VERIFICATION REPORT
LLC "ECO-ALLIANCE"

VERIFICATION OF THE
CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock Company "GOAO Shakhtoupravlenye Donbass"

4th periodic

REPORT NO. UKRAINE-VER/0885/2012

REVISION NO. 03

BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-ver/0885/2012

VERIFICATION REPORT

Date of first issue: 11/03/2013	Organizational unit: Bureau Veritas Certification Holding SAS
Client: LLC "ECO-ALLIANCE"	Client ref.: Mr. Kasyanov

Summary:

Bureau Veritas Certification has made the 4th verification of the "CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock Company "GOAO Shakhtoupravlenye Donbass", JI Registration Reference Number 0077, project of LLC "ECO-ALLIANCE" located in Donetsk region, Ukraine, and applying the methodology ACM0008 version 03, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The verification scope is defined as a periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the monitoring report against project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the verification process is a list of Clarification, Corrective Actions Requests, Forward Actions Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as per determined changes. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize 89,505 tonnes of CO_2 equivalent for the monitoring period from 01/05/2012 to 31/12/2012.

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the approved project baseline and monitoring, and its associated documents.

Report No.: UKRAINE-ver/0885/2012	Subject Group: JI	
Project title: "CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock Company "GOAO Shakhtoupravlenye Donbass"		
Work carried out by: Olena Manziuk - Team Leader, Lead Verifier Iuliia Pylnova – Team Member, Lead Verifier Svitlana Gariyenchyk – Team Member, Lead Verifier Sergiy Kustovskiy – Technical Specialist		
Work reviewed by: Ivan Sokolov – Internal Technical Reviewer Vasyl Kobzar – Technical Specialist		
Work approved by: Ivan Sokolov – Operational Manager		
Date of this revision: 08/04/2013	Rev. No.: 03	Number of pages: 41

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Abbreviations

AIE	Accredited Independent Entity
BVC	Bureau Veritas Certification Holding SAS
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CH_4	Methane
CL	Clarification Request
CMM	Coal Mine Methane
CO_2	Carbon Dioxide
DVM	Determination and Verification Manual
ERU	Emission Reduction Unit
FAR	Forward Action Request
GHG	Green House Gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MP	Monitoring Plan
MR	Monitoring Report
DFP	Designated Focal Point
NMHC	Non methane hydrocarbons
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change

1 INTRODUCTION

LLC “ECO-ALLIANCE” has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock Company «GOAO Shakhtoupravlenye Donbass» (hereafter called “the project”) in Donetsk region, Ukraine.

This report summarizes the findings of the verification of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

Verification is the periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period.

The objective of verification can be divided in Initial Verification and Periodic Verification.

UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

1.2 Scope

Verification scope is defined as an independent and objective review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions. The verification is based on the submitted monitoring report, the determined project design document including the project’s baseline study, revised monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

1.3 Verification Team

The verification team consists of the following personnel:
Olena Manziuk
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Iuliia Pylnova
Bureau Veritas Certification Team Member, Climate Change Lead Verifier

Svitlana Gariyenchyk
Bureau Veritas Certification Climate Change Lead Verifier

Sergiy Kustovskiy
Bureau Veritas Certification Technical Specialist

This verification report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification Internal Technical Reviewer

Vasyl Kobzar
Bureau Veritas Certification Technical Specialist

2 METHODOLOGY

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a verification protocol was customized for the project, according to the version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from verifying the identified criteria. The verification protocol serves the following purposes:

- It organizes, details and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent verification process where the verifier will document how a particular requirement has been verified and the result of the verification.

The completed verification protocol is enclosed in Appendix A to this report.

2.1 Review of Documents

The Monitoring Report (MR) submitted by LLC "ECO-ALLIANCE" and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), Approved CDM methodology ACM0008 and Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on Verification Requirements to be checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the Monitoring Report (MR) versions 1 dated 14/12/2012, MR version 2 dated 16/01/2013, MR version 3 dated 15/02/2013, and MR version 4 dated 26/02/2013, MR version 5 dated 05/04/2013and project as described in the determined revised monitoring plan and final PDD.

2.2 Follow-up Interviews

During the site visit on 26/12/2012 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Coal Mine Shcheglovskaya-Glubokaya, PJSC "COLLIERY GROUP "DONBAS", Eco-Alliance LLC and Carbon-TF B.V. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
PJSC "COLLIERY GROUP "DONBAS" Coal Mine Shcheglovskaya-Glubokaya	Organizational structure Responsibilities and authorities Roles and responsibilities for data collection and processing Installation of equipment Data logging, archiving, and reporting Metering equipment control Metering record keeping system, database IT management Training of personnel Quality management procedures and technology Internal audits and check-ups
Consultant:	Baseline methodology

Carbon-TF B.V., Eco-Alliance LLC	Revised monitoring plan Monitoring report

2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the GHG emission reduction calculation.

