Afterwards the verification report and other supporting documents undergo an internal quality control by the CB "climate and energy" before submission to the JISC.

2.2 Verification Team

The appointment of the verification team takes into account the technical area(s), sectoral scope(s) and relevant host country experience required amongst team members for verifying the ER achieved by the project activity in the relevant monitoring period for this verification.

The verification team consisted of the following members:

Name	Qualification	Coverage of scope	Coverage of technical area	Host country experience
Thomas Kleiser	**ATL**	☑	☑	☑
Dr. Albert Geiger	GHG-A	☑	☑	☑
Dr. Volodymyr Ilchenko	GHG-T	☑		☑

Thomas Kleiser is the Assessment Team Leader of the project with a background in physics and meteorology. Till 31st of December 2008 he was head of the division CDM and JI at TÜV SÜD Industrie Service GmbH conducting more than 90 validations and verifications of CDM and JI projects. In this position he was responsible for validation, verification and certification processes for GHG mitigation projects as well as trainings for internal auditors. Since 1st of January 2009 he is head of the "Certification Body" of TÜV SÜD.

Dr. Volodymyr Ilchenko is a trainee for GHG auditing at the department "TÜV Carbon Management Service" in the head office of TÜV SÜD Industrie Service GmbH in Munich, Germany. He holds a M.Sc. degree in electrical engineering and has a PhD in mechanical engineering. He has received training on the contents and objectives of GHG auditing for climate change projects and is responsible in his current position for the validation/determination and verification audits for JI, CDM and VCS projects. Before joining TÜV SÜD he worked as development engineer in the field of heating systems.

Dr. Albert Geiger is a GHG auditor for CO_2-emission reduction projects of the scopes 8, 10 and 13 at the department "Environmental Service" of TÜV SÜD. He has done more than 15 CDM and JI projects and holds a PhD in geological sciences and does environmental consulting in soil and water protection as well as waste management at TÜV SÜD since 1999.

2.3 Review of Documents

The Monitoring Report version 1.0 submitted by the PP was made publicly available on the UNFCCC website the 12th of February 2010 before the verification activities started. The published MR was assessed based on all the relevant documents. The aims of the desk review were:

- verification of the data completeness and the information presented in the MR,
- check of the MR compliance with respect to the monitoring plan depicted in the determinated PDD (frequency of measurements, the quality of the metering equipment including calibration; and QA/QC procedures),
- evaluation of the data management and QA/QC system in the context of their influence on the generation and reporting of emission reductions.

A complete list of all documents reviewed is available in annex 2 of this report.

2.4 On-site Assessment and follow-up Interviews

During 02/03/2010 to 03/03/2010, TÜV SÜD performed a physical site inspection including on-site interviews with the project participants to:

- confirm the implementation and operation of the project,
- review the data flow for generating, aggregating and reporting of the monitoring parameters,
- confirm the correct implementation of procedures for operation and data collection,
- cross-check the information provided in the MR with other sources,
- check the monitoring equipment against the monitoring plan presented in the PDD and the applied methodology, including calibrations, maintenance, etc.,
- review the calculations and assumptions used to obtain the GHG data and ER,
- check if the QC/QA procedures are in place for preventing and correcting of errors or/and omissions in the reported data.

A list of the persons interviewed during this verification activity is included in annex 2.

2.5 Quality of Evidence to Determine Emission Reductions

Among several evidences submitted, the following relevant and reliable evidence material has been used by the audit team during the verification process:

- Licenses
- Raw data
- Data from cross-checking instruments
- Handwritten Journals
- Analysis
- Calibration documents
- Quality assurance and quality control documents (Monitoring Manual)

Sufficient evidences and data covering the full verification period in the required frequency is available to validate the figures stated in the final MR. The source of the evidences and data will be discussed in chapter 3 of this report. The protocol gives a clear reference to sources assessed and is the basis for the conclusions of the audit team.

Specific cross-checks have been done in cases when further sources were available. The monitoring report figures were checked by the audit team against the raw data. It can be confirmed that the data collection system meets the requirements of the monitoring plan as per the applied methodology.

2.6 Resolution of Clarification, Corrective Action and Forward Action Requests

The objective of this phase of the verification process is to resolve any outstanding issues, which require clarification for TÜV SÜD's conclusion on the reported GHG emission reduction. The findings raised as Forward Action Requests (FARs) (if any) indicated in previous reports (determination/verification) were discussed and resolved during this phase through communication between the PP and TÜV SÜD.

Concerns raised during the desk review, the on-site audit assessment and the follow up interviews are documented together with the according responses provided by the project participants in Annex 1 (verification protocol) to guarantee the transparency of the verification process.

A Corrective Action Request is raised where TÜV SÜD identifies:

- non-conformities in monitoring and/or reporting with the monitoring plan and/or methodology;
- that the evidence provided is not sufficient to prove conformity;
- mistakes in assumptions, data or calculations that impair the ER calculations;
- FARs raised during determination or previous verifications that are not solved until the on-site visit.

A Clarification Request is raised where TÜV SÜD does not have enough information or the information is not transparent in order to confirm a statement or data.

A Forward Action Request is raised where TÜV SÜD identifies that monitoring and/or reporting require special attention or adjustments for the next verification period.

Information or clarifications provided as a response to a CAR, CR or FAR could also lead to a new request.

2.7 Internal Quality Control

As a final step of the verification process, the verification documents including the verification report and the annexes have to undergo an internal quality control by the Certification Body (CB) "climate and energy", i.e. each report has to be finally approved either by the Head of the CB or the Deputy (a Veto person can be used). In case one of these two persons is part of the assessment team, the approval can only be given by the person who is not a part of the assessment team. If the documents have been satisfactorily approved, the Request for Issuance is submitted to the JISC along with the relevant documents.

3 VERIFICATION RESULTS

In the following sections, the results of the verification are stated. The verification results relate to the project performance as documented and described in the determinated PDD and the final Monitoring Report (25/03/2010, version 2.1). The verification findings for each verification subject are presented below.

3.1 FARs from Validation / Previous Verification

No FARs have been raised in the previous verification report.

3.2 Project Implementation in accordance with the determinated Project Design Document

The project is implemented according to the determinated PDD:

- 12 CHP units for electricity and heat generation
- 1 Automobile Gas Filling Station (3 Blocks)

The verifier confirms, through the visual inspection that all physical features of the proposed JI project activity including data collecting and storage systems have been implemented in accordance with the determinated PDD. The project as described above is completely operational that was confirmed during on-site visit.

3.3 Compliance of the Monitoring System with the Monitoring Plan

The monitoring system has been implemented in accordance with the monitoring plan presented in the determinated PDD (as published on UNFCCC JI website).

All parameters during the monitoring period were monitored and evaluated as per the Monitoring Plan. Hereby following parameters have been verified (meter specific details see chapter 2.2. of the protocol):

Data / Parameter:	$GEN_{CHP,y}$
Data unit:	MWh
Description:	Electricity generation by project
Source of data used:	Electronic data gained from automatic readings of the E-meters, hand written data as backup The equipment used has been calibrated according to the requirements of the approved monitoring plan.
Means of verification/Comments:	The electricity data of the EuroALPHA meters have been crosschecked against the measurements of the REF (see below). In the regarded period, the difference is less than 0.15 % and therefore within the approved uncertainty level.
Cross-check	The electricity output of the CHP units is measured by the EuroALPHA E-meters E5 till E16 and separately by universal microprocessor and control devices (REF). Hence, the REF values are taken for cross-checking.

Data / Parameter:	EL_{cons}
Data unit:	MWh
Description:	Net Electricity consumed by Mine
Source of data used:	The net electricity consumption of the Mine is given by a confirmation letter of the Chief Energy Engineer of the Mine.
Means of verification/Comments:	Since the $GEN_{CHP} < EL_{cons}$ the factor EL_{cons} is set to 0, that is in accordance with the approved PDD. Hence, there are no baseline emissions from EL_{cons} claimed.
Cross-check	n.a.

Data / Parameter:	$HEAT_y$
Data unit:	GJ
Description:	Heat consumed
Source of data used:	Electronic data gained from automatic readings of the e-meters, hand written data for backup The used heat meter has an uncertainty level of 4 % which exceeds the required level by 2 % (see PDD p. 46).
Means of verification/Comments:	The amount of the heat consumed was checked with help of raw data sheets. Assessing the calibration records for the heat meter installed the auditor team noticed that the uncertainty level has increased to 4 % in comparison to the figure stated in the registered PDD (2%, see PDD p. 46). Therefore in order to be conservative the PPs decided to reduce the heat measured values by 2 % in the calculations. The re-calculated values have been checked and confirmed to be correct.
Cross-check	No cross-check meters

Data / Parameter:	MM_{CHP}
Data unit:	tCH_4
Description:	Methane send to the CHPs (ignition gas and fuel gas)
Source of data used:	Electronic data gained from automatic readings of the calibrated meters, hand written data for backup and cross-checking. The equipment used has been calibrated according to the requirements of the approved monitoring plan.
Means of verification/Comments:	According to the done cross-checking the error of MM_{CHP} is less than 0,01% (see explanation below and page 17 of the MR).
Cross-check	Gas amount from meters at each CHP unit against total gas amount from gas input meter

Data / Parameter:	MM_{Gas}
Data unit:	tCH_4
Description:	Methane supplied to vehicles
Source of data used:	Electronic data gained from automatic readings of the meters, hand written data for backup. The equipment used has been calibrated according to the requirements of the approved monitoring plan.
Means of verification/Comments:	The accuracy check by comparing the gas input against gas output data showed no differences.
Cross-check	The gas amount provided to the vehicles is documented and is used to check the input value measured by the flow meter.

The monitoring activities are strictly organised and written down in the Monitoring Manual. The responsibilities are determined and quality assurance measures are implemented on-site. The clear distribution of the monitoring duties has been demonstrated by the staff during the on-site visit. The Monitoring Manual has been punctual updated. At the beginning of November 2009 version 3 was implemented.

The personal gets regular training on monitoring procedures (see IRL 36). The last training was held on 14th of December 2009.

3.4 Assessment of Data and Calculation of Greenhouse Gas Emission Reductions

All information nedeed of the assessment of data and clalculation of greenhous gas emission reductions was available.

The reported data of $GEN_{CHP,y}$, MM_{CHP} and MM_{Gas} have been cross-checked against other sources available as explained above in chapter 3.3. As result, the verifier confirms that the data of $GEN_{CHP,y}$, MM_{CHP} and MM_{Gas} are consistent and viable.

The input data of the calculations have been checked against the raw data. The verifier confirms that there are no deviations between raw data and input data.

Furthermore, all formulae used in the calculations have been checked against the approved PDD. The verifier confirms that the methods and formulae used to obtain the baseline, project and leakage emissions are appropriate.

In the case of $HEAT_y$ the total sum has been reduced by 2% because of the violation of the approved uncertainty limit (see table in chapter 3.4).

Since $GEN_{CHP} < EL_{cons}$ the factor EL_{cons} is set 0 that complies fully with the approved PDD.

Additionally, the verifier confirms that all the emission factors and default values (ex-ante values from PDD) have been correctly applied. All the emission factors and default values are explicitly mentioned in the monitoring report. The external grid emission factor was fixed ex-ante. This factor finally needs to be approved by the Ukrainian DFP.

