VERIFICATION REPORT

PUBLIC JOINT STOCK COMPANY "COLLIERY GROUP "POKROVSKE"

VERIFICATION OF THE

"CMM UTILISATION ON THE JOINT STOCK COMPANY "COAL COMPANY KRASNOARMEYSKAYA ZAPADNAYA NO 1 MINE"

5th periodic

REPORT NO. UKRAINE-VER/0883/2012

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-ver/0883/2012

VERIFICATION REPORT

Date of first issue: 28/05/2013	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Public Joint Stock Company "Colliery Group "Pokrovske"	Client ref.: Petryshena Lyudmyla

Summary:
Bureau Veritas Certification has made the 5th periodic verification of the "CMM utilisation on the Joint Stock Company "Coal Company Krasnoarmeyskaya Zapadnaya № 1 Mine", JI Registration Reference Number 0105, project of Public Joint Stock Company "Colliery Group "Pokrovske" located in Krasnoarmiysk city, 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 Action Requests, Forward Action Requests (CL, 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 235612 tonnes of CO2eq for the monitoring period from 01/05/2012 to 31/12/2012.

Our opinion relates to the project 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/0833/2012	Subject Group: JI	
Project title: "CMM utilisation on the Joint Stock Company "Coal Company Krasnoarmeyskaya Zapadnaya № 1 Mine"		
Work carried out by: Team Leader, Lead Verifier: Svitlana Gariyenchyk Team Member, Verifier: Olexandr Kuzmenko Team Member, Lead Verifier: Vyacheslav Yeriomin		
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer Nikolay Chekhmestrenko – Technical Specialist		
Work approved by: Ivan Sokolov - Operational Manager		
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1 INTRODUCTION

Public Joint Stock Company "Colliery Group "Pokrovske" has commissioned Bureau Veritas Certification (BVC) to verify the emissions reductions of its JI project "CMM utilisation on the Joint Stock Company "Coal Company Krasnoarmeyskaya Zapadnaya № 1 Mine" (hereafter called "the project") at Krasnoarmiysk city, 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

The verification scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and monitoring report, 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:

Svitlana Gariyenchyk

Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Olexandr Kuzmenko
Bureau Veritas Certification Team Member, Climate Change Verifier

Vyacheslav Yeriomin
Bureau Veritas Certification Team Member, Climate Change Lead Verifier

This verification report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification, Internal Technical Reviewer

Nikolay Chekhmestrenko
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 Public Joint Stock Company “Colliery Group “Pokrovske” and additional background documents related to the project design, baseline, and monitoring plan, 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 to be Checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the Monitoring Reports version 1 of 17/12/2012, version 2 of 04/02/2013, version 3 of 21/03/2013, version 4 of 24/04/2013 and project as described in the determined PDD.

2.2 Follow-up Interviews

On 25/12/2012 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 "Colliery Group "Pokrovske", Eco-Alliance Ltd 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 "Pokrovske"	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: Eco-Alliance Ltd Carbon TF B.V.	Baseline methodology Monitoring plan Revision to the monitoring plan Monitoring report Deviations from PDD

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 11 Corrective Action Requests, 23 Clarification Requests, and 1 Forward Action Request.

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

3.1 Remaining issues and FARs from previous verifications

During the previous 3rd periodic verification conducted for the period of 01/03/2011 – 31/10/2011 and the 4th verification conducted for the period of 01/11/2011 to 30/04/2012 by BVC one Forward Action Request was issued:

FAR01. The previous verification reports contain the information that monitoring activities including data collection procedures, QA & QC procedures are written down in the project Monitoring Manual. However, no such document was provided to BVC during site-visit, thus the issue is raised:

Please, provide for review the updated project Monitoring Manual, if available.

During the period of previous the 4th verification the project participants haven't provided the updated Monitoring Manual requested by BVC as it was not currently available due to the ongoing works connected with the installation of the automated data control system at the cogeneration plant.
During the current verification the issue has been raised again by the BVC verification team. The project participants explained that as soon as the installation and putting into operation of the one remaining cogeneration unit (No.1) was completed, a new version of the Monitoring Manual would be issued.

The above mentioned Forward Action Request raised by BVC regarding this issue remains open pending the subsequent verification.

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 No 2239/11/10-08, issued on 22/02/2008. 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, Ref. 2008JI02, dated 22/04/2008).

The abovementioned written approvals are unconditional.

3.3 Project implementation (92-93)

The present JI project implies utilization of CMM from two suction systems and from drainage wells on the surface of the «Colliery Group «Pokrovske» (previously called Joint Stock Company "Coal Company "Krasnoarmeyskaya Zapadnaya № 1") for heat and power generation and for flaring.

CMM, which has been sucked out of the active coal mine «Colliery Group «Pokrovske», has been previously utilised in a coal boiler, which has

been upgraded with a CMM burning system and a flare. The methane has been burned to less harmful CO_2.

The construction of the cogeneration station at the central shaft has been finished at the end of 2011.

The installation of the cogeneration station at the main shaft has been completed, the operation started at the end of October 2011. At the moment of current verification cogeneration unit No.5 has been commissioned and started its operation, though the project has not been implemented as planned due to the lack of funds.

During current monitoring period the CMM boiler, flare and five cogeneration units were in operation. The boiler and flare worked until November and then stopped because of lack of gas amount.

The status of project activity implementation compared with the PDD is presented in the table below:

unit	**installation date (PDD)**	**firing capacity**	**planned installation new timetable**
Central Shaft			
upgraded boiler	Oct 2003	25 MW	October 2003
flare No: 1	Jan 2008	5 MW	1 Flare with 25 MW in October 2010
flare No: 3	Mar 2008	5 MW	Included above
cogeneration units #2,#3,#4,#5,#6	Jul 2008	total of 48.8 MW	October 2011
Degassing wells			
flare/pump No: 2	Jan 2008	5 MW	2012
flare/pump No: 7	Apr 2008	5 MW	2012
Air Shaft № 2			
flares No: 4-6	Apr 2008	total of 15 MW	2012
cogeneration units	Jun-Oct 2008	total of 67.5 MW	2012
cogeneration units	Jan 2009	total of 30 MW	2012

It is evident from the table above, there is a delay in installation of most project components (flares at degassing wells, flares and cogeneration units at Air Shaft No.2) are caused by lack of funds.

The identified areas of concern as to project implementation, project participants response and BVC's conclusion are described in Appendix A Table 2 (CAR 01, CAR02, CL22).

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

The monitoring occurred in accordance with the revised monitoring plan described in Section 3.5 below.