If the Verification Team, in assessing the monitoring report and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to the monitoring requirements, it should raise these issues and inform the project participants of these issues in the form of:

(a) Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;

(b) Clarification request (CL), requesting the project participants to provide additional information for the Verification Team to assess compliance with the monitoring plan;

(c) Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

The Verification Team will make an objective assessment as to whether the actions taken by the project participants, if any, satisfactorily resolve the issues raised, if any, and should conclude its findings of the verification.

To guarantee the transparency of the verification process, the concerns raised are documented in more detail in the verification protocol in Appendix A.

3 VERIFICATION CONCLUSIONS

In the following sections, the conclusions of the verification are stated.

The findings from the desk review of the original monitoring documents and the findings from interviews during the follow up visit are described in the Verification Protocol in Appendix A.

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in thirteen Corrective Action Requests and fourteen Clarification Requests. No Forward Action Request was raised during the fourth periodic verification.

The number between brackets at the end of each section corresponds to the DVM paragraph.

3.1 Remaining issues and FARs from previous verifications

No FAR from the previous verification (i.e., the third periodic verification) was remaining. Thus, that section is not applicable.

3.2 Project approval by Parties involved (90-91)

The project was approved by the host Party, Ukraine, which is confirmed by the Letter of Approval of Ministry for Environmental Protection of Ukraine #3872/11/10-08, issued on 26/03/2008. The written project approval by the Netherlands, the other Party involved, has been issued by the DFP of that Party when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest (Approval of voluntary participation in a Joint Implementation Project of the Ministry of Economic Affairs of the Netherlands, reference # 008JI04, dated 22/04/2008).

The abovementioned written approvals are unconditional.

3.3 Project implementation (92-93)

In this project CMM (coal mine methane), which has been sucked out of the active coal mine “Shcheglovskaya-Glubokaya”, has been utilised in upgraded previous coal boilers, a ventilation air heater, a flare, a cogeneration unit and an emergency generator. The methane has been burned to less harmful CO_2. The units have generated heat and power

which have displaced conventionally produced heat and power and gained an additional amount of CO_2 reductions.

In the frame of monitoring period 01/05/2012 – 31/12/2013 the ventilation air heater was working only in the winter period, namely, from November 2012 till December 2012.

The emergency generator was not working during thas monitoring period.

The summer boiler worked until 22/10/2012, the winter boilers are working since 30/10/2012.

The flare was working during the full reporting period with lower capacity in the winter period.

The total CH_4 utilisation remained at the level of the last monitoring period.

Table 3.3.1 Amount of methane utilised for heat and power generation

Unit	Period	CH4 [t/period]	Heat Generation [MWh]	Power Generation [MWh]
Boilers	01/05/2012-31/12/2012	1,621	7.250	-
Ventilation Air Heater	01/05/2012-31/12/2012	63	863	-
Flare	01/05/2012-31/12/2012	1,621	-	-
Cogeneration unit	01/05/2012-31/12/2012	1,182	-	4,947
Emergency generator	01/05/2012-31/12/2012	0	-	0
Total	01/05/2012-31/12/2012	**4,488**	**8,112**	**4,947**

On the whole, implementation of JI project measures is realized according to the schedule stated in the registered project design document.

As stated in the Monitoring Report, GHG emission reductions were achieved due to the JI project activity implementation, and the amount of

the emission reductions (ER) for the monitoring period 01/05/2012 – 31/12/2012 is equal 89,505 tonnes CO_2 equivalent that is slightly lower than anticipated by PDD for the same monitoring period. The deviation of the value is in acceptable range.

The identified areas of concern as to project implementation, project participants response and BV Certification's conclusion are described in Appendix A (refer to CAR01, CAR07, CL01, CL03, CL02, CL11, CL13, and CL14).

3.4 Compliance of the monitoring plan with the monitoring methodology (94-98)

The monitoring occurred in accordance with the PDD regarding which the determination has been deemed final and revised monitoring plan version 6b dated 26/02/2013 which was positively determined in course of the that periodic verification.

For calculating the emission reductions, key factors, such as availability and amount of extracted gas, concentration of methane in the extracted gas and others, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account.