The manual transfer of data was cross checked. No mistakes have been detected.

The observations of the audit team left no doubt that the monitoring process has been implemented in accordance with the Monitoring Plan presented in the determinated PDD and with the procedures described in the Monitoring Manual.

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4 SUMMARY OF FINDINGS

The verifier can confirm that the published MR and related documents are complete and verifiable in accordance with the JI requirements. All the findings raised by the verification team, the responses by the PPs and the conclusion of the audit team are presented in Annex 1.

The means of verification and resulting changes in the MR or related documents are summarized in the table below:

Corrective Action Request 1: MR table page 23: Methane amount burnt in the CHP-Plant: The value given in the MR does not comply with the daily and monthly data sheets. Please clarify and provide supportive evidence (daily raw data).
CAR 1, means of verification
Comparison of raw data with calculated data
CAR 1, changes in the MR or related documents
No changes in the MR
Clarification Request 1: Please present a list with the commissioning dates and the serial numbers of the Jenbacher engines.
CR 1, means of verification
The answer has been accepted because the provided list represents figures checked during the on-site audit.
CR 1, changes in the MR or related documents
No changes in the MR
Clarification Request 2: Please present a list describing the capacity of each block, commissioning dates and the serial numbers of the 4 installed AGFCP Blocks.
CR 2, means of verification
The answer has been accepted because the given figures are evidenced by the provided documents (IRL 29).
CR 2, changes in the MR or related documents
No changes in the MR
Clarification Request 3: Please present the operational licenses of the CHP Plant and the AGFCP.
CR 3, means of verification
The operational licence of the Zasyadko coal mine has been provided (IRL 31)
CR 3, changes in the MR or related documents
No changes in the MR
Clarification Request 4: Please include the missing values in table 6 of the MR.
CR 4, means of verification
Check of the latest MR
CR 4, changes in the MR or related documents
The MR has been revised according to the comment

Clarification Request 5:
Please show that 0.2s and 0.2% are equivalent.
CR 5, means of verification
Check against GOST-Standard
CR5, changes in the MR or related documents
The MR has been revised according to the comment.
Clarification Request 6:
The meters E3 and E4 have an accuracy of 0.5s. Please correct the table of the E-meters accordingly. Please show that the 0.5s is equivalent to an uncertainty of 0.5%.
CR 6, means of verification
Check against GOST-Standard
CR 6, changes in the MR or related documents
The MR has been revised according to the comment.
Clarification Request 7:
The meters E15 and E16 are measuring the generated and not the consumed electricity. Please correct the third column of the table on page 11 of the MR.
CR 7, means of verification
Check of the latest MR
CR 7, changes in the MR or related documents
The MR has been revised according to the comment
Clarification Request 8:
Please describe in the MR the function of the meters E17 and E18 in regard of the determination of $EL_{cons,y.}$
CR 8, means of verification
Check of the latest MR
CR8, changes in the MR or related documents
The explanation has been inserted into the latest MR.
Clarification Request 9:
Please describe the uncertainty level of the heat meter in the MR.
CR 9, means of verification
The uncertainty level has been evidenced by document
CR 9, changes in the MR or related documents
The MR has been revised according to the comment
Clarification Request 10:
Please send the methane concentration data (fuel gas) from 28/11/2009 (Gas analyser 3.244705.5).
CR 10, means of verification
The data have been sent (IRL 15)
CR 10, changes in the MR or related documents
No revisions

Clarification Request 11:
Please verify the uncertainty level of the volume measurements (flow meter serial no. 9771 and 9786).

CR 11, means of verification
Calibration documents (IRL 22)
CR 11, changes in the MR or related documents
The MR has been revised according to the comment
Clarification Request 12: Please describe the meters of GN5 with serial numbers and calibration dates. Please provide the calibration protocols.
CR 12, means of verification
The calibration has been checked by the provided calibration protocol (IRL 35)
CR 12, changes in the MR or related documents
The description has been inserted into the MR.
Clarification Request 13: Please provide a sampling protocol with the description of the sampling and of the sampling points. Please mention the name of the institute for gas analysis in the MR and send the accreditation certificate of the institute.
CR 13, means of verification
A description of the sampling by Resipirator has been provided (IRL 17)
CR 13, changes in the MR or related documents
No revisions
Clarification Request 14: Please send a letter from the institute for gas analysis showing the uncertainty levels of each parameter.
CR 14, means of verification
The certificate has been provided (IRL 18)
CR 14, changes in the MR or related documents
No revisions
Clarification Request 15: Please revise the title of the monitoring report considering the monitoring period. Please revise table 6 inserting the taken values in the last column. Please correct the table notations (e.g. table 5: project default values).
CR 15, means of verification
Check of the latest MR
CR 15, changes in the MR or related documents
The MR has been revised according to the comment
Clarification Request 16: To chapter A.8. of the MR: According to the findings on-site there are no deviations in the monitoring plan. Please correct.
CR 16, means of verification
Check of the latest MR
CR 16, changes in the MR or related documents
The MR has been revised according to the comment
Forward Action Request 1: In the near future it is expected that $EL_{cons} > GEN_{CHP}$. In this case the electricity amounts have to be transparently shown and the raw data have to be presented. Furthermore, all E-meters involved have to be described and listed up according to the tables in the MR.

FAR 1, means of verification
Check during the next audit
FAR 1, changes in the MR or related documents
n/a
Forward Action Request 2 Please describe the sampling procedures of the gas analysis in the Monitoring Manual.
FAR 2, means of verification
Check during the next audit
FAR 2, changes in the MR or related documents
n/a
Forward Action Request 3: Next NMHC analysis: The sampling has to be documented in a sampling protocol.
FAR 3, means of verification
Check during the next audit
FAR 3, changes in the MR or related documents
n/a

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5 VERIFICATION STATEMENT

TÜV SÜD Industrie Service GmbH has performed the 5th periodic verification of the JI project: **"**Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko**"**.

The verification is based on the currently valid requirements of the UN Framework Convention on Climate Change (UNFCCC).

The management of Lease Enterprise "Coal Mine named after O.F. Zasyadko" is responsible for the preparation of the GHG emissions data and the reported GHG emission reductions on the basis set out within the project Monitoring Plan indicated in the determinated PDD version .4, dated 27-03-2008..

The verifier can confirm that:

- the reporting procedures and maintenance of records are in accordance with the determinated monitoring plan;
- the project is operated as planned and described in the project design document approved by the UNFCCC;
- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- the monitoring system is in place allowing reliable monitoring of the GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements;
- the monitoring plan presented in the Monitoring Report is consistent with the determinated PDD;

Our opinion is based on the project GHG emissions and resulting GHG emission reductions reported, which have been determined through the approved project baseline, monitoring plan and associated documents.

Based on the information we have checked and evaluated, we confirm the following statement:

Reporting period:
From 01-10-2009 to 31-01-2010

Verified emissions:

Period 01-10-2009 to 31-12-2009:

Baseline emissions:	184,044	t CO_{2e}
Project emissions:	20,521	t CO_{2e}
Leakage emission:	0	t CO_{2e}
Emission reductions:	**163,523**	**t CO_{2e}**

Period 01-01-2010 to 31-01-2010:

Baseline emissions:	66,683	t CO_{2e}
Project emissions:	7,390	t CO_{2e}
Leakage emission:	0	t CO_{2e}
Emission reductions:	**59,293**	**t CO_{2e}**

Total Emission Reductions: 222,816 t CO_{2e}

The result is valid under the precondition that the external grid emission factor will finally be approved by the Ukrainian DFP.

Munich, 14-05-2010

Rachel Zhang
Certification Body "climate and energy"
TÜV SÜD Industrie Service GmbH

Munich, 14-05-2010

Thomas Kleiser
Assessment Team Leader

Annex 1: DMV and TÜV SÜD Verification Protocols

Annex 2: Information Reference List

DVM Verification Protocol

Project Title: Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko, 5th Verification, Period 01/10/2009 – 31/01/2010

Date of Completion: 12.05.2010

Number of Pages: 1

Industrie Service

DVM paragraph	Check item	Initial finding	Action requested to project participants (incl. CAR, CL or FAR)	Review of project participants. action	Conclusion
Project approvals by Parties involved					
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	Japan, Switzerland and The Netherlands submitted their LoA for the project in 2007.	n/a	n/a	☑
91	Are all the written project approvals by Parties involved unconditional?	Yes, they are.	n/a	n/a	☑
Project implementation					
92	Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The project is still not fully implemented. At the moment the CHP-Plant and the Auto-gas filling station at Vostochnaya site are in operation. However, the works are going on to implement the missing parts of the project. Hence, the project as validated will be fully	See TÜV verification protocol, annex 1	See TÜV verification protocol, annex 1	☑

		implemented, but with a delay of about 2 -3 years.			
93	What is the status of operation of the project during the monitoring period?	During the monitoring period the CHP-Plant and the AGFCP at Vostochnaya site were in operation. Please also see above.	See TÜV verification protocol, annex 1	See TÜV verification protocol, annex 1	☑
Compliance with monitoring plan					
94	Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The monitoring occured in accordance with the monitoring plan of the registered PDD (See chapter 2 of the verification checklist, annex 2; also please see comments given above in "project implementation" section).	See TÜV verification protocol, annex 1	See TÜV verification protocol, annex 1	☑
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with	When calculating the emission reductions all key factors, , e.g. those listed in 23 (b) (i)-(vii), have been considered.	See TÜV verification protocol, annex 1	See TÜV verification protocol, annex 1	☑

	the project taken into account, as appropriate?				
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	All data sources have been identified by the audit team during the on-site audit (data journals, data excel sheets). The transferred data have been cross checked with the raw data. TÜV SÜD confirms that the checked data are reliable and transparent.	See TÜV verification protocol, annex 1	See TÜV verification protocol, annex 1	☑
95 (c)	Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	The used grid emission factors were taken from the registered PDD. The factors were calculated on the bases of the years 2003-2005 and are set as fixed factors till 2012. Although the used factors are valid under the precondition that they will finally be approved by the Ukrainian DFP, they are selected by carefully balancing accu-	See TÜV verification protocol, annex 1	See TÜV verification protocol, annex 1	☑

		racy and reasonableness, and appropriately justified.			
95 (d)	Is the calculation of emission reductions or enhancements of net removals calculated based on conservative assumptions and the most plausible scenarios in a transparent manner?	The calculations are based on the monitored data gained by calibrated meters. Special cases were treated taking into account principle of conservativeness. The calculations are transparently conducted in the Excel workbook. Assessment team can confirm that, the calculations are correct, conservative and transparently presented.	See TÜV verification protocol, annex 1	See TÜV verification protocol, annex 1	☑
	Applicable to JI SSC projects only				
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis?	n/a	n/a	n/a	n/a
96	*If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?*	n/a	n/a	n/a	n/a