For calculating the emission reductions, key factors, such as availability and amount of extracted coal 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; passports for monitoring equipment; data collecting, processing and storing Siemens SIMATIC PLC S7 system and Siemens WINCC programming software; the internet data base; a system for data collecting, archiving and sending to Internet, called Graphic Data Manager RSG 40 Memograph M; logbooks; IPCC guidelines; national rules and regulations; laboratory analyses are clearly identified, reliable and transparent.

Emission factors, such as CO2 emission factor for fuel used for captive power or heat; carbon emission factor for combusted methane; specific carbon dioxide non direct emissions factors for consumption of electricity generated by power stations of united energy system of Ukraine, including default emission factors, are taken from the recognized sources, 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 with monitoring plan, project participants response and BVC's conclusion are described in Appendix A Table 2 (CL 05, CL19, CAR 05, CL 15, CL 16, CL 17, CL 18, CAR 08, CAR 09, CAR 10, CL 20, CL 21, CAR 04).

3.5 Revision of monitoring plan (99-100)

In the course of considered monitoring period (01/05/2012 – 31/12/2012) the original monitoring plan described in the registered PDD version 04 of 10/09/2008 was slightly modified by the project participants.
The value of CO2 emission factor of fuel used for captive power or heat was updated in accordance with the latest version of "National Inventory

Report of Anthropogenic Emissions from Sources and Absorption by Absorbers of Greenhouse Gases in Ukraine for 1990-2010". The value currently applied for "Bituminous Coal" in the emission reduction calculations is 25.99 t C/TJ.

Based on above mentioned, BVC can conclude that the proposed revision of the monitoring plan 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.

No areas of concern as to revision of the monitoring plan were revealed.

3.6 Data management (101)

The data and their sources provided in Section B.2. of the monitoring report, are clearly identified, reliable and transparent. The list of data related to the current monitoring period includes:

- list of values fixed ex-ante (Table 6 of the MR Section B.2.1.);
- list of the applied variables that relate to the baseline and project emissions (Table 7 of the MR Section B.2.2.);
- list of GHG emission sources in the project scenario

  (Table 8 of the MR Section B.2.3.);
- list of GHG emission sources in the baseline scenario (Table 9 of the MR Section B.2.4.);
- data concerning the environmental impacts caused by the project activity and data (MR Section B.2.6.), and
- information on data processing and archiving.

The implementation of data collection procedures is in accordance with the PDD and revised monitoring plan, including the quality control and quality assurance procedures.
Two different data collection and processing systems are used for the upgraded boiler and flare unit. The data for the boiler are collected, processed and stored using a Siemens SIMATIC PLC S7 system and Siemens WINCC programming software. One time per hour the data are sent via GPS to an Internet-based Server data base. The data can be read any time from the internet data base by the authorized personnel. Eco-Alliance ensures regular back ups and archiving.
For the flare and the cogeneration units the equipment supplier Sinapse has provided a system for data collecting, archiving and sending to Internet, called Graphic Data Manager RSG 40 Memograph M. The data are stored in the memory of computer for 6 months. Every month coal

mine personnel save the data into the flash memory and transfer it to Eco-Alliance.

Eco-Alliance together with coal mine personnel conduct periodic audits of the project monitoring process including service audits. The regular back-up is performed for the monitoring data.

For plausibility checks and potential data back up the monitored data are logged in the hand written journals of the suction system.
The monitoring activities including data collection procedures, the quality control and the quality assurance procedures are written down in the project Monitoring Manual that was to be updated with the start of the cogeneration plant operation by the end of the year 2011. As far as one (No.1) of six cogeneration units have not been regularly operating during the current monitoring period the Monitoring Manual has not been updated either. This issue (FAR 01 in the verification protocol) is the subject to a check for the subsequent verification.

The function of the monitoring equipment, including its calibration status, is in order. The measurement equipment used for project monitoring is serviced, calibrated and maintained in accordance with the original manufacturer's instructions and industry standards; relevant records are kept as required.

The evidence and records used for the monitoring are maintained in a traceable manner. All necessary information for monitoring of GHGs emission reductions are stored in paper or/and electronic formats.

The data collection and management system for the project is in accordance with the PDD and revised monitoring plan.
The general project management is implemented by the Technical Director of the «Colliery Group «Pokrovske» through supervising and coordinating activities of his subordinates, such as the degasification engineer, heating technician, and safety engineering departments. The project management structure is presented in the MR section C.1.1.

Daily a group of mechanics and electricians who are responsible for the measures and maintenance of all technological equipment and measuring instruments are present on-site; during each of 12 hour-shift there is a person on-duty responsible for the proper operation and keeping of the journals. The general supervision of the monitoring system is executed by the administration of the coal mine under the existing control and reporting system.

The Monitoring Report provides sufficient information on the assigning roles, responsibilities and authorities for implementation and maintenance of monitoring procedures including control of data. The verification team

confirms effectiveness of the existing management and operational systems and found them eligible for reliable project monitoring.

The identified areas of concern as to the data management, project participants response and BVC's conclusion are described in Appendix A Table 2 (refer to CL 03, CL 04, CL 01, CAR 03, CL 02, CL 06, CL 07, CL 08, CL 09, CL 10, Cl 11, CL 12, CL 13, CL 14, CAR 06, CAR 07, CAR 11, CL 23).

3.7 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 4th periodic verification of the "CMM utilisation on the Joint Stock Company "Coal Company Krasnoarmeyskaya Zapadnaya № 1 Mine" project in Ukraine, which applies the methodology ACM0008 version 03. 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 PJSC "Colliery Group "Pokrovske" 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 project 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 4 for the reporting period as indicated below. 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	:	268666	tonnes of CO2 equivalent.
Project emissions	:	33054	tonnes of CO2 equivalent.
Emission Reductions	:	235612	tonnes of CO2 equivalent.

5 REFERENCES

Category 1 Documents:
Documents provided by PJSC "Colliery Group "Pokrovske" that relate directly to the GHG components of the project.