Data sources used for calculating emission reductions such as appropriately calibrated measuring devices, equipment passports, the study of standardized emission factors for the Ukrainian electricity grid, sectoral standards, IPCC guidelines, laboratory analysis, are clearly identified, reliable and transparent.

Emission factors, including default emission factors, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

The calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner.

The identified areas of concern as to compliance of the monitoring plan with the monitoring methodology, project participants response and BV Certification's conclusion are described in Appendix A (refer to CAR02, CAR03, CAR06, CAR05, CAR08, CL09, and CL10).

3.5. Revision of monitoring plan (99-100)

In the course of the monitoring period (01/05/2012 – 31/12/2012) the monitoring plan was modified by the project participants. The project participants provided an appropriate justification for the proposed revisions caused by a set of reasons that described below. The change is as follows:

1. Change of the value of the CO2 emission factor of fuel used for captive power or heat

The value of the CO2 emission factor of fuel used for captive power or heat was changed. The reason for changing is update of the data source. Now for calculation of the factor the value of 25.99 t C/TJ for “Bituminous Coal” is used. It is the latest assessed value. Due to the regarded revision, it leads to improvement of data applicability because of usage of the latest estimated value of the CO2 emission factor of fuel used for captive power or heat, and accuracy calculations for the reporting period.

All revisions to the monitoring plan were made in accordance with the paragraph D of the „Guidance on criteria for baseline setting and monitoring” to improve accuracy of the monitoring of emission reductions and applicability of information collected.

The proposed revision improves the accuracy and applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans.

Based on above mentioned, BVC verification team can conclude that the proposed revision of the monitoring plan of the project is complete, effective and reliable. All relevant emission sources are covered by the monitoring plan and the boundaries of the project are defined correctly and transparently. All parameters were monitored and determined as prescribed. The collected data are stored in electronic and paper formats. The monitoring methodologies and supporting records were sufficient to enable verification of emission reductions. As a result the verification process, no significant lacks of evidence were detected.

JI project implementation is in compliance of the monitoring plan version 6b dated 26/02/2013 that was positively determined in the frame of the current periodic verification.

The identified areas of concern as to revision of the monitoring plan, project participants response and BV Certification’s conclusion are described in Appendix A (refer to CAR13).

3.6. Data management (101)

The data and their sources, provided in monitoring report, are clearly identified, reliable and transparent.

The implementation of data collection procedures is in accordance with the revised monitoring plan (MP) version 6b dated 26/02/2013, including the quality control and quality assurance procedures.

The function of the monitoring equipment, including its calibration status, is in order.

The evidence and records used for the monitoring are maintained in a traceable manner.

The data collection and management system for the project is in accordance with the monitoring plan (MP version 6b dated 26/02/2013).

Two different but similar systems are used for electronically data collection.

Data from the boilers and the ventilation air heater (VAH) are collected, processed and stored using a Siemens SIMATIC PLC S7 system and Siemens WINCC programming software. All data is stored in the internal memory about 2 GB. One time per hour the data are sent via GPS to an Internet-based Server data base. Eco-Alliance ensures regular back up's and archiving. The data can be read any time from the internet data base by authorised personnel. The utilised methane amount is automatically calculated and stored in the PLC. As all input data are stored, the automatically calculation can be checked in retrospect any time.

Data from the flare and the cogeneration unit are collected, processed and stored using a Siemens SIMATIC PLC S7 system and Siemens WINCC programming software. All data is stored in the internal memory about 2 GB. The data are read daily by Kuhse GmbH via GPS and stored in the Kuhse database in Germany. The data can be viewed any time using special access software provided by Kuhse. Kuhse ensures regular back ups and archiving. The data are regularly reviewed by Carbon-TF and Eco-Alliance. Carbon-TF provides regularly storing and archiving of the data as well as regularly transfer to Excel sheets for analysis, evaluation and reporting procedures.

The data can be read any time from the Kuhse data base by authorised personnel. The utilised methane amount is automatically calculated and

stored in the PLC. As all input data are stored, the automatically calculation can by checked in retrospect any time.

For plausibility checks and potential data back up, data recorded by coal mine personnel in hand written journals can be taken. The journals are stored by the coal mine.

The identified areas of concern as to data management, project participants response and BV Certification's conclusion are described in Appendix A (refer to CAR09, CAR04, CAR10, CAR11, CAR12, CL12, and CL04).

3.7. Verification regarding programmes of activities (102-110)

Not applicable.