	Applicable to bundled JI SSC projects only				
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSC- BUNDLE?	n/a	n/a	n/a	n/a
97 (b)	*If the determination was conducted on the* project participants submitted a common monitoring report?	n/a	n/a	n/a	n/a
98	*If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods,*are the monitoring periods per component of the project clearly specified in the monitoring report?	n/a	n/a	n/a	n/a
98	*If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, d*o the monitoring periods not overlap with those for which verifications were already deemed final in the past?	n/a	n/a	n/a	n/a
Revision of monitoring plan					
	Applicable only if monitoring plan is revised by project participants				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	n/a	n/a	n/a	n/a
99 (b)	Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without	n/a	n/a	n/a	n/a

	changing conformity with the relevant rules and regulations for the establishment of monitoring plans?				
Data management					
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	The data collection procedures, the quality control and the quality assurance procedures have been written down in a monitoring manual. TÜV SÜD confirms that these procedures are in accordance with the registered monitoring plan.	See IRL, annex 2	See IRL, annex 2	☑
101 (b)	Is the function of the monitoring equipment, including its calibration status, in order?	The audit team has controlled all monitoring meters and associated calibration protocols. TÜV SÜD confirms that all meters including their calibration status were in order.	See TÜV verification protocol, annex 1	See TÜV verification protocol, annex 1	☑
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	Yes, the evidence and records used for the monitoring maintained in a traceable manner. The documents and data	See IRL, annex 2	See IRL, annex 2	☑

		records of the monitoring provided by the project proponents are archived on pdf- and excel files at TÜV SÜD.			
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	The data collection and the management system did not change from the last verification and is in accordance with the monitoring plan.	See TÜV verification protocol, annex 1	See TÜV verification protocol, annex 1	☑
Verification regarding programmes of activities (additional elements for assessment)					
102	Is any JPA that has not been added to the JI PoA not verified?	n/a	n/a	n/a	n/a
103	Is the verification based on the monitoring reports of all JPAs to be verified?	n/a	n/a	n/a	n/a
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	n/a	n/a	n/a	n/a
104	Does the monitoring period not overlap with previous monitoring periods?	n/a	n/a	n/a	n/a
105	*If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?*	n/a	n/a	n/a	n/a

	Applicable to sample-based approach only				
106	Does the sampling plan prepared by the AIE: a) Describe its sample selection, taking into account that: (i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as: − The types of JPAs; − The complexity of the applicable technologies and/or measures used; − The geographical location of each JPA; − The amounts of expected emission reductions of the JPAs being verified; − The number of JPAs for which emission reductions are being verified; − The length of monitoring periods of the JPAs being verified; and − The samples selected for prior verifications, if any?	n/a	n/a	n/a	n/a

106	(ii) If, in its sample selection, the AIE does not identify and take into account such differences among JPAs, then (does the sampling plan) provide a reasonable explanation and justification for not doing so?	n/a	n/a	n/a	n/a
106	(b) Provide a list of JPAs selected for site inspections, based on a statistically sound selection of sites for inspection in accordance with the criteria listed in (a) (i) above?	n/a	n/a	n/a	n/a
107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	n/a	n/a	n/a	n/a
108	Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to the upper whole number? If the AIE makes no site inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification?	n/a	n/a	n/a	n/a
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional)	n/a	n/a	n/a	n/a
	Applicable to both sample based and non-sample based approach-	n/a	n/a	n/a	n/a

	es				
110	*If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA,* has the AIE informed the JISC of the fraud in writing?	n/a	n/a	n/a	n/a

Verification Protocol

Project Title: Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko, 5th Verification, Period 01/10/2009 – 31/01/2010

Date of Completion: 12.05.2010

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Table of Content

1. Project Activity Implementation

1.1. Technology

Location (s)			
	PDD Description	Verified Situation	Conclusion and IRL
Description / Address	Coal Mine named after A.F. Zasyadko, Donetsk, Donetsk Oblast, Ukraine There are 4 project sites within the mine: - Centralnaya - Vostochnaya - Yakolevskaya - Grigoryevskaya	Coal Mine named after A.F. Zasyadko, Donetsk, Donetsk Oblast, Ukraine There are 4 project sites within the mine: - Centralnaya - Vostochnaya - Yakolevskaya - Grigoryevskaya	☑
GSP coordinates	n/a	n/a	☑
Technical Equipment – Main Components			
	PDD Description	Verified Situation	Conclusion and IRL
Description	Vostochnaya Site: 12 CHP production modules Automobile Gas Filling Compressor Plant (AGFCP)	The project is still not fully implemented. At the moment the CHP-Plant and the autogas filling station at Vostochnaya site are in operation. However, the works are going on to implement the missing parts of the project. Hence, it looks like that the project as validated will be fully implemented soon within the crediting period.	☑

<table>
<tr>
<td>Component 1
Technical Features</td>
<td>12 CHP modules GE Jenbacher 620
Electrical Capacity: 3 MW
Heat capacity: 2.63 Gcal/h
Manufacturer: GE Jenbacher
Consumption of methane: 700 m^3/h</td>
<td>12 CHP modules GE Jenbacher 620
Electrical Capacity: 3 MW
Heat capacity: 2.63 Gcal/h
Manufacturer: GE Jenbacher

Serial numbers and commissioning dates:

<table>
<tr><th>Module</th><th>Module Nr.</th><th>Motor Nr.</th><th>Generator Nr.</th><th>Commissioning date</th></tr>
<tr><td>1</td><td>4116252</td><td>4117721</td><td>8326654A202</td><td>01.02.2006</td></tr>
<tr><td>2</td><td>4119841</td><td>4117731</td><td>8326655A102</td><td>25.02.2006</td></tr>
<tr><td>3</td><td>4116251</td><td>4116241</td><td>8326654A102</td><td>20.02.2006</td></tr>
<tr><td>4</td><td>4047192</td><td>4045081</td><td>8326441A204</td><td>22.02.2006</td></tr>
<tr><td>5</td><td>4047194</td><td>4045101</td><td>8326441A404</td><td>22.02.2006</td></tr>
<tr><td>6</td><td>4047193</td><td>4045091</td><td>8326441A304</td><td>22.02.2006</td></tr>
<tr><td>7</td><td>4047191</td><td>4038461</td><td>8326441A104</td><td>21.02.2006</td></tr>
<tr><td>8</td><td>4475971</td><td>4365091</td><td>8327391A102</td><td>02.03.2006</td></tr>
<tr><td>9</td><td>4258122</td><td>4258111</td><td>8327000A101</td><td>18.02.2006</td></tr>
<tr><td>10</td><td>4290301</td><td>4290281</td><td>8327185A101</td><td>02.03.2006</td></tr>
<tr><td>11</td><td>4258121</td><td>4859031</td><td>8326655A202</td><td>20.02.2006</td></tr>
<tr><td>12</td><td>4290302</td><td>4290291</td><td>8327186A101</td><td>01.03.2006</td></tr>
</table>

<u>Clarification Request 1:</u></td>
<td>CR 1</td>
</tr>
</table>

		Please present a list with the commissioning dates and the serial numbers of the Jenbacher engines.	
Component 2 Technical Features	Automobile Gas Filling Compressor Plant (AGFCP), 5 Blocks Capacity: no information Manufacturer: Sumygazmash Commissioning date: no information Serial number: no information	Automobile Gas Filling Compressor Plant (AGFCP), 4 Blocks Capacity: Manufacturer: Sumygazmash Commissioning date: 15.01.2004, 15.01.2004, 20.02.2005, 20.02.2005 Serial number: 8, 9, 22, 24 **Clarification Request 2:** Please present a list describing the capacity of each block, commissioning dates and the serial numbers of the 4 installed AGFCP Blocks.	CR 2
Operation Status during verification			
	Verified Situation		Conclusion and IRL
Approvals / Licenses	Licenses of the CHP plant and the AGFCP have to be presented **Clarification Request 3:** Please present the operational licenses of the CHP Plant and the AGFCP.		CR 3
Actual Operation Status	Start date of operation (each site if applicable): 2007 Under construction ☐ In operation ☒ Out of operation ☐ Reason and date (if out of operation):		The CHP plant at Vostochnaya site and the AGFCP are in operation.

		☑
Remarks to Special Operational Status During the Verification Period	Phased implementation: according to PDD Special cases: n/a	☑

1.2. Organization

Project Participant (s)		
	Verified Situation	Conclusion and IRL
Entity / Responsible person:	Lease Company "Coal Mine named after A.F. Zasyadko" Mr. Boris Bokiy (Deputy General Director) Mr. Yevgeniy Berezovskiy (CHP Chief) Mr. Valeriy Cherednikov (Monitoring Engineer, Gas Treatment Lead Engineer)	The entity and the team members did not change since last verification. ☑
JI Project management	Mr. Sergiy Apostolaka (Carbon Emission Partnership LLC) Mr. Boris Bokiy (Lease Company "Mine named after A.F. Zasyadko)	The team members did not change since last

		verification. ☑

1.3. Quality Management System

General aspects of the Quality Management System		
	Verified Situation	Conclusion and IRL
Quality Management Manual	A Monitoring Manual has been drawn up and was revised during the last audit. The current version 3 has been submitted the 02/11/2009 (see IRL 24).	☑
Responsibilities	No change from the last verification according to the findings of the on-site audit.	☑
Qualification and Training	Qualification training was carried out in December 2009 and is documented in the training manual (see IRL 36).	☑
Implementation of QM-system	See Monitoring Manual (see IRL 24)	☑

1.4. Remaining FARs from previous Verifications (or forwarded issues of validation report)

Remaining Requests from Previous Verifications	Summary of project owner response	Audit team Conclusion and IRL
Forward action request No. 1	n/a	No FAR has been raised during the last verification ☑

2. Monitoring Plan Implementation

2.1. Parameters

Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
Parameters not monitored					
$TH_{BL,y}$	n/a	n/a	n/a	n/a	n/a
d_k^{max}	n/a	n/a	n/a	n/a	n/a
$CBM_{BL,i,y}$	n/a	n/a	n/a	n/a	n/a
$CBM_{BL,i}$	n/a	n/a	n/a	n/a	n/a
$PMM_{BL,i}$	n/a	n/a	n/a	n/a	n/a
$VAM_{BLi,y}$	n/a	n/a	n/a	n/a	n/a
$CBMe_{i,y}$	n/a	n/a	n/a	n/a	n/a
$CBM_{BL,i,y}$	n/a	n/a	n/a	n/a	n/a
$CMM_{BL,i,y}$	n/a	n/a	n/a	n/a	n/a
$VAM_{BL,i,y}$	n/a	n/a	n/a	n/a	n/a
$PMM_{BL,i,y}$	n/a	n/a	n/a	n/a	n/a
Parameters monitored					
CON-$S_{ELEC,pj}$	$EL_{cons,y}$	EL_{cons}	B.2.2 List of variables of the MR	Compliance with Meth and PDD.	☑

Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
Parameters not monitored					
CON-$S_{HEAT,PJ}$	n/a	n/a	n/a	n/a	n/a
$CONS_{Foss-Fuel,PJ}$	n/a	n/a	n/a	n/a	n/a
CEF_{ELEC}	n/a	n/a	n/a	n/a	n/a
CEF_{HEAT}	n/a	n/a	n/a	n/a	n/a
$CEF_{FossFuel}$	n/a	n/a	n/a	n/a	n/a
MM_{FL}	n/a	n/a	n/a	n/a	n/a
$VAM_{flow,rate,y}$	n/a	n/a	n/a	n/a	n/a
$time_y$	n/a	n/a	n/a	n/a	n/a
$D_{CH4,corr,inflow}$	n/a	n/a	n/a	n/a	n/a
$D_{CH4,corr,exh}$	n/a	n/a	n/a	n/a	n/a
$P_{VAMinflow}$	n/a	n/a	n/a	n/a	n/a
$T_{VAMinflow}$	n/a	n/a	n/a	n/a	n/a
$P_{VAMexhaust}$	n/a	n/a	n/a	n/a	n/a
$T_{VAMexhaust}$	n/a	n/a	n/a	n/a	n/a
MM_{ELEC}	n/a	n/a	n/a	n/a	n/a
Eff_{ELEC}	n/a	n/a	n/a	n/a	n/a

Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
Parameters not monitored					
MM_{HEAT}	n/a	n/a	n/a	n/a	n/a
Eff_{HEAT}	n/a	n/a	n/a	n/a	n/a
MM_{GAS}	MM_{GAS}	MM_{GAS}	B.2.2 List of variables of the MR	Compliance with Meth and PDD.	☑
Eff_{GAS}	Eff_{GAS}	Eff_{GAS}	Included in table 5 of the MR	Default Value 98.5% is in compliance with the Meth and the PDD.	☑
CEF_{NMHC}	CEF_{NMHC}	Not determined because concentration of NMHC less than 1 %	n/a	The done procedure complies with the Meth and the PDD.	☑
PC_{CH4}	PC_{CH4}	PC_{CH4}	Included in description	Compliance with Meth and PDD	☑
PC_{NMHC}	PC_{NMHC}	PC_{NMHC}	Included in description	Compliance with Meth and PDD	☑
$PC_{CH4,VAM}$					
$PC_{CH4,exhaust}$					
MM_i	MM_{CHP}	MM_{CHP}	B.2.2 List of variables in the MR		☑
Eff_i	Eff_{CHP}	Eff_{CHP}	Included in table 5 of the MR	Default Value 99.5% in compliance with the Meth and the PDD.	☑
PE_{Mvent}	n/a	n/a	n/a	n/a	n/a

Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
Parameters not monitored					
$Me_{i,y}$	n/a	n/a	n/a	n/a	n/a
$CMM_{Pj,i,y}$	n/a	n/a	n/a	n/a	n/a
$VAM_{PJ,i,y}$	n/a	n/a	n/a	n/a	n/a
$PMM_{Pj,i,y}$	n/a	n/a	n/a	n/a	n/a
GWP_{CH4}	GWP_{CH4}	GWP_{CH4}	Included in table 5 of the MR	Default Value 21 tCO2/tCH4 is in compliance with the Meth and the PDD.	☑
PE_y	PE_y	PE_y	n/a	Compliance with Meth and PDD.	☑
PE_{MD}	PE_{MD}	PE_{MD}	n/a	Compliance with Meth and PDD.	☑
PE_{UM}	PE_{UM}	PE_{UM}	n/a	Compliance with Meth and PDD.	☑
MD_{CHP}	MD_{CHP}	MD_{CHP}	n/a	Compliance with Meth and PDD.	☑
MD_{GAS}	MD_{GAS}	MD_{GAS}	n/a	Compliance with Meth and PDD.	☑
CEF_{CH4}	CEF_{CH4}	CEF_{CH4}	Included in table 5 of the MR	Default value 2.75 tCO2e/tCH4 in compliance with the PDD and the Meth.	☑
R	n/a	n/a	n/a	n/a	n/a
V_w	n/a	n/a	n/a	n/a	n/a
T	n/a	n/a	n/a	n/a	n/a
ρ_{coal}	n/a	n/a	n/a	n/a	n/a
g_{coal}	n/a	n/a	n/a	n/a	n/a

Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
Parameters not monitored					
n	n/a	n/a	n/a	n/a	n/a
V_a	n/a	n/a	n/a	n/a	n/a
V_c	n/a	n/a	n/a	n/a	n/a
N	n/a	n/a	n/a	n/a	n/a
Coordi-nates of wells	n/a	n/a	n/a	n/a	n/a
Coordi-nates well profile	n/a	n/a	n/a	n/a	n/a
Well depth	n/a	n/a	n/a	n/a	n/a
t	n/a	n/a	n/a	n/a	n/a
ES_t	n/a	n/a	n/a	n/a	n/a
ES_h	n/a	n/a	n/a	n/a	n/a
ES_V	n/a	n/a	n/a	n/a	n/a
AO_w	n/a	n/a	n/a	n/a	n/a
AT_w	n/a	n/a	n/a	n/a	n/a
w	n/a	n/a	n/a	n/a	n/a

Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
Parameters not monitored					
$ED_{CBMw,y}$	n/a	n/a	n/a	n/a	n/a
$ED_{CBMz,y}$	n/a	n/a	n/a	n/a	n/a
$ED_{CPMM,y}$	n/a	n/a	n/a	n/a	n/a
$CBM_{w,y}$	n/a	n/a	n/a	n/a	n/a
$CBM_{z,y}$	n/a	n/a	n/a	n/a	n/a
$CBM_{x,y}$	n/a	n/a	n/a	n/a	n/a
$PBE_{Use,y}$	n/a	n/a	n/a	n/a	n/a
GENy	n/a	n/a	n/a	n/a	n/a
$HEAT_y$	$HEAT_{deliv,vost,y}$	$HEAT\text{-}CONS,vost,y$	B.2.2 List of variables of the MR	Compliance with the PDD.	☑
	$HEAT_{deliv,yak,y}$	n/a	Not included	Not used yet	☑
	$HEAT_{deliv,centr,y}$	n/a	Not included	Not used yet	☑
$VFUEL_y$	$VFUEL_y$	$VFUEL_y$	Included in table 6 of the MR	Compliance with the PDD.	☑
EF_{Elec}	$EF_{grid,\ produced,y}$	$EF_{grid,\ produced}$	Included in table 6 of the MR but value missing	**Clarification Request 4:** Please include the missing value in table 6 of the PDD.	CR 4
	$E_{grid,reduced,\ y}$	$EF_{grid,reduced}$	Included in table 6 of the MR but value missing	See CR 4	CR 4

Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
Parameters not monitored					
$EF_{OM,y}$	n/a	n/a	n/a	n/a	n/a
$EF_{BM,y}$	n/a	n/a	n/a	n/a	n/a
$F_{i,j,y}$	n/a	n/a	n/a	n/a	n/a
$COEF_{i,k}$	n/a	n/a	n/a	n/a	n/a
$GEN_{j,y}$	$GEN_{CHP,y}$	GEN_{CHP}	B.2.2 List of variables of the MR	Compliance with Meth and PDD.	☑
$EF_{CO2,i}$	$EF_{heat,DH,y}$	n/a	Not included	Not used yet	☑
	$EF_{CO2,DH,y}$	n/a	Not included	Not used yet	☑
	$EF_{heat,vost}$	$EF_{Heat,vost}$	Included in table 6 of the MR but value missing	See CR 4	CR 4
	$EF_{heat,centr}$	n/a	Not included	Not used yet	☑
	$EF_{heat,yak}$	n/a	Not included	Not used yet	☑
$Eff_{captive}$	n/a	n/a	n/a	n/a	n/a
Eff_{heat}	n/a	n/a	n/a	n/a	n/a
EF_{v}	EF_{v}	EF_{v}	Included in table 6 of the MR but value missing	See CR 4	CR 4
ME_{k}	n/a	n/a	n/a	n/a	n/a
$MM_{ELEC,k}$	n/a	n/a	n/a	n/a	n/a
$MM_{HEAT,k}$	n/a	n/a	n/a	n/a	n/a

Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
Parameters not monitored					
$MM_{FL,k}$	n/a	n/a	n/a	n/a	n/a

2.2. Parameters measured directly with instruments

Table 1: E-Meters Vostochnaya Site

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	$GEN_{CHP,y}$	GEN_y	GEN_{CHP}	consistent	☑
Parameter ID (if available)	n/a	n/a	n/a	consistent	☑
Data Unit	MWh	MWh	MWh	consistent	☑
Monitoring frequency (reading)	continuously	continuously	continuously	continuously	☑
Monitoring frequency (recording)	continuously	continuously	Not mentioned	Every half our	☑
Calibration requirements	According to relevant Industry Standard	According to relevant Industry Standard	According to relevant Industry Standard: Every 6 years	E1: 14.05.2005 E2: 14.05.2005 The calibrations performed are consistent with the requirements (e.g. standard DSTU 3989, Ukrainian law §. 28 “About the	☑

				metrological activity" and National Register of Instrumentation of Ukraine)	
Uncertainty level	0.2%	According to relevant Industry Standard	0.2s	**Clarification Request 5:** Please show that 0.2s and 0.2% are equivalent.	CR 5
Measurement Principle (if applicable)	Electricity meter	Electricity meter	Electricity meter	consistent	☑
	Technical aspects				Conclusion and IRL
Instrument Type	2 Electronic E-Meter				The described instruments are installed. ☑
Serial Number	E1: 01116374 E2: 01116376				The numbers have been verified on-site. ☑
Manufacturer Model Nr.	EuroALFA from Elster-Metronika				☑
Specific Location	CHP-Plant (6 kV level)				☑

Measurement Range	n/a	☑
Gaps in operating time of instrument	Period: no gaps	☑
	Default value used: n/a	☑
	Justification: n/a	☑
	QA/QC aspects	Conclusion and IRL
Source of data	Type: electronic data	☑
	Procedures: Automatic recording	☑
	Implementation of procedure: n/a	☑
	Responsibility: Chief dispatcher as described in the Monitoring Manual	☑
Archiving of raw data and protection measures	On hard drive and CDs, written journal	☑
Data transfer and protection of input data for calculations	Detailed description in the Monitoring Manual	☑
	Quality of evidence	Conclusion and IRL
Completeness of data	Complete automatic data protocols	☑

Data verification	Consistency of raw data with calculation tool: During the on-site audit, the data in the calculation tool have been thoroughly checked against the raw data. Both data sets are fully consistent.	☑
	Consistency of calculation tool with monitoring report: The data in the MR have been thoroughly checked against the raw data during the on-site audit. Both data sets are fully consistent.	TÜV SÜD confirms that the data in the MR fully comply with the raw data. ☑
Crosscheck (if available)	Crosscheck of the total electricity measured by the meters E1 and E2 with the readings of the E-Meters E3 till E16	☑

Parameter and instrumentation					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	$GEN_{CHP,y}$	GEN_y	GEN_{CHP}	consistent	☑
Parameter ID (if available)	n/a	n/a	n/a	consistent	☑
Data Unit	MWh	MWh	MWh	consistent	☑
Monitoring frequency (reading)	continuously	continuously	continuously	consistent	☑