/1/ Project Design Document of the project "CMM utilisation on the Joint Stock Company "Coal Company Krasnoarmeyskaya Zapadnaya № 1 Mine", version 04 dated 10/09/2008
/2/ Monitoring Report for the period from 01/05/2012 till 31/12/2012 version 1 dated 17/12/2012
/3/ Monitoring Report for the period from 01/05/2012 till 31/12/2012 version 2 dated 04/02/2013
/4/ Monitoring Report for the period from 01/05/2012 till 31/12/2012 version 3 dated 21/03/2013
/5/ Monitoring Report for the period from 01/05/2012 till 31/12/2012 version 4 dated 24/04/2013
/6/ Revised Monitoring Plan included in the Monitoring Report
/7/ Calculation of Emission Reductions – excel file "ER-KAZ1-2012-05-01 to 2012-12-31_V1.xls", Version 1 of 17/12/2012
/8/ Calculation of Emission Reductions – excel file "ER-KAZ1-2012-05-01 to 2012-12-31_V2.xls", Version 2 of 04/02/2013
/9/ Calculation of Emission Reductions – excel file "ER-KAZ1-2011-05-01 to 2012-12-31_V3.xls", Version 3 of 21/04/2013
/10/ Calculation of Emission Reductions – excel file "ER-KAZ1-2012-05-01 to 2012-12-31_V4.xls", Version 4 of 24/04/2013
/11/ Approved consolidated baseline methodology ACM0008 version 03 "Consolidated baseline methodology for coal bed methane and coal mine methane capture and use for power (electrical or motive) and heat and/or destruction by flaring"
/12/ Approved consolidated baseline methodology ACM0008 version 05 "Consolidated baseline methodology for coal bed methane and coal mine methane capture and use for power (electrical or motive) and heat and/or destruction by flaring"
/13/ Methodological "Tool to determine project emissions from flaring gases containing methane"
/14/ Guidance on Criteria for Baseline Setting and Monitoring, version 03, JISC
/15/ Letter of Approval of Ministry for Environmental Protection of Ukraine No2239/11/10-08 issued on 22/02/2008.
/16/ Letter of Approval of the Ministry of Economic Affairs of the Netherlands, Ref. 2008JI02, dated 22/04/2008

Category 2 Documents: Background documents related to the design and/or methodologies employed in the design or other reference documents.

/1/ Certificate # 12-10544 dated 11/06/2012 on state metrological attestation of gas analyzer type GAE 1, # A1759

/2/ Calibration certificate # 5425 dated 28/10/2011, valid till 28/10/2012, on gas analyzer type NGA 5, # 4009.87

/3/ Information letter # 5295-00 dated 17/08/2012 on construction and application of thermocouples

/4/ Passport and manual on flow computing micro processing block type БВР.М, fabrication # 10512

/5/ Calibration certificate # 4867.1 dated 03/04/2012, valid till 28/10/2015, on flow computing micro processing block type БВР.М, fabrication # 10512

/6/ Passport and manual on flow computing micro processing block type БВР.М, fabrication # 14033 (last calibration date–26/04/2011)

/7/ Passport and manual on gas flow-meter type ДРГ.МЗА-200-400, fabrication # 10144 (last calibration date–20/07/2010)

/8/ Passport on transducer type МТМ201Д, fabrication # 3401 (last calibration date–30/10/2011)

/9/ Passport on temperature transducer type ТСМ-1088, fabrication # 1138 (last calibration date–06/2010)

/10/ Passport and manual on temperature transducer type Vegabar 17, fabrication # 20108320 (last calibration date–05/2012)

/11/ Passport and manual on flow computing micro processing block type БВР.М, fabrication # 14043 (last calibration date–26/04/2011)

/12/ Passport and manual on flow computing micro processing block type БВР.М, fabrication # 14041 (last calibration date–26/04/2011)

/13/ Passport and manual on flow computing micro processing block type БВР.М, fabrication # 14034 (last calibration date–26/04/2011)

/14/ Passport and manual on flow computing micro processing block type БВР.М, fabrication # 14040 (last calibration date–26/04/2011)

/15/ Passport and manual on flow computing micro processing block type БВР.М, fabrication # 14042 (last calibration date–26/04/2011)

/16/ Passport and manual on gas flow-meter type ДРГ.М10000, fabrication # 12054 (last calibration date–23/11/2010)

/17/ Passport and manual on gas flow-meter type ДРГ.М10000, fabrication # 12059 (last calibration date–23/11/2010)

/18/ Passport and manual on gas flow-meter type ДРГ.М10000, fabrication # 12056 (last calibration date–23/11/2010)

/19/ Passport and manual on gas flow-meter type ДРГ.М10000, fabrication # 12053 (last calibration date–23/11/2010)

/20/ Passport and manual on gas flow-meter type ДРГ.М10000, fabrication # 12061 (last calibration date–23/11/2010)

/21/ Passport on transducer type МТМ700ДИЕх, fabrication # 1767 (last calibration date–08/05/2012)

/22/ Passport on transducer type МТМ700ДИЕх, fabrication # 1769 (last calibration date–08/05/2012)

/23/ Passport on transducer type МТМ700ДИЕх, fabrication # 1771 (last calibration date–08/05/2012)
/24/ Passport on transducer type МТМ700ДИЕх, fabrication # 1766 (last calibration date–08/05/2012)
/25/ Passport on transducer type МТМ700ДИЕх, fabrication # 1768 (last calibration date–08/05/2012)
/26/ Passport on temperature transducer type ТСМ-1088, fabrication # 484 (last calibration date–04/2011)
/27/ Passport on transducer type МТМ201Д, fabrication # 3690 (last calibration date–08/05/2012)
/28/ Passport on transducer type МТМ201Д, fabrication # 3688 (last calibration date–08/05/2012)
/29/ Passport on temperature transducer type ТСМ-1088, fabrication # 489 (last calibration date–04/2011)
/30/ Passport on transducer type МТМ201Д, fabrication # 3692 (last calibration date–08/05/2012)
/31/ Passport on temperature transducer type ТСМ-1088, fabrication # 487 (last calibration date–04/2011)
/32/ Passport on transducer type МТМ201Д, fabrication # 3689 (last calibration date–08/05/2012)
/33/ Passport on temperature transducer type ТСМ-1088, fabrication # 488 (last calibration date–04/2011)
/34/ Passport on transducer type МТМ201Д, fabrication # 3691 (last calibration date–08/05/2012)
/35/ Passport on temperature transducer type ТСМ-1088, fabrication # 486 (last calibration date–04/2011)
/36/ Passport on power meter type Енергія-9, fabrication # 53917 (last calibration date–04/10/2010)
/37/ Passport on power meter type Енергія-9, fabrication # 53941 (last calibration date–04/10/2010)
/38/ Passport on power meter type A1805RAL-P4GB-DW-4, fabrication # 01226171 (last calibration date–16/06/2011)
/39/ Passport and manual on flow computing micro processing block type БКТ.М, fabrication # 13984 (last calibration date–19/04/2011)
/40/ Passport on flow-meter type ДРС-500М, fabrication # 09022 (last calibration date–25/11/2010)
/41/ Passport on flow-meter type ДРС-500М, fabrication # 12047 (last calibration date–23/11/2010)
/42/ Passport on temperature transducer type ТСПУ1-3, fabrication # 11617
/43/ Certificate # 1566 dated 19/05/2011 on metrological attestation of temperature transducer type ТСПУ1-3, fabrication # 11617
/44/ Passport on temperature transducer type ТСПУ1-3, fabrication # 11618
/45/ Certificate # 1567 dated 19/05/2011 on metrological attestation of temperature transducer type ТСПУ1-3, fabrication # 11618
/46/ Passport and manual on flow computing microprocessing block type БКТ.М, fabrication # 13982 (last calibration date–19/04/2011)
/47/ Passport on flow-meter type ДРС-100М, fabrication # 12022 (last calibration