4. VERIFICATION OPINION

Bureau Veritas Certification has performed the fourth periodic verification of the "CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock Company "GOAO Shakhtoupravlenye Donbass" Project in Ukraine, which applies the methodology ACM0008 version 3. The verification was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The verification consisted of the following three phases: i) desk review of the monitoring report against the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

The management of LLC "ECO-ALLIANCE" is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the Monitoring Plan as per determined changes. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the project Monitoring Report version 5 dated 05/04/2013 for the reporting period 01/05/2012 – 31/12/2012. Bureau Veritas Certification confirms that the project is implemented as per determined changes. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is accurately calculated and is free of material errors, omissions, or misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the approved project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm, with a reasonable level of assurance, the following statement:

Reporting period: From 01/05/2012 to 31/12/2012

Baseline emissions	: 102,441	tonnes of CO_2 equivalent
Project emissions	: 12,936	tonnes of CO_2 equivalent
Emission Reductions	: 89,505	tonnes of CO_2 equivalent

5. REFERENCES

Category 1 Documents:

Documents provided by the project participants that relate directly to the GHG components of the project.

/1/ Project Design Document "CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock Company "GOAO Shakhtoupravlenye Donbass", version 07 dated 06/08/2009

/2/ Monitoring Report of the JI project "CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock Company "GOAO Shakhtoupravlenye Donbass", version 1 dated 14/12/2012

/3/ Monitoring Report of the JI project "CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock Company "GOAO Shakhtoupravlenye Donbass", version 2 dated 16/01/2013

/4/ Monitoring Report of the JI project "CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock Company "GOAO Shakhtoupravlenye Donbass", version 3 dated 15/02/2013

/5/ Monitoring Report of the JI project "CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock Company "GOAO Shakhtoupravlenye Donbass", version 4 dated 26/02/2013

/6/ Revised Monitoring Plan of the JI project "CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock Company "GOAO Shakhtoupravlenye Donbass" version 6b dated 26/02/2013

/7/ Excel calculation spreadsheets "ER-SG-2012-05-01_to_2012-12-31.V3"

/8/ Letter of Approval of Ministry of Environmental Protection of Ukraine No 3872/11/10-08, issued on 26/03/2008

/9/ Approval of voluntary participation in a Joint Implementation Project of the Ministry of Economic Affairs of the Netherlands No 008JI04, issued on 22/04/2008

/10/ Input monitoring data "SG-B1+VAH_Measuring_Data_2012-05-01 to 2012-12-31_V2"

/11/ Input monitoring data "SG-F1_Measuring_Data_2012-05-01 to 2012-12-31_V2"

/12/ Input monitoring data "SG-M1_Measuring_Data_2012-05-01 to 2012-12-31_V2"

/13/ Monitoring Report of the JI project "CMM utilisation on the coal mine Shcheglovskaya-Glubokaya of the State Holding Joint-Stock

Company “GOAO Shakhtoupravlenye Donbass”, version 5 dated 05/04/2013

Category 2 Documents:

Background documents related to the design and methodologies employed in the design or other reference documents.

/1/ Photo–Flare unit
/2/ Photo–temperature sensor type TCM-1088, serial # 028-01
/3/ Photo–resistance thermometer type TSP U 1-3, serial # 09443
/4/ Photo–resistance transmitter type TSP U 1-3, serial # 09442
/5/ Photo–Emission reduction units automated monitoring system
/6/ Photo–VAH control display
/7/ Photo–pressure transmitter type ST-3000, serial # 0809C2801413001002
/8/ Photo–pressure transducer type P121-E02-311, serial # Ex612124576
/9/ Photo–flare unit control display
/10/ Photo– pressure transmitter type ST-3000, serial # 08W18C3059154001002
/11/ Photo– resistance transmitter type JUMO, serial # TN0051598801264830010083700001
/12/ Photo–standard orifice, serial # 264259
/13/ Photo–pressure transducer type ST-3000, serial # 09W12C3149127001001
/14/ Passport on gas analyzer type Ultramat23, serial # N1-BN-065 (last calibration date–10/04/2012)
/15/ Passport on resistance transmitter type TSP U 1-3, serial # 09443 (last calibration date–10/04/2012)
/16/ Passport on resistance transmitter type TSP U 1-3, serial # 09442 (last calibration date–10/04/2012)
/17/ Passport on resistance transmitter type JUMO, serial # 98023 (last calibration date–10/04/2012)
/18/ Passport on resistance transmitter type JUMO, serial # TN0051598701266669010084000007 (last calibration date–10/04/2012)
/19/ Passport on resistance thermometer type TSP U 1-3, serial # 09456 (last calibration date–10/04/2012)
/20/ Passport on resistance thermometer type TSP U 1-3, serial # 09444 (last calibration date–10/04/2012)
/21/ Passport on resistance thermometer type TSP U 1-3, serial # 09451 (last calibration date–10/04/2012)
/22/ Passport on resistance thermometer type TSP U 1-3, serial