Monitoring frequency (recording)	continuously	continuously	Not mentioned	Every half hour	☑
Calibration requirements	According to relevant Industry Standard	According to relevant Industry Standard	According to relevant Industry Standard: Every 6 years	E3: 03.09.2004 E4: 03.09.2004 E5: 16.06.2005 E6: 16.06.2005 E7: 16.06.2005 E8: 16.06.2005 E9: 16.06.2005 E10: 16.06.2005 E11: 16.06.2005 E12: 10.08.2005 E13: 10.08.2005 E 14: 16.06.2005 E15: 09.02.2006 E16: 09.02.2006 The calibrations preformed are consistent with the requirements (see table 1).	☑
Uncertainty level	0.2%	According to relevant Industry Standard	0.2s	**Clarification Request 6**: The meters E3 and E4 have an accu-	CR 6

				racy class of 0.5s. Please correct the table of the E-meters accordingly. Please show that the 0.5s is equivalent to an uncertainty of 0.5%.	
Measurement Principle (if applicable)	Electricity meter	Electricity meter	Electricity meter	consistent	☑
	Technical aspects				Conclusion and IRL
Instrument Type	12 Electronic E-Meter				The described instruments are installed. ☑
Serial Number	E3: 01103251 E4: 01103208 E5: 01117846 E6: 01117849 E7: 01117851 E8: 01117852 E9: 01117855 E10: 01117856 E11: 01117848 E12: 01122645				The numbers have been verified on-site. CR 7

	E13: 01122650 E 14: 01117845 E15: 01132765 E16: 01132766 **Clarification Request 7:** The meters E15 and E16 are measuring the generated and not the consumed electricity. Please correct the third column of the table on page 11 of the MR.	
Manufacturer Model Nr.	EuroALFA from Elster-Metronika	☑
Specific Location	CHP-Plant (6 kv)	☑
Measurement Range	n/a	☑
Gaps in operating time of instrument	Period: no gaps	☑
	Default value used: n/a	☑
	Justification: n/a	☑
	QA/QC aspects	Conclusion and IRL
Source of data	Type: electronic data	☑
	Procedures: Automatic recording	☑
	Implementation of procedure: n/a	☑

	Responsibility: Chief dispatcher as described in the Monitoring Manual	☑
Archiving of raw data and protection measures	On hard drive and CDs; written journal	☑
Data transfer and protection of input data for calculations	Detailed description in the Monitoring Manual	☑
	Quality of evidence	Conclusion and IRL
Completeness of data	Complete automatic data protocols	☑
Data verification	Consistency of raw data with calculation tool: During the on-site audit, the data in the calculation tool have been thoroughly checked against the raw data. Both data sets are fully consistent.	☑
	Consistency of calculation tool with monitoring report: The data in the MR have been thoroughly checked against the raw data during the on-site audit. Both data sets are fully consistent.	TÜV SÜD confirms that the data in the MR fully comply with the raw data. ☑
Crosscheck (if available)	See E-Meters E1 and E2	☑

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	$EL_{cons,y}$	$CONS_{ELEC,pj}$	EL_{cons}	The net electricity consumption of the Mine is given by the Chief Energy Engineer of the Mine. Since the $GEN_{CHP} < EL_{cons}$ the factor EL_{cons} is set 0 which complies fully with the approved PDD. Hence, there are no baseline emissions claimed (see formula 11 on page 40 of the PDD). **Forward Action Request 1:** In the near future it is expected that $EL_{cons} > GEN_{CHP}$. In this case the electricity amounts have to be transparently shown and the raw	FAR 1

				data have to be presented. Furthermore, all E-meters involved have to be described and listed up according to the tables in the MR.	
Parameter ID (if available)	n/a	n/a	n/a	consistent	☑
Data Unit	MWh	MWh	MWh	consistent	☑
Monitoring frequency (reading)	continuously	continuously	continuously	See above	☑
Monitoring frequency (recording)	continuously	continuously	continuously	See above	☑
Calibration requirements	According to relevant Industry Standard	According to relevant Industry Standard	According to relevant Industry Standard: Every 6 years	E17: E18: Calibrations done by the supply company. The done calibrations are consistent with the requirements (see table 1). **<u>Clarification Request 8:</u>** Please describe in the MR the function of the meters E17	CAR 8

				and E18 in regard of the determination of $EL_{cons,y.}$	
Uncertainty level	0.2%	According to relevant Industry Standard	0.2s	See FAR 1	See FAR 1
Measurement Principle (if applicable)	Electricity meter	Electricity meter	Electricity meter	consistent	☑
	Technical aspects				Conclusion and IRL
Instrument Type	2 Electronic E-Meter				The described instruments are installed. ☑
Serial Number	E17: 01194835 E18: 01194834				The numbers have been verified on-site. ☑
Manufacturer Model Nr.	Euro-ALFA from Elster-Metronika				☑
Specific Location	Transformer Station (110 kV)				See FAR 1
Measurement Range	n/a				See FAR 1
Gaps in operating time of instrument	Period: no gaps				See FAR 1

	Default value used: n/a	☑
	Justification: n/a	☑
	QA/QC aspects	Conclusion and IRL
Source of data	Type: see FAR 1 above	See FAR 1
	Procedures: see FAR 1 above	See FAR 1
	Implementation of procedure: see FAR 1 above	See FAR 1
	Responsibility: see FAR 1 above	See FAR 1
Archiving of raw data and protection measures	see FAR 1 above	See FAR 1
Data transfer and protection of input data for calculations	see FAR 1 above	See FAR 1
	Quality of evidence	Conclusion and IRL
Completeness of data	n/a	See FAR 1
Data verification	n/a	See FAR 1
	n/a	See FAR 1

Crosscheck (if available)	n/a	☑

Table 2: Heat Meter

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	$HEAT_{deliv,vost,y}$	$HEAT_{y}$	$HEAT_{CONS,vost,y}$ (Indices according to the different sites)	consistent	☑
Parameter ID (if available)	n/a	n/a	n/a	consistent	☑
Data Unit	GJ	GJ	GJ	consistent	☑
Monitoring frequency (reading)	continuously	continuously	continuously	continuously	☑
Monitoring frequency (recording)	continuously	continuously	Not described	Once a day (accumulated value of all continuous daily measure-ments)	☑
Calibration requirements	According to relevant Industry Standard	According to relevant Industry Standard	According to relevant Industry Standard: Every 2 years	Calibration was performed on 04.06.09. The calibrations performed are con-	☑

				sistent with the requirements (see table 1).	
Uncertainty level	2%	According to relevant Industry Standard	Not described, see CR 9	**Clarification Request 9**: Please describe the uncertainty level of the heat meter in the MR.	CR 9
Measurement Principle (if applicable)	Heat meter	Heat meter	Heat meter	consistent	☑
	Technical aspects				Conclusion and IRL
Instrument Type	Heat meter SA 94/2M				The described instrument is installed. ☑
Serial Number	22903				The number has been verified on-site. ☑
Manufacturer Model Nr.	ASWEGA SA 94/2M				☑
Specific Location	CHP Plant				☑
Measurement Range	n/a				☑

Gaps in operating time of instrument	Period: No gaps	☑
	Default value used: n/a	☑
	Justification: n/a	☑
	QA/QC aspects	Conclusion and IRL
Source of data	Type: electronic data	☑
	Procedures: see Manual	☑
	Implementation of procedure: Implemented according to the manual	☑
	Responsibility: Chief dispatcher	☑
Archiving of raw data and protection measures	On hard drive and CDs	☑
Data transfer and protection of input data for calculations	Detailed description in the Monitoring Manual	☑
	Quality of evidence	Conclusion and IRL
Completeness of data	Complete automatic data	☑
Data verification	Consistency of raw data with calculation tool (excel sheet): During the on-site audit, the data in the calculation tool have been thoroughly checked against the raw data. Both data sets are fully consistent.	☑

	Consistency of calculation tool with monitoring report: The data in the MR have been thoroughly checked against the raw data during the on-site audit. Both data sets are fully consistent.	TÜV SÜD confirms that the data in the MR fully comply with the raw data. ☑
Crosscheck (if available)	n/a	☑

Table 3: Gas Analyser

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	$PC_{CH4,}$	PC_{CH4}	PC_{CH4}	consistent	☑
Parameter ID (if available)	n/a	n/a	n/a	n/a	☑
Data Unit	%	%	%	consistent	☑
Monitoring frequency (reading)	continuously	continuously	continuously	continuously	☑
Monitoring frequency (recording)	continuously	continuously	Not described	Continuous hourly values (m^3/h)	☑
Calibration requirements	According to relevant Industry Stan-	According to relevant Industry Stan-	According to relevant Industry Stan-	Calibrations done: C1: 09.07.09	☑

	dard	dard	dard: Every year	C2: 10.07.09. The done calibrations are consistent with the requirements (see table 1).	
Uncertainty level	1%	According to relevant Industry Standard	1%	consistent	☑
Measurement Principle (if applicable)	Gas analyser	Gas analyser	Gas analyser	consistent	☑
	Technical aspects				Conclusion and IRL
Instrument Type	2 Gas Analyser ABB 2040 Electronic				The described instruments are installed. ☑
Serial Number	3.244705.5 (fuel gas) and 3.244704.5 (Ignition gas)				The numbers have been verified on-site. ☑
Manufacturer Model Nr.	See instrument type				☑
Specific Location	CHP Plant				☑
Measurement Range	0-100%				☑
Gaps in operating time of instrument	Period: No gaps				☑

	Default value used: n/a	☑
	Justification: n/a	☑
	QA/QC aspects	Conclusion and IRL
Source of data	Type: electronic data	☑
	Procedures: Automatic recording	☑
	Implementation of procedure: n/a	☑
	Responsibility: Chief dispatcher as described in the Monitoring Manual	☑
Archiving of raw data and protection measures	On hard drive and CDs; handwritten journal	☑
Data transfer and protection of input data for calculations	Detailed description in the Monitoring Manual	☑
	Quality of evidence	Conclusion and IRL
Completeness of data	Complete automatic data protocols	☑
Data verification	Consistency of raw data with calculation tool: During the on-site audit, the data in the calculation tool have been checked against the raw data. Both data sets are fully consistent.	☑
	Consistency of calculation tool with monitoring report: The data in the MR have been checked against the raw data during the on-site audit. Both data sets are fully consistent.	TÜV SÜD confirms that the

		data in the MR fully comply with the raw data. ☑
Crosscheck (if available)	**Clarification Request 10:** Please send the methane concentration data (fuel gas) from 28.11.2009 (Gas analyser 3.244705.5)	CR 10

Tables 4: Flow meter

Parameter and instrumentation Information: Ignition Gas					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	MM_{CHP}	MM_i	MM_{CHP}	consistent	☑
Parameter ID (if available)	n/a	n/a	n/a	n/a	☑
Data Unit	t CH_4	t CH_4	t CH_4	consistent	☑
Monitoring frequency (reading)	continuously	continuously	continuously	continuously	☑
Monitoring frequency (recording)	continuously	continuously	not described	continuously	☑
Calibration requirements	According to relevant Industry Stan-	According to relevant Industry Stan-	According to relevant Industry Stan-	Calibrations done: V 1: 10.03.2009	☑

	dard	dard	dard: V: Every 2 years T: Every year P: Every 2 years	T: 10.03.09 P: 10.03.09 The done calibrations are consistent with the requirements (see table 1).	
Uncertainty level	V: 1%	According to relevant Industry Standard	V: 2% T: 0,5 % P: 0,5 %	**Clarification Request 11:** Please verify the uncertainty level of the volume measurements (flow meter serial no. 9771).	CR 11
Measurement Principle (if applicable)	n/a	n/a	n/a	consistent	☑
	Technical aspects				Conclusion and IRL
Instrument Type	Measurement of flow, temperature and pressure: V: G250 LGK 80 NVP Grempis T: PVT-01-1, NVP Grempis P: Vegabar-17, VEGA Germany				The described instruments are installed. ☑
Serial Number	V: 9771 T: 6480 P: 12307278				The numbers have been verified on-site. ☑