date–23/11/2010)
/48/ Passport on temperature transducer type ТСПУ1-3, fabrication # 11619
/49/ Certificate # 1568 dated 19/05/2011 on metrological attestation of temperature transducer type ТСПУ1-3, fabrication # 11619
/50/ Passport on temperature transducer type ТСПУ1-3, fabrication # 11622
/51/ Certificate # 1571 dated 19/05/2011 on metrological attestation of temperature transducer type ТСПУ1-3, fabrication # 11622
/52/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 30/11/2012
/53/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 29/11/2012
/54/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 28/11/2012
/55/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 27/11/2012
/56/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 26/11/2012
/57/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 25/11/2012
/58/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 24/11/2012
/59/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 23/11/2012
/60/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 22/11/2012
/61/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 21/11/2012
/62/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 20/11/2012
/63/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 19/11/2012
/64/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 18/11/2012
/65/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 17/11/2012
/66/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 16/11/2012
/67/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 15/11/2012
/68/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 14/11/2012
/69/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 13/11/2012
/70/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 12/11/2012
/71/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for 11/11/2012

/72/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for 10/11/2012
/73/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for 09/11/2012
/74/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for 08/11/2012
/75/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for 07/11/2012
/76/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for 06/11/2012
/77/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for 05/11/2012
/78/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for 04/11/2012
/79/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for 03/11/2012
/80/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for 02/11/2012
/81/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for 01/11/2012
/82/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for August 2012 (daily data)
/83/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for September 2012 (daily data)
/84/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for July 2012 (daily data)
/85/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for June 2012 (daily data)
/86/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for May 2012 (daily data)
/87/ Percentage content of gases sampled 18/04/2012
/88/ Photo – transducer type МТМ700ДИЕх, fabrication # 1769
/89/ Photo – transducer type МТМ201Д, fabrication # 3689
/90/ Photo – transducer type МТМ700ДИЕх, fabrication # 1767
/91/ Photo – transducer type МТМ201Д, fabrication # 3692
/92/ Photo – flow computing micro processing block type БВР.М, fabrication # 14040
/93/ Photo – flow computing micro processing block type БВР.М, fabrication # 14041
/94/ Photo – transducer type МТМ700ДИ, fabrication # 1771
/95/ Photo – transducer type МТМ201Д, fabrication # 3691
/96/ Photo – flow computing micro processing block type БВР.М, fabrication # 14043
/97/ Photo – transducer type МТМ700ДИ, fabrication # 1766
/98/ Photo – transducer type МТМ201Д, fabrication # 3688
/99/ Photo – flow computing micro processing block type БВР.М, fabrication

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/100/ Photo – transducer type МТМ700ДИ, fabrication # 1768

/101/ Photo – transducer type МТМ201Д, fabrication # 3688

/102/ Photo – flow computing micro processing block type БВР.М, fabrication # 14042

/103/ Photo – flow-meter type ДРС-100М, fabrication # 12022

/104/ Photo – flow computing micro processing block type БВР.М, fabrication # 13984

/105/ Failure and interruption logbook on JMS 620 GS-S.L cogeneration units

/106/ Passport on temperature transducer type ТСПУ1-3, fabrication # 09455 (last calibration date–17/10/2012)

/107/ Passport on temperature transducer type ТСПУ1-3, fabrication # 09436 (last calibration date–17/10/2012)

/108/ Certificate # 1987 dated 18/10/2012, valid till 18/10/2013, on metrological attestation of pressure transducer type Sitrans P serie Z, fabrication # AZB/W5132862

/109/ Certificate # 1988 dated 18/10/2012, valid till 18/10/2013, on metrological attestation of pressure transducer type Sitrans P serie Z, fabrication # AZB/ A2199938

/110/ Logbook on methane disposal, started–01/07/2011 in boiler house

/111/ Report on environmental protection for 2012. Form # 2-ТП (air) (annual)

/112/ Passport and manual on gas flow-meter type ДРГ. М160, fabrication # 11193 (last calibration date–23/11/2010)

/113/ Passport on transducer type МТМ700ДИЕх, fabrication # 1781 (last calibration date–08/05/2012)

/114/ Passport on transducer type МТМ201Д, fabrication # 3684 (last calibration date–08/05/2012)

/115/ Statement on calibration of flow calculation unit type БВР.М, fabrication # 14035 (last calibration date–25/04/2011)

/116/ Passport and manual on gas flow-meter type ДРГ. М160, fabrication # 10558 (last calibration date–23/11/2010)

/117/ Passport on transducer type МТМ700ДИЕх, fabrication # 1784 (last calibration date–08/05/2012)

/118/ Passport on transducer type МТМ201Д, fabrication # 3682 (last calibration date–08/05/2012)

/119/ Statement on calibration of flow calculation unit type БКТ.М, fabrication # 13984 (last calibration date–19/04/2011)

/120/ Statement on calibration of flow calculation unit type БКТ.М, fabrication # 13982 (last calibration date–19/04/2011)

/121/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for May 2012

/122/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for June 2012

/123/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for July 2012

/124/ Information on generation and consumption of electricity produced by the “Colliery Group “Pokrovske” Cogeneration Station for August 2012

/125/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for September 2012
/126/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for October 2012
/127/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for November 2012
/128/ Information on generation and consumption of electricity produced by the "Colliery Group "Pokrovske" Cogeneration Station for December 2012
/129/ Statement dated 18/06/2012 on commissioning of JMS 620 GS-S.L cogeneration unit, # JB622 Motor Nr.5 (engine # 4533471)
/130/ Logbook on equipment replacement (last date–15/09/2012)
/131/ Passport on JMS 620 GS-S.L cogeneration units
/132/ Manual on flow computing microprocessing blocks type БКТ.М
/133/ Equipment replacement statement dated 15/05/2012
/134/ Passport for Gas analyzer Polytron IREX, No ARSK 0191
/135/ Photo: Gas flow meter DRG.M 10000 No. 12053
/136/ Photo: Gas flow meter DRG.M 10000 No. 12056
/137/ Photo: Gas flow meter DRG.M 10000 No. 12057
/138/ Photo: Gas flow meter DRG.M 10000 No. 11193
/139/ Photo: Gas flow meter DRG.M 10000 No. 12061
/140/ Logbook on production of heat energy by cogeneration units for the period from 12/11/2012 to 30/11/2012
/141/ Logbook on production of heat energy by cogeneration units for December 2012
/142/ Logbook on production of heat energy by cogeneration units for January 2013
/143/ Statement on commissioning of cogeneration unit No.5 dated 18/06/2012

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/ Maksim Chernykov – Head of the cogeneration department of PJSC "Colliery Group "Pokrovske"
/2/ Jakov Artyukhov – Head of technical service department of PJSC "Colliery Group "Pokrovske"
/3/ Pavlo Sheleheda – Deputy Director of "Eco-Aliance" Ltd.
/4/ Viktor Avtonomov – JI project manager of "Eco-Aliance" Ltd.