09448 (last calibration date–10/04/2012)

/23/ Passport on standard orifice, registration # 4 (last calibration date–14/09/2012)

/24/ Passport on standard orifice, registration # 41/1 (last calibration date–17/04/2012)

/25/ Passport on standard orifice, registration # 42 (last calibration date–17/04/2012)

/26/ Passport on standard orifice, registration # 56090 (last calibration date–17/04/2012)

/27/ Calibration certificate # 681 dated 10/05/2012, valid till 10/05/2013, on pressure transmitter type P121-E02-311, serial # Ex812127132, issued by Sumy Regional Scientific and Production Centre for Standardization, Metrology and Certification State Enterprise

/28/ Calibration certificate # 2039 dated 30/10/2012, valid till 30/10/2013, on pressure transducer type ST-3000, serial # 09W12C3149127001001, issued by Sumy Regional Scientific and Production Centre for Standardization, Metrology and Certification State Enterprise

/29/ Passport on resistance thermometer type JUMO, serial # TN005159870126666901008400002 (last calibration date–07/06/2012)

/30/ Passport on infrared meter type Binos 100, serial # 48987001 (last calibration date–10/04/2012)

/31/ Passport on resistance thermometer type JUMO, serial # 200411 (last calibration date–10/04/2012)

/32/ Passport on standard orifice, registration # 486343 (last calibration date–17/04/2012)

/33/ Passport on standard orifice, registration # 501029 (last calibration date–17/04/2012)

/34/ Passport on standard orifice, registration # 502741 (last calibration date–17/04/2012)

/35/ Passport on flow-meter type KSD-023, serial # 8087123, inventory # 105304 (last calibration date–12/10/2012)

/36/ Passport on flow-meter type KSD-023, serial # 9056848, inventory # 258159 (last calibration date–12/10/2012)

/37/ Failure, interruption journal, daily data for the period from 12/05/2012 to 23/12/2012

/38/ Logbook on generator operation, daily data for the period from 22/05/2012 to 24/12/2012

/39/ Flare unit operation logbook, daily data for the period from 29/05/2012 to 04/12/2012

/40/ Emission reduction units automated monitoring system logbook for the period from 29/05/2010 to 04/12/2012 (Shcheglovskaya-Glubokaya Coal Mine)

/41/ Certificate # 5637 on the measurement device calibration (chromatograph ser. # 75) dated 19/12/2012. It is valid to

19/12/2013

/42/ Passport of the pressure flow meter type КСД2-023 ser. # 4014777. Date of state calibration 12/10/2012

/43/ Passport of the pressure flow meter type КСД2-023 ser. # 19. Date of state calibration 12/10/2012

/44/ Passport of the pressure flow meter type КСД2-004 ser. # 90908. Date of state calibration 12/10/2012

/45/ Certificate # 2039 on the measurement device calibration (pressure transmitter type ST-3000 ser. # 09W12C3149127001001) dated 30/10/2012. It is valid to 30/10/2013

Persons interviewed:

List persons interviewed during the verification or persons that contributed with other information that are not included in the documents listed above.

/1/ Viktor Orlov - chief engineer of PJSC “COLLIERY GROUP “DONBAS”

/2/ Konstiantyn Skryl – chief engineer of the coal mine “Shcheglovskaya-Glubokaya”

/3/ Oleksandr Rybalko– chief technologist of PJSC “COLLIERY GROUP “DONBAS”

/4/ Mykola Dubovyi - chief mechanical engineer of the coal mine “Shcheglovskaya-Glubokaya”

/5/ Ievhenii Shelenkyn - chief electrician of the coal mine “Shcheglovskaya-Glubokaya”

/6/ Viktor Dikhno - heating engineer of the coal mine “Shcheglovskaya-Glubokaya”

/7/ Oleh Rutskii – head of water facility department

/8/ Volodymyr Semushyn - head of degassing department

/9/ Oleksandr Honcharov – head of ventilation department

/10/ Karl Woste – senior consultant, Carbon-TF B.V.

/11/ Adam Hadulla – director of business development, Carbon_TF B.V.