Manufacturer Model Nr.	See above	☑
Specific Location	CHP Plant	☑
Measurement Range	V = 20-250 m3/h P= 0-0,25 bar T= -50 - +50°C	☑
Gaps in operating time of instrument	Type: electronic data – no gaps	☑
	Procedures: Automatic recording	☑
	Implementation of procedure: n/a	☑
	Responsibility: Chief dispatcher as described in the Monitoring Manual	☑
Source of data	Type: electronic data	☑
	Procedures: Automatic recording	☑
	Implementation of procedure: n/a	☑
	Responsibility: Chief dispatcher as described in the Monitoring Manual	☑
Archiving of raw data and protection measures	On hard drive and CDs; handwritten journal	☑
Data transfer and protection of input data for calculations	Detailed description in the Monitoring Manual	☑
	Quality of evidence	Conclusion and IRL
Completeness of data	Complete automatic data protocols	☑

Data verification	Consistency of raw data with calculation tool: During the on-site audit, the data in the calculation tool have been checked against the raw data. Both data sets are fully consistent.	☑
	Consistency of calculation tool with monitoring report: The data in the MR have been checked against the raw data during the on-site audit. Both data sets are fully consistent.	TÜV SÜD confirms that the data in the MR fully comply with the raw data. ☑
Crosscheck (if available)	n/a	☑

Parameter and instrumentation Information: Gas filling Station					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	MM_{GAS}	MM_{GAS}	MM_{GAS}	consistent	☑
Parameter ID (if available)	n/a	n/a	n/a	n/a	☑
Data Unit	t CH_4	t CH_4	t CH_4	consistent	☑
Monitoring frequency (reading)	continuously	continuously	continuously	continuously	☑
Monitoring frequency (recording)	continuously	continuously	continuously	continuously	☑
Calibration requirements	According to relevant Industry Standard	According to relevant Industry Standard	According to relevant Industry Standard: V: Every 2 years T: Every year P: Every 2 years	Calibrations done: V: 15.07.2009 T: 28.07.09 P: 28.07.09 The calibrations performed are consistent with the requirements (see table 1).	☑
Uncertainty level	V: 1%	According to relevant Industry Standard	V: 2% P: 0.5 % V: 0.5 % See CR 11	See CR 11	See CR 11 The difference in the uncertainty level of the flow meter

					has been considered in the last calculation (minus 1%). ☑
Measurement Principle (if applicable)	n/a	n/a	n/a	consistent	☑
	Technical aspects				Conclusion and IRL
Instrument Type	V: G400 LGK 100 NVP Grempis T: PVT-01-1, NVP Grempis P: SEN-86, Cobold Germany				The described instruments are installed. ☑
Serial Number	V: 9786 T: 211 P: 45				The numbers have been verified on-site. ☑
Manufacturer Model Nr.	See above				☑
Specific Location	Centralnaya				☑
Measurement Range	V = 20-400 m3/h P= 0-0.25 bar T= -50 - +50°C				☑

Gaps in operating time of instrument	Type: electronic data - no failure in operating time	☑
	Procedures: Automatic recording	☑
	Implementation of procedure: n/a	☑
	QA/QC aspects	Conclusion and IRL
Source of data	Type: electronic data	☑
	Procedures: Automatic recording	☑
	Implementation of procedure: n/a	☑
	Responsibility: Chief dispatcher as described in the Monitoring Manual	☑
Archiving of raw data and protection measures	On hard drive and CDs; handwritten journal	☑
Data transfer and protection of input data for calculations	Detailed description in the Monitoring Manual	☑
	Quality of evidence	Conclusion and IRL
Completeness of data	Complete automatic data protocols	☑
Data verification	Consistency of raw data with calculation tool: During the on-site audit, the data in the calculation tool have been checked against the raw data. Both data sets are fully consistent.	☑

	Consistency of calculation tool with monitoring report: The data in the MR have been checked against the raw data during the on-site audit. Both data sets are fully consistent.	TÜV SÜD confirms that the data in the MR fully comply with the raw data. ☑
Crosscheck (if available)	n/a	☑

Parameter and instrumentation Information: CHP Plant Blocks BKT.M-1 till BKT.M-4					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	MM_{CHP}	MM_i	MM_{CHP}	consistent	☑
Parameter ID (if available)	n/a	n/a	n/a	consistent	☑
Data Unit	t CH_4	t CH_4	t CH_4	consistent	☑
Monitoring frequency (reading)	continuously	continuously	continuously	continuously	☑
Monitoring frequency (recording)	continuously	continuously	continuously	continuously	☑
Calibration requirements	According to relevant Industry Standard	According to relevant Industry Standard	According to relevant Industry Standard: V: Every 2 years	Calibration dates: **BKT.M-1**	☑

			T: Every year P: Every 2 years	M1: V: 19.08.2009 T: 22.07.09 P: 04.06.09 M3: V: 19.08.2009 T: 03.07.09 P: 04.06.09 M5: V: 19.08.2009 T: 22.07.09 P: 04.06.09 **BKT.M-2** M2: V:15.06.2009 T: 21.07.09 P: 02.06.09 M4: V:15.06.2009 T: 21.07.09 P: 02.06.09 M6: V:15.06.2009 T: 21.07.09	

				P: 02.06.09 **BKT.M-3** M7: V:17.07.2009 T: 21.07.09 P: 03.06.09 M9: V:17.07.2009 T: 21.07.09 P: 03.06.09 M11: V:17.07.2009 T: 21.07.09 P: 03.06.09 **BKT.M-4** M8: V:01.07.2009 T: 24.07.09 P: 05.06.09 M10: V:01.07.2009 T: 24.07.09 P: 05.06.09 M12:	

				V:01.07.2009 T: 24.07.09 P: 05.06.09 The calibrations performed are consistent with the requirements (see table 1).	
Uncertainty level	V: 1%	According to relevant Industry Standard	V: 1% P: 0.5 % V: 0.5 %	Consistent	☑
Measurement Principle (if applicable)	n/a	n/a	n/a	n/a	☑
	Technical aspects				Conclusion and IRL
Instrument Type	V: DRG.M-10000 T: Metran-274-02 P: Vegabar 14				The described instruments are installed. ☑
Serial Number	**BKT.M-1** M1: V: 102; T: 510745; P: 14536534 M3: V: 109; T: 510753; P: 14536342 M5: V: 103; T: 509669; P: 14447569				The numbers have been verified on-site. ☑

	BKT.M-2 M2: V: 108; T: 510735; P: 14568471 M4: V: 104; T: 509670; P: 14536186 M6: V: 097; T: 510733; P: 14536368 **BKT.M-3** M7: V: 098; T: 510744; P: 14568573 M9: V: 099; T: 510742; P: 14536304 M11: V: 101; T: 510738; P: 14568610 **BKT.M-4** M8: V: 105; T: 510754; P: 14568589 M10: V: 096; T: 510755; P: 14536306 M12: V: 100; T: 510747; P: 14568606	
Manufacturer Model Nr.	See descriptions above	☑
Specific Location	CHP Plant	☑
Measurement Range	V: 400-3000 m^3/h T: -50 - +50°C P: 0-0.25 bar	☑
Gaps in operating time of instrument	Type: electronic data - no failure in operating time	☑
	Procedures: Automatic recording	☑
	Implementation of procedure: n/a	☑

	QA/QC aspects	Conclusion and IRL
Source of data	Type: electronic data	☑
	Procedures: Automatic recording	☑
	Implementation of procedure: n/a	☑
	Responsibility: Chief dispatcher as described in the Monitoring Manual	☑
Archiving of raw data and protection measures	On hard drive and CDs; handwritten journal	☑
Data transfer and protection of input data for calculations	Detailed description in the Monitoring Manual	☑
	Quality of evidence	Conclusion and IRL
Completeness of data	Complete automatic data protocols	☑
Data verification	Consistency of raw data with calculation tool: During the on-site audit, the data in the calculation tool have been thoroughly checked against the raw data. Both data sets are fully consistent.	☑
	Consistency of calculation tool with monitoring report: The data in the MR have been thoroughly checked against the raw data during the on-site audit. Both data sets are fully consistent.	TÜV SÜD confirms that the data in the MR fully comply with the raw data.

		☑
Crosscheck (if available)	Cross-check possibility with meters GN5 **Clarification Request 12:** Please describe the meters of GN5 with serial numbers and calibration dates. Please provide the calibration protocols.	CR12

2.3. Parameters measured through sampling

Sampling information: Gas Sample Analysis					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	PC_{CH4}, PC_{NMHC}	PC_{CH4}, PC_{NMHC}	PC_{CH4}, PC_{NMHC}	consistent	☑
Parameter ID (if available)	n/a	n/a	n/a	consistent	☑
Data Unit	%	%	%	consistent	☑
Sampling frequency	Quarterly	Quarterly	Quarterly	consistent	☑
Sampling point				**Clarification Request 13:** Please provide a sampling protocol with the description of the sampling procedure and sampling points. Please mention the name of the institute for gas analysis in the MR and send the accreditation certificate of the institute. **Forward Action**	CR 13, FAR 2 and FAR 3

				Request 2 Please describe the sampling procedures in the Monitoring Manual.	
Uncertainty level	2 % till 10 % depending on parameter	Not described	Not described	**Clarification Request 14:** Please provide a letter from the institute showing the uncertainty levels of each parameter.	CR 14
	Technical aspects				Conclusion and IRL
Sampling Principle	See CR 13				See CR 13
Methodology of Sampling	See CR 13				See CR 13
Sample Analysed by	See CR 13				See CR 13
Certification of Analyser/ Laboratory	See CR 13				See CR 13
Methodology of Sample Analysis (if applicable)	See CR 13				See CR 13
Measurement Range	See CR 13				See CR 13
Gaps in sampling frequency	Period: no				☑
	Default value used: no				☑

	Justification: n/a	☑
	QA/QC aspects	Conclusion and IRL
Source of data	Type: Chemical Analysis	☑
	Procedures: see Monitoring Manual	☑
	Implementation of procedure: implemented	☑
	Responsibility: Monitoring team	☑
	Representativeness: n/a	☑
	Reproducibility: n/a	☑
Archiving of raw data and protection measures	Hard copy of the analysis protocol	☑
Data transfer and protection of input data for calculations	No input into calculations	☑
	Quality of evidence	Conclusion and IRL
Completeness of data	complete	☑
Data verification	Consistency of raw data with calculation tool n/a	☑
	Consistency of calculation tool with monitoring report: n/a	☑
Crosscheck (if available)	n/a	☑

2.4. Parameters obtained through external sources and accounting data

External sources and accounting information					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	n/a	n/a	n/a	n/a	☑
Parameter ID (if available)	n/a	n/a	n/a	n/a	☑
Data Unit	n/a	n/a	n/a	n/a	☑
	Technical aspects				Conclusion and IRL
Description of Data / Data Refers to:	n/a				☑
Date of Data	n/a				☑
Gaps in data	Period: n/a				☑
	Default value used: n/a				☑
	Justification: n/a				☑
	QA/QC aspects				Conclusion and IRL
Source of data	Type: n/a				☑
	Responsibility: n/a				☑