APPENDIX A: VERIFICATION PROTOCOL
BUREAU VERITAS CERTIFICATION HOLDING SAS

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 has been approved by both the host Party (Ukraine) and the other Party involved (the Netherlands). The written project approvals were issued by DFPs of Parties involved; the respective Letters of Approval were available at the beginning of 1st verification of the project.	OK	OK
91	Are all the written project approvals by Parties involved unconditional?	Yes, all 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?	The project has been implemented with the delay in installation and commissioning of the planned equipment due to the lack of funds. **CAR 01.** Please provide the actual MR_V2 submission date that is 04/02/2013. **CAR 02.** The monitoring period end date indicated in Section A.4. is incorrect. Please correct it. **CL 22.** Please indicate in the ER calculation file the	CAR01 CAR02 CL22	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		project title, the date and issue version		
93	What is the status of operation of the project during the monitoring period?	There was delay in project implementation as scheduled in the PDD caused by the lack of funds. During the given monitoring period only one upgraded boiler, one flare and 5 of 6 units at the cogeneration station were operational. The upgraded boiler has been in operation since October 2003. The flare unit at Central Shaft was commissioned on 26/10/2010. The installation of the cogeneration units (6 units) at Central Shaft was completed in the end of 2011 but only 5 units (#2, #3, #4, #5 and #6) out of 6 are currently operational. The boiler and flare worked until November and then stopped because of lack of gas amount. The status of project activity implementation compared to the PDD is presented in the section A.6 of the Monitoring Report.	OK	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?	The monitoring occurred in accordance with the PDD regarding which the determination has been deemed final with some changes presented in the revised monitoring plan (refer to Section 99(a) below). **CL 05.** Please provide the documentary evidences of the project's environmental impacts. **CL 19.** Please provide the contracts with the 3rd parties	CL05 CL19	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		involved in the project.		
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?	Key factors, such as availability and amount of extracted coal gas, concentration of methane in the extracted gas etc, 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 for calculating the emission reductions.	OK	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	Data sources used for calculating emission reductions are listed in MR sections B.1.2, B.2.1 to B.2.4. The data sources used in the present monitoring period include: - direct measurements of the CMM amount sent to the flare; - direct measurements of the CMM amount sent to the boiler; - electricity consumed by the project; - concentration of methane in extracted gas; - CMM captured by the project activity; - heat generation by the project; and - the flare flame temperature. All measurements are performed with appropriate calibrated measurement equipment (flow meter, pressure transmitter, resistance temperature meter etc.); - laboratory analysis of NMHC concentration in the extracted gas;	CAR05 CL15 CL16 CL17 CL18 CAR08 CAR09 CAR10 CL20 CL21	OK OK OK OK OK OK OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		- data from the approved CDM methodology ACM0008 for carbon emission factor for combusted methane; - IPCC data for efficiency of methane destruction/oxidation in the power and heat plants, carbon emission factor for combusted methane, methane GWP; - official data of the State Environmental Investment Agency of Ukraine on specific carbon dioxide non direct emissions factor for consumption of electricity generated by power stations of united energy system of Ukraine; - "National Inventory Report of Anthropogenic Emissions from Sources and Absorption by Absorbers of Greenhouse Gases in Ukraine for 1990-2010" - equipment specifications (passports for boiler and cogeneration units). All data sources used for calculating emission reductions are clearly identified, reliable and transparent. **CAR 05.** The measurement units used for the parameter $CONS_{ELEC,PJ}$ in the ER calculation file are incorrect. Please correct them **CL 15.** Please provide in detail the latest sources of data for all parameters (project and baseline) including default values **CL 16.** It is not clear in what way the heat generation		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		by the project is measured. Please provide the detailed description of this procedure including data collection, heat measuring equipment, etc **CL 17.** Please present the documentary evidences on methane amount sent to flare (parameter P11, MMFL) and methane destroyed by power generation (parameter P14, MDELEC) for the whole monitoring period. **CL18.** Please present the data on the amount of heat generated (parameter B47, HEAT) during the reported monitoring period. **CAR 08.** The amounts of methane sent to boiler indicated in the ER calculations differ from the ones comprised in the initial data logbook presented to the verification team during the site visit. Please, check this and make appropriate corrections **CAR 09.** Please explain the origin and data source for the figures contained in the cells AV 12 and AV 13 (Heat generation by power plant) in the ER calculation file. **CAR 10.** The source of data on carbon emission factor for bituminous coal provided in Annex 1 of the MR is not valid for the reported monitoring period. Please make it correct.		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CL 20. Please make it clear what fuel was used to fire the boiler in November-December 2012. **CL 21.** Please present for verification the initial data on the heat power generated by the CHP for the reported monitoring period. Please make it clear where this parameter can be found in the ERs calculations.		
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 applied in calculation of the emission reduction for this monitoring period, listed in the above section, are selected by carefully balancing accuracy and reasonableness, and are appropriately justified of the choice. **CAR 04.** It is not evident in the ER calculations what CH_4 mass/volume ratio was used. Please make it clear in ER calculations.	CAR04	OK
95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?	The performed calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner.	OK	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	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?			
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
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?	In the course of considered monitoring period (01/05/2012 – 31/12/2012) the original monitoring plan described in the registered PDD version 04 of 10/09/2008 was modified by the project participants. For the description of changes made to the original monitoring, please, refer to Section 3.5. of the present verification report.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		from.		
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?	The proposed revision improved 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.	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 procedures?	The implementation of data collection procedures is in accordance with the PDD and revised monitoring plan, including the quality control and quality assurance procedures. **CL 03.** Please provide the plant's monthly reports for the reported monitoring period on methane utilised in boiler, on flare and CHP **CL 04.** Please provide the plant reports on electricity production and consumption during the monitoring period.	CL03 CL04	OK OK
101 (b)	Is the function of the monitoring equipment, including its calibration status, in order?	The measurement equipment used for project monitoring is serviced, calibrated and maintained in accordance with the original manufacturer's instructions and industry standards. Still, some issues as to the used monitoring equipment which need to be corrected or clarified were indentified:	CL01 CAR03 CL02 CL06 CL07 CL08	OK OK OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CL 01. Please provide passports for cogeneration units No. 1 and 5, as well as the documents that evidence the dates they were commissioned on. **CAR 03.** Please provide explanation as for the part of the project equipment that was operational during the reported monitoring period. **CL 02.** Are gas analyzes GAE 1, #A1759 and NGA.5 # 5425 the project equipment. If yes, why aren't they included to the table 4 (Monitoring equipment) of the MR. **CL 06.** The evidences of the due calibration of the monitoring equipment listed in Table 4 of the monitoring report under No.2a-4, 6,7,12,16-25, 27, 28, 30, 32, 34-36, 38, 40, 42-44, 46, 48, 50-52, 54, 56, 58, 60, 62, 64, 73 were not presented for verification. **CL 07.** It is mentioned in the supporting documents provided to the verifiers during the site visit that thermocouple #5295-00 was installed on 17/08/2012. Why isn't it included to the project equipment in Table 4? Please provide the replacement statement as well as documents proving its due calibration. **CL 08.** According to the documents provided to the verifiers during the site visit, BVR-M #10512 was decommissioned on 19/08/2011. Please make it clear	CL09 CL10 CL11 CL12 CL13 CL14 CAR06 CAR07	OK OK OK OK OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		what it was replaced with. **CL 09.** During the site visit the verifiers were provided with the passport for TSM1088 #1138. Is this the project equipment? If yes, it is to be included to the list of the project equipment, date of its last calibration as well as calibration frequency are to be provided. **CL 10.** During the site visit the verifiers were provided with the passport for DRG M. 10000 #12054. Is this the project equipment? If yes, it is to be included to the list of the project equipment, date of its last calibration as well as calibration frequency are to be provided. **CL 11.** During the site visit the verifiers were provided with the passport for DRG M. 10000 #12053. Is this the project equipment? If yes, it is to be included to the list of the project equipment, date of its last calibration as well as calibration frequency are to be provided. **CL 12.** During the site visit the verifiers were provided with the passport for DRG M. 10000 #12061. Is this the project equipment? If yes, it is to be included to the list of the project equipment, date of its last calibration as well as calibration frequency are to be provided **CL 13.** During the site visit the verifiers were provided with the passport for BKT.M #13982. Is this the project equipment? If yes, it is to be included to the list of the		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		project equipment, date of its last calibration as well as calibration frequency are to be provided. **CL 14.** During the site visit the verifiers were provided with the passport for TSPU 1-3 #09455. Is this the project equipment? If yes, it is to be included to the list of the project equipment, date of its last calibration as well as calibration frequency are to be provided. **CAR 06.** According to the passport for MTM201D #3401, it was last calibrated on 30/10/2012. Please make due corrections in Table 4. **CAR 07.** The resistance thermometer listed in Table 4 of the MR under ID No 9 was last calibrated on 17/10/2012. Please make due corrections.		
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	All necessary information for monitoring of GHGs emission reductions is stored in paper or/and electronic formats. The data for the boiler are collected, processed and stored using a Siemens SIMATIC PLC S7 system and Siemens WINCC programming software. The data can be read any time from the internet data base by authorised personnel. As all input data are stored, the automatically calculation can by checked in retrospect any time. For the flare and the cogeneration units Sinapse has provided there is a system for data collecting, archiving	CAR11 CL23	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		and sending to Internet, called Graphic Data Manager RSG 40 Memograph M developed and provided by Sinapse. The data is stored in the memory of computer for 6 months. Every month coal mine personnel save the data into flash memory and send it to Eco-Alliance. **CAR 11.** There is neither category nor code named "Other Bituminous Coal" mentioned in the NIR for the years 1990-2010. The value of the parameter (EFheat Table 6 of the MR Section B.2.1) refers to "Bituminous Coal) Please make it correct through the text of the MR and excel file **CL 23.** To avoid repetitions and make the MR more transparent and easy to percept, please, remove Annex 4 and Annex 5 and incorporate the information it contains into Sections A.7. and A.8. respectively. Check Annex 6 for the completeness of information it contains.		
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	The data collection and management system for the project is in accordance with the PDD and revised monitoring plan. The verification team confirms effectiveness of the existing management and operational systems and found them eligible for reliable project monitoring. **FAR01.** The previous verification reports contain the	FAR01	Remains open pending the subsequent verification