/12/ Viktor Avtonomov – monitoring assistant of “Eco-Alliance” Ltd

APPENDIX A VERIFICATION PROTOCOL

Table 1 Check list for verification, according to the JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final 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?	The project was approved as JI project since 08/12/2009. The information concerning project approval is publicly available.	OK	OK
91	Are all the written project approvals by Parties involved unconditional?	The written project approvals by Parties involved are unconditional.	OK	OK
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?	Please, see section A.7 and Annex 5 of the MR. **CAR01.** Please, add to the section A.7 of the MR (except the already mentioned information in this section) reference to	CAR01	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Annex 5 of MR where previously determined changes to the project design are listed. **CL01.** Mentioning in the MR re-starting operation of the flare, please, provide reference to the documentation confirming this fact. **CL03.** Please, revise and correct the name of Annex 5 (as in this Annex there is information on revisions to the project design that were determined within previous monitoring periods; please, taking this into consideration, also correct the footnote on the pg.42).	CL01 CL03	OK OK
93	What is the status of operation of the project during the monitoring period?	See section A.6 of the MR. **CL02.** Please, revise the last sentence below the table on ventilation air heater (pg. 5 of MR) because the sense of this sentence is unclear. **CAR07.** Please, pay attention to the paragraph 4 of the MR section A.3 (obviously, the date 22/10/2011 should be replaced by 22/10/2012).	CL02 CAR07	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CL11. According to the MR, the summer boiler worked until 22/10/2011, the winter boilers are working since 30/10/2012. Please, explain the situation for the period from 22/10/2012 to 30/10/2012.	CL11	OK
		CL13. Please, make some amendments in the section A.3 of the MR as last five sentences in this section are related not to the general description of project activity but to the status of project implementation. Please, make the corresponding subtitle in the second half of the section A.3.	CL13	OK
		CL14. Please, expand the abbreviation *CIS* at the first mention of this abbreviation (because there is no information in the MR that it is *Commonwealth of Independent States*).	CL14	OK
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?	See section A.8 and Annex 4 of the MR. **CAR02.** Please, state in the section A.8 of the MR version 3 (except the already mentioned information in this section) that there are no revisions to the revised monitoring plan determined within the previous monitoring period.	CAR02	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR03. Please, correct (in the section A.8 of MR) the reference made in the last sentence (please, replace A.4 by Annex A.4).	CAR03	OK
		CAR06. Please, correct the footnote (pg. 38 of the MR) because the revisions are related not to all the monitoring periods but to the previous monitoring periods.	CAR06	OK
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 the project taken into account, as appropriate?	For calculating the emission reductions, key factors influencing the baseline and project emissions are appropriately taken into account.	OK	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals	**CAR05.** Please, update (in the MR and Excel file) data on emission reductions for the December 2012, and confirm the data	CAR05	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	clearly identified, reliable and transparent?	by providing necessary information. **CAR08.** The value of project emissions indicated in the MR differs from the value of the same project emissions stated in the Excel file. **CL09.** Please, pay attention to the title of the table E-6 of the MR section D.3.4 as project emissions and emission reductions in this table are related not to the 4th verification period but to the 4th monitoring period.	CAR08 CL09	OK OK
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?	Emission factors are selected by carefully balancing accuracy and reasonableness.	OK	OK
95 (d)	Is the calculation of emission	The calculation of emission reductions is		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?	based on conservative assumptions. **CL10.** Please, provide comparison of the planned in the PDD and actually achieved values of emission reductions and give detailed explanation of this deviation in the MR.	CL10	OK
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? 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
Applicable to bundled JI SSC projects only				
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?	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? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	N/A	N/A	N/A
Revision of monitoring plan **Applicable only if monitoring plan is revised by project participant**				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	One revision to the monitoring plan are regarded in the monitoring report version 05 dated 05/04/2013. **CAR13.** Please, consider revision included in the current Monitoring Report according to the following algorithm: 1) essence of	CAR13	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		revision; 2) reason for this revision; and 3) what it can improve (e.g., applicability, accuracy, etc.). Also, explicitly state whether proposed revisions improve the accuracy and applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans and selected methodology ACM0008.		
99 (b)	Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?	Refer to section 99 (a) above.	OK	OK
Data management				
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance	The implementation of data collection procedures is accordance with the revised monitoring plan determined within this verification.		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	procedures?	**CL12.** Please, clarify whether there were measuring equipment replacement cases during the monitoring period or not. In case of yes, please, provide the records confirming the meters replacement.	CL12	OK
101 (b)	Is the function of the monitoring equipment, including its calibration status, in order?	**CAR09.** Please, provide the replacement statement (of this monitoring period) for the meter of type Ultramat.	CAR09	OK
		CAR04. Please, revise the section C.1.2 of MR by specifying and updating information on the training conducted during the monitoring period. If no new personnel were employed (so no training was conducted), please, state this in the MR.	CAR 04	OK
		CAR10. Please, provide the document confirming the last calibration date (19/12/2012) for gas chromatograph LHM-8MD, ser. #75.	CAR10	OK
		CAR11. Please, provide the document confirming the last calibration date (12/10/2012) for pressure difference transmitters of type DM3583M (ser. #19; ser. #71329, inv. #105621; inv. #101503).	CAR11	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR12. Please, provide the document confirming last calibration date (30/10/2012) for pressure difference transmitter STD-3000, ser. #09W12 C3149127001001.	CAR12	OK
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	**CL04.** Please, mention in the MR the documentation concerning indication of the names of the personnel involved in the monitoring and prescribing the storage of data monitored for two years after the last transfer of ERUs.	CL04	OK
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	See CL 04 of the protocol section 101 (c).	See CL04	OK
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
103	Is the verification based on the monitoring reports of all JPAs to be verified?	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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
104	Does the monitoring period not overlap with previous monitoring periods?	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
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	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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
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
109	Is the sampling plan available for submission to the secretariat for the JISC ex ante assessment? (Optional)	N/A	N/A	N/A
110	If the AIE learns of a fraudulently included JPA, a fraudulently	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
CL01. Mentioning in the MR re-starting operation of the flare, please, provide reference to the documentation confirming this fact.	Table 1, 92	**Response 01**.Text was added in section A.6. **Response 02**. Mistake was made in previous response. Text was added in Annex 1.	**Conclusion on response 01**. Section A.6 of the monitoring Report version 3 does not include the required information. Please clarify the issue. **Conclusion on response 02**. Issue is closed.
CL02. Please, revise the last sentence below the table on ventilation air heater (pg. 5 of MR) because the sense of this sentence is unclear.	Table 1, 93	Text was revised.	Issue is closed.