	Representativeness: n/a	☑
Reliability of Data Source	n/a	☑
Is the Data up-to-date?	n/a	☑
Archiving of raw data and protection measures	n/a	☑
Data transfer and protection of input data for calculations	n/a	☑
	Quality of evidence	☑
Completeness of data		☑
Data verification	Consistency of raw data with calculation tool: n/a	☑
	Consistency of calculation tool with monitoring report: n/a	☑
Crosscheck (if available)	n/a	☑

2.5. Other parameters not included in the methodology/tool but included in the PDD

Other information				
	PDD	MR	Verified	Conclusion and IRL
Parameter title	n/a	n/a	n/a	☑
Parameter ID (if available)	n/a	n/a	n/a	☑
Data Unit	n/a	n/a	n/a	☑
	Technical aspects			Conclusion and IRL
Description of Data / Data Refers to:	n/a			☑
Date of Data	n/a			☑
Gaps in data	Period: n/a			☑
	Default value used: n/a			☑
	Justification: n/a			☑
	QA/QC aspects			Conclusion and IRL
Source of data	Type: n/a			☑
	Responsibility: n/a			☑
	Representativeness: n/a			☑

Reliability of Data Source	n/a	☑
Archiving of raw data and protection measures	n/a	☑
Data transfer and protection of input data for calculations	n/a	☑
	Quality of evidence	Conclusion and IRL
Completeness of data	n/a	☑
Data verification	Consistency of raw data with calculation tool: n/a	☑
	Consistency of calculation tool with monitoring report: n/a	☑
Crosscheck (if available)	n/a	☑

3. Data Processing and ER calculation

Description of data processing from transferred data to final results in the calculation tool		
Step	Description	Conclusion and IRL
Consistency	The presented daily data have been checked against the raw data. Furthermore the data used in the calculations have been checked against the daily data. **Corrective Action Request 1:** MR table page 23: Methane amount burnt in the CHP-Plant: The value given in the MR does not comply with the daily and monthly data sheets. Please clarify and provide supportive evidence (daily raw data).	CAR 1
Calculation Tool description	In the calculation tool all calculation procedures are clearly described.	☑
Elimination of not plausible data (if applicable)	n/a	☑
Transformation from useable data to input data for further calculation (if applicalbe)	n/a	☑
Ex-ante data	n/a	☑
Default parameter	All default values have been thoroughly checked by TÜV SÜD. No deviations to the approved PDD have been found.	TÜV SÜD confirms that all used

		default values comply with the approved PDD. ☑
Formulae check	All formulae have been thoroughly checked by TÜV SÜD. No errors have been found.	TÜV SÜD confirms that all used formulae comply with the formulae of the approved PDD. ☑
Rounding functions	No rounding functions have been applied.	☑
Calculation tool changes and protection measures	There are no changes in the tool to previous calculations. The calculation tool has been send as excel sheet without any protection. However, no errors have been found.	☑
Reported data	The reported data have been thoroughly checked by TÜV SÜD. No inconsistencies with the calculated data have been found.	TÜV SÜD confirms that all reported data are consistent with the calculated data. ☑

4. Additional assessment

4.1. Internal Review

Description and performance of internal review		
	Description	Conclusion and IRL
Procedure	Internal review procedures have been defined and described in the Monitoring Manual.	☑
Documentation	The complete documentation of data and procedures was on-site available. The documents were complete and transparent.	☑
Responsibilities	The responsibilities are clearly defined in the Monitoring Manual and are practiced as described.	☑

4.2. Peculiarities

Description of Peculiarities and unexpected Daily Events during the verification period		
	Description	Conclusion and IRL
Performance	none	☑
Documentation	none	☑
Measures	none	☑

4.3. Further additional requirements

Description of additional requirements to be checked		
	Description	Conclusion and IRL
n/a	n/a	☑

4.4. Data Reporting

Description of the Monitoring Report		
	Comments and Results	Conclusion and IRL
Compliance with UNFCCC regulations	The Monitoring Report is in compliance with UNFCCC regulations. However, the raised requests have to be considered.	☑
Completeness and Transparency	The Monitoring Report describes the used Parameters and formulae in detail and in a transparent manner. The used data and default values are given. However, the given requests have to be considered.	☑
Correctness	**Clarification Request 15:** Please revise the title of the monitoring report considering the monitoring period. Please revise table 6 inserting the taken values in the last column. Please correct the table notations (e.g. table 5: project default values. **Clarification Request 16:** To chapter A.8. of the MR: According to the findings on-site there are no deviations in the monitoring plan. Please correct.	CR 15, CR 16

5. Compilation and Resolutions of CARs, CRs and FARs

Corrective Action Requests by audit team			
	Comments and Results	Ref	Conclusion and IRL
Issue	**Corrective Action Request 1:** MR table page 23: Methane amount burnt in the CHP-Plant: The value given in the MR does not comply with the daily and monthly data sheets. Please clarify and provide supportive evidence (daily raw data).	3.	The CAR is considered to be solved. ☑
Response	1st Response: Pure methane volume calculation in air and gas mixture that is part of emission reduction unit is performed in re-calculation to normal conditions. Methodology of re-calculation to normal conditions is shown on the page 16 MR. Daily raw data are shown in Annex № 1. 2nd Response: This table shows volumes of methane and air mixture brought to normal conditions.		
Assessment	The given values represent the amount of collected coal mine gas. The methane amount is calculated from the methane concentration standardised to normal conditions according to the approved PDD. The given annex refers to the response of Carbon Emission Partnership from 19.03.2010.		

Clarification Requests by audit team			
	Comments and Results	Ref	Conclusion and IRL
Issue	**Clarification Request 1:** Please present a list with the commissioning dates and the serial numbers of the Jenbacher engines.	1.1.	The CR is considered to be solved. ☑
Response	List with the commissioning dates and the serial numbers of the Jenbacher engines is shown in Annex № 2.		
Assessment	The serial numbers and the commissioning dates have been presented to the audit team. The given serial numbers comply with the numbers seen during the on-site audit.		

Issue	**Clarification Request 2:** Please present a list describing the capacity of each block, commissioning dates and the serial numbers of the 4 installed AGFCP Blocks.	1.1.	The CR is considered to be solved. ☑
Response	A list describing the capacity of each block, commissioning dates and the serial numbers of the 4 installed AGFCP Blocks is shown in Annex № 3.		
Assessment	The given list complies with the numbers checked during the on-site audit. The gas filling capacity is 1,8 Nm^3/min (0,15 Mpa) or 3,6 Nm^3/min (0,30 Mpa).		

Issue	**Clarification Request 3:** Please present the operational licenses of the CHP Plant and the AGFCP.	1.1.	The CR is considered to

Response	1st Response: Copies of CHP Plant and AGFCP commissioning certificates are shown in Annex № 4. 2nd Response: Delivery of the operational licence of the Zaysadko coal mine.		be solved. ☑
Assessment	The usage of methane is part of the operational licence of the Zasyadko coal mine. The licence has been provided by the mine.		

Issue	**Clarification Request 4:** Please include the missing values in table 6 of the MR.	2.1.	The CR is considered to be solved. ☑
Response	Appropriate changes have been made to Table 8 of the MR V 2.0, which corresponds to Table 6 of the MR V 1.0		
Assessment	The missing values have been included in table 8.		

Issue	**Clarification Request 5:** Please show that 0.2s and 0.2% are equivalent.	2.2. table 1	The CR is considered to be solved. ☑
Response	«Instrument accuracy» definition explanation is shown in note 4, page 8. «Instrument accuracy 0.2S and 0.5S» definition explanation is shown in note 5, page 8. Measurement error check was performed through cross-checking which values are shown in table 3, page 7.		
Assessment	According to GOST-Standard 30206-94 the 0.2S-Instruments have an uncertainty level of ± 0.2% and the 0.5S-Instruments an uncertainty level of ± 0.5%.		

Issue	**Clarification Request 6**: The meters E3 and E4 have an accuracy of 0.5s. Please correct the table of the E-meters accordingly. Please show that the 0.5s is equivalent to an uncertainty of 0.5%.	2.2. table 1	The CR is considered to be solved.

Response	1st Response: Table has been corrected. «Instrument accuracy 0.2S и 0.5S» definition explanation is shown in note 5, page 8. 2nd Response: Meters E3 and E4 measure electrical power consumed by CHP: uncertainty of 0.5% corresponds to Data uncertainty level B12 EL_{cons}, table 12 of the PDD:		☑
Assessment	The table has been corrected. According to GOST-Standard 30206-94 the meters E3 and E4 (0.5S-Instruments) have an uncertainty level of ± 0.5%, which perfectly corresponds with the uncertainty level of the E-meters metering the electricity consumption (EL_{cons}).		

Issue	**Clarification Request 7:** The meters E15 and E16 are measuring the generated and not the consumed electricity. Please correct the third column of the table on page 11 of the MR.	2.2. table 1	The CR is considered to be solved. ☑
Response	Corrected.		
Assessment	The table has been corrected according to the facts.		

Issue	**Clarification Request 8:** Please describe in the MR the function of the meters E17 and E18 in regard of the determination of $EL_{cons,y.}$	2.2. table 1	The CR is considered to be solved. ☑
Response	Commentary added. See note 3, page 6.		
Assessment	The meters E17 and E18 are part of the metering system measuring $EL_{cons,y.}$		

Issue	**Clarification Request 9**: Please describe the uncertainty level of the heat meter in the MR	2.2. table 2	The CR is considered to be solved.
Response	Commentary added. See note 6, page 14. Instrument SA 94/2M uncertainty consists with DSTU 3339-96 (State Standard of Ukraine) and amounts: heat +/- 4%, flow +/- 2%.		

Assessment	The accuracy of the heat meter (4%) does not match the uncertainty level given in table 14 of the PDD (2%). This deviation has been considered in the last calculations by subtracting 2% from the measured heat thus reducing the baseline emissions. This provides a more conservative result.		☑

Issue	**Clarification Request 10:** Please send the methane concentration data (fuel gas) from 28/11/2009 (Gas analyser 3.244705.5).	2.2. table 3	The CR is considered to be solved. ☑
Response	See data in Annex № 5.		
Assessment	The data has been delivered. The average methane concentration at this date measured by the on-site gas analyser was 29.9 %. In comparison, the methane concentration analysed by the laboratory was 32.6 %. This result clearly supports the accuracy of the on-site measurements.		

Issue	**Clarification Request 11:** Please verify the uncertainty level of the volume measurements (flow meter serial no. 9771 and 9786).	2.2. table 4	The CR is considered to be solved. ☑
Response	Uncertainty level of the volume measurement per flow meters s/n 9771 and 9786 makes +/- 1%.		
Assessment	The value has been corrected (+/- 1%).		

Issue	**Clarification Request 12:** Please describe the meters of GN5 with serial numbers and calibration dates. Please provide the calibration protocols.	2.2. table 4	The CR is considered to be solved.
Response	Table 6 is added into MR, with description of GN5 flow meters. Calibration protocols see		

	data in Annex № 6		☑
Assessment	According to the send documents the serial number is 167. The instrument has been calibrated every year (The last time 02.07.2009). This complies with the on-site findings of TÜV SÜD.		