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		information that monitoring activities including data collection procedures, QA & QC procedures are written down in the project Monitoring Manual. However, no such document was provided to BVC during site-visit, thus the issue is raised: Please, provide for review the updated project Monitoring Manual, if available.		
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
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	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
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	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
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 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

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarification and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
CAR 01. Please provide the actual MR_V2 submission date that is 04/02/2013.	92	The date was provided.	CAR 01 is closed. The MR was submitted as a subsequent version 3 dated 21/03/2013

CAR 02. The monitoring period end date indicated in Section A.4. is incorrect. Please correct it.	92	The date was corrected.	CAR 02 is closed
CL 01. Please provide passports for cogeneration units No. 1 and 5, as well as the documents that evidence the dates they were commissioned on.	101 (b)	*PPs comments on Request #1:* The documents are attached: KZ-1 - Passport for cogeneration units .pdf KZ-2 - Cogeneration Unit №5 Comission.rar *PPs comments on Request #2:* The cogeneration unit No. 1 is not commissioned yet. The previously sent passport is similar for all cogeneration units.	*Consclusion on response #1:* CL 01 is not closed as neither the passport nor the evidence on commissioning cogeneration unit No. 1 is provided for verification. *Final conclusion:* The cogeneration unit No.1 has not been commissioned in the current monitoring period. Issue is closed.

CAR 03. Please provide explanation as for the part of the project equipment that was operational during the reported monitoring period.	101 (b)	*PPs comments on Request #1:* During current monitoring period the CMM boiler, flare and five cogeneration units were in operation. The boiler and flare worked until November and then stopped because of lack of gas amount. *PPs comments on Request #2:* The information was included in section A.3 of Monitoring Report.	*Consclusion on response #1:* CAR 03 is not closed as the provided information has not been inserted into the MR
CL 02. Are gas analyzes GAE 1, #A1759 and NGA.5 # 5425 the project equipment. If yes, why aren't they included to the table 4 (Monitoring equipment) of the MR.	101 (b)	*PPs comments on Request #1:* GAE 1 #A1759 is a new CH4 block of gas analyzer NGA 5 that was installed instead of old block #A1538 on 15/09/2012. The calibration of gas analyzer is actually calibration of this block. KZ-3 - Equipment replacement.jpg # 5425 is not number of the equipment but the number of certificate. *PPs comments on Request #2:* The gas analyzer is included in the list of monitoring equipment under ID 15.	*Consclusion on response #2:* CL 02 is not closed as the gas analyzer under consideration has not been included to the list of the project equipment. *Final conclusion:* CL 02 is closed.