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
CAR01. Please, add to the section A.7 of the MR (except the already mentioned information in this section) reference to Annex 5 of MR where previously determined changes to the project design are listed.	Table 1, 92	Text was added.	Issue is closed.
CL03. Please, revise and correct the name of Annex 5 (as in this Annex there is information on revisions to the project design that were determined within previous monitoring periods; please, taking this into consideration, also correct the footnote on the pg.42).	Table 1, 92	The current name of the Annex shows the changes made during whole period of project implementation.	Issue is closed.
CAR02. Please, state in the section A.8 of the MR version 3 (except the already mentioned information in this section) that there are no revisions to the revised monitoring plan determined within the previous	Table 1, 94	Text was added.	The information was clarified. Issue is closed.

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
monitoring period.			
CAR03. Please, correct (in the section A.8 of MR) the reference made in the last sentence (please, replace A.4 by Annex 4).	Table 1, 94	MR was corrected.	The amendment was made. Issue is closed.
CAR04. Please, revise the section C.1.2 of MR by specifying and updating information on the training conducted during the monitoring period. If no new personnel were employed (so no training was conducted), please, state this in the MR.	Table 1, 101 (b)	The text was extended.	Explanation was provided in the monitoring report. Issue is closed.
CL04. Please, mention in the MR the documentation concerning indication of the names of the personnel involved in the monitoring and prescribing the storage of data monitored for two years after the last transfer of ERUs.	Table 1, 101 (c)	Text was added.	Issue is closed.

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
CAR05. Please, update (in the MR and Excel file) data on emission reductions for the December 2012, and confirm the data by providing necessary information.	Table 1, 95 (b)	Data was updated. The documentation was provided.	Provided documents were reviewed. The data from the monitoring report is in compliance with the documented evidences. Thus, the issue is closed.
CL09. Please, pay attention to the title of the table E-6 of the MR section D.3.4 as project emissions and emission reductions in this table are related not to the 4th verification period but to the 4th monitoring period.	Table 1, 95 (b)	**Response 01**. MR was corrected. **Response 02**. MR was corrected.	**Conclusion on response 01**. Monitoring Report version 3 dated 15/02/2013 does not include the required correction. Please check the information again and provide amendments. **Conclusion on response 02**. Issue is closed.
CAR06. Please, correct the footnote (pg. 38 of the MR) because the revisions are related not to all the monitoring periods but to the previous monitoring periods.	Table 1, 94	The footnote was corrected.	Issue is closed.
CL10. Please, provide comparison of the planned in the PDD and actually achieved	Table 1, 95 (d)	The comparison is provided in Section D.3.	Issue is closed.