Issue	**Clarification Request 13:** Please provide a sampling protocol with the description of the sampling and of the sampling points. Please mention the name of the institute for gas analysis in the MR and send the accreditation certificate of the institute.	2.3	**FAR 3**
Response	Copy of sampling certificate, with indication of numbers of samples and sapling points-see Annex № 7. Name of Institute is indicated in note (18) on page 38 MR. Copy of Institute Accreditation Certificate- see Annex № 8.		
Assessment	The Accreditation Certificate of the Ministry of Coal Mining has been delivered (valid from 10/12/2009 till 2014). Furthermore a general description of the sampling method used has been provided. **Forward Action Request 3:** Next NMHC analysis: The sampling has to be documented in a sampling protocol.		

Issue	**Clarification Request 14:** Please send a letter from the institute for gas analysis showing the uncertainty levels of each parameter.	2.3	The CR is considered to be solved. ☑
Response	Letter from Institute –see Annex № 9.		
Assessment	According to the Accreditation Certificate the uncertainty level of the methane measurements is ± 0.3 %.		

Issue	**Clarification Request 15:** Please revise the title of the monitoring report considering the monitoring period. Please revise table 6 inserting the taken values in the last column. Please correct the table notations (e.g. table 5: project default values).	4.4	The CR is considered to be solved. ☑
Response	Corrected. Data entered.		
Assessment	The title of the monitoring report has been revised considering the monitoring period. The data have been inserted into table 6. The notation of the tables have been revised according to TÜV SÜD comments.		

Issue	**Clarification Request 16:** To chapter A.8. of the MR: According to the findings on-site there are no deviations in the monitoring plan. Please correct.	4.4	The CR is considered to be solved. ☑
Response	Corrected.		
Assessment	Chapter A.8. has been revised according to the comment of TÜV SÜD.		

Forward Action Requests by audit team			
	Comments and Results	Ref	Conclusion and IRL
Issue	**Forward Action Request 1:** In the near future it is expected that EL_{cons} > GEN_{CHP} . In this case the electricity amounts have to be transparently shown and the raw data have to be presented. Furthermore, all E-meters involved have to be described and listed up according to the tables in the MR.	2.2. table 1	Has to be checked at the next verification
Response	1st Response: At this moment and in the nearest future (commissioning of CHP at Yakovlevskaya site), ELcons exceeds GEN_{CHP}. E-meters are described in section B.1.2. 2nd Response: If EL_{cons} will be less than GEN_{CHP} changes into Monitoring Plan will be entered; according to them, in Monitoring Report, reading values for all 13 commercial meters for mine electrical power will be considered, to control correlation of EL_{cons} and GEN_{CHP} values.		
Assessment	N/A		

Issue	**Forward Action Request 2** Please describe the sampling procedures of the gas analysis in the Monitoring Manual.	2.3.	Has to be checked at the next verification
Response	Following changes are entered into MM: «Gas sampling is performed quarterly, by certified laboratory, according to methodology approved by State Standard».		
Assessment	N/A		

Issue	**Forward Action Request 3:** Next NMHC analysis: The sampling has to be documented in a sampling protocol. The procedure has to be included into the Monitoring Manual.	5.	Has to be checked at the next verification
Response	N/A		
Assessment	N/A		

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information
1	27/03/2008	PDD “Utilisation of Coil Mine Methane at the Coil Mine named after A. F. Zasyadko”, Version 04.4, project no. 0035 , UNFCCC website: http://ji.unfccc.int/UserManagement/FileStorage/Q5R65QBGA2B44Q2FUW5199HND2X0T1	Global Carbon B. V.	PDD Registered
2	22/12/2006	Approved consolidated baseline and monitoring methodology ACM0008 Version 03 “Consolidated baseline methodology for coal bed methane and coal mine methane capture and use for power (electrical and motive) and heat and/or destruction by flaring”	UNFCCC	
3	02/03-03/03/2010	Participant list of on-site interviews	TÜV SÜD	
4	02/03-03/03/2010	On-site interviews conducted by TÜV SÜD. **Validation Team:** Dr. Albert Geiger TÜV SÜD Industrie Service GmbH (GHG-Auditor) Dr. Volodymyr Ilchenko Trainee and Country Expert (Regional Manger) **Interviewed persons:** Mr. Boris Bokiy Lease Enterprise “Coal Mine named (Deputy General Director) after A.F. Zasyadko” Mr. Yevgeniy Berezovskiy Lease Enterprise “Coal Mine named (CHP Chief) after A.F. Zasyadko”	TÜV SÜD	

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information
		Mr. Valeriy Cherednikov (Monitoring Engineer) Lease Enterprise “Coal Mine named after A.F. Zasyadko” Mr. Sergiy Apostolaka (Director) Carbon Emission Partnership LLC		
5	01/02/2010	JI Monitoring Report Version 1.0	Carbon Emission Partnership LLC.	
6	11/05/2010	JI Monitoring Report Version 2.2	Carbon Emission Partnership LLC.	
7	01/02/2010 11/05/2010	Excel spread sheets with the calculation of the emission reductions	Carbon Emission Partnership LLC.	
8	02/03/2010	Logbook of CHP unit concerning of volume of mining gas, 01/10/2009 - 31/01/2010	Lease Enterprise Mine named after A. F. Zasyadko	Zasyadko Coal Mine CHP Plant
9	02/03/2010	Amount of generated electricity according to electric EuroAlfameter, output CHP units 1 till 12, 01/10/2009 - 31/01/2010	Lease Enterprise Mine named after A. F. Zasyadko	
10	02/03/2010	Daily electricity output CHP plant, EuroAlfa and REF meters, 01/10/2009 - 31/01/2010	Lease Enterprise Mine named after A. F. Zasyadko	
11	02/03/2010	Volume of the heat meter SA94/2, 01/10/2009 - 31/01/2010	Lease Enterprise Mine named after A. F. Zasyadko	

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information
12	02/03/2010	Computer tables (summary) of electricity amount, gas consumption and methane content, 01/10/2009 - 31/01/2010	Lease Enterprise Mine named after A. F. Zasyadko	
	19/03/2010	Gas concentration of gas analyser 3.244705.5 from 28/11/2009	Lease Enterprise Mine named after A. F. Zasyadko	
13	02/03/2010	Tabel of the monthly gas contribution of the AGFCP	Lease Enterprise Mine named after A. F. Zasyadko	
14	03/03/2010	Confirmation of electricity consumption at Zasyadko coal mine for the period , 01/10/2009 - 31/01/2010, issued by chief power engineer of Zasyadko coal mine	Lease Enterprise Mine named after A. F. Zasyadko	
15	04/12/2009	Report of the quarterly NMHC analysis	Respirator Institute Donetsk, Ukraine	Interval in accordance with the PDD
16	04/12/2009	Statement of Respirator Institute on sampling	Respirator Institute	
17	18/03/2010	Description of the sampling methodology of Respirator Institute	Respirator Institute	
18	10/12/2009	Accreditation certificate of Respirator Institute (valid till 09/12/2014)	Ministry of coal mining of Ukraine	
19	02/03/2010	Calibration documents of the electricity meters (EuroALFA), Passports for electricity meters incl. transformation coefficients Instruments with the Serial Numbers: E1: 01116374	State company “Donetskstandard -metrology”	Independent third party

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information
		E2: 01116376 E3: 01103251 E4: 01103208 E5: 01117846 E6: 01117849 E7: 01117851 E8: 01117852 E9: 01117855 E10: 01117856 E11: 01117848 E12: 01122645 E13: 01122650 E14: 01117845 E15: 01132765 E16: 01132766 E17: 01194835 E18: 01194834		
20	02/03/2010	Calibration documents of the ABB gas analyzers at vacuum pumping stations Serial Numbers 3.244705.5 (fuel gas) and 3.244704.5 (Ignition gas)	State company “Donetskstandard -metrology”	Independent third party
21	02/03/2010	Calibration documents of Heat meter SA 94/2M Serial Number 22903	State company “Donetskstandard -metrology”	Independent third party
22		Calibration documents of the flow meters (incl. T and P meters), instruments with the Serial Numbers:	State company “Donetskstandard	

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information
			-metrology”	
		CHP-Plant: Ignition Gas V: 9771, T: 6480, P: 12307278 BKT.M-1 M1: V: 102; T: 510745; P: 14536534 M3: V: 109; T: 510753; P: 14536342 M5: V: 103; T: 509669; P: 14447569 BKT.M-2 M2: V: 108; T: 510735; P: 14568471 M4: V: 104; T: 509670; P: 14536186 M6: V: 097; T: 510733; P: 14536368 BKT.M-3 M7: V: 098; T: 510744; P: 14568573 M9: V: 099; T: 510742; P: 14536304 M11: V: 101; T: 510738; P: 14568610 BKT.M-4 M8: V: 105; T: 510754; P: 14568589 M10: V: 096; T: 510755; P: 14536306 M12: V: 100; T: 510747; P: 14568606		

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information
		AGFCP V: 9786, T: 211, P: 45		
23	02/03/2010	List of software incl. description for data collection, calculation and reporting implemented at CHP	Lease Enterprise Mine named after A. F. Zasyadko	
24	02/11/2009	Emission Monitoring Manual for Mine name after A. F. Zasyadko, 2008, Lease Enterprise Mine named after A. F. Zasyadko, version 3	Lease Enterprise Mine named after A. F. Zasyadko	
25	02/03/2010	List of CHP staff responsible for the project, Lease Enterprise Mine named after A. F. Zasyadko	Lease Enterprise Mine named after A. F. Zasyadko	
26	14/12/2009	Document showing the training of the staff, conducted the 14th of December	Lease Enterprise Mine named after A. F. Zasyadko	
27	02/03/2010	Documentation of the daily works at CHP in 2009, Lease Enterprise Mine named after A. F. Zasyadko	Lease Enterprise Mine named after A. F. Zasyadko	
28	19/03/2010	List of serial numbers of the CHP units	Lease Enterprise Mine named after A. F. Zasyadko	
29	19/03/2010	List of commissioning dates and technical specifications of the AGFCP-Modules	Lease Enterprise	

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information
			Mine named after A. F. Zasyadko	
29	20/07/2006	Commissioning licence of the CHP-Plant	Inspection of Yasinuvate administrative district office	
30	01/07/1996	GOST 30206-94 Alternative current static watt-hours meters for active energy (accuracy classes 0.2S and 0.5S	GOST	
31	02/12/2009	Update of the Mining licenses of Lease Enterprise Mine named after A. F. Zasyadko (see IRL 34)	State geological service	
32	19/03/2010	Table with compilation and resolutions of CARs, CRs and FARs	Carbon Emission Partnership LLC.	
33	29/03/2010	Table with compilation and resolutions of CARs, CRs and FARs	Carbon Emission Partnership LLC.	
34	13/06/2001	Permission for the usage of the entrails of the earth, valid till 13/06/2021	Ministry for the environmental protection	
35	19/03/2010	Calibration protocol of the meter GN 5, last calibration conducted 02/07/2009	Carbon Emission Partnership LLC.	
36	03/03/2010	Manual of Trainings	Lease Enterprise Mine named after A. F. Zasyadko	

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information
37	04/12/2009	Joint Implementation Determination and Verification Manual	UNFCCC / JISC	
38	28/11/2008	Clean Development Mechanism Validation and Verification Manual	UNFCCC / CDM-EB	