CL 03. Please provide the plant's monthly reports for the reported monitoring period on methane utilised in boiler, on flare and CHP	101 (a)	KZ-4 - Flare cogeneration reports.rar	CL 3 is closed based on the documentary evidence presented as well as explanation provided in the PPs' comment on CL20.
CL 04. Please provide the plant reports on electricity production and consumption during the monitoring period.	101 (a)	See attached: KZ-5 - Electricity reports.rar	CL 04 is closed based on the reports provided

CL 05. Please provide the documentary evidences of the project's environmental impacts.	94	*PPs comments on Request #1:* Documents are attached: KZ-6 - Environmental reports.rar *PPs comments on Request #2:* During third quarter of 2012 new sources of emissions were included into the report on protection of the atmospheric air: - ventilation shaft of industrial site VPS-1 of coal mine; - ventilation shaft of industrial site VPS-2 of coal mine; - vacuum-pump station of industrial site VPS-2 of coal mine.	*Consclusion on response #1:* It is indicated in the report on protection of the atmospheric air (2TP-air) for 2012 year presented by the PPs for verification that the amount of methane emitted to the atmosphere makes 47756,365 t CH_4, beside that the amount of CO2 emitted during 2012 is 77647,908 t. At the same time, the production reports on the methane utilized on flare and in CHP as well as the initial data on methane utilized in boiler contained in the log book demonstrate the reduction in amounts of the methane utilized especially by the end of the year 2012. Please explain what it can be accounted for. *Final conclusion:* CL 05 is closed based on the additional information and explanation provided by the PPs.

CL 06. The evidences of the due calibration of the monitoring equipment listed in Table 4 of the monitoring report under No.2a-4, 6,7,12,16-25, 27, 28, 30, 32, 34-36, 38, 40, 42-44, 46, 48, 50-52, 54, 56, 58, 60, 62, 64, 73 were not presented for verification.	101 (b)	*PPs comments on Request #1:* KZ-7 - Passports p.1.rar *PPs comments on Request #2:* 1. GasAnalyzer Politron.pdf 2. Act of equipment change.pdf 3. Photos.rar 4. The gas flow transmitter DRG M.1000 # 12059 is still installed on Cogeneration Unit #3.	*Consclusion on response #1:* CL 06 is not closed for the reasons mentioned below. 1.There is no calibration evidence presented for the gas analyzer POLITRON - Draeger ARSK 0191 (ID No. 2a). Last calibration was made in October 2011 whereas the analyzer is a subject to yearly calibration. 2. Neither a replacement certificate nor the passport for the resistance thermometer (ID No.6) is provided. Please provide its photo with serial number mark. 3. Please provide photo of the following meters: ID No.15, No. 20, No. 43, No. 44, No.51, No 52, No.59, No. 60 with their serial number marks. 4. Please make it clear what happened to the meter carrying the serial number 12059 that was present at the previous verification site visit? *Final conclusion:* CL 06 is closed based on the information provided.

CAR 04. It is not evident in the ER calculations what CH_4 mass/volume ratio was used. Please make it clear in ER calculations.	95 (c)	The density of methane is 0.717 kg/m³ at standard state conditions. See Table D.1.1.1 of the PDD (P12, P15, P18) and the formula in column H of the ER table.	CAR 04 is closed based on the explanation provided.
CAR 05. The measurement units used for the parameter $CONS_{ELEC,PJ}$ in the ER calculation file are incorrect. Please correct them	95 (b)	The table has been corrected.	CAR 05 is closed based on the correction made to the ER calculation file
CL 07. It is mentioned in the supporting documents provided to the verifiers during the site visit that thermocouple #5295-00 was installed on 17/08/2012. Why isn't it included to the project equipment in Table 4? Please provide the replacement statement as well as documents proving its due calibration.	101 (b)	MR was corrected. KZ-3 - Equipment replacement.jpg Thermocouple isn't subject for calibration.	CL 07 is closed based on the required evidence presented for verification.
CL 08. According to the documents provided to the verifiers during the site visit, BVR-M #10512 was decommissioned on 19/08/2011. Please make it clear what it was replaced with.	101 (b)	The flow calculation unit BVR-M #10512 was replaced with BVR-M #14033.	CL 08 is closed.
CAR 06. According to the passport for MTM201D #3401, it was last calibrated on 30/10/2012. Please make due corrections in Table 4.	101 (b)	MR was corrected.	CAR 06 is closed based on the correction made to the MR.
CL 09. During the site visit the verifiers were provided with the passport for TSM1088 #1138. Is this the project equipment? If yes, it is to be included to the list of the project equipment, date of its last calibration as well as calibration frequency are to be provided.	101 (b)	Resistance thermometer TSM-1088 is a part of the meter for CMM temperature measuring together with measuring transformer MTM 201D and these two meters are calibrated together. During third monitoring period it was decided to leave only measuring transformer MTM 201D.	CL 09 is closed made on the explanation provided.

CL 10. During the site visit the verifiers were provided with the passport for DRG M. 10000 #12054. Is this the project equipment? If yes, it is to be included to the list of the project equipment, date of its last calibration as well as calibration frequency are to be provided.	101 (b)	MR was corrected. The measurement equipment is under ID 27.	CL 10 is closed based on the due correction made to the MR.
CL 11. During the site visit the verifiers were provided with the passport for DRG M. 10000 #12053. Is this the project equipment? If yes, it is to be included to the list of the project equipment, date of its last calibration as well as calibration frequency are to be provided.	101 (b)	*PPs comments on Request #1:* MR was corrected. The measurement equipment is under ID 51. *PPs comments on Request #2:* See CL 06.	*Consclusion on response #1:* CL 11 is not closed. Please refer to conclusion 3 on CL 06 above. *Final conclusion:* CL 11 is closed.
CL 12. During the site visit the verifiers were provided with the passport for DRG M. 10000 #12061. Is this the project equipment? If yes, it is to be included to the list of the project equipment, date of its last calibration as well as calibration frequency are to be provided.	101 (b)	*PPs comments on Request #1:* MR was corrected. The measurement equipment is under ID 59. *PPs comments on Request #2:* See CL 06.	*Consclusion on response #1:* CL 11 is not closed. Please refer to conclusion 3 on CL 06 above. *Final conclusion:* CL12 is closed.
CL 13. During the site visit the verifiers were provided with the passport for BKT.M #13982. Is this the project equipment? If yes, it is to be included to the list of the project equipment, date of its last calibration as well as calibration frequency are to be provided.	101 (b)	The measurement equipment is under ID 73.	CL13 is closed.