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
values of emission reductions and give detailed explanation of this deviation in the MR.			
CAR07. Please, pay attention to the paragraph 4 of the MR section A.3 (obviously, the date 22/10/2011 should be replaced by 22/10/2012).	Table 1, 93	MR was corrected.	Based on the corrections, the issue is closed.
CL11. According to the MR, the summer boiler worked until 22/10/2011, the winter boilers are working since 30/10/2012. Please, explain the situation for the period from 22/10/2012 to 30/10/2012.	Table 1, 93	During this period the adjustment of monitoring system occurred.	Issue is closed.
CL12. Please, clarify whether there were measuring equipment replacement cases during the monitoring period or not. In case of yes, please, provide the records confirming the meters replacement.	Table 1, 101 (a)	There were no equipment replacements during current monitoring period.	According to the clarification, the issue is closed.
CAR08. The value of project	Table 1,	**Response 01**.The values are	**Conclusion on response 01**.

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
emissions indicated in the MR differs from the value of the same project emissions stated in the Excel file.	95 (b)	the same. **Response 02**. The rounding is applied in whole Excel table for correct matching sums and cross sums in most cases impossible without rounding. This procedure was discussed and confirmed with BV team during second monitoring period.	The verification team performed the project emission calculation for crosschecking the calculated value of project emission. As a fact, the total value of PE is 12,936 tonnes CO_2 equivalent, and that value is stated in the MR. But the Excel calculation spreadsheet provides the total value of PE as 12,937 tonnes CO_2 equivalent. Please revise Excel calculation spreadsheet. **Conclusion on response 02**. Issue is closed.
CL13. Please, make some amendments in the section A.3 of the MR as last five sentences in this section are related not to the general description of project activity but to the status of project implementation. Please, make the corresponding subtitle in the second half of the section A.3.	Table 1, 93	Revised.	Issue is closed.

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
CL14. Please, expand the abbreviation *CIS* at the first mention of this abbreviation (because there is no information in the MR that it is *Commonwealth of Independent States*).	Table 1, 93	Text was added.	Explanation was provided in the updated version of the monitoring report. Issue is closed.
CAR09. Please, provide the replacement statement (of this monitoring period) for the meter of type Ultramat.	Table 1, 101 (b)	During current monitoring period the meter of type Ultramat have not been replaced.	Issue is closed.
CAR10. Please, provide the document confirming the last calibration date (19/12/2012) for gas chromatograph LHM-8MD, ser. #75.	Table 1, 101 (b)	Document was provided (Certificate # 5637 on the measurement device calibration).	The documented evidence is in order. Issue is closed.
CAR11. Please, provide the document confirming the last calibration date (12/10/2012) for pressure difference transmitters of type DM3583M (ser. #19; ser. #71329, inv. #105621; inv. #101503).	Table 1, 101 (b)	**Response 01**. was provided (Passports of equipment). **Response 02**. The calibration of pressure difference transmitters is made together with chart recorders so the calibration certificates are equal for both meters. So on every passport serial	**Conclusion on response 01**. Provided file (provided Passports of equipment) included passports on the measurement equipment such as ser. # 4014777, ser. # 9056848, ser. # 8087123; that devices are also included to the project. Please provide

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
		numbers of chart recorder and pressure difference transmitter are indicated. **Response 03**. The documents were provided. The MR was corrected.	the documented evidences for the required equipment (i.e., ser. #19; ser. #71329, inv. #105621; inv. #101503). **Conclusion on response 02**. Please provide the documents to justify calibration status of the equipment such as pressure difference transmitters with ser. #19; ser. #71329, inv. #105621; inv. #101503. **Conclusion on response 03**. Issue is closed.
CAR12. Please, provide the document confirming last calibration date (30/10/2012) for pressure difference transmitter STD-3000, ser. #09W12 C3149127001001.	Table 1, 101 (b)	Document was provided (Certificate # 2039 on the measurement device calibration).	The document was provided and found satisfactory. Issue is closed.
CAR13. Please, consider revision included in the current Monitoring Report according to the following algorithm: 1) essence of revision; 2) reason for this revision; and 3) what it	Table 1, 99 (a)	Information related to the revision was provided in section A.8 of the monitoring report.	Revision was described in a proper way and justify with a documented evidences. So, the issue is closed.

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
can improve (e.g., applicability, accuracy, etc.). Also, explicitly state whether proposed revisions improve the accuracy and applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans and selected methodology ACM0008.			