CL 14. During the site visit the verifiers were provided with the passport for TSPU 1-3 #09455. Is this the project equipment? If yes, it is to be included to the list of the project equipment, date of its last calibration as well as calibration frequency are to be provided.	101 (b)	*PPs comments on Request #1:* MR was corrected. The resistance thermometer TSPU 1-3 #09455 was installed instead of TSPU 1-3 #09124. *PPs comments on Request #2:* See CL 06.	*Consclusion on response #1:* CL 14 is not closed. Please refer to conclusion 2 on CL 06 above. *Final conclusion:* CL 14 is closed.
CAR 07. The resistance thermometer listed in Table 4 of the MR under ID No 9 was last calibrated on 17/10/2012. Please make due corrections.	101 (b)	MR was corrected.	CAR 07 is closed based on the due correction made to the MR.
CL 15. Please provide in detail the latest sources of data for all parameters (project and baseline) including default values	95 (b)	MR was corrected.	CL15 is closed based on the MR updates.

CL 16. It is not clear in what way the heat generation by the project is measured. Please provide the detailed description of this procedure including data collection, heat measuring equipment, etc	95 (b)	*PPs comments on Request #1:* For heat generated by boilers the vortex flow meter is used which processes different parameters (steam temperature, steam pressure, etc.) and shows the value of heat for period of 15 minutes. The data is taken from the automatic monitoring system. The heat power generated by cogeneration station consists of heat given to the consumer (boiler) and consumed for own needs. It's measured with two heat meters. Data is taken from handwritten journals. Methodology of calculating the heat is described in the manual for BKT.M: KZ-8 - BKT.M Methodology.pdf *PPs comments on Request #2:* The text was added in section B.3 of MR.	*Consclusion on response #1:* CL 16 is not closed. The description of heat measurement procedure as well as methodology for heat calculation are to be a part of the MR. *Final conclusion:* CL 16 is closed based on the amendments made to the MR.
CL 17. Please present the documentary evidences on methane amount sent to flare (parameter P11, MM_{FL}) and methane destroyed by power generation (parameter P14, MD_{ELEC}) for the whole monitoring period.	95 (b)	KZ-4 - Flare cogeneration reports.rar	CL 17 is closed based on the required data presented for verification

CL18. Please present the data on the amount of heat generated (parameter B47, HEAT) during the reported monitoring period.	95 (b)	*PPs comments on Request #1:* KZ-9 - Journal_Heat.rar *PPs comments on Request #2:* Data for November is included in the archive. The file is named "0002.jpg". The registering of heat produced by Cogeneration station begins from 12 of November.	*Consclusion on response #1:* CL 18 is not closed as the requested data was provided only for December 2012. *Final conclusion:* Requested data has been provided as requested. Issue is closed.
CAR 08. The amounts of methane sent to boiler indicated in the ER calculations differ from the ones comprised in the initial data logbook presented to the verification team during the site visit. Please, check this and make appropriate corrections	95 (b)	The monthly methane amounts in ER table are given in tonnes of CH4 while the logbook contains monthly values in cubic meters. These monthly values from logbook are made for internal needs of coalmine and are not used in ER table. For crosschecking only daily readings are used.	Explanation has been provided. CAR is closed.

CAR 09. Please explain the origin and data source for the figures contained in the cells AV 12 and AV 13 (Heat generation by power plant) in the ER calculation file.	95 (b)	*PPs comments on Request #1:* The data was calculated from the readings of heat meter registered in hand written journal. *PPs comments on Request #2*: See CL 18.	*Consclusion on response #1:* CAR 09 is not closed. Please provide the readings of the heat meter registered in hand written journal. Please also refer to the conclusion on CL 18 above. *Final conclusion:* CAR 09 is closed based on the required information provided by the PPs.
CL 19. Please provide the contracts with the 3rd parties involved in the project.	94	KZ-10 - Contracts with third parties.rar	CL 19 is closed based on the information provided for verification
CAR 10. The source of data on carbon emission factor for bituminous coal provided in Annex 1 of the MR is not valid for the reported monitoring period. Please make it correct.	95 (b)	MR was corrected.	CAR 10 is closed.
CL 20. Please make it clear what fuel was used to fire the boiler in November-December 2012.	95 (b)	During most part of November and full December the CMM boiler was not working. The other coal boilers were fired with coal.	CL 20 is closed based on the explanation provided.

CL 21. Please present for verification the initial data on the heat power generated by the CHP for the reported monitoring period. Please make it clear where this parameter can be found in the ERs calculations.	95 (b)	*PPs comments on Request #1:* KZ-9 - Journal Heat.rar The monthly sums have been calculated into MWh from the journal and written into the ER Table under cells AV 12 and AV 13. *PPs comments on Request #2:* MR was corrected.	*Consclusion on response #1:* CL 21 is not closed. Please refer to the conclusions on CL 18 and CAR 9 above. Please also provide the formula for the calculation of heat generation into MWh in Table 10 of the MR. *Final conclusion:* CL 21 is closed
CL 22. Please indicate in the ER calculation file the project title, the date and issue version	92	ER excel was corrected.	CL 22 is closed based on the amendment made to the excel file.
CAR 11. There is neither category nor code named "Other Bituminous Coal" mentioned in the NIR for the years 1990-2010. The value of the parameter (EFheat Table 6 of the MR Section B.2.1) refers to "Bituminous Coal) Please make it correct through the text of the MR and excel file	101 (c)	MR and ER excel were corrected.	CL 23 is closed based on the correction made to the MR.
CL 23. To avoid repetitions and make the MR more transparent and easy to percept, please, remove Annex 4 and Annex 5 and incorporate the information it contains into Sections A.7. and A.8. respectively. Check Annex 6 for the completeness of information it contains.	101 (c)	MR was corrected.	CL 23 is closed.

FAR01. The previous verification reports contain the information that monitoring activities including data collection procedures, QA & QC procedures are written down in the project Monitoring Manual. However, no such document was provided to BVC during site-visit, thus the issue is raised: Please, provide for review the updated project Monitoring Manual, if available.	101 (d)	As soon as the installation and putting into operation of the one remaining cogeneration unit (No.1) was completed, a new version of the Monitoring Manual would be issued.	Remains open pending the subsequent verification.